GE
Industrial Solutions

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Redline Ed. 2014

Modular DIN-rail devices and residential enclosures

Just feel protected

GE imagination at work

Modular DIN-rail devices and residential enclosures

Circuit Protection A

People Protection B

Add-on Devices C

Comfort Functions D

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Just feel

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protected

Selection table of MCBs

Page no.	Series	Applications	Poles	Add-on devices	Tripping charac-teristic	Rating current (A)	Short-circuit capacity (kA)
A.14	**G30**		1, 2, 3, 4	yes	B	**6 - 40**	3 5 10
				yes	C	**2 - 40**	3 5 10
A.16	**G45**		1, 2, 3, 4	yes	B	**6 - 40**	4.5 6 14
				yes	C	**2 - 40**	4.5 6 14
A.18	**G60**		1, 1+N, 2, 3, 4	yes	B	**6 - 63**	6 10(1) 20
				yes	C	**0.5 - 63**	6 10(1) 20
				yes	D	**0.5 - 63**	6 10(1) 20
A.20	**EP60**		1, 2, 3, 4	yes	K	**0.5 - 63**	6 10(1) 20
A.22	**G100**		1, 1+N, 2, 3, 4	yes	B	**6 - 63**	10(1) 15(2) 30
				yes	C	**0.5 - 63**	10(1) 15(2) 30
				yes	D	**0.5 - 63**	10(1) 15(2) 30
A.24	**EP100**		1, 2, 3, 4	yes	K	**0.5 - 63**	10 15(2) 30(2)
A.26	**GT10**		1, 2, 3, 4	yes	B	**6 - 63**	10(1) 30
				yes	C	**0.5 - 63**	10(1) 30
				yes	D	**0.5 - 63**	10(1) 30
A.28	**GT25**		1, 2, 3, 4	yes	B	**6 - 63**	15(2) 20(2) 25(2)
				yes	C	**0.5 - 63**	15(2) 20(2) 25(2)
				yes	D	**0.5 - 63**	15(2) 20(2) 25(2)
A.30	**EP100 UC**		1, 2	yes	B	**6 - 63**	6 10
				yes	C	**0.5 - 63**	6 10
A.32	**Hti**		1, 2, 3, 4	yes	B	**80 -125**	10 15
				yes	C	**80 -125**	10 15
				yes	D	**80 -125**	10 15
A.36	**EP60 UL**		1, 2, 3, 4	yes	B	**6 - 63**	6 6 10(1)
				yes	C	**0.5 - 63**	6 6 10(1)
				yes	D	**0.5 - 63**	6 6 10(1)
A.38	**EP100 UL**		1, 2, 3, 4	yes	B	**6 - 63**	10 10 15(1)
				yes	C	**0.5 - 63**	10 10 15(1)
				yes	D	**0.5 - 63**	10 10 15(1)
A.40	**EP100 ULH**		1, 2, 3	yes	B	**5 - 32**	10 15(2)
				yes	C	**0.5 - 32**	10 15(2)
				yes	D	**0.5 - 32**	10 15(2)

domestic
commercial
industrial
motors

B: 3-5 In
C: 5-10 In
D: 10-20 In
K: 8-12 In

EN/IEC 60898-1
EN/IEC 60947-2
NEMA AB1
UL 489
UL 1077

(1) Ics = 75% Icu
(2) Ics = 50% Icu

Selection table of MCBs - continued

Page no.	Series	Applications	Poles	Add-on devices	Tripping charac-teristic	Rating current (A)	Short-circuit capacity (kA)
A.42	EP100R		3	yes	B	0.5 - 63	10 15
				yes	C	0.5 - 63	10 15
A.44	EP100 UCR		1, 2	yes	B	2 - 63	6 10
				yes	C	0.5 - 63	6 10
				yes	K	0.5 - 63	6 10
A.46	EP100T		1, 2, 3, 4	yes	Z	0.5 - 63	10 15
				yes	B	6 - 63	10 15
				yes	C	0.5 - 63	10 15
				yes	K	0.5 - 63	10 15
A.48	EP100 UCT		1, 2	yes	Z	0.5 - 63	6 10
				yes	B	6 - 63	6 10
				yes	C	0.5 - 63	6 10
				yes	K	0.5 - 63	6 10

Selection table of compact MCBs - Unibis™

Page no.	Series	Applications	Poles	Add-on devices	Tripping charac-teristic	Rating current (A)	Short-circuit capacity (kA)
A.60	EPC 451N		1+N (1 mod)	yes	B-C	2 - 40	4.5 6
A.61	EPC 61N		1+N (1 mod)	yes	B-C	2 - 40	6 10(3)
A.63	EPC 611		1P+1P (1 mod)	yes	B-C	2 -20	6 6
A.64	EPC 45		2	yes	B-C	2 - 40	4.5 6
			3, 4	yes	B-C	2 - 32	4.5 6
A.66	EPC 60		2	yes	B-C	2 - 40	6 10
			3, 4	yes	B-C	2 - 32	6 6

Selection table of screwless MCBs - Fixwell™

Page no.	Series	Applications	Poles	Add-on devices	Tripping charac-teristic	Rating current (A)	Short-circuit capacity (kA)
A.76	EPP60		1, 1+N, 2, 3, 3+N, 4	yes	C	2 - 40	6(1) 10
A.78	EPP100		1, 2, 3, 3+N, 4	yes	B-C	2 - 40	10(1) 15(2)

domestic
commercial
industrial
railways

B: 3-5 In
C: 5-10 In
K: 8-12 In
Z: 2-3 In

EN/IEC 60898-1
EN/IEC 60947-2

(1) Ics = 75% Icu
(2) Ics = 50% Icu
(3) Icn1 = 6kA

Technical data of MCBs

Series				G30 / G45	G60 / EP60 char. K	G100 / EP100 char. K
Standards				EN/IEC 60898-1	EN/IEC 60898-1	EN/IEC 60898-1
Tripping characteristics				B, C	B, C, D, K(2)	B, C, D, K(2)
Nominal current			A	2-40	B(6-63), C/D/K(0.5-63)	B(6-63), C/D/K(0.5-63)
Calibration temperature			°C	30	30	30
Number of poles (# mod)				1/2/3/4	1/1+N/2/3/4(2)	1/1+N/2/3/4(2)
Neutral pole protected				-	yes	yes
Nominal voltage Un	AC	1P	V	240/415	240/415	240/415
		1P+N	V	240	-	-
		2P	V	415	415	415
		3P/3P+N/4P	V	415	415	415
	DC	1P (1)	VDC	48	48	48
		2P (in series) (1)	VDC	110	110	110
Frequency			Hz	50/60	50/60	50/60
			Hz	DC: magn.trip +40%	DC: magn.trip +40%	DC: magn.trip +40%
			Hz	400: magn.trip +50%	400: magn.trip +50%	400: magn.trip +50%
Maximum service voltage Ubmax between two wires			V	250/440; 53/120 ⎓	250/440; 53/120 ⎓	250/440; 53/120 ⎓
Minimum service voltage Ubmin			V	12; 12 ⎓	12; 12 ⎓	12; 12 ⎓
Selectivity class (EN/IEC 60898-1)				3	3	3
Isolator application	EN/IEC 60947-2			yes	yes	yes
Rated insulation voltage	Pollution degree 2		V	500	500	500
	Pollution degree 3		V	440	440	440
Impulse withstand test voltage			kV	6	6	6
Insulation resistance			MΩ	10000	10000	10000
Dielectric rigidity			kV	2.5	2.5	2.5
Vibrations resistance (in x, y, z direction) (EN/IEC 77/16.3)				3g	3g	3g
Endurance	electrical at Un, In			10000	10000	10000
	mechanical			20000	20000	20000
Utilisation category (EN/IEC 60947-2)				A	A	A
Mounting position (for all devices): any except upside down				any	any	any
Incoming top or bottom				yes	yes	yes
Protection degree (outside / inside enclosure with door)				IP20/IP40	IP20/IP40	IP20/IP40
Self-extinguish degree (according to UL94)				V2	V2	V2
Tropicalisation (according to EN/IEC 60068-2 / DIN 40046)			°C/RH	+55°C/95% RH	+55°C/95% RH	+55°C/95% RH
Operating temperature			°C	-25/+55	-25/+55	-25/+55
Storage temperature			°C	-55/+55	-55/+55	-55/+55
Terminal capacity	Rigid cable min/max (top)		mm^2	1/35	1/35	1/35
	Flexible cable min*/max (top)		mm^2	0.75/25	0.75/25	0.75/25
	Rigid cable min/max (bottom)		mm^2	1/35	1/35	1/35
	Flexible cable min*/max (bottom)		mm^2	0.75/25	0.75/25	0.75/25
	(* Flexible cable 0.75/1/1.5mm^2 with cable lug)					
	Torque		Nm	4.5	4.5	4.5
Add-on devices (side add-on)	Contacts CA/CB			yes	yes	yes
	Tele U			yes	yes	yes
	Tele L			yes	yes	yes
	Tele MP			yes	yes	yes
	PBS			yes	yes	yes
Busbar systems	Pin (top/bottom)			yes/yes	yes/yes	yes/yes
	Fork (top/bottom)			-/yes	-/yes	-/yes
Accessories				yes	yes	yes
Dimensions	(HxDxW) 86x68xW		mm/mod.	18	18	18
Weight/mod.			g	120	120	120
Package			mod.	12	12	12
Approvals				KEMA	KEMA	KEMA
CE-marking				yes	yes	yes
Page				A.14/A.16	A.18/A.20(2)	A.22/A.24(2)

(1) Preferred values of rated control supply voltage (EN/IEC 60947-2): 24V, 48V, 110V, 125V, 220V, 250V

GT10 / GT25	EP100 UC	Hti	EP100R / EP100T	EP100UCR / EP100UCT
EN/IEC 60947-2	(3)	EN/IEC 60947-2	EN/IEC 60898-1	EN/IEC 60947-2[3]
3-5In/5-10In/10-20In	B, C	3-5In/5-10In/10-20In	Z, B, C, D, K[5]	Z, B, C, K[4]
0.5-63	B(6-63), C(0.5-63)	80 up to 125	B(6-63), C/D/K(0.5-63)	0.5 - 63
40	30	40	30	30
1/2/3/4	1/2/4	1/2/3/4	1/2/3/4[6]	1/2
-	-	-	yes	-
240/415	240/415	230/400	240/415	240/415
-	-	-	-	-
415	415	415	415	415
415	415	415	415	415
48	250	48	48	250
110	500	110	110	500
50/60	50/60	50/60	50/60	50/60
DC: magn.trip +40%	DC: magn.trip +40%	DC: magn.trip +40%	DC: magn.trip +40%	DC: magn.trip +40%
400: magn.trip +50%	400: magn.trip +50%	400: magn.trip +50%	400: magn.trip +50%	400: magn.trip +50%
250/440; 53/120 ⎓	250/440; 250/440 ⎓	250/440; 53/120 ⎓	250/440; 53/120 ⎓	250/440; 250/440 ⎓
12; 12 ⎓	12; 12 ⎓	12; 12 ⎓	12; 12 ⎓	12; 12 ⎓
-	3	-	3	3
yes	yes	yes	yes	yes
500	500	500	500	500
440	440	440	440	440
6	6	6	6	6
10000	10000	10000	10000	10000
2.5	2.5	2.5	2.5	2.5
3g	5g	3g	3g	5g
4000	1000	4000	10000	1000
20000	20000	20000	20000	20000
A	A	A	A	A
any	any	any	any	any
yes	follow polarity	yes	yes	follow polarity
IP20/IP40	IP20/IP40	IP20/IP40	IP20/IP40	IP20/IP40
V2	V2	V2	V2	V2
+55°C/95% RH	+55°C/95% RH	+55°C/95% RH	+55°C/95% RH	+55°C/95% RH
-25/+55	-25/+55	-25/+55	-40/+70	-40/+70
-55/+55	-55/+55	-55/+55	-40/+70	-40/+70
1/35	1/35	70	1/35	1/35
0.75/25	0.75/25	-	0.75/25	0.75/25
1/35	1/35	70	1/35	1/35
0.75/25	0.75/25	-	0.75/25	0.75/25
4.5	4.5	5	4.5	4.5
yes	yes	yes	yes	yes
yes	yes	-	yes	yes
yes	yes	yes	yes	yes
yes	yes	-	yes	yes
yes	yes	yes	yes	yes
yes/yes	yes/yes	-	yes/yes	yes/yes
-/yes	yes/yes	-	-/yes	yes/yes
yes	yes	-	yes	yes
18	18	27	18	18
120	125	210	120	125
12	12	1/4/8	12	12
-	-	-	KEMA	-
yes	yes	yes	yes	yes
A.26/A.28	A.30	A.32	A.42/A.46	A.44/A.48

(2) Motor lines application
no 1+N execution in K curve
EP60K in page A.21
EP100K in page A.25

(3) EN/IEC 60898-2 and VDE 0641-2/3
(4) For EP100 UCR no K curve
(5) For EP100 R only B-C curves
(6) For EP100 R only 3

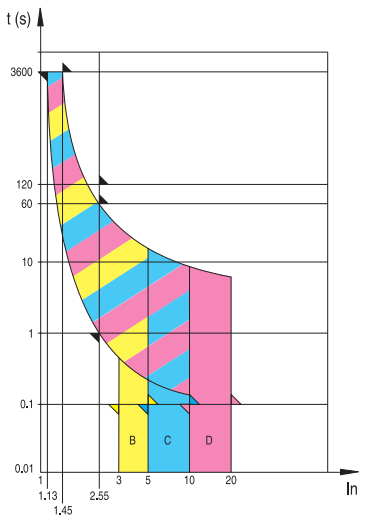
Short-circuit capacity of MCBs

Series				G30	G45	G60 / EP60 char. K
Short-circuit capacity AC			(kA)			
EN/IEC 60898-1	**Icn**	1P	230/400V	3	4.5	6
		1P+N	230V	3	4.5	6
		2P	230/400V	3	4.5	6
		3P/3P+N/4P	230/400V	3	4.5	6
	Ics (service)			100% Icn	100% Icn	100% Icn
EN/IEC 60947-2	**Icu** (ultimate)	1P	127V	-	-	20
			240V	5	6	10
			415V	3	3	3
		1P+N/2P	127V	-	15	30
			240	10	10	20
		2P	415V	5	6	10
		3P, 4P	240V	10	10	20
			415V	5	6	10
			440V	-	-	6
	Ics (service)			75% Icu	75% Icu	75% Icu
	NEMA AB1 (120/240V)			10	14	20
Short-circuit capacity DC			(kA)			
EN/IEC 60947-2	**Icu** (ultimate)	1P	≤60V ⎓	-	-	20
			≤220V ⎓	-	-	-
		2P	≤125V ⎓	-	-	25
			≤440V ⎓	-	-	-
	Ics (service)			-	-	100% Icu
Page				A.14	A.16	A.18/A.20

Characteristics according to EN/IEC 60898-1

Miniature Circuit Breakers (MCB) are intended for the protection of wiring installations against both overloads and short-circuits in domestic or commercial wiring installations where operation is possible by uninstructed people.

Tripping characteristic curves (EN/IEC 60898-1)



Magnetic release

An electromagnet with plunger ensures instantaneous tripping in the event of short-circuit. The standard distinguishes three different types, following the current for instantaneous release: type B,C,D.

Icn (A)	Test current	Tripping time	Applications
B	3 x In	0.1 < t < 45s (In ≤ 32A) 0.1 < t < 90s (In > 32A)	Only for resistive loads such as: - electrical heating
	5 x In	t < 0.1s	- water heater - stoves
C	5 x In	0.1 < t < 15s (In ≤ 32A) 0.1 < t < 30s (In > 32A)	Usual loads such as: - lighting
	10 x In	t < 0.1s	- socket-outlets - small motors
D	10 x In	0.1 < t < 4s(1) (In ≤ 32A) 0.1 < t < 8s (In > 32A)	Control and protection of circuits having important transient inrush currents
	20 x In	t < 0.1s	

(1) if In ≤ 10A, t < 8s

Thermal release

The release is initiated by a bimetal strip in case of overload. The standard defines the range of releases for specific overload values.
Reference ambient temperature is 30°C.

Test current	Tripping time
1.13 x In	t ≥ 1h (In ≤ 63A) t ≥ 2h (In > 63A)
1.45 x In	t < 1h (In ≤ 63A) t < 2h (In > 63A)
2.55 x In	1s < t < 60s (In ≤ 32A) 1 s < t < 120s (In > 32A)

G100 / EP100 char. K EP100T / EP100R	GT10	GT25	EP100 UC / EP100 UCR	Hti
10	-	-	6 (220VDC)[2]	-
10	-	-	-	-
10	-	-	6 (440VDC)[3]	-
10	-	-	-	-
75% Icn	-	-	100% Icn	-
30	25	50	-	-
15	10	50/25/20/15[1]	6[5]	B/C 10; D 7.5
4	-	-	-	4.5
40	30	-	-	-
30	20	50/50/40/30[1]	-	B/C 15
15	10	50/25/20/15[1]	6[5]	B/C 10; D 7.5
30	20	50/50/40/30[1]	-	B/C 15
15	10	50/25/20/15[1]	-	B/C 10; D 7.5
10	-	50/20/15/10[1]	-	-
50% Icu	75% Icu	50% Icu	-	100% Icu
30	30	-	-	-
25	20	25	-	10
-	-	-	10[4]	-
30	25	30	20[4]	15
-	-	-	10[4]	-
100% Icu	100% Icu	100% Icu	-	100% Icu
A.22/A.24/A.42/A.46	A.26	A.28	A.30/A.44	A.32

(1) 0.5-4A/6-25A/32-40A/50-63A
(2) 10 (125VDC)
(3) 10 (250VDC)
(4) T = 4ms
(5) 4.5kA for 50A and 63A

Characteristics according to EN/IEC 60947-2

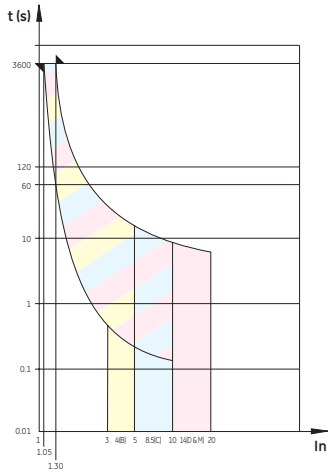
Magnetic release
An electromagnet with plunger ensures instantaneous tripping in the event of short-circuit. The standard leaves the calibration of magnetic release to the manufacturer's discretion.

GE offers instantaneous tripping ranges:
- B: 4 In
- C: 8.5 In (7.5 In for 63A)
- D and M: 14 In
- K: 10 In (6 In ≥ 2 s.)

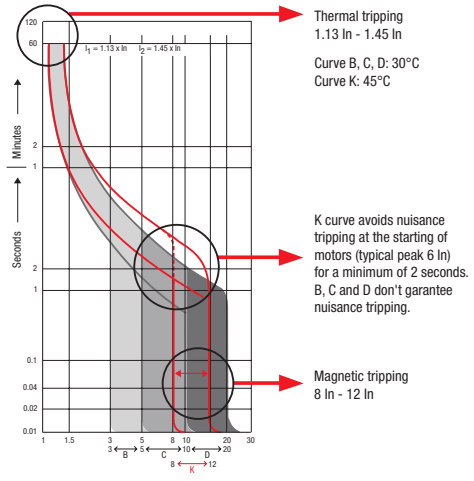
Thermal release
The release is initiated by a bimetal strip in case of overload. The standard defines the range of releases for two special overload values.
Reference ambient temperature is:
- 40°C for GT10 and GT25
- 50°C for G60 and G100, except for K: 45°C

Test current		Tripping time
B - C - D	K	
1.05 x In	1.13 x In	t ≥ 1h (In ≤ 63A) t ≥ 2h (In > 63A)
1.30 x In	1.45 x In	t < 1h (In ≤ 63A) t < 2h (In > 63A)

Tripping characteristic curves (EN/IEC 60947-2)



Curve K (EN/IEC 60947-2) versus B, C, D (EN/IEC 60898-1)



Technical data of MCBs

Series			EP60 UL	EP100 UL	EP100 ULH
Standards UL 1077 (recognized) and CSA C22.2			yes	yes	-
Standards UL 489 (listed)			-	-	yes
UL file			E151139	E151139	E256870
CSA file			235-04	235-04	-
Nominal voltage acc. UL & CSA		1P	277VAC/50VDC	277VAC/50VDC	120VAC/50VDC
		2P	480VAC/110VDC	480VAC/110VDC	240VAC/110VDC
		3P	480VAC/110VDC	480VAC/110VDC	240VAC/110VDC
		4P	480VAC/110VDC	480VAC/110VDC	-
Reference temperature		°C	25	25	25
Terminal capacity		60/75°C	14-4 AWG	14-4 AWG	14-8 AWG
Torque		N.m/lbs.in	2.5/22.5	2.5/22.5	2.5/22.5
Standards EN/IEC 60947-2			yes	yes	yes
Tripping characteristics			B,C,D	B,C,D	B,C,D
Nominal current		A	B 6-63, C/D 0.5-63	B 6-63, C/D 0.5-63	B 5-32, C/D 0.5-32
Calibration temperature		°C	50	50	50
Number of poles			1/2/3/4	1/2/3/4	1/2/3
Number of modules			1, 2, 3, 4	1, 2, 3, 4	1, 2, 3
Nominal voltage Un					
AC	1P	V	230/400	230/400	230/400
	1P+N	V	-	-	-
	2P	V	400	400	400
	3P	V	400	400	400
	3P+N/4P	V	400	400	400
DC	1P (1)	VDC	48	48	48
	2P (in series) (1)	VDC	110	110	110
Frequency		Hz	50/60	50/60	50/60
Maximum service voltage Ubmax between two wires		V	250/440; 53/120 ⎓	250/440; 53/120 ⎓	250/440; 53/120 ⎓
Minimum service voltage Ubmin		V	12 and 12 ⎓	12 and 12 ⎓	12 and 12 ⎓
Selectivity class (EN/IEC 60898)			3	3	3
Isolator application	EN/IEC 60947-2		yes	yes	yes
Rated insulation voltage	Pollution degree 2	V	500	500	500
	Pollution degree 3	V	440	440	440
Impulse withstand test voltage		kV	6	6	6
Insulation resistance		MΩ	10000	10000	10000
Dielectric rigidity		kV	2.5	2.5	2.5
Mounting position			Any	Any	Any
Incoming top or bottom			Any	Any	Any
Vibrations resistance (in x, y, z direction) (EN/IEC 77/16.3)			3g	3g	3g
Endurance	electrical at Un, In		10000	10000	10000
	mechanical		20000	20000	20000
Utilisation category (EN/IEC 60947-2)			A	A	A
Protection distance (EN/IEC 60947-2)		mm	12	12	12
Protection degree (outside / inside enclosure with door)			IP20/IP40	IP20/IP40	IP20/IP40
Self-extinguish degree (according to UL94)			V0	V0	V0
Tropicalisation (according to EN/IEC 60068-2 / DIN 40046)		°C/RH	+55°C / 95%RH	+55°C / 95%RH	+55°C / 95%RH
Operating temperature		°C	-25/+55	-25/+55	-25/+55
Storage temperature		°C	-55/+55	-55/+55	-55/+55
Terminal capacity					
	Rigid cable min/max (top)	mm^2	1/35	1/35	1/35
	Flexible cable min*/max (top)	mm^2	0.75/25	0.75/25	0.75/25
	Rigid cable min/max (bottom)	mm^2	1/35	1/35	1/35
	Flexible cable min*/max (bottom)	mm^2	0.75/25	0.75/25	0.75/25
	(* Flexible cable 0.75/1/1.5mm^2 with cable lug)				
	Torque	Nm	max 4.5	max 4.5	max 4.5
Add-on devices	Auxiliary contacts		yes	yes	yes
(side add-on)	Tele L		yes	yes	yes
	Tele MP		yes	yes	yes
Dimensions (HxDxW) 86x68xW (2)		mm/mod.	18	18	18
Weight/mod.		g	125	125	130
Package		mod.	see page A.37	see page A.39	see page A.41
Approvals			UL/CSA/VDE	UL/CSA/VDE	UL
CE-marking			yes	yes	yes
Page			A.36	A.38	A.40

(1) Preferred values of rated control supply voltage (EN/IEC 60947-2): 24VDC, 48VDC, 110VDC, 125VDC, 220VDC, 250VDC

(2) EP100ULH executions 2P and 3P: H = 116 mm

Short-circuit capacity of MCBs

Series			EP60 UL	EP100 UL	EP100 ULH
Interrupting capacity acc. to		kA	UL1077	UL1077	UL489
UL	1P	277VAC	6	10	-
	2P/3P/4P	480VAC	6	10	-
	1P	120VAC	6	10	10
	2P/3P	240VAC	6	10	10
	1P	50VDC	6	10	10
	2P	110VDC	6	10	10
Short-circuit capacity AC					
EN/IEC 60947-2	**Icu** (ultimate)	kA			
	1 P	127 V	20	30	30
		240V	10	15	15
		415 V	3	4	4
	1+N /2P	127 V	30	40	40
		240 V	20	30	30
	2 P	415 V	10	15	15
	3/3+N/4P	240 V	20	30	30
		415 V	10	15	15
		440 V	6	10	10
	Ics (service)		75% Icu	50% Icu	50% Icu
Short-circuit capacity DC					
EN/IEC 60947-2	**Icu** (ultimate)	kA			
	1 P	≤ 60 V ⎓	20	25	25
		≤ 220 V ⎓	-	-	-
	2 P	≤ 125 V ⎓	25	30	30
		≤ 440 V ⎓	-	-	-
	Ics (service)		100%Icu	100%Icu	10%Icu
Page			A.36	A.38	A.40

Characteristics according to EN/IEC 60947-2

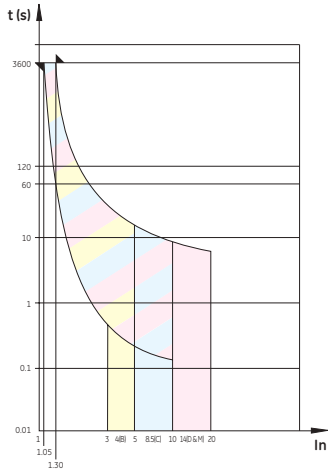
Magnetic release
An electromagnet with plunger ensures instantaneous tripping in the event of short-circuit. The standard leaves the calibration of magnetic release to the manufacturer's discretion.

GE offers instantaneous tripping ranges:
- B: 4 In
- C: 8.5 In (7.5 In for 63A)
- D: 14 In

Thermal release
The release is initiated by a bimetal strip in case of overload. The standard defines the range of releases for two special overload values.
Reference ambient temperature is 50°C

Test current B - C - D	Tripping time
1.05 x In	t ≥ 1h (In ≤ 63A) t ≥ 2h (In > 63A)
1.30 x In	t < 1h (In ≤ 63A) t < 2h (In > 63A)

Tripping characteristic curves (EN/IEC 60947-2)



Back-up protection (association)

Downstream: MCBs - Upstream: MCBs

Redline / Redline							U 230V
Downstream MCB		Upstream MCB (kA)					
Types		G60 and EPP60	G100 and EPP100	GT25	GT25	GT25	Hti
	In (A)	0.5-63	0.5-63	< 32	32-40	50-63	80-125
EPC 451N - EPC45	2-40	22	25	25	25	25	-
EPC 61N - EPC60	2-10	25	30	30	30	30	-
	16-20	25	30	30	30	30	-
	25-40	25	30	30	30	30	-
DM60	4-10	15	15	15	15	15	-
	16-20	15	15	15	15	15	-
	25-40	15	15	15	15	15	
DM100	4-10	15	15	15	15	15	-
	16-20	15	20	20	20	20	
	25-40	15	20	22	22	22	-
G45	6-40	15	20	22	22	22	16
G60	0.5-63	-	20	22	22	22	-
G100	0.5-63	-	-	50	35	30	-

Record Plus™ MCCBs at 220/240V AC

Upstream / Downstream	Icu	MCCBs Record Plus™																										
		FD160/160C	FD160/160E	FD160/160S	FD160/160N	FD160/160H	FD160/160L	FE160N	FE160H	FE160L	FE150V	FE250N	FE250H	FE250L	FG400N	FG400H	FG400L	FG630N	FG630H	FG630L	FK800N	FK800H	FK800L	FK1250N	FK1250H	FK1250L	FK1600N	FK1600H
	In (kA)	25	40	50	85	100	200	85	100	200	65	85	100	200	85	100	200	85	100	200	80	100	170	80	100	170	80	100
		Icu of the combination (kA)																										
Redline																												
EPC 451N / EPC 45	**6**	15	18	18	18	18	18	15	15	15	12	12	12	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DP45	**6**	15	18	22	22	22	22	18	18	18	15	15	15	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EPC 61N / EPC 60	**10**	16	20	23	23	23	23	20	20	20	16	16	16	16														
DP(A) 60	**10**	22	25	30	36	85	85	36	85	85	30	36	65	65	16	16	16	14	14	14	-	-	-	-	-	-	-	-
DPE100 / EPC 101N	**10**	18	22	25	25	25	25	22	22	22	18	18	18	18														
DP(A)100 & DPT 100	**15**	25	36	42	50	100	100	42	100	100	30	36	65	65	18	18	18	16	16	16								
G60 and EPP60	**20**	25	36	42	50	100	100	50	100	100	36	42	85	85	22	22	22	18	18	18	-	-	-	-	-	-	-	-
G100 and EPP100	**30**	-	42	50	65	100	100	65	100	100	42	50	85	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GT25 ≤25A	**50**	-	-	-	65	100	100	65	100	100	-	65	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GT25, 32 and 40A	**40**	-	-	50	65	100	100	65	100	100	42	50	85	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GT25, 50 and 63A	**30**	-	42	50	65	100	100	65	100	100	42	50	85	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Series Hti	**15**	22	36	42	50	100	100	50	100	100	36	42	80	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Series S90	**25**	-	36	42	85	100	100	85	100	100	36	50	85	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Surion																												
GPS1BS ≤16A	**100**	-	-	-	-	-	150	-	-	150	-	-	-	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS1BS >16A	**50**	-	-	-	85	100	150	-	100	150	-	-	100	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS1BH all	**100**	-	-	-	-	-	150	-	-	150	-	-	-	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS2BS ≤16A	**100**	-	-	-	-	-	150	-	-	150	-	-	-	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS2BS >16A	**50**	-	-	-	85	100	150	-	100	150	-	-	100	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS2BH all	**100**	-	-	-	-	-	150	-	-	150	-	-	-	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Record Plus™																												
FD160/160C	**18**	-	30	36	42	50	65	42	50	65	36	42	50	65	42	50	65	42	50	65	-	-	-	-	-	-	-	-
FD160/160E	**36**	-	-	50	65	85	100	65	85	100	50	65	85	100	65	85	100	65	85	100	-	-	-	-	-	-	-	-
FD160/160S	**50**	-	-	-	-	85	100	-	85	100	-	-	85	100	-	85	100	-	85	100	-	-	-	-	-	-	-	-
FD160/160N	**85**	-	-	-	-	100	200	-	100	200	-	-	100	200	-	100	200	-	100	200	80	100	150	80	100	150	80	100
FD160/160H	**100**	-	-	-	-	-	200	-	-	200	-	-	-	200	-	-	200	-	-	200	-	100	150	-	100	150	-	100
FE160N	**85**	-	-	-	-	-	-	-	100	200	-	-	100	200	-	100	200	-	100	200	80	100	150	80	100	150	80	100
FE160H	**100**	-	-	-	-	-	-	-	-	200	-	-	-	200	-	-	200	-	-	200	-	100	150	-	100	150	-	100
FE250N	**85**	-	-	-	-	-	-	-	-	-	-	-	100	200	-	100	200	-	100	200	80	100	150	80	100	150	80	100
FE250H	**100**	-	-	-	-	-	-	-	-	-	-	-	-	200	-	-	200	-	-	200	-	100	150	-	100	150	-	100
FG400N	**85**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	200	-	100	200	80	100	150	80	100	150	80	100
FG400H	**100**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	-	-	200	-	100	150	-	100	150	-	100
FG630N	**85**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	200	80	100	150	80	100	150	80	100
FG630H	**100**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	-	100	150	-	100	150	-	100
FK800N	**80**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	100	150	80	100	150	80	100
FK800H	**100**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	170	-	100	170	-	100
FK1250N	**80**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	100	170	80	100	170	80	100
FK1250H	**100**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	170	-	100	170	-	100

Record Plus™ MCCBs at 400/415V AC

Upstream / Downstream	Icu In (kA)	MCCBs Record Plus™																											
		FD160/160C	FD160/160E	FD160/160S	FD160/160N	FD160/160H	FD160/160L	FE160N	FE160H	FE160L	FE250V	FE250N	FE250H	FE250L	FG400N	FG400H	FG400L	FG630N	FG630H	FG630L	FK800N	FK800H	FK800L	FK1250N	FK1250H	FK1250L	FK1600N	FK1600H
		18	25	36	50	80	150	50	80	150	36	50	80	150	50	80	150	50	80	150	50	80	100	50	80	100	50	80
		Icu of the combination (kA)																										
Redline																												
EPC 452, 453 and 454	**6**	15	18	22	25	30	36	25	30	36	18	22	25	30	12	12	12	10	10	10	-	-	-	-	-	-	-	-
EPC60	**10**	16	20	23	25	34	40	28	34	40	20	25	30	32	15	15	15	10	10	10								
G60	**10**	18	22	25	30	36	42	30	36	42	22	30	36	36	16	16	16	12	12	12	-	-	-	-	-	-	-	-
G100	**15**	18	25	30	36	42	50	36	42	50	25	30	36	36	22	22	22	16	16	16	-	-	-	-	-	-	-	-
GT25 ≤25A	**25**	-	-	36	42	50	65	42	50	65	-	36	42	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GT25, 32 and 40A	**20**	-	-	30	36	42	50	36	42	50	-	36	42	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GT25, 50 and 63A	**15**	18	25	30	36	42	50	36	42	50	25	30	36	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Series Hti	**10**	15	18	25	30	36	42	30	36	42	18	30	36	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Series S90	**15**	18	25	30	36	42	50	36	42	50	25	36	42	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Surion																												
GPS1B/MS ≤10A	**100**	-	-	-	-	-	150	-	-	150	-	-	-	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS1B/MS 12.5A	**50**	-	-	-	-	80	150	-	80	150	-	-	80	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS1B/MS ≥16A	**25**	-	-	-	42	50	65	42	50	65	-	42	50	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS1B/MH ≤12.5A	**100**	-	-	-	-	-	150	-	-	150	-	-	-	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS1B/MH >12.5A	**50**	-	-	-	-	80	150	-	80	150	-	-	80	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS2B/MS 10A	**100**	-	-	-	-	-	150	-	-	150	-	-	-	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS2B/MS >10A	**25**	-	-	-	42	50	65	42	50	65	-	42	50	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS2B/MH 10A	**100**	-	-	-	-	-	150	-	-	150	-	-	-	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS2B/MH >10A	**50**	-	-	-	-	80	150	-	80	150	-	-	80	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Record Plus™																												
FD160/160C	**18**	-	22	25	30	36	42	30	36	42	22	30	36	42	30	36	42	30	36	42	-	-	-	-	-	-	-	-
FD160/160E	**25**	-	-	30	36	42	50	36	42	50	-	36	42	50	36	42	50	36	42	50	-	-	-	-	-	-	-	-
FD160/160S	**36**	-	-	-	42	50	65	42	50	65	-	42	50	65	42	50	65	42	50	65	-	-	-	-	-	-	-	-
FD160/160N	**50**	-	-	-	-	80	150	-	80	150	-	-	80	150	-	80	150	-	80	150	-	80	100	-	80	100	-	80
FD160/160H	**80**	-	-	-	-	-	150	-	-	150	-	-	-	150	-	-	150	-	-	150	-	-	100	-	-	100	-	-
FE160N	**50**	-	-	-	-	-	-	-	80	150	-	-	80	150	-	80	150	-	80	150	-	80	100	-	80	100	-	80
FE160H	**80**	-	-	-	-	-	-	-	-	150	-	-	-	150	-	-	150	-	-	150	-	-	100	-	-	100	-	-
FE250N	**50**	-	-	-	-	-	-	-	-	-	-	-	80	150	-	80	150	-	80	150	-	80	100	-	80	100	-	80
FE250H	**80**	-	-	-	-	-	-	-	-	-	-	-	-	150	-	-	150	-	-	150	-	-	100	-	-	100	-	-
FG400N	**50**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	150	-	80	150	-	80	100	-	80	100	-	80
FG400H	**80**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150	-	-	150	-	-	100	-	-	100	-	-
FG630N	**50**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	150	-	80	100	-	80	100	-	80
FG630H	**80**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150	-	-	100	-	-	100	-	-
FK800N	**50**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	100	-	80	100	-	80
FK800H	**80**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	100	-	-
FK1250N	**50**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	100	-	80	100	-	80
FK1250H	**80**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	100	-	-

Selectivity

Record Plus™ MCCBs

Upstream / Downstream	In (A)	MCCBs Record Plus™ — Selectivity limit (kA)[1]																	
		FDC and FDE 160 LTM						FDS 160 LTMD						FDN, H and L 160 LTMD					
		40	50	63	80	100	125 160	40	50	63	80	100	125 160	40	50	63	80	100	125 160
Redline EPC45 B/C curve	≤16	0.6	2.5	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	20	0.6	2.5	3	T	T	T	3.5	T	T	T	T	T	3.5	T	T	T	T	T
	25	-	0.8	1.2	T	T	T	1.6	3.5	T	T	T	T	1.6	3.5	T	T	T	T
	32	-	-	1.2	3	T	T	-	-	T	T	T	T	-	-	T	T	T	T
	40	-	-	-	3	4	T	-	-	-	T	T	T	-	-	-	T	T	T
Redline EPC60 and DME60 B/C curve	≥16	0.6	2.5	6	6	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	20	0.6	2.5	3	6	T	T	3.5	T	T	T	T	T	3.5	T	T	T	T	T
	25	-	0.8	1.2	6	6	T	1.6	3.5	T	T	T	T	1.6	3.5	T	T	T	T
	32	-	-	1.2	3	6	T	-	-	T	T	T	T	-	-	T	T	T	T
	40	-	-	-	3	4	6	-	-	-	T	T	T	-	-	-	T	T	T
Redline DM60 DME100 B/C curve	≤16	0.6	2.5	6	6	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	20	0.6	2.5	3	6	8	T	3.5	T	T	T	T	T	3.5	T	T	T	T	T
	25	-	0.8	1.2	6	6	T	1.6	3.5	T	T	T	T	1.6	3.5	T	T	T	T
	32	-	-	1.2	3	6	8	-	-	10	T	T	T	-	-	10	T	T	T
	40	-	-	-	3	4	6	-	-	-	T	T	T	-	-	-	T	T	T
	50	-	-	-	1.2	1.5	6	-	-	-	3.5	T	T	-	-	-	3.5	T	T
	63	-	-	-	-	1.5	2	-	-	-	-	8	T	-	-	-	-	8	T
Redline G60 EPC 101N DM100 B/C curve	≤16	0.6	2.5	6	6	10	T	10	10	T	T	T	T	10	10	T	T	T	T
	20	0.6	2.5	3	6	8	T	3.5	10	T	T	T	T	3.5	10	T	T	T	T
	25	-	0.8	1.2	6	6	T	1.6	3.5	T	T	T	T	1.6	3.5	T	T	T	T
	32	-	-	1.2	3	6	8	-	-	10	10	T	T	-	-	10	10	T	T
	40	-	-	-	3	4	6	-	-	-	10	T	T	-	-	-	10	T	T
	50	-	-	-	1.2	1.5	6	-	-	-	3.5	10	T	-	-	-	3.5	10	T
	63	-	-	-	-	1.5	2	-	-	-	-	8	T	-	-	-	-	8	T
Redline G100 GT25 B/C curve	≤16	0.6	2.5	6	6	10	T	10	10	T	T	T	T	10	10	T	T	T	T
	20	0.6	2.5	3	6	8	T	3.5	10	T	T	T	T	3.5	10	T	T	T	T
	25	-	0.8	1.2	6	6	T	1.6	3.5	15	T	T	T	1.6	3.5	15	T	T	T
	32	-	-	1.2	3	6	8	-	-	6	10	T	T	-	-	6	10	T	T
	40	-	-	-	3	4	6	-	-	-	10	15	T	-	-	-	10	15	T
	50	-	-	-	1.2	1.5	6	-	-	-	3.5	10	T	-	-	-	3.5	10	T
	63	-	-	-	-	1.5	2	-	-	-	-	8	T	-	-	-	-	8	T
Hti C curve	80	-	-	-	-	-	1.9	-	-	-	-	-	2.5	-	-	-	-	-	2.5
	100	-	-	-	-	-	1.9	-	-	-	-	-	2.5	-	-	-	-	-	2.5
S90 C curve	≤25	-	0.8	0.9	1.2	1.5	1.9	-	1	1.2	15	15	15	-	1	1.2	15	15	15
	32	-	-	0.9	1.2	1.5	1.9	-	-	1.2	15	15	15	-	-	1.2	15	15	15
	40	-	-	-	1.2	1.5	1.9	-	-	-	15	15	15	-	-	-	15	15	15
	50	-	-	-	1.2	1.5	1.9	-	-	-	15	15	15	-	-	-	15	15	15
	63	-	-	-	-	1.5	1.9	-	-	-	-	15	15	-	-	-	-	15	15
	80	-	-	-	-	-	1.9	-	-	-	-	-	15	-	-	-	-	-	15
	100	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	15
Surion GPS1BS and GPS1MS GPS2BS and GPS2MS	≤20	0.6	2.5	6	6	10	T	10	10	T	T	T	T	10	10	T	T	T	T
	25	-	1	1.2	6	6	T	-	3.5	15	15	T	T	-	3.5	15	15	T	T
	32	-	-	1.2	3	6	10	-	-	6	6	T	T	-	-	6	6	T	T
	40	-	-	-	3	4	6	-	-	-	6	T	T	-	-	-	6	T	T
	50	-	-	-	1.2	1.6	6	-	-	-	3.5	T	T	-	-	-	3.5	T	T
	63	-	-	-	-	1.6	2	-	-	-	-	8	T	-	-	-	-	8	T
Surion GPS1BH and GPS1MH GPS2BH and GPS2MH	≤20	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	25	-	2.5	15	15	T	T	-	3.5	T	T	T	T	-	3.5	T	T	T	T
	32	-	-	6	6	8	T	-	-	T	T	T	T	-	-	T	T	T	T
	40	-	-	-	6	8	T	-	-	T	T	T	T	-	-	T	T	T	T
	50	-	-	-	-	6	T	-	-	-	3.5	T	T	-	-	-	3.5	T	T
	63	-	-	-	-	-	T	-	-	-	-	8	T	-	-	-	-	8	T
Record Plus™ FD160/160E LTM	≤25	0.4	0.5	0.6	0.8	1	1.3	0.6	0.8	0.9	1.2	1.5	3.5	0.6	0.8	0.9	1.2	1.5	3.5
	32	-	0.5	0.6	0.8	1	1.3	-	0.8	0.9	1.2	1.5	3.5	-	0.8	0.9	1.2	1.5	3.5
	40	-	-	-	0.8	1	1.3	-	-	-	1.2	1.5	3.5	-	-	-	1.2	1.5	3.5
	50	-	-	-	0.8	1	1.3	-	-	-	1.2	1.5	3.5	-	-	-	1.2	1.5	3.5
	63	-	-	-	-	1	1.3	-	-	-	-	1.5	3.5	-	-	-	-	1.5	3.5
	80	-	-	-	-	-	1.3	-	-	-	-	-	3.5	-	-	-	-	-	3.5

(1) T = Full selectivity until the Icu of the downstream device.

Remark: For MCBs with D curve assume a C curve type with a one step higher rating.

Example: Selectivity FD160 80Amp LTM with downstream C curve 40A MCB = 3kA, for D curve 40A, take the value mentioned for 50A C curve, here 1.2kA.

Notes

Miniature Circuit Breakers

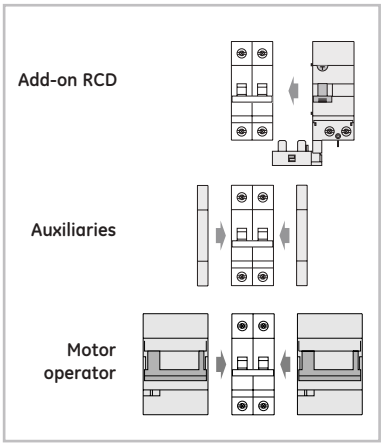
Series G30

EN/IEC 60898-1	3000 3
EN/IEC 60947-2	5kA

Application

Approval / Marking

Add-on devices



Add-on RCD pg B.32
Auxiliary contacts pg C.4
Motor operator pg C.7
Shunt trip pg C.8
Undervoltage release pg C.8
Panel board switch pg C.8

Accessories pg A.50
Busbars pg E.2
More technical data website
Dimensions pg A.80

Performance

Thermal setting In	(A)	2-40
Rated voltage AC Un	(V)	240/415
Minimum operating voltage $U_{B\ min}$	(V)	12
Tripping characteristics		B-C
Selectivity class		3
Mechanical/electrical endurance		20000/10000
Tropicalisation acc.to EN/IEC 60068-2		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	25-35
Poles		1, 2, 3, 4
Weight	(g/pole)	120

Short-circuit capacity

AC acc. to EN/IEC 60898-1

Poles	*V*	*Icn/Ics (kA)*
1-4	230/400	3

AC acc. to EN/IEC 60947-2

Poles	*V*	*Icu (kA)*
1	240	5
2	127	-
	240	10
	415	5
3, 4	240	10
	415	5

Series G30 - 3kA - characteristics B-C

	In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	Pack.
1P 1 mod.	2	-	-	G31C02	**674381**	12
	4	-	-	G31C04	**674383**	12
	6	G31B06	**674443**	G31C06	**674384**	12
	10	G31B10	**674445**	G31C10	**674386**	12
	16	G31B16	**674447**	G31C16	**674388**	12
	20	G31B20	**674448**	G31C20	**674389**	12
	25	G31B25	**674449**	G31C25	**674390**	12
	32	G31B32	**674450**	G31C32	**674391**	12
	40	G31B40	**674451**	G31C40	**674392**	12
2P 2 mod.	2	-	-	G32C02	**674397**	6
	4	-	-	G32C04	**674399**	6
	6	G32B06	**674454**	G32C06	**674400**	6
	10	G32B10	**674456**	G32C10	**674402**	6
	16	G32B16	**674458**	G32C16	**674404**	6
	20	G32B20	**674459**	G32C20	**674405**	6
	25	G32B25	**674460**	G32C25	**674406**	6
	32	G32B32	**674461**	G32C32	**674407**	6
	40	G32B40	**674462**	G32C40	**674408**	6
3P 3 mod.	2	-	-	G33C02	**674413**	4
	4	-	-	G33C04	**674415**	4
	6	G33B06	**674466**	G33C06	**674416**	4
	10	G33B10	**674468**	G33C10	**674418**	4
	16	G33B16	**674470**	G33C16	**674420**	4
	20	G33B20	**674471**	G33C20	**674421**	4
	25	G33B25	**674472**	G33C25	**674422**	4
	32	G33B32	**674473**	G33C32	**674423**	4
	40	G33B40	**674474**	G33C40	**674424**	4
4P 4 mod.	2	-	-	G34C02	**674429**	3
	4	-	-	G34C04	**674431**	3
	6	G34B06	**674477**	G34C06	**674432**	3
	10	G34B10	**674479**	G34C10	**674434**	3
	16	G34B16	**674481**	G34C16	**674436**	3
	20	G34B20	**674482**	G34C20	**674437**	3
	25	G34B25	**674483**	G34C25	**674438**	3
	32	G34B32	**674484**	G34C32	**674439**	3
	40	G34B40	**674485**	G34C40	**674440**	3

Miniature Circuit Breakers

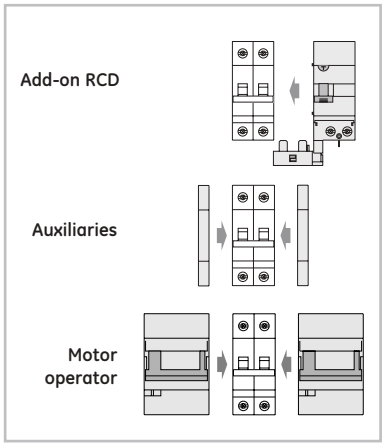
Series G45

EN/IEC 60898-1	4500 3
EN/IEC 60947-2	6kA

Application

Approval / Marking

Add-on devices



Add-on RCD pg B.32
Auxiliary contacts pg C.4
Motor operator pg C.7
Shunt trip pg C.8
Undervoltage release pg C.8
Panel board switch pg C.8

Accessories pg A.50
Busbars pg E.2
More technical data website
Dimensions pg A.80

Performance

Thermal setting In	(A)	2-40
Rated voltage AC Un	(V)	240/415
Minimum operating voltage $U_{B\ min}$	(V)	12
Tripping characteristics		B-C
Selectivity class		3
Mechanical/electrical endurance		20000/10000
Tropicalisation acc.to EN/IEC 60068-2		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	25-35
Poles		1, 2, 3, 4
Weight	(g/pole)	120

Short-circuit capacity

AC acc. to EN/IEC 60898-1

Poles	*V*	*Icn/Ics (kA)*
1-4	230/400	4.5

AC acc. to EN/IEC 60947-2

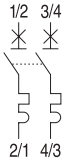
Poles	*V*	*Icu (kA)*
1	240	6
2	127	15
	240	10
	415	6
3, 4	240	10
	415	6

Compact MCBs 4.5 kA, see page A.60, A.64

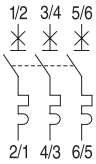
Series G45 - 4.5kA - characteristics B-C

1P
1 mod.

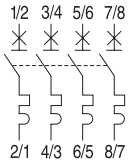
2P
2 mod.



3P
3 mod.



4P
4 mod.



In (A)	B		C		Pack.
	Cat. No.	Ref. No.	Cat. No.	Ref. No.	
2	-	-	G41C02	**674490**	12
4	-	-	G41C04	**674492**	12
6	G41B06	**674552**	G41C06	**674493**	12
10	G41B10	**674554**	G41C10	**674495**	12
16	G41B16	**674556**	G41C16	**674497**	12
20	G41B20	**674557**	G41C20	**674498**	12
25	G41B25	**674558**	G41C25	**674499**	12
32	G41B32	**674559**	G41C32	**674500**	12
40	G41B40	**674560**	G41C40	**674501**	12
2	-	-	G42C02	**674506**	6
4	-	-	G42C04	**674508**	6
6	G42B06	**674563**	G42C06	**674509**	6
10	G42B10	**674565**	G42C10	**674511**	6
16	G42B16	**674567**	G42C16	**674513**	6
20	G42B20	**674568**	G42C20	**674514**	6
25	G42B25	**674569**	G42C25	**674515**	6
32	G42B32	**674570**	G42C32	**674516**	6
40	G42B40	**674571**	G42C40	**674517**	6
2	-	-	G43C02	**674522**	4
4	-	-	G43C04	**674524**	4
6	G43B06	**674574**	G43C06	**674525**	4
10	G43B10	**674576**	G43C10	**674527**	4
16	G43B16	**674578**	G43C16	**674529**	4
20	G43B20	**674579**	G43C20	**674530**	4
25	G43B25	**674580**	G43C25	**674531**	4
32	G43B32	**674581**	G43C32	**674532**	4
40	G43B40	**674582**	G43C40	**674533**	4
2	-	-	G44C02	**674538**	3
4	-	-	G44C04	**674540**	3
6	G44B06	**674585**	G44C06	**674541**	3
10	G44B10	**674587**	G44C10	**674543**	3
16	G44B16	**674589**	G44C16	**674545**	3
20	G44B20	**674590**	G44C20	**674546**	3
25	G44B25	**674591**	G44C25	**674547**	3
32	G44B32	**674592**	G44C32	**674548**	3
40	G44B40	**674593**	G44C40	**674549**	3

Miniature Circuit Breakers

Series G60

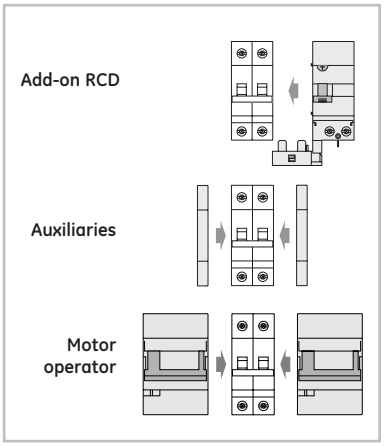
EN/IEC 60898-1	6000 3
EN/IEC 60947-2	10kA

Special executions G60S for Shipping application in separate document.

Applications

Approvals / Marking

Add-on devices



Add-on RCD pg B.32
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Motor operator pg C.7
Shunt trip pg C.8
Undervoltage release pg C.8
Panel board switch pg C.8

Accessories pg A.50
Busbars pg E.2
More technical data website
Dimensions pg A.80

Performance

Thermal setting In	(A)	2-63
Rated voltage AC Un	(V)	240/415
Minimum operating voltage $U_{B\ min}$	(V)	12
Tripping characteristics		B-C-D
Selectivity class		3
Mechanical/electrical endurance		20000/10000
Tropicalisation acc.to EN/IEC 60068-2		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	25-35
Poles		1, 1+N, 2, 3, 4
Weight	(g/pole)	120

Short-circuit capacity

AC acc. to EN/IEC 60898-1

Poles	*V*	*Icn/Ics (kA)*
1-4	230/400	6

AC acc. to EN/IEC 60947-2

Poles	*V*	*Icu (kA)(1)*
1	240	10
1+N, 2	127	30
	240	20
2	415	10
3, 4	240	20
	415	10

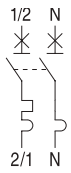
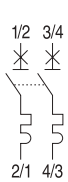
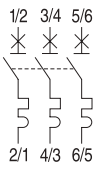
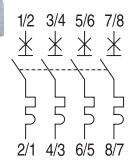
DC acc. to EN/IEC 60947-2

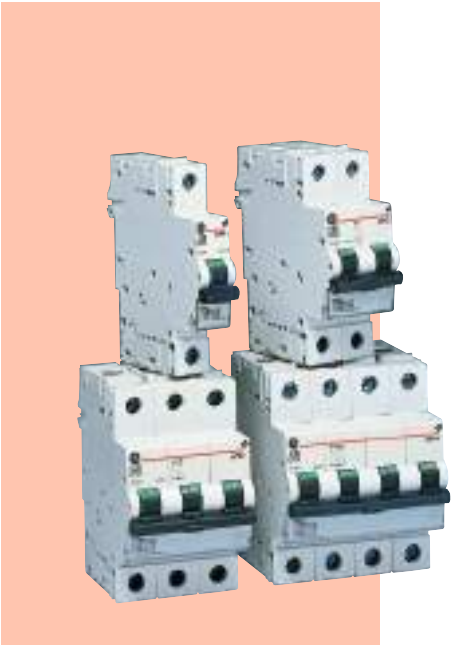
Poles	*V ⎓ (2)*	*Icu/Ics (kA)*
1	60	20
2	125	25

(1) Ics = 75% Icu
(2) Nominal and Maximum VDC on page A.4-A.5

Compact MCBs 6 kA, see page A.61, A.63, A.66
Screwless MCBs 6 kA, see page A.76

Series G60 - 6kA - characteristics B-C-D

	In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	D Cat. No.	D Ref. No.	Pack.
1P 1 mod.	2	-	-	G61C02	**674598**	G61D02	**674760**	12
	4	-	-	G61C04	**674600**	G61D04	**674762**	12
	6	G61B06	**674692**	G61C06	**674601**	G61D06	**674763**	12
	10	G61B10	**674694**	G61C10	**674603**	G61D10	**674765**	12
	16	G61B16	**674696**	G61C16	**674605**	G61D16	**674767**	12
	20	G61B20	**674697**	G61C20	**674606**	G61D20	**674768**	12
	25	G61B25	**674698**	G61C25	**674607**	G61D25	**674769**	12
	32	G61B32	**674699**	G61C32	**674608**	G61D32	**674770**	12
	40	G61B40	**674700**	G61C40	**674609**	G61D40	**674771**	12
	50	G61B50	**674701**	G61C50	**674610**	G61D50	**674772**	12
	63	G61B63	**674702**	G61C63	**674611**	G61D63	**674773**	12
1P+N 2 mod. 	2	-	-	G61NC02	**674614**	G61ND02	**674776**	6
	4	-	-	G61NC04	**674616**	G61ND04	**674778**	6
	6	G61NB06	**674703**	G61NC06	**674617**	G61ND06	**674779**	6
	10	G61NB10	**674705**	G61NC10	**674619**	G61ND10	**674781**	6
	16	G61NB16	**674707**	G61NC16	**674621**	G61ND16	**674783**	6
	20	G61NB20	**674708**	G61NC20	**674622**	G61ND20	**674784**	6
	25	G61NB25	**674709**	G61NC25	**674623**	G61ND25	**674785**	6
	32	G61NB32	**674710**	G61NC32	**674624**	G61ND32	**674786**	6
	40	G61NB40	**674711**	G61NC40	**674625**	G61ND40	**674787**	6
	50	G61NB50	**674712**	G61NC50	**674626**	G61ND50	**674788**	6
	63	G61NB63	**674713**	G61NC63	**674627**	G61ND63	**674789**	6
2P 2 mod. 	2	-	-	G62C02	**674630**	G62D02	**674792**	6
	4	-	-	G62C04	**674632**	G62D04	**674794**	6
	6	G62B06	**674714**	G62C06	**674633**	G62D06	**674795**	6
	10	G62B10	**674716**	G62C10	**674635**	G62D10	**674797**	6
	16	G62B16	**674718**	G62C16	**674637**	G62D16	**674799**	6
	20	G62B20	**674719**	G62C20	**674638**	G62D20	**674800**	6
	25	G62B25	**674720**	G62C25	**674639**	G62D25	**674801**	6
	32	G62B32	**674721**	G62C32	**674640**	G62D32	**674802**	6
	40	G62B40	**674722**	G62C40	**674641**	G62D40	**674803**	6
	50	G62B50	**674723**	G62C50	**674642**	G62D50	**674804**	6
	63	G62B63	**674724**	G62C63	**674643**	G62D63	**674805**	6
3P 3 mod. 	2	-	-	G63C02	**674646**	G63D02	**674808**	4
	4	-	-	G63C04	**674648**	G63D04	**674810**	4
	6	G63B06	**674725**	G63C06	**674649**	G63D06	**674811**	4
	10	G63B10	**674727**	G63C10	**674651**	G63D10	**674813**	4
	16	G63B16	**674729**	G63C16	**674653**	G63D16	**674815**	4
	20	G63B20	**674730**	G63C20	**674654**	G63D20	**674816**	4
	25	G63B25	**674731**	G63C25	**674655**	G63D25	**674817**	4
	32	G63B32	**674732**	G63C32	**674656**	G63D32	**674818**	4
	40	G63B40	**674733**	G63C40	**674657**	G63D40	**674819**	4
	50	G63B50	**674734**	G63C50	**674658**	G63D50	**674820**	4
	63	G63B63	**674735**	G63C63	**674659**	G63D63	**674821**	4
4P 4 mod. 	0.5	-	-	G64C0.5	**674660**			3
	2	-	-	G64C02	**674662**	G64D02	**674824**	3
	4	-	-	G64C04	**674664**	G64D04	**674826**	3
	6	G64B06	**674736**	G64C06	**674665**	G64D06	**674827**	3
	10	G64B10	**674738**	G64C10	**674667**	G64D10	**674829**	3
	16	G64B16	**674740**	G64C16	**674669**	G64D16	**674831**	3
	20	G64B20	**674741**	G64C20	**674670**	G64D20	**674832**	3
	25	G64B25	**674742**	G64C25	**674671**	G64D25	**674833**	3
	32	G64B32	**674743**	G64C32	**674672**	G64D32	**674834**	3
	40	G64B40	**674744**	G64C40	**674673**	G64D40	**674835**	3
	50	G64B50	**674745**	G64C50	**674674**	G64D50	**674836**	3
	63	G64B63	**674746**	G64C63	**674675**	G64D63	**674837**	3

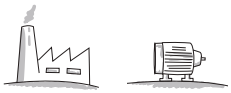


Miniature Circuit Breakers

Series EP60

EN/IEC 60898-1	6000
EN/IEC 60947-2	10kA

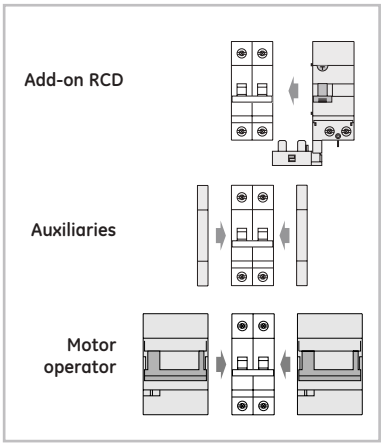
Applications



Marking

CE

Add-on devices



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Auxiliary contacts pg C.4
Motor operator pg C.7
Shunt trip pg C.8
Undervoltage release pg C.8
Panel board switch pg C.8

Accessories pg A.50
Busbars pg E.2
More technical data website
Dimensions pg A.80

Performance

Thermal setting In	(A)	2-63
Rated voltage AC Un	(V)	240/415
Minimum operating voltage $U_{B\ min}$	(V)	12
Tripping characteristics		8-12 In (K) and 6 In non tripping ≤ 2 sec.
Mechanical/electrical endurance		20000/10000
Tropicalisation acc.to EN/IEC 60068-2		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	25-35
Poles		1, 2, 3, 4
Weight	(g/pole)	120

Short-circuit capacity

AC acc. to EN/IEC 60947-2

Poles	*V*	*Icu (kA)[1]*
1	240	10
1+N, 2	127	30
	240	20
2	415	10
3, 4	240	20
	415	10

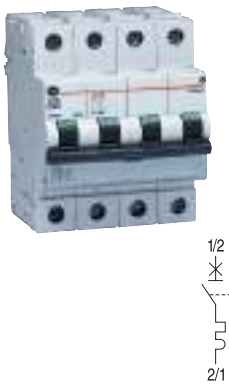
DC acc. to EN/IEC 60947-2

Poles	*V ⎓ [2]*	*Icu/Ics (kA)*
1	60	20
2	125	25

(1) Ics = 75% Icu
(2) Nominal and Maximum VDC on page A.4-A.5

Series EP60 - 6kA - characteristic K

	In (A)	K Cat. No.	K Ref. No.	Pack.
1P 1 mod.	0.5	EP61K0.5	**681600**	12
	1	EP61K01	**681601**	12
	1.6	EP61K1.6	**681602**	12
	2	EP61K02	**681603**	12
	3	EP61K03	**681604**	12
	4	EP61K04	**681605**	12
	6	EP61K06	**681606**	12
	8	EP61K08	**681607**	12
	10	EP61K10	**681608**	12
	16	EP61K16	**681609**	12
	20	EP61K20	**681610**	12
	25	EP61K25	**681611**	12
	32	EP61K32	**681612**	12
	40	EP61K40	**681613**	12
	50	EP61K50	**681614**	12
	63	EP61K63	**681615**	12
2P 2 mod.	0.5	EP62K0.5	**681616**	6
	1	EP62K01	**681617**	6
	1.6	EP62K1.6	**681618**	6
	2	EP62K02	**681619**	6
	3	EP62K03	**681620**	6
	4	EP62K04	**681621**	6
	6	EP62K06	**681622**	6
	8	EP62K08	**681623**	6
	10	EP62K10	**681624**	6
	16	EP62K16	**681625**	6
	20	EP62K20	**681626**	6
	25	EP62K25	**681627**	6
	32	EP62K32	**681628**	6
	40	EP62K40	**681629**	6
	50	EP62K50	**681630**	6
	63	EP62K63	**681631**	6
3P 3 mod.	0.5	EP63K0.5	**681632**	4
	1	EP63K01	**681633**	4
	1.6	EP63K1.6	**681634**	4
	2	EP63K02	**681635**	4
	3	EP63K03	**681636**	4
	4	EP63K04	**681637**	4
	6	EP63K06	**681638**	4
	8	EP63K08	**681639**	4
	10	EP63K10	**681640**	4
	16	EP63K16	**681641**	4
	20	EP63K20	**681642**	4
	25	EP63K25	**681643**	4
	32	EP63K32	**681644**	4
	40	EP63K40	**681645**	4
	50	EP63K50	**681646**	4
	63	EP63K63	**681647**	4
4P 4 mod.	0.5	EP64K0.5	**681648**	3
	1	EP64K01	**681649**	3
	1.6	EP64K1.6	**681650**	3
	2	EP64K02	**681651**	3
	3	EP64K03	**681652**	3
	4	EP64K04	**681653**	3
	6	EP64K06	**681654**	3
	8	EP64K08	**681655**	3
	10	EP64K10	**681656**	3
	16	EP64K16	**681657**	3
	20	EP64K20	**681658**	3
	25	EP64K25	**681659**	3
	32	EP64K32	**681660**	3
	40	EP64K40	**681661**	3
	50	EP64K50	**681662**	3
	63	EP64K63	**681663**	3



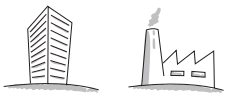
Miniature Circuit Breakers

Series G100

EN/IEC 60898-1	10000 / 3
EN/IEC 60947-2	15kA

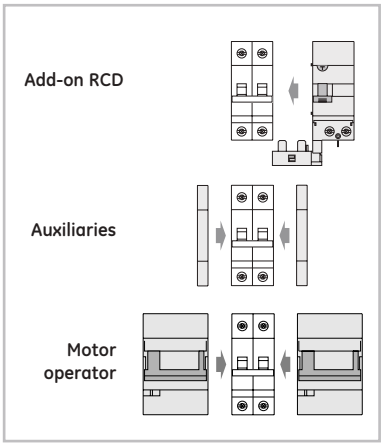
Special executions G100S for Shipping application and EP100R for Railways application in separate document.

Applications



Approvals / Marking

Add-on devices



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Panel board switch pg C.8

Accessories pg A.50
Busbars pg E.2
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Dimensions pg A.80

Performance

Thermal setting In	(A)	0.5-63
Rated voltage AC Un	(V)	240/415
Minimum operating voltage $U_{B\ min}$	(V)	12
Tripping characteristics		B-C-D
Selectivity class		3
Mechanical/electrical endurance		20000/10000
Tropicalisation acc.to EN/IEC 60068-2		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	25-35
Poles		1, 1+N, 2, 3, 4
Weight	(g/pole)	120

Short-circuit capacity

AC acc. to EN/IEC 60898-1

Poles	*V*	*Icn (kA)[1]*
1-4	230/400	10

AC acc. to EN/IEC 60947-2

Poles	*V*	*Icu (kA)[2]*
1	240	15
1+N, 2	127	40
	240	30
2	415	15
3, 4	240	30
	415	15

DC acc. to EN/IEC 60947-2

Poles	*V ⎓ [3]*	*Icu/Ics (kA)*
1	60	25
2	125	30

(1) Ics = 75% Icu
(2) Ics = 50% Icu
(3) Nominal and Maximum VDC on page A.4-A.5

Screwless MCBs 10 kA, see page A.78

Series G100 - 10kA - characteristics B-C-D

1P
1 mod.

1/2
2/1

In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	D Cat. No.	D Ref. No.	Pack.
0.5	-	-	G101C0.5	**674854**	G101D0.5	**675016**	12
1	-	-	G101C01	**674855**	G101D01	**675017**	12
2	-	-	G101C02	**674856**	G101D02	**675018**	12
3	-	-	G101C03	**674857**	G101D03	**675019**	12
4	-	-	G101C04	**674858**	G101D04	**675020**	12
6	G101B06	**674950**	G101C06	**674859**	G101D06	**675021**	12
10	G101B10	**674952**	G101C10	**674861**	G101D10	**675023**	12
13	G101B13	**674953**	G101C13	**674862**	G101D13	**675024**	12
16	G101B16	**674954**	G101C16	**674863**	G101D16	**675025**	12
20	G101B20	**674955**	G101C20	**674864**	G101D20	**675026**	12
25	G101B25	**674956**	G101C25	**674865**	G101D25	**675027**	12
32	G101B32	**674957**	G101C32	**674866**	G101D32	**675028**	12
40	G101B40	**674958**	G101C40	**674867**	G101D40	**675029**	12
50	G101B50	**674959**	G101C50	**674868**	G101D50	**675030**	12
63	G101B63	**674960**	G101C63	**674869**	G101D63	**675031**	12

1P+N
2 mod.

1/2 N
2/1 N

In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	D Cat. No.	D Ref. No.	Pack.
0.5	-	-	-	-	G101ND0.5	**675032**	6
1	-	-	-	-	G101ND01	**675033**	6
2	-	-	G101NC02	**674872**	G101ND02	**675034**	6
3	-	-	G101NC03	**674873**	G101ND03	**675035**	6
4	-	-	G101NC04	**674874**	G101ND04	**675036**	6
6	G101NB06	**674961**	G101NC06	**674875**	G101ND06	**675037**	6
10	G101NB10	**674963**	G101NC10	**674877**	G101ND10	**675039**	6
13	G101NB13	**674964**	G101NC13	**674878**	G101ND13	**675040**	6
16	G101NB16	**674965**	G101NC16	**674879**	G101ND16	**675041**	6
20	G101NB20	**674966**	G101NC20	**674880**	G101ND20	**675042**	6
25	G101NB25	**674967**	G101NC25	**674881**	G101ND25	**675043**	6
32	G101NB32	**674968**	G101NC32	**674882**	G101ND32	**675044**	6
40	G101NB40	**674969**	G101NC40	**674883**	G101ND40	**675045**	6
50	G101NB50	**674970**	G101NC50	**674884**	G101ND50	**675046**	6
63	G101NB63	**674971**	G101NC63	**674885**	G101ND63	**675047**	6

2P
2 mod.

1/2 3/4
2/1 4/3

In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	D Cat. No.	D Ref. No.	Pack.
0.5	-	-	G102C0.5	**674886**	G102D0.5	**675048**	6
1	-	-	G102C01	**674887**	G102D01	**675049**	6
2	-	-	G102C02	**674888**	G102D02	**675050**	6
3	-	-	G102C03	**674889**	G102D03	**675051**	6
4	-	-	G102C04	**674890**	G102D04	**675052**	6
6	G102B06	**674972**	G102C06	**674891**	G102D06	**675053**	6
10	G102B10	**674974**	G102C10	**674893**	G102D10	**675055**	6
13	G102B13	**674975**	G102C13	**674894**	G102D13	**675056**	6
16	G102B16	**674976**	G102C16	**674895**	G102D16	**675057**	6
20	G102B20	**674977**	G102C20	**674896**	G102D20	**675058**	6
25	G102B25	**674978**	G102C25	**674897**	G102D25	**675059**	6
32	G102B32	**674979**	G102C32	**674898**	G102D32	**675060**	6
40	G102B40	**674980**	G102C40	**674899**	G102D40	**675061**	6
50	G102B50	**674981**	G102C50	**674900**	G102D50	**675062**	6
63	G102B63	**674982**	G102C63	**674901**	G102D63	**675063**	6

3P
3 mod.

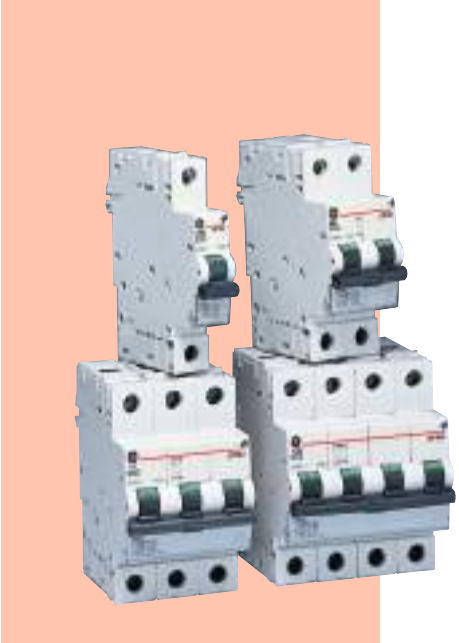
1/2 3/4 5/6
2/1 4/3 6/5

In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	D Cat. No.	D Ref. No.	Pack.
0.5	-	-	G103C0.5	**674902**	G103D0.5	**675064**	4
1	-	-	G103C01	**674903**	G103D01	**675065**	4
2	-	-	G103C02	**674904**	G103D02	**675066**	4
3	-	-	G103C03	**674905**	G103D03	**675067**	4
4	-	-	G103C04	**674906**	G103D04	**675068**	4
6	G103B06	**674983**	G103C06	**674907**	G103D06	**675069**	4
10	G103B10	**674985**	G103C10	**674909**	G103D10	**675071**	4
13	G103B13	**674986**	G103C13	**674910**	G103D13	**675072**	4
16	G103B16	**674987**	G103C16	**674911**	G103D16	**675073**	4
20	G103B20	**674988**	G103C20	**674912**	G103D20	**675074**	4
25	G103B25	**674989**	G103C25	**674913**	G103D25	**675075**	4
32	G103B32	**674990**	G103C32	**674914**	G103D32	**675076**	4
40	G103B40	**674991**	G103C40	**674915**	G103D40	**675077**	4
50	G103B50	**674992**	G103C50	**674916**	G103D50	**675078**	4
63	G103B63	**674993**	G103C63	**674917**	G103D63	**675079**	4

4P
4 mod.

1/2 3/4 5/6 7/8
2/1 4/3 6/5 8/7

In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	D Cat. No.	D Ref. No.	Pack.
0.5	-	-	G104C0.5	**674918**	G104D0.5	**675080**	3
1	-	-	G104C01	**674919**	G104D01	**675081**	3
2	-	-	G104C02	**674920**	G104D02	**675082**	3
3	-	-	G104C03	**674921**	G104D03	**675083**	3
4	-	-	G104C04	**674922**	G104D04	**675084**	3
6	G104B06	**674994**	G104C06	**674923**	G104D06	**675085**	3
10	G104B10	**674996**	G104C10	**674925**	G104D10	**675087**	3
13	G104B13	**674997**	G104C13	**674926**	G104D13	**675088**	3
16	G104B16	**674998**	G104C16	**674927**	G104D16	**675089**	3
20	G104B20	**674999**	G104C20	**674928**	G104D20	**675090**	3
25	G104B25	**675000**	G104C25	**674929**	G104D25	**675091**	3
32	G104B32	**675001**	G104C32	**674930**	G104D32	**675092**	3
40	G104B40	**675002**	G104C40	**674931**	G104D40	**675093**	3
50	G104B50	**675003**	G104C50	**674932**	G104D50	**675094**	3
63	G104B63	**675004**	G104C63	**674933**	G104D63	**675095**	3

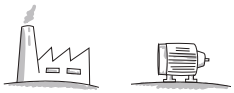


Miniature Circuit Breakers

Series EP100

EN/IEC 60898-1	10000
EN/IEC 60947-2	15kA

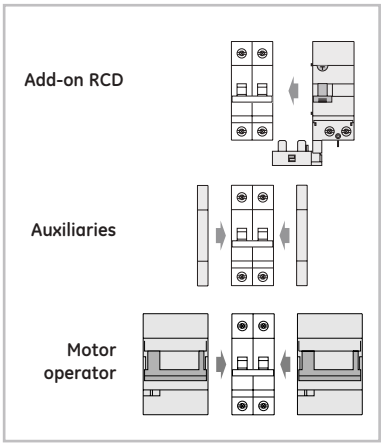
Applications



Marking

CE

Add-on devices



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Motor operator pg C.7
Shunt trip pg C.8
Undervoltage release pg C.8
Panel board switch pg C.8

Accessories pg A.50
Busbars pg E.2
More technical data website
Dimensions pg A.80

Performance

Thermal setting In	(A)	0.5-63
Rated voltage AC Un	(V)	240/415
Minimum operating voltage $U_{B\ min}$	(V)	12
Tripping characteristics		8-12 In (K) and 6 In non tripping ≤ 2 sec.
Mechanical/electrical endurance		20000/10000
Tropicalisation acc.to EN/IEC 60068-2		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	25-35
Poles		1, 2, 3, 4
Weight	(g/pole)	120

Short-circuit capacity

AC acc. to EN/IEC 60947-2

Poles	*V*	*Icu (kA)[1]*
1	240	15
1+N, 2	127	40
	240	30
2	415	15
3, 4	240	30
	415	15

DC acc. to EN/IEC 60947-2

Poles	*V ⎓ [2]*	*Icu/Ics (kA)*
1	60	25
2	125	30

(1) Ics = 50% Icu
(2) Nominal and Maximum VDC on page A.4-A.5

Series EP100 - 10kA - characteristic K

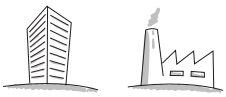
	In (A)	K Cat. No.	K Ref. No.	Pack.
1P 1 mod.	0.5	EP101K0.5	**672402**	12
	1	EP101K01	**672403**	12
	1.6	EP101K1.6	**681588**	12
	2	EP101K02	**672404**	12
	3	EP101K03	**672405**	12
	4	EP101K04	**672406**	12
	6	EP101K06	**672407**	12
	8	EP101K08	**672408**	12
	10	EP101K10	**672409**	12
	16	EP101K16	**672411**	12
	20	EP101K20	**672412**	12
	25	EP101K25	**672413**	12
	32	EP101K32	**672414**	12
	40	EP101K40	**672415**	12
	50	EP101K50	**672416**	12
	63	EP101K63	**672417**	12
2P 2 mod.	0.5	EP102K0.5	**672434**	6
	1	EP102K01	**672435**	6
	1.6	EP102K1.6	**681591**	6
	2	EP102K02	**672436**	6
	3	EP102K03	**672437**	6
	4	EP102K04	**672438**	6
	6	EP102K06	**672439**	6
	8	EP102K08	**672440**	6
	10	EP102K10	**672441**	6
	16	EP102K16	**672443**	6
	20	EP102K20	**672444**	6
	25	EP102K25	**672445**	6
	32	EP102K32	**672446**	6
	40	EP102K40	**672447**	6
	50	EP102K50	**672448**	6
	63	EP102K63	**672449**	6
3P 3 mod.	0.5	EP103K0.5	**672450**	4
	1	EP103K01	**672451**	4
	1.6	EP103K1.6	**681594**	4
	2	EP103K02	**672452**	4
	3	EP103K03	**672453**	4
	4	EP103K04	**672454**	4
	6	EP103K06	**672455**	4
	8	EP103K08	**672456**	4
	10	EP103K10	**672457**	4
	16	EP103K16	**672459**	4
	20	EP103K20	**672460**	4
	25	EP103K25	**672461**	4
	32	EP103K32	**672462**	4
	40	EP103K40	**672463**	4
	50	EP103K50	**672464**	4
	63	EP103K63	**672465**	4
4P 4 mod.	0.5	EP104K0.5	**672466**	3
	1	EP104K01	**672467**	3
	1.6	EP104K1.6	**681597**	3
	2	EP104K02	**672468**	3
	3	EP104K03	**672469**	3
	4	EP104K04	**672470**	3
	6	EP104K06	**672471**	3
	8	EP104K08	**672472**	3
	10	EP104K10	**672473**	3
	16	EP104K16	**672475**	3
	20	EP104K20	**672476**	3
	25	EP104K25	**672477**	3
	32	EP104K32	**672478**	3
	40	EP104K40	**672479**	3
	50	EP104K50	**672480**	3
	63	EP104K63	**672481**	3

Miniature Circuit Breakers

Series GT10

EN/IEC 60947-2 **10kA**

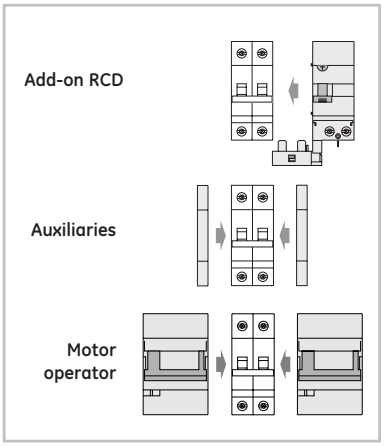
Applications



Marking

CE

Add-on devices



Add-on RCD pg B.32
Auxiliary contacts pg C.4
Motor operator pg C.7
Shunt trip pg C.8
Undervoltage release pg C.8
Panel board switch pg C.8

Accessories pg A.50
Busbars pg E.2
More technical data website
Dimensions pg A.80

Performance

Thermal setting In	(A)	0.5-63
Rated voltage AC Un	(V)	240/415
Minimum operating voltage $U_{B\ min}$	(V)	12
Tripping characteristics		3-5In (B) 5-10In (C) 10-20In (D)
Mechanical/electrical endurance		20000/10000
Tropicalisation acc.to EN/IEC 60068-2		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	25-35
Poles		1, 2, 3, 4
Weight	(g/pole)	120

Short-circuit capacity

AC acc. to EN/IEC 60947-2

Poles	*V*	*Icu (kA)[1]*
1	240	10
2	127	30
	240	20
	415	10
3, 4	240	20
	415	10

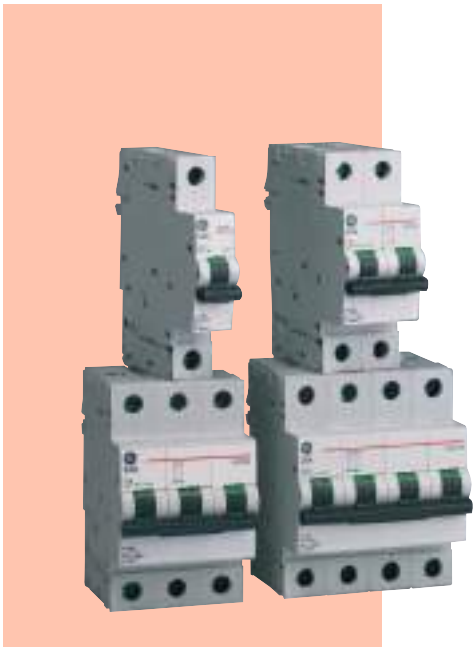
DC acc. to EN/IEC 60947-2

Poles	*V ⎓ [2]*	*Icu (kA)/Ics (kA)*
1	60	20
2	125	25

(1) Ics = 75% Icu
(2) Nominal and Maximum VDC on page A.4-A.5

Series GT10 - 10kA - 3-5In (B), 5-10In (C), 10-20In (D)

		3-5In (B)		5-10In (C)		10-20In (D)		
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
1P 1 mod.	0.5	-	-	GT101C0.5	**675112**	GT101D0.5	**675220**	12
	1	-	-	GT101C01	**675113**	GT101D01	**675221**	12
	2	-	-	GT101C02	**675114**	GT101D02	**675222**	12
	3	-	-	GT101C03	**675115**	GT101D03	**675223**	12
	4	-	-	GT101C04	**675116**	GT101D04	**675224**	12
	6	GT101B06	**675176**	GT101C06	**675117**	GT101D06	**675225**	12
	10	GT101B10	**675178**	GT101C10	**675119**	GT101D10	**675227**	12
	13	GT101B13	**675179**	GT101C13	**675120**	GT101D13	**675228**	12
	16	GT101B16	**675180**	GT101C16	**675121**	GT101D16	**675229**	12
	20	GT101B20	**675181**	GT101C20	**675122**	GT101D20	**675230**	12
	25	GT101B25	**675182**	GT101C25	**675123**	GT101D25	**675231**	12
	32	GT101B32	**675183**	GT101C32	**675124**	GT101D32	**675232**	12
	40	GT101B40	**675184**	GT101C40	**675125**	GT101D40	**675233**	12
	50	GT101B50	**675185**	GT101C50	**675126**	GT101D50	**675234**	12
	63	GT101B63	**675186**	GT101C63	**675127**	GT101D63	**675235**	12
2P 2 mod.	0.5	-	-	GT102C0.5	**675128**	GT102D0.5	**675236**	6
	1	-	-	GT102C01	**675129**	GT102D01	**675237**	6
	2	-	-	GT102C02	**675130**	GT102D02	**675238**	6
	3	-	-	GT102C03	**675131**	GT102D03	**675239**	6
	4	-	-	GT102C04	**675132**	GT102D04	**675240**	6
	6	GT102B06	**675187**	GT102C06	**675133**	GT102D06	**675241**	6
	10	GT102B10	**675189**	GT102C10	**675135**	GT102D10	**675243**	6
	13	GT102B13	**675190**	GT102C13	**675136**	GT102D13	**675244**	6
	16	GT102B16	**675191**	GT102C16	**675137**	GT102D16	**675245**	6
	20	GT102B20	**675192**	GT102C20	**675138**	GT102D20	**675246**	6
	25	GT102B25	**675193**	GT102C25	**675139**	GT102D25	**675247**	6
	32	GT102B32	**675194**	GT102C32	**675140**	GT102D32	**675248**	6
	40	GT102B40	**675195**	GT102C40	**675141**	GT102D40	**675249**	6
	50	GT102B50	**675196**	GT102C50	**675142**	GT102D50	**675250**	6
	63	GT102B63	**675197**	GT102C63	**675143**	GT102D63	**675251**	6
3P 3 mod.	0.5	-	-	GT103C0.5	**675144**	GT103D0.5	**675252**	4
	1	-	-	GT103C01	**675145**	GT103D01	**675253**	4
	2	-	-	GT103C02	**675146**	GT103D02	**675254**	4
	3	-	-	GT103C03	**675147**	GT103D03	**675255**	4
	4	-	-	GT103C04	**675148**	GT103D04	**675256**	4
	6	GT103B06	**675198**	GT103C06	**675149**	GT103D06	**675257**	4
	10	GT103B10	**675200**	GT103C10	**675151**	GT103D10	**675259**	4
	13	GT103B13	**675201**	GT103C13	**675152**	GT103D13	**675260**	4
	16	GT103B16	**675202**	GT103C16	**675153**	GT103D16	**675261**	4
	20	GT103B20	**675203**	GT103C20	**675154**	GT103D20	**675262**	4
	25	GT103B25	**675204**	GT103C25	**675155**	GT103D25	**675263**	4
	32	GT103B32	**675205**	GT103C32	**675156**	GT103D32	**675264**	4
	40	GT103B40	**675206**	GT103C40	**675157**	GT103D40	**675265**	4
	50	GT103B50	**675207**	GT103C50	**675158**	GT103D50	**675266**	4
	63	GT103B63	**675208**	GT103C63	**675159**	GT103D63	**675267**	4
4P 4 mod.	0.5	-	-	GT104C0.5	**675160**	GT104D0.5	**675268**	3
	1	-	-	GT104C01	**675161**	GT104D01	**675269**	3
	2	-	-	GT104C02	**675162**	GT104D02	**675270**	3
	3	-	-	GT104C03	**675163**	GT104D03	**675271**	3
	4	-	-	GT104C04	**675164**	GT104D04	**675272**	3
	6	GT104B06	**675209**	GT104C06	**675165**	GT104D06	**675273**	3
	10	GT104B10	**675211**	GT104C10	**675167**	GT104D10	**675275**	3
	13	GT104B13	**675212**	GT104C13	**675168**	GT104D13	**675276**	3
	16	GT104B16	**675213**	GT104C16	**675169**	GT104D16	**675277**	3
	20	GT104B20	**675214**	GT104C20	**675170**	GT104D20	**675278**	3
	25	GT104B25	**675215**	GT104C25	**675171**	GT104D25	**675279**	3
	32	GT104B32	**675216**	GT104C32	**675172**	GT104D32	**675280**	3
	40	GT104B40	**675217**	GT104C40	**675173**	GT104D40	**675281**	3
	50	GT104B50	**675218**	GT104C50	**675174**	GT104D50	**675282**	3
	63	GT104B63	**675219**	GT104C63	**675175**	GT104D63	**675283**	3



Miniature Circuit Breakers

Series GT25

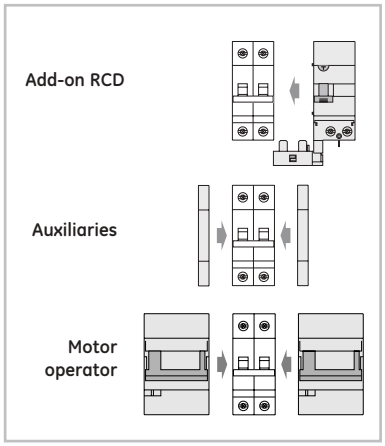
EN/IEC 60947-2 **100kA**
25kA
20kA
15kA

Application

Marking

CE

Add-on devices



Add-on RCD ● pg B.32
Auxiliary contacts ● pg C.4
Motor operator ● pg C.7
Shunt trip ● pg C.8
Undervoltage release ● pg C.8
Panel board switch ● pg C.8

Accessories ● pg A.50
Busbars ● pg E.2
More technical data ● website
Dimensions ● pg A.80

Performance

Thermal setting In	(A)	0.5-63
Rated voltage AC Un	(V)	240/415
Minimum operating voltage $U_{B\ min}$	(V)	12
Tripping characteristics		3-5In (B) 5-10In (C) 10-20In (D)
Mechanical/electrical endurance		20000/10000
Tropicalisation acc.to EN/IEC 60068-2		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	25-35
Poles		1, 2, 3, 4
Weight	(g/pole)	120

Short-circuit capacity

AC acc. to EN/IEC 60947-2

In (A)	*Poles*	*V*	*Icu (kA)[1]*
0.5-4	1	240	100
	2-4	415	100
6-25	1	240	25
	2-4	240	50
		415	25
32-40	1	240	20
	2-4	240	40
		415	20
50-63	1	240	15
	2-4	240	30
		415	15

DC acc. to EN/IEC 60947-2

Poles	*V ⎓ [2]*	*Icu/Ics (kA)*
1	60	25
2	125	30

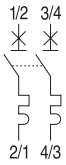
(1) Ics = 50% Icu
(2) Nominal and Maximum VDC on page A.4-A.5

Series GT25 - 25kA - 3-5In (B), 5-10In (C), 10-20In (D)

1P
1 mod.

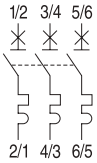
In (A)	3-5In (B) Cat. No.	3-5In (B) Ref. No.	5-10In (C) Cat. No.	5-10In (C) Ref. No.	10-20In (D) Cat. No.	10-20In (D) Ref. No.	Pack.
0.5	-	-	GT251C0.5	**675284**	GT251D0.5	**675392**	12
1	-	-	GT251C01	**675285**	GT251D01	**675393**	12
2	-	-	GT251C02	**675286**	GT251D02	**675394**	12
4	-	-	GT251C04	**675288**	GT251D04	**675396**	12
6	GT251B06	**675348**	GT251C06	**675289**	GT251D06	**675397**	12
10	GT251B10	**675350**	GT251C10	**675291**	GT251D10	**675399**	12
16	GT251B16	**675352**	GT251C16	**675293**	GT251D16	**675401**	12
20	GT251B20	**675353**	GT251C20	**675294**	GT251D20	**675402**	12
25	GT251B25	**675354**	GT251C25	**675295**	GT251D25	**675403**	12
32	GT251B32	**675355**	GT251C32	**675296**	GT251D32	**675404**	12
40	GT251B40	**675356**	GT251C40	**675297**	GT251D40	**675405**	12
50	GT251B50	**675357**	GT251C50	**675298**	GT251D50	**675406**	12
63	GT251B63	**675358**	GT251C63	**675299**	GT251D63	**675407**	12

2P
2 mod.



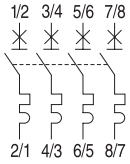
In (A)	3-5In (B) Cat. No.	3-5In (B) Ref. No.	5-10In (C) Cat. No.	5-10In (C) Ref. No.	10-20In (D) Cat. No.	10-20In (D) Ref. No.	Pack.
0.5	-	-	GT252C0.5	**675300**	GT252D0.5	**675408**	6
1	-	-	GT252C01	**675301**	GT252D01	**675409**	6
2	-	-	GT252C02	**675302**	GT252D02	**675410**	6
4	-	-	GT252C04	**675304**	GT252D04	**675412**	6
6	GT252B06	**675359**	GT252C06	**675305**	GT252D06	**675413**	6
10	GT252B10	**675361**	GT252C10	**675307**	GT252D10	**675415**	6
16	GT252B16	**675363**	GT252C16	**675309**	GT252D16	**675417**	6
20	GT252B20	**675364**	GT252C20	**675310**	GT252D20	**675418**	6
25	GT252B25	**675365**	GT252C25	**675311**	GT252D25	**675419**	6
32	GT252B32	**675366**	GT252C32	**675312**	GT252D32	**675420**	6
40	GT252B40	**675367**	GT252C40	**675313**	GT252D40	**675421**	6
50	GT252B50	**675368**	GT252C50	**675314**	GT252D50	**675422**	6
63	GT252B63	**675369**	GT252C63	**675315**	GT252D63	**675423**	6

3P
3 mod.



In (A)	3-5In (B) Cat. No.	3-5In (B) Ref. No.	5-10In (C) Cat. No.	5-10In (C) Ref. No.	10-20In (D) Cat. No.	10-20In (D) Ref. No.	Pack.
0.5	-	-	GT253C0.5	**675316**	GT253D0.5	**675424**	4
1	-	-	GT253C01	**675317**	GT253D01	**675425**	4
2	-	-	GT253C02	**675318**	GT253D02	**675426**	4
4	-	-	GT253C04	**675320**	GT253D04	**675428**	4
6	GT253B06	**675370**	GT253C06	**675321**	GT253D06	**675429**	4
10	GT253B10	**675372**	GT253C10	**675323**	GT253D10	**675431**	4
16	GT253B16	**675374**	GT253C16	**675325**	GT253D16	**675433**	4
20	GT253B20	**675375**	GT253C20	**675326**	GT253D20	**675434**	4
25	GT253B25	**675376**	GT253C25	**675327**	GT253D25	**675435**	4
32	GT253B32	**675377**	GT253C32	**675328**	GT253D32	**675436**	4
40	GT253B40	**675378**	GT253C40	**675329**	GT253D40	**675437**	4
50	GT253B50	**675379**	GT253C50	**675330**	GT253D50	**675438**	4
63	GT253B63	**675380**	GT253C63	**675331**	GT253D63	**675439**	4

4P
4 mod.



In (A)	3-5In (B) Cat. No.	3-5In (B) Ref. No.	5-10In (C) Cat. No.	5-10In (C) Ref. No.	10-20In (D) Cat. No.	10-20In (D) Ref. No.	Pack.
0.5	-	-	GT254C0.5	**675332**	GT254D0.5	**675440**	3
1	-	-	GT254C01	**675333**	GT254D01	**675441**	3
2	-	-	GT254C02	**675334**	GT254D02	**675442**	3
4	-	-	GT254C04	**675336**	GT254D04	**675444**	3
6	GT254B06	**675381**	GT254C06	**675337**	GT254D06	**675445**	3
10	GT254B10	**675383**	GT254C10	**675339**	GT254D10	**675447**	3
16	GT254B16	**675385**	GT254C16	**675341**	GT254D16	**675449**	3
20	GT254B20	**675386**	GT254C20	**675342**	GT254D20	**675450**	3
25	GT254B25	**675387**	GT254C25	**675343**	GT254D25	**675451**	3
32	GT254B32	**675388**	GT254C32	**675344**	GT254D32	**675452**	3
40	GT254B40	**675389**	GT254C40	**675345**	GT254D40	**675453**	3
50	GT254B50	**675390**	GT254C50	**675346**	GT254D50	**675454**	3
63	GT254B63	**675391**	GT254C63	**675347**	GT254D63	**675455**	3

Miniature Circuit Breakers for universal currents

Series EP100 UC

EN/IEC 60898-2 | **6000** | **T15**

DIN VDE 0641

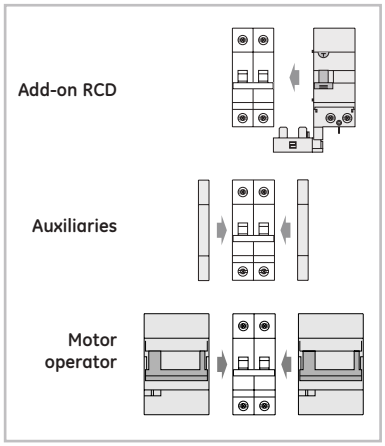
EN/IEC 60947-2 **10kA**

Applications

Standards / Marking

EN/IEC 60898-2, DIN VDE 0641 CE

Add-on devices



Add-on RCD pg B.32
Auxiliary contacts pg C.4
Motor operator pg C.7
Shunt trip pg C.8
Undervoltage release pg C.8
Panel board switch pg C.8

Accessories pg A.50
Busbars pg E.2
More technical data website
Dimensions pg A.80

Performance

Thermal setting In	(A)	0.5 -63
Rated voltage AC Un	(V)	230/400
		250/500/880 ⎓
Minimum operating voltage U_{Bmin}	(V)	12
		12 ⎓
Tripping characteristics		B-C
Mechanical/electrical endurance		20000/10000
Tropicalisation acc. to EN/IEC 60068-2		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	25-35
Poles[1]		1, 2, 4[2]
Weight	(g/pole)	120

Short-circuit capacity

AC/DC acc. to EN/IEC 60898-2[5]

Poles	*V*	*Icn=Ics (kA)*
1	125 DC	10
	250 DC	6
	230/400 AC	6
2	250 DC	10
	500 DC	6
	400 AC	6
4	800 DC	6

AC/DC acc. to EN/IEC 60947-2

Poles	*V*	*Icu (kA)*
1	220 DC	10[3]
2	440 DC	10[3]
1	230 AC	6[4]
2	400 AC	6[4]

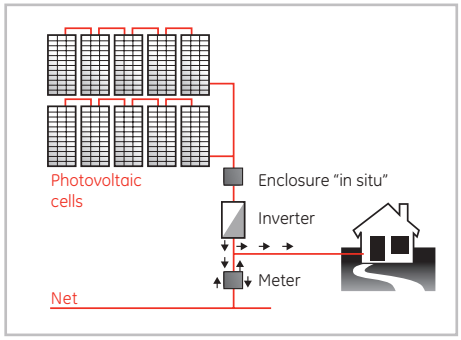
(1) Polarity labeling to be respected due to the permanent magnet in the MCB
(2) For 4P execution open circuit voltage U_{CO} = 1000 ⎓
(3) T = 4ms
(4) 4.5kA for 50A and 63A
(5) After a switching of the net with more than 6kA in AC it should not be used in DC

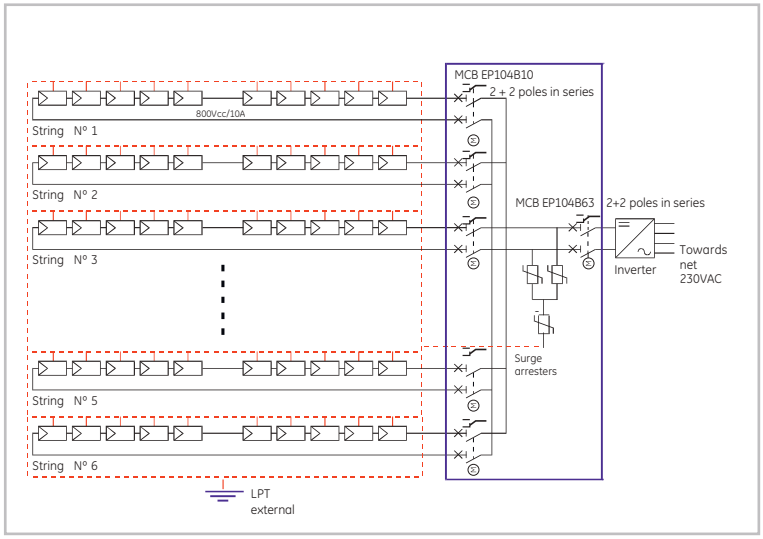
Series EP100 UC - 10kA - characteristics B-C

	In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	Pack.
1P 1 mod.	0.5	-	-	EP101UCC0.5	**673301**	12
	1	-	-	EP101UCC01	**673302**	12
	2	-	-	EP101UCC02	**673303**	12
	4	-	-	EP101UCC04	**673305**	12
	6	EP101UCB06	**673333**	EP101UCC06	**673306**	12
	10	EP101UCB10	**673334**	EP101UCC10	**673308**	12
	16	EP101UCB16	**673335**	EP101UCC16	**673310**	12
	20	EP101UCB20	**673336**	EP101UCC20	**673311**	12
	25	EP101UCB25	**673337**	EP101UCC25	**673312**	12
	32	EP101UCB32	**673338**	EP101UCC32	**673313**	12
	40	EP101UCB40	**673339**	EP101UCC40	**673314**	12
	50	EP101UCB50	**673340**	EP101UCC50	**673315**	12
	63	EP101UCB63	**673341**	EP101UCC63	**673316**	12
2P 2 mod.	0.5	-	-	EP102UCC0.5	**673317**	6
	1	-	-	EP102UCC01	**673318**	6
	2	-	-	EP102UCC02	**673319**	6
	4	-	-	EP102UCC04	**673321**	6
	6	EP102UCB06	**673342**	EP102UCC06	**673322**	6
	10	EP102UCB10	**673343**	EP102UCC10	**673324**	6
	16	EP102UCB16	**673344**	EP102UCC16	**673326**	6
	20	EP102UCB20	**673345**	EP121UCC20	**673327**	6
	25	EP102UCB25	**673346**	EP102UCC25	**673328**	6
	32	EP102UCB32	**673347**	EP102UCC32	**673329**	6
	40	EP102UCB40	**673348**	EP102UCC40	**673330**	6
	50	EP102UCB50	**673349**	EP102UCC50	**673331**	6
	63	EP102UCB63	**673350**	EP102UCC63	**673332**	6
4P 4.5 mod.(1)	10	EP104UCB10	**690200**			3
	16	EP104UCB16	**688029**			3
	20	EP104UCB20	**688026**			3
	25	EP104UCB25	**691580**			3
	32	EP104UCB32	**691581**			3
	40	EP104UCB40	**688027**			3
	63	EP104UCB63	**688028**			3

(1) Including auxiliary contact CAH (central half module)
Line to be connected to bottom terminals 1, 7 load to 3, 5.

Example of the wiring in a Photovoltaic application





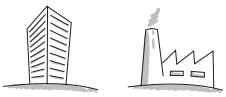
Example of installation in enclosure "in situ"

Miniature Circuit Breakers

Series Hti

EN/IEC 60947-2 10kA

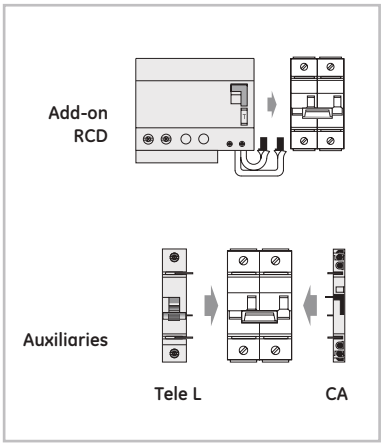
Applications



Standard / Marking

EN/IEC 60947-2 CE

Add-on devices



Add-on RCD pg A.34
Auxiliary contacts pg A.35
Shunt trip pg A.35

More technical data website
Dimensions pg A.81

Performance

Thermal setting In	(A)	80-100-125
Rated voltage AC Un	(V)	230/400
Tripping characteristics		3-5 In (B) 5-10 In (C) 10-20 In (D)
Mechanical/electrical endurance		10000/4000
Operating temperature	(°C)	-25°C up to 55°C
Terminal capacity flexible/rigid cable	(mm^2)	70
Poles		1, 2, 3, 4
Weight	(g/pole)	210

Short-circuit capacity

AC acc. to EN/IEC 60947-2 (B, C)

Poles	*V*	*Icu (kA)*[1]
1	230/400	10[2]
2	230	15[3]
3, 4	230	15[3]
3, 4	400	10[2]

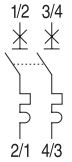
Add-on RCD - technical performances

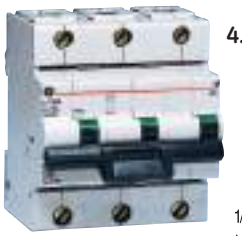
Standard		EN/IEC 60947-2
Nominal current In	(A)	80-125
Residual current IΔn	(mA)	30, 300
Rated voltage AC Un	(V)	2P: 230/400 3P-4P: 400
Resistance against unwanted tripping		Type A, AC: 250A 8/20 µs Type S: 3000A 8/20 µs
Terminal capacity flexible/rigid cable	(mm^2)	70
Poles		2, 3, 4

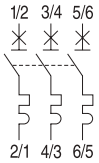
(1) Only for 3-5 In (B) and 5-10 In (C)
(2) 7.5kA for 10-20 In (D)
(3) 10kA for 10-20 In (D)

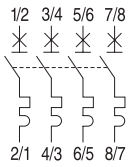
Series Hti - 10kA - characteristics B-C-D

	In (A)	3-5 In (B) Cat. No.	3-5 In (B) Ref. No.	5-10 In (C) Cat. No.	5-10 In (C) Ref. No.	10-20 In (D) Cat. No.	10-20 In (D) Ref. No.	Pack.
1P 1.5 mod.	80	Hti 101 B080	**671504**	Hti 101 C080	**671528**	Hti 101 D080	**671552**	8
	100	Hti 101 B100	**671505**	Hti 101 C100	**671529**	Hti 101 D100	**671553**	1
	125	Hti 101 B125	**671506**	Hti 101 C125	**671530**	Hti 101 D125	**671554**	1
2P 3 mod.	80	Hti 102 B080	**671510**	Hti 102 C080	**671534**	Hti 102 D080	**671558**	4
	100	Hti 102 B100	**671511**	Hti 102 C100	**671535**	Hti 102 D100	**671559**	1
	125	Hti 102 B125	**671512**	Hti 102 C125	**671536**	Hti 102 D125	**671560**	1
3P 4.5 mod.	80	Hti 103 B080	**671516**	Hti 103 C080	**671540**	Hti 103 D080	**671564**	1
	100	Hti 103 B100	**671517**	Hti 103 C100	**671541**	Hti 103 D100	**671565**	1
	125	Hti 103 B125	**671518**	Hti 103 C125	**671542**	Hti 103 D125	**671566**	1
4P 6 mod.	80	Hti 104 B80	**671522**	Hti 104 C080	**671546**	Hti 104 D080	**671570**	1
	100	Hti 104 B100	**671523**	Hti 104 C100	**671547**	Hti 104 D100	**671571**	1
	125	Hti 104 B125	**671524**	Hti 104 C125	**671548**	Hti 104 D125	**671572**	1





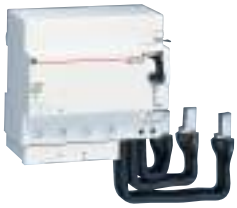




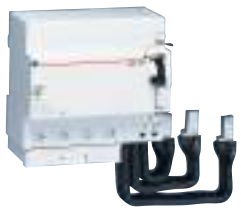
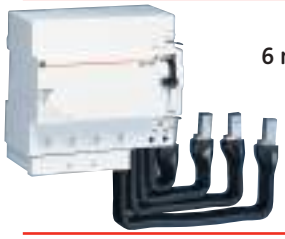
Only for 3-5 In (B) and 5-10 In (C)

For D see page A.32

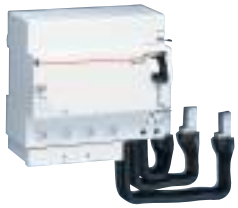
Series Hti - Add-on RCD - Type AC

		In (A)	30 mA Cat. No.	30 mA Ref. No.	300 mA Cat. No.	300 mA Ref. No.	Pack.
	2P 6 mod.	80-125	DOC 2125/030	**671574**	DOC 2125/300	**671576**	1
	3P 6 mod.	80-125	DOC 3125/030	**671582**	DOC 3125/300	**671584**	1
	4P 6 mod.	80-125	DOC 4125/030	**671590**	DOC 4125/300	**671592**	1

Series Hti - Add-on RCD - Type A

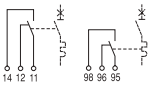
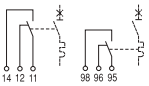
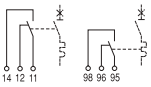
		In (A)	30 mA Cat. No.	30 mA Ref. No.	300 mA Cat. No.	300 mA Ref. No.	Pack.
	3P 6 mod.	80-125	DOCA 3125/030	**671581**	DOCA 3125/300	**671583**	1
	4P 6 mod.	80-125	DOCA 4125/030	**671589**	DOCA 4125/300	**671591**	1

Series Hti - Add-on RCD - Type S S

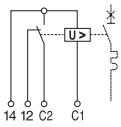
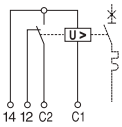
		In (A)	30 mA Cat. No.	30 mA Ref. No.	300 mA Cat. No.	300 mA Ref. No.	Pack.
	3P 6 mod.	80-125	-	-	DOCS 3125/300	**671585**	1
	4P 6 mod.	80-125	-	-	DOCS 4125/300	**671593**	1

On demand: 2P type A and S

Series Hti - Auxiliary contacts (right side)

	Description	Functions	Mod.	Cat. No.	Ref. No.	Pack.
	Auxiliary contact	H	1/2	Hti H	**671597**	1
	Signal contact S + test + reset	S	1/2	Hti S	**671598**	12
	**Changeable auxiliary/signal contact**	H/S	1/2	Hti H/S	**671599**	1
	**Auxiliary contact and changeable auxiliary/signal contact**	H+H/S	1/2	Hti HH/HS	**671600**	1
	**Auxiliary contact and signal contact H + S + test + reset**	H+S	1/2	Hti HSR	**671602**	1

Series Hti - Auxiliary contacts (left or right side)

	Rated voltage	Closing current	Operating time	Coil impedance at 50Hz	Cat. No.	Ref. No.	Pack.
1 mod.	110 to 415V	0.3A at 110V	10 ms	ca. 29 Ohm			
	110 to 125VDC	0.6A at 230V	4ms	ca. 29 Ohm	TELE L 110	**624945**	8
		1A at 400V	2ms	ca. 29 Ohm			
1 mod.	24 to 48VDC	1A at 24VDC	10ms	ca. 24 Ohm	TELE L 24	**624946**	8
	24 to 60V	2A at 48VDC	4ms	ca. 24 Ohm			

Miniature circuit breakers with UL approval

Series EP60 UL (Supplementary protection)

Recognized UL 1077 6 kA

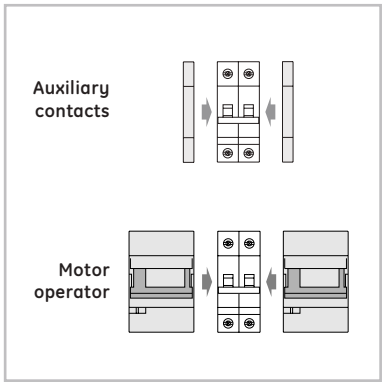
EN/IEC 60898-1 6000 / 3

EN/IEC 60947-2 10 kA

Applications

Approvals / Marking

Add-on devices



Auxiliary contacts ● pg C.4
Motor operator ● pg C.7
Shunt trip ● pg C.8

Dimensions ● pg A.80

Performance

Thermal setting In	(A)	0.5-63
Rated voltage AC Un	(V)	277/480; 110V ⎓
Minimum operating voltage U_{Bmin}	(V)	12
Tripping characteristics		B-C-D
Selectivity class		3
Mechanical/electrical endurance		20000/10000
Tropicalisation acc. EN/IEC 60068-2-28/2-30		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	25-35
Poles		1, 2, 3, 4
Weight/pole	(g)	125

Short-circuit capacity

According to UL 1077

Poles	*V*	*Icc (kA)*
1	277	6
2, 3, 4	277/480	6

According to EN/IEC 60898-1

Poles	*V*	*Icn/Ics (kA)*
1	230/400	6
2, 3, 4	400	6

According to EN/IEC 60947-2

Poles	*V*	*Icu (kA)*(1)
1	127	20
	240	10
	415	3
2	127	30
2, 3, 4	240	20
	415	10
	440	6

DC according to EN/IEC 60947-2

Poles	*Un (V ⎓)*	*Icu (kA)/Ics (kA)*
1	60	25
2	125	30

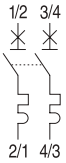
(1) Ics = 75% Icu

with UL 1077 approval

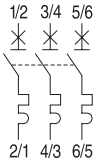
Series EP60 UL - 6kA - characteristics B-C-D

1P
1 mod.

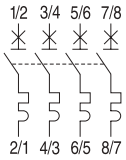
2P
2 mod.



3P
3 mod.



4P
4 mod.



In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	D Cat. No.	D Ref. No.	Pack.
0.5	-	-	EP61ULC0.5	686656	EP61ULD0.5	686732	12
1	-	-	EP61ULC01	686657	EP61ULD01	686733	12
2	-	-	EP61ULC02	686658	EP61ULD02	686734	12
4	-	-	EP61ULC04	686660	EP61ULD04	686736	12
6	EP61ULB06	686601	EP61ULC06	686662	EP61ULD06	686738	12
10	EP61ULB10	686602	EP61ULC10	686663	EP61ULD10	686739	12
16	EP61ULB16	686605	EP61ULC16	686666	EP61ULD16	686742	12
20	EP61ULB20	686606	EP61ULC20	686667	EP61ULD20	686743	12
25	EP61ULB25	686607	EP61ULC25	686668	EP61ULD25	686744	12
32	EP61ULB32	686609	EP61ULC32	686670	EP61ULD32	686746	12
40	EP61ULB40	686610	EP61ULC40	686671	EP61ULD40	686747	12
50	EP61ULB50	686611	EP61ULC50	686672	EP61ULD50	686748	12
63	EP61ULB63	686613	EP61ULC63	686674	EP61ULD63	686750	12
0.5	-	-	EP62ULC0.5	686675	EP62ULD0.5	686751	6
1	-	-	EP62ULC01	686676	EP62ULD01	686752	6
2	-	-	EP62ULC02	686677	EP62ULD02	686753	6
4	-	-	EP62ULC04	686679	EP62ULD04	686755	6
6	EP62ULB06	686615	EP62ULC06	686681	EP62ULD06	686757	6
10	EP62ULB10	686616	EP62ULC10	686682	EP62ULD10	686758	6
16	EP62ULB16	686619	EP62ULC16	686685	EP62ULD16	686761	6
20	EP62ULB20	686620	EP62ULC20	686686	EP62ULD20	686762	6
25	EP62ULB25	686621	EP62ULC25	686687	EP62ULD25	686763	6
32	EP62ULB32	686623	EP62ULC32	686689	EP62ULD32	686765	6
40	EP62ULB40	686624	EP62ULC40	686690	EP62ULD40	686766	6
50	EP62ULB50	686625	EP62ULC50	686691	EP62ULD50	686767	6
63	EP62ULB63	686627	EP62ULC63	686693	EP62ULD63	686769	6
0.5	-	-	EP63ULC0.5	686694	EP63ULD0.5	686770	4
1	-	-	EP63ULC01	686695	EP63ULD01	686771	4
2	-	-	EP63ULC02	686696	EP63ULD02	686772	4
4	-	-	EP63ULC04	686698	EP63ULD04	686774	4
6	EP63ULB06	686629	EP63ULC06	686700	EP63ULD06	686776	4
10	EP63ULB10	686630	EP63ULC10	686701	EP63ULD10	686777	4
16	EP63ULB16	686633	EP63ULC16	686704	EP63ULD16	686780	4
20	EP63ULB20	686634	EP63ULC20	686705	EP63ULD20	686781	4
25	EP63ULB25	686635	EP63ULC25	686706	EP63ULD25	686782	4
32	EP63ULB32	686637	EP63ULC32	686708	EP63ULD32	686784	4
40	EP63ULB40	686638	EP63ULC40	686709	EP63ULD40	686785	4
50	EP63ULB50	686639	EP63ULC50	686710	EP63ULD50	686786	4
63	EP63ULB63	686641	EP63ULC63	686712	EP63ULD63	686788	4
0.5	-	-	EP64ULC0.5	686713	EP64ULD0.5	686789	3
1	-	-	EP64ULC01	686714	EP64ULD01	686790	3
2	-	-	EP64ULC02	686715	EP64ULD02	686791	3
4	-	-	EP64ULC04	686717	EP64ULD04	686793	3
6	EP64ULB06	686643	EP64ULC06	686719	EP64ULD06	686795	3
10	EP64ULB10	686644	EP64ULC10	686720	EP64ULD10	686796	3
16	EP64ULB16	686647	EP64ULC16	686723	EP64ULD16	686799	3
20	EP64ULB20	686648	EP64ULC20	686724	EP64ULD20	686800	3
25	EP64ULB25	686649	EP64ULC25	686725	EP64ULD25	686801	3
32	EP64ULB32	686651	EP64ULC32	686727	EP64ULD32	686803	3
40	EP64ULB40	686652	EP64ULC40	686728	EP64ULD40	686804	3
50	EP64ULB50	686653	EP64ULC50	686729	EP64ULD50	686805	3
63	EP64ULB63	686655	EP64ULC63	686731	EP64ULD63	686807	3

with UL 1077 approval

On request: 3 - 5 - 13 - 15 - 30 - 60A

Miniature circuit breakers with UL approval

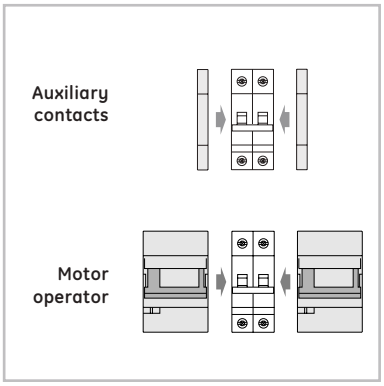
Series EP100 UL (Supplementary protection)

Recognized	UL 1077	10 kA
	EN/IEC 60898-1	10000 / 3
	EN/IEC 60947-2	15 kA

Applications

Approvals / Marking

Add-on devices



Auxiliary contacts pg C.4
Motor operator pg C.7
Shunt trip pg C.8

Dimensions pg A.80

Performance

Thermal setting In	(A)	0.5-63
Rated voltage AC Un	(V)	277/480; 110V ⎓
Minimum operating voltage U_{Bmin}	(V)	12
Tripping characteristics		B-C-D
Selectivity class		3
Mechanical/electrical endurance		20000/10000
Tropicalisation acc. EN/IEC 60068-2-28/2-30		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	25-35
Poles		1, 2, 3, 4
Weight/pole	(g)	125

Short-circuit capacity

According to UL 1077

Poles	*V*	*Icc (kA)*
1	277	10
2, 3, 4	277/480	10

According to EN/IEC 60898-1

Poles	*V*	*Icn/Ics (kA)*
1	230/400	10
2, 3, 4	400	10

According to EN/IEC 60947-2

Poles	*V*	*Icu (kA)*(1)
1	127	30
	240	15
	415	4
2	127	40
2, 3, 4	240	30
	415	15
	440	10

DC according to EN/IEC 60947-2

Poles	*Un (V ⎓)*	*Icu (kA)/Ics (kA)*
1	60	25
2	125	30

(1) Ics = 50% Icu

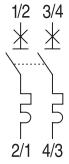
with UL 1077 approval

Series EP100 UL - 10kA - characteristics B-C-D

1P
1 mod.

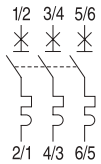
In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	D Cat. No.	D Ref. No.	Pack.
0.5	-	-	EP101ULC0.5	686864	EP101ULD0.5	686940	12
1	-	-	EP101ULC01	686865	EP101ULD01	686941	12
2	-	-	EP101ULC02	686866	EP101ULD02	686942	12
4	-	-	EP101ULC04	686868	EP101ULD04	686944	12
6	EP101ULB06	686809	EP101ULC06	686870	EP101ULD06	686946	12
10	EP101ULB10	686810	EP101ULC10	686871	EP101ULD10	686947	12
16	EP101ULB16	686813	EP101ULC16	686874	EP101ULD16	686950	12
20	EP101ULB20	686814	EP101ULC20	686875	EP101ULD20	686951	12
25	EP101ULB25	686815	EP101ULC25	686876	EP101ULD25	686952	12
32	EP101ULB32	686817	EP101ULC32	686878	EP101ULD32	686954	12
40	EP101ULB40	686818	EP101ULC40	686879	EP101ULD40	686955	12
50	EP101ULB50	686819	EP101ULC50	686880	EP101ULD50	686956	12
63	EP101ULB63	686821	EP101ULC63	686882	EP101ULD63	686958	12

2P
2 mod.



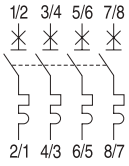
In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	D Cat. No.	D Ref. No.	Pack.
0.5	-	-	EP102ULC0.5	686883	EP102ULD0.5	686959	6
1	-	-	EP102ULC01	686884	EP102ULD01	686960	6
2	-	-	EP102ULC02	686885	EP102ULD02	686961	6
4	-	-	EP102ULC04	686887	EP102ULD04	686963	6
6	EP102ULB06	686823	EP102ULC06	686889	EP102ULD06	686965	6
10	EP102ULB10	686824	EP102ULC10	686890	EP102ULD10	686966	6
16	EP102ULB16	686827	EP102ULC16	686893	EP102ULD16	686969	6
20	EP102ULB20	686828	EP102ULC20	686894	EP102ULD20	686970	6
25	EP102ULB25	686829	EP102ULC25	686895	EP102ULD25	686971	6
32	EP102ULB32	686831	EP102ULC32	686897	EP102ULD32	686973	6
40	EP102ULB40	686832	EP102ULC40	686898	EP102ULD40	686974	6
50	EP102ULB50	686833	EP102ULC50	686899	EP102ULD50	686975	6
63	EP102ULB63	686835	EP102ULC63	686901	EP102ULD63	686977	6

3P
3 mod.



In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	D Cat. No.	D Ref. No.	Pack.
0.5	-	-	EP103ULC0.5	686902	EP103ULD0.5	686978	4
1	-	-	EP103ULC01	686903	EP103ULD01	686979	4
2	-	-	EP103ULC02	686904	EP103ULD02	686980	4
4	-	-	EP103ULC04	686906	EP103ULD04	686982	4
6	EP103ULB06	686837	EP103ULC06	686908	EP103ULD06	686984	4
10	EP103ULB10	686838	EP103ULC10	686909	EP103ULD10	686985	4
16	EP103ULB16	686841	EP103ULC16	686912	EP103ULD16	686988	4
20	EP103ULB20	686842	EP103ULC20	686913	EP103ULD20	686989	4
25	EP103ULB25	686843	EP103ULC25	686914	EP103ULD25	686990	4
32	EP103ULB32	686845	EP103ULC32	686916	EP103ULD32	686992	4
40	EP103ULB40	686846	EP103ULC40	686917	EP103ULD40	686993	4
50	EP103ULB50	686847	EP103ULC50	686918	EP103ULD50	686994	4
63	EP103ULB63	686849	EP103ULC63	686920	EP103ULD63	686996	4

4P
4 mod.



In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	D Cat. No.	D Ref. No.	Pack.
0.5	-	-	EP104ULC0.5	686921	EP104ULD0.5	686997	3
1	-	-	EP104ULC01	686922	EP104ULD01	686998	3
2	-	-	EP104ULC02	686923	EP104ULD02	686999	3
4	-	-	EP104ULC04	686925	EP104ULD04	687001	3
6	EP104ULB06	686851	EP104ULC06	686927	EP104ULD06	687003	3
10	EP104ULB10	686852	EP104ULC10	686928	EP104ULD10	687004	3
16	EP104ULB16	686855	EP104ULC16	686931	EP104ULD16	687007	3
20	EP104ULB20	686856	EP104ULC20	686932	EP104ULD20	687008	3
25	EP104ULB25	686857	EP104ULC25	686933	EP104ULD25	687009	3
32	EP104ULB32	686859	EP104ULC32	686935	EP104ULD32	687011	3
40	EP104ULB40	686860	EP104ULC40	686936	EP104ULD40	687012	3
50	EP104ULB50	686861	EP104ULC50	686937	EP104ULD50	687013	3
63	EP104ULB63	686863	EP104ULC63	686939	EP104ULD63	687015	3

with UL 1077 approval

On request: 3 - 5 - 13 - 15 - 30 - 60A

Miniature circuit breakers with UL approval

Series EP100 ULH (Branch circuit protection)

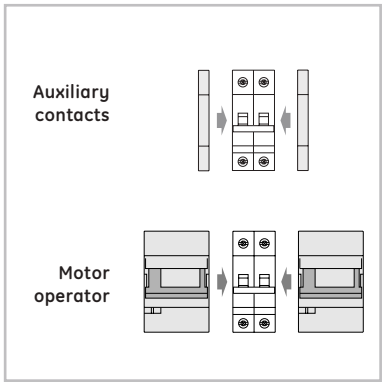
Listed	*UL 489*	**10 kA**
	EN 60947-2	**15 kA**

Application

Approval / Marking

c UL us LISTED CE

Add-on devices



Auxiliary contacts ● pg C.4
Motor operator ● pg C.7
Shunt trip ● pg C.8

Dimensions ● pg A.80

Performance

Thermal setting In	(A)	0.5-32
Rated voltage AC Un	(V)	120/240; 110V ⎓
Minimum operating voltage U_{Bmin}	(V)	12
Tripping characteristics		B-C-D
Selectivity class		3
Mechanical/electrical endurance		20000/10000
Tropicalisation acc. EN/IEC 60068-2-28/2-30		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	25-35
Poles		1, 2, 3
Weight/pole	(g)	130

Short-circuit capacity

According to UL 489

Poles	*V*	*Icc (kA)*
1	120	10
2, 3	240	10

According to EN/IEC 60947-2

Poles	*V*	*Icu (kA)*(1)
1	127	30
	240	15
	415	4
2	127	40
2, 3	240	30
	415	15
	440	10

DC according to EN/IEC 60947-2

Poles	*Un (V ⎓)*	*Icu (kA)/Ics (kA)*
1	60	25
2	125	30

(1) Ics = 50% Icu

with UL 489 approval

Series EP100 ULH - 10kA - characteristics B-C-D

	In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	D Cat. No.	D Ref. No.	Pack.
1P 1 mod. (1)	0.5	-	-	EP101ULHC0.5	**690265**	EP101ULHD0.5	**690313**	12
	1	-	-	EP101ULHC01	**690266**	EP101ULHD01	**690314**	12
	2	-	-	EP101ULHC02	**690267**	EP101ULHD02	**690315**	12
	4	-	-	EP101ULHC04	**690269**	EP101ULHD04	**690317**	12
	5	EP101ULHB05	**690214**	EP101ULHC05	**690270**	EP101ULHD05	**690318**	12
	6	EP101ULHB06	**690215**	EP101ULHC06	**690271**	EP101ULHD06	**690320**	12
	10	EP101ULHB10	**690216**	EP101ULHC10	**690273**	EP101ULHD10	**690321**	12
	13	EP101ULHB13	**690217**	EP101ULHC13	**690274**	EP101ULHD13	**690322**	12
	15	EP101ULHB15	**690218**	EP101ULHC15	**690275**	EP101ULHD15	**690323**	12
	16	EP101ULHB16	**690219**	EP101ULHC16	**690276**	EP101ULHD16	**690324**	12
	20	EP101ULHB20	**690220**	EP101ULHC20	**690277**	EP101ULHD20	**690325**	12
	25	EP101ULHB25	**690221**	EP101ULHC25	**690278**	EP101ULHD25	**690326**	12
	30	EP101ULHB30	**690222**	EP101ULHC30	**690279**	EP101ULHD30	**690327**	12
	32	EP101ULHB32	**690223**	EP101ULHC32	**690280**	EP101ULHD32	**690328**	12
2P 2 mod.	0.5	-	-	EP102ULHC0.5	**690281**	EP102ULHD0.5	**690329**	6
	1	-	-	EP102ULHC01	**690282**	EP102ULHD01	**690330**	6
	2	-	-	EP102ULHC02	**690283**	EP102ULHD02	**690331**	6
	4	-	-	EP102ULHC04	**690285**	EP102ULHD04	**690333**	6
	5	EP102ULHB05	**690224**	EP102ULHC05	**690286**	EP102ULHD05	**690334**	6
	6	EP102ULHB06	**690225**	EP102ULHC06	**690287**	EP102ULHD06	**690335**	6
	10	EP102ULHB10	**690226**	EP102ULHC10	**690289**	EP102ULHD10	**690337**	6
	13	EP102ULHB13	**690227**	EP102ULHC13	**690290**	EP102ULHD13	**690338**	6
	15	EP102ULHB15	**690228**	EP102ULHC15	**690291**	EP102ULHD15	**690339**	6
	16	EP102ULHB16	**690229**	EP102ULHC16	**690292**	EP102ULHD16	**690340**	6
	20	EP102ULHB20	**690230**	EP102ULHC20	**690293**	EP102ULHD20	**690341**	6
	25	EP102ULHB25	**690231**	EP102ULHC25	**690294**	EP102ULHD25	**690342**	6
	30	EP102ULHB30	**690232**	EP102ULHC30	**690295**	EP102ULHD30	**690343**	6
	32	EP102ULHB32	**690233**	EP102ULHC32	**690296**	EP102ULHD32	**690344**	6
3P 3 mod.	0.5	-	-	EP103ULHC0.5	**690297**	EP103ULHD0.5	**690345**	4
	1	-	-	EP103ULHC01	**690298**	EP103ULHD01	**690346**	4
	2	-	-	EP103ULHC02	**690299**	EP103ULHD02	**690347**	4
	4	-	-	EP103ULHC04	**690301**	EP103ULHD04	**690349**	4
	5	EP103ULHB05	**290234**	EP103ULHC05	**690302**	EP103ULHD05	**690350**	4
	6	EP103ULHB06	**690235**	EP103ULHC06	**690303**	EP103ULHD06	**690351**	4
	10	EP103ULHB10	**690236**	EP103ULHC10	**690305**	EP103ULHD10	**690353**	4
	13	EP103ULHB13	**290237**	EP103ULHC13	**690306**	EP103ULHD13	**690354**	4
	15	EP103ULHB15	**290238**	EP103ULHC15	**690307**	EP103ULHD15	**690355**	4
	16	EP103ULHB16	**690239**	EP103ULHC16	**690308**	EP103ULHD16	**690356**	4
	20	EP103ULHB20	**690240**	EP103ULHC20	**690309**	EP103ULHD20	**690357**	4
	25	EP103ULHB25	**690241**	EP103ULHC25	**690310**	EP103ULHD25	**690358**	4
	30	EP103ULHB30	**290242**	EP103ULHC30	**690311**	EP103ULHD30	**690359**	4
	32	EP103ULHB32	**690243**	EP103ULHC32	**690312**	EP103ULHD32	**690360**	4

with UL 489 approval

Accessories for MCBs

		Cat. No.	Ref. No.	Pack.
Walls	Walls for terminals IP	WUL	**690244**	10

Several 1 pole MCBs side to side mounted and opposite polarity must be provided by walls on poles.
Also when 1 pole MCBs mounting add-on extensions.

Padlocking bracket	Allows padlocking in ON and OFF position	KS	**624929**	2

Miniature circuit breakers for railway applications

Series EP100 R

EN 60898-1 10000 / 3

EN 60947-2 **15 kA**

Bombardier Certified

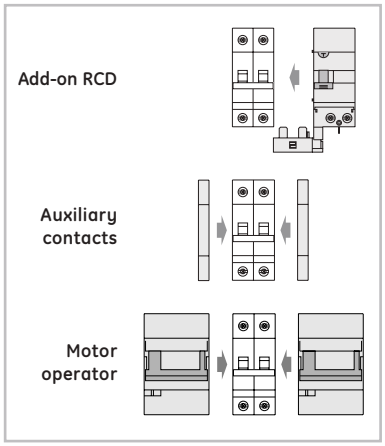
Applications

Approval / Marking

Bombardier Transportation Approval acc. to EN50155

CE

Add-on devices



Add-on RCD pg B.32
Auxiliary contacts pg C.4
Motor operator pg C.7
Shunt trip pg C.8
Undervoltage release pg C.8
Panel Board Switch pg C.8

Accessories pg A.50
Busbars pg E.2
More technical data website
Dimensions pg A.80

Performance

Thermal setting In	(A)	0.5 -63
Rated voltage AC Un	(V)	230/400
Minimum operating voltage U_{Bmin}	(V)	12
Tripping characteristics		B-C
Selectivity class		3
Mechanical/electrical endurance		20000/10000
Tropicalisation acc. to EN/IEC 60068-2		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	25-35
Poles		3
Weight/pole	(g)	125

Short-circuit capacity

AC/DC acc. to EN/IEC 60898-2

Poles	*V*	*Icn=Ics (kA)*
3	400 DC	10(1)

AC/DC acc. to EN/IEC 60947-2

Poles	*V*	*Icu (kA)(2)*
3	240 DC	30
	415 DC	15
	440 AC	10

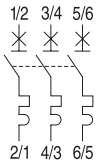
(1) Grid distance of 60 mm for B-C and D; Ics = 75% Icu
(2) Ics = 50% Icu

Railway Applications

Bombardier Certified

Series EP100 R - 10kA - characteristics B-C

3P
3 mod.



	B		C		
In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
0.5	-	-	EP103C0,5RAIL	**681461**	4
1	-	-	EP103C01RAIL	**681462**	4
2	-	-	EP103C02RAIL	**681463**	4
3	-	-	EP103C03RAIL	**681464**	4
4	-	-	EP103C04RAIL	**681465**	4
6	EP103B06RAIL	**681452**	EP103C06RAIL	**681466**	4
10	EP103B10RAIL	**681453**	EP103C10RAIL	**681467**	4
16	EP103B16RAIL	**681454**	EP103C16RAIL	**681468**	4
20	EP103B20RAIL	**681455**	EP103C20RAIL	**681469**	4
25	EP103B25RAIL	**681456**	EP103C25RAIL	**681470**	4
32	EP103B32RAIL	**681457**	EP103C32RAIL	**681471**	4
40	EP103B40RAIL	**681458**	EP103C40RAIL	**681472**	4
50	EP103B50RAIL	**681459**	EP103C50RAIL	**681473**	4
63	EP103B63RAIL	**681460**	EP103C63RAIL	**681474**	4

Miniature circuit breakers for railway applications - Universal currents

Series EP100 UCR

EN/IEC 60898-2 | 6000 | T15

DIN VDE 0641

EN/IEC 60947-2 **10kA**

Bombardier Certified

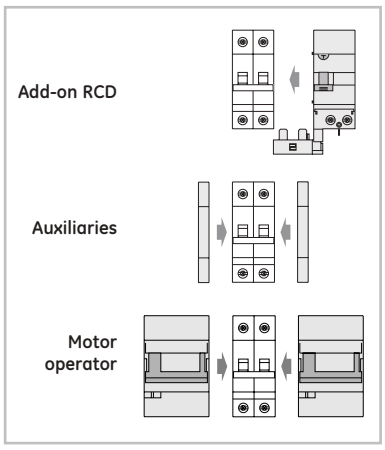
Applications

Approval / Marking

Bombardier Transportation Approval acc. to EN50155

CE

Add-on devices



Add-on RCD ● pg B.32
Auxiliary contacts ● pg C.4
Motor operator ● pg C.7
Shunt trip ● pg C.8
Undervoltage release ● pg C.8
Panel Board Switch ● pg C.8

Accessories ● pg A.50
Busbars ● pg E.2
More technical data ● website
Dimensions ● pg A.80

Performance

Thermal setting In	(A)	0.5 -63
Rated voltage AC Un	(V)	230/400
		250/500 ⎓
Minimum operating voltage U_{Bmin}	(V)	12
		12 ⎓
Tripping characteristics		B-C-K
Mechanical/electrical endurance		20000/10000
Tropicalisation acc. to EN/IEC 60068-2		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	25-35
Poles(1)		1, 2
Weight	(g/pole)	125

Short-circuit capacity

AC/DC acc. to EN/IEC 60898-2(4)

Poles	*V*	*Icn=Ics (kA)*
1	125 DC	10
	220 DC	6
	230/400 AC	6
2	250 DC	10
	440 DC	6
	400 AC	6

AC/DC acc. to EN/IEC 60947-2

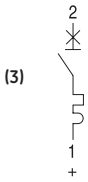
Poles	*V*	*Icu (kA)*
1	220 DC	10(2)
2	440 DC	10(2)
1	230 AC	6(3)
2	400 AC	6(3)

(1) Polarity labeling to be respected due to the permanent magnet in the MCB
(2) T = 4ms
(3) 4.5kA for 50A and 63A
(4) After a switching of the net with more than 6kA in AC it should not be used in DC

Railway Applications

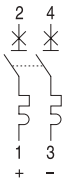
Bombardier Certified

Series EP100 UCR - 10kA - characteristics B-C-K



(3)

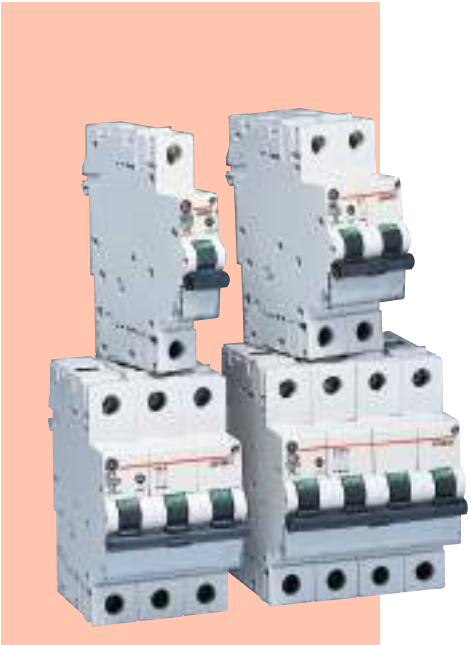
		B		C		K		
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
2P	0.5	-	-	EP101RucC0,5	**681493**	EP101UCRK0,5	**673267**	12
1 mod.	1	-	-	EP101RucC01	**681494**	EP101UCRK01	**673268**	12
				-	-	EP101UCRK1,6	**673269**	
(1) (2)	2	-	-	EP101RucC02	**681495**	EP101UCRK02	**673270**	12
		-	-	-	-	EP101UCRK03	**673271**	
	4	-	-	EP101RucC04	**681496**	EP101UCRK04	**673272**	12
	6	EP101RucB06	**681475**	EP101RucC06	**681497**	EP101UCRK06	**673273**	12
		-	-	-	-	EP101UCRK08	**673274**	
	10	EP101RucB10	**681476**	EP101RucC10	**681498**	EP101UCRK10	**673275**	12
		-	-	-	-	EP101UCRK13	**673276**	
	16	EP101RucB16	**681477**	EP101RucC16	**681499**	EP101UCRK16	**673277**	12
	20	EP101RucB20	**681478**	EP101RucC20	**681500**	EP101UCRK20	**673278**	12
	25	EP101RucB25	**681479**	EP101RucC25	**681501**	EP101UCRK25	**673279**	12
	32	EP101RucB32	**681480**	EP101RucC32	**681502**	EP101UCRK32	**673280**	12
	40	EP101RucB40	**681481**	EP101RucC40	**681503**	EP101UCRK40	**673281**	12
	50	EP101RucB50	**681482**	EP101RucC50	**681504**	EP101UCRK50	**673282**	12
	63	EP101RucB63	**681483**	EP101RucC63	**681505**	EP101UCRK63	**673283**	12



2P	0.5	-	-	EP102RucC0,5	**681506**	-	-	6
2 mod.	1	-	-	EP102RucC01	**681507**	-	-	6
		-	-	-	-	-	-	
(1) (2)	2	-	-	EP102RucC02	**681508**	-	-	6
		-	-	-	-	-	-	
	4	-	-	EP102RucC04	**681509**	-	-	6
	6	EP102RucB06	**681484**	EP102RucC06	**681510**	-	-	6
		-	-	-	-	-	-	
	10	EP102RucB10	**681485**	EP102RucC10	**681511**	-	-	6
		-	-	-	-	-	-	
	16	EP102RucB16	**681486**	EP102RucC16	**681512**	-	-	6
	20	EP102RucB20	**681487**	EP102RucC20	**681513**	-	-	6
	25	EP102RucB25	**681488**	EP102RucC25	**681514**	-	-	6
	32	EP102RucB32	**681489**	EP102RucC32	**681515**	-	-	6
	40	EP102RucB40	**681490**	EP102RucC40	**681516**	-	-	6
	50	EP102RucB50	**681491**	EP102RucC50	**681517**	-	-	6
	63	EP102RucB63	**681492**	EP102RucC63	**681518**	-	-	6

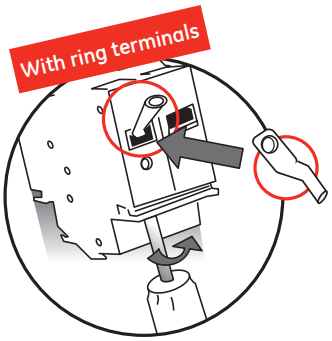
2P	0.5	-	-	EP102UCRC0,5	**680565**	EP102UCRK0,5	**673284**	6
2 mod.	1	-	-	EP102UCRC01	**680566**	EP102UCRK01	**673285**	6
		-	-			EP102UCRK1,6	**673286**	6
(1) (2)	2	-	-	EP102UCRC02	**680567**	EP102UCRK02	**673287**	6
		-	-			EP102UCRK03	**673288**	6
	4	-	-	EP102UCRC04	**680568**	EP102UCRK04	**673289**	6
	6	-	-	EP102UCRC06	**680569**	EP102UCRK06	**673290**	6
		-	-			EP102UCRK08	**673291**	6
	10	-	-	EP102UCRC10	**680570**	EP102UCRK10	**673292**	6
		-	-			EP102UCRK13	**673293**	6
	16	-	-	EP102UCRC16	**680571**	EP102UCRK16	**673294**	6
	20	-	-	EP102UCRC20	**680572**	EP102UCRK20	**673295**	6
	25	-	-	EP102UCRC25	**680573**	EP102UCRK25	**673296**	6
	32	-	-	EP102UCRC32	**680574**	EP102UCRK32	**673297**	6
	40	-	-	EP102UCRC40	**680575**	EP102UCRK40	**673298**	6
	50	-	-	EP102UCRC50	**680576**	EP102UCRK50	**673299**	6
	63	-	-	EP102UCRC63	**680577**	EP102UCRK63	**673300**	6

(1) Always respect the polarities
(2) Characteristics are in DC:
B (DC) 3 up to 7.5 In
C (DC) 5 up to 15 In
K (DC) 8 up to 12 In
(3) Marking EP101UCRK:



Miniature circuit breakers with ring terminals

Series EP100T



The miniature circuit breakers in RAIL-design have been developed with regard to shakes, shocks and vibrations

Applications

Standards

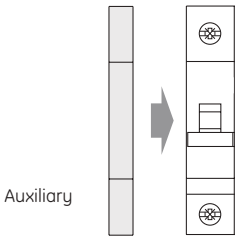
- Certified acc. new CEI UNI 11170 (higher protection against fires)
- Certified acc. to NF 16-101, smoke index F
- Shock and vibrations tests acc. to IEC 61373

Approval / Marking

Trenitalia n° 371441.01

CE

Add-on devices



Auxiliary contacts series CBT
Shunt trip Tele LT

Auxiliary contacts pg C.10
Shunt trip pg C.11
Dimensions pg A.80

Performances

Thermal setting In	(A)	0.5 to 63 at 45°C
Rated voltage AC Un	(V)	240/440
Operating temperature	(°C)	-40/+70
Tripping characteristics		Z-B-C-K
Selectivity class		3
Mechanical/electrical endurance		20000/10000
Tropicalisation acc. IEC 60068-2-28/2-30		95% RH under 55°C
Capacity of ring terminal	(mm^2)	16 (x2 connections)
Torque	(Nm)	2
Poles		1, 2, 3, 4
Self-extinguish degree		according UNI CEI 11170
Smoke index acc. UNI CEI 11170, NF 16-102		F1
Maximum working altitude	(m)	2000

Short-circuit capacity

AC acc. to EN/IEC 60898

Poles	*V ~*	*Icn (kA)*
1-4	230/400	10

AC acc. to EN 60947-2 (minimum value)

Poles	*V ~*	*Icu (kA)*
1	230	15
	133	20
2	440/380	15
	230/133	20
3, 4	440	10
	380	15
	230	20

DC acc. to EN 60947-2

Poles	*V ⎓*	*Icu (kA)/Ics(kA)*
1	60	25/15 ms
2	110	30/15 ms

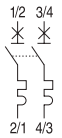
Railway applications with ring terminals

Series EP100T - 10kA – characteristics Z-B-C-K

1P 1 mod.

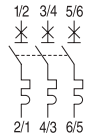
	2-3 In (Z)		3-5 In (B)		8-12 In (C)		8-12 In (K)		
In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
0.5	EP101TZ0.5	**691277**	-	-	EP101TC0.5	**691245**	EP101TK0.5	**691261**	12
1	EP101TZ01	**691278**	-	-	EP101TC01	**691246**	EP101TK1	**691267**	12
1.6	EP101TZ1.6	**691284**	-	-	EP101TC1.6	**691252**	EP101TK1.6	**691268**	12
2	EP101TZ02	**691279**	-	-	EP101TC02	**691247**	EP101TK02	**691262**	12
3	EP101TZ03	**691280**	-	-	EP101TC03	**691248**	EP101TK03	**691263**	12
4	EP101TZ04	**691281**	-	-	EP101TC04	**691249**	EP101TK04	**691264**	12
6	EP101TZ06	**691282**	EP101TB6	**691234**	EP101TC06	**691250**	EP101TK06	**691265**	12
8	EP101TZ08	**691283**	EP101TB8	**691235**	EP101TC08	**691251**	EP101TK08	**691266**	12
10	EP101TZ10	**691285**	EP101TB10	**691236**	EP101TC10	**691253**	EP101TK10	**691269**	12
13	-	-	EP101TB13	**691237**	EP101TC13	**691254**	-	-	12
16	EP101TZ16	**691286**	EP101TB16	**691238**	EP101TC16	**691255**	EP101TK16	**691270**	12
20	EP101TZ20	**691287**	EP101TB20	**691239**	EP101TC20	**691256**	EP101TK20	**691271**	12
25	EP101TZ25	**691288**	EP101TB25	**691240**	EP101TC25	**667248**	EP101TK25	**691272**	12
32	EP101TZ32	**691289**	EP101TB32	**691241**	EP101TC32	**691257**	EP101TK32	**691273**	12
40	EP101TZ40	**691290**	EP101TB40	**691242**	EP101TC40	**691258**	EP101TK40	**691274**	12
50	EP101TZ50	**691291**	EP101TB50	**691243**	EP101TC50	**691259**	EP101TK50	**691275**	12
63	EP101TZ63	**691292**	EP101TB63	**691244**	EP101TC63	**691260**	EP101TK63	**691276**	12

2P 2 mod.



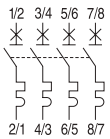
0.5	EP102TZ0.5	**691337**	-	-	EP102TC0.5	**691304**	EP102TK0.5	**691321**	6
1	EP102TZ01	**691338**	-	-	EP102TC01	**691305**	EP102TK01	**691322**	6
1.6	EP102TZ1.6	**691344**	-	-	EP102TC1.6	**691311**	EP102TK1.6	**691328**	6
2	EP102TZ02	**691339**	-	-	EP102TC02	**691306**	EP102TK02	**691323**	6
3	EP102TZ03	**691340**	-	-	EP102TC03	**691307**	EP102TK03	**691324**	6
4	EP102TZ04	**691341**	-	-	EP102TC04	**691308**	EP102TK04	**691325**	6
6	EP102TZ06	**691342**	EP102TB06	**691293**	EP102TC06	**691309**	EP102TK06	**691326**	6
8	EP102TZ08	**691343**	EP102TB08	**691294**	EP102TC08	**691310**	EP102TK08	**691327**	6
10	EP102TZ10	**691345**	EP102TB10	**691295**	EP102TC10	**691312**	EP102TK10	**691329**	6
13	-	-	EP102TB13	**691296**	EP102TC13	**691313**	-	-	6
16	EP102TZ16	**691346**	EP102TB16	**691297**	EP102TC16	**691314**	EP102TK16	**691330**	6
20	EP102TZ20	**691347**	EP102TB20	**691298**	EP102TC20	**691315**	EP102TK20	**691331**	6
25	EP102TZ25	**691348**	EP102TB25	**691299**	EP102TC25	**691316**	EP102TK25	**691332**	6
32	EP102TZ32	**691349**	EP102TB32	**691300**	EP102TC32	**691317**	EP102TK32	**691333**	6
40	EP102TZ40	**691350**	EP102TB40	**691301**	EP102TC40	**691318**	EP102TK40	**691334**	6
50	EP102TZ50	**691351**	EP102TB50	**691302**	EP102TC50	**691319**	EP102TK50	**691335**	6
63	EP102TZ63	**691352**	EP102TB63	**691303**	EP102TC63	**691320**	EP102TK63	**691336**	6

3P 3 mod.



0.5	-	-	-	-	EP103TC0.5	**691364**	EP103TK0.5	**691381**	4
1	-	-	-	-	EP103TC01	**691365**	EP103TK01	**691382**	4
1.6	-	-	-	-	EP103TC1.6	**691371**	EP103TK1.6	**691388**	4
2	-	-	-	-	EP103TC02	**691366**	EP103TK02	**691383**	4
3	-	-	-	-	EP103TC03	**691367**	EP103TK03	**691384**	4
4	-	-	-	-	EP103TC04	**691368**	EP103TK04	**691385**	4
6	-	-	EP103TB06	**691353**	EP103TC06	**691369**	EP103TK06	**691386**	4
8	-	-	EP103TB08	**691354**	EP103TC08	**691370**	EP103TK08	**691387**	4
10	-	-	EP103TB10	**691355**	EP103TC10	**691372**	EP103TK10	**691389**	4
13	-	-	EP103TB13	**691356**	EP103TC13	**691373**	-	-	4
16	-	-	EP103TB16	**691357**	EP103TC16	**691374**	EP103TK16	**691390**	4
20	-	-	EP103TB20	**691358**	EP103TC20	**691375**	EP103TK20	**691391**	4
25	-	-	EP103TB25	**691359**	EP103TC25	**691376**	EP103TK25	**691392**	4
32	-	-	EP103TB32	**691360**	EP103TC32	**691377**	EP103TK32	**691393**	4
40	-	-	EP103TB40	**691361**	EP103TC40	**691378**	EP103TK40	**691394**	4
50	-	-	EP103TB50	**691362**	EP103TC50	**691379**	EP103TK50	**691395**	4
63	-	-	EP103TB63	**691363**	EP103TC63	**691380**	EP103TK63	**691396**	4

4P 4 mod.

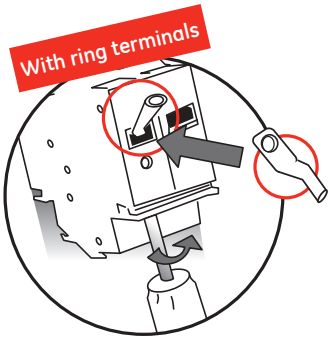


0.5	-	-	-	-	EP104TC0.5	**691407**	EP104TK0.5	**691424**	3
1	-	-	-	-	EP104TC01	**691408**	EP104TK01	**691425**	3
1.6	-	-	-	-	EP104TC1.6	**691414**	EP104TK1.6	**691431**	3
2	-	-	-	-	EP104TC02	**691409**	EP104TK02	**691426**	3
3	-	-	-	-	EP104TC03	**691410**	EP104TK03	**691427**	3
4	-	-	-	-	EP104TC04	**691411**	EP104TK04	**691428**	3
6	-	-	EP104TB06	**691397**	EP104TC06	**691412**	EP104TK06	**691429**	3
8	-	-	EP104TB08	**691398**	EP104TC08	**691413**	EP104TK08	**691430**	3
10	-	-	EP104TB10	**691399**	EP104TC10	**691415**	EP104TK10	**691432**	3
13	-	-	EP104TB13	**691400**	EP104TC13	**691416**	-	-	3
16	-	-	EP104TB16	**667247**	EP104TC16	**691417**	EP104TK16	**691433**	3
20	-	-	EP104TB20	**691401**	EP104TC20	**691418**	EP104TK20	**691434**	3
25	-	-	EP104TB25	**691402**	EP104TC25	**691419**	EP104TK25	**691435**	3
32	-	-	EP104TB32	**691403**	EP104TC32	**691420**	EP104TK32	**691436**	3
40	-	-	EP104TB40	**691404**	EP104TC40	**691421**	EP104TK40	**691437**	3
50	-	-	EP104TB50	**691405**	EP104TC50	**691422**	EP104TK50	**691438**	3
63	-	-	EP104TB63	**691406**	EP104TC63	**691423**	EP104TK63	**691439**	3

Railway applications with ring terminals

Miniature circuit breakers with ring terminals Universal currents

Series EP100 UCT



The miniature circuit breakers in RAIL-design have been developed with regard to shakes, shocks and vibrations

Applications

Standards

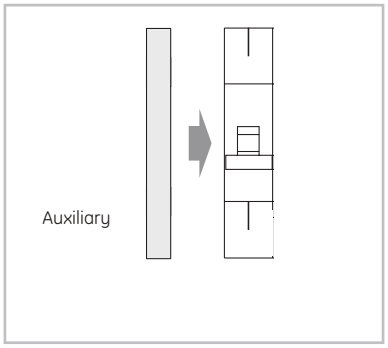
- Certified acc. new CEI UNI 11170 (higher protection against fires)
- Certified acc. to NF 16-101, smoke index F
- Shock and vibrations tests acc. to IEC 61373

Approval / Marking

Trenitalia n° 371441.01

CE

Add-on devices



Auxiliary contacts pg C.10
Shunt trip pg C.11
Dimensions pg A.80

Performances

Thermal setting In	(A)	0.5 to 63 at 45°C
Rated voltage AC Un	(V)	250/440
Operating temperature	(°C)	-40/+70
Tripping characteristics		Z-B-C-K
Selectivity class		3
Mechanical/electrical endurance		20000/10000
Tropicalisation acc. IEC 60068-2-28/2-30		95% RH under 55°C
Capacity of ring terminal	(mm^2)	16 (x2 connections)
Torque	(Nm)	2
Poles		1, 2
Self-extinguish degree		according UNI CEI 11170
Smoke index acc. UNI CEI 11170, NF 16-102		F1
Maximum working altitude	(m)	2000

Short-circuit capacity

DC acc. to EN/IEC 60947-2

Poles	*V ⎓*	*Icu (kA)/Ics(kA)*
1	24	25/15 ms
	60	25/15 ms
	110	20/10 ms
	250	10/5 ms
2	24	30/15 ms
	60	30/15 ms
	110	25/15 ms
	250	10/5 ms

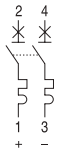
Railway applications with ring terminals

Series EP100 UCT - 10kA - characteristics Z-B-C-K

1P
1 mod.

	2-3 In (Z)		3-5 In (B)		8-12 In (C)		8-12 In (K)		
In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
0.5	EP101UCTZ0.5	**691484**	-	-	EP101UCTC0.5	**691451**	EP101UCTK0.5	**691468**	12
1	EP101UCTZ01	**691485**	-	-	EP101UCTC01	**691452**	EP101UCTK01	**691469**	12
1.6	EP101UCTZ1.6	**691491**	-	-	EP101UCTC1.6	**691458**	EP101UCTK1.6	**691475**	12
2	EP101UCTZ02	**691486**	-	-	EP101UCTC02	**691453**	EP101UCTK02	**691470**	12
3	EP101UCTZ03	**691487**	-	-	EP101UCTC03	**691454**	EP101UCTK03	**691471**	12
4	EP101UCTZ04	**691488**	-	-	EP101UCTC04	**691455**	EP101UCTK04	**691472**	12
6	EP101UCTZ06	**691489**	EP101UCTB06	**691440**	EP101UCTC06	**691456**	EP101UCTK06	**691473**	12
8	EP101UCTZ08	**691490**	EP101UCTB08	**691441**	EP101UCTC08	**691457**	EP101UCTK08	**691474**	12
10	EP101UCTZ10	**691492**	EP101UCTB10	**691442**	EP101UCTC10	**691459**	EP101UCTK10	**691476**	12
13	-	-	EP101UCTB13	**691443**	EP101UCTC13	**691460**	-	-	12
16	EP101UCTZ16	**691493**	EP101UCTB16	**691444**	EP101UCTC16	**691461**	EP101UCTK16	**691477**	12
20	EP101UCTZ20	**691494**	EP101UCTB20	**691445**	EP101UCTC20	**691462**	EP101UCTK20	**691478**	12
25	EP101UCTZ25	**691495**	EP101UCTB25	**691446**	EP101UCTC25	**691463**	EP101UCTK25	**691479**	12
32	EP101UCTZ32	**691496**	EP101UCTB32	**691447**	EP101UCTC32	**691464**	EP101UCTK32	**691480**	12
40	EP101UCTZ40	**691497**	EP101UCTB40	**691448**	EP101UCTC40	**691465**	EP101UCTK40	**691481**	12
50	EP101UCTZ50	**691498**	EP101UCTB50	**691449**	EP101UCTC50	**691466**	EP101UCTK50	**691482**	12
63	EP101UCTZ63	**691499**	EP101UCTB63	**691450**	EP101UCTC63	**691467**	EP101UCTK63	**691483**	12

2P
2 mod.



0.5	EP102UCTZ0.5	**691544**	-	-	EP102UCTC0.5	**691511**	EP102UCTK0.5	**691528**	6
1	EP102UCTZ01	**691545**	-	-	EP102UCTC01	**691512**	EP102UCTK01	**691529**	6
1.6	EP102UCTZ02	**691546**	-	-	EP102UCTC1.6	**691518**	EP102UCTK1.6	**691535**	6
2	EP102UCTZ1.6	**691551**	-	-	EP102UCTC02	**691513**	EP102UCTK02	**691530**	6
3	EP102UCTZ03	**691547**	-	-	EP102UCTC03	**691514**	EP102UCTK03	**691531**	6
4	EP102UCTZ04	**691548**	-	-	EP102UCTC04	**691515**	EP102UCTK04	**691532**	6
6	EP102UCTZ06	**691549**	EP102UCTB06	**691500**	EP102UCTC06	**691516**	EP102UCTK06	**691533**	6
8	EP102UCTZ08	**691550**	EP102UCTB08	**691501**	EP102UCTC08	**691517**	EP102UCTK08	**691534**	6
10	EP102UCTZ10	**691552**	EP102UCTB10	**691502**	EP102UCTC10	**691519**	EP102UCTK10	**691536**	6
13	-	-	EP102UCTB13	**691503**	EP102UCTC13	**691520**	-	-	6
16	EP102UCTZ16	**691553**	EP102UCTB16	**691504**	EP102UCTC16	**691521**	EP102UCTK16	**691537**	6
20	EP102UCTZ20	**691554**	EP102UCTB20	**691505**	EP102UCTC20	**691522**	EP102UCTK20	**691538**	6
25	EP102UCTZ25	**691555**	EP102UCTB25	**691506**	EP102UCTC25	**691523**	EP102UCTK25	**691539**	6
32	EP102UCTZ32	**691556**	EP102UCTB32	**691507**	EP102UCTC32	**691524**	EP102UCTK32	**691540**	6
40	EP102UCTZ40	**691557**	EP102UCTB40	**691508**	EP102UCTC40	**691525**	EP102UCTK40	**691541**	6
50	EP102UCTZ50	**691558**	EP102UCTB50	**691509**	EP102UCTC50	**691526**	EP102UCTK50	**691542**	6
63	EP102UCTZ63	**691559**	EP102UCTB63	**691510**	EP102UCTC63	**691527**	EP102UCTK63	**691543**	6

Railway applications with ring terminals

Accessories for MCBs - Series G, GT and EP

		Cat. No.	Ref. No.	Pack.
Sealing plate for 4P	Cut off the number of poles needed for Series G, GT	EPP	**669486**	100
Padlocking bracket	Allows padlocking in ON and OFF position Ø padlock 5 mm	KS	**624929**	2
Spacer	1/2 module	PLS / CTX SP	**686069**	50

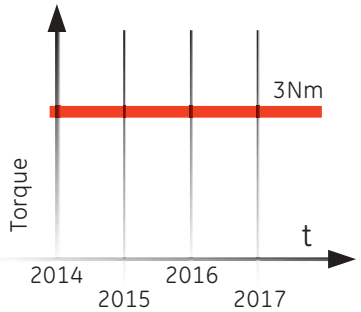
Notes

2 circuits in 1 mo

Redline Unibis™: the solution

Unibis™ compact MCBs are one of the latest introductions in the Redline range and are developed to **reduce the size of the distribution board to the minimum**.
The performances are upgraded to **10kA**.

Safety terminals
Up to 6mm² + 4mm² wires combined.

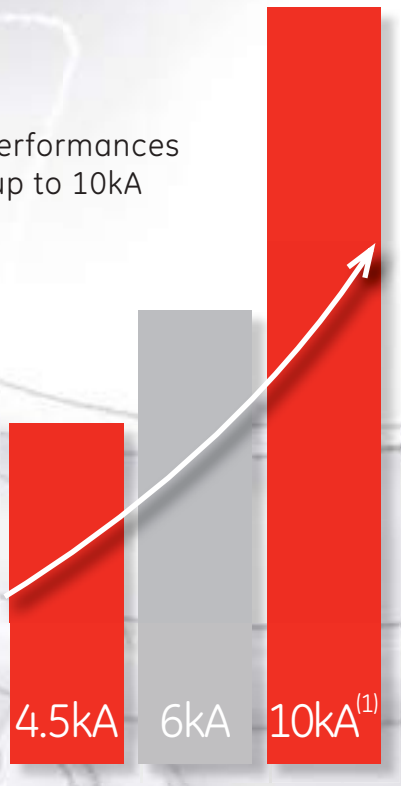


dule

for space problems

1P+1P in 1 module | **1P+N in 1 module** | **2P in 1 module** | **3P in 2 modules** | **4P in 2 modules**

- ☑ Brandnew design:
  2P in 1 module,
- ☑ 3 and 4P in 2 modules
- ☑ Complete range: from 4.5–6–**10kA**(1),
  2–**40** Amps, B and C curves
- ☑ 100% compatible with all Redline
  auxiliaries and accessories
- ☑ 100% quality and reliability
  acc. to EN 60898
- ☑ CEBEC, NF, VDE, KEMA, IMQ certified



(1) 10kA acc. to IEC 60947-2

The solution for

Unibis™ compact MCBs
quality and reliability guaranteed

High performance clips

To fix the MCB to the DIN rail.

High performance torque

Up to 3Nm.

Easy to replace

Double clips make it easy to replace the MCBs, especially when a busbar is installed.

Userfriendly

All screws are on the same level to work fast and easy.

Green or red flag on toggle with isolation applications

Correct information about the real position. Minimum 5mm distance between open contacts is ensured.

Part of the family

Unibis™ MCBs fit perfectly in the Redline range.

Safety terminals IP20

The capacity of Unibis™ terminals has been doubled. Connection possibilities:
(2 x 4mm^2)
or
(1 x 4mm^2) + (1 x 6mm^2).

Full functionality

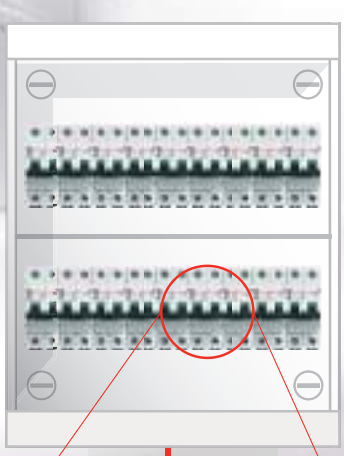
A small auxiliary contact is the interface to the complete functionality of the Redline auxiliaries and accessories.

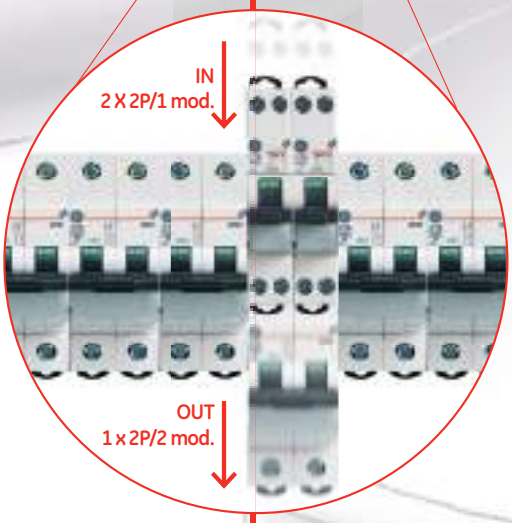
renovations

Saving up to 50% space in distribution boards!

Before

18 x 2P MCBs
36 MODULES

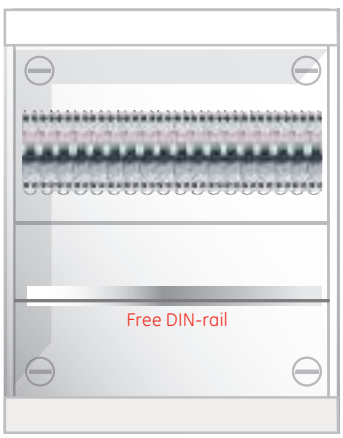




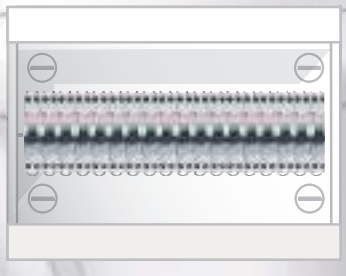
Replacing standard MCBs by compact Unibis™ MCBs

OR

FREE DIN-RAIL FOR EXTENSIONS



DISTRIBUTION BOARD REDUCED BY 50%



After

18 x 2P MCBs
18 MODULES

Technical data of compact MCBs

Series			EPC 451N
Standards			EN 60898-1
Tripping characteristics			B,C
Nominal current		(In)	2-40
Calibration temperature		(°C)	30
Number of poles (# mod.)			1+N (1 mod.)
Neutral pole protected			-
Nominal voltage Un AC	1P+N	(V)	240
	1P+1P	(V)	-
	2P	(V)	-
	3P	(V)	-
	4P	(V)	-
Nominal voltage Un DC	2P	(V⎓)	-
Frequency		(Hz)	50/60
		in DC	Thresh. magn. + 40%
		for 400 Hz	Thresh. magn. + 50%
Maximum service voltage Ub max		(V)	250
Minimum service voltage Ub min		(V)	12
Selectivity class (EN 60898-1)			3
Rated insulation voltage	Pollution degree 2	(V)	500
	Pollution degree 3	(V)	400
Impulse withstand test voltage		(kV)	6
Insulation resistance		(MΩ)	1000
Dielectric rigidity		(kV)	2.5
Vibration resistance (in x,y,z direction) (IEC 77/16.3)		(g)	3
Endurance	Electrical at Un,In		10000(1)
	Mechanical		20000
Utilisation category (EN 60947-2)			A
Mounting position: vertical/horizontal			any
Incoming top or bottom			yes
Protection degree (outside/inside enclosure with door)			IP20/IP40
Selfextinguish degree (acc. UL 94)			V2
Tropicalisation (acc. EN 60068-2/DIN 40046)			+55°C/95%RH
Operating temperature		(°C)	-25/+55
Storage temperature		(°C)	-55/+55
Terminal capacity	Rigid cable min/max (top)	(mm²)	1/16(2)
	Flexible cable min/max (top)	(mm²)	1/10(2)
	Rigid cable min/max (bottom)	(mm²)	1/16(2)
	Flexible cable min/max (bottom)	(mm²)	1/10(2)
	Torque	(Nm)	3
Add-on devices	Auxiliary contacts CA UN		yes
	Tele U		yes(3)
	Tele L		yes(3)
	Tele MP		yes(3)
	PBS		yes(3)
Busbar systems	Pin (top/bottom)		yes/yes
	Fork (top/bottom)		no/no
Accessories			yes
Width per mod.		(mm)	18
Weight per mod.		(g)	125
Package			12
Approvals			KEMA, IMQ
CE- marking			yes
Page			A.60

Short-circuit capacity of compact MCBs

Series			EPC 451N
Short-circuit capacity AC			(kA)
EN/IEC 60898-1 **Icn**	1P+N	240 V	4.5
	1P+1P	240 V	-
	2P	415 V	-
	3P	415 V	-
	4P	415 V	-
EN 60947-2 **Icu**	1P+N	230 V	6
	1P+1P	230 V	-
	2P	415 V	-
	3P	415 V	-
	4P	415 V	-
Short-circuit capacity DC			
EN 60947-2 **Icu**	2P	96 V⎓	

(1) 8000 for 32 and 40 A
(2) Also accepting (2x4mm²) or (1x4mm²)+(1x6mm²)
(3) Requires CA UN auxiliary contact as interface

EPC 61N	EPC 611	EPC 45	EPC 60
EN 60898-1	EN 60898-1	EN 60898-1	EN 60898-1
B,C	B,C	B,C	B,C
2-40	2-20	2-40	2-40
30	30	30	30
1+N (1 mod.)	1P+1P (1 mod.)	2 (1 mod.), 3 and 4 (2 mod.)	2 (1 mod.), 3 and 4 (2 mod.)
-	-	-	-
240	-	-	-
-	230(4)	-	-
-	-	415	415
	-	415	415
	-	415	415
-	-	96	96
50/60	50/60	50/60	50/60
Thresh. magn. + 40%	Thresh. magn. + 40%	Thresh. magn. + 40%	Thresh. magn. + 40%
Thresh. magn. + 50%	Thresh. magn. + 50%	Thresh. magn. + 50%	Thresh. magn. + 50%
250	250/440	250/440	250/440
12	12	12	12
3	3	3	3
500	500	500	500
400	400	400	400
6	6	6	6
1000	1000	10000	10000
2.5	2.5	2.5	2.5
3	3	3	3
10000(1)	10000(1)	10000(1)	10000(1)
20000	20000	20000	20000
A	A	A	A
any	any	any	any
yes	yes	yes	yes
IP20/IP40	IP20/IP40	IP20/IP40	IP20/IP40
V2	V2	V2	V2
+55°C/95%RH	+55°C/95%RH	+55°C/95%RH	+55°C/95%RH
-25/+55	-25/+55	-25/+55	-25/+55
-55/+55	-55/+55	-55/+55	-55/+55
1/16(2)	1/16(2)	1/16(2)	1/16(2)
1/10(2)	1/10(2)	1/10(2)	1/10(2)
1/16(2)	1/16(2)	1/16(2)	1/16(2)
1/10(2)	1/10(2)	1/10(2)	1/10(2)
3	3	3	3
yes	yes	yes	yes
yes(3)	yes(3)	yes(3)	yes(3)
yes(3)	yes(3)	yes(3)	yes(3)
yes(3)	yes(3)	yes(3)	yes(3)
yes(3)	yes(3)	yes(3)	yes(3)
yes/yes	yes/yes	yes/yes	yes/yes
no/no	no/no	no/no	no/no
yes	yes	yes	yes
18	18	18/36	18/36
125	160	160/320	160/320
12	12/6	12/6	12/6
VDE, KEMA, IMQ	VDE, IMQ	IMQ, NF	VDE, IMQ, NF, CEBEC
yes	yes	yes	yes
A.61	A.63	A.64	A.66

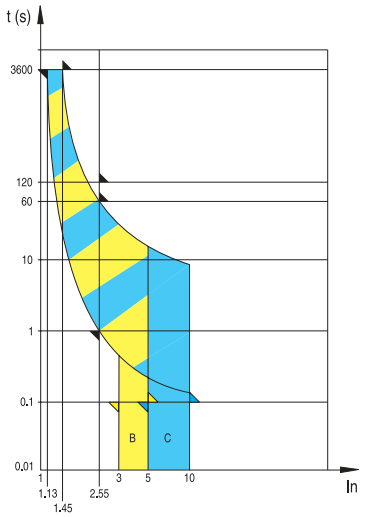
EPC 61N	EPC 611	EPC 45	EPC 60
(kA)	(kA)	(kA)	(kA)
6	-	-	-
-	6	-	-
-	-	4.5	6
-	-	4.5	6
-	-	4.5	6
10	-	-	-
-	6	-	-
-	-	6	10
-	-	6	6
-	-	6	6
		4.5	6

(1) 8000 for 32 and 40 A
(2) Also accepting (2x4mm²) or (1x4mm²)+(1x6mm²)
(3) Requires CA UN auxiliary contact as interface
(4) Single phase supply or same phase in 3Ph supply

Characteristics according to IEC/EN 60898-1

Miniature Circuit Breakers (MCB) are intended for the protection of wiring installations against both overloads and short-circuits in domestic or commercial wiring installations where operation is possible by uninstructed people.

Tripping characteristic curves (EN/IEC 60898-1)



Magnetic release

An electromagnet with plunger ensures instantaneous tripping in the event of short-circuit. The standard distinguishes two different types, following the current for instantaneous release: type B and C.

Icn (A)	Test current	Tripping time	Applications
B	3 x In 5 x In	0.1 < t < 45s (In ≤ 32A) 0.1 < t < 90s (In > 32A) t < 0.1s	Only for resistive loads such as: - electrical heating - water heater - stoves
C	5 x In 10 x In	0.1 < t < 15s (In ≤ 32A) 0.1 < t < 30s (In > 32A) t < 0.1s	Usual loads such as: - lighting - socket-outlets - small motors

Thermal release

The release is initiated by a bimetal strip in case of overload. The standard defines the range of releases for specific overload values.
Reference ambient temperature is 30°C.

Test current	Tripping time
1.13 x In	t ≥ 1h (In ≤ 63A) t ≥ 2h (In > 63A)
1.45 x In	t < 1h (In ≤ 63A) t < 2h (In > 63A)
2.55 x In	1s < t < 60s (In ≤ 32A) 1 s < t < 120s (In > 32A)

Influence of ambient air temperature on the rated current

The maximum value of the current which can flow through an MCB depends of the nominal current of the MCB, the conductor cross-section as well as of the ambient air temperature.

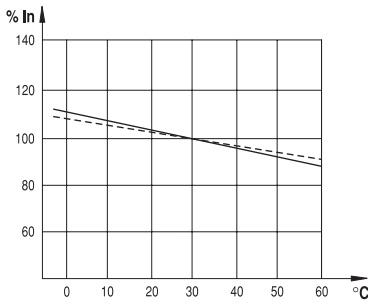
The values shown in the table below are for devices in free air. For devices installed with other modular devices in the same switchboard a correction factor (K) shall be applied relative to the mounting situation of the MCB, the ambient temperature and the number of main circuits in the installation (EN 60439-1):

No. of devices	K
2 or 3	0.9
4 or 5	0.8
6 to 9	0.7
> 10	0.6

Calculation example
Within a distribution panel consisting of eight MCBs 2PC16 with an operating ambient temperature of 45°C, which is the highest temperature at which the MCB can operate without unwanted tripping.

Calculation
The correction factor K=0.7, for use in an eight circuit installation: 16A x 0.7= 11.2A
As the MCB is working at 45°C, another factor shall be applied (90% = 0.9):
In at 45°C = In at 30°C x 0.9 = 11.2A x 0.9 = 10.1A

The thermal calibration of the MCBs was carried out at an ambient temperature of 30°C. Ambient temperatures different from 30°C influence the bimetal and this results in earlier or later thermal tripping.



Tripping current as a function of the frequency

All MCBs are designed to work at frequencies of 50-60 Hz, therefore to work at different values, consideration must be given to the variation of the tripping characteristics. The thermal tripping does not change with variation of the frequency but the magnetic tripping values can be up to 50% higher than the ones at 50-60 Hz.
For DC current magnetic tripping is 50% higher.

Tripping current variations

60Hz	100Hz	200Hz	300Hz	400Hz
1	1.1	1.2	1.4	1.5

Power losses

The power losses are calculated by measuring the voltage drop between the incoming and the outgoing terminals of the device at rated current.

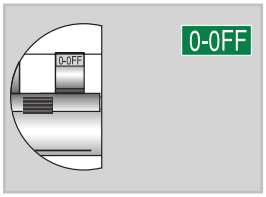
Power losses per pole

In (A)	Voltage drop (V)	Energy loss Pw (W)	Resistance Z (mOhm)
2	0.55	1.1	275.00
4	0.34	1.35	84.38
6	0.25	1.52	42.22
10	0.16	1.64	16.40
16	0.13	2.1	8.20
20	0.13	2.52	6.30
25	0.12	3.1	4.96
32	0.12	3.8	3.71
40	0.11	4.46	2.79

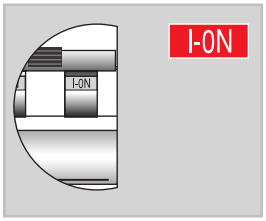
Toggle

The toggle permits to switch the MCB ON or OFF

Printing on the toggle provides information of the real contact position.



0-OFF
Contacts in open position. Ensures a distance between contacts > 5mm in the Unibis™ range.



I-ON
Contacts in closed position. Ensures continuity in the main circuit.

Compact MCBs

Series EPC 451N

EN/IEC 60898-1 4500 / 3

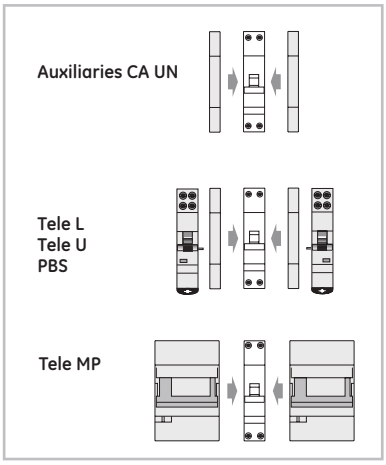
EN/IEC 60947-2 6kA

Applications

Approvals / Marking

KEMA KEUR CE

Add-on devices



When coupling an add-on device (Tele L, Tele U, PBS, Tele MP) to the MCB, an universal CA UN auxiliary has to be coupled first as interface.

Auxiliary contacts pg C.6

Busbars pg E.2
Dimensions pg A.82

Performances

Thermal setting In	(A)	2-40
Rated voltage AC Un	(V)	240
Minimum operating voltage U_{Bmin}	(V)	12
Tripping caracteristics		B-C
Selectivity class		3
Mechanical/electrical endurance		20000/10000(1)
Tropicalisation acc. to EN/IEC 60068-2		55°C at 95% RH
Terminal capacity flexible/rigid cable	(mm²)	10-16(2)
Poles		1P+N (1 mod)
Weight	(g)	125

Short-circuit capacity

AC acc. to EN/IEC 60898-1

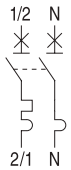
Poles	*V*	*Icn/Ics (kA)*
1P+N	240	4.5

AC acc. to EN/IEC 60947-2

Poles	*V*	*Icu (kA)*
1P+N	240	6

Attention: do not use on IT net configuration

Series EPC 451N - 4.5kA - characteristics B-C



1P + N
1 mod.

	B		C		
In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
2	EPC 451N B02	**692810**	EPC 451N C02	**692781**	12
4	EPC 451N B04	**692811**	EPC 451N C04	**692782**	12
6	EPC 451N B06	**692812**	EPC 451N C06	**692783**	12
10	EPC 451N B10	**692813**	EPC 451N C10	**692784**	12
16	EPC 451N B16	**692814**	EPC 451N C16	**692786**	12
20	EPC 451N B20	**692815**	EPC 451N C20	**692787**	12
25	EPC 451N B25	**692816**	EPC 451N C25	**692788**	12
32	EPC 451N B32	**692817**	EPC 451N C32	**692789**	12
40	EPC 451N B40	**692818**	EPC 451N C40	**692790**	12

(1) 8000 for 32 and 40A
(2) Also accepting (2x4mm²) or (1x4mm²)+(1x6mm²)

Compact MCBs

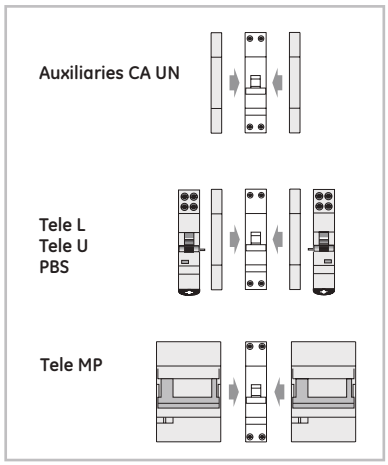
Series EPC 61N

EN/IEC 60898-1	6000 / 3
EN/IEC 60947-2	10kA

Applications

Approvals / Marking

Add-on devices



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Auxiliary contacts pg C.6

Busbars pg E.2
Dimensions pg A.82

Performances

Thermal setting In	(A)	2-40
Rated voltage AC Un	(V)	240
Minimum operating voltage U_{Bmin}	(V)	12
Tripping caracteristics		B-C
Selectivity class		3
Mechanical/electrical endurance		20000/10000(1)
Tropicalisation acc. to EN/IEC 60068-2		55°C at 95% RH
Terminal capacity flexible/rigid cable	(mm²)	10-16(2)
Poles		1P+N (1 mod)
Weight	(g)	125

Short-circuit capacity

AC acc. to EN/IEC 60898-1

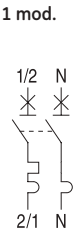
Poles	*V*	*Icn/Ics (kA)*
1P+N	240	6

AC acc. to EN/IEC 60947-2

Poles	*V*	*Icu (kA)*
1P+N	240	10

Attention: do not use on IT net configuration

Series EPC 61N - 6kA - characteristics B-C



		B		C		
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
1P + N 1 mod.	2	EPC 61N B02	**692819**	EPC 61N C02	**692791**	12
	4	EPC 61N B04	**692820**	EPC 61N C04	**692792**	12
	6	EPC 61N B06	**692821**	EPC 61N C06	**692793**	12
	10	EPC 61N B10	**692822**	EPC 61N C10	**692794**	12
	13	EPC 61N B13	**692604**	EPC 61N C13	**692795**	12
	16	EPC 61N B16	**692823**	EPC 61N C16	**692796**	12
	20	EPC 61N B20	**692824**	EPC 61N C20	**692797**	12
	25	EPC 61N B25	**692825**	EPC 61N C25	**692798**	12
	32	EPC 61N B32	**692826**	EPC 61N C32	**692799**	12
	40	EPC 61N B40	**692827**	EPC 61N C40	**692800**	12

(1) 8000 for 32 and 40A
(2) Also accepting (2x4mm²) or (1x4mm²)+(1x6mm²)

Notes

Compact MCBs

Series EPC 611

EN/IEC 60898-1 6000 / 3

EN/IEC 60947-2 6kA

Performances

Thermal setting In	(A)	2-20
Rated voltage AC Un	(V)	230(1)
Minimum operating voltage U_{Bmin}	(V)	12
Tripping characteristics		B-C
Selectivity class		3
Mechanical/electrical endurance		20000/10000
Tropicalisation acc. to EN/IEC 60068-2		55°C at 95% RH
Terminal capacity flexible/rigid cable	(mm^2)	10-16(2)
Poles		1P+1P (1 mod)
Weight	(g)	125

Short-circuit capacity

AC acc. to EN/IEC 60898-1

Poles	*V*	*Icn/Ics (kA)*
1 + 1	230	6

AC acc. to EN/IEC 60947-2

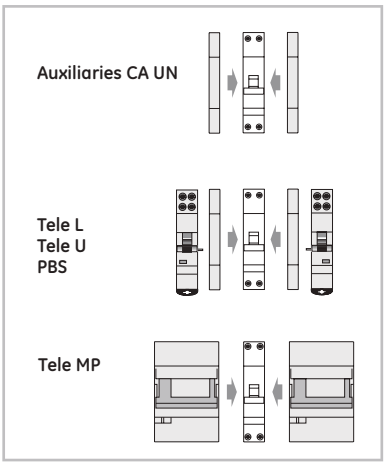
Poles	*V*	*Icu (kA)*
1 + 1	230	6

Attention: do not use on IT net configuration

Applications

Approvals / Marking

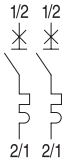
Add-on devices



When coupling an add-on device (Tele L, Tele U, PBS, Tele MP) to the MCB, an universal CA UN auxiliary has to be coupled first as interface.

Series EPC 611 - 6kA - characteristics B-C

	In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	Pack.
1P+1P 1 mod.	2	EPC 611 B02	**692689**	EPC 611 C02	**692699**	12
	4	EPC 611 B04	**692690**	EPC 611 C04	**692700**	12
	6	EPC 611 B06	**692691**	EPC 611 C06	**692701**	12
	10	EPC 611 B10	**692692**	EPC 611 C10	**692702**	12
	13	EPC 611 B13	**692693**	EPC 611 C13	**692703**	12
	16	EPC 611 B16	**692694**	EPC 611 C16	**692704**	12
	20	EPC 611 B20	**692695**	EPC 611 C20	**692705**	12



(1) Single phase supply or same phase in 3Ph supply
(2) Also accepting (2x4mm²) or (1x4mm²)+(1x6mm²)

Auxiliary contacts pg C.6

Busbars pg E.2
Dimensions pg A.82

Compact MCBs

Series EPC 45

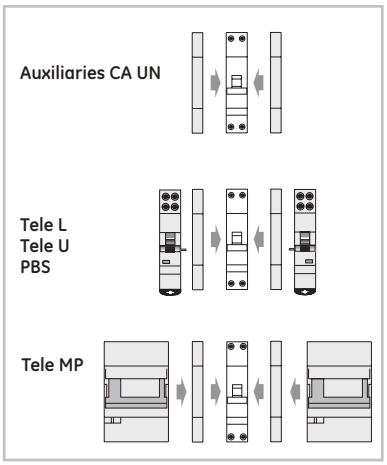
EN/IEC 60898-1 4500 / 3

EN/IEC 60947-2 6kA

Applications

Approvals / Marking

Add-on devices



When coupling an add-on device (Tele L, Tele U, PBS, Tele MP) to the MCB, an universal CA UN auxiliary has to be coupled first as interface.

Performances

Thermal setting In	(A)	2-40(1)
Rated voltage AC Un	(V)	240/415
Minimum operating voltage UBmin	(V)	12
Tripping characteristics		B-C
Selectivity class		3
Mechanical/electrical endurance		20000/10000(2)
Tropicalisation acc. to EN/IEC 60068-2		55°C at 95% RH
Terminal capacity flexible/rigid cable	(mm²)	10-16(3)
Poles		2, 3, 4
Weight	(g/mod)	160

Short-circuit capacity

AC acc. to EN/IEC 60898-1

Poles	*V*	*Icn/Ics (kA)*
2P	415	4.5
3P	415	4.5
4P	415	4.5

AC acc. to EN/IEC 60947-2

Poles	*V*	*Icu (kA)*
2P	415	6
3P	415	6
4P	415	6

DC acc. EN/IEC 60947-2

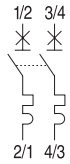
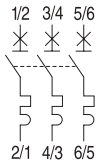
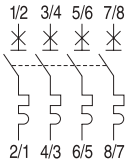
Poles	*Un (V ⎓)*	*Icu (kA)*
2P	96	4.5

(1) 32A, 3P and 4P
(2) 8000 for 32A
(3) Also accepting (2x4mm²) or (1x4mm²)+(1x6mm²)

Auxiliary contacts pg C.6

Busbars pg E.2
Dimensions pg A.82

Series EPC 45 - 4.5kA - characteristics B-C

		In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	Pack.
	2P 1 mod. 	2	EPC 452 B02	**692608**	EPC 452 C02	**692527**	12
		4	EPC 452 B04	**692609**	EPC 452 C04	**692528**	12
		6	EPC 452 B06	**692610**	EPC 452 C06	**692529**	12
		10	EPC 452 B10	**692611**	EPC 452 C10	**692530**	12
		16	EPC 452 B16	**692612**	EPC 452 C16	**692531**	12
		20	EPC 452 B20	**692613**	EPC 452 C20	**692532**	12
		25	EPC 452 B25	**692614**	EPC 452 C25	**692533**	12
		32	EPC 452 B32	**692615**	EPC 452 C32	**692534**	12
		40	EPC 452 B40	**692616**	EPC 452 C40	**692535**	12
	3P 2 mod. 	2	EPC 453 B02	**692617**(1)	EPC 453 C02	**692536**(1)	6
		4	EPC 453 B04	**692618**(1)	EPC 453 C04	**692537**(1)	6
		6	EPC 453 B06	**692619**(1)	EPC 453 C06	**692538**(1)	6
		10	EPC 453 B10	**692620**(1)	EPC 453 C10	**692539**(1)	6
		16	EPC 453 B16	**692621**(1)	EPC 453 C16	**692540**(1)	6
		20	EPC 453 B20	**692622**(1)	EPC 453 C20	**692541**(1)	6
		25	EPC 453 B25	**692623**(1)	EPC 453 C25	**692542**(1)	6
		32	EPC 453 B32	**692624**(1)	EPC 453 C32	**692543**(1)	6
	4P 2 mod. 	2	EPC 454 B02	**692626**	EPC 454 C02	**692545**	6
		4	EPC 454 B04	**692627**	EPC 454 C04	**692546**	6
		6	EPC 454 B06	**692628**	EPC 454 C06	**692547**	6
		10	EPC 454 B10	**692629**	EPC 454 C10	**692548**	6
		16	EPC 454 B16	**692630**	EPC 454 C16	**692549**	6
		20	EPC 454 B20	**692631**	EPC 454 C20	**692550**	6
		25	EPC 454 B25	**692632**	EPC 454 C25	**692551**	6
		32	EPC 454 B32	**692633**	EPC 454 C32	**692552**	6

(1) The auxiliary contact CA UN must be placed only on the **left side** of the 3P MCBs

Compact MCBs

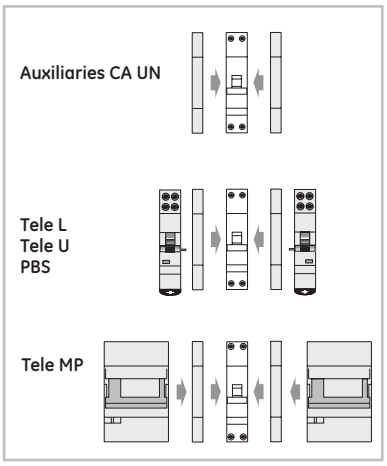
Series EPC 60

EN/IEC 60898-1	6000 / 3
EN/IEC 60947-2	10kA(1)

Applications

Approvals / Marking

Add-on devices



When coupling an add-on device (Tele L, Tele U, PBS, Tele MP) to the MCB, an universal CA UN auxiliary has to be coupled first as interface.

Performances

Thermal setting In	(A)	2-40(2)
Rated voltage AC Un	(V)	240/415
Minimum operating voltage UBmin	(V)	12
Tripping caracteristics		B-C
Selectivity class		3
Mechanical/electrical endurance		20000/10000(3)
Tropicalisation acc. to EN/IEC 60068-2		55°C at 95% RH
Terminal capacity flexible/rigid cable	(mm²)	10-16(4)
Poles		2, 3, 4
Weight/mod	(g)	160

Short-circuit capacity

AC acc. to EN/IEC 60898-1

Poles	*V*	*Icn/Ics (kA)*
2P	240/415	6
3P	240/415	6
4P	240/415	6

AC acc. to EN/IEC 60947-2

Poles	*V*	*Icu (kA)*
2P	240/415	10
3P	240/415	6
4P	240/415	6

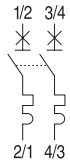
(1) 6kA at 415V
(2) 32A, 3P and 4P
(3) 8000 for 32A
(4) Also accepting (2x4mm²) or (1x4mm²)+(1x6mm²)

Auxiliary contacts pg C.6

Busbars pg E.2
Dimensions pg A.82

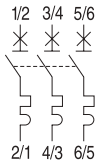
Series EPC 60 - 6kA - characteristics B-C

2P
1 mod.



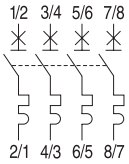
In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	Pack.
2	EPC 62 B02	**692635**	EPC 62 C02	**692554**	12
4	EPC 62 B04	**692636**	EPC 62 C04	**692555**	12
6	EPC 62 B06	**692637**	EPC 62 C06	**692556**	12
10	EPC 62 B10	**692638**	EPC 62 C10	**692557**	12
16	EPC 62 B16	**692639**	EPC 62 C16	**692558**	12
20	EPC 62 B20	**692640**	EPC 62 C20	**692559**	12
25	EPC 62 B25	**692641**	EPC 62 C25	**692560**	12
32	EPC 62 B32	**692642**	EPC 62 C32	**692561**	12
40	EPC 62 B40	**692643**	EPC 62 C40	**692562**	12

3P
2 mod.



In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	Pack.
2	EPC 63 B02	**692644**(1)	EPC 63 C02	**692563**(1)	6
4	EPC 63 B04	**692645**(1)	EPC 63 C04	**692564**(1)	6
6	EPC 63 B06	**692646**(1)	EPC 63 C06	**692565**(1)	6
10	EPC 63 B10	**692647**(1)	EPC 63 C10	**692566**(1)	6
16	EPC 63 B16	**692648**(1)	EPC 63 C16	**692567**(1)	6
20	EPC 63 B20	**692649**(1)	EPC 63 C20	**692568**(1)	6
25	EPC 63 B25	**692650**(1)	EPC 63 C25	**692569**(1)	6
32(2)	EPC 63 B32	**692651**(1)	EPC 63 C32	**692570**(1)	6

4P
2 mod.



In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	Pack.
2	EPC 64 B02	**692653**	EPC 64 C02	**692572**	6
4	EPC 64 B04	**692654**	EPC 64 C04	**692573**	6
6	EPC 64 B06	**692655**	EPC 64 C06	**692574**	6
10	EPC 64 B10	**692656**	EPC 64 C10	**692575**	6
16	EPC 64 B16	**692657**	EPC 64 C16	**692576**	6
20	EPC 64 B20	**692658**	EPC 64 C20	**692577**	6
25	EPC 64 B25	**692659**	EPC 64 C25	**692578**	6
32	EPC 64 B32	**692660**	EPC 64 C32	**692579**	6

(1) The auxiliary contact CA UN must be placed only on the **left side** of the 3P MCBs

Screwless & Plu

The new range of Fixwell™ MCB

Screwless contact

At the top all *Fixwell*™ MCBs are equipped with 2 screwless contacts per pole, up to 2 x 4mm^2.

Terminal contact stability guaranteed

No tightening needed later on.

Easy to disconnect

Plug-in the cable to connect, release by pressing the push-button. Tightening and releasing by screws is history!

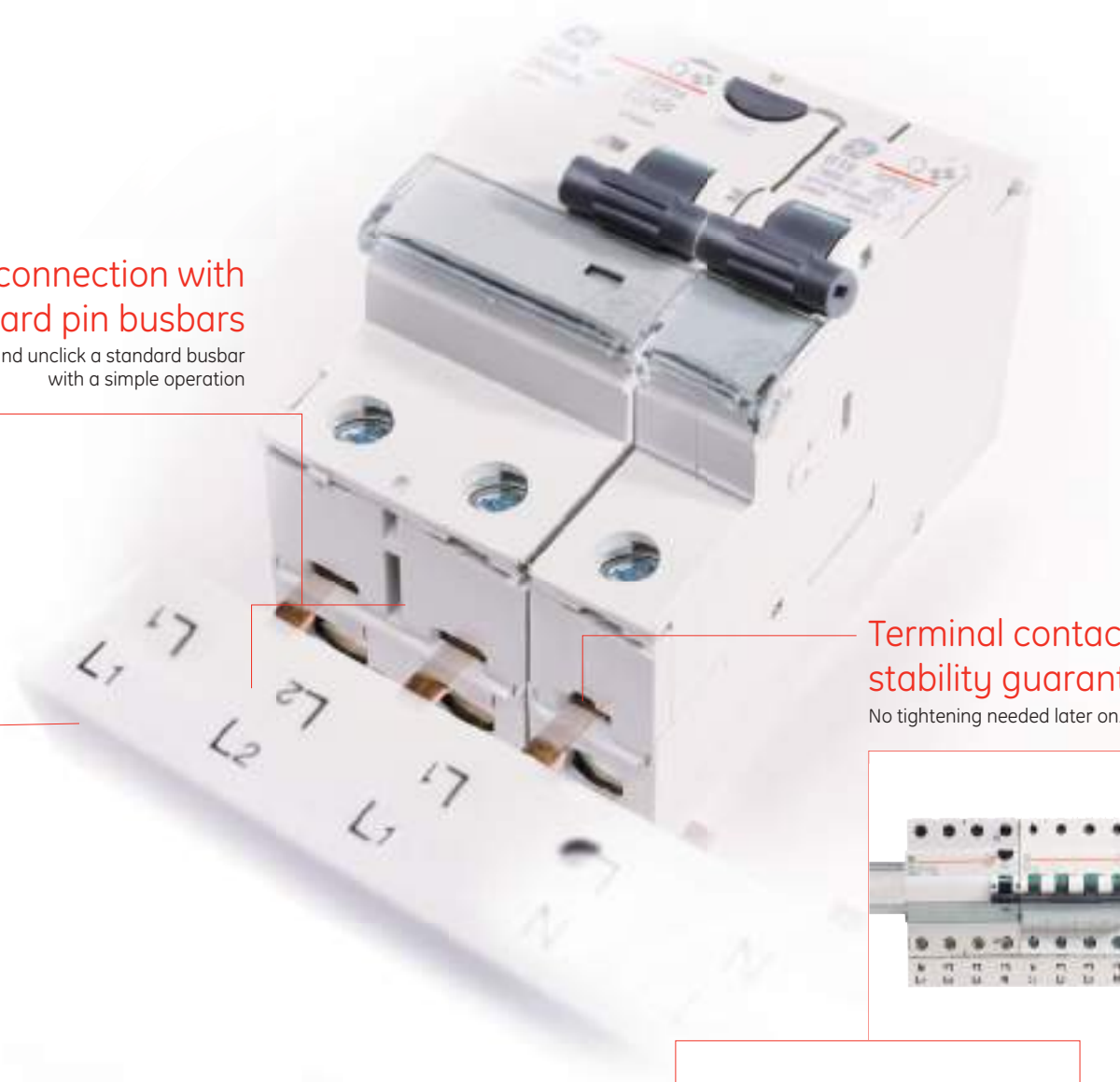
- ☑ 100% screwless top cable connection up to 20A
- ☑ 100% screwless bottom plug-in connection for standard GE pin busbars up to 63A
- ☑ 100% toolfree installation
- ☑ 100% reliable and safe

g-in

s and RCCBs

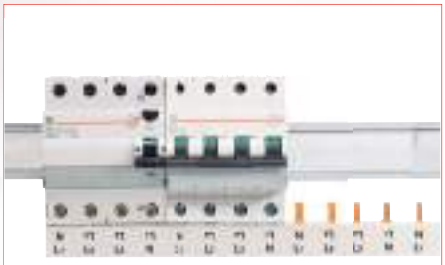
Plug-in connection with standard pin busbars

Click and unclick a standard busbar with a simple operation



Terminal contact stability guaranteed

No tightening needed later on.



Standard pin busbars as used for all Redline products

Plug-in connection

All *Fixwell*™ MCBs and RCCBs are equipped with plug-in busbar contacts.

Easy, Fast and

How to install MCBs and RCCBs without tools within seconds

Fixwell™ **MCBs** and **RCCBs** are the most recent extension of the Redline range and are developed **to reduce time of installation to the absolute minimum.** A toolfree installation with guaranteed reliability from the very first moment by **plug & play**. A 100% compatibility with all Redline accessories and auxiliaries are the keys of success of this innovative range of MCBs and RCCBs.

1 hour becomes **30 min.**

>50% time reduction using manual screwdriver
>30% time reduction using electrical screwdriver

Easy DIN-rail extraction

Plug-in connection with standard busbars

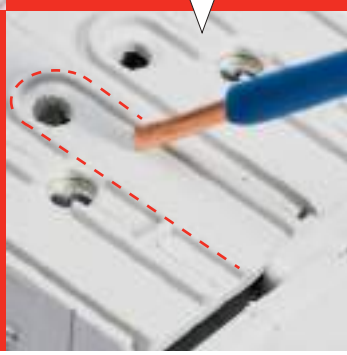
All Fixwell™ MCBs and RCCBs are equipped at the bottom with screwless plug-in contacts for GE standard pin busbars. Click and unclick with a simple operation. Time consuming tightening is no longer needed.

User-friendly

Determine the perfect length (14mm) of the bare cable using the integrated measurement tool.

Integrated guide

Moulded channels smoothly guide the cables to the terminals in all conditions.



Reliable

Sure and secure from the first moment

Push down vertically the cable into the contact until the withstand. From that very moment is the cable in perfect position.
No additional tightening is required.

Part of the family

Fixwell™ MCBs and RCCBs fit perfectly in the Redline range and are compatible with all Redline auxiliaries and accessories.

Rigid and flexible cable

You have the choice : rigid cable or multiwire from 1 up to 4mm^2. It doesn't matter, our Fixwell™ MCBs are accepting both!
No cable crimps needed.

Reliable connection

The unique concept of Fixwell™ screwless contacts guarantees a permanent pull-out force much higher than standards request.
The terminal contacts stability along the time is guaranteed.
You can rely on Fixwell™.

Technical data of screwless MCBs

Series				EPP60	EPP100
Standards				IEC/EN 60898-1	IEC/EN 60898-1
Tripping characteristics				B,C	B,C
Nominal current [1]			(A)	6 - 63	6 - 63
Calibration temperature			(°C)	30	30
Number of poles (# mod)				1/1P+N/2/3/3P+N/4P	1/2/3/3P+N/4P
Neutral pole protected				yes	yes
Clip-on (rapid closing)				yes	yes
Nominal voltage (Un)	AC	1P	(V)	240/415	240/415
		1P+N	(V)	240	240
		2P	(V)	415	415
		3P/3P+N/4P	(V)	415	415
	DC	1P [2]	(VDC)	48	48
		2P (in series) [2]	(VDC)	110	110
Frequency			(Hz)	50 to 60	50 to 60
Use in D.C.			(Hz)	DC: magn. trip. +40%	DC: magn. trip. +40%
			(Hz)	400Hz: magn. trip. +50%	400Hz: magn. trip.+ 50%
Maximum service voltage (Ubmax) between two wires			(V)	250/440; 53/120 DC	250/440; 53/120 DC
Minimum service voltage (Ubmin)			(V)	12; 12 DC	12; 12 DC
Selectivity class (IEC/EN 60898-1)				3	3
Isolator application	EN 60947-2			yes	yes
Rated insulation voltage	Pollution degree 2		(V)	500	500
	Pollution degree 3		(V)	440	440
Impulse withstand test voltage			(kV)	6	6
Insulation resistance			(MΩ)	10000	10000
Dielectric rigidity			(kV)	2.5	2.5
Vibration resistance (in x, y, z direction) (IEC 77/16.3)				3g	3g
Endurance	Electrical at In, In			10000	10000
	Mechanical			20000	20000
Utilisation category (EN 60947-2)				A	A
Protection degree (outside / inside enclosure)				IP20/IP40	IP20/IP40
Self-extinguish degree (acc. to UL94)				V2	V2
Tropicalisation (EN 60068-2 / DIN 40046)			(°C/RH)	+55°C / 95%RH	+55°C / 95%RH
Operating temperature [3]			(°C)	-25/+55	-25/+55
Storage temperature			(°C)	-55/+55	-55/+55
Terminal capacity				see page A.72	see page A.74
Add-on devices (side add-on)	Auxiliary contacts CA			yes	yes
	Tele U [4]			yes	yes
	Tele L [4]			yes	yes
	Tele MP [4]			yes	yes
	PBS [4]			yes	yes
Busbar system bottom	Pin			yes	yes
	Fork			no	no
Accessories				yes	yes
Dimensions, weights, packaging					
	(HxDxW) per module		(mm)	88.4x68x18	88.4x68x18
	Weight/module		(g)	125	125
	Package unit			12	12
Approvals [5]				VDE-KEMA-CEBEC-IMQ	VDE-KEMA-CEBEC-IMQ
CE-marking				yes	yes

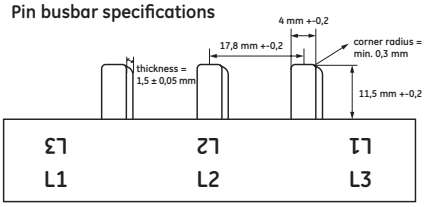
(1) Rating current derating as usual in function of installation conditions.
(2) Preferred values of rated control supply voltage (EN/IEC 60947-2): 24VDC, 48VDC, 110VDC, 125VDC, 220VDC, 250VDC.
(3) With plug-in pin busbar: -25/+50°C
(4) Only at **any extreme side** of the row. No pin busbars let through allowed.
(5) 4P execution approval pending.

Terminal capacity

Top terminals		Ratings 6A to 20A: Screwless (Max. 2 wires)	Ratings 25A to 63A: Cage terminals
Rigid cable (min/max)	mm²	2 x (1/4) [1]	1/35
Flexible cable (min/max)	mm²	2 x (1.5/4) [1]	0.75/ 25
Recommended torque	Nm	-	2.5
Maximum torque	Nm	-	4.5

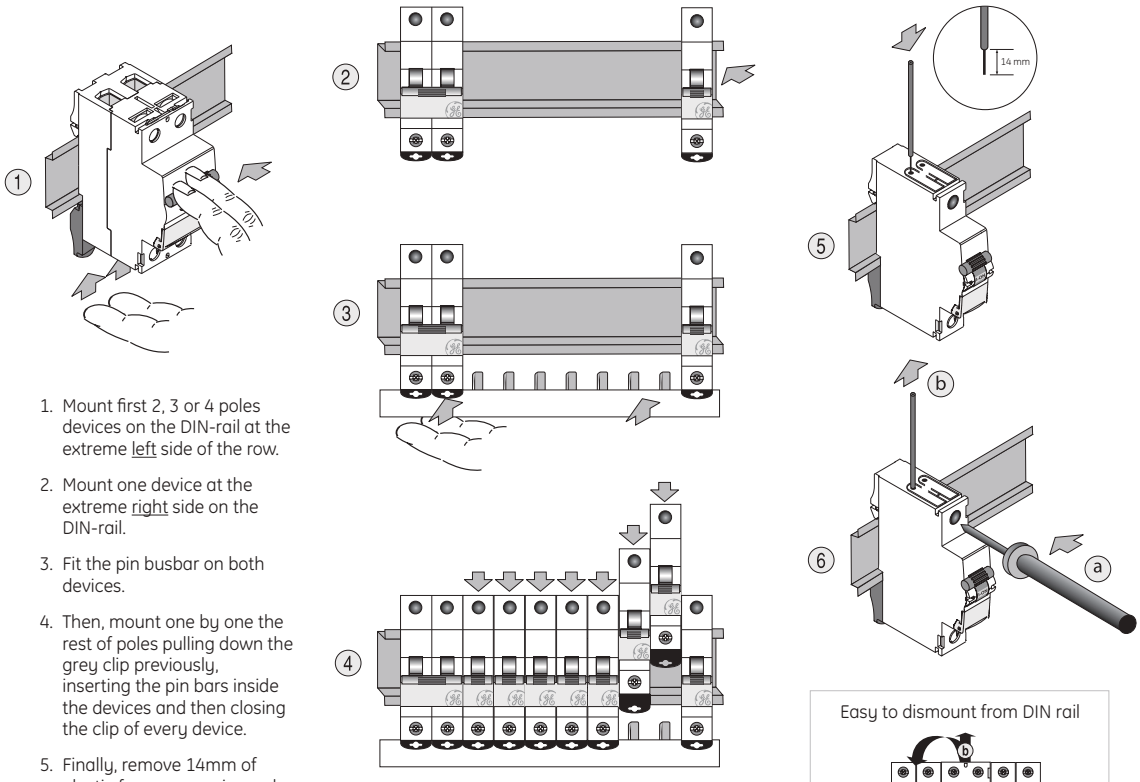
Bottom terminals		Ratings 6A to 63A: Bottom cage terminals [2]	Ratings 6A to 63A: Bottom flat plug-in terminals [3]
Rigid cable (min/max)	mm²	1/25	To insert GE pin busbars, or other brands under following dimensions: Length = 11.5 ± 0.2mm Width= 4 ± 0.2 mm Thickness = 1.5 ± 0.05 mm Corners min. radius = 0.3 mm
Flexible cable (min/max)	mm²	0.75/16	
Recommended torque	Nm	2.5	
Maximum torque	Nm	4.5	

Pin busbar specifications



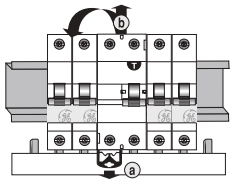
(1) The top screwless terminal is composed of two separate and parallel terminals. You can connect one rigid or flexible cable into each terminal. The bare cable (insulation removed to the appropriate length) should be pushed into the screwless terminal (Fig 5), the terminals will not accept cables with cable lugs or ferrules. For flexible cables it is recommended to twist wires and insert it into the terminal by pressing the push button. To release the cable press the push-button of the MCB and at the same time gently pull the cable (Fig 6).
(2) Bottom terminals provide a cage terminal to connect also cables to feed other rows /devices limited to rated current of the device.
(3) Plug-in window terminals are only foreseen for pin busbars providing the incoming supply to several devices from the bottom side. Not intended for any other conductor with or without cable lugs or cable connectors.

How to mount the busbar into devices



1. Mount first 2, 3 or 4 poles devices on the DIN-rail at the extreme left side of the row.
2. Mount one device at the extreme right side on the DIN-rail.
3. Fit the pin busbar on both devices.
4. Then, mount one by one the rest of poles pulling down the grey clip previously, inserting the pin bars inside the devices and then closing the clip of every device.
5. Finally, remove 14mm of plastic from every wire and insert them vertically one by one inside the top screwless terminals.
6. For disconnecting the outgoing wires.

Easy to dismount from DIN rail



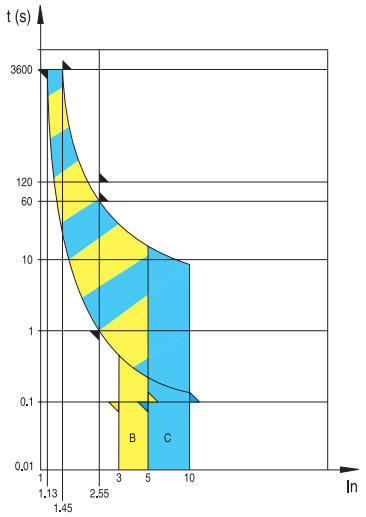
Short-circuit capacity of screwless MCBs

Series				EPP60	EPP100
Short-circuit capacity AC		**(kA)**			
IEC/EN 60898-1	**Icn**	1P	230/400V	6	10
		1P+N	230V	6	10
		2P	230/400V	6	10
		3P/3P+N/4P	230/400V	6	10
	Ics (service)			100% Icu	75% Icu
IEC/EN 60947-2	**Icu** (max.)	1P	127V	20	30
			240V	10	15
			415V	3	4
		1P+N/2P	127V	30	40
			240V	20	30
		2P	415V	10	15
		3P/3P+N/4P	240V	20	30
			415V	10	15
			440V	6	10
	Ics (service)			75% Icu	50% Icu
Short-circuit capacity DC		**(kA)**			
IEC/EN 60947-2	**Icu** (max.)	1P	≤60V	20	25
			≤125V	-	-
			≤220V	-	-
		2P	≤125V	25	30
			≤440V	-	-
	Ics (service)			100% Icu	100% Icu

Characteristics according to IEC/EN 60898-1

Miniature Circuit Breakers (MCB) are intended for the protection of wiring installations against both overloads and short-circuits in domestic or commercial wiring installations where operation is possible by uninstructed people.

Tripping characteristic curves (EN/IEC 60898-1)



Magnetic release

An electromagnet with plunger ensures instantaneous tripping in the event of short-circuit. The standard distinguishes two different types, following the current for instantaneous release: type B and C.

Icn (A)	Test current	Tripping time	Applications
B	3 x In	0.1 < t < 45s (In ≤ 32A) 0.1 < t < 90s (In > 32A)	Only for resistive loads such as: - electrical heating - water heater - stoves
	5 x In	t < 0.1s	
C	5 x In	0.1 < t < 15s (In ≤ 32A) 0.1 < t < 30s (In > 32A)	Usual loads such as: - lighting - socket-outlets - small motors
	10 x In	t < 0.1s	

Thermal release

The release is initiated by a bimetal strip in case of overload. The standard defines the range of releases for specific overload values.
Reference ambient temperature is 30°C.

Test current	Tripping time
1.13 x In	t ≥ 1h (In ≤ 63A) t ≥ 2h (In > 63A)
1.45 x In	t < 1h (In ≤ 63A) t < 2h (In > 63A)
2.55 x In	1s < t < 60s (In ≤ 32A) 1 s < t < 120s (In > 32A)

Influence of ambient air temperature on the rated current

The maximum value of the current which can flow through a MCB depends of the nominal current of the MCB, the conductor cross-section as well as of the ambient air temperature.

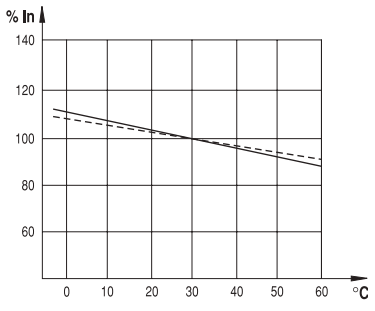
The values shown in the table below are for devices in the free air. For devices installed with other modular devices in the same switchboard a correction factor (K) shall be applied relative to the mounting situation of the MCB, the ambient temperature and the number of main circuits in the installation (EN 60439-1):

No. of devices	K
2 or 3	0.9
4 or 5	0.8
6 to 9	0.7
> 10	0.6

Calculation example
Within a distribution panel consisting of eight MCB 2PC16 with an operating ambient temperature of 45°C, which is the highest temperature the MCB can operate without unwanted tripping.

Calculation
The correction factor K=0.7, for use in an eight circuit installation: 16A x 0.7= 11.2A
As the MCB is working at 45°C it shall be applied another factor (90% = 0.9):
In at 45°C = In at 30°C x 0.9 = 11.2A x 0.9 = 10.1A

The thermal calibration of the MCBs was carried out at ambient temperature of 30°C. Ambient temperatures different from 30°C influence the bimetal and this results in earlier or later thermal tripping.



Tripping current as a function of the frequency

All MCBs are designed to work at frequencies of 50-60 Hz, therefore to work at different values, consideration must be given to the variation of the tripping characteristics. The thermal tripping does not change with variation of the frequency but the magnetic tripping values can be up to 50% higher than the ones at 50-60 Hz.
For DC current magnetic tripping is 50% higher.

Tripping current variations

60Hz	100Hz	200Hz	300Hz	400Hz
1	1.1	1.2	1.4	1.5

Power losses

The power losses are calculated by measuring the voltage drop between the incoming and the outgoing terminals of the device at rated current.

Power losses per pole

In (A)	Voltage drop (V)	Energy loss Pw (W)	Resistance Z (mOhm)
0.5	2.23	1.12	4458.00
1	1.27	1.27	1272.00
2	0.62	1.24	310.00
3	0.52	1.56	173.00
4	0.37	1.49	93.00
6	0.26	1.57	43.60
8	0.16	1.24	19.40
10	0.16	1.56	15.60
13	0.16	2.01	11.90
16	0.16	2.57	10.10
20	0.14	2.76	6.90
25	0.13	3.19	5.10
32	0.10	3.07	3.00
40	0.10	4.00	2.50
50	0.09	4.50	1.80
63	0.08	5.16	1.30

Screwless MCBs

Series EPP60

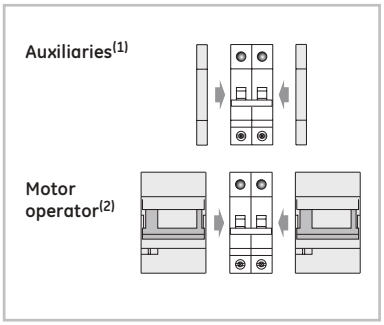
IEC/EN 60898-1	6000 3
IEC/EN 60947-2	10 kA

Applications

Approvals / Marking

Screwless connection

Add-on devices



(1) Series CA - Tele L - Tele U - PBS
(2) Only one extension at the extreme end of the pin busbar

Performance

Thermal setting In	(A)	6-63
Rated voltage AC Un	(V)	240/415
Minimum operating voltage U_{Bmin}	(V)	12, 12 DC
Tripping characteristics		B,C
Mechanical/electrical endurance		20000/10000
Tropicalisation acc.to IEC 60068-2		95% RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	25-35
Poles		1/1P+N/2/3/3P+N/4P
Weight	(g/mod)	125

Short-circuit capacity

AC acc. IEC/EN 60898-1

Poles	*V*	*Icn/Ics (kA)(1)*
1	230/400	6

AC acc. IEC/EN 60947-2

Poles	*V*	*Icu (kA)*
1	240	10
1+N, 2	127	30
	240	20
2	415	10
3, 3+N, 4	240	20
	415	10

DC acc. IEC/EN 60947-2

Poles	*Un (V ⎓)*	*Icu/Ics (kA)*
1	≤ 60	20
2	≤ 125	25

(1) Ics= 75% Icn

Screwless & Plug-in

Series EPP60 - characteristics B and C

		In (A)	B Cat. No.	B Ref. No.	C Cat. No.	C Ref. No.	Pack.
	1P 1/2 2/1	6	EPP61B06	678172	EPP61C06	678212	12
		10	EPP61B10	678173	EPP61C10	678213	12
		13	EPP61B13	678174	EPP61C13	678214	12
		16	EPP61B16	678175	EPP61C16	678215	12
		20	EPP61B20	678176	EPP61C20	678216	12
		25	EPP61B25	678177	EPP61C25	678217	12
		32	EPP61B32	678178	EPP61C32	678218	12
		40	EPP61B40	678179	EPP61C40	678219	12
		50	EPP61B50	678180	EPP61C50	678220	12
		63	EPP61B63	678181	EPP61C63	678221	12
	1P+N 1/2 N 2/1 N	6	-		EPP61NC06	678222	6
		10	-		EPP61NC10	678223	6
		13	-		EPP61NC13	678224	6
		16	-		EPP61NC16	678225	6
		20	-		EPP61NC20	678226	6
		25	-		EPP61NC25	678227	6
		32	-		EPP61NC32	678228	6
		40	-		EPP61NC40	678229	6
		50	-		EPP61NC50	678230	6
		63	-		EPP61NC63	678231	6
	2P 1/2 3/4 2/1 4/3	6	EPP62B06	678182	EPP62C06	678232	6
		10	EPP62B10	678183	EPP62C10	678233	6
		13	EPP62B13	678184	EPP62C13	678234	6
		16	EPP62B16	678185	EPP62C16	678235	6
		20	EPP62B20	678186	EPP62C20	678236	6
		25	EPP62B25	678187	EPP62C25	678237	6
		32	EPP62B32	678188	EPP62C32	678238	6
		40	EPP62B40	678189	EPP62C40	678239	6
		50	EPP62B50	678190	EPP62C50	678240	6
		63	EPP62B63	678191	EPP62C63	678241	6
	3P 1/2 3/4 5/6 2/1 4/3 6/5	6	EPP63B06	678192	EPP63C06	678242	4
		10	EPP63B10	678193	EPP63C10	678243	4
		13	EPP63B13	678194	EPP63C13	678244	4
		16	EPP63B16	678195	EPP63C16	678245	4
		20	EPP63B20	678196	EPP63C20	678246	4
		25	EPP63B25	678197	EPP63C25	678247	4
		32	EPP63B32	678198	EPP63C32	678248	4
		40	EPP63B40	678199	EPP63C40	678249	4
		50	EPP63B50	678200	EPP63C50	678250	4
		63	EPP63B63	678201	EPP63C63	678251	4
	3P+N 1/2 3/4 5/6 N 2/1 4/3 6/5 N	6	EPP63NB06	678202	EPP63NC06	678252	3
		10	EPP63NB10	678203	EPP63NC10	678253	3
		13	EPP63NB13	678204	EPP63NC13	678254	3
		16	EPP63NB16	678205	EPP63NC16	678255	3
		20	EPP63NB20	678206	EPP63NC20	678256	3
		25	EPP63NB25	678207	EPP63NC25	678257	3
		32	EPP63NB32	678208	EPP63NC32	678258	3
		40	EPP63NB40	678209	EPP63NC40	678259	3
		50	EPP63NB50	678210	EPP63NC50	678260	3
		63	EPP63NB63	678211	EPP63NC63	678261	3
	4P 1/2 3/4 5/6 7/8 2/1 4/3 6/5 8/7	6	EPP64B06	678705	EPP64C06	678715	3
		10	EPP64B10	678706	EPP64C10	678716	3
		13	EPP64B13	678707	EPP64C13	678717	3
		16	EPP64B16	678708	EPP64C16	678718	3
		20	EPP64B20	678709	EPP64C20	678719	3
		25	EPP64B25	678710	EPP64C25	678720	3
		32	EPP64B32	678711	EPP64C32	678721	3
		40	EPP64B40	678712	EPP64C40	678722	3
		50	EPP64B50	678713	EPP64C50	678723	3
		63	EPP64B63	678714	EPP64C63	678724	3

SCREWLESS
top terminals
In=6 to 20A

Screwless MCBs

Series EPP100

IEC/EN 60898-1 10000 / 3

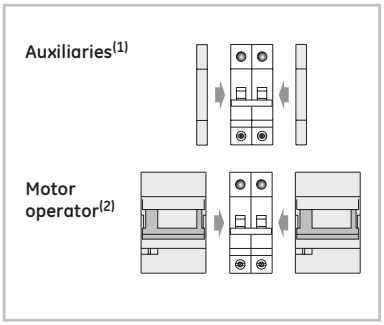
IEC/EN 60947-2 15 kA

Applications

Approvals / Marking

Screwless connection

Add-on devices



(1) Series CA - Tele L - Tele U - PBS
(2) Only one extension at the extreme end of the pin busbar

Performance

Thermal setting In	(A)	6-63
Rated voltage AC Un	(V)	240/415
Minimum operating voltage U_{Bmin}	(V)	12, 12 DC
Tripping characteristics		B,C
Mechanical/electrical endurance		20000/10000
Tropicalisation acc.to IEC 60068-2		95% RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	25-35
Poles		1/2/3/3P+N/4P
Weight	(g/mod)	125

Short-circuit capacity

AC acc. IEC/EN 60898-1

Poles	*V*	*Icn (kA)(1)*
1-4	230/400	10

AC acc. IEC/EN 60947-2

Poles	*V*	*Icu (kA)(2)*
1	240	15
1+N, 2	127	40
	240	30
2	415	15
3, 3+N, 4	240	30
	415	15

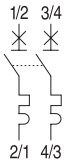
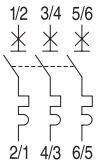
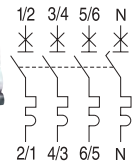
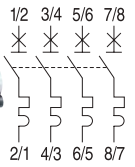
DC acc. IEC/EN 60947-2

Poles	*Un (V ⎓)*	*Icu/Ics (kA)*
1	≤ 60	25
2	≤ 125	30

(1) Ics= 75% Icn
(2) Ics= 50% Icu

Screwless & Plug-in

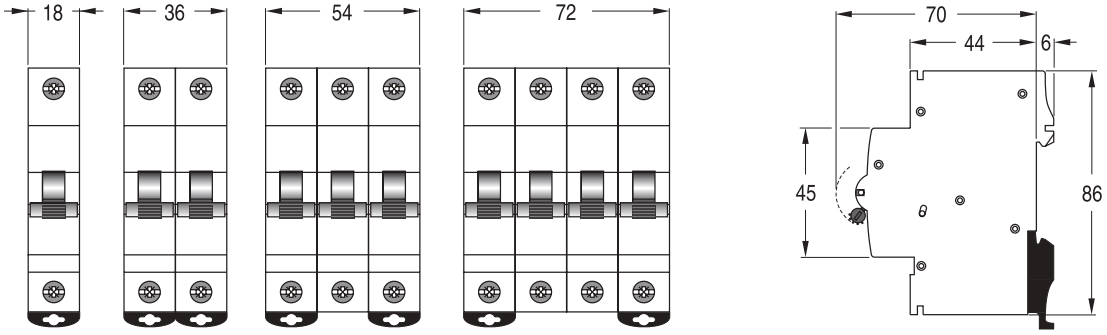
Series EPP100 - characteristics B and C

		B		C		
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
1P	6	EPP101B06	678262	EPP101C06	678302	12
	10	EPP101B10	678263	EPP101C10	678303	12
	13	EPP101B13	678264	EPP101C13	678304	12
	16	EPP101B16	678265	EPP101C16	678305	12
	20	EPP101B20	678266	EPP101C20	678306	12
	25	EPP101B25	678267	EPP101C25	678307	12
	32	EPP101B32	678268	EPP101C32	678308	12
	40	EPP101B40	678269	EPP101C40	678309	12
	50	EPP101B50	678270	EPP101C50	678310	12
	63	EPP101B63	678271	EPP101C63	678311	12
2P 	6	EPP102B06	678272	EPP102C06	678312	6
	10	EPP102B10	678273	EPP102C10	678313	6
	13	EPP102B13	678274	EPP102C13	678314	6
	16	EPP102B16	678275	EPP102C16	678315	6
	20	EPP102B20	678276	EPP102C20	678316	6
	25	EPP102B25	678277	EPP102C25	678317	6
	32	EPP102B32	678278	EPP102C32	678318	6
	40	EPP102B40	678279	EPP102C40	678319	6
	50	EPP102B50	678280	EPP102C50	678320	6
	63	EPP102B63	678281	EPP102C63	678321	6
3P 	6	EPP103B06	678282	EPP103C06	678322	4
	10	EPP103B10	678283	EPP103C10	678323	4
	13	EPP103B13	678284	EPP103C13	678324	4
	16	EPP103B16	678285	EPP103C16	678325	4
	20	EPP103B20	678286	EPP103C20	678326	4
	25	EPP103B25	678287	EPP103C25	678327	4
	32	EPP103B32	678288	EPP103C32	678328	4
	40	EPP103B40	678289	EPP103C40	678329	4
	50	EPP103B50	678290	EPP103C50	678330	4
	63	EPP103B63	678291	EPP103C63	678331	4
3P+N 	6	EPP103NB06	678292	EPP103NC06	678332	3
	10	EPP103NB10	678293	EPP103NC10	678333	3
	13	EPP103NB13	678294	EPP103NC13	678334	3
	16	EPP103NB16	678295	EPP103NC16	678335	3
	20	EPP103NB20	678296	EPP103NC20	678336	3
	25	EPP103NB25	678297	EPP103NC25	678337	3
	32	EPP103NB32	678298	EPP103NC32	678338	3
	40	EPP103NB40	678299	EPP103NC40	678339	3
	50	EPP103NB50	678300	EPP103NC50	678340	3
	63	EPP103NB63	678301	EPP103NC63	678341	3
4P 	6	EPP104B06	678725	EPP104C06	678735	3
	10	EPP104B10	678726	EPP104C10	678736	3
	13	EPP104B13	678727	EPP104C13	678737	3
	16	EPP104B16	678728	EPP104C16	678738	3
	20	EPP104B20	678729	EPP104C20	678739	3
	25	EPP104B25	678730	EPP104C25	678740	3
	32	EPP104B32	678731	EPP104C32	678741	3
	40	EPP104B40	678732	EPP104C40	678742	3
	50	EPP104B50	678733	EPP104C50	678743	3
	63	EPP104B63	678734	EPP104C63	678744	3

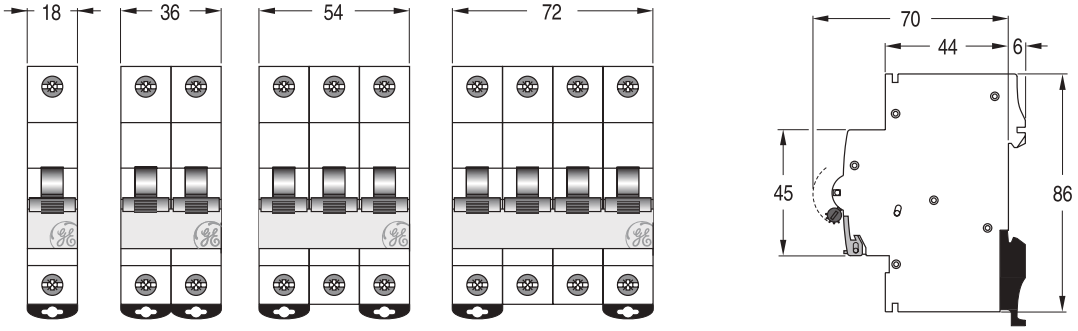
SCREWLESS top terminals In=6 to 20A

Dimensional drawings

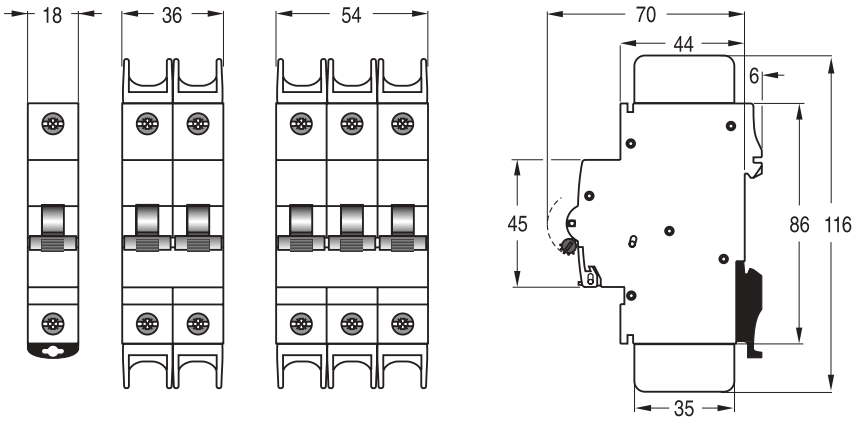
Miniature Circuit Breakers - Series G and GT and Series EP100 UC, EP60 UL and EP100 UL



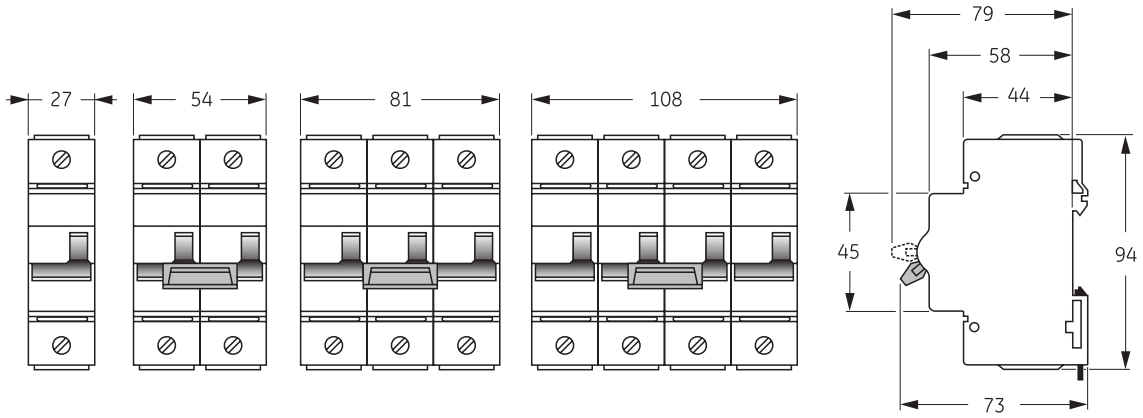
Miniature Circuit Breakers - Series EP60, EP100, EP100T, EP100 UCT, EP100R and EP100 UCR



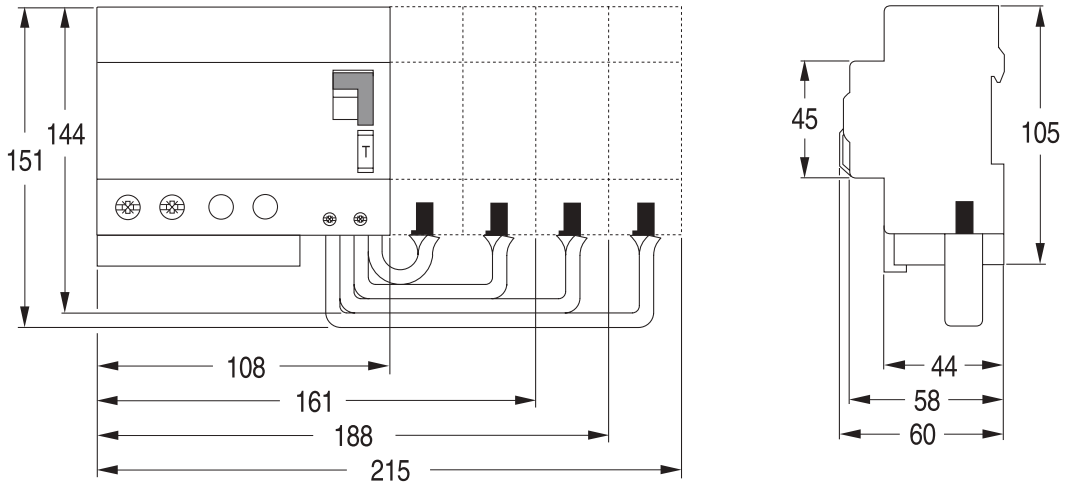
MCB with UL 489 approval - Series EP100 ULH



Miniature Circuit Breakers - Series Hti

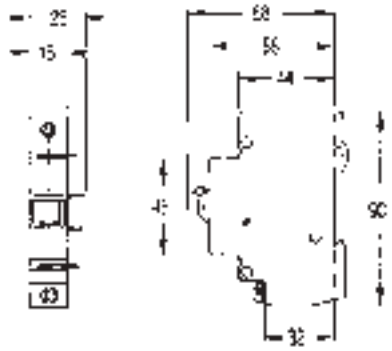


Add-on RCDs for Series Hti



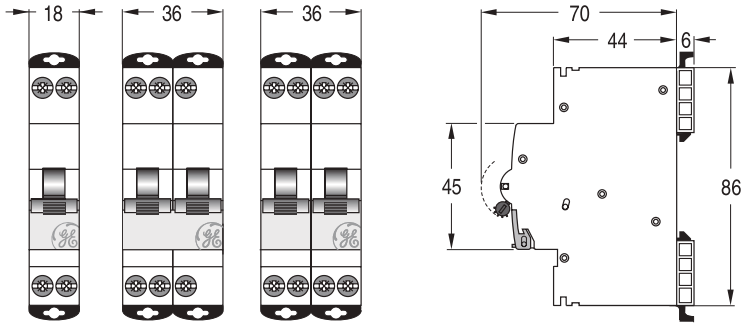
Auxiliary contact - Series Hti

Shunt trip - Series Hti

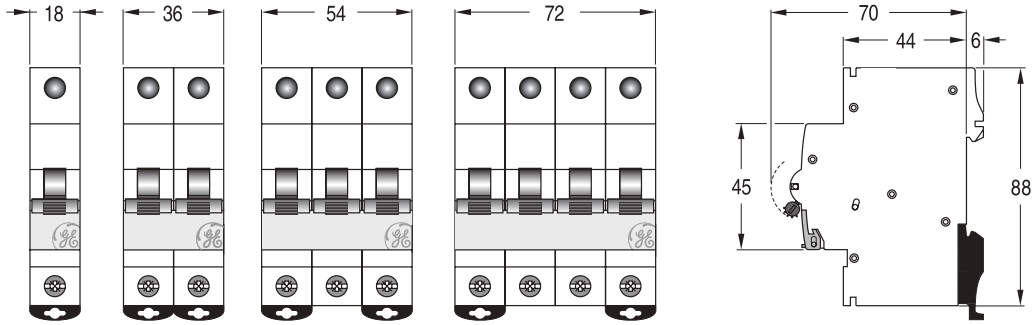


Dimensional drawings

Compact MCBs - Series EPC - Unibis™



Screwless MCBs - Series EPP - Fixwell™



Residual Current Circuit Breaker with Overcurrent Protection

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B.6 Technical data
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Compact RCBOs

B.26 RCBOs - **Series DMCE60 and DICE60**
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B.30 RCBOs with overcurrent protection - **Series DMET**
B.32 Add-on RCCBs - **Diff-o-Click**
B.34 RCCBs with UL approval - **Series FPAUL**
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Fixwell™ - Screwless RCCBs

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B.38 Residential earth leakage relay - **Series GRDT+TOP**

TeleREC 2 / TeleREC Top

B.42 Series TeleREC 2
B.46 Series TeleREC Top - MCBs
B.48 Series TeleREC Plus - For industrial applications

B.49 Dimensional drawings

2P in two modules compact RCBOs
The complete protection and ...

Unibis ™ RCBOs are the latest innovation in the ElfaPlus modular devices range. They have been developed to reduce the size of distribution boards to the minimum.

Performances have been upgraded up to 10kA and extended with high immunity residual tripping characteristics. For each line where integrated overload protection and residual current protection are required, a RCBO is now available in only **two modules**!

New

Saving up to 50% space in distribution boards!

New

... **the solution** for space issues

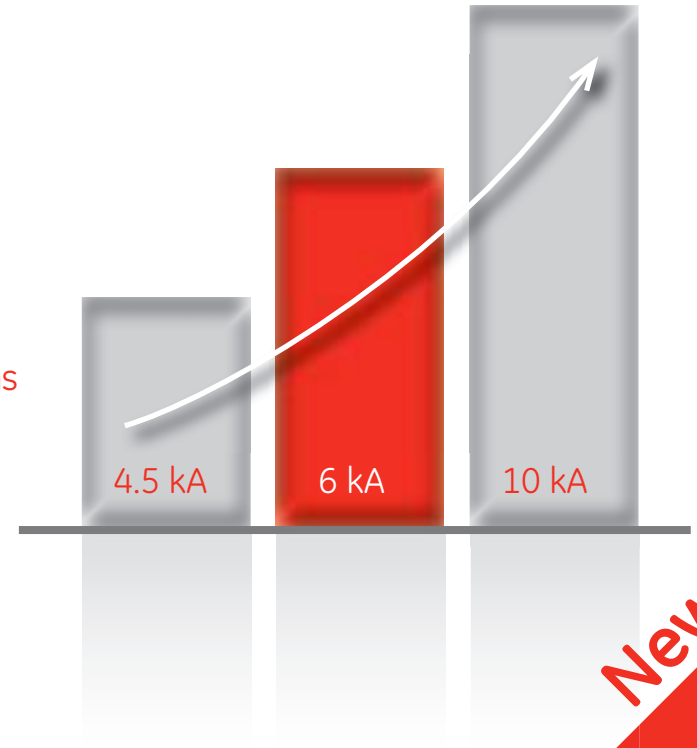
4500A
6-40A
AC, A
30-300mA

6000A
6-40A
AC, A, Ai
10-30-300mA

10000A
6-40A
AC, A, Ai
10-30-300mA

Shipping approvals

- ☑ Brand-new design: 2P RCBO in 2 modules
- ☑ Complete range: 4.5 kA - 6 kA - 10 kA
- ☑ 6-40 Amps, B and C curves
- ☑ Classes: AC - A - Ai
- ☑ 100% compatible with all ElfaPlus auxiliaries, accessories and busbar systems
- ☑ Approvals: CEBEC, KEMA, VDE, IMQ, NF
- ☑ RINA and Lloyd's Register certified



New

The most complete **RCBO** offer on the market for double phase circuits

New

Saving up to 50% space in distribution boards!

Earth leakage indicator

Protected terminals

Plastic tongue in IP20 terminals

Easy to replace

Double clips make it easy to replace the RCBO, especially when a busbar is installed.

PIN and FORK busbars

Pin and fork busbars can be placed at the **bottom** and at the **top**.

For residential, commercial and industrial applications

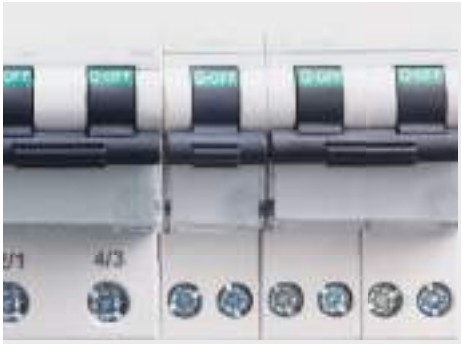
High immunitity type Ai RCBO 2 poles protected in 2 modules!

Green and red flag on toggle

with isolation applications

New

Quality and **reliability** guaranteed in distribution boards



Userfriendly

All screws are on the same level to work fast and easy.

Perfectly in line with ElfaPlus, Unibis and Redline devices.

High performance torque

Up to 4Nm

Shipping applications

New shipping devices are completing the current Redline and ElfaPlus shipping ranges.

Part of the family

The compact RCBO fits perfectly with the Unibis MCB ranges.

New

2P RCBO | 2P MCB | 3P MCB | 4P MCB

Full functionality

A small auxiliary contact is the interface to the full functionality of the add-on devices and auxiliaries. The interface can be mounted at the **left** and at the **right** side.

New

Technical data - Compact 2P and 3P+N RCBOs

Series		DPC45	DPC60	DPC100	DMA63N
Standards		EN 61009-1	EN 61009-1	EN 61009-1	EN 61009-1
Magnetic tripping characteristics		C	B,C	B,C	C
Residual tripping characteristics		AC, A	AC, A, Ai	AC, A, Ai	A
Tripping time at IΔn Instantaneous	ms	<60	<60	<60	-
Rated current	A	6-40	6-40	6-40	10-32
Rated residual current (IΔn)	mA	30, 300	10, 30, 300	10, 30, 300	30
Earth leakage tripping indicator: blue flag		yes	yes	yes	yes
Calibration temperature	°C	30	30	30	30
Number of poles (# mod.)		2P (2 mod.)	2P (2 mod.)	2P (2 mod.)	3P+N (4 mod.)
Rated voltage Un AC 2P	V	230	230	230	400
Frequency	Hz	50	50(3)	50(3)	50/60
Maximum service voltage Ub max	V	265	265	265	-
Minimum service voltage Ub min	V	117(2)	117(2)	117(2)	-
Minimum voltage for leakage protection	V	Voltage independent	Voltage independent	Voltage independent	Voltage independent
Power supply		top/bottom	top/bottom	top/bottom	top/bottom
Energy limiting class		3	3	3	3
Residual making and breaking capacity (IΔm)	A	4500	6000	6000	3000
Rated short-circuit capacity (Icn)	A	4500	6000	10000	6000
Grid distance (safety distance between two devices)	mm	35	35	60	-
Isolator application		yes	yes	yes	-
Insulation degree					
Insulation voltage	V(DC)	440	440	440	500
Test shock voltage 1.2/50us	kV	6	6	6	6
Insulation resistance	Mohm	1000	1000	1000	1000
Dielectric strength	V	2500	2500	2500	2500
Shock resistance in x, y, z direction (EN/IEC 60077/16.3)		40g, 18 shocks 5 ms	40g, 18 shocks 5 ms	40g, 18 shocks 5 ms	40g, 18 shocks 5 ms
Vibration resistance in x, y, z direction (EN/IEC 60068-2-6)		1.5g, 30 min, 0...80Hz	1.5g, 30 min, 0...80Hz	1.5g, 30 min, 0...80Hz	5g, 30 min, 0...80Hz
Endurance Electrical at Un, In		10000	10000	10000	10000
Mechanical		20000	20000	20000	20000
Protection degree (EN 60529) (outside/inside electrical enclosure with door)		IP20/IP40	IP20/IP40	IP20/IP40	IP20/IP40
Self extinguish degree (UL94)		V2	V2	V2	V2
Tropicalisation (EN/IEC 60068-2, DIN 40046)	°C/RH	55°C/95%	55°C/95%	55°C/95%	55°C/95%
Pollution degree (EN/IEC 60947-1)		3	3	3	3
Operating temperature	°C	-5 up to +60 (-25°C type A)	-5 up to +60 (-25°C type A, Ai)	-5 up to +60 (-25°C type A, Ai)	-5 up to +60
Storage temperature	°C	-25 up to +70	-25 up to +70	-25 up to +70	-25 up to +40
Terminal capacity					
Rigid cable Min./Max. (top)	mm²	1/35	1/35	1/35	1/25
Flexible cable Min./Max. (top)	mm²	1/25	1/25	1/25	1/25
Rigid cable Min./Max. (bottom)	mm²	1/35	1/35	1/35	1/35
Flexible cable Min./Max. (bottom)	mm²	1/25	1/25	1/25	1/35
Torque top/bottom (max.)	Nm	4	4	4	3
Add-on devices (side add-on)					
Auxiliary contacts		yes	yes	yes	no
Tele U		yes(1)	yes(1)	yes(1)	no
Tele L		yes(1)	yes(1)	yes(1)	no
Tele MP		yes(1)	yes(1)	yes(1)	no
PBS		yes(1)	yes(1)	yes(1)	no
Maximum add-on combinations (per side)		4x CA + 1x TeleL + 1x Tele U	4x CA + 1x TeleL + 1x Tele U	4x CA + 1x TeleL + 1x Tele U	no
TeleREC Plus		in development	in development	in development	no
Busbar systems Pin (top/bottom)		yes/yes	yes/yes	yes/yes	yes/yes
Fork (top/bottom)		yes/yes	yes/yes	yes/yes	yes/yes
Accessories		yes	yes	yes	no
Width per mod.	mm	18	18	18	18
Weight per mod.	gr	110	110	110	110
Package	pcs	1/6	1/6	1/6	1/3
Approvals		IMQ	NF, CEBEC, KEMA, IMQ, VDE	NF, CEBEC, KEMA, IMQ, VDE, LR, RINA	IMQ
CE- marking		yes	yes	yes	no
Page		B.8	B.10	B.12	B.14

(1) Requires CA auxiliary contact as interface
(2) $U_b$min = 150V for 30mA
(3) 50/60 Hz for Ai residual tripping characteristic

New

Short-circuit capacity - Compact 2P and 3P+N RCBOs

Series		DPC45	DPC60	DPC100	DMA63N
Short-circuit capacity (Icn) at 230Vac (EN/IEC 61009-1)	A	4500	6000	10000	6000
Service short-circuit capacity (Ics)	kA	4.5	6	7.5	6
Rated short-circuit capacity (Icu) acc. EN/IEC 60947-2	kA	6	10	10	6

Selection table - Compact 2P RCBOs

Page	Series	Sensitivity (mA)	Pole	Type	Tripping char.	Short-circuit cap.	6	10	13	16	20	25	32	40	Isolator appl.	Add-on devices	Rated voltage
B.9	DPC45	30	2	AC	C	4500									x	x	230
B.9		300	2	AC	C	4500									x	x	230
B.9		30	2	A	C	4500									x	x	230
B.9		300	2	A	C	4500									x	x	230
B.11	DPC60	10	2	AC	C	6000									x	x	230
B.11		30	2	AC	C	6000									x	x	230
B.11		300	2	AC	C	6000									x	x	230
B.11		10	2	A	B	6000									x	x	230
					C	6000									x	x	230
B.11		30	2	A	B	6000									x	x	230
					C	6000									x	x	230
B.11		300	2	A	B	6000									x	x	230
					C	6000									x	x	230
B.11		30	2	Ai	B	6000									x	x	230
					C	6000									x	x	230
B.11		300	2	Ai	B	6000									x	x	230
					C	6000									x	x	230
B.13	DPC100	10	2	AC	C	10000									x	x	230
B.13		30	2	AC	C	10000									x	x	230
B.13		300	2	AC	C	10000									x	x	230
B.13		10	2	A	B	10000									x	x	230
					C	10000									x	x	230
B.13		30	2	A	B	10000		•	•	•	•				x	x	230
					C	10000		•	•	•	•				x	x	230
B.13		300	2	A	B	10000									x	x	230
					C	10000									x	x	230
B.13		30	2	Ai	B	10000									x	x	230
					C	10000									x	x	230
B.13		300	2	Ai	B	10000									x	x	230
					C	10000									x	x	230
B.14	DMA63N	30	3+N	A	C	6000									x	no	400

• Special thermal tripping curves for Norway and Paneuropean types

2P RCBOs - Residual Current Circuit Breaker with Overcurrent Protection

Series DPC45

EN /IEC 61009-1 **4.5kA**

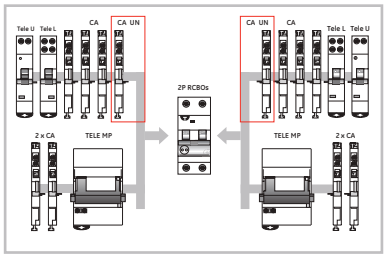
Type AC

Type A

Applications

Approvals / Marking

Add-on devices



The auxiliary contact CA UN is needed as interface if Tele MP needs to trip the 2P RCBO.
If the RCBO is used only to reconnect, the interface is not needed.

Performance

Thermal setting In	(A)	6-40
Residual current	(mA)	30, 300
Tripping characteristics		C
Rated voltage AC Un	(V)	230
Minimum operating voltage Ub min.	(V)	117(1)
Mechanical / electrical endurance		10000/20000
Tropicalisation acc. to EN/IEC 60068-2		55°C/95%
Terminal capacity flexible / rigid cable	(mm²)	25/35
Poles		2
Nuisance tripping resistance	(A)	250
Ambient temperature	(°C)	Type AC: -5 up to 60 Type A: -25 up to 60
Weight / mod.	(g)	110

Short-circuit capacity

Acc. to EN 61009-1	
Residual making and breaking capacity	IΔm = 4500A
Energy limiting class	3
Short-circuit capacity	Icn = 4500A at 230V

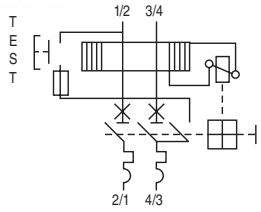
(1) Ubmin = 150V for 30mA

Auxiliary contacts pg C.6
Technical data pg B.6
Dimensions pg B.9

New

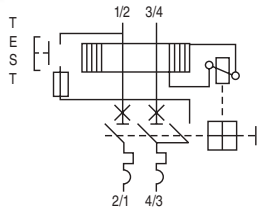
Compact RCBOs

Series DPC45 - Type AC - characteristic C



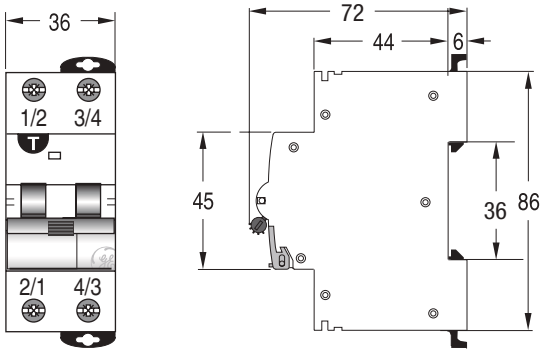
		10mA		30 mA		300 mA		
	In (A)	Cat. no.	Ref. no.	Cat. no.	Ref. no.	Cat. no.	Ref. no.	Pack
2P	6	-	-	DPC45C06/030	**606786**	DPC45C06/300	**606794**	1/6
	10	-	-	DPC45C10/030	**606787**	DPC45C10/300	**606795**	1/6
	13	-	-	DPC45C13/030	**606788**	DPC45C13/300	**606796**	1/6
	16	-	-	DPC45C16/030	**606789**	DPC45C16/300	**606797**	1/6
	20	-	-	DPC45C20/030	**606790**	DPC45C20/300	**606798**	1/6
	25	-	-	DPC45C25/030	**606791**	DPC45C25/300	**606799**	1/6
	32	-	-	DPC45C32/030	**606792**	DPC45C32/300	**606800**	1/6
	40	-	-	DPC45C40/030	**606793**	DPC45C40/300	**606801**	1/6

Series DPC45 - Type A - characteristic C



2P	6	-	-	DPCA45C06/030	**606802**	DPCA45C06/300	**606810**	1/6
	10	-	-	DPCA45C10/030	**606803**	DPCA45C10/300	**606811**	1/6
	13	-	-	DPCA45C13/030	**606804**	DPCA45C13/300	**606812**	1/6
	16	-	-	DPCA45C16/030	**606805**	DPCA45C16/300	**606813**	1/6
	20	-	-	DPCA45C20/030	**606806**	DPCA45C20/300	**606814**	1/6
	25	-	-	DPCA45C25/030	**606807**	DPCA45C25/300	**606815**	1/6
	32	-	-	DPCA45C32/030	**606808**	DPCA45C32/300	**606816**	1/6
	40	-	-	DPCA46C40/030	**606809**	DPCA45C40/300	**606817**	1/6

Dimensions



New

2P RCBOs - Residual Current Circuit Breaker with Overcurrent Protection

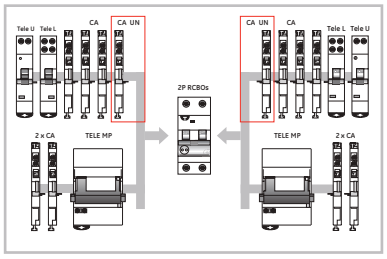
Series DPC60

EN /IEC 61009-1	6kA
Type AC	
Type A - Ai	

Applications

Approvals / Marking

Add-on devices



The auxiliary contact CA UN is needed as interface if Tele MP needs to trip the 2P RCBO.
If the RCBO is used only to reconnect, the interface is not needed.

Performance

Thermal setting In	(A)	6-40
Residual current	(mA)	10, 30, 300
Tripping characteristics		B, C
Rated voltage AC Un	(V)	230
Minimum operating voltage Ub min.	(V)	117(1)
Mechanical / electrical endurance		10000/20000
Tropicalisation acc. to EN/IEC 60068-2		55°C/95%
Terminal capacity flexible / rigid cable	(mm²)	25/35
Poles		2
Nuisance tripping resistance	(A)	250 (A, AC), 3000 (Ai)
Ambient temperature	(°C)	Type AC: -5 up to 60 Type A: -25 up to 60
Weight / mod.	(g)	110

Short-circuit capacity

Acc. to EN 61009-1	
Residual making and breaking capacity	IΔm = 6000A
Energy limiting class	3
Short-circuit capacity	Icn = 6000A at 230V

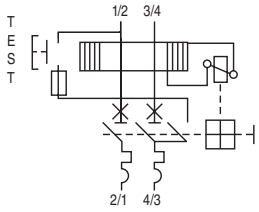
(1) Ubmin = 150V for 30mA

Auxiliary contacts pg C.6
Technical data pg B.6
Dimensions pg B.9

New

Compact RCBOs

Series DPC60 - Type AC - characteristic C

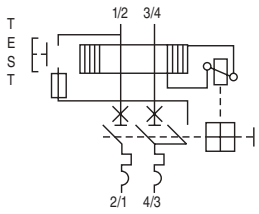


		10mA		30 mA		300 mA		
	In (A)	Cat. no.	Ref. no.	Cat. no.	Ref. no.	Cat. no.	Ref. no.	Pack
2P	6	-	-	DPC60C06/030	**606820**	DPC60C06/300	**606828**	1/6
	10	DPC60C10/010	**606818**	DPC60C10/030	**606821**	DPC60C10/300	**606829**	1/6
	13	-	-	DPC60C13/030	**606822**	DPC60C13/300	**606830**	1/6
	16	DPC60C16/010	**606819**	DPC60C16/030	**606823**	DPC60C16/300	**606831**	1/6
	20	-	-	DPC60C20/030	**606824**	DPC60C20/300	**606832**	1/6
	25	-	-	DPC60C25/030	**606825**	DPC60C25/300	**606833**	1/6
	32	-	-	DPC60C32/030	**606826**	DPC60C32/300	**606834**	1/6
	40	-	-	DPC60C40/030	**606827**	DPC60C40/300	**606835**	1/6

Series DPC60 - Type A - characteristic B

2P	6	-	-	DPCA60B06/030	**606872**	DPCA60B06/300	**606880**	1/6
	10	DPCA60B10/010	**606870**	DPCA60B10/030	**606873**	DPCA60B10/300	**606881**	1/6
	13	-	-	DPCA60B13/030	**606874**	DPCA60B13/300	**606882**	1/6
	16	DPCA60B16/010	**606871**	DPCA60B16/030	**606875**	DPCA60B16/300	**606883**	1/6
	20	-	-	DPCA60B20/030	**606876**	DPCA60B20/300	**606884**	1/6
	25	-	-	DPCA60B25/030	**606877**	DPCA60B25/300	**606885**	1/6
	32	-	-	DPCA60B32/030	**606878**	DPCA60B32/300	**606886**	1/6
	40	-	-	DPCA60B40/030	**606879**	DPCA60B40/300	**606887**	1/6

Series DPC60 - Type A - characteristic C

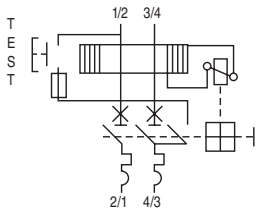


2P	6	-	-	DPCA60C06/030	**606838**	DPCA60C06/300	**606846**	1/6
	10	DPCA60C10/010	**606836**	DPCA60C10/030	**606839**	DPCA60C10/300	**606847**	1/6
	13	-	-	DPCA60C13/030	**606840**	DPCA60C13/300	**606848**	1/6
	16	DPCA60C16/010	**606837**	DPCA60C16/030	**606841**	DPCA60C16/300	**606849**	1/6
	20	-	-	DPCA60C20/030	**606842**	DPCA60C20/300	**606850**	1/6
	25	-	-	DPCA60C25/030	**606843**	DPCA60C25/300	**606851**	1/6
	32	-	-	DPCA60C32/030	**606844**	DPCA60C32/300	**606852**	1/6
	40	-	-	DPCA60C40/030	**606845**	DPCA60C40/300	**606853**	1/6

Series DPC60 - Type Ai - characteristic B

2P	6	-	-	DPCAi60B06/030	**606888**	DPCAi60B06/300	**606896**	1/6
	10	-	-	DPCAi60B10/030	**606889**	DPCAi60B10/300	**606897**	1/6
	13	-	-	DPCAi60B13/030	**606890**	DPCAi60B13/300	**606898**	1/6
	16	-	-	DPCAi60B16/030	**606891**	DPCAi60B16/300	**606899**	1/6
	20	-	-	DPCAi60B20/030	**606892**	DPCAi60B20/300	**606900**	1/6
	25	-	-	DPCAi60B25/030	**606893**	DPCAi60B25/300	**606901**	1/6
	32	-	-	DPCAi60B32/030	**606894**	DPCAi60B32/300	**606902**	1/6
	40	-	-	DPCAi60B40/030	**606895**	DPCAi60B40/300	**606903**	1/6

Series DPC60 - Type Ai - characteristic C



2P	6	-	-	DPCAi60C06/030	**606854**	DPCAi60C06/300	**606862**	1/6
	10	-	-	DPCAi60C10/030	**606855**	DPCAi60C10/300	**606863**	1/6
	13	-	-	DPCAi60C13/030	**606856**	DPCAi60C13/300	**606864**	1/6
	16	-	-	DPCAi60C16/030	**606857**	DPCAi60C16/300	**606865**	1/6
	20	-	-	DPCAi60C20/030	**606858**	DPCAi60C20/300	**606866**	1/6
	25	-	-	DPCAi60C25/030	**606859**	DPCAi60C25/300	**606867**	1/6
	32	-	-	DPCAi60C32/030	**606860**	DPCAi60C32/300	**606868**	1/6
	40	-	-	DPCAi60C40/030	**606861**	DPCAi60C40/300	**606869**	1/6

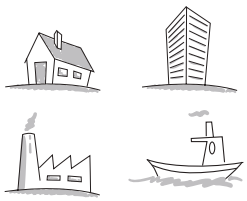
New

2P RCBOs - Residual Current Circuit Breaker with Overcurrent Protection

Series DPC100

EN /IEC 61009-1	10kA
Type AC	
Type A - Ai	

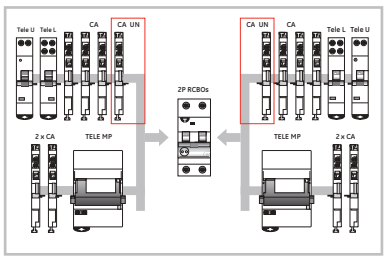
Applications



Approvals / Marking

(1) Lloyd's register
(2) RINA

Add-on devices



The auxiliary contact CA UN is needed as interface if Tele MP needs to trip the 2P RCBO.
If the RCBO is used only to reconnect, the interface is not needed.

Performance

Thermal setting In	(A)	6-40
Residual current	(mA)	10, 30, 300
Tripping characteristics		B(1)-C(1)
Rated voltage AC Un	(V)	230
Minimum operating voltage Ub min.	(V)	117(2)
Mechanical / electrical endurance		10000/20000
Tropicalisation acc. to EN/IEC 60068-2		55°C/95%
Terminal capacity flexible / rigid cable	(mm²)	25/35
Poles		2
Nuisance tripping resistance	(A)	250 (A, AC), 3000 (Ai)
Ambient temperature	(°C)	Type AC: -5 up to 60 Type A: -25 up to 60
Weight / mod.	(g)	110

(1) Additional to traditional B and C curves, specials ones focused in Norwegian standards for 10A, 13A, 16A, 20A
(2) Ubmin = 150V for 30mA

Short-circuit capacity

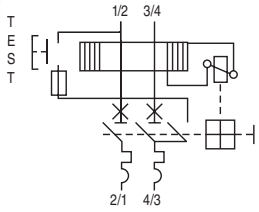
Acc. to EN 61009-1	
Residual making and breaking capacity	IΔm = 6000A
Energy limiting class	3
Short-circuit capacity	Icn = 10000A at 230V

Auxiliary contacts pg C.6
Technical data pg B.6
Dimensions pg B.9

New

Compact RCBOs

Series DPC100 - Type AC - characteristic C

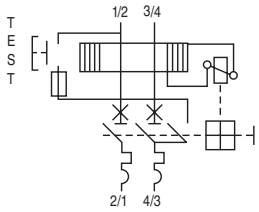


		10mA		30 mA		300 mA		
	In (A)	Cat. no.	Ref. no.	Cat. no.	Ref. no.	Cat. no.	Ref. no.	Pack
2P	6	-	-	DPC100C06/030	**606906**	DPC100C06/300	**606914**	1/6
	10	DPC100C10/010	**606904**	DPC100C10/030	**606907**	DPC100C10/300	**606915**	1/6
	13	-	-	DPC100C13/030	**606908**	DPC100C13/300	**606916**	1/6
	16	DPC100C16/010	**606905**	DPC100C16/030	**606909**	DPC100C16/300	**606917**	1/6
	20	-	-	DPC100C20/030	**606910**	DPC100C20/300	**606918**	1/6
	25	-	-	DPC100C25/030	**606911**	DPC100C25/300	**606919**	1/6
	32	-	-	DPC100C32/030	**606912**	DPC100C32/300	**606920**	1/6
	40	-	-	DPC100C40/030	**606913**	DPC100C40/300	**606921**	1/6

Series DPC100 - Type A - characteristic B

2P	6	-	-	DPCA100B06/030	**606964**	DPCA100B06/300	**606976**	1/6
	10	DPCA100B10/010	**606961**	DPCA100B10/030	**606965**	DPCA100B10/300	**606977**	1/6
	13	DPCA100B13/010	**606962**	DPCA100B13/030	**606966**	DPCA100B13/300	**606978**	1/6
	16	DPCA100B16/010	**606963**	DPCA100B16/030	**606967**	DPCA100B16/300	**606979**	1/6
	20	-	-	DPCA100B20/030	**606968**	DPCA100B20/300	**606980**	1/6
	10	-	-	DPCA100B10/030	**606969**(1)	-	-	1/6
	13	-	-	DPCA100B13/030	**606970**(1)	-	-	1/6
	16	-	-	DPCA100B16/030	**606971**(1)	-	-	1/6
	20	-	-	DPCA100B20/030	**606972**(1)	-	-	1/6
	25	-	-	DPCA100B25/030	**606973**	DPCA100B25/300	**606981**	1/6
	32	-	-	DPCA100B32/030	**606974**	DPCA100B32/300	**606982**	1/6
	40	-	-	DPCA100B40/030	**606975**	DPCA100B40/300	**606983**	1/6

Series DPC100 - Type A - characteristic C

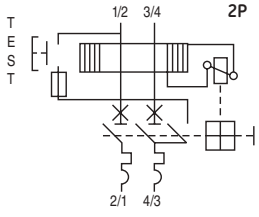


2P	6	-	-	DPCA100C06/030	**606925**	DPCA100C06/300	**606937**	1/6
	10	DPCA100C10/010	**606922**	DPCA100C10/030	**606926**	DPCA100C10/300	**606938**	1/6
	13	DPCA100C13/010	**606923**	DPCA100C13/030	**606927**	DPCA100C13/300	**606939**	1/6
	16	DPCA100C16/010	**606924**	DPCA100C16/030	**606928**	DPCA100C16/300	**606940**	1/6
	20	-	-	DPCA100C20/030	**606929**	DPCA100C20/300	**606941**	1/6
	10	-	-	DPCA100C10/030	**606930**(1)	-	-	1/6
	13	-	-	DPCA100C13/030	**606931**(1)	-	-	1/6
	16	-	-	DPCA100C16/030	**606932**(1)	-	-	1/6
	20	-	-	DPCA100C20/030	**606933**(1)	-	-	1/6
	25	-	-	DPCA100C25/030	**606934**	DPCA100C25/300	**606942**	1/6
	32	-	-	DPCA100C32/030	**606935**	DPCA100C32/300	**606943**	1/6
	40	-	-	DPCA100C40/030	**606936**	DPCA100C40/300	**606944**	1/6

Series DPC100 - Type Ai - characteristic B

2P	6	-	-	DPCAi100B06/030	**606984**	DPCAi100B06/300	**606992**	1/6
	10	-	-	DPCAi100B10/030	**606985**	DPCAi100B10/300	**606993**	1/6
	13	-	-	DPCAi100B13/030	**606986**	DPCAi100B13/300	**606994**	1/6
	16	-	-	DPCAi100B16/030	**606987**	DPCAi100B16/300	**606995**	1/6
	20	-	-	DPCAi100B20/030	**606988**	DPCAi100B20/300	**606996**	1/6
	25	-	-	DPCAi100B25/030	**606989**	DPCAi100B25/300	**606997**	1/6
	32	-	-	DPCAi100B32/030	**606990**	DPCAi100B32/300	**606998**	1/6
	40	-	-	DPCAi100B40/030	**606991**	DPCAi100B40/300	**606999**	1/6

Series DPC100 - Type Ai - characteristic C



2P	6	-	-	DPCAi100C06/030	**606945**	DPCAi100C06/300	**606953**	1/6
	10	-	-	DPCAi100C10/030	**606946**	DPCAi100C10/300	**606954**	1/6
	13	-	-	DPCAi100C13/030	**606947**	DPCAi100C13/300	**606955**	1/6
	16	-	-	DPCAi100C16/030	**606948**	DPCAi100C16/300	**606956**	1/6
	20	-	-	DPCAi100C20/030	**606949**	DPCAi100C20/300	**606957**	1/6
	25	-	-	DPCAi100C25/030	**606950**	DPCAi100C25/300	**606958**	1/6
	32	-	-	DPCAi100C32/030	**606951**	DPCAi100C32/300	**606959**	1/6
	40	-	-	DPCAi100C40/030	**606952**	DPCAi100C40/300	**606960**	1/6

(1) Special thermal tripping curves for Norway

New

3P+N RCBOs- Residual Current Circuit Breaker with Overcurrent Protection

Series DMA63N

EN 61009-1 6000 / 3

Type A

Applications

Approval / Marking

Performance

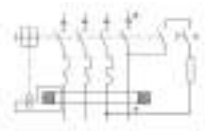
Thermal setting In	(A)	10 - 32
Residual current	(mA)	30
Tripping characteristics		C
Rated voltage AC Un	(V)	400
Minimum operating voltage Ub min.	(V)	100
Mechanical / electrical endurance		10000/20000
Tropicalisation acc. to EN/IEC 60068-2		55°C/95%
Terminal capacity flexible / rigid cable	(mm²)	25/35
Poles		3+N (right)
Nuisance tripping resistance	(A)	250A 8/20µs
Ambient temperature	(°C)	25 up to 40
Weight / mod.	(g)	440

Short-circuit capacity

Acc. to EN 61009-1

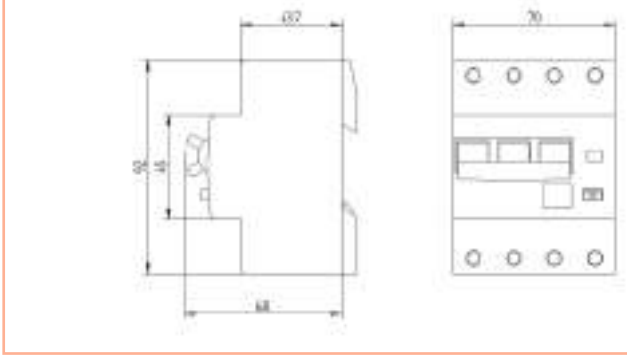
Residual making and breaking capacity	IΔm = 3000A
Energy limiting class	3
Short-circuit capacity	Icn = 6000A at 230V

Series DMA63N - Type A - characteristic C - 3P+N



	30mA		
In (A)	Cat. no.	Ref. no.	Pack
10	DMA 63NC10/030	**783517**	1/3
13	DMA 63NC13/030	**783518**	1/3
16	DMA 63NC16/030	**783519**	1/3
20	DMA 63NC20/030	**783520**	1/3
32	DMA 63NC32/030	**568322**	1/3

Dimensions



Notes

Selection table of RCCBs

Page no.	Series	Sensitivity (mA)	Poles	Type	Nominal current (A) 16	25	40	63	80	100	Isolator appl.	Add-on devices	Rated voltage
B.20	BP/BD												
		10	2P	AC/A							x	x	240
		30	2P	AC/A							x	x	240
				G							x	x	240
			4P	AC/A							x	x	240/415
				G							x	x	240/415
		100	2P	AC/A/S							x	x	240
				G							x	x	240
			4P	AC/A/S							x	x	240/415
				G							x	x	240/415
		300	2P	AC/A/S							x	x	240
			4P	AC/A/S							x	x	240/415
		500	2P	AC/A/S							x	x	240
			4P	AC/A/S							x	x	240/415
		1000	2P	AC/A/S							x	x	240
			4P	AC/A/S							x	x	240/415
B.36	FPP	30,100, 300	2P	A/S							x	x	240/415
			4P	A/S							x	x	240/415

Selection table of RCBOs

Page no.	Series	Sensitivity (mA)	Pole	Type	Tripping charact.	Nominal current (A) 4	6	10	13	16	20	25	32	40	Isolator appl.	Add-on devices	Rated voltage
B.22	DM60																
		10	1+N	AC/A	B										x	x	240
					C										x	x	240
		30	1+N	AC/A	B										x	x	240
					C										x	x	240
		100	1+N	AC/A	B										x	x	240
					C										x	x	240
		300	1+N	AC/A	B										x	x	240
					C										x	x	240
B.23	DMT60																
		30	1+N	AC	C										x	x	240
B.24	DM100	10	1+N	AC/A	B										x	x	240
					C										x	x	240
		30	1+N	AC/A	B										x	x	240
					C										x	x	240
		100	1+N	AC/A	B										x	x	240
					C										x	x	240
		300	1+N	AC/A	B										x	x	240
					C										x	x	240
B.25	DMT100																
		30	1+N	AC	C										x	x	240
B.26	DMC/DICE																
		30	1+N	AC/A	B/C										x	x	240

Selection table of RCBOs (continued)

Page no.	Series	Sensitivity (mA)	Pole	Type	Tripping charact.	Nominal current (A) 6	10	16	20	25	32	40	Isolator appl.	Add-on devices	Rated voltage
B.29	DME60														
		30, 100	1+N	AC	C								x	x	240
B.29	DME100														
		10, 30, 100	1+N	AC/A	C								x	x	240
		10, 30, 100	1+N	AC	B								x	x	240
		100	1+N	AC	D								x	x	240
		10, 30	1+N	A	B								x	x	240
		10, 30, 100	1+N	A	C, D								x	x	240
B.31	DMET60														
		30	1+N	AC/A	C								x	x	240
B.31	DMET100														
		10, 30, 100, 300	1+N	AC	C								x	x	240
		30	1+N	A	C								x	x	240

Selection table for add-on RCCBs

Page no.	Series	Sensitivity (mA)	Poles	Type	Tripping charact.	Nominal current (A) 32	63	Isolator appl.	Add-on devices	Rated voltage
B.32	Diff-o-Click									
		10	2-3-4	AC/A	-			-	-	240/415
		100, 300, 500, 1000	2-3-4	AC/A/S	-			-	-	240/415

Technical data of RCDs

Series			BP/BD	DM60	DM100	DMCE/DICE
Standards			EN/IEC 61008-1	EN/IEC 61009-1	EN/IEC 61009-1	EN/IEC 61009-1
Magnetic tripping characteristics			-	B-C	B-C	B-C
Residual tripping characteristic			AC, A, S	AC	AC	AC, A
Tripping time at I Δn	Instantaneous	ms	<40	<40	<40	<40
	Selective	ms	>150	-	-	-
Rated current		A	16, 25, 40, 63, 80, 100	4,6,10,13,16,20,25,32,40	4,6,10,13,16,20,25,32,40	6 ...40
Rated residual current I Δn		mA	10,30,100,300,500,1000	10, 30, 300	10, 30, 300	30
Calibration temperature		°C	30	30	30	30
Number of poles versus modules			1	1	1	1
Rated voltage Un	2P AC	V	240	230 (1P+N)	230 (1P+N)	240 (1P+N)
	3P AC	V	-	-	-	-
	4P AC	V	415	-	-	-
Frequency		Hz	50/60	50/60	50/60	50
Maximum service voltage Ubmax		V	2P=265 / 4P=455	255	255	265
Minimum service voltage Ubmin		V	2P=117 / 4P=205	117	117	195
Minimum voltage for leakage protection		V	Voltage independent	Voltage independent	Voltage independent	85
Power supply			Top/Bottom	Top/Bottom	Top/Bottom	Bottom
Selectivity class			-	3	3	3
Rated making and breaking capacity (Im)		A	500 (or 10xIn)	-	-	10xIn
Residual making and breaking capacity (IΔ m)		A	500 (or 10xIn)	6000	6000	6000
Conditional short-circuit capacity (Inc)		A	10000 fuse 100A gLgG	-	-	-
Conditional residual short-circuit capacity (IΔ c)		A	10000 fuse 100A gLgG	-	-	-
Rated Short-circuit capacity (Icn)		A	-	6000	10000	6000
Grid distance (safety distance between two devices)		mm	35	35	35	-
Isolator application			yes	yes	yes	yes
Insulation degree	Insulation voltage	V (DC)	440	440	440	440
	Shock voltage (1.2/50µs)	kV	6	6	6	6 (1)
	Insulation resistance	MΩ	1000	1000	1000	1000 (1)
	Dielectric strength	V	2500	2500	2500	2500 (1)
Shock resistance (in x, y, z direction) (EN/IEC 60077/16.3)			40g, 18 shocks 5 ms	40g, 18 shocks 5 ms	40g, 18 shocks 5 ms	40g, 18 shocks 5 ms
Vibration resistance (in x, y, z direction) (EN/IEC 60068-2-6)			1.5g, 30 min, 0...80Hz	1.5g, 30 min, 0...80Hz	1.5g, 30 min, 0...80Hz	2g, 30 min, 0...80Hz
Endurance	electrical at Un, In		10000	10000	10000	10000
	mechanical at Un, In		20000	20000	20000	20000
Protection degree (outside/inside electrical enclosure with door)			IP20 / IP40	IP20 / IP40	IP20 / IP40	IP20 / IP40
Self extinguish degree (according to UL94)			V2	V2	V2	V2
Tropicalisation (according to EN/IEC 60068-2, DIN 40046)		°C/RH	+55/95%	+55/95%	+55/95%	+55/95%
Pollution degree (acc. EN/IEC 60947-1)			3	3	3	3
Operating temperature			AC (-5.. +60); A -25.. +60)	-5..+60	-25..+60	-5..+60
Storage temperature		°C	-25..+70	-25..+70	-5..+70	-25..+70
Terminals capacity	Rigid cable min/max (top)	mm^2	1.5/50 [1.5/35]	1/25	1/25	1/25
	Flexible cable min*/max (top)	mm^2	1.5/35 [1.5/25]	1/16	1/16	1.5/16
	Rigid cable min/max (bottom)	mm^2	1.5/50 [1.5/35]	1/35	1/35	1/35
	Flexible cable min*/max (bottom)	mm^2	1.5/35 [1.5/25]	1/25	1/25	1.5/25
Torque	Top/Bottom	Nm	5/5	3/4	3/4	3/3(DMCE) 3/4.5(DICE)
Add-on devices (side add-on)	Auxiliary contacts		yes	yes	yes	yes (coupled to CAUN)
	Tele U		yes	yes	yes	yes
	Tele L		yes	yes	yes	yes
	Tele M		yes	yes	yes	yes
	PBS		no	yes	yes	yes
Busbars systems	Pin		yes	Bottom	Bottom	yes
	Fork		yes	Bottom	Bottom	-
	# Poles		2-4	1+N	1+N	1+N
Dimensions	(HxDxW) 86x68xW		36/72	36	36	18
	Weight	mm	2P=250 / 4P=368	250	250	125/215
	Package	g	2P=1/6 / 4P=1/3	1/6	1/6	1/12
Approvals			KEMA	KEMA	KEMA	RCM
CE-marking			yes	yes	yes	yes
Page			B.20	B.22	B.24	B.26

*Flexible cable 0.75/1/1.5 mm2 with cable lug

DME60/DMET60	DME100/DMET100	Diff-o-Click	FPAUL	DPA100	FPP
EN/IEC 61009-1	EN/IEC 61009-1	EN/IEC 61009-1	UL1053 and EN/IEC 61008-1	UL1053 and EN/IEC 61009-1	EN 61008-1
C	B-C-D	B-C-D	-	B-C	-
AC, A	AC, A	AC, A, S	A	A	A, S
<40	<40	<40	< 40	< 40	<40
-	-	>150	-	-	>150
6 ...40	6,10,16,20,25,32,40	0.5,1,2,4,6,10,16,20,25,32,40,50,63	16, 25, 40, 63	10, 13, 16, 32, 40	25, 40, 63[3]
30, 100	10, 30, 100, 300	30,100,300,500,1000	10, 30, 100, 300, 500	10, 30	30, 100, 300
30	30	30	30	30	30
1	1	1	1	1	1
240 (1P+N)	240 (1P+N)	240/415	240	277 & 240 (1P+N)	240
-	-	400		-	-
-	-	400	UL: 240; EN/IEC: 415		415
50/60	50/60	50/60	50/60	50/60	50/60
265	265	2P=265 / 4P=455	2P=265 / 4P=455	255	2P=265 / 4P=455
195	195	2P=205 / 4P=205	2P=117 / 4P=205	195	2P=110 / 4P=190
100	100	Voltage independent	Voltage independent	Voltage independent	Voltage independent
Bottom	Bottom	Top	Top/Bottom	Top/Bottom	Top/Bottom
3	3	3	-	3	-
10xIn	10xIn	-	500 (or 10xIn)	-	500 (or 10xIn)
6000	10000	see MCB	500 (or 10xIn)	6000	500 (or 10xIn)
-	-	-	10000 fuse 100A gIgG	-	10000 fuse 100A
-	-	-	10000	-	10000
6000	10000	see MCB	-	5000/10000	-
-	-	35	35	35	-
yes	yes	no	yes	yes	yes
440	440	440	500	500	500
6 [1]	6 [1]	6	8	6	8
1000 [1]	1000 [1]	1000	1000	1000	1000
2500 [1]	2500 [1]	2500	2500	2500	2500
40g, 18 shocks 5 ms	40g, 18 shocks 5 ms	40g, 18 shocks 5 ms	40g, 18 shocks 5 ms	40g, 18 shocks 5 ms	40g, 18 shocks 5 ms
2g, 30 min, 0...80Hz	2g, 30 min, 0...80Hz	5g, 30 min, 0...80Hz	1.5g, 30 min, 0...80Hz	1.5g, 30 min, 0...80Hz	1.5g, 30 min, 0...80Hz
10000	10000	10000	10000	10000	10000
20000	20000	20000	20000	20000	20000
IP20 / IP40	IP20 / IP40	IP20 / IP40	IP20 / IP40	IP20 / IP40	IP20 / IP40
V2	V2	V2	V2	V2	V2
+55/95%	+55/95%	+55/95%	+55/95%	+55/95%	+55/95%
3	3	3	3	3	3
-5..+60	-5..+60	AC (-5..+60); A(-25..+60)	AC (-5.. +60); A (-25.. +60)	-5..+60	-25.. +60[4]
-25..+70	-25..+70	-25..+70	-25..+70	-25..+70	-25..+70
1/25	1/25	1/25	1.5/50 [1.5/35]	1/25	see page B.20
1/16	1/16	1/16	1.5/35 [1.5/25]	1/16	-
1/35	1/35	1/35	1.5/50 [1.5/35]	1/35	-
1/25	1/25	1/25	1.5/35 [1.5/25]	1/25	-
3/4.5	3/4.5	-/4.5	5/5	3/4	-
-	-	yes (coupled to MCB)	yes	yes	yes
-	-	yes (coupled to MCB)	yes[2]	yes[2]	yes[5]
-	-	yes (coupled to MCB)	yes	yes	yes[5]
-	-	yes (coupled to MCB)	yes[2]	yes[2]	yes[5]
-	-	yes (coupled to MCB)	yes[2]	yes[2]	yes[5]
Bottom	Bottom	-	yes[2]	yes[2]	yes
Bottom	Bottom	-	yes[2]	yes[2]	yes
1+N	1+N	2-3-4	2-4	1+N	2/4
18	18	72/90/108/125/144	36/72	36	88x68x36/73.2
235	235	2P=250 / 3P=320 / 4P=340	2P=250 / 4P=368	250	2P=248 / 4P=364
1	1	1	2P=1/6 / 4P=1/3	1/6	2P=1/6 / 4P=1/3
KEMA	CEBEC	KEMA	UL	UL and CEBEC	VDE-KEMA-CEBEC-IMQ
yes	yes	yes	yes	yes	yes
B.29/B.31	B.29/B.31	B.32	B.34	B.35	B.36

(1) Making sure that N-L and both flying leads are disconnected.
(2) Not UL registered
(3) Rating current derating as usual in function of installation conditions.
(4) With plug-in busbar: -25/+50°C
(5) With plug-in busbar only at right extreme side of each row. No pin busbars let through allowed

RCCBs - Residual Current Circuit Breakers

Series BP/BD

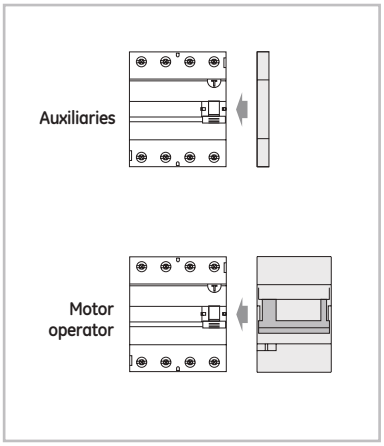
EN/IEC 61008-1
Type AC
Type A - Ai
Type S - Si S

Applications

Approval / Marking

KEMA KEUR CE

Add-on devices



Auxiliary contacts pg C.4
Motor operator pg C.7
Shunt trip pg C.8
Undervoltage release pg C.8
Panel board switch pg C.8

Busbars pg E.2
More technical data pg B.18
Dimensions pg B.50

Performance

Thermal setting In	(A)	16, 25, 40, 63, 80, 100
Residual current IΔn	(mA)	10, 30, 100, 300, 500, 1000
Rated voltage AC Un	(V)	2P: 240 4P: 240/415
Minimum operating voltage U_{Bmin}	(V)	2P: 117 4P: 205
Mechanical/electrical endurance		20000/10000
Tropicalisation acc.to EN/IEC 60068-2-28/2-30 and DIN 40046		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	35-50(1)
Poles		2, 4
Nuisance tripping resistance		Type A, AC: 250A 8/20μs; 200A 0.5μs - 100kHz Type S: 3000A 8/20μs Type Ai: 3000A 8/20μs Type Si: 5000A 8/20μs
Ambient temperature	(°C)	Type AC: -5 up to 40 Type A: -25 up to 40
Weight	(g)	2P: 220 4P: 385

Short-circuit capacity

Acc. to EN/IEC 61008-1

Making and breaking capacity	Im ≥ 500A from 16 up to 40A In = 10In from 63 up to 100A
Residual making and breaking capacity	IΔm ≥ 500A from 16 up to 40A IΔm = 10In from 63 up to 100A
Short-circuit capacity	
Series BD	Inc = 6000A at 240/415V fuse 63A gG
Series BP	Inc = 10000A at 240/415V fuse 80A gG

(1) Series BD: 25-35 mm^2

Series BP/BD - Type AC

		10*/30mA		100mA		300mA		500mA		1000mA		
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
2P	16	BPC216/010*	**606131**	-	-	-	-	-	-	-	-	6
	25	BDC225/030	**607125**	BPC225/100	**606140**	BDC225/300	**607127**	BPC225/500	**606153**	BPC225/1000	**606158**	6
	40	BDC240/030	**607126**	BPC240/100	**606141**	BDC240/300	**607128**	BPC240/500	**606154**	BPC240/1000	**606159**	6
	63	BPC263/030	**606134**	BPC263/100	**606142**	BPC263/300	**606150**	BPC263/500	**606155**	BPC263/1000	**606160**	6
	80	BPC280/030	**606135**	BPC280/100	**606143**	BPC280/300	**606151**	BPC280/500	**606156**	BPC280/1000	**606161**	6
	100	BPC2100/030	**606136**	BPC2100/100	**606144**	BPC2100/300	**606152**	BPC2100/500	**606157**	BPC2100/1000	**606162**	6
4P	25	BPC425/030	**606208**	BPC425/100	**606216**	BPC425/300	**606224**	BPC425/500	**606229**	BPC425/1000	**606234**	3
	40	BPC440/030	**606209**	BPC440/100	**606217**	BPC440/300	**606225**	BPC440/500	**606230**	BPC440/1000	**606235**	3
	63	BPC463/030	**606210**	BPC463/100	**606218**	BPC463/300	**606226**	BPC463/500	**606231**	BPC463/1000	**606236**	3
	80	BPC480/030	**606211**	BPC480/100	**606219**	BPC480/300	**606227**	BPC480/500	**606232**	BPC480/1000	**606237**	3
	100	BPC4100/030	**606212**	BPC4100/100	**606220**	BPC4100/300	**606228**	BPC4100/500	**606233**	BPC4100/1000	**606238**	3

Series BP - Type A

		10*/30mA		100mA		300mA		500mA		1000mA		
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
2P	16	BPA216/010*	**606085**	-	-	-	-	-	-	-	-	6
	25	BPA225/030	**606086**	BPA225/100	**606091**	BPA225/300	**606101**	BPA225/500	**606111**	BPA225/1000	**606121**	6
	40	BPA240/030	**606087**	BPA240/100	**606092**	BPA240/300	**606102**	BPA240/500	**606112**	BPA240/1000	**606122**	6
	63	BPA263/030	**606088**	BPA263/100	**606093**	BPA263/300	**606103**	BPA263/500	**606113**	BPA263/1000	**606123**	6
	80	BPA280/030	**606089**	BPA280/100	**606094**	BPA280/300	**606104**	BPA280/500	**606114**	BPA280/1000	**606124**	6
	100	BPA2100/030	**606090**	BPA2100/100	**606095**	BPA2100/300	**606105**	BPA2100/500	**606115**	BPA2100/1000	**606125**	6
4P	25	BPA425/030	**606163**	BPA425/100	**606168**	BPA425/300	**606178**	BPA425/500	**606188**	BPA425/1000	**606198**	3
	40	BPA440/030	**606164**	BPA440/100	**606169**	BPA440/300	**606179**	BPA440/500	**606189**	BPA440/1000	**606199**	3
	63	BPA463/030	**606165**	BPA463/100	**606170**	BPA463/300	**606180**	BPA463/500	**606190**	BPA463/1000	**606200**	3
	80	BPA480/030	**606166**	BPA480/100	**606171**	BPA480/300	**606181**	BPA480/500	**606191**	BPA480/1000	**606201**	3
	100	BPA4100/030	**606167**	BPA4100/100	**606172**	BPA4100/300	**606182**	BPA4100/500	**606192**	BPA4100/1000	**606202**	3

Series BP - Type S

		100mA		300mA		500mA		1000mA		
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
2P	25	BPS225/100	**606096**	BPS225/300	**606106**	BPS225/500	**606116**	BPS225/1000	**606126**	6
	40	BPS240/100	**606097**	BPS240/300	**606107**	BPS240/500	**606117**	BPS240/1000	**606127**	6
	63	BPS263/100	**606098**	BPS263/300	**606108**	BPS263/500	**606118**	BPS263/1000	**606128**	6
	80	BPS280/100	**606099**	BPS280/300	**606109**	BPS280/500	**606119**	BPS280/1000	**606129**	6
	100	BPS2100/100	**606100**	BPS2100/300	**606110**	BPS2100/500	**606120**	BPS2100/1000	**606130**	6
4P	25	BPS425/100	**606173**	BPS425/300	**606183**	BPS425/500	**606193**	BPS425/1000	**606203**	3
	40	BPS440/100	**606174**	BPS440/300	**606184**	BPS440/500	**606194**	BPS440/1000	**606204**	3
	63	BPS463/100	**606175**	BPS463/300	**606185**	BPS463/500	**606195**	BPS463/1000	**606205**	3
	80	BPS480/100	**606176**	BPS480/300	**606186**	BPS480/500	**606196**	BPS480/1000	**606206**	3
	100	BPS4100/100	**606177**	BPS4100/300	**606187**	BPS4100/500	**606197**	BPS4100/1000	**606207**	3

HIGH IMMUNITY

Series BP - Type Ai

Series BP - Type Si

		30mA		300mA		300mA		
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
2P	25	BPAi225/030	**606331**	BPAi225/300	**606347**	BPSi225/300	**606337**	6
	40	BPAi240/030	**606332**	BPAi240/300	**606348**	BPSi240/300	**606338**	6
	63	BPAi263/030	**606333**	BPAi263/300	**606349**	BPSi263/300	**606339**	6
	80	-	-	-	-	BPSi280/300	**606340**	6
	100	-	-	-	-	BPSi2100/300	**606341**	6
4P	25	BPAi425/030	**606334**	BPAi425/300	**606350**	BPSi425/300	**606342**	3
	40	BPAi440/030	**606335**	BPAi440/300	**606351**	BPSi440/300	**606343**	3
	63	BPAi463/030	**606336**	BPAi463/300	**606352**	BPSi463/300	**606344**	3
	80	-	-	-	-	BPSi480/300	**606345**	3
	100	-	-	-	-	BPSi4100/300	**606346**	3

RCBOs - Residual Current Circuit Breakers With Overcurrent Protection

Series DM60

EN/IEC 61009-1 6000 / 3

Type AC

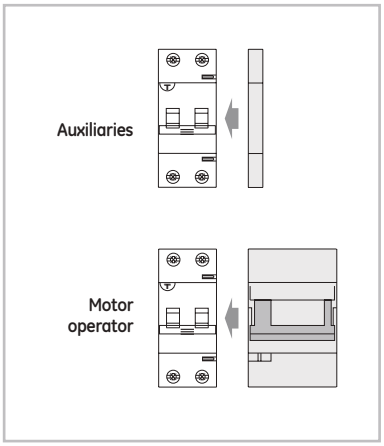
Type A

Applications

Approval / Marking

KEMA KEUR CE

Add-on devices



Auxiliary contacts pg C.4
Motor operator pg C.7
Shunt trip pg C.8
Undervoltage release pg C.8
Panel board switch pg C.8

Busbars pg E.2
More technical data pg B.18
Dimensions pg B.51

Performance

Thermal setting In	(A)	4 to 40
Residual current IΔn	(mA)	10, 30, 100, 300
Tripping characteristic		B-C
Rated voltage AC Un	(V)	230
Minimum operating voltage U_{Bmin}	(V)	117
Mechanical/electrical endurance		20000/10000
Tropicalisation acc. to EN/IEC 60068-2-28/2-30 and DIN 40046		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	Top terminal: 16-25 Bottom terminal: 25-35
Poles		1+N
Nuisance tripping resistance		250A 8/20µs; 200A 0.5µs - 100kHz
Ambient temperature	(°C)	Type AC: -5 up to 40 Type A: -25 up to 40
Weight	(g)	250

Short-circuit capacity

Acc. to EN/IEC 61009-1 and EN/IEC 60898-1

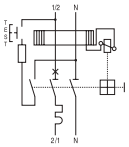
Residual making and breaking capacity	IΔm = 6000A
Short-circuit capacity	Icn = 6000A at 240V
Selectivity class	3

Acc. to EN/IEC 60947-2

Short-circuit capacity	Icu = 10000A at 240V

Series DM60 - Type AC

Characteristic B 1P+N



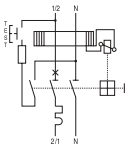
In (A)	10 mA Cat. No.	10 mA Ref. No.	30 mA Cat. No.	30 mA Ref. No.	100 mA Cat. No.	100 mA Ref. No.	300 mA Cat. No.	300 mA Ref. No.	Pack.
6	DM60B06/010	**609802**	DM60B06/030	**609807**	DM60B06/100	**609815**	DM60B06/300	**609823**	6
10	DM60B10/010	**609803**	DM60B10/030	**609808**	DM60B10/100	**609816**	DM60B10/300	**609824**	6
13	DM60B13/010	**609804**	DM60B13/030	**609809**	DM60B13/100	**609817**	DM60B13/300	**609825**	6
16	DM60B16/010	**609805**	DM60B16/030	**609810**	DM60B16/100	**609818**	DM60B16/300	**609826**	6
20	DM60B20/010	**609806**	DM60B20/030	**609811**	DM60B20/100	**609819**	DM60B20/300	**609827**	6
25	-	-	DM60B25/030	**609812**	DM60B25/100	**609820**	DM60B25/300	**609828**	6
32	-	-	DM60B32/030	**609813**	DM60B32/100	**609821**	DM60B32/300	**609829**	6
40	-	-	DM60B40/030	**609814**	DM60B40/100	**609822**	DM60B40/300	**609830**	6

Characteristic C 1P+N

In (A)	10 mA Cat. No.	10 mA Ref. No.	30 mA Cat. No.	30 mA Ref. No.	100 mA Cat. No.	100 mA Ref. No.	300 mA Cat. No.	300 mA Ref. No.	Pack.
4	DM60C04/010	**609831**	DM60C04/030	**609837**	DM60C04/100	**609846**	DM60C04/300	**609855**	6
6	DM60C06/010	**609832**	DM60C06/030	**609838**	DM60C06/100	**609847**	DM60C06/300	**609856**	6
10	DM60C10/010	**609833**	DM60C10/030	**609839**	DM60C10/100	**609848**	DM60C10/300	**609857**	6
13	DM60C13/010	**609834**	DM60C13/030	**609840**	DM60C13/100	**609849**	DM60C13/300	**609858**	6
16	DM60C16/010	**609835**	DM60C16/030	**609841**	DM60C16/100	**609850**	DM60C16/300	**609859**	6
20	DM60C20/010	**609836**	DM60C20/030	**609842**	DM60C20/100	**609851**	DM60C20/300	**609860**	6
25	-	-	DM60C25/030	**609843**	DM60C25/100	**609852**	DM60C25/300	**609861**	6
32	-	-	DM60C32/030	**609844**	DM60C32/100	**609853**	DM60C32/300	**609862**	6
40	-	-	DM60C40/030	**609845**	DM60C40/100	**609854**	DM60C40/300	**609863**	6

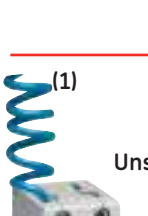
Series DM60 - Type A

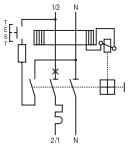
Characteristic B 1P+N



In (A)	10 mA Cat. No.	10 mA Ref. No.	30 mA Cat. No.	30 mA Ref. No.	100 mA Cat. No.	100 mA Ref. No.	300 mA Cat. No.	300 mA Ref. No.	Pack.
6	DMA60B06/010	**609740**	DMA60B06/030	**609745**	DMA60B06/100	**609753**	DMA60B06/300	**609761**	6
10	DMA60B10/010	**609741**	DMA60B10/030	**609746**	DMA60B10/100	**609754**	DMA60B10/300	**609762**	6
13	DMA60B13/010	**609742**	DMA60B13/030	**609747**	DMA60B13/100	**609755**	DMA60B13/300	**609763**	6
16	DMA60B16/010	**609743**	DMA60B16/030	**609748**	DMA60B16/100	**609756**	DMA60B16/300	**609764**	6
20	DMA60B20/010	**609744**	DMA60B20/030	**609749**	DMA60B20/100	**609757**	DMA60B20/300	**609765**	6
25	-	-	DMA60B25/030	**609750**	DMA60B25/100	**609758**	DMA60B25/300	**609766**	6
32	-	-	DMA60B32/030	**609751**	DMA60B32/100	**609759**	DMA60B32/300	**609767**	6
40	-	-	DMA60B40/030	**609752**	DMA60B40/100	**609760**	DMA60B40/300	**609768**	6

Characteristic C 1P+N



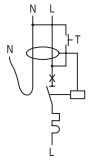


In (A)	10 mA Cat. No.	10 mA Ref. No.	30 mA Cat. No.	30 mA Ref. No.	100 mA Cat. No.	100 mA Ref. No.	300 mA Cat. No.	300 mA Ref. No.	Pack.
4	DMA60C04/010	**609769**	DMA60C04/030	**609775**	DMA60C04/100	**609784**	DMA60C04/300	**609793**	6
6	DMA60C06/010	**609770**	DMA60C06/030	**609776**	DMA60C06/100	**609785**	DMA60C06/300	**609794**	6
10	DMA60C10/010	**609771**	DMA60C10/030	**609777**	DMA60C10/100	**609786**	DMA60C10/300	**609795**	6
13	DMA60C13/010	**609772**	DMA60C13/030	**609778**	DMA60C13/100	**609787**	DMA60C13/300	**609796**	6
16	DMA60C16/010	**609773**	DMA60C16/030	**609779**	DMA60C16/100	**609788**	DMA60C16/300	**609797**	6
20	DMA60C20/010	**609774**	DMA60C20/030	**609780**	DMA60C20/100	**609789**	DMA60C20/300	**609798**	6
25	-	-	DMA60C25/030	**609781**	DMA60C25/100	**609790**	DMA60C25/300	**609799**	6
32	-	-	DMA60C32/030	**609782**	DMA60C32/100	**609791**	DMA60C32/300	**609800**	6
40	-	-	DMA60C40/030	**609783**	DMA60C40/100	**609792**	DMA60C40/300	**609801**	6

Series DMT60 - Type AC

(1)

Characteristic C Unswitched neutral 1P+N



In (A)	30 mA Cat. No.	30 mA Ref. No.	Pack.
4	DMT60C04/030	**609280**	6
6	DMT60C06/030	**609281**	6
10	DMT60C10/030	**609282**	6
13	DMT60C13/030	**609283**	6
16	DMT60C16/030	**609284**	6
20	DMT60C20/030	**609285**	6
25	DMT60C25/030	**609286**	6
32	DMT60C32/030	**609287**	6
40	DMT60C40/030	**609288**	6

(1) Please consult us for blue neutral flying lead

RCBOs - Residual Current Circuit Breakers With Overcurrent Protection

Series DM100

EN/IEC 61009-1 **10000** / **3**

Type AC

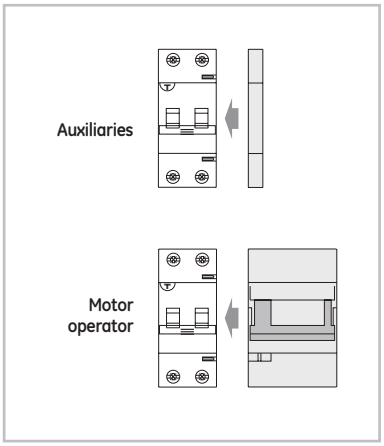
Type A

Applications

Approval / Marking

KEMA KEUR CE

Add-on devices



Auxiliary contacts pg C.4
Motor operator pg C.7
Shunt trip pg C.8
Undervoltage release pg C.8
Panel board switch pg C.8

Busbars pg E.2
More technical data pg B.18
Dimensions pg B.51

Performance

Thermal setting In	(A)	4 to 40
Residual current IΔn	(mA)	10, 30, 100, 300
Tripping characteristic		B-C
Rated voltage AC Un	(V)	230
Minimum operating voltage U_{Bmin}	(V)	117
Mechanical/electrical endurance		20000/10000
Tropicalisation acc. to EN/IEC 60068-2-28/2-30 and DIN 40046		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	Top terminal: 16-25 Bottom terminal: 25-35
Poles		1+N
Nuisance tripping resistance		250A 8/20µs; 200A 0.5µs - 100kHz
Ambient temperature	(°C)	Type AC: -5 up to 40 Type A: -25 up to 40
Weight	(g)	250

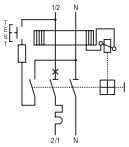
Short-circuit capacity

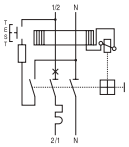
Acc. to EN/IEC 61009-1 and EN/IEC 60898-1	
Residual making and breaking capacity	IΔm = 6000A
Short-circuit capacity	Icn = 10000A at 240V
Selectivity class	3

Acc. to EN/IEC 60947-2	
Short-circuit capacity	Icu = 15000A at 240V

Series DM100 - Type AC

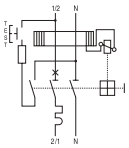
	In (A)	10 mA Cat. No.	10 mA Ref. No.	30 mA Cat. No.	30 mA Ref. No.	100 mA Cat. No.	100 mA Ref. No.	300 mA Cat. No.	300 mA Ref. No.	Pack.
Characteristic B 1P+N	6	DM100B06/010	**609926**	DM100B06/030	**609931**	DM100B06/100	**609939**	DM100B06/300	**609947**	6
	10	DM100B10/010	**609927**	DM100B10/030	**609932**	DM100B10/100	**609940**	DM100B10/300	**609948**	6
	13	DM100B13/010	**609928**	DM100B13/030	**609933**	DM100B13/100	**609941**	DM100B13/300	**609949**	6
	16	DM100B16/010	**609929**	DM100B16/030	**609934**	DM100B16/100	**609942**	DM100B16/300	**609950**	6
	20	DM100B20/010	**609930**	DM100B20/030	**609935**	DM100B20/100	**609943**	DM100B20/300	**609951**	6
	25	-	-	DM100B25/030	**609936**	DM100B25/100	**609944**	DM100B25/300	**609952**	6
	32	-	-	DM100B32/030	**609937**	DM100B32/100	**609945**	DM100B32/300	**609953**	6
	40	-	-	DM100B40/030	**609938**	DM100B40/100	**609946**	DM100B40/300	**609954**	6
Characteristic C 1P+N	4	DM100C04/010	**609955**	DM100C04/030	**609961**	DM100C04/100	**609970**	DM100C04/300	**609979**	6
	6	DM100C06/010	**609956**	DM100C06/030	**609962**	DM100C06/100	**609971**	DM100C06/300	**609980**	6
	10	DM100C10/010	**609957**	DM100C10/030	**609963**	DM100C10/100	**609972**	DM100C10/300	**609981**	6
	13	DM100C13/010	**609958**	DM100C13/030	**609964**	DM100C13/100	**609973**	DM100C13/300	**609982**	6
	16	DM100C16/010	**609959**	DM100C16/030	**609965**	DM100C16/100	**609974**	DM100C16/300	**609983**	6
	20	DM100C20/010	**609960**	DM100C20/030	**609966**	DM100C20/100	**609975**	DM100C20/300	**609984**	6
	25	-	-	DM100C25/030	**609967**	DM100C25/100	**609976**	DM100C25/300	**609985**	6
	32	-	-	DM100C32/030	**609968**	DM100C32/100	**609977**	DM100C32/300	**609986**	6
	40	-	-	DM100C40/030	**609969**	DM100C40/100	**609978**	DM100C40/300	**609987**	6

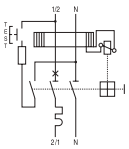




Series DM100 - Type A

	In (A)	10 mA Cat. No.	10 mA Ref. No.	30 mA Cat. No.	30 mA Ref. No.	100 mA Cat. No.	100 mA Ref. No.	300 mA Cat. No.	300 mA Ref. No.	Pack.
Characteristic B 1P+N	6	DMA100B06/010	**609864**	DMA100B06/030	**609869**	DMA100B06/100	**609877**	DMA100B06/300	**609885**	6
	10	DMA100B10/010	**609865**	DMA100B10/030	**609870**	DMA100B10/100	**609878**	DMA100B10/300	**609886**	6
	13	DMA100B13/010	**609866**	DMA100B13/030	**609871**	DMA100B13/100	**609879**	DMA100B13/300	**609887**	6
	16	DMA100B16/010	**609867**	DMA100B16/030	**609872**	DMA100B16/100	**609880**	DMA100B16/300	**609888**	6
	20	DMA100B20/010	**609868**	DMA100B20/030	**609873**	DMA100B20/100	**609881**	DMA100B20/300	**609889**	6
	25	-	-	DMA100B25/030	**609874**	DMA100B25/100	**609882**	DMA100B25/300	**609890**	6
	32	-	-	DMA100B32/030	**609875**	DMA100B32/100	**609883**	DMA100B32/300	**609891**	6
	40	-	-	DMA100B40/030	**609876**	DMA100B40/100	**609884**	DMA100B40/300	**609892**	6
Characteristic C 1P+N	4	DMA100C04/010	**609893**	DMA100C04/030	**609899**	DMA100C04/100	**609908**	DMA100C04/300	**609917**	6
	6	DMA100C06/010	**609894**	DMA100C06/030	**609900**	DMA100C06/100	**609909**	DMA100C06/300	**609918**	6
	10	DMA100C10/010	**609895**	DMA100C10/030	**609901**	DMA100C10/100	**609910**	DMA100C10/300	**609919**	6
	13	DMA100C13/010	**609896**	DMA100C13/030	**609902**	DMA100C13/100	**609911**	DMA100C13/300	**609920**	6
	16	DMA100C16/010	**609897**	DMA100C16/030	**609903**	DMA100C16/100	**609912**	DMA100C16/300	**609921**	6
	20	DMA100C20/010	**609898**	DMA100C20/030	**609904**	DMA100C20/100	**609913**	DMA100C20/300	**609922**	6
	25	-	-	DMA100C25/030	**609905**	DMA100C25/100	**609914**	DMA100C25/300	**609923**	6
	32	-	-	DMA100C32/030	**609906**	DMA100C32/100	**609915**	DMA100C32/300	**609924**	6
	40	-	-	DMA100C40/030	**609907**	DMA100C40/100	**609916**	DMA100C40/300	**609925**	6

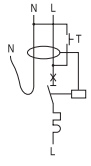




Series DMT100 - Type AC

	In (A)	30 mA Cat. No.	30 mA Ref. No.	Pack.
Characteristic C Unswitched neutral 1P+N	4	DMT100C04/030	**609289**	6
	6	DMT100C06/030	**609290**	6
	10	DMT100C10/030	**609291**	6
	13	DMT100C13/030	**609292**	6
	16	DMT100C16/030	**609293**	6
	20	DMT100C20/030	**609294**	6
	25	DMT100C25/030	**609295**	6
	32	DMT100C32/030	**609296**	6
	40	DMT100C40/030	**609297**	6

(1)



(1) Please consult us for blue neutral flying lead

Compact Electronic Residual Current Circuit Breaker

Series DMCE60, DICE60

EN/IEC 61009-1 6000 / 3

Type AC

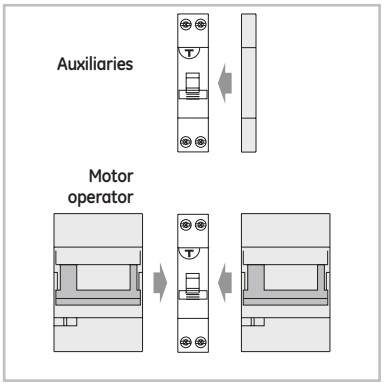
Type A

With Overcurrent Protection functionality dependent on Line Voltage

Applications

Approval / Marking

Add-on devices



(1) CA UN auxiliary contact right side mounted is interface to make compatible all extensions CA, CB, Tele L, Tele U, PSB.
(2) Tele MP can be mounded on both sides.

Auxiliary contacts ● pg C.4
Motor operator ● pg C.7
Shunt trip ● pg C.8
Undervoltage release ● pg C.8
Panel board switch ● pg C.8

Busbars ● pg E.2
More technical data ● pg B.18
Dimensions ● pg B.51

Performance

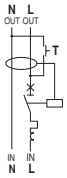
Thermal setting In		(A)	6, 10, 16, 20, 25, 32
Residual current IΔ n		(mA)	30
Tripping characteristic			B, C
Rated voltage AC Un		(V)	240
Minimum operating voltage U_{Bmin}		(V)	85
Mechanical/electrical endurance			20000/10000
Tropicalisation acc. to EN/IEC 60068-2-28/2-30			95%RH at 55°C
Terminals			
DICE (Industry)	**Top**		Phase out(1), Neutral out(1), Neutral in(2)
	Bottom		Phase in(3)
DMCE (Domestic)	**Top**		Phase out(1), Neutral out(1)
	Bottom		Phase in(1), Neutral in(1), 1P+N (1 module)(4)
Poles			
Nuisance tripping resistance			250A 8/20µs
Ambient temperature		(°C)	-5 up to 55
Weight DMCE-DICE		(g)	125-215g

Short-circuit capacity

DME60 according to EN/IEC 61009-1	
Residual making and breaking capacity	IΔm = 3000A
Short-circuit capacity	Icn = 6000A at 240V
Selectivity class	3

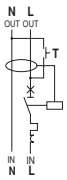
Terminal capacity:
(1) Rigid copper wires 1-25mm², flexible copper wires 1.5 - 16mm²
(2) Flying lead entering the device from top side. Cross section of 4mm² up to 25A, 6mm² up to 40A, 1200mm length.
(3) Rigid copper wires 1-35mm², Flexible copper wires 1.5 - 25mm²
(4) Unswitched neutral on the left.

Series DMCE60 - Type AC - Domestic Applications



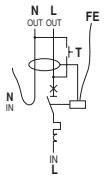
		B		C		
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
Switched neutral 1P+N	6	DMCE60B06/030	**694014**	DMCE60C06/030	**694000**	1
	10	DMCE60B10/030	**694015**	DMCE60C10/030	**694001**	1
	16	DMCE60B16/030	**694016**	DMCE60C16/030	**694002**	1
	20	DMCE60B20/030	**694017**	DMCE60C20/030	**694003**	1
	25	DMCE60B25/030	**694018**	DMCE60C25/030	**694004**	1
	32	DMCE60B32/030	**694019**	DMCE60C32/030	**694005**	1

Series DMCEA60 - Type A - Domestic Applications



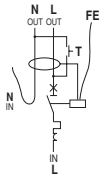
		B		C		
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
Switched neutral 1P+N	6	DMCEA60B06/030	**694021**	DMCEA60C06/030	**694007**	1
	10	DMCEA60B10/030	**694022**	DMCEA60C10/030	**694008**	1
	16	DMCEA60B16/030	**694023**	DMCEA60C16/030	**694009**	1
	20	DMCEA60B20/030	**694024**	DMCEA60C20/030	**694010**	1
	25	DMCEA60B25/030	**694025**	DMCEA60C25/030	**694011**	1
	32	DMCEA60B32/030	**694026**	DMCEA60C32/030	**694012**	1

Series DICE60 - Type AC - Industrial Applications

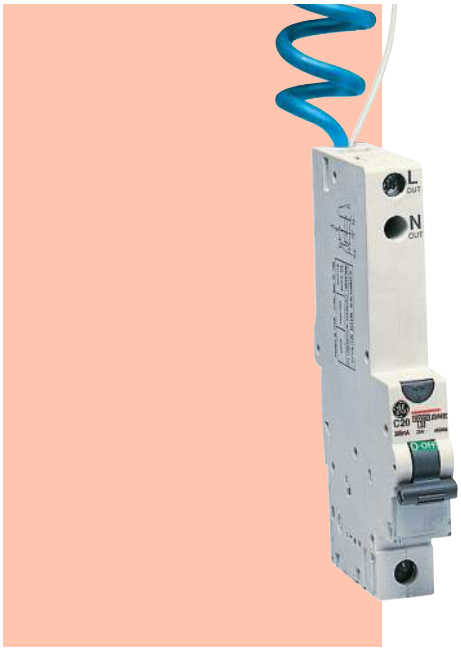


		B		C		
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
Unswitched neutral 1P+N	6	DICE60B06/030	**694042**	DICE60C06/030	**694028**	1
	10	DICE60B10/030	**694043**	DICE60C10/030	**694029**	1
	16	DICE60B16/030	**694044**	DICE60C16/030	**694030**	1
	20	DICE60B20/030	**694045**	DICE60C20/030	**694031**	1
	25	DICE60B25/030	**694046**	DICE60C25/030	**694032**	1
	32	DICE60B32/030	**694047**	DICE60C32/030	**694033**	1

Series DICEA60 - Type A - Industrial Applications



		B		C		
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
Unswitched neutral 1P+N	6	DICEA60B06/030	**694049**	DICEA60C06/030	**694035**	1
	10	DICEA60B10/030	**694050**	DICEA60C10/030	**694036**	1
	16	DICEA60B16/030	**694051**	DICEA60C16/030	**694037**	1
	20	DICEA60B20/030	**694052**	DICEA60C20/030	**694038**	1
	25	DICEA60B25/030	**694053**	DICEA60C25/030	**694039**	1
	32	DICEA60B32/030	**694054**	DICEA60C32/030	**694040**	1



eRCBOs - Residual Current Circuit Breakers with Overcurrent Protection NEUTRAL BLUE

Series DME

EN/IEC 61009-1 6000 / 3 — 10000 / 3

Type AC

Type A

Applications

For use in consumer units and distribution boards.

Marking

CE

Performance

Thermal setting In	(A)	6, 10, 16, 20, 25, 32, 40
Residual current IΔn	(mA)	10, 30, 100
Tripping characteristic		B, C, D
Rated voltage AC Un	(V)	265
Minimum operating voltage U_{Bmin}	(V)	195
Mechanical/electrical endurance		20000/10000
Tropicalisation acc. to EN/IEC 60068-2-28/2-30		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	Bottom terminal: 16-25
Poles		1+N (1 module)
Nuisance tripping resistance		250A 8/20µs
Ambient temperature	(°C)	-5 up to 55
Weight	(g)	235

The earth reference cable (FE white) ensures protection against earth leakage in case of loss of supply neutral.

Short-circuit capacity

DME60 acc. to EN/IEC 61009-1

Residual making en breaking capacity	IΔm = 6000A
Short-circuit capacity	Icn = 6000A at 240V
Selectivity class	3

DME100 acc. to EN/IEC 61009-1

Residual making en breaking capacity	IΔm = 10000A
Short-circuit capacity	Icn = 10000A at 240V
Selectivity class	3

Busbars pg E.2
More technical data pg B.18
Dimensions pg B.51

Series DME60 - Type AC - Characteristic C

				30mA		100mA		
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
Unswitched neutral 1P+N	6	-	-	DME60C06/030	605060	DME60C06/100	605067	1
	10	-	-	DME60C10/030	605061	DME60C10/100	605068	1
	16	-	-	DME60C16/030	605062	DME60C16/100	605069	1
	20	-	-	DME60C20/030	605063	DME60C20/100	605070	1
	25	-	-	DME60C25/030	605064	DME60C25/100	605071	1
	32	-	-	DME60C32/030	605065	DME60C32/100	605072	1
	40	-	-	DME60C40/030	605066	DME60C40/100	605073	1

Series DME100 - Type AC - Characteristic B

		10mA		30mA		100mA		
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
Unswitched neutral 1P+N	6	DME100B06/010	605030	DME100B06/030	605037	DME100B06/100	605260	1
	10	DME100B10/010	605031	DME100B10/030	605038	DME100B10/100	605261	1
	16	DME100B16/010	605032	DME100B16/030	605039	DME100B16/100	605262	1
	20	DME100B20/010	605033	DME100B20/030	605040	DME100B20/100	605263	1
	25	DME100B25/010	605034	DME100B25/030	605041	DME100B25/100	605264	1
	32	DME100B32/010	605035	DME100B32/030	605042	DME100B32/100	605265	1
	40	DME100B40/010	605036	DME100B40/030	605043	DME100B40/100	605266	1

Series DME100 - Type AC - Characteristic C

Unswitched neutral 1P+N	6	DME100C06/010	605044	DME100C06/030	605051	DME100C06/100	605240	1
	10	DME100C10/010	605045	DME100C10/030	605052	DME100C10/100	605241	1
	16	DME100C16/010	605046	DME100C16/030	605053	DME100C16/100	605242	1
	20	DME100C20/010	605047	DME100C20/030	605054	DME100C20/100	605243	1
	25	DME100C25/010	605048	DME100C25/030	605055	DME100C25/100	605244	1
	32	DME100C32/010	605049	DME100C32/030	605056	DME100C32/100	605245	1
	40	DME100C40/010	605050	DME100C40/030	605057	DME100C40/100	605246	1

Series DME100 - Type AC - Characteristic D

Unswitched neutral 1P+N	6	-	-	-	-	DME100D06/100	606519	1
	10	-	-	-	-	DME100D10/100	606520	1
	16	-	-	-	-	DME100D16/100	606521	1
	20	-	-	-	-	DME100D20/100	606522	1
	25	-	-	-	-	DME100D25/100	606523	1
	32	-	-	-	-	DME100D32/100	606524	1
	40	-	-	-	-	DME100D40/100	606525	1

Series DMEA100 - Type A - Characteristic B

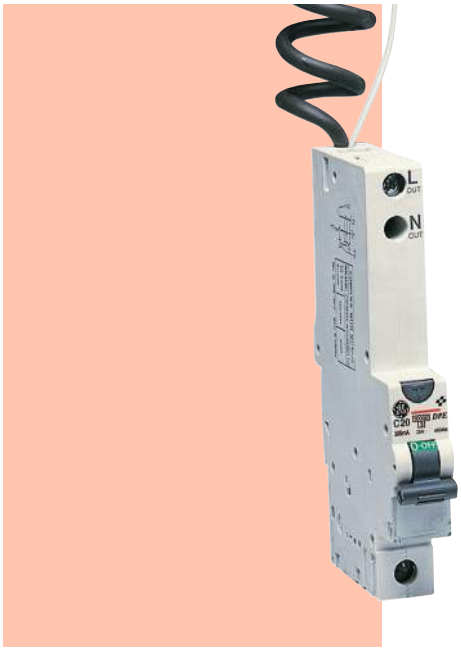
		10mA		30mA		100mA		
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
Unswitched neutral 1P+N	6	DMEA100B06/010	605150	DMEA100B06/030	605157	-	-	1
	10	DMEA100B10/010	605151	DMEA100B10/030	605158	-	-	1
	16	DMEA100B16/010	605152	DMEA100B16/030	605159	-	-	1
	20	DMEA100B20/010	605153	DMEA100B20/030	605160	-	-	1
	25	DMEA100B25/010	605154	DMEA100B25/030	605161	-	-	1
	32	DMEA100B32/010	605155	DMEA100B32/030	605162	-	-	1
	40	DMEA100B40/010	605156	DMEA100B40/030	605163	-	-	1

Series DMEA100 - Type A - Characteristic C

Unswitched neutral 1P+N	6	DMEA100C06/010	605164	DMEA100C06/030	605171	DMEA100C06/100	606526	1
	10	DMEA100C10/010	605165	DMEA100C10/030	605172	DMEA100C10/100	606527	1
	16	DMEA100C16/010	605166	DMEA100C16/030	605173	DMEA100C16/100	606528	1
	20	DMEA100C20/010	605167	DMEA100C20/030	605174	DMEA100C20/100	606529	1
	25	DMEA100C25/010	605168	DMEA100C25/030	605175	DMEA100C25/100	606530	1
	32	DMEA100C32/010	605169	DMEA100C32/030	605176	DMEA100C32/100	606531	1
	40	DMEA100C40/010	605170	DMEA100C40/030	605177	DMEA100C40/100	606532	1

Series DMEA100 - Type A - Characteristic D

Unswitched neutral 1P+N	6	DMEA100D06/010	606505	DMEA100D06/030	606512	DME100D06/100	606519	1
	10	DMEA100D10/010	606506	DMEA100D10/030	606513	DME100D10/100	606520	1
	16	DMEA100D16/010	606507	DMEA100D16/030	606514	DME100D16/100	606521	1
	20	DMEA100D20/010	606508	DMEA100D20/030	606515	DME100D20/100	606522	1
	25	DMEA100D25/010	606509	DMEA100D25/030	606516	DME100D25/100	606523	1
	32	DMEA100D32/010	606510	DMEA100D32/030	606517	DME100D32/100	606524	1
	40	DMEA100D40/010	606511	DMEA100D40/030	606518	DME100D40/100	606525	1



eRCBOs - Residual Current Circuit Breakers with Overcurrent Protection NEUTRAL BLACK

Series DMET

EN/IEC 61009-1 6000 / 3 — 10000 / 3

Type AC

Type A

Applications

For use in consumer units and distribution boards.

Marking

CE

Performance

Thermal setting In	(A)	6, 10, 16, 20, 25, 32, 40
Residual current IΔn	(mA)	10, 30, 100
Tripping characteristic		B, C, D
Rated voltage AC Un	(V)	265
Minimum operating voltage U_{Bmin}	(V)	195
Mechanical/electrical endurance		20000/10000
Tropicalisation acc. to EN/IEC 60068-2-28/2-30		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	Bottom terminal: 16-25
Poles		1+N (1 module)
Nuisance tripping resistance		250A 8/20µs
Ambient temperature	(°C)	-5 up to 55
Weight	(g)	235

The earth reference cable (FE white) ensures protection against earth leakage in case of loss of supply neutral.

Short-circuit capacity

DMET60 acc. to EN/IEC 61009-1

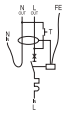
Residual making en breaking capacity	IΔm = 6000A
Short-circuit capacity	Icn = 6000A at 240V
Selectivity class	3

DMET100 acc. to EN/IEC 61009-1

Residual making en breaking capacity	IΔm = 10000A
Short-circuit capacity	Icn = 10000A at 240V
Selectivity class	3

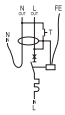
Busbars pg E.2
More technical data pg B.18
Dimensions pg B.51

Series DMET60 - Type AC - Characteristic C



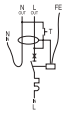
		10mA		30mA		100mA		300mA		
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
Unswitched neutral 1P+N	10	-	-	DMET60C10/030	607427	-	-	-	-	1
	16	-	-	DMET60C16/030	607428	-	-	-	-	1
	20	-	-	DMET60C20/030	607429	-	-	-	-	1
	25	-	-	DMET60C25/030	607430	-	-	-	-	1
	32	-	-	DMET60C32/030	607431	-	-	-	-	1

Series DMET60 - Type A - Characteristic C



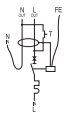
Unswitched neutral 1P+N	10	-	-	DMEAT60C10/030	608135	-	-	-	-	1
	16	-	-	DMEAT60C16/030	608136	-	-	-	-	1
	20	-	-	DMEAT60C20/030	608137	-	-	-	-	1
	25	-	-	DMEAT60C25/030	608138	-	-	-	-	1
	32	-	-	DMEAT60C32/030	608139	-	-	-	-	1

Series DMET100 - Type AC - Characteristic C

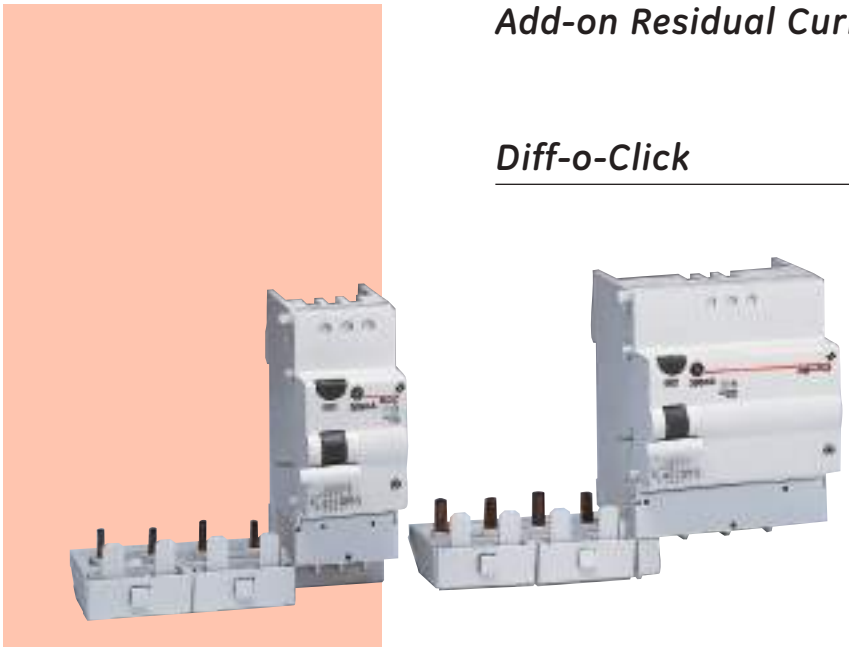


		10mA		30mA		100mA		300mA		
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
Unswitched neutral 1P+N	6	DMET100C06/010	606567	DMET100C06/030	606574	DMET100C06/100	606560	DMEA100C06/300	606588	1
	10	DMET100C10/010	606568	DMET100C10/030	606575	DMET100C10/100	606561	DMEA100C10/300	606589	1
	16	DMET100C16/010	606569	DMET100C16/030	606576	DMET100C16/100	606562	DMEA100C16/300	606590	1
	20	DMET100C20/010	606570	DMET100C20/030	606577	DMET100C20/100	606563	DMEA100C20/300	606591	1
	25	DMET100C25/010	606571	DMET100C25/030	606578	DMET100C25/100	606564	DMEA100C25/300	606592	1
	32	DMET100C32/010	606572	DMET100C32/030	606579	DMET100C32/100	606565	DMEA100C32/300	606593	1
	40	DMET100C40/010	606573	DMET100C40/030	606580	DMET100C40/100	606566	DMEA100C40/300	606581	1

Series DMET100 - Type A - Characteristic C



Unswitched neutral 1P+N	10	-	-	DMEAT100C10/030	607285	-	-	-	-	1
	16	-	-	DMEAT100C16/030	607286	-	-	-	-	1
	20	-	-	DMEAT100C20/030	607287	-	-	-	-	1
	25	-	-	DMEAT100C25/030	607288	-	-	-	-	1
	32	-	-	DMEAT100C32/030	607289	-	-	-	-	1



Add-on Residual Current Devices

Diff-o-Click

EN/IEC 61009-1

Type AC

Type A

Type S

Type Ai *on demand*

Type ASi *on demand*

Applications

Approval / Marking

KEMA KEUR CE

Add-on devices

Integrated auxiliary contact on demand.

Performance

Thermal setting In	(A)	32, 63
Residual current IΔn	(mA)	30, 100, 300, 500, 1000
Rated voltage AC Un	(V)	2P: 240/415 3P: 415 4P: 415
Minimum operating voltage U_{Bmin}	(V)	2P: 205 3P: 205 4P: 205
Mechanical/electrical endurance		20000/10000
Tropicalisation acc.to EN/IEC 60068-2/3 and DIN 40046		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	2P 32 & 63A: 25-35 3P 32 & 63A: 25-35 4P 2 mod. 32A: 16 4P 32 & 63A 4 mod.: 25-35
Poles		2, 3, 4
Nuisance tripping resistance		Type A, AC: 250A 8/20µs; 200A 0.5µs - 100kHz Type S: 3000A 8/20µs
Ambient temperature	(°C)	Type AC: -5 up to 55 Type A, S: -25 up to 55
Weight	(g)	2P: 250 3P: 320 4P: 340

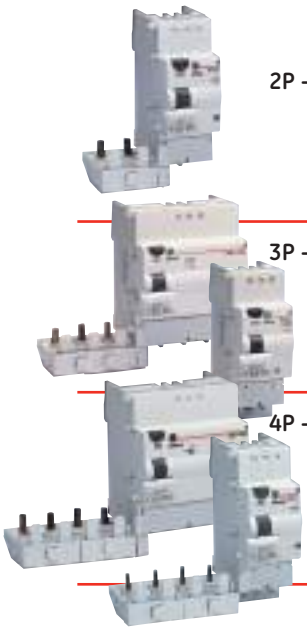
Short-circuit capacity

Depends on the associated MCB

		MCB			
		G30	G45	G60	G100
Residual making and breaking capacity	IΔm	3000	4500	6000	7500
Short-circuit capacity	Icn	3000	4500	6000	10000

More technical data ● pg B.18
Dimensions ● pg B.50

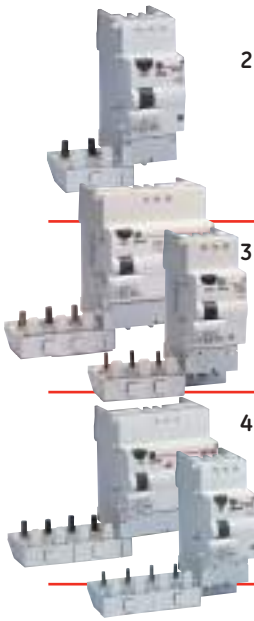
Add-on RCD - Series Diff-o-Click - Type AC



	In (A)	30 mA Cat. No.	30 mA Ref. No.	100 mA Cat. No.	100 mA Ref. No.	300 mA Cat. No.	300 mA Ref. No.	500 mA Cat. No.	500 mA Ref. No.	1000 mA Cat. No.	1000 mA Ref. No.	Pack.
2P - 2 mod.	32	DOC 232/030	**607536**	DOC 232/100	**607537**	DOC 232/300	**607538**	DOC 232/500	**607539**	DOC 232/1000	**607540**	1
	63	DOC 263/030	**607542**	DOC 263/100	**607543**	DOC 263/300	**607544**	DOC 263/500	**607545**	DOC 263/1000	**607546**	1
3P - 2 mod. 4 mod.	32	DOC 332/030	**607620**	DOC 332/100	**607621**	DOC 332/300	**607622**	DOC 332/500	**607623**	DOC 332/1000	**607624**	1
	63	DOC 363/030	**607626**	DOC 363/100	**607627**	DOC 363/300	**607628**	DOC 363/500	**607629**	DOC 363/1000	**607630**	1
4P - 2 mod. 4 mod.	32	DOC 532/030	**607722**	DOC 532/100	**607723**	DOC 532/300	**607724**	DOC 532/500	**607725**	DOC 532/1000	**607726**	1
	32	DOC 432/030	**607728**	DOC 432/100	**607729**	DOC 432/300	**607730**	DOC 432/500	**607731**	DOC 432/1000	**607732**	1
	63	DOC 463/030	**607734**	DOC 463/100	**607735**	DOC 463/300	**607736**	DOC 463/500	**607737**	DOC 463/1000	**607738**	1

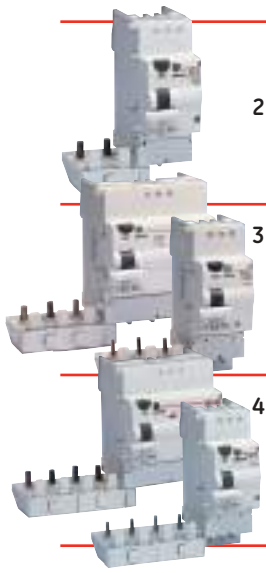
Note: 3P+N (unswitched) flying lead on request.

Add-on RCD - Series Diff-o-Click - Type A



	In (A)	30 mA Cat. No.	30 mA Ref. No.	100 mA Cat. No.	100 mA Ref. No.	300 mA Cat. No.	300 mA Ref. No.	500 mA Cat. No.	500 mA Ref. No.	1000 mA Cat. No.	1000 mA Ref. No.	Pack.
2P - 2 mod.	32	DOCA 232/030	**607500**	DOCA 232/100	**607501**	DOCA 232/300	**607502**	DOCA 232/500	**607503**	DOCA 232/1000	**607504**	1
	63	DOCA 263/030	**607506**	DOCA 263/100	**607507**	DOCA 263/300	**607508**	DOCA 263/500	**607509**	DOCA 263/1000	**607510**	1
3P - 2 mod. 4 mod.	32	DOCA 332/030	**607584**	DOCA 332/100	**607585**	DOCA 332/300	**607586**	DOCA 332/500	**607587**	DOCA 332/1000	**607588**	1
	63	DOCA 363/030	**607590**	DOCA 363/100	**607591**	DOCA 363/300	**607592**	DOCA 363/500	**607593**	DOCA 363/1000	**607594**	1
4P - 2 mod. 4 mod.	32	DOCA 532/030	**607668**	DOCA 532/100	**607670**	DOCA 532/300	**607669**	DOCA 532/500	**607671**	DOCA 532/1000	**607672**	1
	32	DOCA 432/030	**607674**	DOCA 432/100	**607675**	DOCA 432/300	**607676**	DOCA 432/500	**607677**	DOCA 432/1000	**607678**	1
	63	DOCA 463/030	**607680**	DOCA 463/100	**607681**	DOCA 463/300	**607682**	DOCA 463/500	**607683**	DOCA 463/1000	**607684**	1

Add-on RCD - Series Diff-o-Click - Type S



	In (A)	100 mA Cat. No.	100 mA Ref. No.	300 mA Cat. No.	300 mA Ref. No.	500 mA Cat. No.	500 mA Ref. No.	1000 mA Cat. No.	1000 mA Ref. No.	Pack.
2P - 2 mod.	32	DOCS 232/100	**607513**	DOCS 232/300	**607514**	DOCS 232/500	**607515**	DOCS 232/1000	**607516**	1
	63	DOCS 263/100	**607519**	DOCS 263/300	**607520**	DOCS 263/500	**607521**	DOCS 263/1000	**607522**	1
3P - 2 mod. 4 mod.	32	DOCS 332/100	**607597**	DOCS 332/300	**607598**	DOCS 332/500	**607599**	DOCS 332/1000	**607600**	1
	63	DOCS 363/100	**607603**	DOCS 363/300	**607604**	DOCS 363/500	**607605**	DOCS 363/1000	**607606**	1
4P - 2 mod. 4 mod.	32	DOCS 532/100	**607687**	DOCS 532/300	**607688**	DOCS 532/500	**607689**	DOCS 532/1000	**607690**	1
	32	DOCS 432/100	**607693**	DOCS 432/300	**607694**	DOCS 432/500	**607695**	DOCS 432/1000	**607696**	1
	63	DOCS 463/100	**607699**	DOCS 463/300	**607700**	DOCS 463/500	**607701**	DOCS 463/1000	**607702**	1

Residual Current Circuit Breakers

Series FPAUL — Recognized UL1053

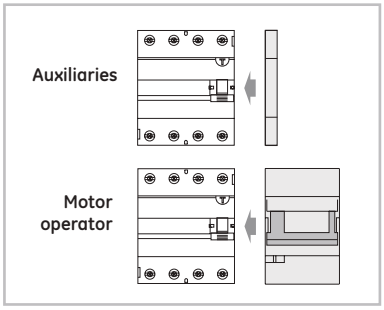
EN/IEC 61008-1
Type A

Applications

Approval

with UL approval

Add-on devices



Dimensions ● pg B.49

Performances UL

Maximum voltage AC	(V)	240
Fault current withstand	(kA)	10
UL file		E248309

Performances EN/IEC

Thermal setting In	(A)	16, 25, 40, 63
Residual current IΔn	(mA)	10, 30, 100, 300, 500
Rated maximum voltage AC Un	(V)	2P: 240 4P: 240/415
Minimum operating voltage U_{Bmin}	(V)	2P: 117 4P: 205
Mechanical/electrical endurance		20000/10000
Tropicalisation acc.to EN/IEC 60068-2-28/2-30 and DIN 40046		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	35-50
Poles		2, 4
Nuisance tripping resistance	Type A:	250A 8/20µs; 3000A 8/20µs
Ambient temperature	(°C)	-25 up to 40
Weight	(g)	2P: 220 4P: 385

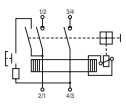
Short-circuit capacity

Acc. to EN/IEC 61008-1

Making and breaking capacity	Im = 500A
Residual making and breaking capacity	IΔ m ≥ 500A from 16 up to 40A IΔ m = 10In from 63 up to 100A
Short-circuit capacity	Inc = 10000A at 230/400V fuse 80A gG

Series FPAUL - Type A

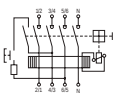
2P



In (A)	10*/30mA Cat. No.	10*/30mA Ref. No.	100mA Cat. No.	100mA Ref. No.	300mA Cat. No.	300mA Ref. No.	500mA Cat. No.	500mA Ref. No.	Pack.
16	FPAUL 216/010*	**608377**	-	-	-	-	-	-	
25	FPAUL 225/030	**608378**	FPAUL 225/100	**608379**	FPAUL 225/300	**608380**	FPAUL 225/500	**608381**	6
40	FPAUL 240/030	**608382**	FPAUL 240/100	**608383**	FPAUL 240/300	**608384**	FPAUL 240/500	**608385**	6
63	FPAUL 263/030	**608386**	FPAUL 263/100	**608387**	FPAUL 263/300	**608388**	FPAUL 263/500	**608401**	6

Series FPAUL - Type A

4P



In (A)	30mA Cat. No.	30mA Ref. No.	100mA Cat. No.	100mA Ref. No.	300mA Cat. No.	300mA Ref. No.	500mA Cat. No.	500mA Ref. No.	Pack.
25	FPAUL 425/030	**608389**	FPAUL 425/100	**608390**	FPAUL 425/300	**608391**	FPAUL 425/500	**608392**	3
40	FPAUL 440/030	**608393**	FPAUL 440/100	**608394**	FPAUL 440/300	**608395**	FPAUL 440/500	**608396**	3
63	FPAUL 463/030	**608397**	FPAUL 463/100	**608398**	FPAUL 463/300	**608399**	FPAUL 463/500	**608400**	3

Residual Current Circuit Breakers with Overcurrent Protection

Series DPA100 — Recognized UL1053

EN 61009-1 — 10000 / 3

Type A

Performances UL

Rated/Maximum voltage AC	(V)	240 or 277
Fault current withstand		5kA (277V), 10kA (240V)
UL file		E248309

Performances EN/IEC

Thermal setting In	(A)	10 to 32
Residual current IΔn	(mA)	10, 30, 100, 300
Tripping characteristic		B-C
Rated voltage AC Un	(V)	240
Minimum operating voltage U_{Bmin}	(V)	195
Mechanical/electrical endurance		20000/10000
Tropicalisation acc. to EN/IEC 60068-2-28/2-30 and DIN 40046		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	Top terminal: 16-25 Bottom terminal: 25-35
Poles		1+N
Nuisance tripping resistance		250A 8/20μs; 200A 0.5μs - 100kHz
Ambient temperature	(°C)	-25 up to 40
Weight	(g)	250

Short-circuit capacity

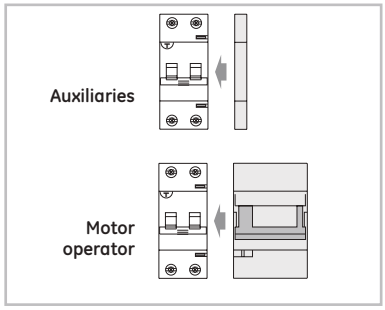
Acc. to EN/IEC 61009-1	
Residual making and breaking capacity	I Δ m = 6000A
Short-circuit capacity	Icn = 5000/10000A at 230V
Selectivity class	3
Acc. to EN/IEC 60947-2	
Short-circuit capacity	Icu = 15000A at 230V

Applications

Approvals

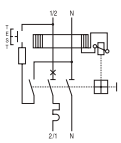
CEBEC — c UL us — with UL approval

Add-on devices



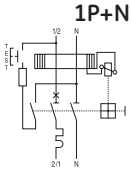
Dimensions ● pg B.50

Series DPA100 - 10000/3 Type A - characteristic B



In (A)	10 mA Cat. No.	10 mA Ref. No.	30 mA Cat. No.	30 mA Ref. No.	Pack.
10	DPA100B10/010	**608706**	DPA100B10/030	**608712**	6
13	DPA100B13/010	**608707**	DPA100B13/030	**608713**	6
16	DPA100B16/010	**608708**	DPA100B16/030	**608714**	6
20	DPA100B20/010	**608709**	DPA100B20/030	**608715**	6
25	-	-	DPA100B25/030	**608716**	6
32	-	-	DPA100B32/030	**608717**	

Series DPA100 - 10000/3 Type A - characteristic C



In (A)	10 mA Cat. No.	10 mA Ref. No.	30 mA Cat. No.	30 mA Ref. No.	Pack.
10	DPA100C10/010	**608757**	DPA100C10/030	**608763**	6
13	DPA100C13/010	**608758**	DPA100C13/030	**608764**	6
16	DPA100C16/010	**608759**	DPA100C16/030	**608765**	6
20	DPA100C20/010	**608760**	DPA100C20/030	**608766**	6
25	-	-	DPA100C25/030	**608767**	6
32	-	-	DPA100C32/030	**608768**	6

Residual Current Circuit Breakers

Series FPP

Screwless connection

EN/IEC 61008-1

Type A

Type S S

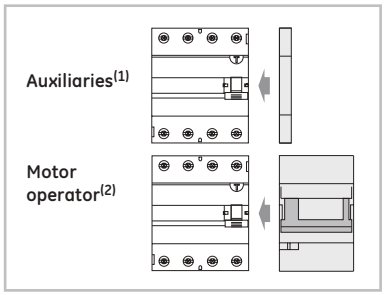
Performances

Thermal setting In	(A)	25, 40, 63
Residual current IΔn	(mA)	30, 100, 300
Rated voltage AC Un	(V)	2P: 240 4P: 415
Minimum operating voltage U_{Bmin}	(V)	2P: 117 4P: 205
Mechanical/electrical endurance		20000/10000
Tropicalisation acc.to EN/IEC 60068-2-28/2-30 and DIN 40046		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	35-50
Poles		2, 4
Nuisance tripping resistance		Type A: 250A 8/20μs Type S: 3000A 8/20us
Ambient temperature	(°C)	-25 ... +50
Weight	(g)	2P: 248 4P: 364

Applications

Approvals / Marking

Add-on devices



Short-circuit capacity

Acc. EN/IEC 61008-1	
Making and breaking capacity	Im = 500A
Residual making and breaking capacity	IΔm ≥ 500A from 16 up to 40A IΔm = 10In from 63 up to 100A
Short-circuit capacity	Inc = 10000A at 240/415V fuse 80A gG

(1) Series CA - Tele L - Tele U - PBS
(2) Only at right side end of the extreme pin busbar

Series FPP - Type A

Plug-in

	In (A)	30 mA Cat. No.	30 mA Ref. No.	100 mA Cat. No.	100 mA Ref. No.	300 mA Cat. No.	300 mA Ref. No.	Pack.
2P	25	FPPA225/030	**678359**	FPPA225/100	**678365**	FPPA225/300	**678371**	6
	40	FPPA240/030	**678360**	FPPA240/100	**678366**	FPPA240/300	**678372**	6
	63	FPPA263/030	**678361**	FPPA263/100	**678367**	FPPA263/300	**678373**	6
4P	25	FPPA425/030	**678362**	FPPA425/100	**678368**	FPPA425/300	**678374**	3
	40	FPPA440/030	**678363**	FPPA440/100	**678369**	FPPA440/300	**678375**	3
	63	FPPA463/030	**678364**	FPPA463/100	**678370**	FPPA463/300	**678376**	3

Series FPP - Type S

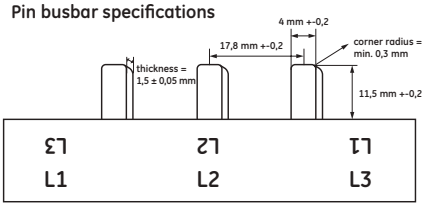
	In (A)	300 mA Cat. No.	300 mA Ref. No.	Pack.
2P	40	FPPS240/300	**678377**	6
	63	FPPS263/300	**678378**	6
4P	40	FPPS440/300	**678379**	3
	63	FPPS463/300	**678380**	3

Terminal capacity

Top terminals		Ratings 25A, 40A and 63A: Cage terminals
Rigid cable (min/max)	mm²	1.5/50
Flexible cable (min/max)	mm²	1.5/35
Recommended torque	Nm	2.5
Maximum torque	Nm	5

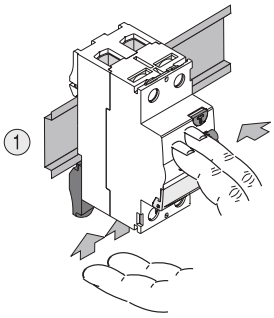
Bottom terminals		Ratings 25A, 40A and 63A: Cage terminals (1)	Ratings 25A, 40A and 63A: Flat plug-in terminals (2)
Rigid cable (min/max)	mm²	1/25	To insert GE pin busbars. or other brands under following dimensions: Lenght = 11.5 ± 0.2mm Width= 4 ± 0.2 mm Thickness = 1.5 ± 0.05 mm Corners min. radius = 0.3 mm
Flexible cable (min/max)	mm²	0.75/16	
Recommended torque	Nm	2.5	
Maximum torque	Nm	4.5	

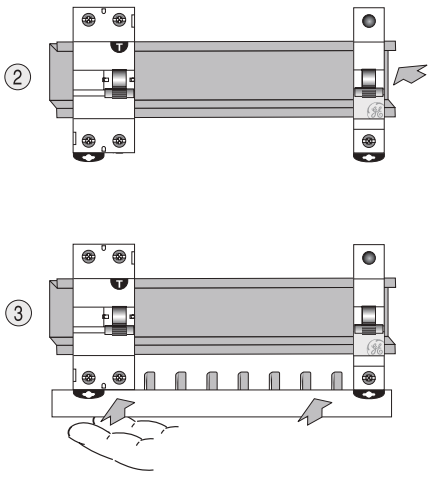
Pin busbar specifications

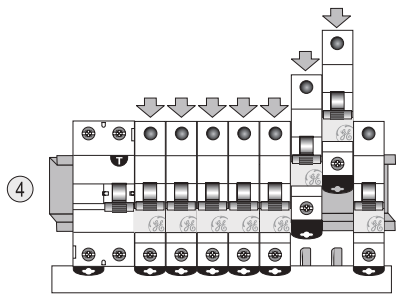


(1) Bottom terminals provide a cage terminal to connect also cables to feed other rows /devices limited to rated current of the device.
(2) Plug-in window terminals are only foreseen for pin busbars providing the incoming to several devices from the bottom side.
Not intended for any other conductor with or without cable lugs or cable connectors.

How to mount the busbar into devices

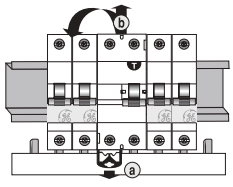






1. Mount first 2, 3 or 4 poles devices on the DIN-rail at the extreme left side of the row.
2. Mount one device at the extreme right side on the DIN-rail.
3. Fit the pin busbar on both devices.
4. Then, mount one by one the rest of poles pulling down the grey clip previously, inserting the pin bars inside the devices and then closing the clip of every device.

Easy to dismount from DIN rail



Function

Detect earth leakage current through external toroid and open the line protecting people.

Marking

CE

Residential earth leakage relay

Series GRDT+TOP / TOR

Applications

Features

This residential residual current device in only 2 modules works at Idn=30mA instantaneous.
Till 19 ranges selectable set point 30mA...30A sensibility with 7 selectable intervetion time being the residual tripping characteristic A type It's available with alarm (1 relay output) and local and remote test button.
GRDT+ TOP works in connection with TOR series which allow to detect earth leakage currents towards ground caused by insulation faults on machines or plants.

Standards

EN 60947-2

Performance GRDT+TOP

	GRDT+TOP	TOR
Input		
Connection	Low voltage lines, with TOR toroids	-
Waveform earth leakage current	A type	-
Rated frequency	50Hz	-
Working frequency	47..63Hz	-
Setup		
Sensibility set point	Selectable by 7-position potentiometer, 3 ranges x1, x10, x100	-
Non-operating residual current	0.5 I delta n	-
Intervention time	Selectable by 7-position potentiometer	-
Adjudstable range t:	0;0.15;0.25;0.5;1;2.5;5 seconds	-
Signaling		
Power On	Green LED ON	-
Alarm intervention	Red LED "TRIP" + relay switching	-
Ring toroid-realy connection failure	Red LED "TRIP" blinking + relay switching	-
Control		
Manual test	It verifies the residual current relay perfect working	-
Local	Front key	-
Remote	By external contact closing	-
Automatic continuous test	It verifies the integrity of the connection between realy and ring core	-
Terminal capacity		
TRIP state memorisation	Red LED "TRIP" + relay self-retaining	-
Reset	Manual or automatic, selectable by DIP switch	-
Local manual	Front key	-
Remote manual	External contact closing	-
Automatic	3 restart attempts (1 each 60 seconds)	-
Inhibit reset with persistent residual current	>50% I delta n	-
Output		
Relay	1 SPDT relay	-
Contact range	5A 250V AC	-
Auxiliary supply		
Rated value Uaux:	230V AC	-
Rated frequency:	50 Hz	-
Tolerance	47-63Hz	-
Rated burden	<2.5W	-
Environmental conditions		
Operating temperature	-5...50°C	-
Number of modules	2	-

* For complete technical performances, please ask for technical datasheet of each device

New

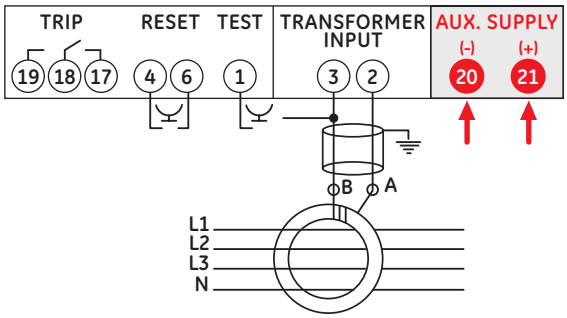
Series GRDT+TOP

Idelta n	Intervention time	Modules	Cat. No.	Ref. No.	Pack
30mA..30A	0-5 seconds	2	GRDT+TOP	**665394**	1

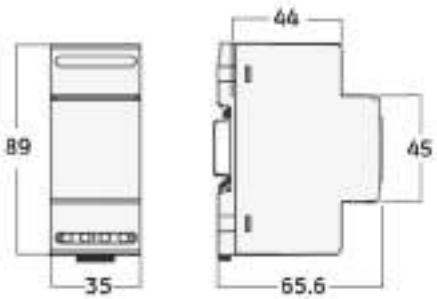
Series TOR

	Diameter	Cat. No.	Ref. No.	Pack
Toroids	28 mm	TOR+28	**665297**	1
	35 mm	TOR+35	**665298**	1
	60 mm	TOR+60	**665299**	1
	110 mm	TOR+110	**665917**	1

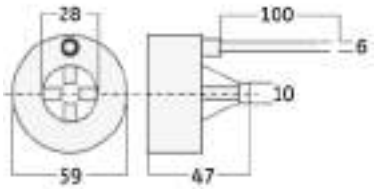
Electric diagram



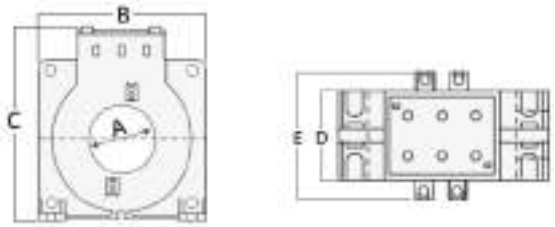
Dimensions



TOR+28



TOR+35, TOR+60, TOR+110



A	B	C	D	E
35	92	113	36	56
60	105	138	36	56
110	165	198	36	56

New

TeleREC 2

User friendly

Double clips to the DIN-rail

Strong fixation to the DIN-rail throughout
Two clips for 2P and 4P version.

Interlock

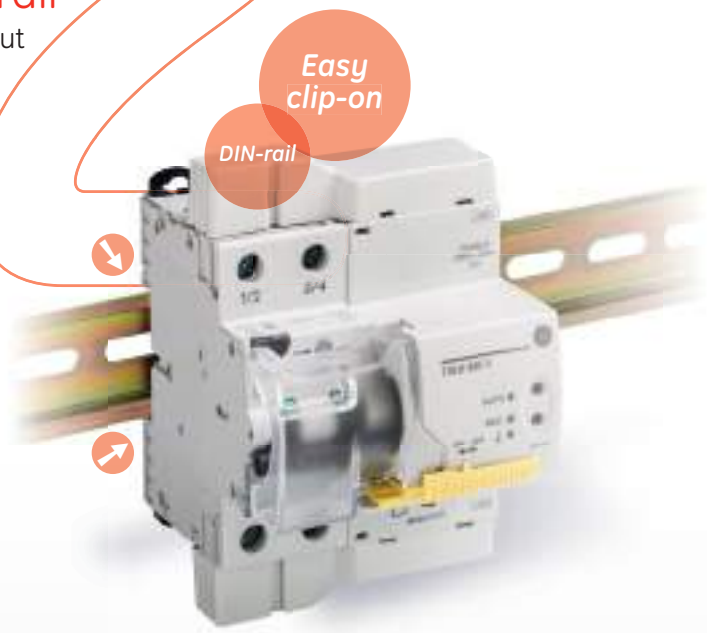
M2 hole to attach a seal or packlock to block access to the RCCB or RCBO in case of works downstream.

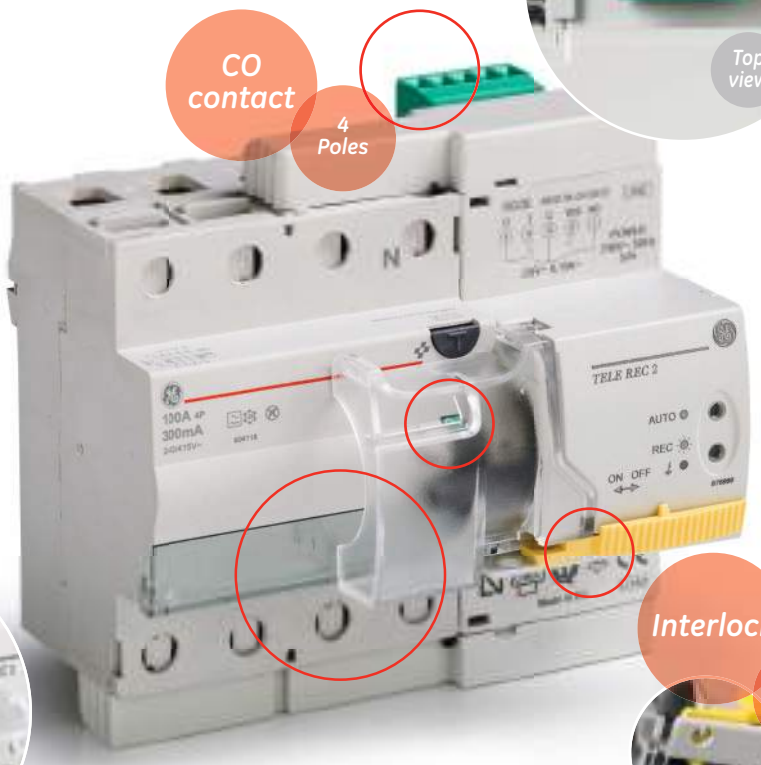
4 Poles version

Changeover contact in 4P RCCB version to indicate the TeleREC 2 status remotely.

Transparent windows

Transparent windows covering the RCCB following EN 50557 and with a visor to identify the RCCB or RCBO properly.





New

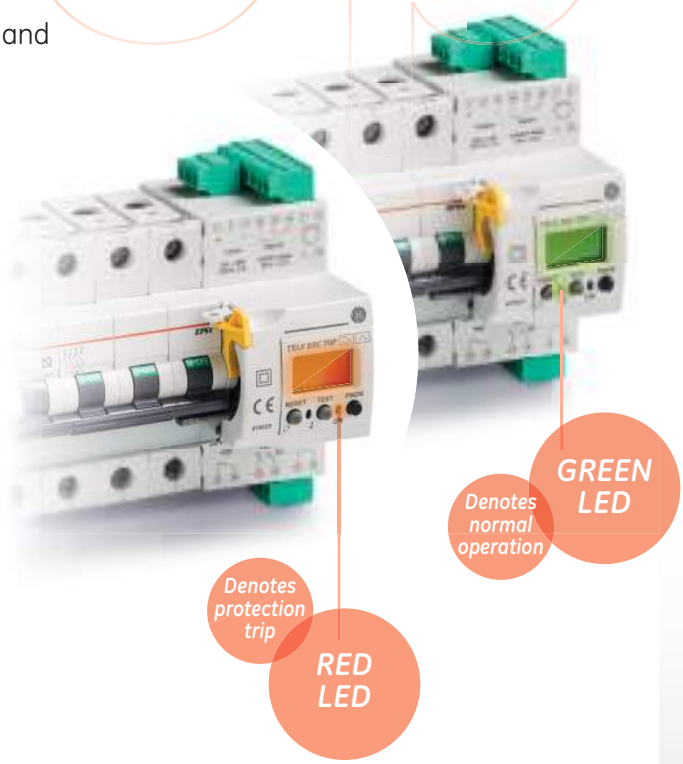
TeleREC Top

Monitorised control

Complete screen, buttons and LEDs to program and visualize the state of the reclosing system.

Remote indicators

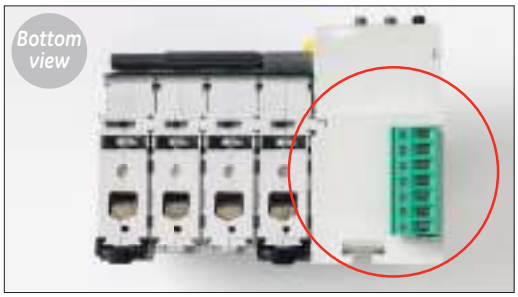
AUX and TRIP status outputs (voltage-free contacts).
The AUX output is a NO contact, which closes when the auxiliary power supply is connected.
The TRIP output is an alarm output.
The EXT input (not insulated) enables the switch to be controlled remotely.

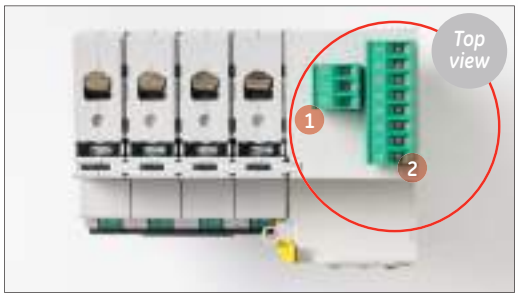


Remote indicators

1
Status outputs for the main switch.
When the switch is closed, contact 16-17 is closed.
When switch is open, contact 16-18 is closed.

2
The auxiliary power supply is connected between terminals 1-3.
The earth leakage transformer is connected between terminals 7-8.





The TeleREC Top is used to protect single and three-phase electrical installations (up to 63A), in which a high level of continuity in the electrical service must be guaranteed. The unit has an automatic rearming system which is activated following a trip, so that it reconnects itself after a certain amount of time, restoring the installations powersupply without the need for any human intervention.

In short, the protection functions performed by the TeleREC Top are:
- Earth leakage protection (protects people against electric shock).
- Protection against overloads and short-circuits via a circuit breaker switch.

New

Reclosing system for Residual Current Circuit Breakers

Series TeleREC 2

EN 50557:2012

Applications

Approvals / Marking

Performance

Thermal setting In	(A)	25-100
Residual current	(mA)	30, 300
Rated voltage AC Un	(V)	2P: 230 4P: 230/400
Minimum operating voltage Ub min	(V)	2P: 127 4P: 190
Mechanical/electrical endurance		20000/10000
Tropicalisation acc. to EN/IEC 60068-2		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm²)	25/35
Poles		2, 4
Nuisance tripping resistance	(A)	Type A: 250 Type Ai, S: 3000
Ambient temperature	(°C)	-25 up to +55
Weight	(g)	2P: 416 4P: 598

Short-circuit capacity

Acc. to EN/IEC 61008-1	
Making and breaking capacity	Im = 500A
Residual making and breaking capacity	IΔm ≥500A from 16 up to 40A IΔm = 630A for 63A IΔm = 800A from 80A to 100A
Short-circuit capacity	Inc = 10000A at 230/400V fuse 80A gG

Reclosing system by insulation, M mode

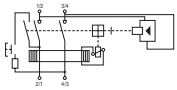
RECLOSURES					
1		2		3	
Delay	**Restart**	**Delay**	**Restart**	**Delay**	**Restart**
< 3 sec.	10 sec.	30 sec.	30 sec.	120 sec.	60 sec.

The leakage current will be supervised by measuring the resistance downstream of the tripped RCCB.

Dimensions ● pg B.49

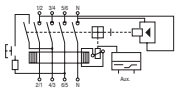
New

Series TeleREC 2 - RCCBs - Type A



2P
4.5M

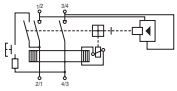
In (A)	30 mA Cat. no.	30 mA Ref. no.	300 mA Cat. no.	300 mA Ref. no.	Pack
25	REC2 A 225/30	**676986**	REC2 A 225/300	**676994**	1
40	REC2 A 240/30	**676987**	REC2 A 240/300	**676995**	1
63	REC2 A 263/30	**676988**	REC2 A 263/300	**676996**	1
80	REC2 A 280/30	**676989**	REC2 A 280/300	**676997**	1
100	REC2 A 2100/30	**676990**	REC2 A 2100/300	**676998**	1



4P
6.5M

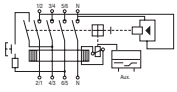
25	REC2 A 425/30	**677042**	REC2 A 425/300	**677050**	1
40	REC2 A 440/30	**677043**	REC2 A 440/300	**677071**	1
63	REC2 A 463/30	**677044**	REC2 A 463/300	**677072**	1
80	REC2 A 480/30	**677045**	REC2 A 480/300	**677073**	1
100	REC2 A 4100/30	**677046**	REC2 A 4100/300	**677074**	1

Series TeleREC 2 - RCCBs - Type Ai



2P
4.5M

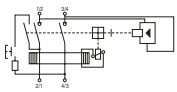
In (A)	30 mA Cat. no.	30 mA Ref. no.	300 mA Cat. no.	300 mA Ref. no.	Pack
25	REC2 Ai 225/30	**676991**	-	-	1
40	REC2 Ai 240/30	**676992**	-	-	1
63	REC2 Ai 263/30	**676993**	-	-	1
80	-	-	-	-	-
100	-	-	-	-	-



4P
6.5M

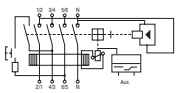
25	REC2 Ai 425/30	**677047**	-	-	1
40	REC2 Ai 440/30	**677048**	-	-	1
63	REC2 Ai 463/30	**677049**	-	-	1
80	-	-	-	-	-
100	-	-	-	-	-

Series TeleREC 2 - RCCBs - Type S



2P
4.5M

In (A)	30 mA Cat. no.	30 mA Ref. no.	300 mA Cat. no.	300 mA Ref. no.	Pack
25	-	-	-	-	-
40	-	-	REC2 S 240/300	**676999**	1
63	-	-	REC2 S 263/300	**677039**	1
80	-	-	REC2 S 280/300	**677040**	1
100	-	-	REC2 S 2100/300	**677041**	1



4P
6.5M

25	-	-	-	-	-
40	-	-	REC2 S 440/300	**677075**	1
63	-	-	REC2 S 463/300	**677076**	1
80	-	-	REC2 S 480/300	**677077**	1
100	-	-	REC2 S 4100/300	**677098**	1

New

Reclosing system for 2P RCBOs - Residual Current Circuit Breakers with Overcurrent Protection

Series TeleREC 2

EN 50557:2012

Applications

Marking

CE

Performance

Thermal setting In	(A)	10-40
Residual current	(mA)	30, 300
Tripping characteristics		B-C
Rated voltage AC Un	(V)	230
Minimum operating voltage Ub min	(V)	150
Mechanical/electrical endurance		20000/10000
Tropicalisation acc. to EN/IEC 60068-2		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm²)	25/35
Poles		2
Nuisance tripping resistance	(A)	Type A: 250
		Type Ai: 3000
Ambient temperature	(°C)	-25 up to +55
Weight	(g)	346

Short-circuit capacity

Acc. to EN 61009-1	
Residual Making and Breaking capacity	IΔm=6000A
Energy limiting class	3
Short-circuit capacity	Icn=10000A at 230V

Reclosing system by insulation, M mode

RECLOSURES					
1		2		3	
Rec time	**Restart**	**Rec time**	**Restart**	**Rec time**	**Restart**
3	60	240	240	960	960

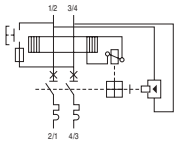
The leakage current will be supervised by measuring the resistance downstream of the tripped RCBO.
The ShortCircuit current will be supervised by measuring the resistance downstream of the tripped RCBO.

Dimensions ● pg B.49

New

Series TeleREC 2 - RCBOs - Type A - Characteristic C

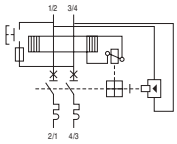
2P
4.5M



	30 mA		300 mA		
In (A)	Cat. no.	Ref. no.	Cat. no.	Ref. no.	Pack
10	REC2 DPCA100C10/030	**677150**	REC2 DPCA100C10/300	**677156**	1
16	REC2 DPCA100C16/030	**677151**	REC2 DPCA100C16/300	**677157**	1
20	REC2 DPCA100C20/030	**677152**	REC2 DPCA100C20/300	**677158**	1
25	REC2 DPCA100C25/030	**677153**	REC2 DPCA100C25/300	**677159**	1
32	REC2 DPCA100C32/030	**677154**	REC2 DPCA100C32/300	**677160**	1
40	REC2 DPCA100C40/030	**677155**	REC2 DPCA100C40/300	**677161**	1

Series TeleREC 2 - RCBOs - Type A - Characteristic B

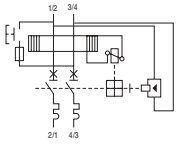
2P
4.5M



	30 mA		300 mA		
In (A)	Cat. no.	Ref. no.	Cat. no.	Ref. no.	Pack
10	REC2 DPCA100B10/030	**677174**	REC2 DPCA100B10/300	**677180**	1
16	REC2 DPCA100B16/030	**677175**	REC2 DPCA100B16/300	**677181**	1
20	REC2 DPCA100B20/030	**677176**	REC2 DPCA100B20/300	**677182**	1
25	REC2 DPCA100B25/030	**677177**	REC2 DPCA100B25/300	**677183**	1
32	REC2 DPCA100B32/030	**677178**	REC2 DPCA100B32/300	**677184**	1
40	REC2 DPCA100B40/030	**677179**	REC2 DPCA100B40/300	**677185**	1

Series TeleREC 2 - RCBOs - Type Ai - Characteristic C

2P
4.5M



	30 mA		300 mA		
In (A)	Cat. no.	Ref. no.	Cat. no.	Ref. no.	Pack
10	REC2 DPCAi100C10/030	**677162**	REC2 DPCAi100C10/300	**677168**	1
16	REC2 DPCAi100C16/030	**677163**	REC2 DPCAi100C16/300	**677169**	1
20	REC2 DPCAi100C20/030	**677164**	REC2 DPCAi100C20/300	**677170**	1
25	REC2 DPCAi100C25/030	**677165**	REC2 DPCAi100C25/300	**677171**	1
32	REC2 DPCAi100C32/030	**677166**	REC2 DPCAi100C32/300	**677172**	1
40	REC2 DPCAi100C40/030	**677167**	REC2 DPCAi100C40/300	**677173**	1

Available second half of 2014.

New

Reclosing system with earth leakage protection for Miniature Circuit Breakers

Series TeleREC Top - MCBs

Applications

Marking

CE

Performance

Thermal setting In	(A)	6-63
Residual current		adjustable 30mA ... 1A
Tripping characteristics		B-C
Rated voltage AC Un	(V)	230/400
Minimum operating voltage Ub min	(V)	12
Selectivity class		3
Mechanical/electrical endurance		20000/10000
Tropicalisation acc. to EN/IEC 60068-2		95%RH at 55°C
Terminal capacity flexible/rigid cable	(mm^2)	25/35
Poles		2, 4
Nuisance tripping resistance	(A)	Type A: 378
Ambient temperature	(°C)	-10 up to +50
Weight	(g)	2P: 516
		4P: 769

Short-circuit capacity

AC acc. to EN/IEC 60898-1

Poles	***V***	***Icn/Ics (kA)***
2-4	230/400	10

AC acc. to EN/IEC 60947-2

Poles	***V***	***Icu (kA)(1)***
2	127	40
	230	30
2	415	15
4	240	30
	415	15

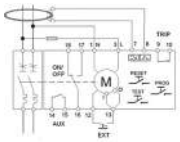
Reclosing system

Configuration of the reclosing system after a trip caused by overcurrent or short-circuit fault: maximum number of reclose attempts (NR), the timer (ST) and the resetting time of the partial meter (TR) can be configured. See manual configuration of the reclosing system following a trip caused by an earth leakage: maximum number of reclose attempts (NR), the timer (ST) and the resetting time of the partial meter (TR) can be configured. See manual.

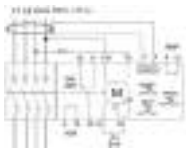
Dimensions ● pg B.49

New

Series TeleREC Top - MCBs - Characteristic C

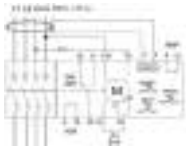


	In (A)	Cat. no.	Ref. no.	Pack
2P 4.5M	6	-	-	-
	10	REC TOP EP102 C10	**677186**	1
	16	REC TOP EP102 C16	**677187**	1
	20	REC TOP EP102 C20	**677188**	1
	25	REC TOP EP102 C25	**677189**	1
	32	REC TOP EP102 C32	**677190**	1
	40	REC TOP EP102 C40	**677191**	1
	50	REC TOP EP102 C50	**677192**	1
	63	REC TOP EP102 C63	**677193**	1



4P 6.5M	6	-	-	-
	10	REC TOP EP104 C10	**678028**	1
	16	REC TOP EP104 C16	**678029**	1
	20	REC TOP EP104 C20	**678030**	1
	25	REC TOP EP104 C25	**678031**	1
	32	REC TOP EP104 C32	**678032**	1
	40	REC TOP EP104 C40	**678033**	1
	50	REC TOP EP104 C50	**678034**	1
	63	REC TOP EP104 C63	**678035**	1

Series TeleREC Top - MCBs - Characteristic B



	In (A)	Cat. no.	Ref. no.	Pack
4P 6.5M	6	-	-	-
	10	REC TOP EP104 B10	**677194**	1
	16	REC TOP EP104 B16	**677195**	1
	20	REC TOP EP104 B20	**677196**	1
	25	REC TOP EP104 B25	**677197**	1
	32	REC TOP EP104 B32	**677198**	1
	40	REC TOP EP104 B40	**677199**	1
	50	REC TOP EP104 B50	**678026**	1
	63	REC TOP EP104 B63	**678027**	1

Accessories

Ø	Cat. no.	Ref. no.	Pack
Toroidal transformer for earth leakage detection			
25mm^2	REC TOP TT 25	**678036**	1
35mm^2	REC TOP TT 35	**678037**	1

New

Reclosing system for Residual Current Circuit Breakers

***Series TeleREC Plus** - For industrial applications*

Applications

Marking

CE

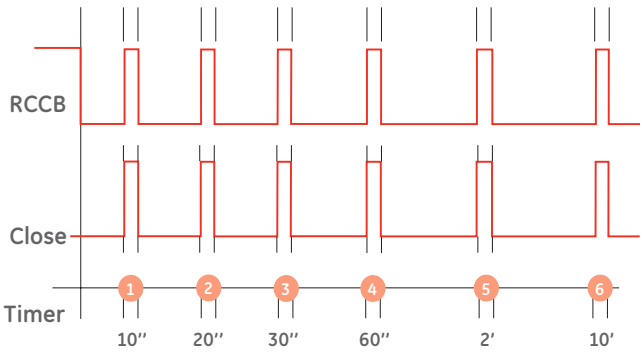
Performance

Rated voltage AC Un	(V)	220/400
Frequency	(Hz)	50/60
Reclosing numbers		6
Reclosing cycles	(sec)	10, 20, 30, 60, 120, 600
Auxiliary contact	Imax	2A (250V AC or 24V DC)
Imin (auxiliary contact)	(mA)	20
Remote control		Manual reclosing with push-button
Weight	(g)	358

Series TeleREC Plus

	Cat. no.	Ref. no.	Pack
3 mod.	Tele REC PLUS Motor	677132	1

Reclosing cycles



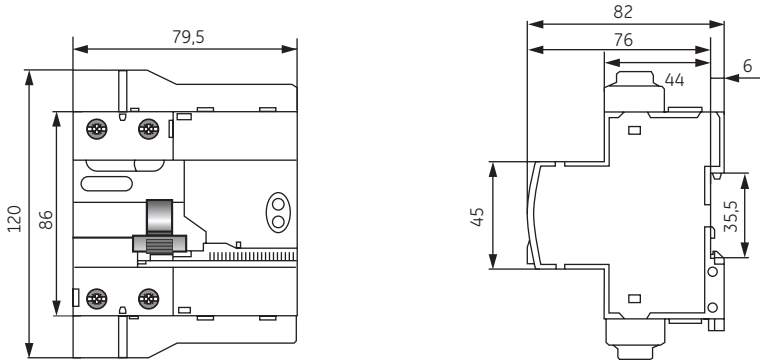
Dimensions ● pg B.49

New

Dimensional drawings

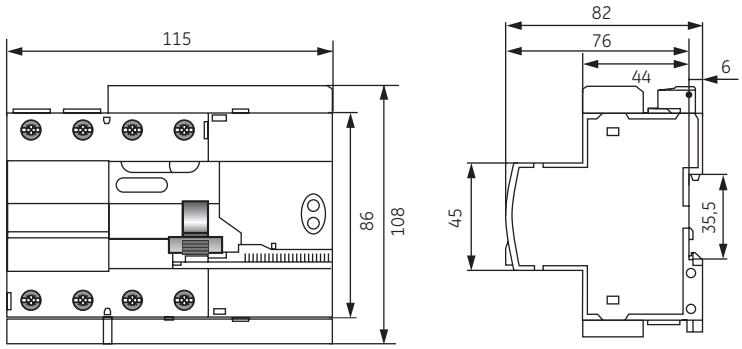
TeleREC 2 RCCB / RCBO

2P
4.5 mod.



TeleREC 2 RCBO

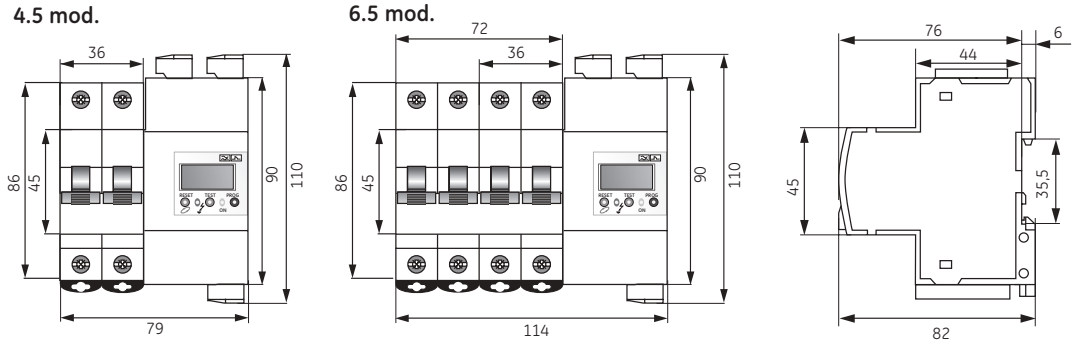
4P
6.5 mod.



TeleREC Top MCB

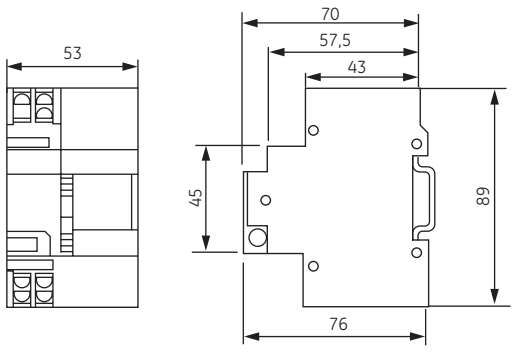
2P
4.5 mod.

4P
6.5 mod.



TeleREC Plus

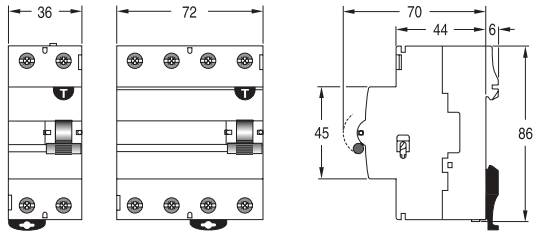
3 mod.



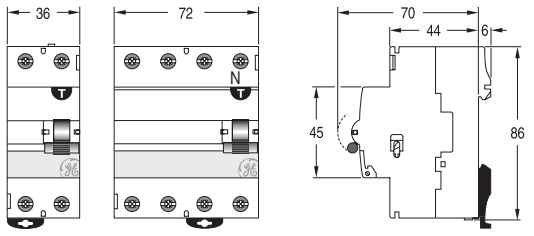
New

Dimensional drawings

RCCBs - Series BP/BD and FPAUL

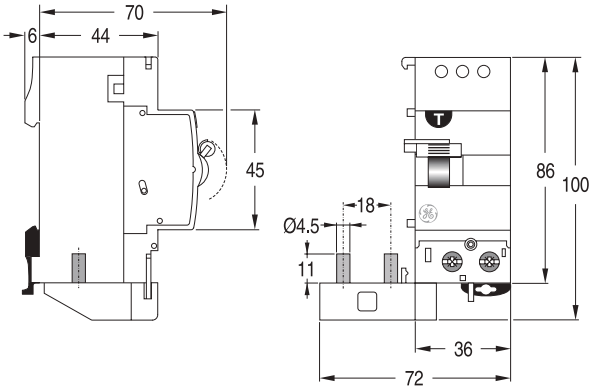


RCCBs - Series FPP - Fixwell™

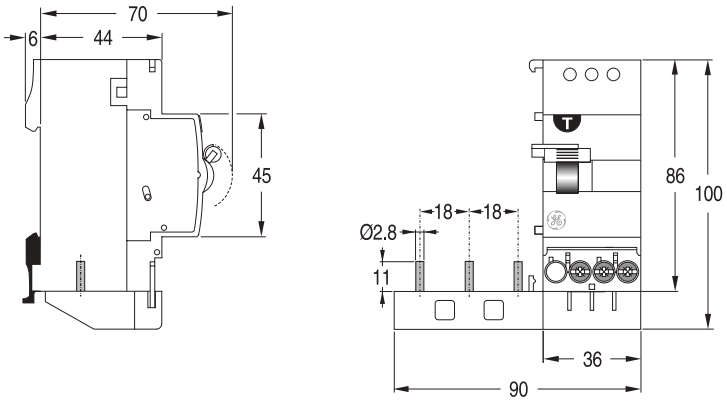


Add-on RCCB - Series Diff-o-Click

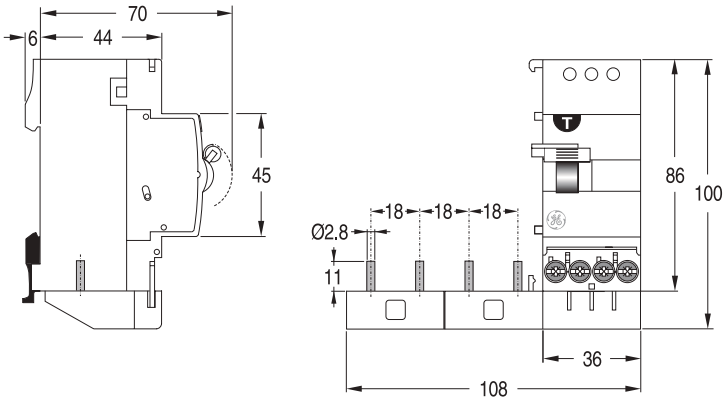
2P 32A
2P 63A



3P 32A

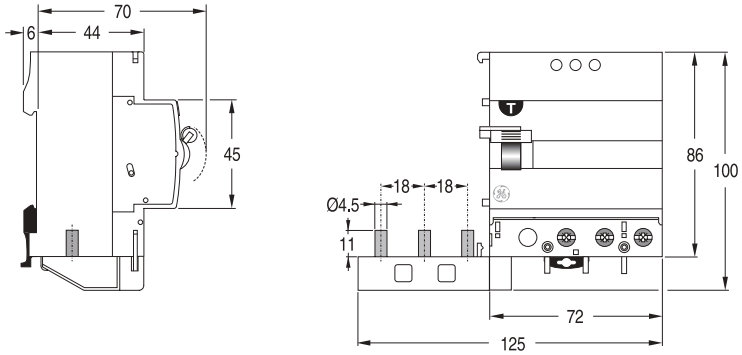


4P 32A

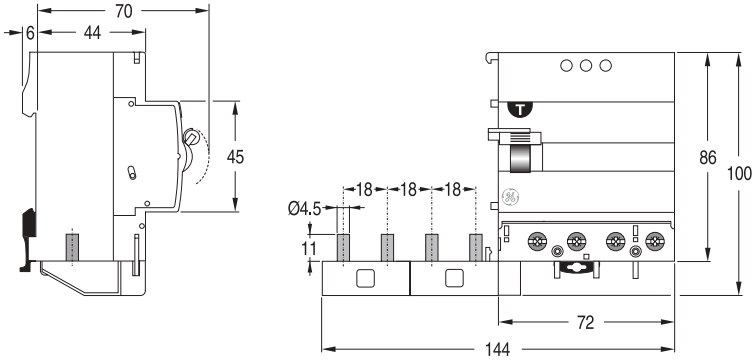


Add-on RCCB - Series Diff-o-Click (continued)

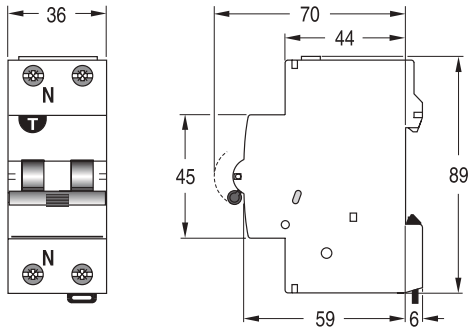
3P 63A



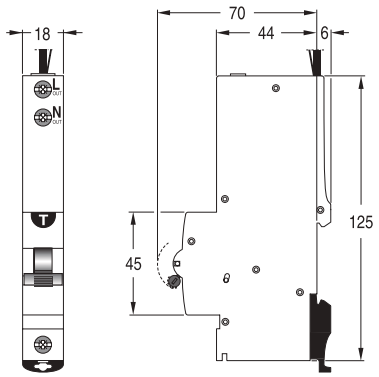
4P 63A



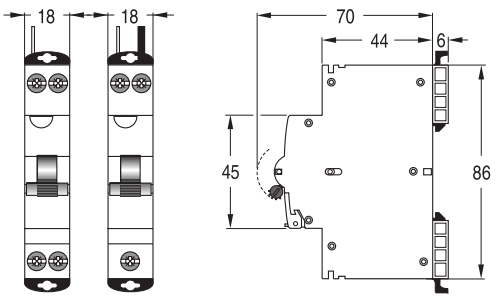
RCBOs - Series DM and DPA100



RCBOs - Series DME



Compact e-RCBO - Series DMCE and DICE



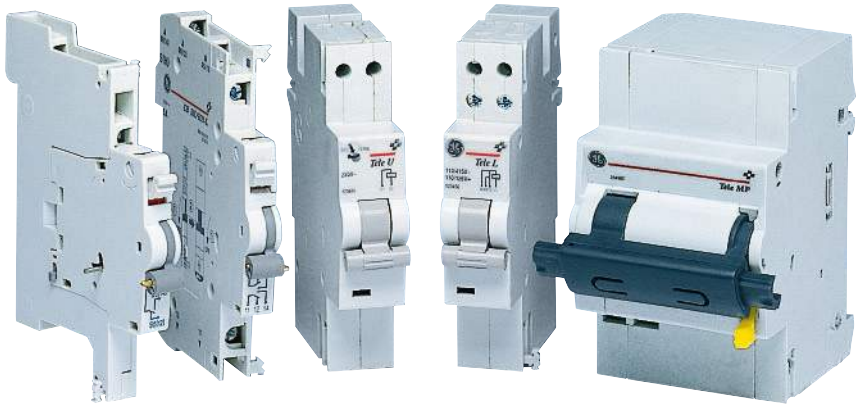
Notes

C.2 Selection table
C.3 Coupling combinations
C.4 Auxiliary - **Series CA**
C.5 Auxiliary - **Series CB**

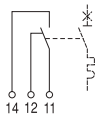
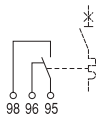
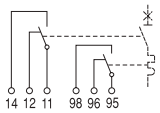
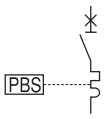
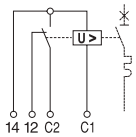
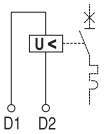
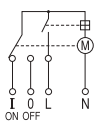
New **Unibis™**
C.6 Interface - **Series CA**

C.7 Motor operator - **Tele MP**
C.8 Shunt trip - **Tele L**
C.8 Undervoltage release - **Tele U**
C.8 Panel board switch - **PBS**
C.10 Auxiliary contacts - **Series CBT**
C.11 Shunt trip - **Series Tele LT**
C.12 Dimensional drawings

Add-on devices for MCBs and RCDs



Common add-on devices suitable for all MCBs and RCDs

Function			Type
H		**Auxiliary Contact H** For monitoring the status of the protection device (Open/Closed) independently, if it has been actuated manually or automatically.	CA
S		**Signal or Auxiliary Contact S/H** For signalling the automatic tripping of the protection devices: Overload or short-circuit for MCBs Earth leakage tripping for RCDs	CA
S/H+H		**Signal or Auxiliary Contact S/H + Auxiliary Contact H** Two change-over contacts that include both functions as described above (S/H+H)	CB
PBS		**Panel Board Switch** For opening the main device when the panel frame is removed	PBS
TL		**Shunt Trip (Distance tripping by emission)** For opening the device when it is fed locally or remotely	Tele L
TU		**Undervoltage Release** For opening the device when the voltage goes lower than a certain value	Tele U
TM		**Motor Operator** Allows to switch on/off the devices from a distance	Tele MP

Coupling of add-on devices on MCBs, RCCBs and modular switches

Cat. No.	Description	Function	EPC	G30	G45	G60	G100	GT10	GT25	EP100 UC EP100T EPP100	BP	DM	Series G + Diff-o-Click	ASTER
CA H	Auxiliary contact	H	L-R[2]	L-R	L-R	L-R	L-R	L-R	L-R	L-R	R	R	L	L-R
CA S/H	Signal or auxiliary contact	S/H	L-R[2]	L-R	L-R	L-R	L-R	L-R	L-R	L-R	R	R	L	L-R
CA S/H-G	Signal or auxiliary contact, gold contact	S/H	L-R[2]	L-R	L-R	L-R	L-R	L-R	L-R	L-R	R	R	L	L-R
CA UN H	Auxiliary contact	H	L-R[1]	-	-	-	-	-	-	-	-	-	-	-
CA UN S/H	Signal or auxiliary contact	S/H	L-R[1]	-	-	-	-	-	-	-	-	-	-	-
CB SH/HH-R	Signal or auxiliary + auxiliary contact	S/H+H	-	R	R	R	R	R	R	R	R	R	-	-
CB SH/HH-L	Signal or auxiliary + auxiliary contact	S/H+H	-	L	L	L	L	L	L	L	-	-	L	-
PBS	Panel board switch	PBS	L-R[2]	L-R	L-R	L-R	L-R	L-R	L-R	L-R	-	-	L-R	-
Tele L	Shunt trip	TL	L-R[2]	L-R	L-R	L-R	L-R	L-R	L-R	L-R	R	R	L	-
Tele U	Undervoltage release	TU	L-R[2]	L-R	L-R	L-R	L-R	L-R	L-R	L-R	R	R	L	-
Tele MP	Motor operator	TM	L-R	L-R	L-R	L-R	L-R	L-R	L-R	L-R	R	R	L	-

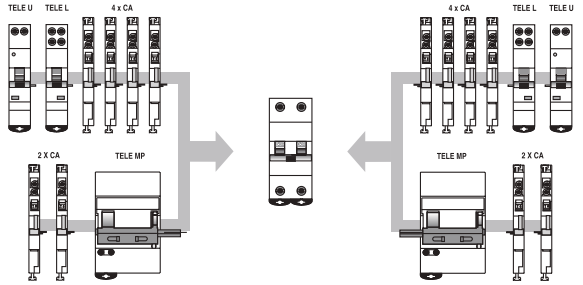
(1) Except 3P Unibis™ that only accept CA UN on the **left** side
(2) Except Tele MP, all add-on devices on EPC need one CA UN as interface

L = Coupling on the left R = Coupling on the right

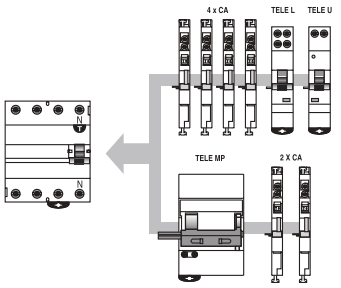
For detailed information, see website

Miniature Circuit Breakers
Series G/EP
Series EPC[3]

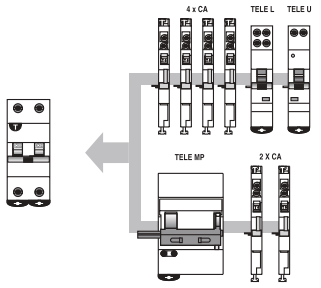
(3) Except for Tele MP the first auxiliary contact on MCB should always be CA UN



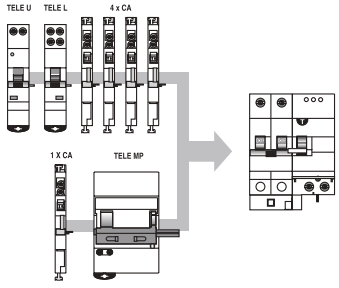
Residual Current Circuit Breakers (RCCB)
Series BP



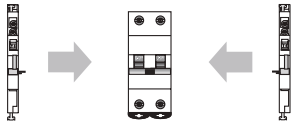
Residual Current Circuit Breakers (RCBO)
with Overcurrent Protection
Series DM



Miniature Circuit Breakers
Series G
+ Diff-o-Click



Modular switches
Aster



Auxiliary

Series CA — EN/IEC 62019

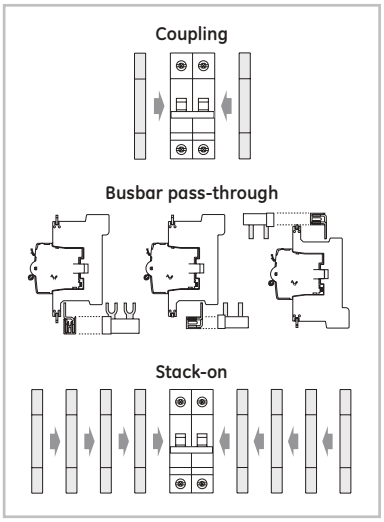
- Common for all modular protection devices: MCBs and RCBOs up to 63 A, RCCBs up to 100A and mains disconnect switches type ASTER (ASTM).
- Can be coupled on both sides of MCBs and modular switches type ASTM.
- Version with golden contacts, available for low current as well as low voltage applications.
- Stack-on left and right up to 4 CA units.
- Permits the pass-through of busbars, pin & fork, top and bottom, just changing the position of the base of the auxiliaries.

Applications

Approvals

Performance

Change-over contacts		1
Rated current In	(A)	5
Rated voltage AC Un	(V)	240
Electrical endurance		10000
Terminal capacity flexible/rigid cable	(mm^2)	2.5
Weight	(g)	70



Utilisation

The auxiliary contacts are units to be added on to protection devices. They allow information to be monitored from a distance about the protection devices.

Auxiliary contact CA H (function H)

Provides the status of the protection device, OPEN/CLOSED.

Signal or auxiliary contact CA S/H, CA S/H G (function S/H)

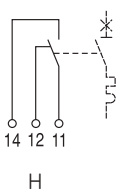
This auxiliary can act as an auxiliary contact (function H) or as a signal contact (function S).

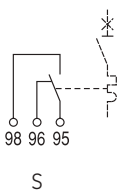
The user can change the function at the moment of installation.

Used as signal contact (function S) it provides the information about the automatic tripping of the protection devices: overload or short-circuit for MCBs, earth leakage tripping for RCDs.

- The device has a test button on the front to simulate the function (acting as a function H or S)
- Reset button for the contacts (function S)
- Tripping signal on the front (function S)

Series CA





1/2 mod.

Function	Cat. No.	Ref. No.	Pack.	
H	CA H	**672567**	40	
S/H	CA S/H	**672568**	40	
S/H	CA S/H G	**672569**	40	golden contacts

More technical data ● website
Dimensions ● pg C.12

Auxiliary

Series CB — EN/IEC 62019

- Common for all modular protection devices: MCBs and RCBOs up to 63 A, RCCBs up to 100A and mains disconnect switches type ASTER (ASTM).
- Can be coupled on both sides of MCBs and modular switches type ASTM.
- Common for all modular protection devices: MCBs and RCBOs up to 63 A, RCCBs up to 100A.
- Can be coupled on both sides of MCBs and modular switches type ASTM.
- This device has 2 change-over contacts, the upper one with changeable function (S/H).
- Two versions: CB SH/HH-R to be coupled on the right side of the protection devices, CBSH/HH-L when assembled on the left side
- No stack-on possibilities (only 1 auxiliary)
- No busbar pass-through facilities

Applications

Approvals

Performance

Change-over contacts		2
Rated current In	(A)	5
Rated voltage AC Un	(V)	240
Electrical endurance		10000
Terminal capacity flexible/rigid cable	(mm^2)	2.5
Weight	(g)	80

Utilisation

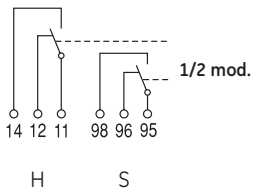
Bottom auxiliary contact (function H)
Provides the status of the protection device, OPEN/CLOSED.
Top signal or auxiliary contact (function S/H).
This auxiliary can act as an auxiliary contact (function H) or as a signal contact (function S)
The user can make the change of the function at the moment of installation.
Used as signal contact (function S) it provides information about automatic tripping of the protection devices: overload or short-circuit for MCBs, earth leakage tripping for RCDs.

- The device has a test button on the front to simulate the function (acting as a function H or S)
- Reset button for the contacts (function S)
- Tripping signal on the front (function S)

Coupling right

Coupling left

Series CB



Function	Cat. No	Ref. No.	Pack.
SH/HH	CB SH/HH-R(1)	**672570**	40
SH/HH	CB SH/HH-L(2)	**672571**	40

(1) R= coupling on the right

(2) L= coupling on the left

More technical data website
Dimensions pg C.12

Auxiliary

Series CA UN - Unibis™ Interface EN/IEC 62019

- Common for all modular protection devices: MCBs and RCBOs up to 63 A, RCCBs up to 100A and mains disconnect switches type ASTER (ASTM).
- Can be coupled on both sides of MCBs(1) and modular switches type ASTM.
- Version with golden contacts, available for low current as well as low voltage applications.
- Stack-on left or right up to 4 CA units.
- Permits the pass-through of busbars, pin & fork, top and bottom, just changing the position of the base of the auxiliaries.

Performances

Change-over contacts		1
Rated current In	(A)	5
Rated voltage AC Un	(V)	240
Electrical endurance		10000
Terminal capacity flexible/rigid cable	(mm²)	2.5
Weight	(g)	70

Application

The auxiliary contact Unibis™ has a double function:
1. The standard function as auxiliary monitoring contact for which it has been developed.
2. The interface function, which allows the use of all auxiliaries in combination with the Unibis™ MCB range.
Example: to couple the undervoltage release Tele U to a Unibis™ MCB, the CA 672972 has to be added in between the MCB and the Tele U as interface.

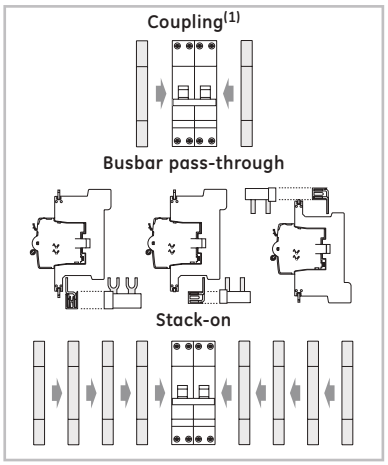
The auxiliary contacts are units to be added on to protection devices. They allow information to be monitored from a distance about the protection devices.

Auxiliary contact CA UN H (function H)
Provides the status of the protection device, OPEN/CLOSED.
Signal or auxiliary contact CA UN S/H, CA UN S/H G (function S/H)
This auxiliary can act as an auxiliary contact (function H) or as a signal contact (function S).
The user can change the function at the moment of installation.
Used as signal contact (function S) it provides the information about the automatic tripping of the protection devices: overload or short-circuit for MCBs, earth leakage tripping for RCDs.
- The device has a test button on the front to simulate the function (acting as a function H or S)
- Reset button for the contacts (function S)
- Tripping signal on the front (function S)

Applications

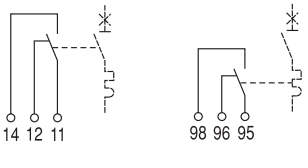
Approvals / Marking

Add-on devices



(1) 3P Unibis™ MCBs accept CA UN only on the **left** side
(2) Only first auxiliary contact on MCB must be CA UN type as interface, than every extension can be stack-on mounted

Series CA UN - Unibis™ Interface



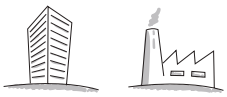
1/2 mod.

Function	Cat. No	Ref. No.	Pack.	
H	CA UN H	**672972**	1/40	
S/H	CA UN S/H	**672973**	1/40	
S/H	CA UN S/H G	**672974**	1/40	golden contacts

New

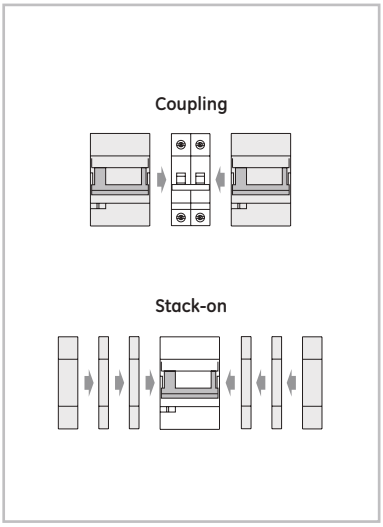
More technical data ● website
Dimensions ● pg C.12

Applications



Standard

EN/IEC 60947-2



Motor Operator

Tele MP

- Common device for all modular protection devices.
- Can be coupled on both sides of MCBs and modular switches, on the right hand side of RCCBs and RCBOs.
- Stack-on left and right sides up to 4 modules. One of them can be coupled between the main device and the motor operator.
- Can be locked in off position with a lock.
- Manual operating is possible.

The Tele MP allows to remotely open or close any MCB, RCCB, RCBO or modular switch by means of a push-button or any other automatic management processor (PLC..).

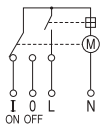
In case of mounting a Tele MP and a Undervoltage Tele U togheter: when the Tele U trips, a manual reset of the Tele U is locally needed due to safety reasons.

Performance

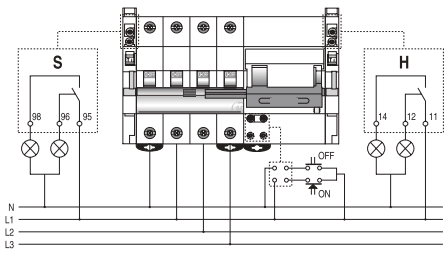
Rated voltage AC Un	(V)	240
Minimum voltage	(V)	200
Impulse to switch on	(ms)	50
Impulse to switch off	(ms)	50
Closing time	(s)	0.5
Opening time	(s)	0.2
Electrical endurance		10000
Terminal capacity flexible/rigid cable	(mm^2)	2.5
Weight	(g)	380

Tele MP - Motor operator

	Voltage	Cat. No.	Ref. No.	Pack.
3 mod.	AC 230V	TELE MP	**672580**	1

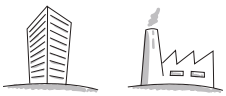


Application example



More technical data website
Dimensions pg C.12

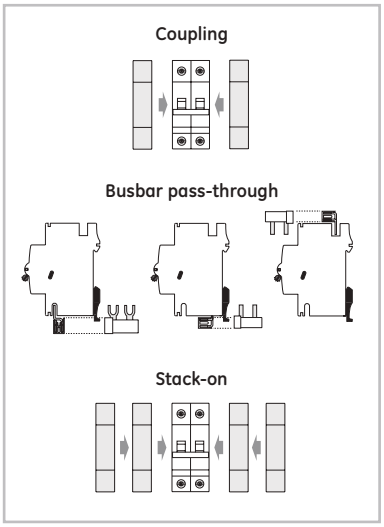
Applications



Approvals

EN/IEC 60947-2 (1)

(1) For TELE L-1 and TELE L-2



Shunt trip, Undervoltage release, Panel board switch

- Common device for all modular protection devices.
- Can be coupled on both sides of MCBs, on the right side of RCCBs and RCBOs.
- Permit the pass-through of busbars, pin & fork, at top or bottom terminals.
- Stack-on left and right side up to 4 modules.

Shunt Trip Tele L

The Tele L allows to remotely switch off any MCB, RCCB or RCBO by means of push-buttons or any other automatic management processor. A built-in contact in series with the coil prevents burn- out damage if the voltage remains.

Performance

Rated voltage	(V)	110/415, 110/125 DC
	(V)	24/60, 24/48 DC
Tripping time	(ms)	<10
Electrical endurance		10000
Terminal capacity flexible/rigid cable	(mm^2)	2.5
Weight	(g)	125
Inrush current (Tele 2)	at 110V AC	0.4A
	at 230V AC	0.9A
	at 415V AC	1.5A

Undervoltage Release Tele U

The Tele U releases the main MCB, RCCB, RCBO and modular switch in case the power supply drops below 0.5xUn. Time delay adjusting up to 300 ms.

Performance

Rated voltage AC Un	(V)	240
Rated voltage DC/AC Un	(V)	12, 24, 48 DC/AC
Tripping voltage	(V)	≤0.5xUn±10%
Resetting voltage	(V)	>0.5xUn±10%
Tripping time	(ms)	Adjustable 0...300
Electrical endurance		2000
Terminal capacity flexible/rigid cable	(mm^2)	2.5
Weight	(g)	125

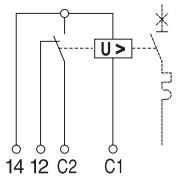
Panel Board Switch PBS

The panel board switch PBS is a mechanical switch. When the panel frame releases the PBS switch, it will trip the protection devices (MCBs or RCDs). Consequently the distribution board will become isolated.

More technical data ● website
Dimensions ● pg C.12

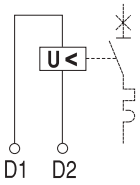
Tele L - Shunt trip

	Voltage	Cat. No.	Ref. No.	Pack.
1P 1 mod.	AC 24-60V DC 24-48V	TELE L-1	**672573**	1
	AC 110-415V DC 110-125V	TELE L-2	**672574**	1



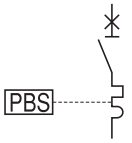
Tele U - Undervoltage release

	Voltage	Cat. No.	Ref. No.	Pack.
1P 1 mod.	AC 240V	TELE U-230	**672575**	1
	AC/DC 12V	TELE U-12	**672576**	1
	AC/DC 24V	TELE U-24	**672577**	1
	AC/DC 48V	TELE U-48	**672578**	1

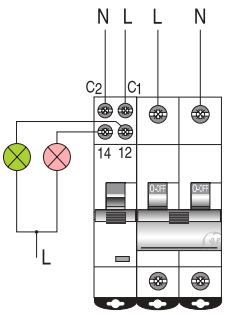


PBS - Panel board switch

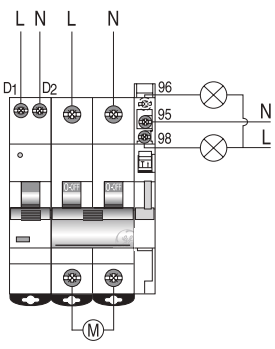
	Cat. No.	Ref. No.	Pack.
1P 1/2 mod.	PBS	**672572**	1

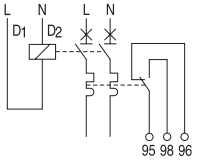


Tele L



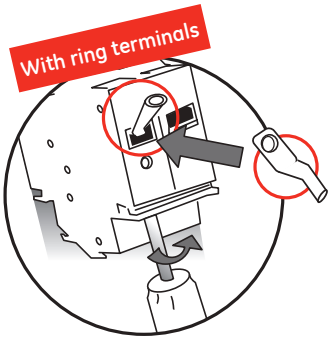
Tele U





Auxiliary contacts

Series CBT



The miniature circuit breakers in RAIL-design have been developed with regard to shakes, shocks and vibrations

Features

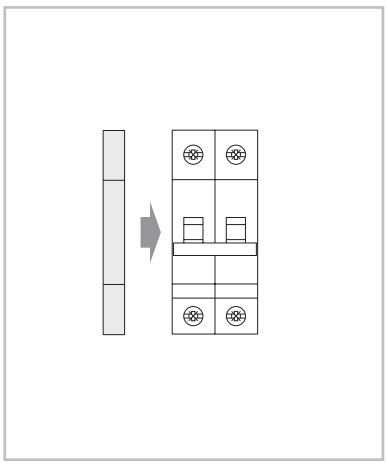
- Three versions: 1NO+1NC, 2NC, 2 NO
- CBT accepts ring terminals on wires
- Certified acc. new CEI UNI 11170 (higher protection against fires)
- Certified acc. to NF 16-101, smoke index F1
- Shock and vibration tests acc. to IEC 61373

Standards / Marking

EN 60898, EN 60947-2, UNI CEI 11170, EN 61373

Approval

Trenitalia n° 371441.01



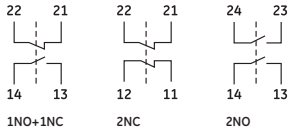
Technical data

Number of change-over contacts	2
Thermal setting In	5A (230Vac), 4A (24Vdc), 1A (60Vdc)
Rated voltage Un	230Vac, 60Vdc
Endurance electrical	10.000
Terminal capacity for flexible/rigid cable	2.5mm^2
Unloosable screws	Pozidrive 2

Bottom auxiliary contact (function H)
Provides the status of the protection device: OPEN/CLOSED.

More technical data website
Dimensions pg C.12

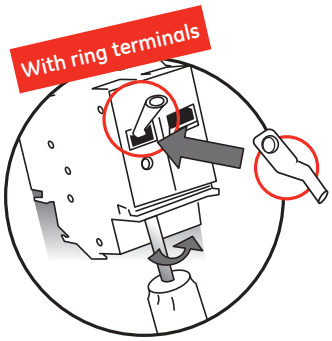
Series CBT



Contact combination	Cat. No.	Ref. No.	Pack.
1NO+1NC	CBT H NO-NC	**667249**	1
2NC	CBT H 2NC	**667250**	1
2NO	CBT H 2NO	**667251**	1

Shunt trip (Distance tripping by emission)

Series Tele LT



The miniature circuit breakers in RAIL-design have been developed with regard to shakes, shocks and vibrations

Features

- Tele LT accepts ring terminals on wires
- Certified acc. new CEI UNI 11170 (higher protection against fires)
- Certified acc. to NF 16-101, smoke index F1
- Shock and vibrations tests acc. to IEC 61373
- Shock and vibrations tests acc. to IEC 61373

Technical data

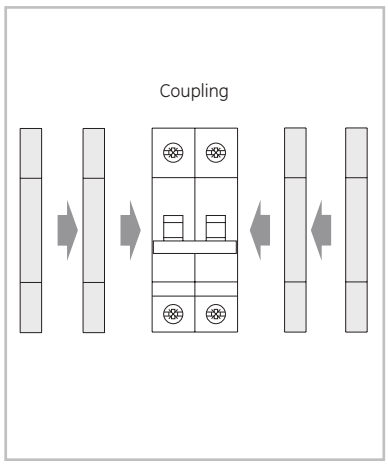
Rated voltage	(V)	110/415~110/128/150 ⎓
	(V)	24/60~24/48 ⎓
Tripping time	(ms)	<10
Electrical endurance		10.000
Terminal capacity flexible/rigid cable	(mm^2)	2.5
Unloosable screws		Pozidrive 2
U_{min}	(V)	0,70 x Un
U_{max}	(V)	1.25 x Un

Standards / Marking

EN 60898, EN 60947-2, UNI CEI 11170, EN 61373

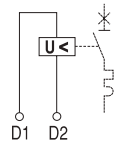
Approval

Trenitalia n° 371441.01



More technical data website
Dimensions pg C.12

Tele LT

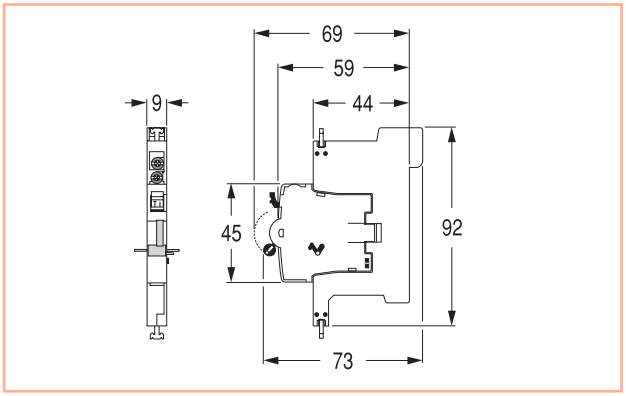


1/2 mod.

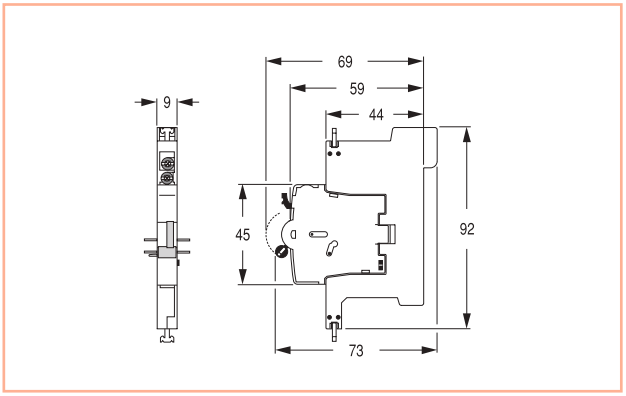
Voltage	Cat. No.	Ref. .No.	Pack.
CA 110/415 V ~ CC 110/128/150 V =	TELE LT-1	**667252**	1
CA 24/60 V ~ CC 24/48 V =	TELE LT-2	**667253**	1

Dimensional drawings

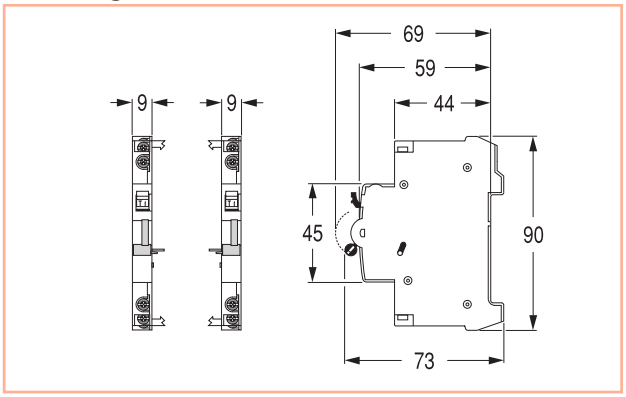
Auxiliary - Series CA



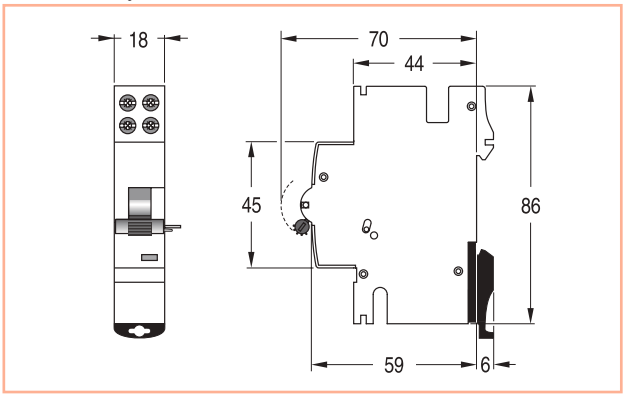
Auxiliary interface - Series CA - Unibis™



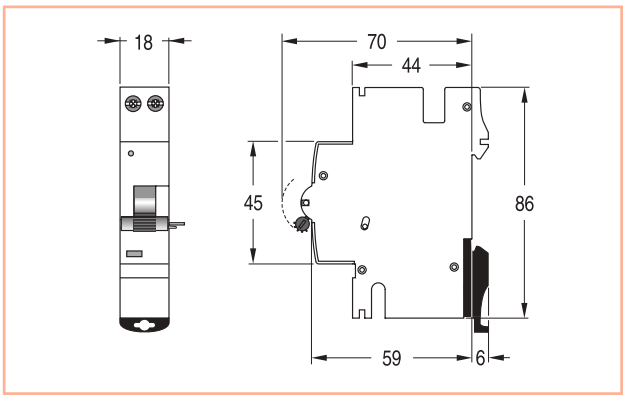
Auxiliary - Series CB / CBT



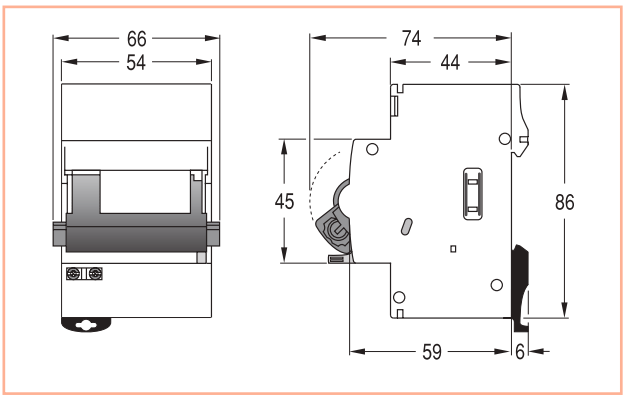
Shunt Trip - Tele L / Tele LT



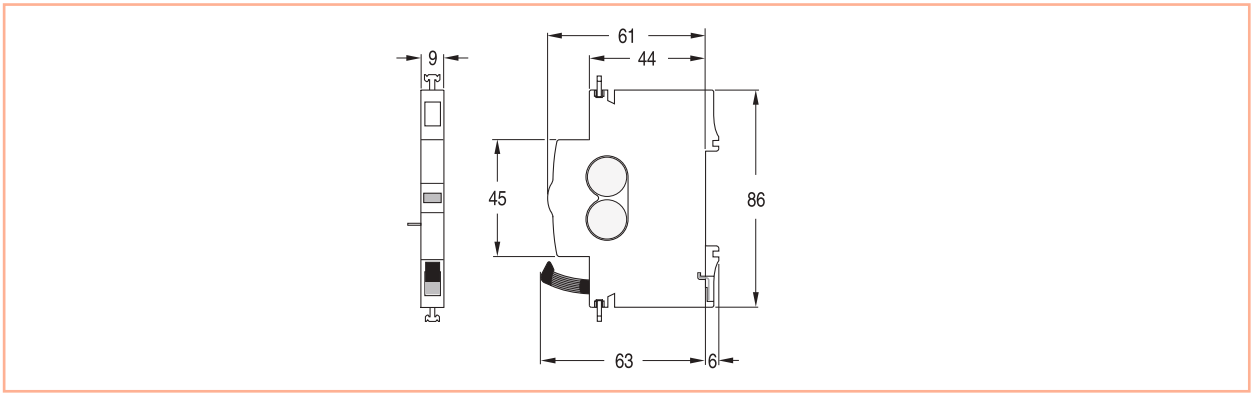
Undervoltage Release - Tele U



Motor operator - Tele MP



Panel board switch - PBS



D.2 Switches and Push-buttons - **Aster**
D.4 Indication Lamp - **Aster**
D.6 Contactors - **Contax**

D.8 Relays - **Contax R**
D.12 Impulse Switches - **Pulsar S**
D.16 Staircase Switches - **Pulsar TS**
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D.20 Analogue Time Switches - **Classic**
D.22 Digital Time Switches - **Galax**
D.24 Time Switches - **72 X 72 Classic and Galax**
D.26 Light Sensitive Switches - **Galax LSS**

D.28 Safety and bell transformers Buzzers and bells - **Series T+ BU+ BE+**
D.30 Digital kWh - **Series MT+D kWh**
D.32 Digital measurement instruments - **Series MT+D**
D.34 Analogue measurement instruments - **Series MT+A**
D.36 Current transformers - **Series MT+CT**

D.38 Compact three-phase analyser - **Series MTDIN**
D.40 Basic three-phase analyser - **Series MT96**
D.42 Advanced three-phase analyser - **Series MT144**
D.44 Power Analysers - Parameter table
D.46 Surge Arresters - **SurgeGuard**
D.52 Terminal capacity

D.54 Dimensional drawings

Switches and Push-buttons

Aster

Function

Manual control of all kinds of electrical devices.

Approvals(1)

(1) Depending on type.

Applications

Switching of lighting and heating in homes, shops, offices, warehouses, factories, hospitals, etc.

Features

Wide range with respect to available contact combinations and switching capacity. Mains disconnect switches and switches with change-over contact and off position available.
Compact (4-pole in 1 module) with high switching capacity due to double interruption per path.
All switches are sealable through padlock or by means of a lock.
The terminals are equipped with captive Pozidriv screws and have IP20 protection degree.
Mains disconnect switches accepts auxiliary contacts CA.

Standards

Switches 16/32A	BS EN 60669-1 VDE 0632 Part 1
Mains disconnect switches 40-100	BS EN 60947-3 VDE 0632 Part 101
Rotary switches	BS EN 60947-3

Performance

	Push-buttons	Switches	Rotary switches	Mains disconnect switches
Nominal rated current	*16A*	*16A | 32A*	*32-40-63A*	*40-63-80-100A*
Usable as mains disconnect switch	no	no	yes	yes
Nominal breaking capacity at 415V, cos φ =0.95	-	1.25xIn	8xIn	3xIn
Nominal breaking capacity at 415V, cos φ =0.65	-	-	8xIn	3xIn
Nominal voltage single pole devices	240V	240V	-	240/415V
Nominal voltage multipole devices	-	415V	240/415V	240/415V
Maximum allowed current during less than 1 s.	-	-	-	2kA
Mechanical service life (complete on-off-cycle)	>20000	>20000	>10000	>20000
Electrical service life, cos φ = 0.95, Un and In	>20000	>20000 | >5000	>1500	>1500
Short-circuit resistance with upfront fuses Gg/gL 100A (nominal)	4.5kA (nominal)	4.5kA (nominal)	15kA (nominal)	16kA (nominal)
(peak)	3kA (peak)	3kA (peak)	10kA (peak)	7kA (peak)
Protection degree	IP20	IP20	IP20	IP20
Screws	Pozidriv 1	Pozidriv 1	Pozidriv 2	Pozidriv 2
Terminal capacity: min	1x1.5mm²	1x1.5mm²	1x2.5mm²	1x6mm²
max	1x10mm²	1x10mm²	1x25mm²	1x50mm²

Auxiliary contacts ● pg. C.4
More technical data ● website
Dimensions ● pg D.54

Aster - Switches and push-buttons

	Nominal current	Contact combination	Number of modules	Cat. No.	Ref. No.	Pack.
Mains disconnect switch	40A/240V	1NO	1	AST M 40 10	**666614**	12
	40A/415V	2NO	2	AST M 40 20	**666615**	6
	40A/415V	3NO	3	AST M 40 30	**666616**	4
	40A/415V	4NO	4	AST M 40 40	**666617**	3
	63A/240V	1NO	1	AST M 63 10	**666562**	12
	63A/415V	2NO	2	AST M 63 20	**666563**	6
	63A/415V	3NO	3	AST M 63 30	**666564**	4
	63A/415V	4NO	4	AST M 63 40	**666565**	3
	80A/240V	1NO	1	AST M 80 10	**666566**	12
	80A/415V	2NO	2	AST M 80 20	**666567**	6
	80A/415V	3NO	3	AST M 80 30	**666568**	4
	80A/415V	4NO	4	AST M 80 40	**666569**	3
	100A/240V	1NO	1	AST M 100 10	**666558**	12
	100A/415V	2NO	2	AST M 100 20	**666559**	6
	100A/415V	3NO	3	AST M 100 30	**666560**	4
	100A/415V	4NO	4	AST M 100 40	**666561**	3
Rotary switch	32A/415V	2NO	4	AST R 32 20	**666574**	1
	32A/415V	3NO	4	AST R 32 30	**666575**	1
	32A/415V	3NO+NC	4	AST R 32 3N	**666576**	1
	32A/415V	4NO	4	AST R 32 40	**666577**	1
	40A/415V	2NO	4	AST R 40 20	**666578**	1
	40A/415V	3NO	4	AST R 40 30	**666579**	1
	40A/415V	3NO+NC	4	AST R 40 3N	**666580**	1
	40A/415V	4NO	4	AST R 40 40	**666581**	1
	63A/415V	2NO	4	AST R 63 20	**666582**	1
	63A/415V	3NO	4	AST R 63 30	**666583**	1
	63A/415V	3NO+NC	4	AST R 63 3N	**666584**	1
	63A/415V	4NO	4	AST R 63 40	**666585**	1
Changeover switches	16A/240V	1NO	1	AST S 16 10	**666587**	12
	16A/415V	2NO	1	AST S 16 20	**666589**	12
	16A/415V	3NO	1	AST S 16 30	**666590**	12
	16A/415V	4NO	1	AST S 16 40	**666593**	12
	16A/415V	3NO	2	AST S 16 30 2	**666591**	6
	16A/415V	4NO	2	AST S 16 40 2	**666592**	6
	16A/240V	1CO	1	AST S 16 1	**666586**	12
	16A/240V	2CO	1	AST S 16 2	**666588**	12
	32A/240V	1NO	1	AST S 32 10	**666595**	12
	32A/415V	2NO	1	AST S 32 20	**666597**	12
	32A/415V	3NO	1	AST S 32 30	**666599**	12
	32A/415V	4NO	1	AST S 32 40	**666600**	12
	32A/415V	3NO	2	AST S 32 30 2	**666598**	6
	32A/415V	4NO	2	AST S 32 40 2	**666601**	6
	32A/240V	1CO	1	AST S 32 1	**666594**	12
	32A/240V	2CO	1	AST S 32 2	**666596**	12
Switch with signal lamp	16A/240V	1NO	1	AST SL 16 10	**666602**	12
	16A/240V	2NO	1	AST SL 16 20	**666603**	12
	32A/240V	1NO	1	AST SL 32 10	**666604**	12
	32A/240V	2NO	1	AST SL 32 20	**666605**	12
Changeover switches with zero position	16A/240V	1CO	1	AST SZ 16 1	**666606**	12
	16A/240V	2CO	1	AST SZ 16 2	**666607**	12
	32A/240V	1CO	1	AST SZ 32 1	**666608**	12
	32A/240V	2CO	1	AST SZ 32 2	**666609**	12
Push-button	16A/240V	1NC	1	AST P 16 01	**666570**	12
	16A/240V	1NO	1	AST P 16 10	**666571**	12
	16A/240V	1NO 1NC	1	AST P 16 11	**666572**	12
Push-button with signal lamp	16A/240V	1NO	1	AST PL 16 10	**666573**	12

Accessories for rotary switches

Extension shaft	238 mm with emergency handle		AST R ES E	**666555**	1
	238 mm with standard handle		AST R ES S	**666556**	1
Sealing piece		4	AST R TS	**666557**	1

Indication lamps

Aster

Function

Status visualisation.

Applications

Mainly used to visualise the status of a (sub)part of the installation, heater, motor, fan, pump etc.

Features

Available in different voltages and with different coloured lenses.

Performance

Nominal voltage	12V	24V	230V
Own consumption	120mA	85mA	2.2mA
Lamp	Incandescent lamp	Incandescent lamp	Neon lamp
Lens colours	Red, green, orange and transparent	Red, green, orange and transparent	Red, green, orange and transparent
Protection degree	IP20	IP20	IP20
Screws	Pozidriv 1	Pozidriv 1	Pozidriv 1
Terminal capacity: min	1x1.5mm²	1x1.5mm²	1x1.5mm²
max	1x10mm² / 2x4mm²	1x10mm² / 2x4mm²	1x10mm² / 2x4mm²

Socket-outlets

MSC

Standards

BS EN C61112-1, NF C61-303 (86), IEC 60884-1

Approvals(1)

(1) Depending on type.

Performance

Nominal current	*16A*
Nominal voltage	250V
Operating temperature	-20 ... +55°C
Protection degree	IP20
Screws	Pozidriv 2
Terminal capacity: min	1x1 mm²
max	1x6 mm² or 2x2.5 mm²

More technical data website
Dimensions pg D.54-55

Aster - Indication lamp

	Nominal operating voltage	Colour	Number of modules	Cat. No.	Ref. No.	Pack.
Lampholder	-	-	1	AST B	**666347**	12

Accessories

	Nominal operating voltage	Colour	Number of modules	Cat. No.	Ref. No.	Pack.
Lamp	12V	-	-	AST B 12	**666340**	12
	24V	-	-	AST B 24	**666342**	12
	230V	-	-	AST B 230	**666341**	12
Lamp LED E10	235V ~/⎓	Green	-	AST LG 230V	**666876**	10
	235V ~/⎓	Amber	-	AST LA 230V	**666874**	10
	235V ~/⎓	Red	-	AST LR 230V	**666877**	10
	235V ~/⎓	Blue	-	AST LB 230V	**666875**	10
	235V ~/⎓	White	-	AST LW 230V	**666878**	10

Lens	-	Transparent	-	AST L CL	**666343**	12
	-	Green	-	AST L GN	**666344**	12
	-	Orange	-	AST L OR	**666345**	12
	-	Red	-	AST L RD	**666346**	12

MSC - Socket-outlets

	Nominal current	Nominal voltage	Number of modules	Cat. No.	Ref. No.	Pack.
Edged with child protection	16A	250V	2.5	MSC SEP	**666501**	4
Edged without child protection	16A	250V	2.5	MSC SE	**666499**	4

Pin with child protection	16A	250V	2.5	MSC SPP	**666502**	4

Contactors

Contax

Function

Contactors are electromechanically controlled switches used to control single or multi-phase (high) power loads while the control itself can be (very) low power.

Dimensions ● pg D.55

Applications

Switching of lighting, heating-equipment, motors for pumps and fans, ...
Day and night contactors are used mainly in combination with dual-tariff applications to allow high-energy-loads (i.e. electrical water heaters, accumulation heaters) only to consume energy during the low-tariff period.
A forced-on, forced-off, auto-switch allows to overrule the normal operation of the DN-contactor at all times.

Features

Except for the 20A version, all contactors have DC coils, resulting in an absolutely noise-free, real silent operation: 50 or 60Hz noise generation by the contactor is impossible. As all DC coil contactors have an internal diode rectifier bridge, they all can be operated by both DC and AC power supplies. The built-in varistor protects the coil against an overvoltage of up to 5kV.
The switch position of the contactor is visualised through an indicator flag.
The loss-proof safety terminals are equipped with Pozidriv screws and have IP20 protection degree. Add-on auxiliary contacts as well as spacers and sealing pieces are available.

Standards

IEC 60947-4-1, BS EN 60947-4-1, IEC 61095, BS EN 61095. Approval VDE.

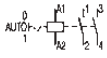
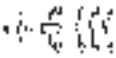
Performance

Rated switching capacity	**20A**	**24A**	**40A**	**63A**
Contacts				
Switching capacity for different loads				
Rated insulation voltage	400V	500V	500V	500V
Rated operational voltage	250V	440V	440V	440V
Switching-on capacity				
cos φ = 0.65 at 380-400V 3phase	-	90A	220A	300A
cos φ = 0.95 at 220-230V 1phase	100A	-	-	-
Switching-off capacity				
cos φ = 0.65 at 380-400V 3phase	-	72A	176A	240A
cos φ = 0.95 at 220-230V 1phase	80A	-	-	-
Fuse type GL for short-circuit protection	20A	35A	63A	80A
Ohmic loss per contact at In	1.0W	1.5W	3.0W	6.0W
Maximum switching frequency AC1 / AC7a	300/h	300/h	300/h	300/h
Maximum switching frequency AC3 / AC7b	600/h	600/h	600/h	600/h
Mechanical service life	10^6	10^6	10^6	10^6
Electrical service life AC1 / AC7a	150000	150000	150000	150000
Electrical service life AC3 / AC7b	150000	500000	170000	240000
Screws	Pozidriv 1	Pozidriv 1	Pozidriv 2	Pozidriv 2
Terminal capacity: min	1x1 mm^2	1x1 mm^2	1x1.5 mm^2	1x1.5 mm^2
max	1x10mm^2 or 2x4 mm^2	1x10mm^2 or 2x4 mm^2	1x25mm^2 or 2x10 mm^2	1x25mm^2 or 2x10 mm^2
Magnetic control system				
Control voltage range	85 ... 110%xUn	85 ... 110%xUn	85 ... 110%xUn	85 ... 110%xUn
Rated operating frequency	50 or 60Hz	DC, 40 ... 450Hz	DC, 40 ... 450Hz	DC, 40 ... 450Hz
Operating temperature range	-25 ... +55°C(1)	-25 ... +55°C(1)	-25 ... +55°C(1)	-25 ... +55°C(1)
Maximum pull-in coil power loss	8.0VA / 5.0W	4VA / 4W	5VA / 5W	6.5VA / 6.5W
Maximum holding coil power loss	3.2VA / 1.2W	4VA / 4W	5VA / 5W	4.2VA / 4.2W
Switching-on delay	9 ... 12 ms	< 40 ms	< 40 ms	< 40 ms
Switching-off delay	10 ... 12 ms	< 40 ms	< 40 ms	< 40 ms
Screws	Pozidriv 1	Pozidriv 1	Pozidriv 1	Pozidriv 1
Terminal capacity: min	1x1 mm^2	1x1 mm^2	1x1 mm^2	1x1 mm^2
max	1x4mm^2 or 2x2.5 mm^2	1x4mm^2 or 2x2.5 mm^2	1x4mm^2 or 2x2.5 mm^2	1x4mm^2 or 2x2.5 mm^2

(1) Remark: If several contactors are mounted next to each-other and the time of operation exceeds 1 hour and the ambient temperature rises above 40°C, a 1/2-module spacer must be added every second contactor (i.e. contactor contactor spacer contactor contactor spacer contactor contactor etc.)

Contax - Contactors

	Nominal current	Contact combination	Coil voltage	AC/DC	Number of modules	Cat. No.	Ref. No.	Pack.
Contactor	20A	1NO 1NC	24V	AC	1	CTX 20 11 024 A	**666127**	12
	20A	1NO 1NC	230V	AC	1	CTX 20 11 230 A	**666126**	12
	20A	2NC	24V	AC	1	CTX 20 02 024 A	**666129**	12
	20A	2NC	230V	AC	1	CTX 20 02 230 A	**666128**	12
1 NO 1 NC	20A	2NO	12V	AC	1	CTX 20 20 012 A	**666130**	12
	20A	2NO	24V	AC	1	CTX 20 20 024 A	**666133**	12
	20A	2NO	48V	AC	1	CTX 20 20 048 A	**666134**	12
	20A	2NO	230V	AC	1	CTX 20 20 230 A	**666131**	12
	20A	2NO	240V	AC	1	CTX 20 20 240 A	**666132**	12
2 NC	24A	2NO 2NC	24V	AC/DC	2	CTX 24 22 024 U	**666136**	5
	24A	2NO 2NC	230V	AC/DC	2	CTX 24 22 230 U	**666135**	5
	24A	3NO	24V	AC/DC	2	CTX 24 30 024 U	**666138**	5
	24A	3NO	230V	AC/DC	2	CTX 24 30 230 U	**666137**	5
	24A	4NC	24V	AC/DC	2	CTX 24 04 024 U	**666140**	5
2 NO	24A	4NC	230V	AC/DC	2	CTX 24 04 230 U	**666139**	5
	24A	4NO	12V	AC/DC	2	CTX 24 40 012 U	**666141**	5
	24A	4NO	24V	AC/DC	2	CTX 24 40 024 U	**666144**	5
	24A	4NO	48V	AC/DC	2	CTX 24 40 048 U	**666145**	5
	24A	4NO	230V	AC/DC	2	CTX 24 40 230 U	**666142**	5
2 NO 2 NC	24A	4NO	240V	AC/DC	2	CTX 24 40 240 U	**666143**	5
	40A	2NC	230V	AC/DC	3	CTX 40 02 230 U	**666170**	3
	40A	2NO	230V	AC/DC	3	CTX 40 20 230 U	**666146**	3
	40A	3NO	24V	AC/DC	3	CTX 40 30 024 U	**666149**	3
3 NO	40A	3NO	230V	AC/DC	3	CTX 40 30 230 U	**666148**	3
	40A	4NO	12V	AC/DC	3	CTX 40 40 012 U	**666150**	3
	40A	4NO	24V	AC/DC	3	CTX 40 40 024 U	**666153**	3
	40A	4NO	48V	AC/DC	3	CTX 40 40 048 U	**666154**	3
	40A	4NO	230V	AC/DC	3	CTX 40 40 230 U	**666151**	3
4 NC	40A	2NO	24V	AC/DC	3	CTX 40 20 024 U	**666147**	3
	40A	4NO	240V	AC/DC	3	CTX 40 40 240 U	**666152**	3
	63A	4NO	24V	AC/DC	3	CTX 63 40 024 U	**666158**	3
	63A	4NO	230V	AC/DC	3	CTX 63 40 230 U	**666156**	3
	63A	2NO	230V	AC/DC	3	CTX 63 20 230 U	**666155**	3
4 NO	63A	4NO	240V	AC/DC	3	CTX 63 40 240 U	**666157**	3

	Nominal current	Contact combination	Coil voltage	AC/DC	Number of modules	Cat. No.	Ref. No.	Pack.
Contactor Day and Night	20A	2NO	230V	AC	1	CTX DN 20 20 230 A	**666164**	12
	24A	3NO	230V	AC/DC	2	CTX DN 24 30 230 U	**666165**	5
	24A	4NO	230V	AC/DC	2	CTX DN 24 40 230 U	**666166**	5
2 NO								
	40A	2NO	230V	AC/DC	3	CTX DN 40 20 230 U	**666167**	3
	40A	3NO	230V	AC/DC	3	CTX DN 40 30 230 U	**666168**	3
	40A	4NO	230V	AC/DC	3	CTX DN 40 40 230 U	**666169**	3
3 NO								
4NO								

Add-on auxiliary contact for 24-40-63A contactors

	Nominal current	Contact combination			Number of modules	Cat. No.	Ref. No.	Pack.
Left mounting	6A	1NO 1NC	-	-	0.5	CTX 06 11	**666162**	5
1 NO 1 NC	6A	2NO	-	-	0.5	CTX 06 20	**666163**	5
2 NO								

Accessories

					Number of modules	Cat. No.	Ref. No.	Pack.
Sealing piece					2	CTX TS 2	**666160**	3
					3	CTX TS 3	**666159**	3
Spacer					0.5	PLS + / CTX + SP	**686069**	50

Relays

Contax R

Standards / Marking

EN 60947-4-1 CE

Function

Relays are electromechanically controlled switches used to control low power loads.

Applications

- Switching of lighting, heating, etc.
- Galvanic insulation of i.e. status signalisation lamps from a (high) power (high voltage) circuit.
- Galvanic insulation of PLC-inputs or outputs to avoid destruction through excessive voltage.

Features

- The switch position is visualised by the position of the front handle.
- The safety terminals are equipped with captive Pozidriv screws and have IP20 protection degree.
- Add-on auxiliary contacts available.
- Because of the advanced product design, no spacers are needed.
- Increased safety: sealing caps for both coil and terminal are available.

More technical data ● website
Dimensions ● pg D.56

Performance

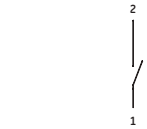
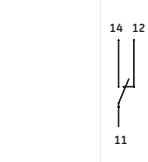
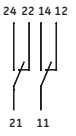
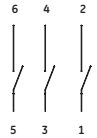
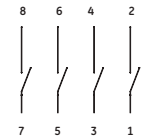
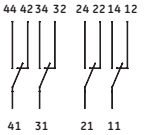
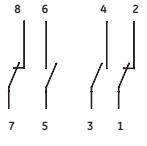
			Contax R CTX + R16
Rated current (according to EN 60947-4-1)			
250VAC (1 and 2 pole) / 400VAC (3 and 4 pole)		A	16
Nominal thermal current (Ith)		A	16
Number of pole			1 → 4
Contacts	NO		1 → 4
	Changeover ("m" contacts)		1 → 4
	NO + NC		1+1 / 2+2
Width (in 17.8mm DIN modules)	1P and 2P	Mod.	1
	3P and 4P	Mod.	2
Coil specifications			
Supply voltage : DC/AC ratio[1]			0.5 / 1
Supply voltage range (in % of Un)		%	85-110
Coil pick-up power	1P and 2P	VA	3.4
	3P and 4P	VA	6.7
Coil power loss - AC	1P and 2P	VA	1.8
	3P and 4P	VA	3.4
Coil power loss - DC	1P and 2P	W	2.1
	3P and 4P	W	3.9
Maximum coil holding voltage time			unlimited
Contact bounce time at closing		sec.	<0.010
Operate and release time (bounce time incl.)			
Pick-up time	NO contact	sec.	< 0.040
(from 0 to Un)	NC contact	sec.	< 0.020
Drop-out time	NO contact	sec.	< 0.050
(from Un to 0)	NC contact	sec.	< 0.050
Maximum peak current at closing			
Single phase 250VAC cos φ = 0.95		A	45
3-phase 400V~ cos φ = 0.65		A	60
Maximum peak current at opening			
Single phase 250VAC cos φ = 0.95		A	75
3-phase 400V~ cos φ = 0.65		A	60
Lifetime (in number of operations)[2]			
Electrical (in AC-1 - At full load)			3×10^5
Mechanical			2×10^6
Load specifications per phase			
Maximum load AC-1	1P and 2P	kW	3.0
	3P and 4P	kW	8.5
Maximum load AC-5b		kW	1.8
Maximum load AC-7b		kW	0.9
Maximum load AC-3	250VAC	kW	1.5
	400VAC	kW	2.2
Minimum load (under 5V)		W	2
Short-circuit fuse protection		A	20
Maximum lamp load (10^3 operations/h)			
Incandesc. and halogen (40 to 200 W lamps)		W	1,800
Fluorescence, compensated (cos φ = 0.9)			
	Serial compensation	VA	1,800
	Parallel compensation	VA	500
Fluorescence, non compensated (cos φ = 0.5)		VA	900
General specifications			
Auxiliary contact add-on (PLS / CTX R)			yes
Need for spacer			no
DIN rail mounting			yes
2-position DIN rail lock			yes
Front handle for manual operation			yes
Permanent ON/OFF			no
Indicator of contact position			yes
Clamping terminals			yes
Unlosable screws			yes
Sealable terminals (coil and load)			yes
Cable cross section (Ø min/max)	Coil	mm²	1.5 / 10
	Load	mm²	1.5 / 10
Maximum torque on terminals		Nm	1
Ambient temperature at installation point (min./max.)		°C	-20 / +45

(1) DC supply voltage = AC supply voltage x DC/AC ratio, except for 8VAC and 115VAC (48VDC)
(2) 1 cycle = 2 operations per pole (closing + opening)

Impulse switches and relays: maximum lamp loads

Lamps type	Lamp Watts Power consumption	Pulsar S PLS + 16	Pulsar S PLS + 32	Contax R CTX + R16
Incandescent lamps				
Max. load 230VAC		3000 W	4000 W	1800 W
Max. number of lamps	15 W	200	266	120
	25 W	120	160	72
	40 W	75	102	45
	60 W	50	65	30
	75 W	40	52	24
	100 W	30	40	18
	150 W	20	26	12
	200 W	15	20	9
	300 W	9	12	6
	500 W	5	8	3
Fluo lamp PF uncorrected				
Max. load 230VAC		1800 W	2200 W	900 W
Max. number of lamps	18 W	81	110	50
	36 W	44	58	25
	40 W	38	53	23
	58 W	29	35	16
	65 W	26	34	13
Fluo twin lamps				
Max. load 230VAC		3000 W	4000 W	1800 W
Max. number of lamps	2 x 18 W	78	110	50
	2 x 36 W	38	55	25
	2 x 40 W	35	50	23
	2 x 58 W	23	34	16
	2 x 65 W	22	30	13
Fluo lamp parallel compensation				
Max. load 230VAC		2500 W	3200 W	500 W
Max. number of lamps	18 W	103	132	17
	36 W	55	72	13
	40 W	50	65	12
	58 W	34	45	8
	65 W	30	40	7
Halogen 230V				
Max. load 230VAC		3000 W	4000 W	1800 W
Max. number of lamps	150 W	20	26	12
	250 W	12	16	7
	300 W	10	13	6
	400 W	7	10	4
	500 W	6	8	3
	1000 W	3	4	2
HP sodium vapour				
Max. load 230VAC		1200 W	1600 W	800 W
Max. number of lamps	70 W	15	18	10
	150 W	8	10	5
	250 W	4	6	3
	400 W	3	4	2
	1000 W	1	1	-
LP sodium vapour				
Max. load 230VAC		1400 W	2000 W	400 W
Max. number of lamps	55 W	27	36	6
	90 W	16	22	4
	135 W	11	14	3
	180 W	8	11	2
	185 W	8	10	2
HP mercury vapour				
Max. load 230VAC		1200 W	1600 W	800 W
Max. number of lamps	50 W	19	25	16
	80 W	15	20	10
	125 W	9	12	7
	250 W	4	6	3
	400 W	3	4	2
	1000 W	1	2	-
VLV halogen				
Max. load 230VAC		2300 W	3200 W	1500 W
Max. number of lamps	20 W	116	160	72
	50 W	46	64	29
	75 W	31	42	20
	100 W	24	32	15
	150 W	15	21	10
	200 W	12	16	7
	300 W	7	10	5
Electronic reactor				
Max. load 230VAC		1600 W	2200W	1000 W
Max. number of lamps	1 x 18 W	83	112	38
	1 x 36 W	46	61	30
	1 x 58 W	31	38	17
	2 x 18 W	40	56	19
	2 x 36 W	23	30	15
	2 x 58 W	14	19	8

Contax R - Relays

	Nominal current	Contact combination	Coil voltage AC	Coil voltage DC	Number of Modules	Cat. No.	Ref. No.	Pack.
	16A	1 NO	8	-	1	CTX + R 16 10 008 A	**686007**	12
	16A	1 NO	12	6	1	CTX + R 16 10 012 A	**686008**	12
	16A	1 NO	24	12	1	CTX + R 16 10 024 A	**686009**	12
	16A	1 NO	48	24	1	CTX + R 16 10 048 A	**686010**	12
	16A	1 NO	115	48	1	CTX + R 16 10 115 A	**686011**	12
	16A	1 NO	230	115	1	CTX + R 16 10 230 A	**686013**	12
	16A	1 NO	230/60Hz	-	1	CTX + R 16 10 23060	**686012**	12
	16A	1 NO	240	120	1	CTX + R 16 10 240 A	**686014**	12
	16A	1 CO	8	-	1	CTX + R 16 1 008 A	**686000**	12
	16A	1 CO	12	6	1	CTX + R 16 1 012 A	**686001**	12
	16A	1 CO	24	12	1	CTX + R 16 1 024 A	**686002**	12
	16A	1 CO	48	24	1	CTX + R 16 1 048 A	**686003**	12
	16A	1 CO	115	48	1	CTX + R 16 1 115 A	**686004**	12
	16A	1 CO	230	115	1	CTX + R 16 1 230 A	**686005**	12
	16A	1 CO	240	120	1	CTX + R 16 1 240 A	**686006**	12
	16A	2 NO	8	-	1	CTX + R 16 20 008 A	**686036**	12
	16A	2 NO	12	6	1	CTX + R 16 20 012 A	**686037**	12
	16A	2 NO	24	12	1	CTX + R 16 20 024 A	**686038**	12
	16A	2 NO	48	24	1	CTX + R 16 20 048 A	**686039**	12
	16A	2 NO	115	48	1	CTX + R 16 20 115 A	**686040**	12
	16A	2 NO	230	115	1	CTX + R 16 20 230 A	**686042**	12
	16A	2 NO	230/60Hz	-	1	CTX + R 16 20 23060	**686041**	12
	16A	2 NO	240	120	1	CTX + R 16 20 240 A	**686043**	12
	16A	1 NO 1 NC	8	-	1	CTX + R 16 11 008 A	**686015**	12
	16A	1 NO 1 NC	12	6	1	CTX + R 16 11 012 A	**686016**	12
	16A	1 NO 1 NC	24	12	1	CTX + R 16 11 024 A	**686017**	12
	16A	1 NO 1 NC	48	24	1	CTX + R 16 11 048 A	**686018**	12
	16A	1 NO 1 NC	115	48	1	CTX + R 16 11 115 A	**686019**	12
	16A	1 NO 1 NC	230	115	1	CTX + R 16 11 230 A	**686021**	12
	16A	1 NO 1 NC	230/60Hz	-	1	CTX + R 16 11 23060	**686020**	12
	16A	1 NO 1 NC	240	120	1	CTX + R 16 11 240 A	**686022**	12
	16A	2 CO	8	-	1	CTX + R 16 2 008 A	**686023**	12
	16A	2 CO	12	6	1	CTX + R 16 2 012 A	**686024**	12
	16A	2 CO	24	12	1	CTX + R 16 2 024 A	**686026**	12
	16A	2 CO	48	24	1	CTX + R 16 2 048 A	**686028**	12
	16A	2 CO	115	48	1	CTX + R 16 2 115 A	**686030**	12
	16A	2 CO	230	115	1	CTX + R 16 2 230 A	**686032**	12
	16A	2 CO	240	120	1	CTX + R 16 2 240 A	**686034**	12
	16A	3 NO	12	6	2	CTX + R 16 30 012 A	**686050**	6
	16A	3 NO	24	12	2	CTX + R 16 30 024 A	**686051**	6
	16A	3 NO	48	24	2	CTX + R 16 30 048 A	**686052**	6
	16A	3 NO	230	115	2	CTX + R 16 30 230 A	**686053**	6
	16A	4 NO	8	-	2	CTX + R 16 40 008 A	**686025**	6
	16A	4 NO	12	6	2	CTX + R 16 40 012 A	**686060**	6
	16A	4 NO	24	12	2	CTX + R 16 40 024 A	**686061**	6
	16A	4 NO	48	24	2	CTX + R 16 40 048 A	**686062**	6
	16A	4 NO	230	115	2	CTX + R 16 40 230 A	**686064**	6
	16A	4 NO	230/60Hz	-	2	CTX + R 16 40 23060	**686063**	6
	16A	4 NO	240	120	2	CTX + R 16 40 240 A	**686065**	6
	16A	4 CO	12	6	2	CTX + R 16 4 012 A	**686054**	6
	16A	4 CO	24	12	2	CTX + R 16 4 024 A	**686055**	6
	16A	4 CO	48	24	2	CTX + R 16 4 048 A	**686056**	6
	16A	4 CO	115	48	2	CTX + R 16 4 115 A	**686057**	6
	16A	4 CO	230	115	2	CTX + R 16 4 230 A	**686058**	6
	16A	4 CO	240	120	2	CTX + R 16 4 240 A	**686059**	6
	16A	2 NO 2 NC	8	-	2	CTX + R 16 22 008 A	**686027**	6
	16A	2 NO 2 NC	12	6	2	CTX + R 16 22 012 A	**686044**	6
	16A	2 NO 2 NC	24	12	2	CTX + R 16 22 024 A	**686045**	6
	16A	2 NO 2 NC	48	24	2	CTX + R 16 22 048 A	**686046**	6
	16A	2 NO 2 NC	230	115	2	CTX + R 16 22 230 A	**686048**	6
	16A	2 NO 2 NC	230/60Hz	-	2	CTX + R 16 22 23060	**686047**	6
	16A	2 NO 2 NC	240	120	2	CTX + R 16 22 240 A	**686049**	6

Terminal identification, see page D.53

Impulse switches

Pulsar S

Standards / Marking

IEC 60669-1, IEC 60669-2-2

CE

Function

Impulse switches are electromechanically controlled switches used to control single- or multi-phase medium-power loads while the control itself can be (very) low power. The device switches between 2 stable positions, each time a (brief) impulse energises its control circuit.

Applications

Mainly used for the switching of lighting and heating equipment and/or to obtain a simplified wiring in case the load needs to be controlled at reduced voltage and/or from more than 2 different places.

Features

- Besides the normal operation through electrically energising the coil, manual operation is possible at all times, except PLS series SA and SB.
- The switch position is visualised by the position of the front handle for all devices, except PLS series SA and SB.
- The central command version was developed to force several devices at the same time to the on or off position, independently of the current status of each individual device. Also in this case, the possibility of operating the device locally remains.
- The safety terminals are equipped with captive Pozidriv screws and have IP20 protection degree.
- An add-on auxiliary contact, add-on central-command module and a spacer are available.
- 3 and 4 poles devices are multi voltage (except all-in central command).
- The use of a large number of luminous push-buttons is possible.
- Availability of sealing cap for coil and load terminals.

For the table Impulse switches maximum lamp loads, see page D.10

More technical data ● website
Dimensions ● pg D.56

Performance

			PLS +				PLS + C [4]	
			PLS + 16	PLS + 32	PLS + SA and SB	PLS + PU 16	PLS + C 16	PLS + C 32
Rated current (acc. to IEC 669-2-3)								
250VAC (1 and 2 pole) / 400VAC (3 and 4 pole)		A	16	32	16	16	16	32
Direct Current (at 30VDC)		A	16	16	16	16	16	16
Number of poles			1 → 4	1 → 4	2	1 → 4	1 → 3	1 → 3
Contacts	NO		1 → 4	1 → 4	2	1 → 4	1 → 3	1 → 3
	Changeover ("m")		1 → 4	-	-	1 → 4	1 → 3	-
	NO + NC		1+1 / 2+2	-	-	1+1 / 2+2	-	-
Width (in 17.8mm DIN modules)								
	1 P	Mod.	1	1	-	1	1	1
	2 P	Mod.	1	1	1	1	1½	1½
	3 P	Mod.	2	2	-	2	2	2
	4 P	Mod.	2	2	-	2	-	-
Coil specifications								
Supply voltage : DC/AC ratio [1]			0.5 / 1	0.5 / 1	0.5 / 1	0.5 / 1	0.5 / 1	0.5 / 1
Supply voltage range (in % of Un)		%	90-110	90-110	90-110	90-110	90-110	90-110
Coil pick-up power (AC)	1P and 2P	VA	14.5	16.0	14.5	4.8	14.5	14.5
	3P and 4P	VA	14.5	16.0	-	8.0	16.0	16.0
Coil power loss - AC	1P and 2P	VA	11.0	11.5	11.0	3.2	11.0	14.5
	3P and 4P	VA	11.0	11.5	-	6.0	11.0	16.0
Coil power loss - DC	1P and 2P	W	7.5	8.0	7.5	2.9	12.5	12.5
	3P and 4P	W	7.5	8.0	-	5.4	14.5	14.5
Maximum coil holding voltage time			[2]	[2]	[2]	unlimited	[2]	[2]
Impulse times								
Minimum impulse time (under Un)		sec.	0.050	0.050	0.050	0.050	0.100	0.100
Minimum impulse time (90% Un)		sec.	0.100	0.100	0.100	0.100	0.100	0.100
Minimum time between impulses		sec.	0.150	0.150	0.150	0.150	0.150	0.150
Maximum number of impulses per mn			250	250	250	250	250	250
Lifetime (in number of operations) [3]								
Electrical (in AC-1 - At full load) [4]			4×10^5	3×10^5	3×10^5	2×10^5	4×10^5	3×10^5
Mechanical			2×10^6	2×10^6	2×10^6	1×10^6	2×10^6	2×10^6
Load specifications								
Maximum load AC-1 per phase		A	20	32	20	20	20	32
Maximum load DC (30VDC)		A	16	16	16	16	16	16
Minimum load per phase (under 5V)		W	2	2	2	2	2	2
Short-circuit fuse protection		A	20	32	20	20	20	32
Maximum lamp load (10^3 operations/h)								
Incandescence and halogen (40 to 200 W lamps)		W	3,000	4,000	3,000	3,000	3,000	4,000
Fluorescence, compensated (cos φ = 0.9)								
	Serial compensation	VA	3,000	4,000	3,000	3,000	3,000	4,000
	Parallel compensation	VA	2,500	3,200	2,500	2,500	2,500	3,200
Fluorescence, non compensated (cos φ = 0.5)		VA	1,800	2,200	1,800	1,800	1,800	2,200
Maximum number of push-buttons								
Non illuminated push-buttons			unlimited	unlimited	unlimited	unlimited	unlimited	unlimited
Luminous push-buttons (0.6mA)								
4 terminals			unlimited	unlimited	unlimited	unlimited	unlimited	unlimited
3 terminals	Without compensator		8	8	8	6	8	8
	1 compensator		18	18	18	15	27	27
	2 compensators		45	45	45	38	43	43
General specifications								
Power contact add-on			yes	yes	no	no	no	no
Auxiliary contact add-on (PLS / CTX R)			yes	yes	no	yes	yes	yes
Need for spacer [2]			yes	yes	yes	no	yes	yes
DIN rail mounting			yes	yes	yes	yes	yes	yes
2-position DIN rail lock			yes	yes	yes	yes	yes	yes
2-position handle			yes	yes	no	yes	yes	yes
Indicator of contact position			yes	yes	yes	yes	yes	yes
Clamping terminals			yes	yes	yes	yes	yes	yes
Unlosable screws			yes	yes	yes	yes	yes	yes
Sealable terminals (coil and load)			yes	yes	yes	yes	yes	yes
Cable cross section (Ø min/max)	Coil	mm²	1.5 / 10	1.5 / 10	1.5 / 10	1.5 / 10	1.5 / 10	1.5 / 10
	Load 1P-3P and 4P	mm²	1.5 / 10	1.5 / 10	1.5 / 10	1.5 / 10	1.5 / 10	1.5 / 10
	Load 2P	mm²	1.5 / 10	1.5 / 10	1.5 / 10	1.5 / 10	1.5 / 6	1.5 / 10
Maximum torque on terminals		Nm	1	1	1	1	1	1
Ambient temperature at installation point (min./max.)		°C	-20 / +45	-20 / +45	-20 / +45	-20 / +45	-20 / +45	-20 / +45

(1) For all impulse relays, DC supply voltage = AC supply voltage x DC/AC ratio, except for 8VAC and 115VAC (48VDC)
(2) Whenever the normal use of the impulse relay integrates a permanent coil working, use of a spacer is required on both sides. Make sure that the duty factor allows the device to come back to the ambient temperature (not required for PLS PU)
(3) 1 cycle = 2 operations per pole (closing + opening)
(4) For any central command installation, a PLS SG module per phase must be installed in order to protect the coils against overvoltages

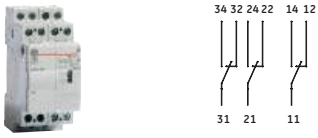
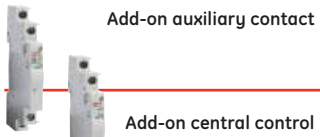
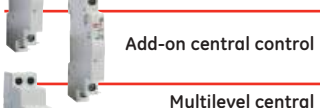
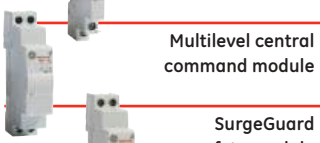
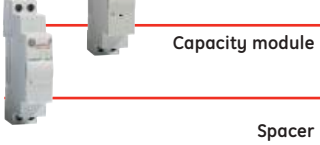
Pulsar S - Impulse switches

	Nominal current	Contact combination	Coil voltage AC	Coil voltage DC	No. of Modules	Cat. No.	Ref. No.	Pack.
Impulse switches	16A	1NO	8	-	1	PLS + 16 10 008 A	**686078**	12
	16A	1NO	12	6	1	PLS + 16 10 012 A	**686079**	12
	16A	1NO	24	12	1	PLS + 16 10 024 A	**686080**	12
	16A	1NO	48	24	1	PLS + 16 10 048 A	**686081**	12
	16A	1NO	115	48	1	PLS + 16 10 115 A	**686082**	12
	16A	1NO	230	115	1	PLS + 16 10 230 A	**686083**	12
	16A	1NO	230/60Hz	-	1	PLS + 16 10 23060	**686284**	12
	16A	1NO	240	120	1	PLS + 16 10 240 A	**686084**	12
	16A	1CO	8	-	1	PLS + 16 1 008 A	**686071**	12
	16A	1CO	12	6	1	PLS + 16 1 012 A	**686072**	12
	16A	1CO	24	12	1	PLS + 16 1 024 A	**686073**	12
	16A	1CO	48	24	1	PLS + 16 1 048 A	**686074**	12
	16A	1CO	115	48	1	PLS + 16 1 115 A	**686075**	12
	16A	1CO	230	115	1	PLS + 16 1 230 A	**686076**	12
	16A	1CO	240	120	1	PLS + 16 1 240 A	**686077**	12
	16A	2NO	8	-	1	PLS + 16 20 008 A	**686102**	12
	16A	2NO	12	6	1	PLS + 16 20 012 A	**686103**	12
	16A	2NO	24	12	1	PLS + 16 20 024 A	**686104**	12
	16A	2NO	48	24	1	PLS + 16 20 048 A	**686105**	12
	16A	2NO	115	48	1	PLS + 16 20 115 A	**686106**	12
	16A	2NO	230	115	1	PLS + 16 20 230 A	**686108**	12
	16A	2NO	230/60Hz	-	1	PLS + 16 20 23060	**686107**	12
	16A	2NO	240	120	1	PLS + 16 20 240 A	**686109**	12
	16A	1NO 1NC	8	-	1	PLS + 16 11 008 A	**686086**	12
	16A	1NO 1NC	12	6	1	PLS + 16 11 012 A	**686087**	12
	16A	1NO 1NC	24	12	1	PLS + 16 11 024 A	**686088**	12
	16A	1NO 1NC	48	24	1	PLS + 16 11 048 A	**686089**	12
	16A	1NO 1NC	115	48	1	PLS + 16 11 115 A	**686090**	12
	16A	1NO 1NC	230	115	1	PLS + 16 11 230 A	**686091**	12
	16A	1NO 1NC	230/60Hz	-	1	PLS + 16 11 23060	**686285**	12
	16A	1NO 1NC	240	120	1	PLS + 16 11 240 A	**686092**	12
	16A	2 CO	8	-	1	PLS + 16 2 008 A	**686093**	12
	16A	2 CO	12	6	1	PLS + 16 2 012 A	**686094**	12
	16A	2 CO	24	12	1	PLS + 16 2 024 A	**686095**	12
	16A	2 CO	48	24	1	PLS + 16 2 048 A	**686096**	12
	16A	2 CO	115	48	1	PLS + 16 2 115 A	**686097**	12
	16A	2 CO	230	115	1	PLS + 16 2 230 A	**686098**	12
	16A	2 CO	240	120	1	PLS + 16 2 240 A	**686099**	12
	32A	1NO	8	-	1	PLS + 32 10 008 A	**686110**	12
	32A	1NO	12	6	1	PLS + 32 10 012 A	**686111**	12
	32A	1NO	24	12	1	PLS + 32 10 024 A	**686112**	12
	32A	1NO	48	24	1	PLS + 32 10 048 A	**686113**	12
	32A	1NO	115	48	1	PLS + 32 10 115 A	**686114**	12
	32A	1NO	230	115	1	PLS + 32 10 230 A	**686115**	12
	32A	1NO	240	120	1	PLS + 32 10 240 A	**686116**	12
	32A	2NO	8	-	1	PLS + 32 20 008 A	**686118**	12
	32A	2NO	12	6	1	PLS + 32 20 012 A	**686119**	12
	32A	2NO	24	12	1	PLS + 32 20 024 A	**686120**	12
	32A	2NO	48	24	1	PLS + 32 20 048 A	**686121**	12
	32A	2NO	115	48	1	PLS + 32 20 115 A	**686122**	12
	32A	2NO	230	115	1	PLS + 32 20 230 A	**686123**	12
	32A	2NO	240	120	1	PLS + 32 20 240 A	**686124**	12
Add-on power contact	16A	2NO	-	-	1	PLS + 16 20	**686100**	10
	16A	1NO 1NC	-	-	1	PLS + 16 11	**686085**	10
	16A	2CO	-	-	1	PLS + 16 2	**686101**	10
	32A	2NO	-	-	1	PLS + 32 20	**686117**	10
Step by step multi circuit	16A	2NO	12	6	1	PLS + SA 16 20 012 A	**686182**	12
	16A	2NO	24	12	1	PLS + SA 16 20 024 A	**686183**	12
	16A	2NO	48	24	1	PLS + SA 16 20 048 A	**686184**	12
	16A	2NO	230	115	1	PLS + SA 16 20 230 A	**686185**	12
	16A	2NO	240	120	1	PLS + SA 16 20 240 A	**686186**	12
	16A	2NO	12	6	1	PLS + SB 16 20 012 A	**686187**	12
	16A	2NO	24	12	1	PLS + SB 16 20 024 A	**686188**	12
	16A	2NO	48	24	1	PLS + SB 16 20 048 A	**686189**	12
	16A	2NO	230	115	1	PLS + SB 16 20 230 A	**686190**	12
	16A	2NO	240	120	1	PLS + SB 16 20 240 A	**686191**	12
All-in central command	16A	1NO	8	-	1	PLS + C 16 10 008 A	**686132**	12
	16A	1NO	12	6	1	PLS + C 16 10 012 A	**686133**	12
	16A	1NO	24	12	1	PLS + C 16 10 024 A	**686134**	12
	16A	1NO	48	24	1	PLS + C 16 10 048 A	**686135**	12
	16A	1NO	230	115	1	PLS + C 16 10 230 A	**686136**	12
	16A	1NO	240	120	1	PLS + C 16 10 240 A	**686137**	12

SA= 0-A-0-B-0
SB =0-A-AB-B-0

32A other version available on request.
Terminal identification, see page D.52

Pulsar S - Impulse switches

	Nominal current	Contact combination	Coil voltage AC	Coil voltage DC	No. of Modules	Cat. No.	Ref. No.	Pack.
All-in central command (continued)								
	16A	1CO	8	-	1	PLS + C 16 1 008 A	**686126**	12
	16A	1CO	12	6	1	PLS + C 16 1 012 A	**686127**	12
	16A	1CO	24	12	1	PLS + C 16 1 024 A	**686128**	12
	16A	1CO	48	24	1	PLS + C 16 1 048 A	**686129**	12
	16A	1CO	230	115	1	PLS + C 16 1 230 A	**686130**	12
	16A	1CO	240	120	1	PLS + C 16 1 240 A	**686131**	12
	16A	2NO	8	-	1.5	PLS + C 16 20 008 A	**686144**	8
	16A	2NO	12	6	1.5	PLS + C 16 20 012 A	**686145**	8
	16A	2NO	24	12	1.5	PLS + C 16 20 024 A	**686146**	8
	16A	2NO	48	24	1.5	PLS + C 16 20 048 A	**686147**	8
	16A	2NO	230	115	1.5	PLS + C 16 20 230 A	**686148**	8
	16A	2NO	240	120	1.5	PLS + C 16 20 240 A	**686149**	8
	16A	2CO	8	-	1.5	PLS + C 16 2 008 A	**686138**	8
	16A	2CO	12	6	1.5	PLS + C 16 2 012 A	**686139**	8
	16A	2CO	24	12	1.5	PLS + C 16 2 024 A	**686140**	8
	16A	2CO	48	24	1.5	PLS + C 16 2 048 A	**686141**	8
	16A	2CO	230	115	1.5	PLS + C 16 2 230 A	**686142**	8
	16A	2CO	240	120	1.5	PLS + C 16 2 240 A	**686143**	8
	16A	3CO	8	-	2	PLS + C 16 3 008 A	**686150**	6
	16A	3CO	12	6	2	PLS + C 16 3 012 A	**686151**	6
	16A	3CO	24	12	2	PLS + C 16 3 024 A	**686152**	6
	16A	3CO	48	24	2	PLS + C 16 3 048 A	**686153**	6
	16A	3CO	230	115	2	PLS + C 16 3 230 A	**686154**	6
	16A	3CO	240	120	2	PLS + C 16 3 240 A	**686155**	6
	32A	1NO	8	-	1	PLS + C 32 10 008 A	**686156**	12
	32A	1NO	12	6	1	PLS + C 32 10 012 A	**686157**	12
	32A	1NO	24	12	1	PLS + C 32 10 024 A	**686158**	12
	32A	1NO	48	24	1	PLS + C 32 10 048 A	**686159**	12
	32A	1NO	230	115	1	PLS + C 32 10 230 A	**686160**	12
	32A	1NO	240	120	1	PLS + C 32 10 240 A	**686161**	12
	32A	2NO	8	-	1.5	PLS + C 32 20 008 A	**686162**	8
	32A	2NO	12	6	1.5	PLS + C 32 20 012 A	**686163**	8
	32A	2NO	24	12	1.5	PLS + C 32 20 024 A	**686164**	8
	32A	2NO	48	24	1.5	PLS + C 32 20 048 A	**686165**	8
	32A	2NO	230	115	1.5	PLS + C 32 20 230 A	**686166**	8
	32A	2NO	240	120	1.5	PLS + C 32 20 240 A	**686167**	8
	32A	3NO	8	-	2	PLS + C 32 30 008 A	**686168**	6
	32A	3NO	12	6	2	PLS + C 32 30 012 A	**686169**	6
	32A	3NO	24	12	2	PLS + C 32 30 024 A	**686170**	6
	32A	3NO	48	24	2	PLS + C 32 30 048 A	**686171**	6
	32A	3NO	230	115	2	PLS + C 32 30 230 A	**686172**	6
	32A	3NO	240	120	2	PLS + C 32 30 240 A	**686173**	6
Permanent use	16A	2NO	24	12	1	PLS + PU 16 20 024 A	**686178**	12
	16A	2NO	230	115	1	PLS + PU 16 20 230 A	**686179**	12
	16A	2CO	24	12	1	PLS + PU 16 2 024 A	**686176**	12
	16A	2CO	230	115	1	PLS + PU 16 2 230 A	**686177**	12
2NO 2CO 4NO	16A	4NO	24	12	2	PLS + PU 16 40 024 A	**686180**	6
	16A	4NO	230	115	2	PLS + PU 16 40 230 A	**686181**	6
 **Add-on auxiliary contact**	5A	1NO 1NC	-	-	0.5	CTX + R 5 11	**686067**	16
	5A	2NO	-	-	0.5	CTX + R 5 20	**686068**	16
	5A	2NC	-	-	0.5	CTX + R 5 02	**686066**	16
 **Add-on central control**	-	-	-	-	0.5	PLS + C	**686125**	16
 **Multilevel central command module**	-	-	-	-	1	PLS + M	**686175**	12
SurgeGuard safety module	-	-	230/240	-	1	PLS + SG	**686192**	12
 **Capacity module**	-	-	230/240	-	1	PLS + CAP	**686174**	12
Spacer	-	-	-	-	0.5	PLS + / CTX + SP	**686069**	50
Sealing cap	-	-	-	-	1	PLS + / CTX + TS 1	**686070**	50

Terminal identification, see page D.52

Staircase switches

Pulsar TS

Function

Push-button operated single-shot timer, switching the power to the load after the push-button has been pushed briefly, and switching off again after the presetted time has elapsed.
Energy saving: the PLTS + TD is especially developed to switch off during the preset time when the staircase switch receives a new impulse.

Applications

Lighting or ventilation of staircases, basements, halls, etc.

Features

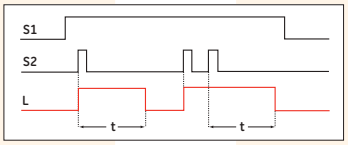
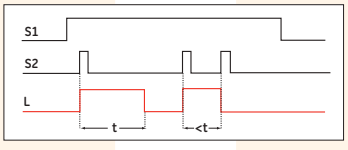
- Designed for a real 3.500W switching capacity.
- User adjustable time.
- Electromechanical contact and electronic timer with manual override off or on possible at all time for PLTS + M.
- 3 or 4 wire wiring possible.
- Device for pre-extinction warning adjustable from 20 to 40 sec only for incandescence sources.
- Safety terminals equipped with captive Pozidriv screws and IP20 protection degree.
- Anti vandalisme: resistant to blocked push-buttons.

Standards

EN 60669-2-3

CE

Pulsar TS - Staircase switches

		Nominal current	Contact combination	Coil voltage AC	Coil voltage DC	Number of Modules	Cat. No.	Ref. No.	Pack.
	Staircase switch	16	1NO	230	-	1	PLTS + M	**686216**	12
									
	Dimmer for staircase switch	16	3500W	230	-	1	PLTS + D	**686214**	12
		To be used only in combination with the staircase switch. Wiring diagram on page D.17							
	Time-delay impulse relay	16	1NO	230	-	1	PLTS + TD	**666311**	12
									

Terminal identification, see page D.53

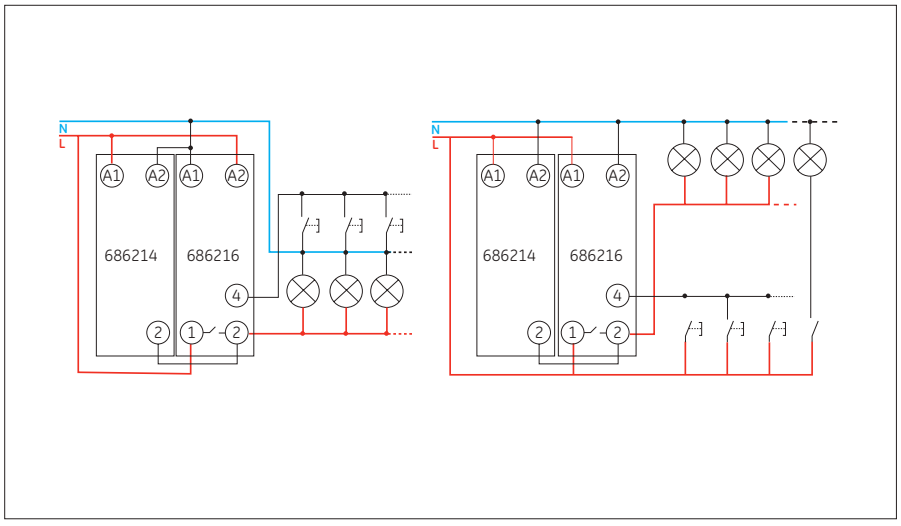
More technical data website
Dimensions pg D.57

Performance

			PLTS + TD	PLTS + M	PLTS + D
Rated current (acc. IEC 669-2-3)		A	16	16	16
Width (in number of DIN-modules)			1	1	1
Contacts	NO		1	1	1
Time range	1 function		1mn / 20mn	30s / 15mn	20s / 40s
Supply voltage	230V - 50/60 Hz		yes	yes	yes
	24VAC/24VDC		on request	on request	on request
Supply voltage range (in % of Un)		%	90-110	90-110	90-110
Rated power consumption					
Closed circuit current	230V	VA	4.0	4.0	4.0
Working current (ignition and running)	230V	VA	4.0	4.0	4.0
Light types					
Incandescent lamps			yes	yes	yes
Fluorescent lamps			yes	yes	no
Switching capacity					
AC-5b Incandescent lamps (40 to 200 W lamps)		W	3,500	3,500	3,500
Fluorescence compensated (cos φ = 0.9)					
	Serial compensation	W	3,500	3,500	n/a
	Parallel compensation	VA	2,500	2,500	n/a
Lifetime (in number of operations)(1)					
Electrical (AC-1)	at 1.200 W		2×10^6	2×10^6	2×10^6
	at full load		1×10^6	3×10^5	3×10^5
Mechanical			1×10^7	1×10^7	1×10^7
Max. number of push-buttons					
Non illuminated push-buttons			unlimited	unlimited	unlimited
Luminous push-buttons (0.6mA):					
4 terminals			unlimited	unlimited	unlimited
3 terminals	Without compensator		39	83	83
	1 compensator (2µF)(2)		45	300	300
	2 compensators (2 x 2µF)		59	600	600
General specifications					
DIN rail mounting			yes	yes	yes
Silent operations			yes	yes	yes
Setting accuracy - Full range		%	+/- 15	+/- 15	+/- 15
3-wire and 4-wire installation			yes	yes	yes
Resistent to blocked push-buttons			yes	yes	yes
Continuously adjustable time-lag			yes	yes	yes
Manual switching (number of positions)			2	3	-
Front switch-off lever			yes	yes	-
Clamping screw terminals, unloosable screws			yes	yes	yes
Cable cross section (Ø min/max)	Coil	mm²	1.5 / 10	1.5 / 10	1.5 / 10
	Load	mm²	1.5 / 10	1.5 / 10	1.5 / 10
Maximum torque on terminals		N x m	1	1	1
Ambient temperature at installation point (min./max.)		°C	-20 / +45	-20 / +45	-20 / +45

(1) cycle = 2 operations per pole (closing + opening)
(2) See page D.15: code 686174

Wiring diagram



Time Relays

Pulsar T

Function

Conditioning of incoming source to exact predictable output.

Applications

From the delayed lighting of driveways (to avoid unneccessary on/off switching), to after-circulation of a pump (to build in some hysteresis, again to avoid continuous on/off switching) to the post-present ventilation of a meeting room.

Features

- Devices with delay on (ON), delay off (OFF), combined on-off-delay (ON/OFF), astable (AS), positive edge single shot (PS) negative edge single shot (NS) and even with all the above combined in one multi-function (MF) device are available.
- User presettable prescaler and time.
- In the case of the multi-function relay, the function itself is also user selectable.
- The loss-proof safety terminals are equipped with Pozidriv screws and have IP20 protection degree.

Standards

IEC 60669-2-3

CE

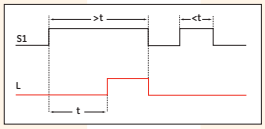
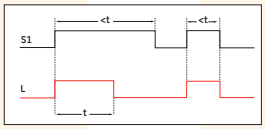
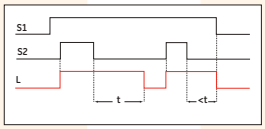
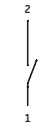
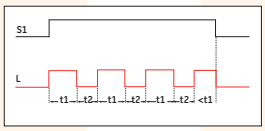
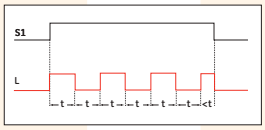
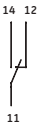
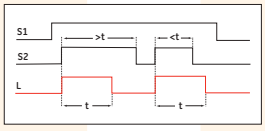
Performance

			PLT + AS	Other PLT +
Rated current (acc. IEC 669-2-3)		A	1 (static)	16
Width (number of DIN-modules)			1	1
Contacts	Changeover		-	1
	Static input		1	-
Time range	1 function		0.1s./ 60s.	1s / 60mn
	Multifunction		no	0.1s. / 20h.
Supply voltage	230/240V - 50/60 Hz		yes	yes
	24VAC/24VDC		yes	yes
Supply voltage range (in % of Un)		%	90-110	90-110
Rated power consumption				
Closed circuit current	230V	VA	4.0	1.5
	24V	VA	-	0.2
Working current(ignition and running)	230V	VA	4.0	4.0
	24V	VA	-	2.0
Light types				
Incandescent lamps			yes	yes
Fluorescent lamps			yes	yes
Switching capacity				
AC-5b Incandescent lamps (40 to 200 W lamps)		W	2,300	2,300
Fluorescence compensated (cos φ =0.9)				
	Serial compensation	W	-	2,300
	Parallel compensation	VA	-	1,000
Inductive load cos φ =0.5			230W	10A
	Load AC-7b	W	-	900
Lifetime (in number of operations) (1)				
Electrical (AC-1)	at 1,200 W		2×10^6	2×10^6
	at full load		1×10^6	3×10^5
Mechanical			1×10^7	1×10^7
General specifications				
DIN rail mounting			yes	yes
Silent operations			yes	yes
Setting accuracy - Full range		%	+/- 15	+/- 15
Continuously adjustable time-lag			yes	yes
Front switch-off lever			yes	no
Clamping screw terminals, unlosable screws			yes	yes
Cable cross section (Ø min/max)	Coil	mm^2	1.5 / 10	1.5 / 10
	Load	mm^2	1.5 / 10	1.5 / 10
Maximum torque on terminals		N x m	1	1
Ambient temperature at installation point (min./max.)		°C	-20 / +45	-20 / +45

(1) cycle = 2 operations per pole (closing + opening)

More technical data website
Dimensions pg D.57

Pulsar T - Time Relays

	Nominal current	Contact combination	Coil voltage AC	Coil voltage DC	No. of Modules	Cat. No.	Ref. No.	Pack.
Delay on								
	Operating scale from 1 sec. up to 60 seconds							
	16 A	1 CO	24	24	1	PLT + ON 024U 1-60S	**686207**	12
	16 A	1 CO	230	-	1	PLT + ON 230A 1-60S	**686209**	12
	Operating scale from 1 min. up to 60 minutes							
	16 A	1 CO	24	24	1	PLT + ON 024U 1-60M	**686206**	12
	16 A	1 CO	230	-	1	PLT + ON 230A 1-60M	**686208**	12
								
Positive edge single shot								
	Operating scale from 1 sec. up to 60 seconds							
	16 A	1 CO	24	24	1	PLT + PS 024U 1-60S	**686211**	12
	16 A	1 CO	230	-	1	PLT + PS 230A 1-60S	**686213**	12
	Operating scale from 1 min. up to 60 minutes							
	16 A	1 CO	24	24	1	PLT + PS 024U 1-60M	**686210**	12
	16 A	1 CO	230	-	1	PLT + PS 230A 1-60M	**686212**	12
								
Delay off								
	Operating scale from 1 sec. up to 60 seconds							
	16 A	1 CO	24	24	1	PLT + OF 024U 1-60S	**686203**	12
	16 A	1 CO	230	-	1	PLT + OF 230A 1-60S	**686205**	12
	Operating scale from 1 min. up to 60 minutes							
	16 A	1 CO	24	24	1	PLT + OF 024U 1-60M	**686202**	12
	16 A	1 CO	230	-	1	PLT + OF 230A 1-60M	**686204**	12
								
Asymmetrical flasher	1 A	1 NO	230	-	1	PLT + AS 230A	**686195**	12
								
Symmetrical flasher	16 A	1 CO	24	24	1	PLT + SS 024U	**686218**	6
	16 A	1 CO	230	-	1	PLT + SS 230A	**686219**	6
								
Impulse generator	16 A	1 CO	24	24	1	PLT + IG 024U	**686196**	6
	16 A	1 CO	230	-	1	PLT + IG 230A	**686197**	6
								
Multifunction	**Operating scale from 0.1 sec. up to 60 minutes**							
	16 A	1 CO	24	24	1	PLT + MF 024U 0.1S-60M [1]	**686198***	1/6
	16 A	1 CO	230	-	1	PLT + MF 230A 0.1S-60M [1]	**686200***	1/6
*	**Operating scale from 30 sec. up to 20 hours**							
	16 A	1 CO	24	24	1	PLT + MF 024U 30S-20H [1]	**686199***	1/6
	16 A	1 CO	230	-	1	PLT + MF 230A 30S-20H [1]	**686201***	1/6

(1) PLT + MF = Multifunction, including functions PLT + ON, PLT + OF and PLT + PS.
Terminal identification, see page D.53

Function

Pre-programmed switching of all kinds of electrical devices.

Classic

Features

Very easy programming by means of mechanical switches on a dial, but with restricted possibilities compared to the digital time switches. Both devices with 1 dial for programming of daily or weekly events, as well as devices with 2 dials for 2 channel daily events and combined daily and weekly events are available in 2 versions: quartz and net synchronised, with and without running reserve respectively. Manual override Off or On is possible at all times. All devices are sealable.

Applications

Going from the pre-programmed switching of lighting (car park, advertising signs, public roads, etc.) over pre-programmed switching of heating equipment (home and work-environment, waterheating, etc.), to the pre-programmed switching of motors for pumps and fans and even to presence simulation.

Standards

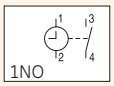
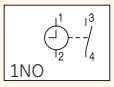
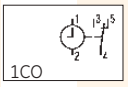
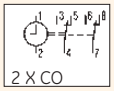
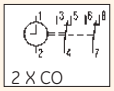
VDE 0633, BS EN 60730-1, BS EN 60730-2-7

Performance

	Plastic switches			
	Net synchronised 1 module	**Net synchronised 3 and 6 modules**	**Quartz synchronised 1 module**	**Quartz synchronised 3 and 6 modules**
Contact	Voltage free NO	Voltage free CO	Voltage free NO	Voltage free CO
Fix on, Fix off, Auto switch	Not fix off	yes	Not fix off	yes
Rated switching capacity				
- Resistive load	16A/250V	16A/250V	16A/250V	16A/250V
- Inductive load (cos φ = 0.6)	4A/250V	4A/250V	4A/250V	4A/250V
- Incandescent lamps	1000W	1350W	1000W	1350W
Shortest switching time day-program	30min.	30min.	30min.	30min.
Shortest switching time week-program	-	3h	-	3h
Screws	Pozidriv 1	Pozidriv 1	Pozidriv 1	Pozidriv 1
Terminal capacity: min	1x0.5mm²	1x0.5mm²	1x0.5mm²	1x0.5mm²
max	1x6 or 2x2.5mm²	1x6 or 2x2.5mm²	1x6 or 2x2.5mm²	1x6 or 2x2.5mm²
Clockwork				
Operating voltage	220 - 240V 50Hz	220 - 240V 50Hz	230V - 130VDC	230V - 130VDC
Own consumption at 230V	*1VA*	1VA	1VA	1VA
Running reserve	-	-	150h	150h
Battery charging time	-	-	70h	70h
Operating temperature range	-20 to +55°C	-20 to +55°C	-20 to +55°C	-20 to +55°C
Accuracy	net synchronised	net synchronised	±2.5s./day at 20°C	±2.5s./day at 20°C
Sealable	yes	yes	yes	yes
Screws	Pozidriv 1	Pozidriv 1	Pozidriv 1	Pozidriv 1
Terminal capacity: min	1x0.5mm²	1x0.5mm²	1x0.5mm²	1x0.5mm²
max	1x6 or 2x2.5mm²	1x6 or 2x2.5mm²	1x6 or 2x2.5mm²	1x6 or 2x2.5mm²

More technical data ● website
Dimensions ● pg D.58

Classic - Analogue time switches

	Program	No. of channels	Nominal current	Operating voltage	Running reserve	Shortest switch time	Fix on/off auto	No. of mod.	Cat. No.	Ref. No.	Pack.
NET SYNCHRONISED											
Day programmable	1x24x2	1NO	16A/250V	220 ... 240V 50Hz	-	30min.	Not "OFF"	1	CLS S 11 D	**666111**	1
	1x24x2	1CO	16A/250V	220 ... 240V 50Hz	-	30min.	yes	3	CLS S 31 D	**666112**	1
	 1NO	1CO									
Week programmable	7x24/3	1CO	16A/250V	220 ... 240V 50Hz	-	3h	yes	3	CLS S 31 W	**666114**	1
	1CO										
QUARTZ SYNCHRONISED											
Day programmable	1x24x2	1NO	16A/250V	130VDC/ 230V	50h	30min.	Not "OFF"	1	CLS Q 11 D	**666105**	1
	1x24x2	1CO	16A/250V	130VDC/ 230V	150h	30min.	yes	3	CLS Q 31 D	**666104**	1
	 1NO	 1CO									
Week programmable	7x24/3	1CO	16A/250V	130VDC/ 230V	150h	3h	yes	3	CLS Q 31 W	**666109**	1
	1CO										
Day-Day programmable	1x24x2 + 1x24x2	2CO	16A/250V	130VDC/ 230V	150h	30/30min.	yes	6	CLS Q 62 DD	**666103**	1
	 2 X CO										
Day-Week programmable	1x24x2 + 7x24/3	2CO	16A/250V	130VDC/ 230V	150h	30min./3h	yes	6	CLS Q 62 DW	**666108**	1
	 2 X CO										

Accessories

	No. of mod.	Cat. No.	Ref. No.	Pack.
Surface mounting set	1	SMS 1	**666100**	1
	3	SMS 3	**666101**	1
	6	SMS 6	**666102**	1

Digital Time Switches

Galax

Applications

Going from the pre-programmed switching of lighting (car park, advertising signs, public roads, etc.) over pre-programmed switching of heating equipment (home and work environment, water heating, etc.), to the pre-programmed switching of motors for pumps and fans and even to random presence simulation.

Features

Very easy programming, with quasi unlimited possibilities compared to the analogue time switches. Devices with daily, weekly and yearly event programming possibilities are available in 1, 2 up to 8 channel execution.
All devices have a shortest switching time of one minute, some of them even one second, and are all internally quartz-synchronized, some of them with the possibility of being DCF77-synchronized. On all devices, the summer/winter time change is fully automatic. Devices with block-programming, holiday, random and impulse-function are available. Manual On or Off override is possible at all times and all devices are sealable.
ASTRO timers are specially designed for lighting applications. Only the longitude and latitude need to be entered for precice automatic determination of the times for sunrise and sunset.

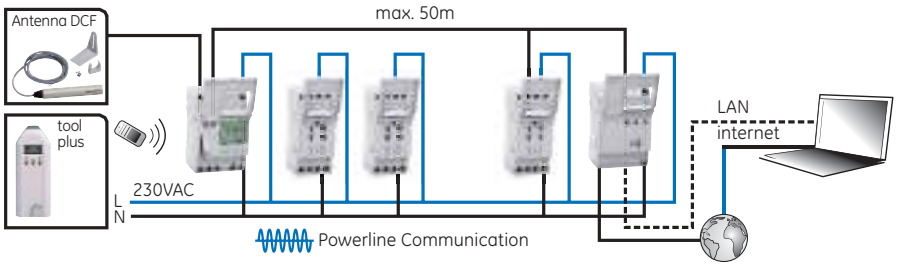
Function

Pre-programmed switching of all kinds of electrical devices.

Standards

BS EN-60730-1, BS EN-60730-2-7,
VDE 0633

Example of the system solution for new timers GLX Q32 V800 with extention channels GLX Q22 CE and LAN device GLX Q30



Performance

	GLX Q ## W 70 / ASTRO 1, 2 CO	GLX Q ## W 100C 1 CO: 1 CO + 1 NO	GLX Q 32 / GLX 22CE[2] 2 CO (up to 8 CO)
Contact	Voltage-free changeover	Voltage-free changeover	Voltage-free changeover
Rated switching capacity			
- Resistive load	16A/250V	16A/250V	16A/250V
- Inductive load (cos φ = 0.6)	10A/250V	10A/250V	10A/250V
- Incandescent lamps	2600W	2600W	2600W
Fluorescent uncorrected / serial corrected	1000VA	1000VA	1000VA
- Halogen lamp load	2600W	2600W	2600W
- Compact fluorescent lamp	22 x 7W, 18 x 11W, 16 x 15W, 16 x 20W, 14 x 23W		
- Energy saving lamps	37 x 7W, 30 x 11W, 26 x 15W, 26 x 20W, 11 x 23W		
Minimum switching load	300mW	300mW	500mW
DC switching capacity 24V / 50V / 220V	800mA / 300mA / 150mA	800mA / 300mA / 150mA	800mA / 300mA / 150mA
Shortest switching time	1min.	1min./1s (pulse and cycle)	1min./1s (pulse and cycle)
Screws	Pozidriv 1	Pozidriv 1	Pozidriv 1
Terminal capacity:	1-4mm²	1-4mm²	1-4mm²
Clockwork			
Operating voltage	110-230VAC	24VAC/DC; 110-230VAC	230V 50-60Hz
Own consumption at 230V	1VA	1VA	5VA
Running reserve (at 20° C)	3 years at 20°C	10 years at 20°C	3 years at 20°C
Battery type	CR2032	CR2450	CR2032
Operating temperature range	-25[1] to +55°C	-25 to +55°C	-10 to +55°C
Accuracy	±0.5s/day at 20°C	±0.3s/day at 20°C	±1s/day at 20°C
Sealable and unloosable cover	yes	yes	yes

More technical data ● website
Dimensions ● pg D.58

(1)Limited display readability possible but full functionality guaranteed
(2)GLX 22 CE has got the same switching capacity

New

Galax - Digital time switches

QUARTZ SYNCHRONISED

	Programme	No. of channels	Switching capacity	Operating voltage	Running reserve	Shortest switch time	No. of prog. steps	No. of mod.	Cat. No	Ref. No.	Pack.
Week programmable	7x24h	1CO	16A/250V	110-230V	3yr	1min.	70	2	GLX Q 21 W 70	**666312**	1
	7x24h	2CO	16A/250V	110-230V	3yr	1min.	70	2	GLX Q 22 W 70	**666313**	1
	7x24h	1CO	16A/250V	110-230V	10yr	1s	100	2	GLX Q 21 W 100C	**666314**	1
	7x24h	1CO+1NO	16A/250V	110-230V	10yr	1s	100	2	GLX Q 22 W 100C	**666315**	1

For 2 modules timers
- Display lighting
- PIN-code
- Hour counter with service function
- 12/24h time setting
- Weekly and holiday program (ON/OFF)
- Free weekdays block formation
- Summer/winter time changeover: auto/free selectable/OFF
- Manual switch: auto/override/fix ON-OFF
- Non-volatile memory (EEPROM)
- Easy battery replacement (from top side)

Additional functions only for 666314 and 666315
- Pulse and cycle function with shortest switching time 1s
- Random switching up to 30min.
- External input (override, countdown, pulse counter)
- PC-supported programm creation (with use of GLX PRG)

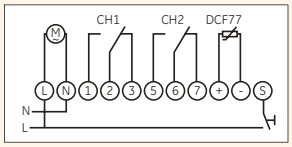
ASTRO/Holiday programm.	-	1CO	16A/250V	110-230V	3yr	1min.	70	2	GLX Q 21 70 ASTRO	**666348**	1
	-	2CO	16A/250V	110-230V	3yr	1min.	70	2	GLX Q 22 70 ASTRO	**666349**	1

- ASTRO function
- Entering lonaitude / latitude or selecting cities from stored list
- Auto offset
- Nighttime switching - off
- Non-volatile memory (EEPROM)
- Easy battery replacement (from top side)
- Summer/winter time changeover: auto/free selectable/OFF
- Display lighting
- PIN-code
- Hour counter with service function
- 12/24h time setting
- Holiday program
- Free weekdays block formation

QUARTZ SYNCHRONISED

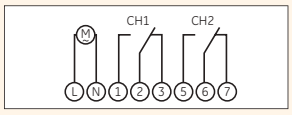
Day/Week/Year programmable	365x24x3600	2CO	16A/250V	220...240V	3yr	1s	800	3	GLX Q 32 Y 800	**666351**	1

- 800 memory spaces
- Date-dependent programming
- Expandable to up to 8 channels
- Exchangeable battery
- PIN code secured, tamper-proof
- External output with pulse meter, count-down timer and override
- Operating hour counter with reset function
- ON/OFF, pulse and cycle functions
- PC-assisted program generation
- DCF antenna for exact time synchronization (Not needed when LAN unit is used)
- Program transmission via GLX PRG or with GLX LAN via a LAN network or internet
- Communication with channel extensions and LAN module via Powerline GPL
- Channel extensions and LAN module can be placed in different switch cabinets
- Notification of service messages to support problem-free maintenance (Only when LAN unit is used)
- Programming in 7 languages



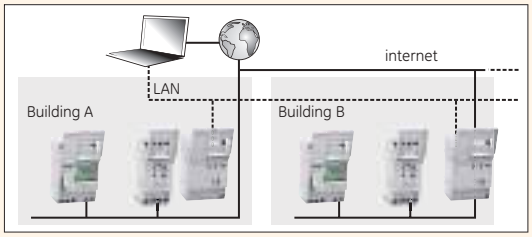
Channel extension		2CO	16A/250V	220...240V				2	GLX 22 CE	**666352**	1

The channel extensions allow the annual time switch to be expanded to a complete mini control system of up to 8 channels. The connected channel extensions receive their switching commands via the Powerline. This allows the GLX CE to be mounted in different switch cabinets at a distance of up to 50m from the main unit.
The switching status is displayed on the channel extension.



LAN device				220...240V				3	GLX 30 LAN	**666353**	1

- Communication with GLX Q 32 Y800 via Powerline
- Integrated web server
- Upload/Download/Monitoring of switching programs
- Alarm function
- Time synchronization via internet
- LAN/Internet communication
- Static and dynamic IP addressing
- Ethernet Port: 10Base T
- Ethernet connection: RJ-45
- Supported network protocols: TCP, UDP, ARP, ICMP, TFTP, DHCP, NBNS,HTTP, SMTP and NTP



Accessories

		No. of mod.	Cat. No.	Ref. No.	Pack.
	DCF-77 antenna for GLX Q 32 Y800	-	GLX DCF	**666181**	1

- Maximum cable length: 300 metres
- Can be used outdoors (IP 54)

Programming tools for timers GLX Q W100C / GLX Y 800	-	GLX PRG	**666354**	1

Including also: - mini CD with PC software and manuals
- connection cable for connection PC to GLX PRG
- Hand-held programming device, transfers date/time and a maximum of 4 programs
- Stores programs in EEPROM; bidirectional serial part
- Transmission/reception of programs

Programming languages: - GLX Q W70 / Astro in DE/EN-FR/IT-ES/PT-NL/PL
- GLX Q W100C; GLX Q Y 800; GLX PRG in DE-EN-FR-IT-ES-NL
Electronic manuals for the other languages available on the request.

New

Time Switches

72 X 72 Classic and Galax

Applications

Going from the pre-programmed switching of lighting (car park, advertising signs, public roads, etc.) over pre-programmed switching of heating equipment (home and work environment, water heating, etc.), to the pre-programmed switching of motors for pumps and fans and even to random presence simulation.

Features

Very easy programing by means of mechanical switches or digital buttons. Devices with daily and weekly event programing possibilities. Analogue devices have a shortest switching time of 15 minutes and digital device has 1 minute.

Function

Pre-programmed switching of all kind of electrical devices.

Performance

	Weekly timers		Daily timers	Daily/Week timer
Code	666176	666175	666178	666179
Type	CLS 72Q41W	CLS72S41W	CLS72Q41D	GLX72Q41DW
Running reserve	150h	-	150h	3yr.
Shortest switch time	2h	2h	15min	1min
Modules	4	4	4	4
Nominal current	16A/250V	16A/250V	16A/250V	16A/250V
Accuracy	<2.5s/day	<2.5s/day	<2.5s/day	<2.5s/day
Number of channels	1CO	1CO	1CO	1CO
Operating voltage	220-240VAC/50-60Hz	220-240VAC/50-60Hz	220-240VAC/50-60Hz	220-240VAC/50-60Hz
Fix on/off auto	yes	yes	yes	yes
Flush mounting	yes	yes	yes	yes
Surface mounting	yes	yes	yes	yes
DIN-rail mounting	yes	yes	yes	yes
Number of memory position	-	-	-	50

More technical data ● website
Dimensions ● pg D.59

72 X 72 Classic - Analogue time switches

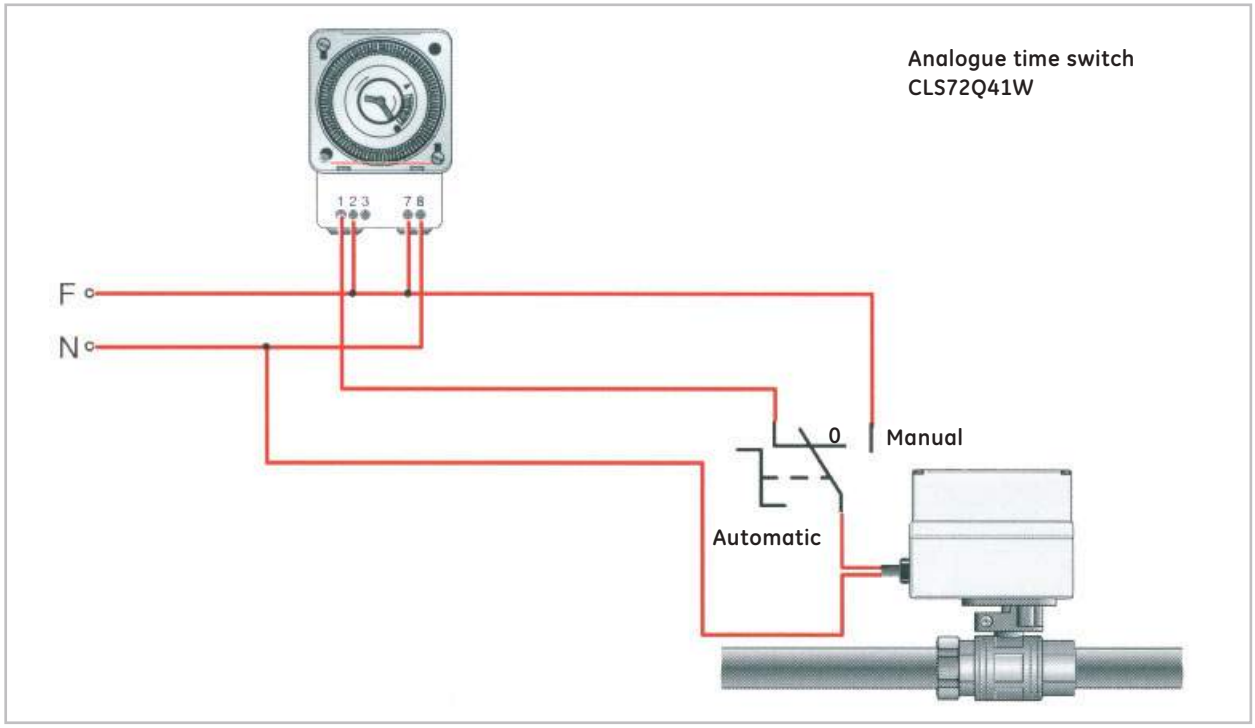
	Program	No. of channels	Nominal current	Operating voltage	Running reserve	Shortest switch time	Fix on/off auto	No. of mod.	Cat. No.	Ref. No.	Pack.
Day program	1x24	1CO	16A/250V	220...240VAC	150 h	15 min	yes	4	CLS72Q41D	**666178**	1
Week program	7x24	1CO	16A/250V	220...240VAC	-	2 h	yes	4	CLS72S41W	**666175**	1
	7x24	1CO	16A/250V	220...240VAC	150 h	2 h	yes	4	CLS72Q41W	**666176**	1

72 X 72 Galax - Digital time switches

	Program	No. of channels	Nominal current	Operating voltage	Running reserve	Shortest switch time	Fix on/off auto	No. of mod.	Cat. No.	Ref. No.	Pack.
Day-Week program	1x24/7x24	1CO	16A/250V	220 240VAC	3 yr.	1 min	yes	4	GLX72Q41DW	**666179**	1

- Easy to use
- Text programming in different languages (D, GB, F, E, I, P, Cz, NL)
- Summer/winter time change is fully automatic
- Switching capacity for inductive load 8A/250V

Example of application



Light Sensitive Switches

Galax LSS

Applications

Control of lighting in shop windows, offices, car parking areas, controlling street lights, advertising signs, sun blinds, shutters, or even lighting in a home to simulate the presence of people.

Features

User presettable switch light intensity, intensity range and hysteresis (to avoid on/off a stable behavior). Reaction time is also user presettable. 1 channel and 2 channel with week-cycle, all with separate photocell are available besides a 1 channel all-in-one device.

Function

Electronic switch controlled by the intensity of the ambient light, detected by a separate or integrated photocell (depending on the model). When the light intensity drops below the threshold setting, the switch changes its state to the on position. An increasing ambient light intensity eventually will switch off the device again.

Standards

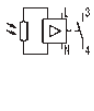
VDE 0632, VDE 0633,
BS EN 60669-1

Performance

	LSS 11 1 channel	**LSS 32 2 channel**	**LSS 31 LS 1 1 channel + digital time switch**	**LSS W 1 channel wall mounting**
Contact	1 make contact NO	Voltage-free changeover	Voltage-free changeover	1 make contact NO
Switching capacity				
- Resistive load	16A/250V	10A/250V	16A/250V	10A/250V
- Inductive load (cos φ = 0.6)	8A/250V	8A/250V	10A/250V	2A/250V
- Incandescent lamps	2000W	2000W	2600W	1200W
DC Switching capacity	800mA at 24V, 300mA at 60V; 150mA at 220V			Not allowed
Shortest switching time	-	-	1min.	-
Screws	Pozidriv 1	Pozidriv 1	Pozidriv 1	Slot head
Terminal capacity: min	1x0.5mm²	1x0.5mm²	1x0.5mm²	1x0.5mm²
max.	1x6mm² or 2x2.5mm²	1x6mm² or 2x2.5mm²	1x4mm²	1x6mm² or 2x2.5mm²
Operating voltage	220/240V 50/60Hz	230/240V 50/60Hz	230V 50/60Hz	220/240V 50/60Hz
Own consumption at 230V	5VA	2.5VA	5VA	6VA
Running reserve	-	-	3 years at 20°C	-
Battery	-	-	Lithium	-
Operating temperature range	-20 to +55°C	-20 to +55°C-	-10 to +55°C	-35 to +60°C-
Accuracy	-	-	±1s/day at 20°C	-
Sealable	yes	yes	yes	-
Screws	Pozidriv 1	Pozidriv 1	Pozidriv 1	Slot head
Terminal capacity: min	1x0.5mm²	1x0.5mm²	1x0.5mm²	1x0.5mm²
max.	1x6mm² or 2x2.5mm²	1x6mm² or 2x2.5mm²	1x6mm² or 2x2.5mm²	1x6mm² or 2x2.5mm²
Light sensitive operating part				
Light intensity switching range	2 to 500 lux	2 to 500 lux	2 to 500 lux	2 to 2000 lux
Switching hysteresis		30% above On-switching point		
On/Off switching delay	100s On 100s Off	Use presettable from 0 to 100s	Use presettable from 0 to 100s	20 to 120s
Light sensitive sensor wire-length	max. 100m	max. 100m	max. 100m	-
Light sensitive sensor protection degree	IP65	IP65	IP65	IP54 (complete device)
Operating temperature range	-30 to +70°C	-30 to +70°C	-30 to +70°C	-35 to +60°C
Terminal capacity: min	2x0.75mm²	2x0.75mm²	2x0.75mm²	-

More technical data ● website
Dimensions ● pg D.59

Galax LSS - Light Sensitive Switches

	Programme	No. of channels	Nominal current	Operating voltage	No. of modules	Cat. No.	Ref. No.	Pack.
DIN-rail mounting, separate photocell included 	2 to 500 lux	1NO	16A/250V	230V	1	LSS 11	**666361**	1
	2 to 500 lux	2CO	16A/250V	230V	3	LSS 32	**666362**	1
Wall mounting, photocell incorporated	2 to 2000 lux	1NO	16A/250V	230V	-	LSS W	**666364**	1

GALAX – Light Sensitive Switches with digital timer

	Programme	Number of channels	Nominal current	Operating voltage	Running reserve	Shortest switch time	No. of program steps	No. of mod.	Cat. No.	Ref. No.	Pack.
DIN rail mounting, separate photocell included with digital timer	2 to 500 lux and 7x24x60	1CO	16A/250V	230V	3yr	1 min.	50	3	LSS 31 LS 1[1]	**666365**	1

- Automatic summer time / winter time changeover
- Manual switch: FIX ON / FIX OFF
- Free weekday black formation
- Non-volatile memory (EEPROM)

Accessories

		No. of modules	Cat. No.	Ref. No.	Pack.
Photocell (spare part)	Ambient temperature: -30°C to +70°C	-	LSS LDR	**666358**	1
Surface mounting set		1	SMS 1	**666100**	1
		3	SMS 3	**666101**	1
		6	SMS 6	**666102**	1

(1) Language set (codes LS) valable for: German, English, French, Spanish, Italian, Portuguese, Czech, Dutch

Safety and bell transformers
Buzzers and bells

Series T+ BU+ BE+

Function

Reducing the voltage to a very low (safety) voltage used mainly as control-voltage in order to reduce the risk of electrocution due to environmental circumstances (I.e. high degree of humidity like out-doors, in a swimming pool complex, etc.).

Approvals

CE

Applications

Going from supplying power to a bell circuit, to supplying power to the control circuit of impulse switches, relays or contactors for the control of lighting, heating, etc.

Features

Safety transformers have short-circuit protection throught PTC or fail-safe transformers and continuous nominal power.
Bell transformers are recommended for intermittent use at the nominal power declared. Complete noiseless operation.
4, 8, 12, 24, 48V secondary voltages available at power indicated.
terminals are equipped with captive Pozidriv screws and have IP20 protection degree.
Possibility to connect till 2 loads at lower secondary voltages taking into account the power. For bells and safety transformers over 25VA terminals CAPS available as accesorie with sealing performances.

Standards

IEC 61558-1-2-6: Safety transformer
IEC 61558-1-2-8: Bell transformer
EN 62080: Bells and buzzers

Performance

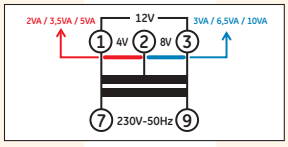
	Bell transformer	Safety transformer	Buzzers and bells
Nominal primary voltage and frequency//Command voltage	230V 50Hz / 240V 60Hz	230V 50Hz / 240V 60Hz	230VAC-12VAC
Power VA / Comsumption VA	5-10-15-8-16-30	15-25-40-63	4,5
Secondary voltage at nominal primary voltage	4-8- 12V; 12-12-24V	12-12-24V	-
Maximum secondary voltage at zero load	1.5xUn sec.	1.3xUn sec.	-
Minimum secondary voltage at nominal load	0.85xUn sec.	0.95xUn sec.	-
Maximum load	Nominal power	Nominal power	-
Short-circuit protection	PTC and Fail Safe	PTC and Fail safe	-
Operating temperature	-20...+40°C	0-20...+40°C	-20...+45°C
Isolation voltage	4kV	4kV	
Protection degree	IP20	IP20	IP20
Use	Inttermitent	Permanent	Permanent
Maximum permanent working time	-	-	12 hours
Sound level	-	-	77-75 dB
Screw	Slotted and PH1	Slotted and PH1	Pozidriv 1
Terminal capacity min	1x0.5mm²	1x0.5mm²	1x1.5 mm²
max	1x4mm² or 2x2.5mm²	1x4mm² or 2x2.5mm²	1x10 mm²

New

Series TR+ Bells transformers

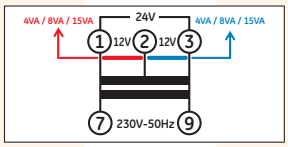
Bell transformer

Output power VA	Secundary voltages	Primary voltage	Number of modules	Primary circuit protection	Cat. No.	Ref. No.	Pack.
5	4-8-12 Vac	230 Vac	2	PTC	TR+ B 5	**665900**	1
10	4-8-12 Vac	230 Vac	2	fail safe	TR+B10	**665902**	1
15	4-8-12 Vac	230 Vac	2	fail safe	TR+B15	**665903**	1



Bell transformer

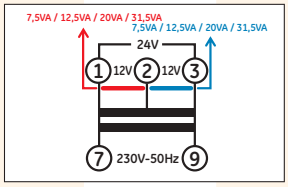
Output power VA	Secundary voltages	Primary voltage	Number of modules	Primary circuit protection	Cat. No.	Ref. No.	Pack.
8	12-12-24 Vac	230 Vac	2	fail safe	TR+B 8	**665901**	1
16	12-12-24 Vac	230 Vac	2	fail safe	TR+B16	**665904**	1
30	12-12-24 Vac	230 Vac	3	fail safe	TR+B30	**665905**	1



Series TS+ Safety transformers

Safety transformer

Output power VA	Secundary voltages	Primary voltage	Number of modules	Primary circuit protection	Cat. No.	Ref. No.	Pack.
15	12-12-24 Vac	230 Vac	2	fail safe	TR+S15	**665909**	1
25	12-12-24 Vac	230 Vac	3	fail safe	TR+S25	**665910**	1
40	12-12-24 Vac	230 Vac	3	PTC	TR+S40	**665911**	1
63	12-12-24 Vac	230 Vac	6	PTC	TR+S63	**665912**	1



Serie TR+/TS+ sealing CAPS for Bells and safety transformers

Sealing CAPs

To be used in			Number of modules		Cat. No.	Ref. No.	Pack.
TR+S25	TR+S40	TR+B30	3	-	TR&KT+C3MOD	**665918**	1
TR+S63	-	-	6	-	TR&KT+C6MOD	**665919**	1

Serie BE+/BU+ Bells and buzzers

	Power consumption VA	Voltages	dB	Number of modules	Permanent use	Cat. No.	Ref. No.	Pack.
Bells	4.5	230 Vac	77	1	12 h	BE+230	**665920**	12
	4.5	12 Vac	77	1	12 h	BE+12	**665922**	12
Buzzers	4.5	230 Vac	75	1	12 h	BU+230	**665921**	12
	4.5	12 Vac	75	1	12 h	BU+12	**665923**	12

New

Digital kWh

Series MT+D kWh

Function

Measurement, visualisation and logging of Energy kWh to be used in BMS systems.

Approvals

CE MID

Applications

Measurement of energy consumption. Possibility to integrate in only one system electricity, water, gas... consumptions.

Features

An electricity meter or energy meter is a device that measures the amount of electric energy consumed by a residence, business, or an electrically powered device. Electricity meters are typically calibrated in billing units, the most common one being the kilowatt hour [kWh]. Periodic readings of electricity meters establishes billing cycles and energy used during a cycle.
GEIS offer a new electronic meter, which display the energy used on an LCD display, and they can also transmit readings to remote places via pulse output, ModBus RS485 or through Ethernet building a powerfull system of measure. In order to build this system, some accesories devices are offered like RS232/485 converter, RS485/ethernet converter or Pulse output concentrator. The concentrator can also receive pulses from other type of meters like gas meter or water meter in order to integrate in only one system all type of consuptions in a house, village or commercial and industrial building.

Standards

EN/IEC 62053-21, EN/IEC 62053-23, EN/IEC 62052-11

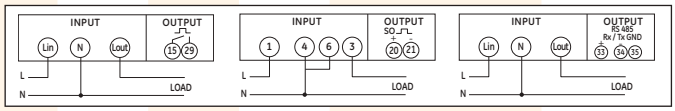
Performance MT+D KWh

	D1i32	D1i63	D3Ni63	D3Ni x/5
Display				
Display type	LCD 7 digits	LCD 6 digits	LCD 8 digits	LCD 8 digits
Maximum display	99999.99kWh	99999.9kWh	999999.99kWh	See Tech. Datasheet
Energy				
Resolution	10Wh	100Wh	10Wh	See Tech. Datasheet
Metering LED	1imp/Wh	1imp/Wh	1imp/Wh	1Imp/0.1Wh
Total energy count	not resettable	not resettable	not resettable	not resettable
Partial energy count	N/A	ressetable	ressetable	ressetable
Accuracy (EN/IEC 62053-21):	Class 1	Class 1	Class 1	Class 1
Input				
Network	Single-phase	Single-phase	Three phase, 3-4wires	Single Phase, Three phase, 3-4 wires
Reference voltage	230V AC	230-240V AC	400-415V AC	230-240V single & 400-415 Three phase
Specified operating range	196..264V AC	196..264V AC	197...480V AC	210..264V single & 210..440V Three phase
Reference frequency	50-60Hz	50-60Hz	50-60Hz	50-60Hz
Tolerance (Hz)	47...63Hz	47...63Hz	47...63Hz	47...63Hz
Basic current Ib	5A	5A	10A	x/5A
Max. Current, Imax	32A	63A	63A	6A
Starting current	20mA	20mA	40mA	20mA
Pulse output				
Pulse weight	1 imp/Wh	1, 10, 100, 1000Wh	1, 10, 100, 1000Wh	10, 100Wh; 1,10, 100, 1000kWh
Type	Class A	Optoelectronic relay	Optoelectronic relay	Optoelectronic relay
Voltage Uimp	12...27V DC	110V DC/AC	110V DC/AC	110V DC/AC
Current	10...27mA	50mA	50mA	50mA
Pulse duration	70ms	50,100,150,200,300,400,500ms	50,100,150,200,300,400,500ms	50,100,150,200,300,400,500ms
RS485 ouput	NO	MT+D1485 63 2M	MT+D3N485 63 4M	MT+D3N485 x/5 4M
Thermal capacity				
Rigid cable	1/10mm^2	1/16mm^2	1/16mm^2	1/4mm^2
Flexible cable	1/7mm^2	1/10mm^2	1/10mm^2	0.05/2,5mm^2
Tightening torque advised	1.1mm^2	1.4mm^2	1.4mm^2	0.8mm^2
Number of modules	1	2	4	4
Environmental conditions				
Operating temperature	-5°C..55°C	-5°C..55°C	-5°C..55°C	-5°C..55°C
Additional Approvals				
MID directive compliance	MT+D1i32 1M MID	MT+D1485 63 2M MID MT+D1i 63 2M MID	MT+D3N485 63 4M MID MT+D3Ni 63 4M MID	MT+D3Ni x/5 4M MID MT+D3N485 x/54M MID

New

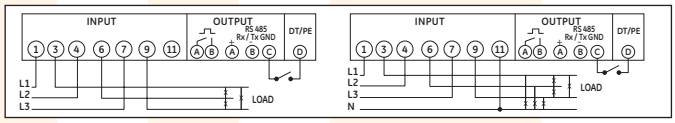
Series MT+D kWh

	Scale	Accuracy	Number of modules	Outputs	Additional measures	Cat. No.	Ref. No.	Pack
Monophase kWh	<32A	Class 1	1	Pulse	-	MT+D1i 32 1M	**665248**	1
	<63A	Class 1	2	Pulse	In, Vn, Wt, Hz, PF, HM	MT+D1i 63 2M	**665250**	1
	<63A	Class 1	2	RS485	In, Vn, Wt, Hz, PF, HM	MT+D1485 63 2M	**665252**	1



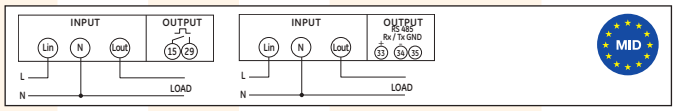
Triphase 3-4 wires kWh	<63A	Class 1	4	PULSE	partial kwh, duble tariff, Var, Un, In, Wt, Hz, PF, HM	MT+D3Ni 63 4M	**665254**	1
	<63A	Class 1	4	RS485	partial kwh, duble tariff, Var, Un, In, Wt, Hz, PF, HM	MT+D3N485 63 4M	**665256**	1
	x/5A	Class 1	4	PULSE	partial kwh, duble tariff, Var, Un, In, Wt, Hz, PF	MT+D3Ni x/5 4M	**665258**	1
	x/5A	Class 1	4	RS485	partial kwh, duble tariff, Var, Un, In, Wt, Hz, PF	MT+D3N485 x/5 4M	**665260**	1

For x/5 version see tech. datasheet



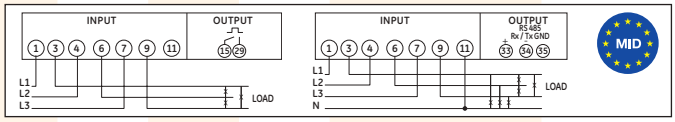
Series MT+D kWh. MID Directive approval

	Scale	Accuracy	Number of modules	Outputs	Additional measures (non MID)	Cat. No.	Ref. No.	Pack
Monophase kWh	<32A	Class B	1	PULSE	-	MT+D1i 32 1M MID	**665249**	1
	<63A	Class B	2	PULSE	In, Vn, Wt, Hz, PF, HM	MT+D1i 63 2M MID	**665251**	1
	<63A	Class B	2	RS485	In, Vn, Wt, Hz, PF, HM	MT+D1485 63 2M MID	**665253**	1



Triphase 3-4 wires kWh	<63A	Class B	4	PULSE	partial kwh, duble tariff, Var, Un, In, Wt, Hz, PF, HM	MT+D3Ni 63 4M MID	**665255**	1
	<63A	Class B	4	RS485	partial kwh, duble tariff, Var, Un, In, Wt, Hz, PF, HM	MT+D3N485 63 4MMID	**665257**	1
	x/5A	Class B	4	PULSE	partial kwh, duble tariff, Var, Un, In, Wt, Hz, PF	MT+D3Ni x/5 4M MID	**665259**	1
	x/5A	Class B	4	RS485	partial kwh, duble tariff, Var, Un, In, Wt, Hz, PF	MT+D3N485 x/54MMID	**665261**	1

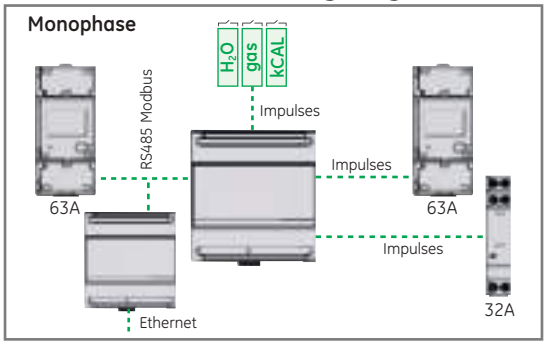
For x/5 version see tech. datasheet

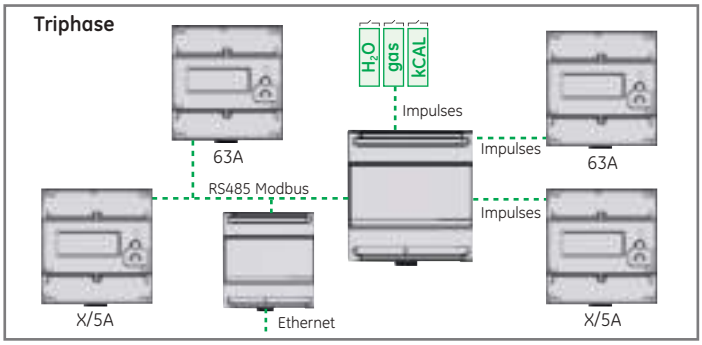


Series MT+D kWh

Number of modules	Description	Cat. No.	Ref. No.	Pack
4	Pulse adquisition 3 program input configuration - 12 contact inputs PASSIVE - 6 contact inputs+6 active inputs ACTIVE - S0 (GME ENEL)	MT+ImpCon	**665262**	1
4	RS485-Ethernet conversion	MT+RS485/Ethernet	**665389**	1
2	RS485 RS232 conversion	MT+RSC TOP	**665390**	1

Series MT+kWh. Building a system





New

Digital measurement instruments

Series MT+D

Applications

Measurement of all possible electrical values from simple measurement as voltage, current, frequency over more complex such as power and energy, to all-in-one measurement with the net analyser devices. To avoid down-time due to abnormal situations, i.e. power-supply voltage too high, absorbed power too high, etc., leading to malfunctionning and even break-down of the machinery, the measurement and monitoring of the electrical values like voltage, current, power, energy etc. is an absolute must and even an indespensable asset when it comes to preventive maintenance.

Function

Measurement, visualisation and logging of voltage, current, frequency, hours of operation, power, energy, cos φ, etc..

Features

AC measurement devices with digital technology and readout are available. The simple devices (one measurement only voltage, current, frequency) are only available in single phase, while the complex devices (more than one measurement i.e. power, energy, net analyser) are also available in 3-phase execution. High current can be measured through the intermediate use of a current transformer . All devices have very good precision and have also a very low self-consumption to limit as much as possible the measurement error. The net analysers are true RMS measuring devices. Monitoring and logging all electrical values on to a PC is possible by using communication modules to RS484, RS232 and Ethernet

Approvals

CE

Standards

EN 61010-1, BS EN 60051-1-2

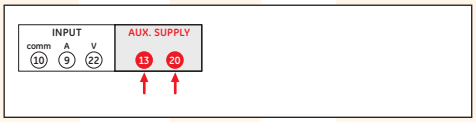
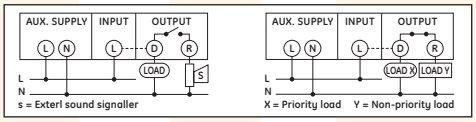
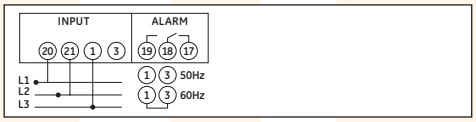
Performance MT+D

	V-A-F DV500 DA5 F	Priority Relay PRI BASIC	Phase sequence AP 3F	Multimeter BASIC	Net analyser TOPi
Display					
Display type	7 segments, LEDs	red LEDs	-	LCD backlighter	LCD backlighter
Maximum display	999	999	-	9999x3	See Tech. Datasheet
Measurements/Alarms					
Values	V, A, Hz	V,A,kW	-	Ph V, Ph A, Linked Voltage	kwh, Var, -kwh, -Var, total and partial
	-		-	Ph act./reactive Power, Act., React., appar. Power	V, I, neutral current, PF
	-		-	Neutral current, Hz, PF, Working H&min., Power Demand, Max. Power demand	Power: active, reactive, apparent, Demand and max. Demand, THD, Harmonic distorsion, Hz, Hour meter,
Alarms values	-	Non Priority load tripping management	Phase sequence, Lack of Phase, Phase asimetric	-	Alarms relays
Accuracy	+-1%+1 digit	-		±0.5 (I,V), ±1.5%(W), ±0.2%(Hz)	Class 0.5 (kWh) Class 1 (VAr)
Input					
Network	Single-phase	Single-phase	Three phase, 3 wires	Single Phase, Three phase, 3-4wires	Single Phase, Three phase, 3-4wires
Voltage connection Current connection	direct external CT	direct 195..264V direct. Max 28A	direct -	1ph 50..350V 3ph 80..600V x/5A	1ph 50..290V 3ph 80..500V x/5A
Frequency connection Tolerance (Hz)	direct 10...100Hz	50 Hz 47...63Hz	- -	50 Hz 47...63Hz	- 45...65Hz (fn=50Hz)
Rated current In	5A	-	-	5A	x/5A
Rated Voltage Un	500V	-	380..415V (phase-phase)	230/400Vac	230/400Vac
Rated Frequency	-	-	50-60Hz (selectable)	50 Hz	50-400 Hz
Pulse output					
Pulse weight	-	-	-	-	1 pulse/10,100Wh; 1,10,100 kWh,1, 10 MWh
Type	-	-	-	-	Optoelectronic relay
Voltage Uimp:	-	-	-	-	110Vdc/ac
Current	-	-	-	-	50mA
Pulse duration	-	-	-	-	50,100,150,200,300,400,500ms
RS485 ouput	-	-	-	-	MT+D TOPiRS485 4M
Terminal capacity					
Rigid cable	1/10mm²	-	4/35mm²	1/4mm²	1/4mm²
Flexible cable	1/7mm²	-	10/25mm²	1/2.5mm²	0.05/2.5mm²
Tightening torque advised	1.1mm²	-	-	-	0.6Nm
Number of modules	4	2	2	4	4
Environmetal conditions					
Operating temperature	-5°C..55°C	-5°C..55°C	-5°C..55°C	-5°C..55°C	-5°C..55°C

* For complete technical performances, please ask for technical datasheet of each device

New

Series MT+D

	Scale	Accuracy	Number of modules	Outputs	Additional measures	Cat. No.	Ref. No.	Pack
V, A, Hz	x/5A	±1%+1 digit	4	-	voltage, current, frequency	MT+D DV500 DA5 F 4M	**665387**	1
								
Priority Relay+Buzzer	direct 28A	-	2	Buzzer	V, A, kW	MT+D PRI BASIC 2M	**665395**	1
								
Phase sequence relay	380..415V (phase-phase) 50-60Hz (selectable)	-	2	Alarm	-	MT+ AP 3F 2M	**665396**	1
								
Multimeter	x/5A 230/400V	±0,5 (I,V), -1.5%(W), -0.2%(Hz)	4	-	Ph V, Ph A, Linked Voltage Ph act./reactive Power, Act.,React., appar. Power Neutral current, Hz, PF, Working H&min., Power demand, Max. Power demand	MT+D BASIC 4M	**665393**	1
	Single Phase, three phase, 3-4 wires, for electric diagram							
Net Analyser	x/5A	Class 0,5 (kWh)	4	Pulse	see tech. datasheet	MT+D TOPi 4M	**665391**	1
	230/400V	Class 1 (VAr)		Pulse +RS485	see tech. datasheet	MT+D TOPiRS485 4M	**665392**	1
	Single Phase, three phase, 3-4 wires, for electric diagram. See tech. datasheet							

New

Function

Measurement, visualisation and logging of voltage, current, frequency and hours of operation

Approvals

CE

Analogue measurement instruments

Series MT+A

Applications

Measurement of voltage, current, frequency and hours of operation with analogue visualisation of the measure.

Features

AC measurement devices with analogue technology and readout are available. The simple devices (one measurement only i.e. voltage, current, frequency) are only available in single phase. High currents can be measured through the intermediate use of a current transformer (for the analogue amp-meter combined with an interchangeable scale-plate). All devices have very good precision and have also a very low self-consumption to limit as much as possible the measurement error. Using one monophase-volt or amp-meter in a 3-phase system is possible by using the appropriate selector switch also available in our range.

Standards

EN 61010-1, BS EN 60051-1-2

Performance MT+A

	Ammeter MT+AA	Voltmeter MT+AV	Frequency meter MT+F	Hour Counter MT+AH	Selector MT+S
Scale selection	Interchangeable scaleplate	-	-	Counter 7 digit	I1-I2-I3 V12-V23-V31-V1n-V2n-V3n
Rated Burden	< 1,1VA	< 3,5VA(500V) < 3VA (300V)	≤ 4VA	< 8mA	-
Operating temperature range	-25...50°C	-25...50°C	-25...50°C	-20...70°C	-
Class of precision (accuracy)	1.5	1.5	1	0.02%	-
Type	Single phase, AC	Single phase, AC	Single phase, AC	230V-110V-24V	-
Connection	direct or CT /5	300V-500V	-	-	-
Measure	true RMS value	true RMS value	-	-	-
Continuous overload	1.2In	1.2Un	-	-	-
Instantaneous overload	10In/5second	10Un/5second	-	-	-
Rating Frequency	50Hz	50Hz	50-60Hz	50Hz	-
Working Frequency	45..65Hz	45..65Hz	45..65Hz	-	-

New

Series MT+A analogue measurement instruments

Ammeters

Scale	Accuracy	Nr. of phases	Nr. of modules	Cat. No.	Ref. No.	Pack
-	1.5	1	4	MT+AA 4M	**665264**	**1**
5A	1.5	1	4	MT+AA5 4M	**665265**	**1**
10A	1.5	1	4	MT+AA10 4M	**665266**	**1**
15A	1.5	1	4	MT+AA15 4M	**665267**	**1**
20A	1.5	1	4	MT+AA20 4M	**665268**	**1**
25A	1.5	1	4	MT+AA25 4M	**665269**	**1**
30A	1.5	1	4	MT+AA30 4M	**665270**	**1**

Interchangeable Ammeter scaleplates

Scale	To use in	Cat. No.	Ref. No.	Pack
40/5	665264	MT+SP40	**665283**	10
50/5	665264	MT+SP50	**665284**	10
60/5	665264	MT+SP60	**665285**	10
80/5	665264	MT+SP80	**665286**	10
100/5	665264	MT+SP100	**665287**	10
150/5	665264	MT+SP150	**665288**	10
200/5	665264	MT+SP200	**665289**	10
250/5	665264	MT+SP250	**665290**	10
300/5	665264	MT+SP300	**665291**	10
400/5	665264	MT+SP400	**665292**	10
500/5	665264	MT+SP500	**665293**	10
600/5	665264	MT+SP600	**665294**	10
800/5	665264	MT+SP800	**665295**	10
1000/5	665264	MT+SP1000	**665296**	10

Voltmeters

Scale	Accuracy	Nr. of phases	Nr. of modules	Cat. No.	Ref. No.	Pack
300V	1.5	1	4	MT+AV300 4M	**665271**	1
500V	1.5	1	4	MT+AV500 4M	**665272**	1

Frequency meter

Scale	Accuracy	Nr. of phases	Nr. of modules	Cat. No.	Ref. No.	Pack
45...65Hz	1.5	1	4	MT+AF 4M	**665273**	1

Hour counter

Scale	Accuracy	Nr. of phases	Nr. of modules	Cat. No.	Ref. No.	Pack
230V/50Hz	0.02%	1	2	MT+AH110 2M	**665274**	1
110V/50Hz	0.02%	1	2	MT+AH230 2M	**665275**	1
24V/50Hz	0.02%	1	2	MT+AH24 2M	**665276**	1

Selector switch

Nr. of modules	Cat. No.	Ref. No.	Pack
3	MT+S4 3M	**665385**	1
3	MT+S7 3M	**665386**	1

New

Function

When current in a circuit is too high to apply directly to measuring instruments, a current transformer produces a reduced current accurately proportional to the current in the circuit, which can be conveniently connected to measuring and recording instruments.
A current transformer isolates the measuring instruments from what may be very high Current in the monitored circuit.

Approvals

CE

Current transformers

Series MT+CT

Applications

Current transformers are commonly used in metering.

Features

Current transformers are used extensively for measuring current. This new CTs range covers every facility with three-phase service and single-phase services greater from 40A to 4000A.
The CT is typically described by its current ratio from primary to secondary. Often, multiple CTs are installed for various uses. For example, protection devices and revenue metering may use separate CTs to provide isolation between metering and protection circuits, and allows current transformers with different characteristics (accuracy, overload performance) to be used for the devices. The primary circuit is largely unaffected by the insertion of the CT. The rated secondary current is commonly standardized at 5A.
For example, a 4000:5 CT secondary winding will supply an output current of 5 Amperes when the primary winding current is 4000 A.
The load, or burden, of the CT should be a low resistance. The accuracy of a CT is directly related to a number of factors including:
burden, burden class/saturation class, rating factor, load and physical configuration For the IEC standard, accuracy classes for various types of measurement are set out in IEC 60044-1, Classes 0.5, 1 and 3.
The class designation is an approximate measure of the CTs accuracy.
The ratio (primary to secondary current) error of a Class 1 CT is 1% at rated current; the ratio error of a Class 0.5 CT is 0.5% or less.

Standards

EN60044-1

Performance MT+V

	CT40-CT80	CT100-CT400	CT500-CT600	CT800-CT1000	CT1200-CT2000	CT2500-CT4000
Rated primary current Ipn	40-50-60-80	100-150-200-250-300-400	500-600	800-1000	1200-1500-2000	2500-3200-4000
Rated frequency	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz
Working frequency	47...63Hz	47...63Hz	47...63Hz	47...63Hz	47...63Hz	47...63Hz
Rated continuous thermal current according to EN60044-1						
Rated short-time thermal current Ith	< 60In	< 60In	< 60In	< 60In	< 60In	< 60In
Rated dynamic current Idyn	2.5Ith	2.5Ith	2.5Ith	2.5Ith	2.5Ith	2.5Ith
Instrument security factor (FS)	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5
Rated secondary current Isn	5	5	5	5	5	5
Rated burden	1...2.5VA (see table)	1.5...12VA (see table)	10...15VA (see table)	8...12VA (see table)	15...25VA (see table)	20...50VA (see table)
Accuracy class	1 – 3 (see table)	0.5-1 (see table)	0.5-1 (see table)	0.5-1 (see table)	0.5-1 (see table)	0.5-1 (see table)
Max. power dissipation	≤ 3W	≤ 7W	≤ 9W	≤ 10.5W	≤ 20W	≤ 23W
Allowed max cable or busbar temp.	125°C	125°C	125°C	125°C	125°C	125°C
Rated insulation level	3kV r.m.s. 50Hz/1min	3kV r.m.s. 50Hz/1min	3kV r.m.s. 50Hz/1min	3kV r.m.s. 50Hz/1min	3kV r.m.s. 50Hz/1min	3kV r.m.s. 50Hz/1min
Class of insulation (EN60044-1)	B	B	B	B	B	B
Nominal temperature range	-25.....50°C	-25.....50°C	-25.....50°C	-25.....50°C	-25.....50°C	-25.....40°C
Limit temperature range for storage	-40...85°C	-40...85°C	-40...85°C	-40...85°C	-40...85°C	-40...85°C
Connections						
Primary winding	passing cable	passing cable/ busbar primary	passing cable/ busbar primary	passing cable/ busbar primary	busbar primary	busbar primary
Max. tightening torque for passing primary bar fixing screws:	0.2Nm	0.2Nm	0.2Nm	0.2Nm	0.2Nm	0.2Nm
Secondary winding	screw terminals, max 2x2.5mm²	screw terminals, max 6mm²	4 screw terminals, max 6mm²+2 faston (4.8x0.8mm)	4 screw terminals, max 6mm²+2 faston (4.8x0.8mm)	tightening by nut	tightening by nut

New

Series MT+CT Current Transformers

	VA CL. 0.5	VA CL. 1	Secondary current	Primary current	Size (mm)	Cat. No.	Ref. No.	Pack.
	-	1	5	40	65x44x30	MT+CT40	**665368**	1
	1.25	1.5	5	50	65x44x30	MT+CT50	**665369**	1
	1.25	2	5	60	65x44x30	MT+CT60	**665370**	1
	1.5	2.5	5	80	65x44x30	MT+CT80	**665371**	1
	1.5	3	5	100	80x56x43	MT+CT100	**665372**	1
	3	4	5	150	80x56x43	MT+CT150	**665373**	1
	4	7	5	200	80x56x43	MT+CT200	**665374**	1
	6	8	5	250	80x56x43	MT+CT250	**665375**	1
	8	10	5	300	80x56x43	MT+CT300	**665376**	1
	10	12	5	400	80x56x43	MT+CT400	**665377**	1
	10	12	5	500	95x70x45	MT+CT500	**665378**	1
	12	13	5	600	95x70x45	MT+CT600	**665379**	1
	10	12	5	800	95x70x45	MT+CT800	**665380**	1
	12	15	5	1000	95x70x45	MT+CT1000	**665381**	1
	15	20	5	1200	94x90x40	MT+CT1200	**665382**	1
	20	25	5	1500	94x90x40	MT+CT1500	**665383**	1
	20	25	5	2000	94x90x40	MT+CT2000	**665384**	1
	30	50	5	2500	160x99x58	MT+CT2500	**665924**	1
	30	50	5	3200	160x125x40	MT+CT3200	**665925**	1
	30	50	5	4000	160x125x40	MT+CT4000	**665926**	1

New

Compact three-phase analyser

Series MTDIN

Applications

- Control switchboards for low and medium voltage applications where DIN-rail mounting is preferred due to size restraints.
- Allows the measurement of electrical variables utilized for the effective control of systems.

Description

Three-phase power analyser for mounting on DIN-rail. Also adaptable for panel mounting with 72 x 72mm dimension.

Key features

- Current measuring .../5 or .../1A
- DIN rail format with only 3 modules (52mm).
- Assembly on the 72 x 72 mm panel with frontal adaptor (Ref. No. 665244).
- RS485 communications (Modbus-RTU).
- Two transistor outputs.
- Optional ITF technology: galvanic insulation for inputs.
- THD available per phase for power factor, voltage and current.
- Instantaneous display of important electrical parameters.

Features

Power supply circuit	230VAC (-15% to +10%) or 85 to 265VAC / 95 to 300VDC
Consumption	3VA
Frequency	50 or 60Hz
Nominal current (In)	5A
Metering circuit	
Maximum voltage	300VAC (Ph-N) / 520VAC (Ph-Ph)
Frequency	45 to 65Hz
Voltage consumption of the circuit	0.7VA
Current consumption of the circuit	0.9VA (ITF) /0.75VA (shunt)
Nominal current	In / 5A
Permanent overload	1.2 In
Class/Accuracy	
Voltage	0.5% ± 1 digit
Current	0.5% ± 1 digit
Power rating	1% ± 1 digit
Ambient conditions	
Operating temperature	-10°C up to +50°C
Relative humidity (non-condensing)	5% up to 95%

Output transistor	Opto-isolated (open collector) NPN
Max. operating voltage	24VDC
Max. operating current	50mA
Max. impulse frequency	5 impulse / s
Duration of the impulse	100 ms
Housing	
Type of box	VO self-extinguishing plastic
Degree of protection	Embedded equipment: IP41 Terminals: IP20
Dimensions (H x W x D)	85 x 52.5 x 67.9 mm (3 modules)
Weight	210 g
Safety	Designed for CAT III 300/520VAC installations, in accordance with EN 61010. Class II double insulated for protection against electric shock
Standards	IEC 664, VDE 0110, UL 94, IEC 664, VDE 0110, UL 94, IEC 801, IEC 348, IEC 571-1, EN 61000-6-3, EN 61000-6-1, EN 61010-1

New

Compact three-phase power analyser - Series MTDIN

Modules	Class (V, A)	Communication	Protocol	Output	Voltage	Harmonics	Cat. No.	Ref. No.
3	0.5	-	-	-	85 to 265VAC 95 to 300VAC	-	MTDIN1	**665010**
3	0.5	-	-	-	230VAC	-	MTDIN2	**665011**
3	0.5	RS485	ModBus/RTU	2	230VAC	-	MTDIN2COM	**665155**
3	0.5	RS485	ModBus/RTU	2	85 to 265VAC 95 to 300VDC	U and I (15º)	MTDIN1HARCOM	**665012**

For other versions, contact GE or your local distributor.

Accessories

Front panel adaptor

MTAdapt	**665244**	1

Adaptor installing MTDIN on 72 x 72 mm panels.

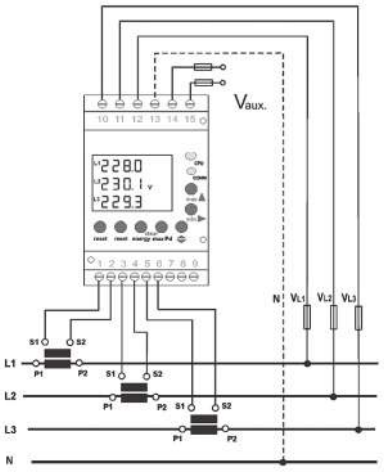
Central fixing.

Adjustable on the rear with two straps.

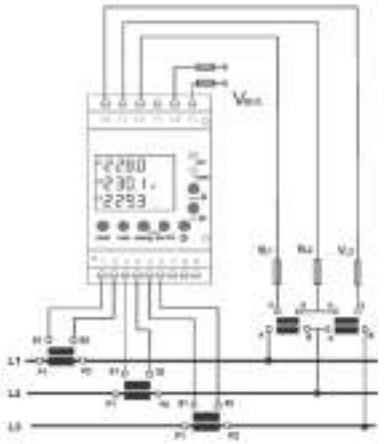
For converters, see page D.43

Connections

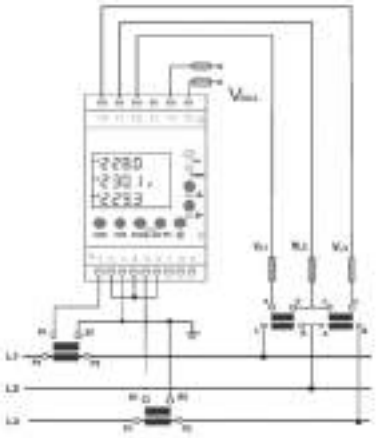
3 or 4 wires (low voltage)



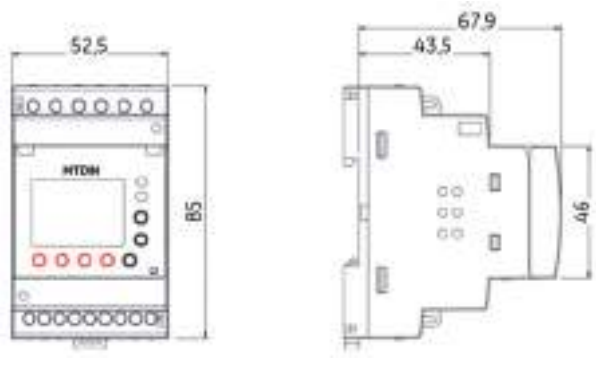
3 wires (2 voltage transformers and 3 current transformers)



3 wires (2 voltage transformers and 2 current transformers)



Dimensions (mm)



New

Basic three-phase analyser

Series MT96

Applications

- Control switchboards for low and medium voltage applications.
- Allows the measurement of electrical variables utilized for the effective control of systems.
- Consumed energy can be set to trigger pulses.
- Alarm controls: full programming capability for each output, i.e., the maximum value, minimum value, and delay.

Description

Three-phase power analyser for panel mounting with a 96 x 96 mm front fascia with compact depth.

Key features

- Class 0.5 energy precision.
- Current measure .../5
- Optional RS485 Modbus /RTU communications.
- Instantaneous display of important electrical parameters.
- Digital outputs with opto-isolated transistor.
- Optional ITF technology: galvanic insulation for inputs.
- THD available per phase for power factor, voltage and current.

Features

Power supply circuit	230VAC (-15% tot +10%) or 85 to 265VAC / 95 to 300VDC
Consumption	5VA
Frequency	50 or 60Hz
Nominal current (In)	5A
Metering circuit	
Maximum voltage	300VAC (Ph-N) / 520VAC (Ph-Ph)
Frequency	45 to 65Hz
Voltage consumption of the circuit	0.75VA
Current consumption of the circuit	0.9VA (ITF) /1.2VA (shunt)
Nominal current	In / 5A or In /1A
Permanent overload	1.1 In
Class/Accuracy	
Voltage	0.5% ± 2 digits
Current	0.5% ± 2 digits
Power rating	1% ± 2 digits
Ambient conditions	
Operating temperature	-10°C up to +50°C
Relative humidity	5% up to 95%

Output transistor	Opto-isolated (open collector) NPN
Max. operating voltage	24VDC
Max. operating current	50mA
Max. impulse frequency	5 impulse / s
Duration of the impulse	100 ms
Housing	
Type of box	VO self-extinguishing plastic
Degree of protection	Fitted unit (frontal): IP51 Non-fitted unit (sides and rear cover) IP31
Dimensions (H x W x D)	96 x 96 x 63 mm
Safety	Designed for CAT III 300/520VAC installations, in accordance with EN 61010. Class II double insulated for protection against electric shock
Standards	IEC 664, VDE 0110, UL 94, IEC 801, IEC 348, IEC 571-1, EN 61000-6-3, EN 61000-6-1, EN 61010-1

New

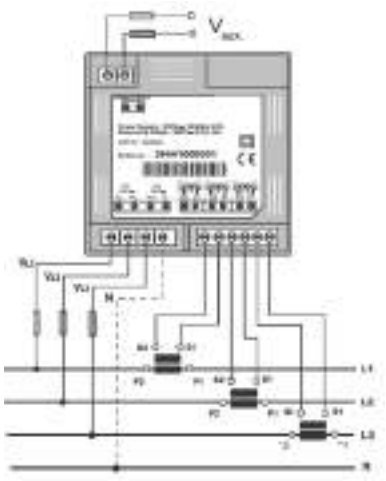
Basic three-phase power analyser - Series MT96

Modules	Class (V, A)	Communication	Protocol	Digital output	Voltage	Harmonics	Cat. No.	Ref. No.
4	0.5	-	-	-	85 to 265VAC 95 to 300VDC	-	MT961	**665190**
4	0.5	-	-	-	230VAC	-	MT962	**665191**
4	0.5	RS485	ModBus/RTU	1	230VAC	-	MT962COM	**665192**
4	0.5	RS485	ModBus/RTU	1	85 to 265VAC 95 to 300VDC	U and I (15º)	MT961HARCOM	**665193**

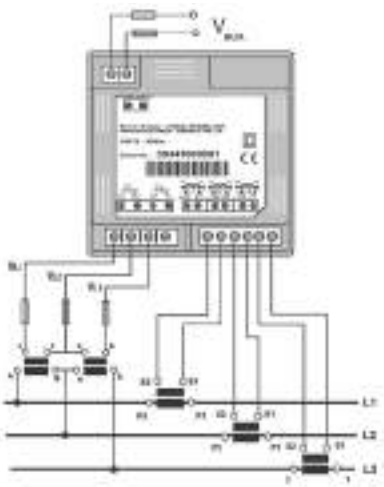
For converters, see page D.43.
For other versions, contact GE or your local distributor.

Connections

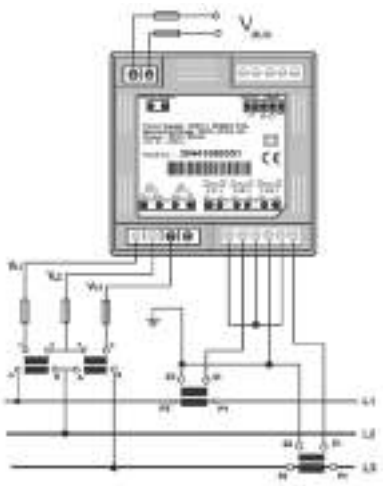
3 or 4 wires (low voltage)



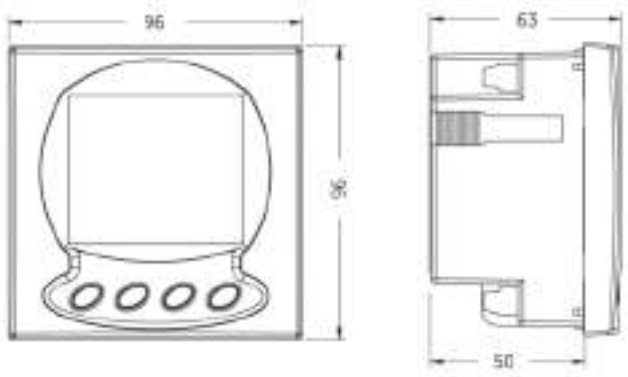
3 wires (2 voltage transformers and 3 current transformers)



3 wires (2 voltage transformers and 2 current transformers)



Dimensions (mm)



New

Advanced three-phase analyser

Series MT144

Description

Three-phase advanced power analyser for panel mounting with a 144 x 144 mm front fascia.

Key features

- Class 0.2 energy and power precision.
- Class B power quality analyser.
- One display can monitor up to 32 measurement modules.
- Current measuring .../5 or .../1A
- Measure of neutral current with transformer.
- Optional energy consumption and generation billing (up to 9 rates).
- Expansion possibilities (up to 3 modules).
- RS485 Modbus/RTU communications.
- Profibus GSD module available.
- SD memory module with max capacity of 2 GB available.
- Backlit VGA graphical display.
- Instantaneous display of maximum and minimum electrical parameters with date and hour.
- Measure of energy consumed and generated, up to 100 GWh.
- Up to 8 digital inputs and outputs available.
- ITF technology: galvanic insulation for inputs.

Applications

- Control switchboards for low and medium voltage applications.
- Alarm center by means of voltage-free digital inputs.
- Submetering: can measure through impulses other types of consumption, such as gas, water, steam, etc. via their digital inputs.
- Measurement converters: possible to associate instantaneous parameter to one of the analogue outputs (0 to 20mA / 4 to 20mA).
- Recording of instantaneous, maximum, and minimum parameters with a date and hour by means of an expandable memory card.
- Power quality analyser: harmonic decomposition up to order 50º, asymmetries, flicker, unbalances, overvoltages, gaps, interruptions, etc.

Features

Power supply circuit	85 to 265VAC and 95 to 300VDC
AC power supply frequency	50/60Hz
AC pow. supp. consumption	3VA
DC pow. supp. consumption	< 25W
Metering circuit	
Voltage	15 to 360VAC (L-N) 26 to 600VAC (L-L)
Frequency	45 to 65Hz
Metering margin	5 to 120% Un
Admissible overvoltage	750VAC
Voltage consumption of the circuit	< 0.5VA
Current measuring circuit	
Nominal current (In)	5A or 1A
Metering range	1 to 120% of In
Primary current metered	Programmable < 30,000A
Admissible overload	6A permanent, 100A t < 1s
Current consumption of the circuit	< 0.45VA

Maximum meter value	100GWh
Class/Accuracy	0.2 or 0.5 power and energy
Ambient conditions	
Operating temperature	-10°C up to +50°C
Relative humidity	5% up to 95%
Housing	
Metering module	Assembly on DIN rail 46277 (EN 50022)
Screen or screen + metering module	Assembly on panel (96 x 96 mm, 144 x 144 mm) or opening with a 103 mm diameter
Dimensions (H x W x D)	144 x 144 x 116 mm
Safety	Designed for CAT III 300/520VAC installations, in accordance with EN 61010. Class II double insulated for protection against electric shock
Standards	IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-11, IEC 61000-4-4, IEC 61000-4-5

New

Compact units (metering + display module) - Series MT144

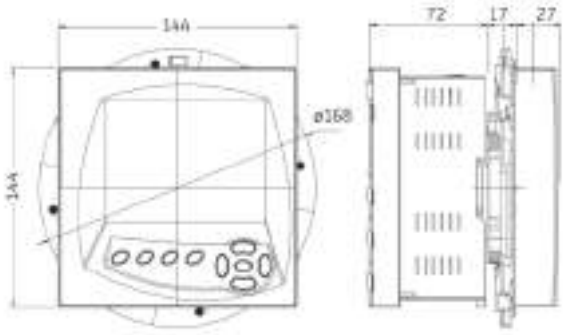
Quadrants	Class (V, A)	Communication	Protocol	Neutral current	Universal power supply	Harmonics	Cat. No.	Ref. No.
4	0.2	RS485	ModBus/RTU	Yes	85 to 265VAC 95 to 300VDC	U and I (50°)	MT144UMD	**665194**

Measuring units (measuring module and display sold separately) - Series MT144

	Quadrants	Class (V, A)	Communication	Protocol	Neutral current	Universal power supply	Harmonics	Cat. No.	Ref. No.
Measuring module	4	0.2	RS485	ModBus/RTU	Yes	85 to 265VAC 95 to 300VDC	U and I (50°)	MT144UM	**665195**
VGA display	4	-	-	-	Yes	-	-	MT144UD	**665196**

For other versions, contact GE or your local distributor.

Dimensions



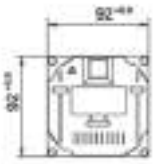


Fig. 1

Fig. 2
Holes guide

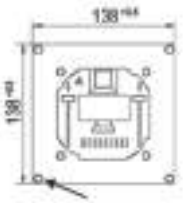
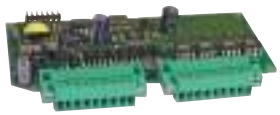


Fig. 3
Lock points

Figures above illustrate how the front display mounts on the panel either with a 92 x 92 mm square cutout or a circular cutout with a diameter of 110 mm. View is the rear of the display module.

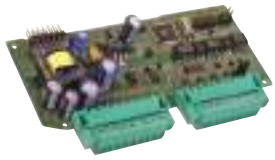
Exchangeable cards



8I/8O digital expansion card

MT8I80	**665197**	1

8 digital inputs and
8 digitale outputs.
Outputs with opto-coupled transistor.



8I/4O analogue expansion card

MT8I40	**665198**	1

8 analog inputs and
4 analog outputs

8I/4O digital expansion card

MT8I40R	**665199**	1

8 digital inputs and
4 digital outputs.
Outputs with relay.

ProfiBus expansion card - GSD modules

MTPBUS	**665243**	1

Ethernet and SD memory card

MTMBUS	**665239**	1

Ethernet communications card and
SD memory.

SD memory expansion card

MTSDMEM	**665240**	1

Common accessories for MTDIN, MT96 en MT44 - Converters

Converter for RS232/485 to Ethernet (and vice-versa)

MT485Enet	**665245**	1

Power supply 85...265VAC / 115...374VDC.
Ethernet speed: 10/100 BaseTX
RS Bus transmission speed: 1200 bps to 115200 bps.

USB converter to RS232 or RS485

MTUSB485	**665246**	1

Converter from USB network protocol to RS232 or RS485.
Power supply through the PC's USB port.
Transmission speed: 4800 to 128000 bps.

New

Power Analysers - Parameter table

	MTDIN				MT96				MT144				
MEASUREMENT	L1	L2	L3	III	L1	L2	L3	III	L1	L2	L3	N	III
Single phase voltage	•	•	•		•	•	•		•	•	•		•
Phase phase voltage	•	•	•		•	•	•		•	•	•		
Reference voltage (GND)-neutral												•	
Current	•	•	•	•	•	•	•	◆	•	•	•	•	
Frequency	•				•		•		•				
Active power	•	•	•	•	•	•	•	•	•	•	•		•
Reactive power L (inductance)	•	•	•	•	•	•	•	•	•	•	•		•
Reactive power C (capacitance)	•	•	•	•	•	•	•	•	•	•	•		•
Apparent power	•	•	•	•				•	•	•	•		•
Power factor	•	•	•	•	•	•	•		•	•	•		•
Cosine				•				•	•	•	•		•
Maximum active power demand				•				•					•
Maximum apparent power demand				•				•					•
Maximum current demand	•	•	•	•	•	•	•	•	•	•	•		•
Neutral current		•				•					•		
THD voltage	•	•	•		•	•	•		•	•	•		•
THD current	•	•	•		•	•	•		•	•	•		•
Voltage harmonics	•	•	•	15	•	•	•	15	•	•	•	•	50
Current harmonics	•	•		15	•	•		15	•	•	•	•	50
Active energy				•				•					•
Reactive energy L				•				•					•
Reactive energy C				•				•					•
Apparent energy				•				•					•
Flicker (WA and PST)									•	•	•		
Factor K (current)									•	•	•		
Peak factor (voltage)									•	•	•		
Unbalance (voltage and current)									•	•	•		
Asymmetry (voltage and current)									•	•	•		
Rates (optional)		3				1					9		
Analogue inputs (0/4 20mA)											•		
Analogue outputs (0/4 20mA)											•		
Digital inputs											•		
Digital outputs		•				•					•		
COMMUNICATIONS													
RS232													
RS485		•				•					•		
Ethernet											•		
PROTOCOLS													
Modbus RTU		•				•					•		
Modbus TCP											•		
Profibus DP (optional)											•		

• Available for display and communications
◆ Available only for communications

New

Notes

Surge Arresters

SurgeGuard

Functions

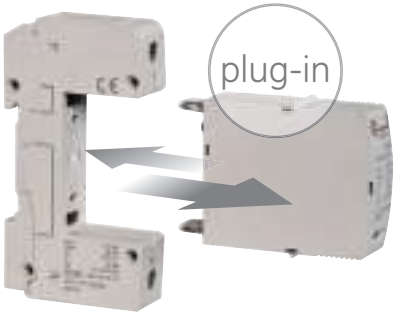
Protection of an electrical installation and all electrical and electronic devices connected to this installation against destructive surges. Such voltage surges can be generated by lightning induced currents, by network polluting devices (such a motors, frequency converters, dimmers, etc..) and by power supply networks switching operations.

Standards

IEC 61643-I
IEC 61643-11/EN 61643-11
DIN VDE 0675-6
NF C61-740
BS 6651

Marking

CE



Applications

Surge arresters cover the protection of home appliances (TV, Hifi , VCR, laundry machine, dishwasher...), commercial building equipment (computer, data networks, intrusion and alarm systems, access control and building automation systems), but also industrial equiment (PLC, instrumentation, medical apparatus, monitoring devices) and even the protection of entire offshore drilling platforms.

Features

- The line of surge arresters includes a full range of compact protectors for installation on DIN rail. The devices are especially designed to provide complete and effective protection against surges, protecting equipment and property connected to the low voltage network.
- The range of surge arresters includes:
  - Class I limp = 100kA (monoblock)
  - Class I+II limp = 12.5kA and limp = 25kA (plug-in)
  - Class I+II limp = 7.5kA and limp = 15kA (monoblock) in 10/350ms waveform
  - Class II with different discharge capacities: 15kA, 20kA, 40kA in 8/20ms waveform
  - Class II for DC photovoltaic applications, communication and TV lines are also available.

  The most suitable value will be selected according to the type of installation, premises and equipments to be protected.
- ***NEW* plug-in ranges** in Class I+II, Class II and for photovoltaic application in uni- and multipole format.
- Several different formats one pole, single phase, two phase and three phases are available for all types of electrical net systems: TT, TN-S, TN-C, IT.
- Additionally, dedicated versions for temporary overvoltage (TOV) are included in the offer.
  TOV is a voltage peak of hundreds of volts for an indeterminate period due to the unbalance of the network (normally caused by neutral fault).
- The Tele OV devices follow the new European standard EN 50550.

New

Parameters

Impulse current (Iimp)
This is the peak current that the surge arrester can withstand without failing. The waveform of the applied current is normalised as 10/350µs, used in Class I devices.

Maximum discharge current (Imax)
This is the peak current that the surge arrester can withstand in a single pulse without failing. The waveform of the applied current is normalised as 8/20µs, used in Class II devices.

Nominal discharge current (In)
This is the current that the surge protection device is capable of shunting to ground at least 20 times without failing.

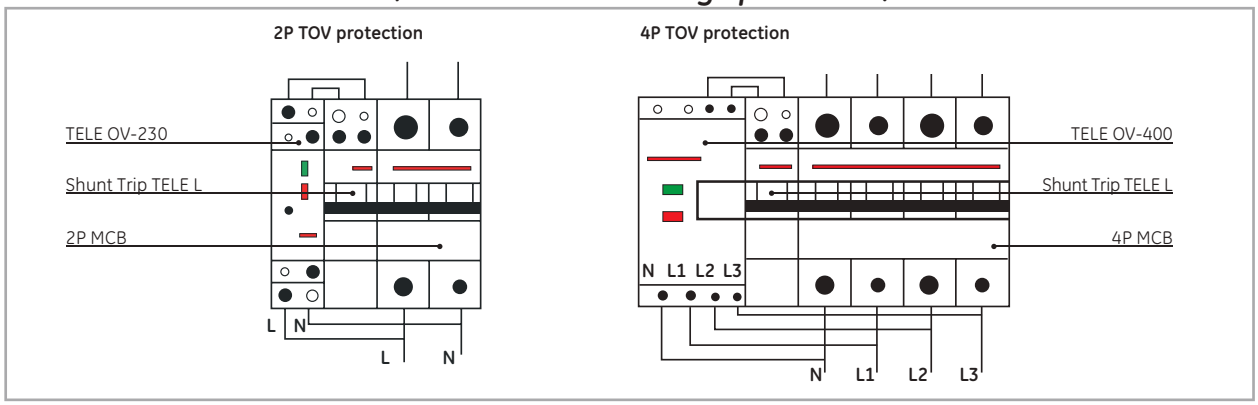
Level of protection (Up)
This is the parameter that characterises the action of the protection device against surges by limiting the voltage between its terminals. It must be less than the surge withstand capacity given by the category of the equipment to be protected. However, if the protector is far from the equipment to be protected it may be necessary to use additional protectors.

Maximum continuous operating voltage Umax (Uc)
This is the maximum AC or DC voltage which may be continuously applied to the terminals of the surge arrester.

Performance

	SA BLOCK I	SA BLOCK I and II	SAP I+II	SAP II	SAPV I+II photovoltaic	SAPV II photovoltaic	SA BLOCK II single phase	SA BLOCK II multi-phase
Energy impulse wave	10/350µs	10/350µs and 8/20µs	10/350µs and 8/20µs	8/20µs	10/350µs and 8/20µs	8/20µs	8/20µs	8/20µs
Response time	<100ns	<25ns	<25ns	<25ns	<25ns	<25ns	<25ns	<25ns
Thermal fuse	no	yes	yes	yes	yes	yes	yes	yes
Thermal fuse healty indication	no	yes	yes	yes	yes	yes	yes	yes
Nominal voltage	230V or 400V	230V or 400V	230V or 400V	230V or 400V	600V or 1000V	600V or 1000V	230V or 400V	230V or 400V
Frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	-	-	50/60Hz	50/60Hz
Usable in networks	TT, TN-S, TN-C, IT	TT, TN-S, TN-C, IT	TT, TN-S, TN-C, IT	TT, TN-S, TN-C, IT	DC	DC	TT, TN-S, TN-C, IT	TT, TN-S, TN-C, IT
Operating temperature	-40°C+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C
Screws	Pozidriv 3	Pozidriv 3	Pozidriv 3	Pozidriv 3	Pozidriv 3	Pozidriv 3	Pozidriv 3	Pozidriv 3
Terminal capacity: min	16mm²	6mm²	10mm²	6mm²	10mm²	6mm²	6mm²	6mm²
max (flexible/grid)	35/50mm²	25/35mm²	25/35mm²	25/35mm²	25/35mm²	25/35mm²	25/35mm²	25/35mm²

Connection scheme Tele OV (continuous overvoltage protection)



New

SurgeGuard - Surge arresters - Class I+II/B+C

Single phase PLUG-IN

TT, TN-S, TN-C, IT system

Iimp	Imax	In	Up	Up (L-N)	Up (N-PE)	Umax (Uc) per pole	No. of poles	Auxiliary contact	No. of modules	Cat. No.	Ref. No.	Pack
25kA	100kA	25kA	1500V	-	-	275V	1P	-	2	SAP1 I+II 25/230	**660125**	1
25kA	100kA	25kA	1500V	-	-	275V	1P	1CO	2	SAP1 I+II 25/230 C	**660127**	1
25kA	100kA	25kA	2000V	-	-	440V	1P	-	2	SAP1 I+II 25/400	**660126**	1
25kA	100kA	25kA	2000V	-	-	440V	1P	1CO	2	SAP1 I+II 25/400 C	**660128**	1
12.5kA	65kA	20kA	1300V	-	-	275V	1P	-	1	SAP1 I+II 12.5/230	**660131**	1
12.5kA	65kA	20kA	1300V	-	-	275V	1P	1CO	1	SAP1 I+II 12.5/230 C	**660135**	1
12.5kA	65kA	20kA	1800V	-	-	440V	1P	-	1	SAP1 I+II 12.5/400	**660132**	1
12.5kA	65kA	20kA	1800V	-	-	440V	1P	1CO	1	SAP1 I+II 12.5/400 C	**660136**	1
Neutral-earth SPD's for TT systems												
100kA	100kA	50kA	1500V	-	-	255V	1P	-	2	SAP1 I+II 100N	**660391**	1
50kA	65kA	50kA	1500V	-	-	255V	1P	-	1	SAP1 I+II 50N	**660130**	1
25kA	65kA	25kA	1500V	-	-	255V	1P	-	1	SAP1 I+II 25N	**660138**	1

Multi-phase PLUG-IN

TT system

12.5kA	65kA	20kA	-	1300V	1500V	275V	2P	-	2	SAP2 I+II 12.5 TT	**660139**	1
12.5kA	65kA	20kA	-	1300V	1500V	275V	2P	1CO	2	SAP2 I+II 12.5 TT C	**660140**	1
12.5kA	65kA	20kA	-	1300V	1500V	275V	4P	-	4	SAP4 I+II 12.5 TT	**660150**	1
12.5kA	65kA	20kA	-	1300V	1500V	275V	4P	1CO	4	SAP4 I+II 12.5 TT C	**660151**	1

TN-S system

12.5kA	65kA	20kA	-	1300V	-	275V	2P	-	2	SAP2 I+II 12.5 TNS	**660143**	1
12.5kA	65kA	20kA	-	1300V	-	275V	2P	1CO	2	SAP2 I+II 12.5 TNS C	**660144**	1
12.5kA	65kA	20kA	-	1300V	-	275V	4P	-	4	SAP4 I+II 12.5 TNS	**660152**	1
12.5kA	65kA	20kA	-	1300V	-	275V	4P	1CO	4	SAP4 I+II 12.5 TNS C	**660156**	1

TN-C system

12.5kA	65kA	20kA	-	1300V	-	275V	3P	-	3	SAP3 I+II 12.5 TNC	**660147**	1
12.5kA	65kA	20kA	-	1300V	-	275V	3P	1CO	3	SAP3 I+II 12.5 TNC C	**660148**	1

Replacement modules for Class I+II/B+C

Iimp	Imax	In	Up	Up (L-N)	Up (N-PE)	Umax (Uc)	No. of poles	Auxiliary contact	No. of modules	Cat. No.	Ref. No.	Pack
25kA	100kA	25kA	1500V	-	-	275V	1P	-	2	SAM I+II 25/230	**660199**	1
25kA	100kA	25kA	2000V	-	-	440V	1P	-	2	SAM I+II 25/400	**660257**	1
12.5kA	65kA	20kA	1300V	-	-	275V	1P	-	1	SAM I+II 12.5/230	**660294**	1
12.5kA	65kA	20kA	1800V	-	-	440V	1P	-	1	SAM I+II 12.5/400	**660295**	1
Neutral-earth replacement modules for SAPx I+II...N												
100kA	100kA	50kA	1500V	-	-	255V	1P	-	2	SAM I+II 100N	**660393**	1
50kA	65kA	50kA	1500V	-	-	255V	1P	-	1	SAM I+II 50N	**660274**	1
25kA	65kA	25kA	1500V	-	-	255V	1P	-	1	SAM I+II 25N	**660296**	1

New

SurgeGuard - Surge arresters - Class II/C

Class II protectors are the most frequently used because they offer high protection and are compatible with most equipments.

Single phase PLUG-IN

TT, TN-S, TN-C, IT system

Imax	In	Up	Up (L-N)	Up (N-PE)	Umax (Uc) per pole	No. of poles	Auxiliary contact	No. of modules	Cat. No.	Ref. No.	Pack
40kA	20kA	-	1300V	-	275V	1P	-	1	SAP1 II 40/230	**660158**	1
40kA	20kA	-	1300V	-	275V	1P	1CO	1	SAP1 II 40/230 C	**660160**	1
40kA	20kA	-	2000V	-	440V	1P	-	1	SAP1 II 40/400	**660159**	1
40kA	20kA	-	2000V	-	440V	1P	1CO	1	SAP1 II 40/400 C	**660162**	1
20kA	10kA	-	1400V	-	320V	1P	-	1	SAP1 II 20/230	**660164**	1
20kA	10kA	-	1400V	-	320V	1P	1CO	1	SAP1 II 20/230 C	**660166**	1
20kA	10kA	-	2000V	-	440V	1P	-	1	SAP1 II 20/400	**660165**	1
20kA	10kA	-	2000V	-	440V	1P	1CO	1	SAP1 II 20/400 C	**660167**	1
Neutral-earth SPD's for TT systems											
40kA	20kA	-	-	1500V	265V	1P	-	1	SAP1 II 40N	**660163**	1
20kA	10kA	-	-	1500V	255V	1P	-	1	SAP1 II 20N	**660169**	1

Multi-phase PLUG-IN

TT system

40kA	20kA	-	1300V	1500V	275V	2P	-	2	SAP2 II 40/230 TT	**660171**	1
40kA	20kA	-	1300V	1500V	275V	2P	1CO	2	SAP2 II 40/230 TTC	**660172**	1
20kA	10kA	-	1400V	1500V	320V	2P	-	2	SAP2 II 20/230 TT	**660173**	1
20kA	10kA	-	1400V	1500V	320V	2P	1CO	2	SAP2 II 20/230 TTC	**660174**	1
40kA	20kA	-	1300V	1500V	275V	4P	-	4	SAP4 II 40/400 TT	**660183**	1
40kA	20kA	-	1300V	1500V	275V	4P	1CO	4	SAP4 II 40/400 TTC	**660184**	1
20kA	10kA	-	1400V	1500V	320V	4P	-	4	SAP4 II 20/400 TT	**660185**	1
20kA	10kA	-	1400V	1500V	320V	4P	1CO	4	SAP4 II 20/400 TTC	**660186**	1

TN-S system

40kA	20kA	-	1300V	-	275V	2P	-	2	SAP2 II 40/230 TNS	**660175**	1
40kA	20kA	-	1300V	-	275V	2P	1CO	2	SAP2 II 40/230 TNSC	**660176**	1
20kA	10kA	-	1400V	-	320V	2P	-	2	SAP2 II 20/230 TNS	**660177**	1
20kA	10kA	-	1400V	-	320V	2P	1CO	2	SAP2 II 20/230 TNSC	**660178**	1
40kA	20kA	-	1300V	-	275V	4P	-	4	SAP4 II 40/400 TNS	**660187**	1
40kA	20kA	-	1300V	-	275V	4P	1CO	4	SAP4 II 40/400 TNSC	**660188**	1
20kA	10kA	-	1400V	-	320V	4P	-	4	SAP4 II 20/400 TNS	**660189**	1
20kA	10kA	-	1400V	-	320V	4P	1CO	4	SAP4 II 20/400 TNSC	**660190**	1

TN-C system

40kA	20kA	-	1300V	-	275V	3P	-	3	SAP3 II 40/400 TNC	**660179**	1
40kA	20kA	-	1300V	-	275V	3P	1CO	3	SAP3 II 40/400 TNCC	**660180**	1
20kA	10kA	-	1400V	-	320V	3P	-	3	SAP3 II 20/400 TNC	**660181**	1
20kA	10kA	-	1400V	-	320V	3P	1CO	3	SAP3 II 20/400 TNCC	**660182**	1

Replacement modules for Class II/B

For TT, TN-S, TN-C, IT system

Imax	In	Up	Up (L-N)	Up (N-PE)	Umax (Uc)	No. of poles	Auxiliary contact	No. of modules	Cat. No.	Ref. No.	Pack
40kA	20kA	1300V	-	-	275V	1P	-	1	SAM II 40/230	**660373**	1
40kA	20kA	2000V	-	-	440V	1P	-	1	SAM II 40/400	**660374**	1
20kA	10kA	1400V	-	-	320V	1P	-	1	SAM II 20/230	**660297**	1
20kA	10kA	2000V	-	-	440V	1P	-	1	SAM II 20/400	**660298**	1
Neutral-earth replacement modules for SAPx II...N											
40kA	20kA	1500V	-	-	265V	1P	-	1	SAM II 40N	**660375**	1
20kA	10kA	1500V	-	-	255V	1P	-	1	SAM II 20N	**660299**	1

New

SurgeGuard - Surge arresters - Class I/B

The surge arresters have the capacity to divert excess energy for low voltage line protection.
Class I surge arresters should be installed in areas at high risk from direct lightning strike discharge.

Single phase MONOBLOCK

TT, TN-S
TN-C, IT

Iimp	In	Up	Up (L-N)	Up (N-PE)	Umax (Uc) per pole	No. of poles	Auxiliary contact	No. of modules	Cat. No.	Ref. No.	Pack
35kA	-	-	4000V	-	255V	1P	-	1	SA BLOCK I 35	**667470**	1
100kA	-	-	-	4000V	255V	1P	-	1	SA BLOCK I 100 N	**667471**	1
Cable throught		-	-	-	-	-	-	1	SA BLOCK I PC	**667472**	1

SurgeGuard - Surge arresters - Class I+II/B+C

The surge arrester can operate as a Class I and Class II protection in accordance with the IEC 61643-11 Class I/B and Class II/C integrated in only one device. Used in main panelboards (incomer of installations) with high risk from direct lightning strike discharge. Decoupling coils not needed

Single phase MONOBLOCK

TT, TN-S
TN-C, IT

Iimp Class I/Class II	In Class II	Up	Up (L-N)	Up (N-PE)	Umax (Uc) per pole	No. of poles	Auxiliary contact	No. of modules	Cat. No.	Ref. No.	Pack
15kA/100KA	30kA	-	1300V	-	275V	1P	-	2	SA BLOCK I and II 100	**667486**	1
30kA/100KA	60kA	-	-	1500V	275V	1P	-	2	SA BLOCK I and II 100N	**667487**	1
7.5kA/65KA	20kA	-	1300V	-	275V	1P	-	1	SA BLOCK I and II 65	**667517**	1
12kA/65KA	20kA	-	-	1500V	275V	1P	-	1	SA BLOCK I and II 65N	**667518**	1

SurgeGuard - Surge arresters - Class II/C

Single phase MONOBLOCK

TT, TN-S
TN-C, IT

Iimp	In	Up	Up (L-N)	Up (N-PE)	Umax (Uc) per pole	No. of poles	Auxiliary contact	No. modules	Cat. No.	Ref. No.	Pack
15kA	5kA	-	1200V	-	275V	1P	-	1	SA BLOCK II 15/230	**667473**	1
15kA	5kA	-	1200V	-	275V	1P	1CO	1	SA BLOCK II 15/230 C	**667475**	1
15kA	5kA	-	1800V	-	420V	1P	-	1	SA BLOCK II 15/400	**667474**	1
15kA	5kA	-	1800V	-	420V	1P	1CO	1	SA BLOCK II 15/400 C	**667476**	1
15kA	5kA	-	-	850V	255V	1P	-	1	SA BLOCK II 15N	**667481**	1
40kA	15kA	-	1300V	-	275V	1P	-	1	SA BLOCK II 40/230	**667477**	1
40kA	15kA	-	1300V	-	275V	1P	1CO	1	SA BLOCK II 40/230 C	**667479**	1
40kA	15kA	-	1800V	-	420V	1P	-	1	SA BLOCK II 40/400	**667478**	1
40kA	15kA	-	1800V	-	420V	1P	1CO	1	SA BLOCK II 40/400 C	**667480**	1
40kA	20kA	-	-	1500V	275V	1P	-	1	SA BLOCK II 40N	**667482**	1

Multi-phase MONOBLOCK

Common and differential mode protection - TT system											
15kA	5kA	-	1200V	1500V	275V	2P	-	1	SA BLOCK II 15LN	**667483**	1
15kA	5kA	-	1200V	1500V	275V	2P	-	2	SA BLOCK II 15/230 LNE	**667488**	1
40kA	15kA	-	1300V	1500V	275V	2P	-	2	SA BLOCK II 40/230 LNE	**667490**	1
15kA	5kA	-	1200V	1500V	440V	4P	-	4	SA BLOCK II 15/400 3L+NE	**667494**	1
40kA	15kA	-	1300V	1500V	440V	4P	-	4	SA BLOCK II 40/400 3L+NE	**667496**	1
Common mode protection - TNS system											
15kA	5kA	1200V	-	-	275V	2P	-	2	SA BLOCK II 15/230 LLE	**667489**	1
40kA	15kA	1300V	-	-	275V	2P	-	2	SA BLOCK II 40/230 LLE	**667491**	1
15kA	5kA	1200V	-	-	440V	4P	-	4	SA BLOCK II 15/400 4L/NE	**667495**	1
40kA	15kA	1300V	-	-	440V	4P	-	4	SA BLOCK II 40/400 4L/NE	**667497**	1
40kA	15kA	1300V	-	-	440V	4P	1CO	4	SA BLOCK II 40/400 4L/NE C	**667498**	1

Surge arresters for communication lines and coax cables

The protective devices should be installed for sensitive equipment both in home and industries.

Telephone, modem, router, alarm, home automation

Imax	In	Up	Up (L-N)	Up (N-PE)	Umax	fg Bandwidth	Protection type	No. of modules	Cat. No.	Ref. No.	Pack
10kA	5kA	200V	-	-	180V	3MHz	1 par	1	SA BLOCK ADSL	**667484**	1

Radio frequency signals, TV, cameras, receivers, satelite

20kA	10kA	600V	-	-	230V	3GHz	BNC	-	SA TV	**667510**	1

SurgeGuard - Surge arresters - Class I+II for (DC) photovoltaic applications

PLUG-IN

Iimp	Imax	In	Up	Umax	No. of poles	Auxiliary contact	No. of modules	Cat. No.	Ref. No.	Pack
12.5kA	65kA	20kA	2600	700VDC	3P	-	3	SAPV I+II 12.5/600	**660191**	1
12.5kA	65kA	20kA	2600	700VDC	3P	1CO	3	SAPV I+II 12.5/600 C	**660192**	1
12.5kA	65kA	20kA	4000	1170VDC	3P	-	3	SAPV I+II 12.5/1000	**660193**	1
12.5kA	65kA	20kA	4000	1170VDC	3P	1CO	3	SAPV I+II 12.5/1000 C	**660194**	1

New

Replacement modules for Class I+II photovoltaic applications

12.5kA	65kA	20kA	-	350VDC	1P	-	1	SAM I+II 12.5/600PV	**660376**	1
12.5kA	65kA	20kA	-	585VDC	1P	-	1	SAM I+II 12.5/1000PV	**660377**	1

New

SurgeGuard - Surge arresters - Class II for (DC) photovoltaic applications

PLUG-IN

Imax	In	Up	Umax	No. of poles	Auxiliary contact	No. of modules	Cat. No.	Ref. No.	Pack
40kA	20kA	2600V	700VDC	3P	-	3	SAPV II 40/600	**660195**	1
40kA	20kA	2600V	700VDC	3P	1CO	3	SAPV II 40/600C	**660196**	1
40kA	20kA	4000V	1170VDC	3P	-	3	SAPV II 40/1000	**660197**	1
40kA	20kA	4000V	1170VDC	3P	1CO	3	SAPV II 40/1000C	**660198**	1

New

Replacement modules for Class II photovoltaic applications

40kA	20kA	1300V	350VDC	1P	-	1	SAM II 40/600PV	**660378**	1
40kA	20kA	2000V	585VDC	1P	-	1	SAM II 40/1000PV	**660379**	1

New

SurgeGuard - Surge arresters - Class II for (DC) photovoltaic applications

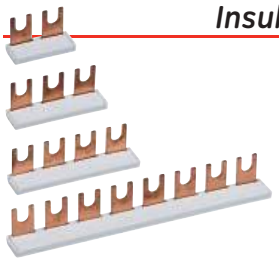
MONOBLOCK

40kA	15kA	2600V	600VDC	2P	-	2	SA PHOT 600V	**667508**	1
40kA	15kA	3800V	1000VDC	2P	-	2	SA PHOT 1000V	**667509**	1

Surge arresters for temporary overvoltage protection (TOV)(1)

In	Ua L-N	Tripping time (Ua)	Tripping time (400V)	Un	No. of poles	No. of modules	Cat. No.	Ref. No.	Pack
MCB's	254V	<4s	<0.5s	230V	2	1	TELE OV 230	**667485**	1
MCB's	254V	<4s	<0.5s	400V	4	2	TELE OV 400	**667493**	1

Insulated FORK type busbars



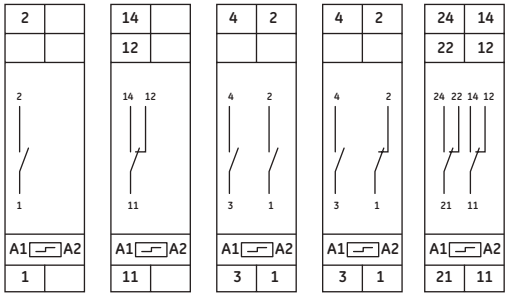
Section	Description	Cat. No.	Ref. No.	Pack
10mm²	2x1P - 90°	EV-G.1.2.80-90°	**624993**	20
10mm²	3x1P - 90°	EV-G.1.3.80-90°	**644893**	20
10mm²	4x1P - 90°	EV-G.1.4.80-90°	**568106**	20
10mm²	8x1P - 90°	EV-G.1.8.80-90°	**644897**	20

(1) Connection scheme Tele OV, see page D.47

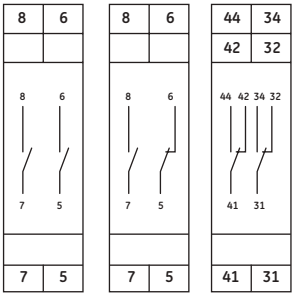
Terminal capacity

Impulse switches - Pulsar S

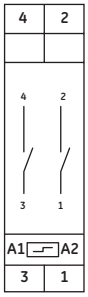
Impulse switches



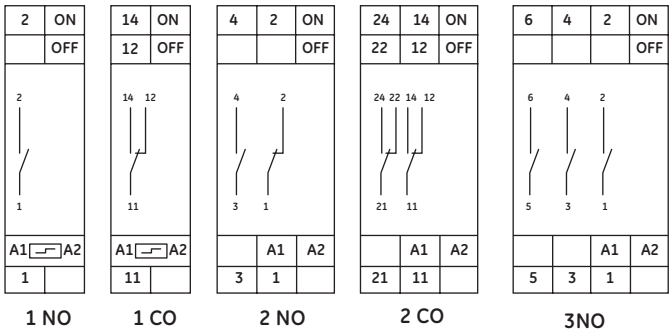
Add-on power contact



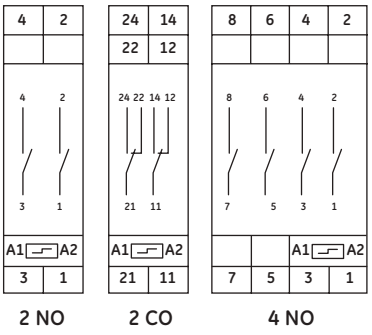
Step by step multi circuit



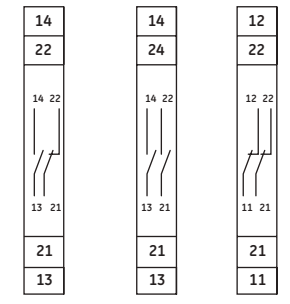
All-in central command



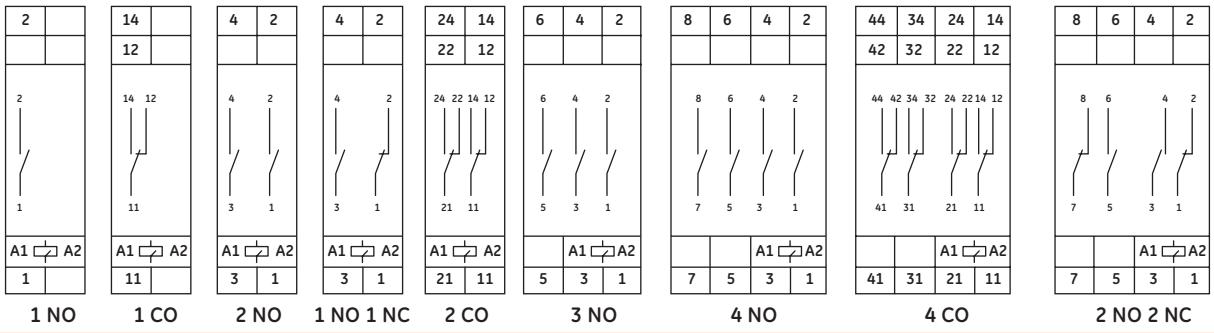
Permanent use



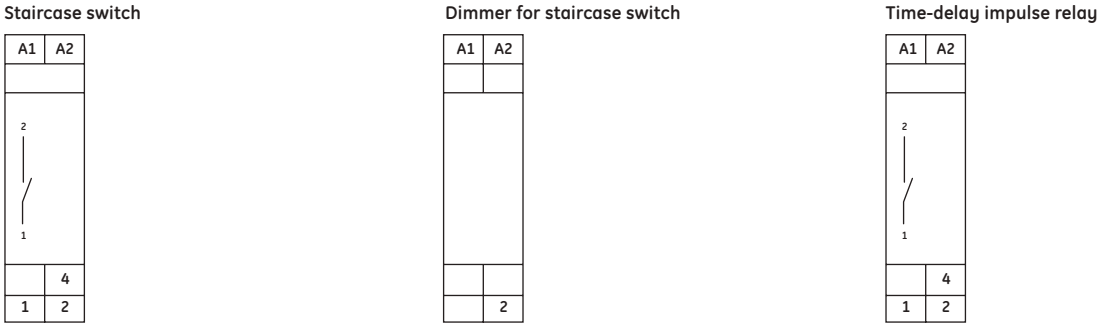
Add-on auxiliary contact



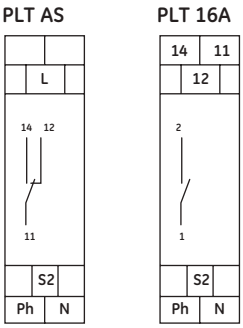
Relays - Contax R



Staircase switches - Pulsar TS

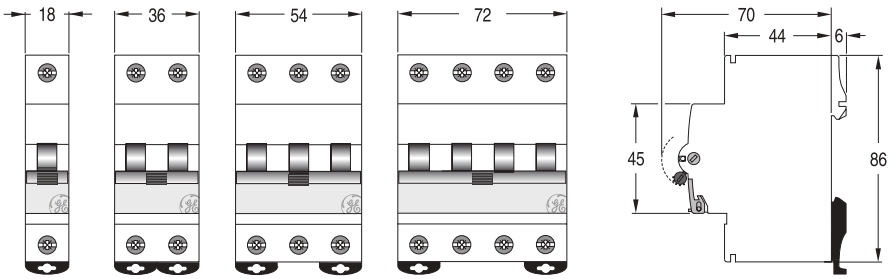


Time relays - Pulsar T

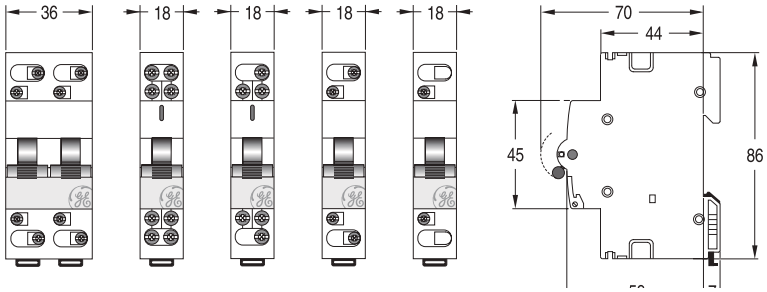


Dimensional drawings

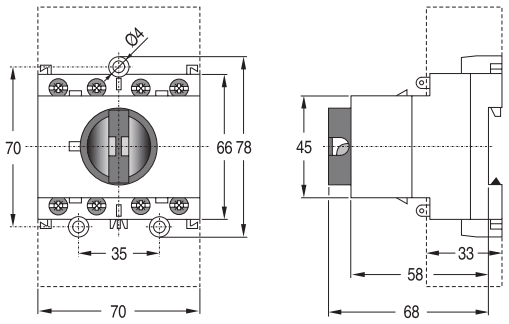
Mains disconnect switches - Aster



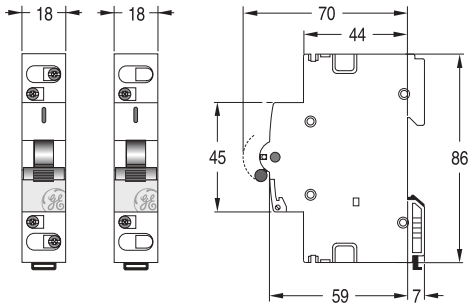
Switches - Aster



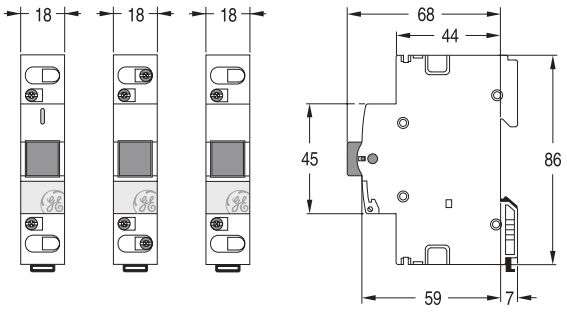
Rotary switches - Aster



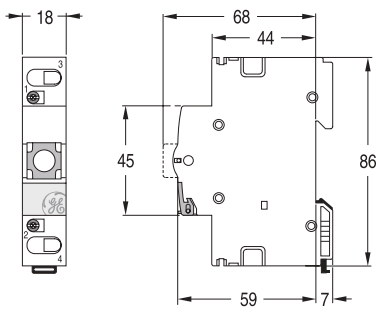
Switches with signal lamp - Aster



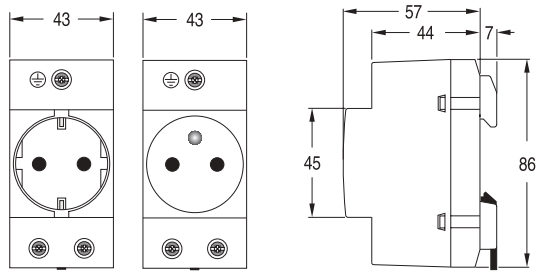
Push-buttons - Aster



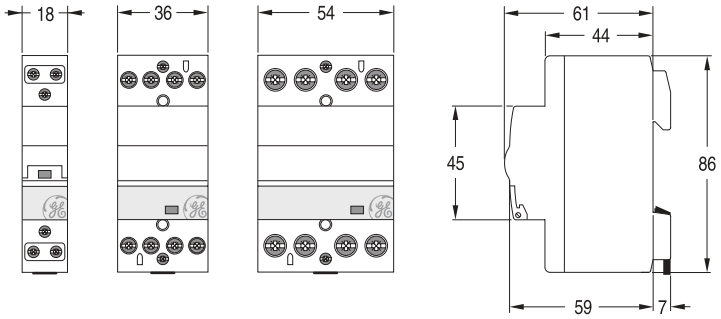
Indication lamp - Aster



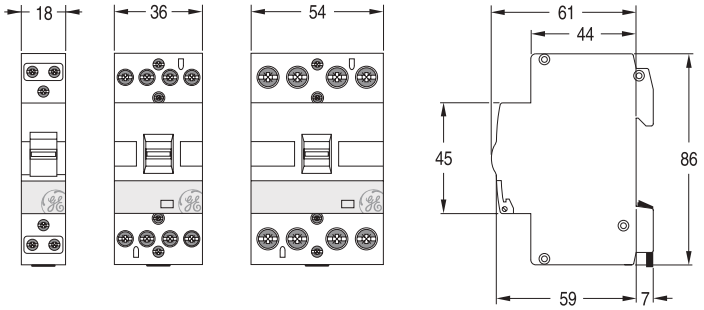
Socket-outlet - Series MSC



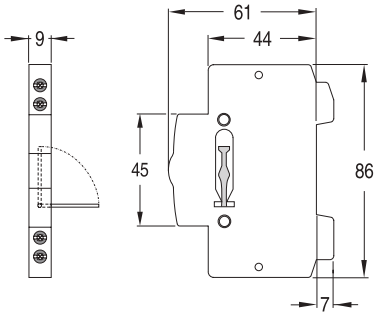
Contactors - Contax



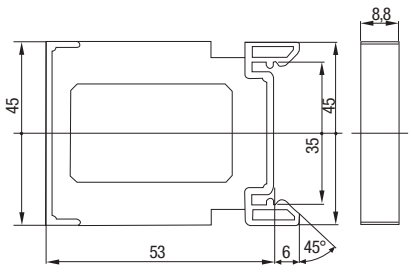
Contactors Day and Night - Contax



Contactors - Auxiliary contact

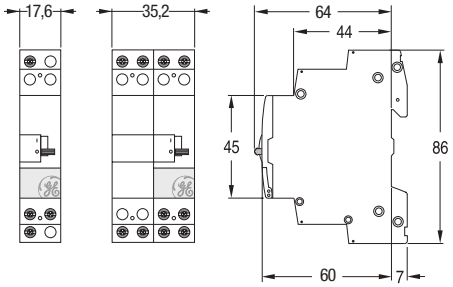


Contactors - Spacer

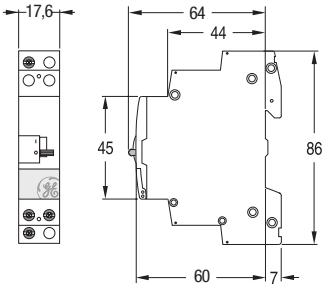


Dimensional drawings

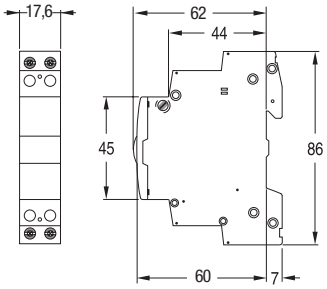
Relays - Contax R



Impulse switches - Pulsar S

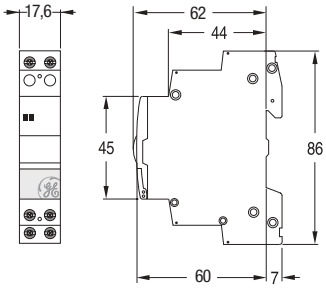


Impulse switches - Pulsar S

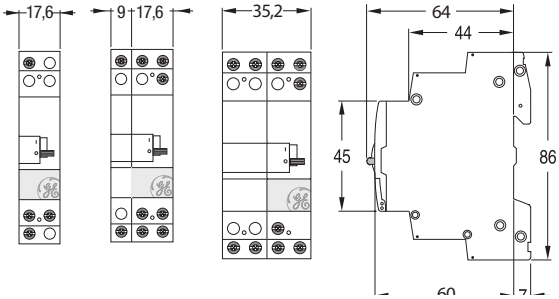


Impulse switches - Pulsar S

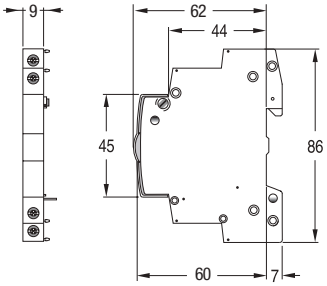
Step by step multi circuit



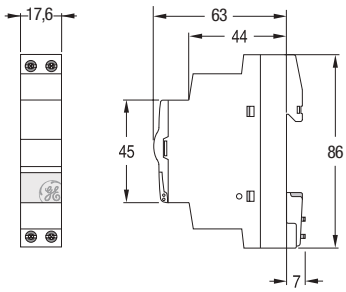
All-in central command - Pulsar S



Add-on auxiliary contact - Pulsar S

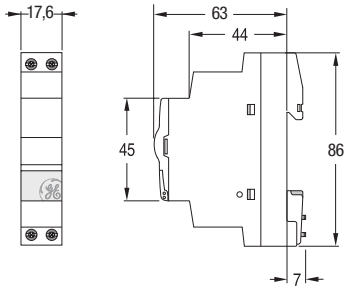


Capacity module - Pulsar S

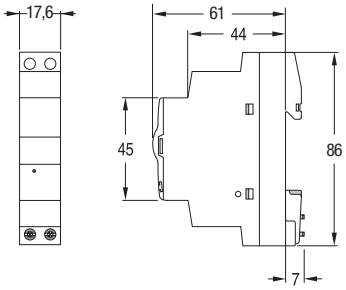


Central command - Pulsar S

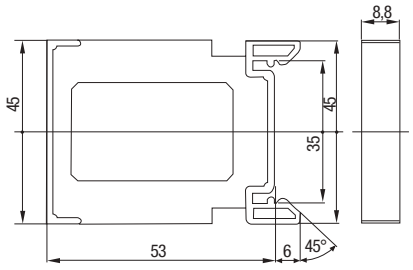
Multilevel central control module



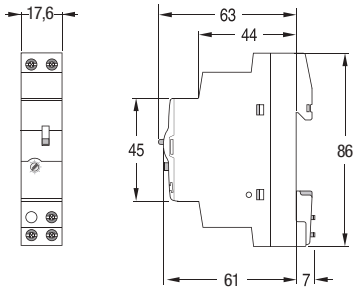
SurgeGuard safety module



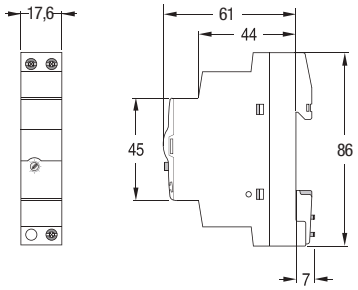
Spacer - Pulsar S



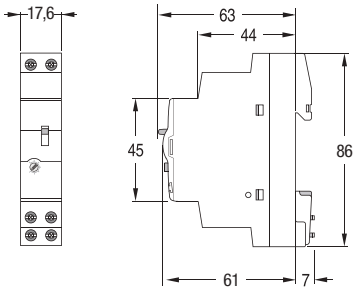
Staircase switches - Pulsar TS



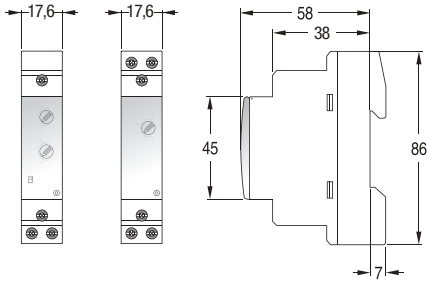
Dimmer - Pulsar TS



Time-delay impulse relay - Pulsar TS



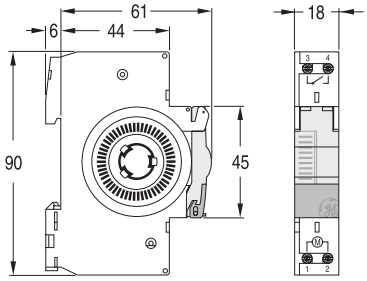
Time relays - Pulsar T



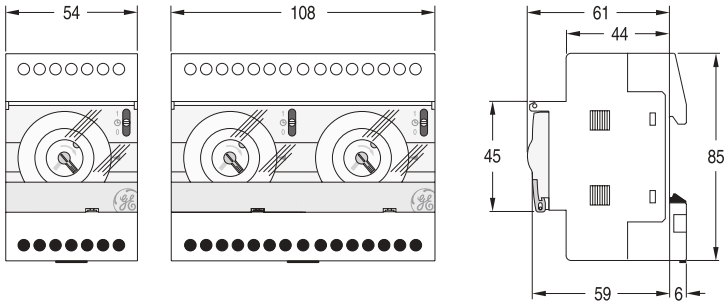
Dimensional drawings

Analogue time switches - Classic

1 module

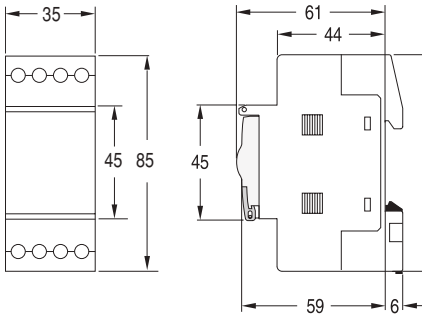


3 and 6 modules



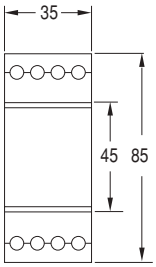
Digital time switches - Galax

2 modules

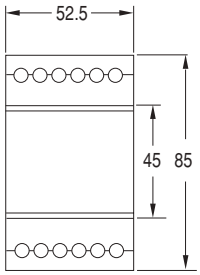


Digital time switches - Galax - channel extention / annual time switches / LAN device

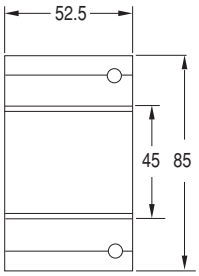
GLX 22 CE



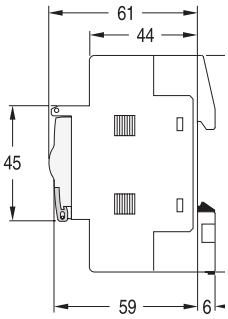
GLX Q 32



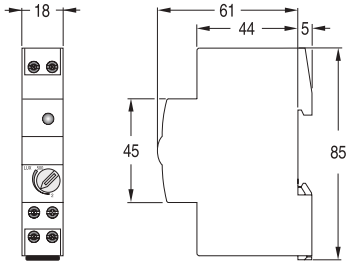
GLX 30 LAN



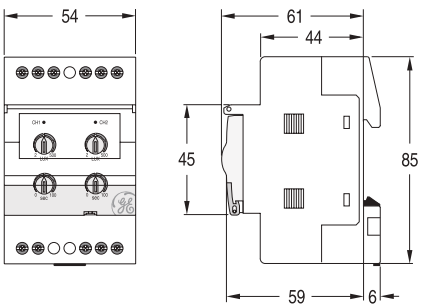
GLX 22 CE / GLX Q 30 / GLX 32 LAN



Light sensitive switch 1 module - Galax LSS

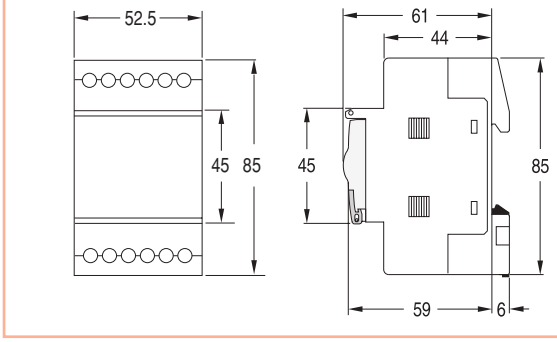


Light sensitive switches 3 mod. - Galax LSS

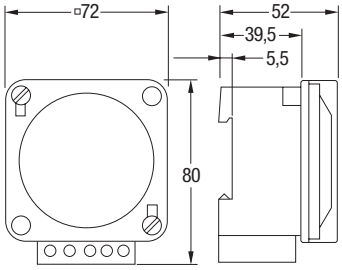


Light sensitive switches with timer Galax LSS

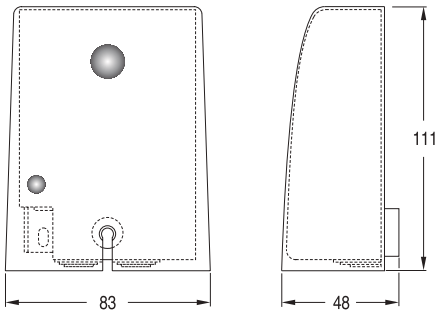
LSS 31



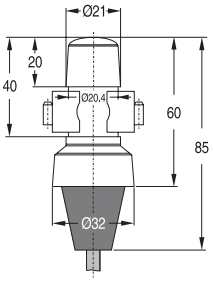
Time Switches - 72x72 Classic and Galax



Light sensitive switch photocell incorporated



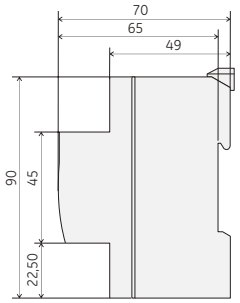
Light sensitive switches - Photocell



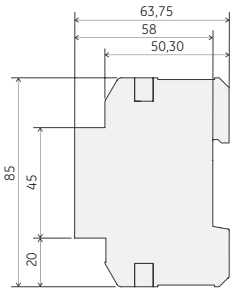
Dimensional drawings

Surge arresters - SurgeGuard

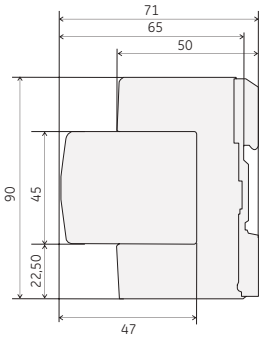
MONOBLOCK types
SA BLOCK, SA BLOCK ADSL



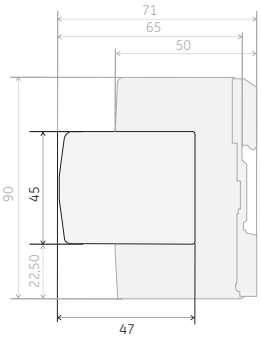
SA BLOCK II 15 LN



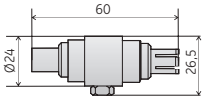
PLUG-IN types



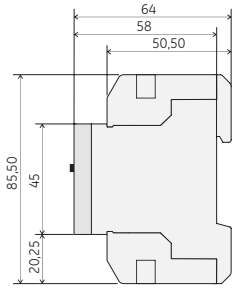
Replacement modules



For coax cables (SATV)

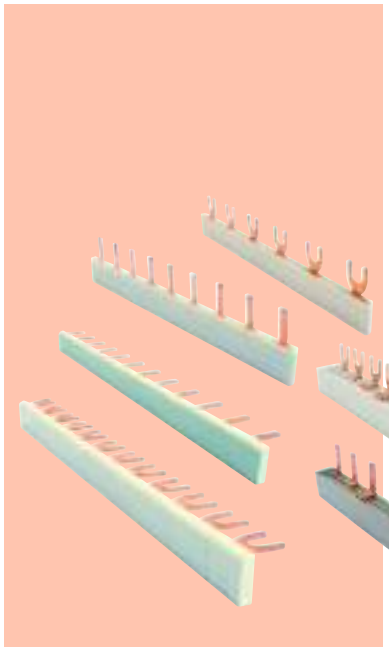


TELE OV - Overvoltage protection



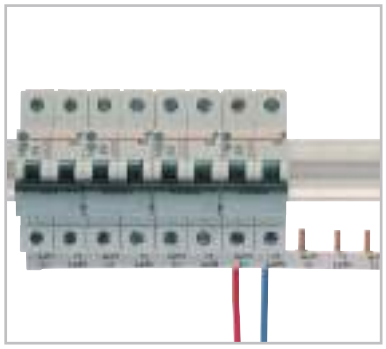
E.2 **Busbar system**
E.4 Insulated PIN type busbars
E.5 Insulated PIN type busbars for compact MCBs Unibis™
E.6 Insulated FORK type busbars
E.8 Busbars for connection of auxiliaries
E.8 Accessories

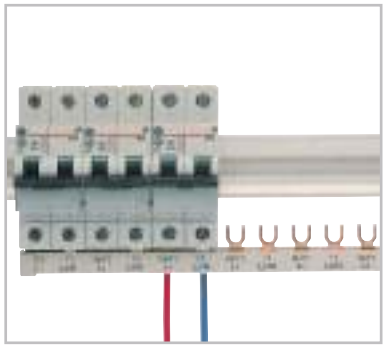
Notes

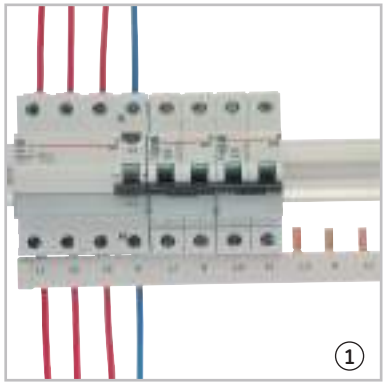


Busbar system

Rails







Technical data

Rail	copper (oxygen free)
Insulation strip	plastic heat resistant > 96 °C self extinguishing V0
Dielectric strength	36kV/mm (acc. to DIN 53481/1.2)
Short-circuit resistance	25kA (100A fuse)
Climate proofing	according to IEC 60068-2-30
Creepage resistance/tracking index	400V (acc. to IEC 60112)
Insulation group acc. to EN 60439-1	Material group II, 400V

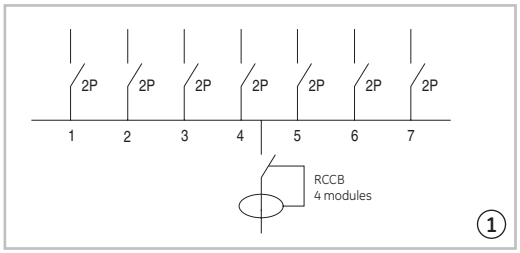
Load values in A (Ith)

Polarity	**1 pole**			
Connection	**side**		**middle**	
Section (mm^2)	*Ith (A)*	*K (mm^2)*	*Ith (A)*	*K (mm^2)*
10 isolated	80	10	100	25
12 non isolated	90	16	110	35
16 non isolated	110	25	130	35
24 non isolated	160	25	180	2x25
36 non isolated	200	35	220	2x35

Polarity	**n poles**			
Connection	**side**		**middle**	
Section (mm^2)	*Ith (A)*	*K (mm^2)*	*Ith (A)*	*K (mm^2)*
10 isolated	80	16	100	25
16 isolated	120	25	130	35

K = section of the connection wire

n = 2P, 1P + N, 3P, 3P + N, 4P

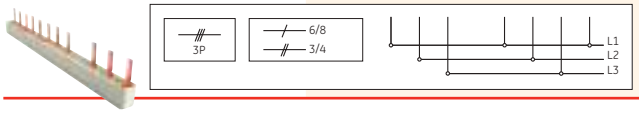
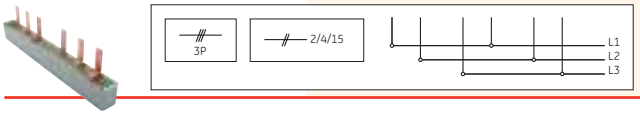
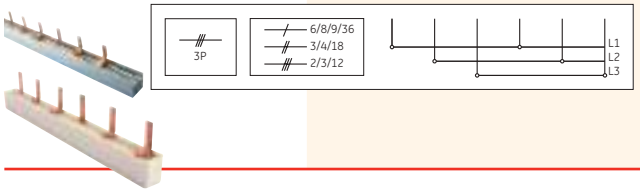
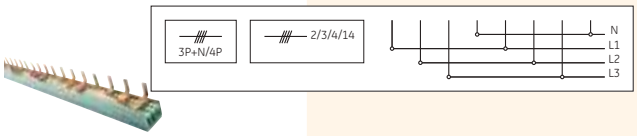
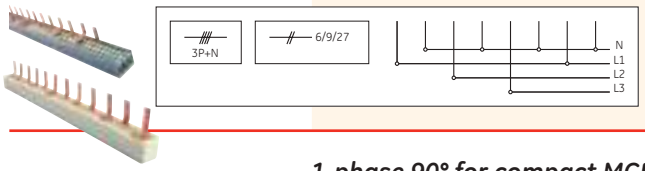
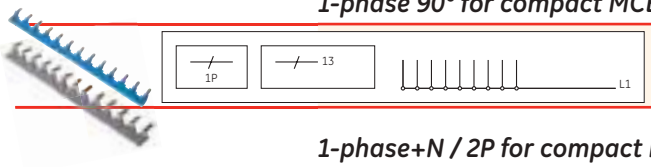
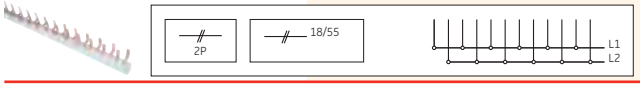
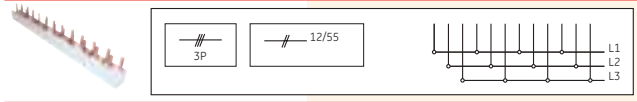
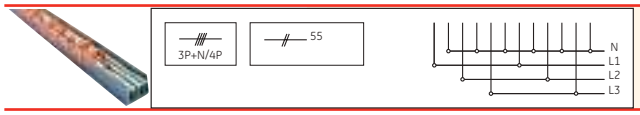
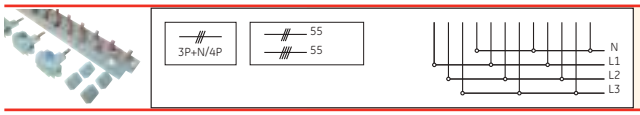


Insulated PIN type busbars

Section mm²	Description	Ref. No.	Pack.
1-phase			
10	2x1P	**546253**	10
10	6x1P	**546254**	10
10	12x1P	**546255**	10
10	13x1P	**650156**	10
10	57x1P - length 1m	**624991***	1/10
16	57x1P - length 1m	**544193***	1/10
1-phase 90°			
10	3x1P - 90°	**624959**	20
10	4x1P - 90°	**624960**	20
10	5x1P - 90°	**624961**	20
10	6x1P - 90°	**624962**	20
10	7x1P - 90°	**624963**	20
10	8x1P - 90°	**624964**	20
10	9x1P - 90°	**624965**	20
10	10x1P - 90°	**624966**	20
10	11x1P - 90°	**624967**	20
10	12x1P - 90°	**624968**	20
10	13x1P - 90°	**624969**	20
10	14x1P - 90°	**624970**	20
10	15x1P - 90°	**624971**	20
10	16x1P - 90°	**624972**	20
10	17x1P - 90°	**624973**	20
10	18x1P - 90°	**624974**	20
1-phase with 1P + auxiliary			
10	2 x (1P + auxiliary)	**546256**	10
10	6 x (1P + auxiliary)	**546257**	10
10	8 x (1P + auxiliary)	**546237**	10
10	36 x (1P + auxiliary) or MCBs Hti - length 1m	**546152***	1/50
16	36 x (1P + auxiliary) or MCBs Hti - length 1m	**624994***	1/50
2-phase			
10	4x1P or 2x2P	**546265**	10
10	6x1P or 3x2P	**546266**	10
10	12x1P or 6x2P	**546267**	10
10	14x1P or 7x2P	**544186**	10
10	18x1P or 9x2P	**624805**	10
16	14x1P or 7x2P	**618294**	20
16	56x1P or 28x2P - length 1m	**546139***	1/20
2-phase with 2P + auxiliary			
10	3 x (2P + auxiliary)	**546269**	10
10	5 x (2P + auxiliary)	**546270**	10
16	22 x (2P + auxiliary) - length 1m	**546126***	1/20
3-phase			
10	6x1P or 3x2P or 2x3P	**546277**	10
10	9x1P or 4x2P or 3x3P	**546308**	10
10	12x1P or 4x3P or 3x4P	**546278**	10
10	15x1P or 5x3P	**544180**	10
10	18x1P or 6x3P	**544181**	10
10	21x1P or 7x3P	**544182**	10
10	24x1P or 12x2P or 8x3P	**624839**	20
10	57x1P or 28x2P or 19x3P - length 1m	**546142***	1/20
16	57x1P or 28x2P or 19x3P - length 1m	**546143***	1/20

* Rails with 1m length can be shortened

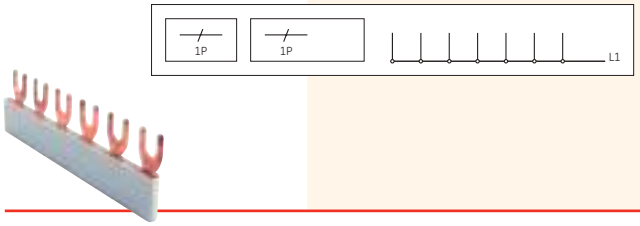
Insulated PIN type busbars (continued)

	Section mm²	Description	Ref. No.	Pack.
3-phase for screwless MCBs Fixwell™				
	10	1xRCD + 6x1P or 3x2P	**544183**	10
	10	1xRCD + 8x1P or 4x2P	**544184**	10
3-phase with 2P + auxiliary				
	10	2 x (3P + auxiliary)	**555434**	10
	10	4 x (3P + auxiliary)	**555435**	10
	10	15 x (3P + auxiliary) - length 1m	**544195***	1/20
3-phase with 1P + auxiliary				
	10	6 x (1P + auxiliary) or 6x1P MCBs Hti or 3x2P MCBs Hti or 2x3P MCBs Hti	**546396**	10
	10	8 x (1P + auxiliary) or 8x1P Hti MCB or 4x2P Hti MCB	**544185**	10
	10	9 x (1P + auxiliary) or 3x3P MCBs Hti	**546397**	10
	10	36 x (1P + auxiliary) or 18x2P Hti MCB or 12x3P Hti MCB - length 1m	**546128***	1/20
4-phase 4P or 3P+N				
	10	2x4P or 2x3P+N	**546282**	5
	10	3x4P or 3x3P+N	**546283**	5
	10	4x4P or 4x3P+N	**544187**	5
	10	14x4P or 14x3P+N - length 1m	**624807***	1/15
	16	14x4P or 14x3P+N - length 1m	**546130***	1/15
4-phase 1P+N or 2P				
	10	6x1P+N or 6x2P	**546284**	5
	10	9x1P+N or 9x2P	**546285**	5
	10	27x1P+N or 27x2P - length 1m	**624995***	1/15
	16	27x1P+N or 27x2P - length 1m	**624996***	1/15
1-phase 90° for compact MCBs Unibis™				
	10	13x1P - 90° - grey	**646091**	15
	10	13x1P - 90° - blue	**646092**	15
1-phase+N / 2P for compact MCBs Unibis™				
	10	18x1P+N / 2P	**624796**	20
	10	55x1P+N / 2P - length 1m	**624893***	1/20
3-phase for compact MCBs Unibis™				
	10	12x2P	**624797**	15
	10	55x2P - length 1m	**624798***	1/15
4-phase 1P+N or 2P for compact MCBs Unibis™				
	10	55x2P - length 1m	**624892***	1/10
4-phase 4P or 3P+N for compact MCBs Unibis™				
	10	55x3P or 4P - length 1m incl. 4 end caps and 4 connection clamps	**624800***	1/5

* Rails with 1m length can be shortened

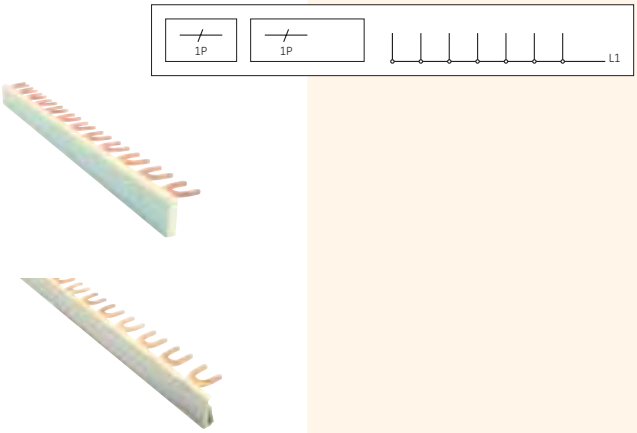
Insulated FORK type busbars

1-phase



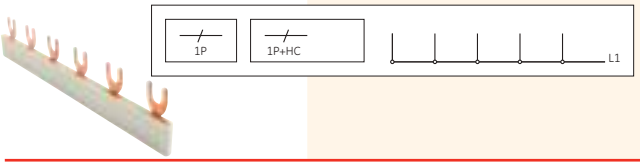
Section mm²	Description	Ref. No.	Pack.
10	2x1P	**546247**	20
10	3x1P	**644873**	20
10	4x1P	**546341**	20
10	5x1P	**650164**	20
10	6x1P	**546248**	20
10	12x1P	**546249**	20
10	13x1P	**650152**	20
10	57x1P - length 1m	**546187***	1/10
16	57x1P - length 1m	**544188***	1/10

1-phase 90°



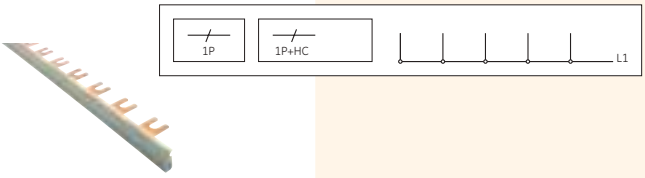
Section mm²	Description	Ref. No.	Pack.
10	2x1P - 90°	**624975**	20
10	4x1P - 90°	**624976**	20
10	5x1P - 90°	**624977**	20
10	6x1P - 90°	**624978**	20
10	7x1P - 90°	**624979**	20
10	8x1P - 90°	**624980**	20
10	9x1P - 90°	**624981**	20
10	10x1P - 90°	**624982**	20
10	11x1P - 90°	**624983**	20
10	12x1P - 90°	**624984**	20
10	13x1P - 90°	**624985**	20
10	14x1P - 90°	**624986**	20
10	15x1P - 90°	**624987**	20
10	16x1P - 90°	**624988**	20
10	17x1P - 90°	**624989**	20
10	18x1P - 90°	**624990**	20
16	57x1P - 90°- length 1m	**644890***	1/50
10	2x1P - 90° for surge arresters SurgeGuard	**624993**	20
10	3x1P - 90° for surge arresters SurgeGuard	**644893**	20
10	4x1P - 90° for surge arresters SurgeGuard	**568106**	20
10	8x1P - 90° for surge arresters SurgeGuard	**644897**	20

1-phase with 1P + auxiliary



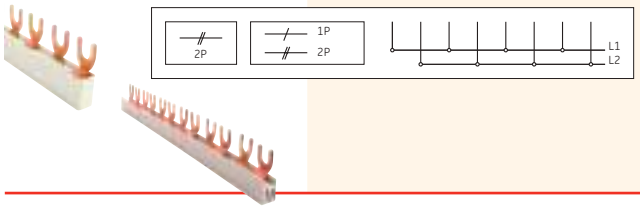
Section mm²	Description	Ref. No.	Pack.
10	2 x (1P + auxiliary)	**546250**	20
10	3 x (1P + auxiliary)	**644875**	20
10	4 x (1P + auxiliary)	**644876**	20
10	5 x (1P + auxiliary)	**644877**	20
10	6 x (1P + auxiliary)	**546251**	20
10	8 x (1P + auxiliary)	**546295**	20
10	9 x (1P + auxiliary)	**546252**	20

1-phase with 1P + auxiliary 90°



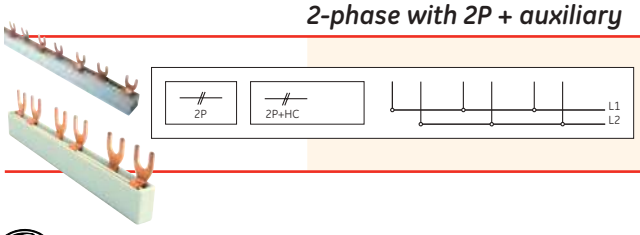
Section mm²	Description	Ref. No.	Pack.
10	2 x (1P + auxiliary) - 90°	**544272**	20
10	7 x 1P + auxiliary) - 90°	**544277**	20
10	13 x (1P + auxiliary) - 90°	**544296**	50
10	14 x (1P + auxiliary) - 90°	**644879**	20
10	15 x (1P + auxiliary) - 90°	**644880**	20
16	15 x (1P + auxiliary) - 90°	**544327**	20
10	37 x (1P + auxiliary) - 90° - length 1m	**546197***	1/50
16	37 x (1P + auxiliary) - 90° - length 1m	**544189***	1/50

2-phase



Section mm²	Description	Ref. No.	Pack.
10	4x1P or 2x2P	**546259**	10
10	6x1P or 3x2P	**546260**	10
10	10x1P or 5x2P	**644881**	10
10	12x1P or 6x2P	**546261**	10
10	14x1P or 7x2P	**544178**	10
10	18x1P or 9x2P	**644882**	10
10	56x1P or 28x2P - length 1m	**544191***	1/20
16	56x1P or 28x2P - length 1m	**546227***	1/20

2-phase with 2P + auxiliary

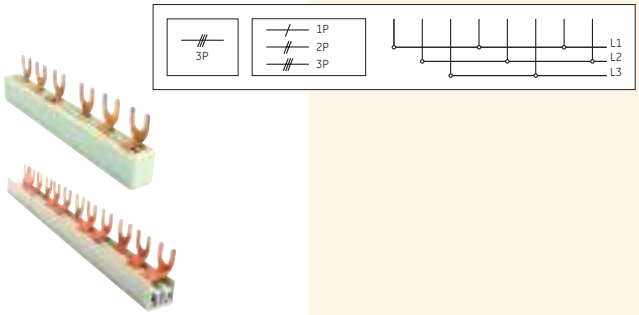


Section mm²	Description	Ref. No.	Pack.
10	2 x (2P + auxiliary)	**546262**	10
10	3 x (2P + auxiliary)	**546263**	10
10	4 x (2P + auxiliary)	**544344**	10
10	5 x (2P + auxiliary)	**546264**	10
16	22 x (2P + auxiliary) - length 1m	**546125***	1/20

* Rails with 1m length can be shortened

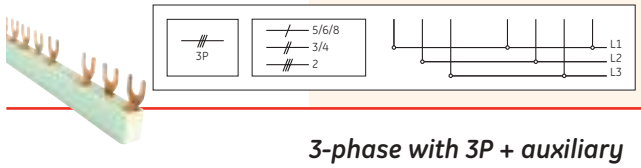
Insulated FORK type busbars (continued)

3-phase



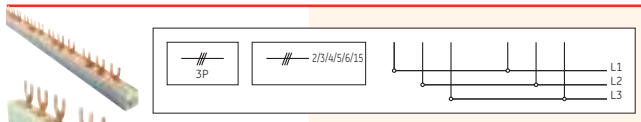
Section mm²	Description	Ref. No.	Pack.
10	6x1P or 3x2P or 2x3P	**546271**	10
10	7x1P	**624957**	10
10	9x1P or 3x3P	**546296**	10
10	12x1P or 6x2P or 4x3P	**546272**	10
10	13x1P	**650153**	10
10	14x1P or 7x2P	**650154**	10
10	15x1P or 5x3P	**544172**	10
10	18x1P or 9x2P or 6x3P	**544173**	10
10	21x1P or 7x3P	**544174**	10
10	24x1P or 12x2P or 8x3P	**624958**	20
10	57x1P or 28x2P or 19x3P - length 1m All forks on the lateral side of the busbar	**546229***	1/20
16	57x1P or 19x3P - length 1m All forks in the middle of the busbar	**546176***	1/20
16	57x1P or 28x2P or 19x3P - length 1m All forks in the middle of the busbar	**546230***	1/20

3-phase RCD´s



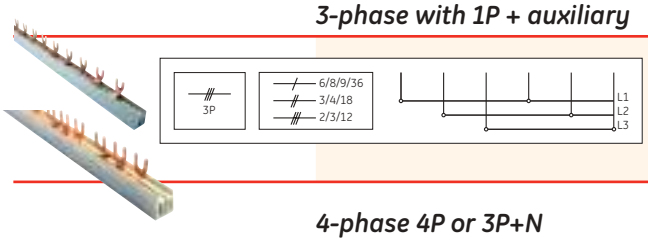
Section mm²	Description	Ref. No.	Pack.
10	1xRCD + 5x1P	**555609**	10
10	1xRCD + 6x1P or 3x2P or 2x3P	**544175**	10
10	1xRCD + 8x1P or 4x2P	**544176**	10

3-phase with 3P + auxiliary



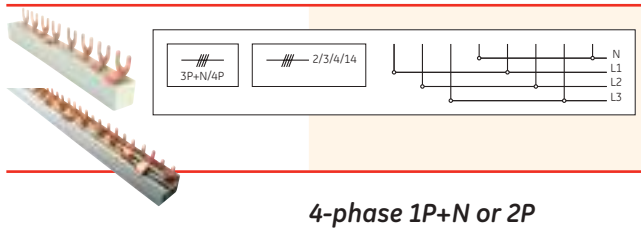
Section mm²	Description	Ref. No.	Pack.
10	2 x (3P + auxiliary)	**546273**	10
10	3 x (3P + auxiliary)	**644884**	10
10	4 x (3P + auxiliary)	**546274**	10
10	5 x (3P + auxiliary)	**644885**	10
10	6 x (3P + auxiliary)	**644886**	10
16	15 x (3P + auxiliary) - length 1m	**546129***	1/20

3-phase with 1P + auxiliary



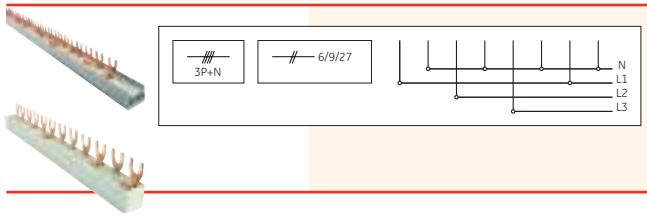
Section mm²	Description	Ref. No.	Pack.
10	6 x (1P + auxiliary) or 6x MCBs Hti	**546275**	10
10	8 x (1P + auxiliary) or 8x MCBs Hti	**544177**	10
10	9 x (1P + auxiliary) or 9x MCBs Hti	**546276**	10
16	36 x (1P + auxiliary) - length 1m	**546127***	1/20

4-phase 4P or 3P+N



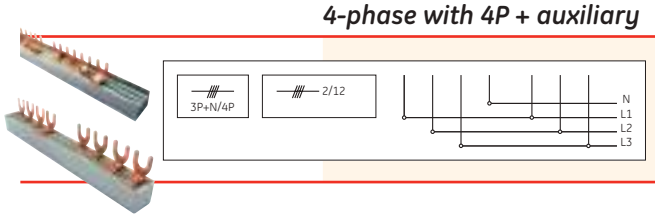
Section mm²	Description	Ref. No.	Pack.
10	2x4P or 2x3P+N	**546279**	5
10	3x4P or 3x3P+N	**546280**	5
10	4x4P or 4x3P+N	**544179**	5
10	14x4P or 14x3P+N - length 1m	**618293***	1/15
16	14x4P or 14x3P+N - length 1m	**546234***	1/15

4-phase 1P+N or 2P



Section mm²	Description	Ref. No.	Pack.
10	6x1P+N or 6x2P	**546398**	5
10	9x1P+N or 9x2P	**546281**	5
10	2xAdd on 32A +4P	**546228**	5
10	27x1P+N or 27x2P - length 1m	**624799***	1/15
16	27x1P+N or 27x2P - length 1m	**544192***	1/15

4-phase with 4P + auxiliary



Section mm²	Description	Ref. No.	Pack.
10	2 x (4P + auxiliary) or 2 x (3P+N + auxiliary)	**646084**	5
16	12 x (4P + auxiliary) or 12 x (3P+N + auxiliary) - length 1m	**646083***	1/15

*** Rails with 1m length can be shortened**

Busbars for connection of auxiliaries

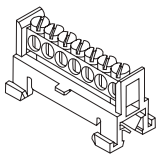
	Section mm²	Description	Ref. No.	Pack.
For auxiliary function added on 1P MCB				
		27mm / 8P	**546244**	10
		27mm / 4P	**544346**	10
For auxiliary function added on 2P MCB				
		45mm / 5P	**546245**	10
		45mm / 4P	**544347**	10
For auxiliary function added on 3P MCB				
		63mm / 4P	**546246**	10

Accessories

End caps			
10/16	for 1P busbars	**644891**	50
10	for 2P busbars	**546181**	10
10	for 3P busbars	**546200**	10
16	for 2P and 3P busbars	**546184**	10
10/16	for 4P busbars	**629867**	10

Connection clamps			
25	fork	**546287**	30
25	pin	**546288**	30
25	pin long	**546289**	50
35	for fork and pin direct on busbar	**546290**	10
25	4P compact MCBs Unibis™	**624795**	30
Insulation cap			
	Pin/fork - Yellow (RAL 1004)	**546291**	10

Insulation strip			
	For fork and pin - length 1m	**624992**	10
Clamps for neutral conductor			
16	7 poles	**546297**	10
16	12 poles	**546298**	10
16	12 poles, insulated	**568083**	10
16	15 poles	**546299**	10



Clamps for phase conductors			
16	7 poles	**546300**	10
16	12 poles	**546301**	10
16	12 poles, insulated	**568084**	10
16	15 poles	**546302**	10

DIN-rail (EN 50022)			
	Length 1000mm - Height 7mm	**564092**	10

Metal enclosures

F.2 Surface mounting - **Fix-o-Rail Senior**
F.4 Surface and flush mounting - **Fix-o-Rail 144**

Insulated plastic enclosures

F.8 Surface mounting - **Fix-o-Rail Covers**
F.10 Surface mounting - **Fix-o-Rail Classic**
F.14 Surface mounting - **Fix-o-Rail Junior**
F.16 Surface mounting - **Consumer unit**
F.22 Surface mounting - **Abaco S**
F.24 Surface mounting - **Aquaria**
F.26 Surface mounting - **Fix-o-Rail 150**
F.30 Surface mounting - **Fix-o-Rail 55**
F.32 Surface mounting - **Europe Line**
F.36 Flush mounting - **Abaco F**
F.38 Flush mounting - **Fix-o-Rail 150-F4**
F.40 Junction boxes - **Flex-o-Box**
F.42 Junction boxes - **Series 55**
F.46 Dimensional drawings

Metal enclosures
Surface mounting

Fix-o-Rail Senior — IP43

Features

- **Secure: total insulation**
  Double wall: a steel outer wall plus an inner insulated extruded wall
- Protection degree: IP43-IK08 (plain door)
- Universal: for DIN-rail equipment up to 92.5 mm
- Installation friendly: ample wiring room and a removable mounting frame
- Flexible cable entries, integrated in the base

Components

The Fix-o-Rail Senior enclosure includes:
- base in RAL 9002
- mounting frame
- labels for circuit indication
- coverplates
- a transparent or grey door in RAL 9002
- closed by handle without lock
- padlocking option

Approvals / Marking

KEMA CE

Applications

As an elegant insulated enclosure in:
- restaurants and hotels
- workshops
- hospitals
- shopping centers
- offices
- commercial buildings
- leisure and sport locations

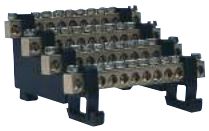
Fix-o-Rail Senior

	H x W x D (mm)	Number of modules	Number of rows	Ref. No.	Pack.
Plain door	650 x 300 x 210	48	4	**610239**	1
	800 x 300 x 210	60	5	**610248**	1
	650 x 550 x 210	96	4	**610240**	1
	800 x 550 x 210	120	5	**610249**	1
	950 x 550 x 210	144	6	**610257**	1
	1100 x 550 x 210	168	7	**610241**	1
	1250 x 550 x 210	192	8	**610242**	1
	1100 x 800 x 210	252	7	**610243**	1
	1250 x 800 x 210	288	8	**610244**	1

Transparent door	650 x 300 x 210	48	4	**610328**	1
	800 x 300 x 210	60	5	**610330**	1
	650 x 550 x 210	96	4	**610329**	1
	800 x 550 x 210	120	5	**610331**	1
	950 x 550 x 210	144	6	**610332**	1

Dimensions ● pg F.51

Accessories



4 pole terminals

	610022	18

63A

Connection range 4 x (10 x 16 mm²)

Cu section 6,5 x 9 mm

	617992	5

160 A

with cover

4x (1 x 10 to 50 mm² incoming

+ 3 x 6 to 35 mm² + 8 x 2.5 to 16 mm² outgoing)

Cu section 12 x 10 mm

	610020	1

160A

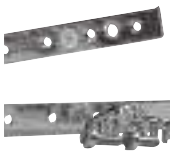
connection range 4 x (10 x 10mm²)

Cu section 12 x 5 mm

Protective shroud

	610021	1

For 160A terminal (ref. 610020)



Earth bar

	828152	1

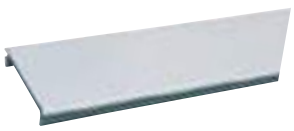
For enclosure width 300 mm - length 190mm

	828153	1

For enclosure width 550 mm - length 437mm

	828149	1

For enclosure width 800 mm - length 684mm

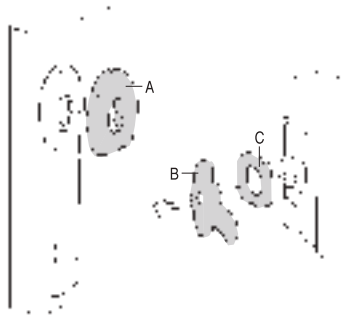


Cover strip

	828056	1

For cut out of 45 mm

Adaptor kit = A + B + C



Standard plates

	815094	1

Pre-drilled plates

	815093	5

17 x PG13.5

	815092	5

1 x PG21 - PG48 / 2 x PG13.5

2 x PG29 / 4 x PG13.5

Label for circuit indication

	610232	10

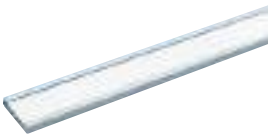
For enclosure width 300 mm

	610233	10

For enclosure width 550 mm

	610238	10

For enclosure width 800 mm



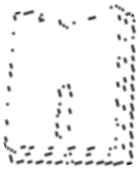
Pocket for drawings

	832000	1

Self adhesive

To be fitted on the innerside of the door

W x H = 155 x 225



Non standard lock

487/089000-016	**815105**	1

Adaptor kit

+

451/070152-061	**811327**	1

Insert 3 mm double bit key

451/070152-051	**811326**	1

Insert 8 mm triangle key

451/070152-041	**811325**	1

Insert 8 mm square key

451/070158-011	**811331**	1

Cylinder with 2 keys V2432-E

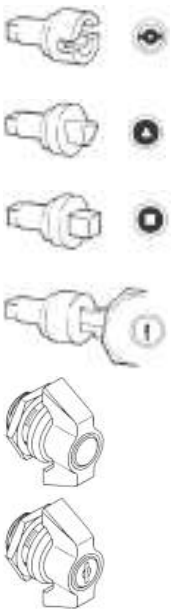
485/087000-014	**813146**	1

Neutral handle

485/087000-023	**813156**	1

Handle with key V2432-E

The standard handle can be replaced by adaptor kit + insert or handle



Metal enclosures

Fix-o-Rail 144 F (flush mounting)
Fix-o-Rail 144 S (surface mounting) IP40

Features

- In accordance with EN 60439-1 and IEC 60439-1
- Protection degree: IP40 – IK07 without door
  IP40 – IK08 with plain door
  IP40 – IK07 with transparent door
- Each DIN-rail can be equipped with 24 modules
- Centre distance between two DIN-rails: 150 mm
- Flush mounting depth: 105 mm
- Can be equipped with the Record Plus 160A D-frame
- Colour: RAL 7035

Electrical properties
- Designated voltage: 415V AC
- Designated current: 160A

Masking frame and door
- Rodged masking frame
- Manufactured in quality mild steel of 1 mm thick, cold reduced
- Pre-treated prior to electrostatic powder coating in RAL 7035 (light grey)
- Transparent or plain door

Protection plate
- Made from PVC
- Easy fixations with 1/4 screws

Base
- Ridged base (mono-block)
- Manufactured in sendzimir zinc plated steel of 1 mm thick (F.O.R 144F)
- Sidewalls foreseen with position lugs (F.O.R 144F)
- Pre-treated prior to electrostatic powder coating in RAL 7035, light grey (F.O.R 144S)
- Knock-outs in the upper, lower and the bottom side of the base
- Fixing points for the fixation of cables with cable ties

Mounting frame
- Ridged and removable mounting frame
- Adjustable in depth (±20 mm) (F.O.R 144F)
- Adjustable left or right (±10 mm) (F.O.R 144F)
- Distance between two DIN-rails: 150 mm

Door
- Transparent or plain door, security lock included

Earth bar (L = 380 mm)
- Copper bar, 12x5 mm, 18 x M5 threaded holes + connectors and screws

Advantages

- Suitable for DIN-rail mounting devices up to 70 mm as MCBs, RCDs, relays, ...
- Door, transparent or plain easy to install (optional)
- Generous wiring room
- Easy to install
- Earth terminal can be installed on the upper and the lower side of the base
- Removable mounting frame
- Easy removable protection plates
- Electrostatic powder coating RAL 7035
- Flush mounting depth base 105 mm
- Can be equipped with wiring trunks (W x H): 15x40 mm, 25x40 mm, 40x40 mm, 60x40 mm

Components

The enclosure packaging includes:
- Base
- Mounting frame
- Earth terminal
- Protection plate
- Masking frame
- User instructions

The door packaging includes:
- Plain or transparent door
- Security lock
- Hinges
- Earth continuity set
- User instructions

Dimensions ● pg. F.48

Fix-o-Rail 144-F - Flush mounting enclosures without door (1)

Included ref. 617965 = an earth terminal: copper bar 12 x 5 mm, 18 threaded holes M 5, connectors and screws

	H x W x D (mm)	Number of modules	Number of rows	Power dissipation (W) Without door	Power dissipation (W) With door	Ref. No.	Pack.
	650 x 740 x 140(1) 560 x 610 x 105(2)	72	3	140	83	**617934**	1
	800 x 740 x 140(1) 710 x 610 x 105(2)	96	4	152	95	**617935**	1
	950 x 740 x 140(1) 860 x 610 x 105(2)	120	5	164	110	**617936**	1
	1100 x 740 x 140(1) 1010 x 610 x 105(2)	144	6	176	116	**617937**	1
Equipped with function for Record Plus 160A D-frame	1100 x 740 x 140(1) 1010 x 610 x 105(2)	120	5	176	116	**617938**	1

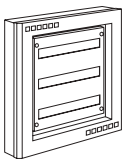
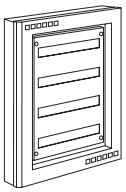
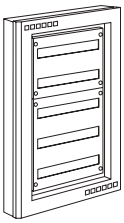
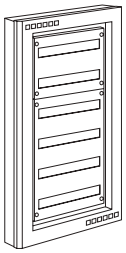
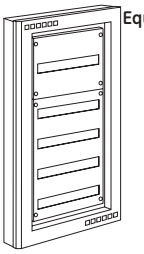
Transparent and plain doors

For enclosure	Number of modules	Number of rows	Transparent door Ref. No.	Plain door Ref. No.	Pack.
617934	72	3	**617939**	**617943**	1
617935	96	4	**617940**	**617944**	1
617936	120	5	**617941**	**617945**	1
617937	144	6	**617942**	**617946**	1
617938	120	5	**617942**	**617946**	1

(1) External dimensions
(2) Internal dimensions

Fix-o-Rail 144-S - Surface mounting enclosures without door

Included ref. 617965 = an earth terminal: copper bar 12 x 5 mm, 18 threaded holes M 5, connectors and screws

	Dimensions H x W x D (mm)	Number of modules	Number of rows	Power dissipation (W) Without door	Power dissipation (W) With door	Ref. No.	Pack.
	650 x 740 x 140	72	3	160	88	**617966**	1
	800 x 740 x 140	96	4	175	100	**617967**	1
	950 x 740 x 140	120	5	187	115	**617968**	1
	1100 x 740 x 140	144	6	195	125	**617969**	1
 Equipped with function for Record Plus 160A D-frame	1100 x 740 x 140	120	5	195	125	**617970**	1

Transparant and plain doors

For enclosure	Number of modules	Number of rows	Transparant door Ref. No.	Plain door Ref. No.	Pack.
617966	72	3	**617939**	**617943**	1
617967	96	4	**617940**	**617944**	1
617968	120	5	**617941**	**617945**	1
617969	144	6	**617942**	**617946**	1
617970	120	5			

Accessories

4 pole terminals

617992	5

160 A
with cover
4x (1 x 10 to 50 mm^2 incoming
+ 3 x 6 to 35 mm^2
+ 8 x 2.5 to 16 mm^2 outgoing)
Cu section 12 x 10 mm

610020	1

160A
connection range 4 x (10 x 10mm^2)
Cu section 12 x 5 mm

Protective shroud

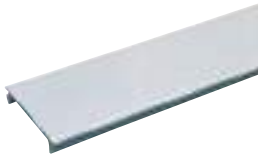
610021	1

For 160A terminal (ref. 610020)

Earth terminal kit

617965	1

Cu bar 12x5, 18 threaded holes M5,
L=380 mm, with connectors and screws
Can be installed in the upper and
lower side of the base



Cover strip

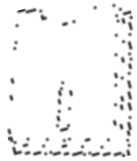
828056	1

For cut out of 45 mm

Blank plate

610142	4
610484	500

Length: 72 mm
Cut-out width: 45 mm
Can be cut into 9 mm lengths
RAL 7035



Pocket for drawings

832000	1

Self adhesive - format A4
To be fitted on the innerside of the door
W x H = 155 x 225

Function for Record Plus 125A D-frame

Fix-o-Rail 144 F/S **617018**	1
VP-System **617964**	1

height = 300 mm

Depth adapter & support

617947	1

PVC profile: lenght 355 mm
used with the function 617964

Security lock

617948	1

With two keys

Label for circuit indication

610233	10

For enclosure width 550 mm

Support for wiring-trunking

617949	1

Wiring supports

828145	1
828146	1

Cable-tray support (20 pieces)
Cable-tray (10 pieces)

Insulated enclosures
Surface mounting

Fix-o-Rail Covers *IP30*

Applications

Marking

CE

Features

- Protection degree: IP30
- Made from high resistance ABS
- Flame resistance: self extinguishing material, resist the 960°C
- Colour: Grey RAL 7035
- Installation temperature: -15°C up to +60°C

Dimensions ● pg F.49

Fix-o-Rail Covers - Without door

H x W x D (mm)	No. of modules	No. of rows	Ref. No.	Pack
139 x 51 x 61	2	1	**610090**	50
139 x 88 x 61	4	1	**610091**	60
140 x 165 x 72	6	1	**610354**	28
198 x 200 x 72	8	1	**610355**	18

Insulated enclosures
Surface mounting

Fix-o-Rail Classic — *IP30 / IP40*

Approvals / Marking

Standards

EN 60439-3

Applications

Fix-o-Rail Classic and the accessories are a homogeneous system for power distribution in new homes, adding add-on devices and replacing old units.

Features

- Protection degree: IP30
- IP40 with door (optional)
- Colour: RAL 9010
- 13, 26, 39 and 52 modules
- Total insulation ⧈ (with backplate and door)
- Transparent or plain door
- Surface mounting
- Adjustable DIN-rail
- ABS for the covers
- Polycarbonate for the transparent doors
- Flame resistance: self extinguishing material, resist the glowwire 650°C

Components

The Fix-o-Rail Classic A packaging includes:
- A mounting frame
- A protective cover
- A backplate
- A support with earth and neutral terminals
- A modular blank plate
- Four insulating caps
- Labels for circuit identification
- Installation guidelines

The Fix-o-Rail Classic B packaging includes:
- A mounting frame
- A protective cover
- Labels for circuit identification
- Installation guidelines

Advantages

- Two DIN-rail positions: 47 and 55 mm
- Generous wiring room 30 mm behind the mounting frame
- 13 modules on each row
- 125 mm distance between two DIN-rails
- Self positioning protective cover, fixation with four captive quater-turn screws
- Door can be opened to the left or the right and hinges over 180°
- The Classic range can be coupled

Dimensions ● pg F.49

Fix-o-Rail Classic

Classic A

H x W x D (mm)	Equipment	Number of rows	Number of modules	Ref. No.	Pack.
250 x 250 x 94	Earth bar: connection 8 x 16 mm^2 Neutral bar: connection 10 x 16 mm^2	1	13	**619200**	1
375 x 250 x 94	Earth bar: connection 18 x 16 mm^2 Neutral bar: connection 2(8 x 16 mm^2)	2	26	**619201**	1
500 x 250 x 94	Earth bar: connection 27 x 16 mm^2 Neutral bar: connection 2(8 x 16 mm^2)	3	39	**619202**	1
625 x 250 x 94	Earth bar: connection 27 x 16 mm^2 Neutral bar: connection 2(8 x 16 mm^2)	4	52	**618116**	1

Classic B

250 x 250 x 94	1	13	**619203**	1
375 x 250 x 94	2	26	**619204**	1
500 x 250 x 94	3	39	**619205**	1
625 x 250 x 94	4	52	**618117**	1

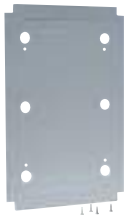
Accessories

Transparent door + hinges

618503	1
1 row	
618509	1
2 rows	
618515	1
3 rows	
617961	1
4 rows*	

Plain white door + hinges

619206	1
1 row	
619207	1
2 rows	
619208	1
3 rows	
617962	1
4 rows*	



Insulated backplate + screws

Protects the cables and devices when the cover is mounted on a moist or agressive surface

618505	1
For Classic B - 1 row	
618511	1
For Classic B - 2 rows	
618517	1
For Classic B - 3 rows	
619411	1
For Classic B - 4 rows	

Equipped insulated support

618506	1
For Classic B - 1 row E: 8 x 16 mm^2 and N: 10 x 16 mm^2	
618512	1
For Classic B - 2 rows E: 18 x 16 mm^2 and N: 2 (8 x 16 mm^2)	
618518	1
For Classic B - 3 rows E: 27 x 16 mm^2 and N: 2 (8 x 16 mm^2)	

E = earth connection
N = neutral connection

* in metal

Insulated support for earth and neutral terminals

618530	1
Can be fixed on a mounting frame easily Can be equipped with below mentioned earth or neutral terminals	

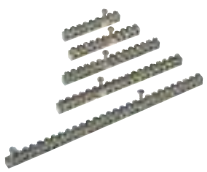
1x	2x	3x	Combination
8 x 16 mm^2	8 x 16 mm^2	8 x 16 mm^2	1 (8 x 16 mm^2) + 1 (10 x 16 mm^2)
10 x 16 mm^2	10 x 16 mm^2		1 (8 x 16 mm^2) + 1 (14 x 16 mm^2)
14 x 16 mm^2			1 (8 x 16 mm^2) + 1 (18 x 16 mm^2)
18 x 16 mm^2			1 (10 x 16 mm^2) + 1 (14 x 16 mm^2)
27 x 16 mm^2			

Equipped insulated support 3P+N + earth assembly

618529	1
5 (8 x 16 mm^2)	

Earth or neutral terminals

618519	4
8 x 16 mm^2	
618520	4
10 x 16 mm^2	
618521	4
14 x 16 mm^2	
618522	4
18 x 16 mm^2	
618523	4
27 x 16 mm^2	



Accessories Fix-o-Rail Classic (continued)

Shrouding for earth and neutral support

Protects against direct contact with live parts

618531	1

Cable entry

For a perfect finish

Can be fixed on the top as well as on the bottom of the mounting frame

619084	1

Knockouts: 11 x PG 13.5 + 1 x PG 21/29

Metal support for connection terminals

618524	1

Blank plate 4 modules

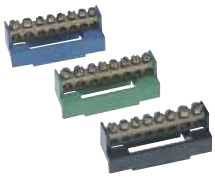
610382	4

Length: 72 mm

Cut out width: 45 mm

Can be cut into 9 mm length

RAL 9010



Connection terminals

610185	4

Phase terminal 6 x 10 mm^2 + 2 x 16 mm^2

610186	4

Earth terminal 6 x 10 mm^2 + 2 x 16 mm^2

610187	4

Neutral terminal 6 x 10 mm^2 + 2 x 16 mm^2

Coupling

618528	2

Sealing bracket

618527	2

Notes

Insulated enclosures
Surface mounting

Fix-o-Rail Junior — *IP40*

Approvals / Marking

CEBEC CE

Standards

EN 60439-3

Applications

For new buildings, replacing old units and adding add-on devices.

Features

- High resistance material
- Modern design
- Compact construction
- High protection degree IP40
- Total insulation ⧈
- Total security
- Transparent cover allowing visibility of devices
- For all modular equipment
- Available in 4 and 8 modules
- Colour: RAL 7035
- ABS for the base
  Flame resistance: self extinguishing material, resist the 650 °C
- Polycarbonate for the lid
  Flame resistance: self extinguishing material, resist the 960 °C

Dimensions ● pg F.46

Fix-o-Rail Junior

H x W x D (mm)	Equipment	No. of modules	Ref. No.	Pack.
170 x 90 x 100 Max. depth of the devices: 70 mm Entries: 2 x PG29, 4 x PG21	Earth terminal: connection 5 x 16 mm² Neutral terminal: connection 5 x 16 mm²	4	**610344**	1/15
170 x 175 x 120 Max. depth of the devices: 92.5 mm Entries: 2 x PG21, 4 x PG21, 4 x PG16	Earth terminal: connection 6 x 10 + 2 x 16 mm² Neutral terminal: connection 6 x 10 + 2 x 16 mm²	8	**610345**	1/8

Accessories

Earth/neutral terminals

For Junior 4 modules

610141	2

Connection range 5 x 16 mm²

Sealing bracket

610140	2

Earth/neutral terminals

For Junior 8 modules

610186	4

Earth

connection range

6 x 10 mm² + 2 x 16 mm²

610187	4

Neutral

connection range

6 x 10 mm² + 2 x 16 mm²

Blank plate 4 modules

610142	4
610484	500

length: 72 mm

cut out width: 45 mm

can be cut into 9 mm length

RAL 7035

Grommets

610130	25

PG16

610132	25

PG21

610133	25

PG29

Consumer Unit

BS EN60439-3 **IP40**

Applications

Standard

BS EN 60439-3

Marking

CE

Performance

Voltage	240V 50Hz
Rating main switch	100A/63A
Rating RCCB	63A, 80A and 100A
IP rating	IP40
Poles	1P+N
Terminal capacity	25mm^2 + 16mm^2

Dimensions Insulated

Dimension code	Height	Width	Depth
A (4 module)	245	198	120
B (10 module)	245	306	120
C (14 module)	245	378	120
D (18 module)	245	468	120

Dimensions Metal

Dimension code	Height	Width	Depth
A (4 module)	175	112	90
B (10 module)	208	218	108
C (14 module)	208	292	108
D (18 module)	208	370	108

Insulated main switch up to 100A

MCB ways	Rating (A)	HxWxD code	Cat. No.	Ref. No.	Pack.
1[1]	63A	A	MS1	**662100**	1
2[1]	63A	A	MS2	**662101**	1
4	100A	B	MS4	**662102**	1
6	100A	B	MS6	**662103**	1
8	100A	B	MS8	**662104**	1
11	100A	C	MS11	**662105**	1
16	100A	D	MS16	**662106**	1

Insulated RCCB main switch up to 80A

MCB ways	Rating (A)	Sensitivity (mA)	HxWxD code	Cat. No.	Ref. No.	Pack.
1[2]	63A	30mA	A	RM1	**662108**	1
2[2]	63A	30mA	A	RM2	**662109**	1
4	80A	30mA	B	RM4	**662110**	1
6	80A	30mA	B	RM6	**662111**	1
8	80A	30mA	B	RM8	**662112**	1
11	80A	30mA	C	RM11	**662113**	1
13	80A	30mA	D	RM14SPD	**662115**	1
16	80A	30mA	D	RM16	**662114**	1

Insulated split load 100A main switch and 80A 30mA RCCB

MCB ways	Split		HxWxD code	Cat. No.	Ref. No.	Pack.
	Iso	RCCB				
Pre-configured						
6	3	3	B	SL33	**662119**	1
10	5	5	C	SL55	**662120**	1
10	6	4	C	SL64	**662121**	1
12	6	6	D	SL66	**662122**	1
14	7	7	D	SL77	**662123**	1
Flexible busbar						
10	3/7	7/3	D	FSL10	**662125**	1
14	5/9	9/5	D	FSL14	**662126**	1

Insulated time delayed RCCB split load - 100A 100mA TD RCCB and 80A 30mA RCCB

MCB ways	Split		HxWxD code	Cat. No.	Ref. No.	Pack.
	Iso	RCCB				
10	5	5	C	SLTD55	**662129**	1

(1) Main switch rated at 63A
(2) RCD main switch rated at 63A

Insulated split load 100A main switch and Dual 80A 30mA RCCB

No. of ways	Split			HxWxD code*	Cat. No.	Ref. No.	Pack.
	Iso	RCCB	RCCB				
Pre-configured							
6	2	2	2	C	TSL222	**662152**	1
10	3	4	5	D	TSL345	**662153**	1
10	4	4	2	D	TSL442	**662154**	1
12	2	5	5	D	TSL255	**662155**	1
12	4	5	5	D	TSL444	**662156**	1
Flexible busbar							
12	3/4/5	5/4/3		D	FTSL12	**662161**	1

Insulated split load 100A main switch and 80A 30mA RCCB

No. of ways	Split		HxWxD code*	Cat. No.	Ref. No.	Pack.
	RCCB	RCCB				
Pre-configured						
10	4	4	C	DSL44	**662157**	1
10	6	4	D	DSL64	**662158**	1
10	5	5	D	DSL55	**662159**	1
12	6	6	D	DSL66	**662160**	1
Flexible busbar						
12	5/7	7/5	D	DFSL12	**662163**	1

Garage and Shower

Description	RCCB Rating (A)	HxWxD code	Cat. No.	Ref. No.	Pack.
Garage unit 16A+6A	40A	A	GA40	**662116**	1
Shower unit 40A MCB	63A	A	SH40	**662117**	1
Shower unit 50A MCB	63A	A	SH50	**662118**	1

Metal main switch up to 100A

MCB ways	Rating (A)	HxWxD code	Cat. No.	Ref. No.	Pack.
2[1]	63A	A	VCM2	**618401**	1
4	100A	B	VCM4	**618402**	1
6	100A	B	VCM6	**618403**	1
9	100A	C	VCM9	**618404**	1
13	100A	D	VCM13	**618405**	1

Metal RCCB main switch up to 80A

MCB ways	Rating (A)	Sensitivity (mA)	HxWxD code	Cat. No.	Ref. No.	Pack.
2[2]	63A	30mA	A	VCMA2	**618406**	1
4	80A	30mA	B	VCMA4	**618407**	1
6	80A	30mA	B	VCMA6	**618409**	1
9	80A	30mA	C	VCMA9	**618411**	1
13	80A	30mA	D	VCMA13	**618413**	1

Metal split load 100A main switch and 80A 30mA RCCB

MCB ways	Split		HxWxD code	Cat. No.	Ref. No.	Pack.
	Iso	RCCB				
Pre-configured						
6	3	3	C	VCM3A3	**618416**	1
8	4	4	D	VCM4A4	**618419**	1
10	5	5	D	VCM5A5	**618423**	1
14	7	7	D	VCM7A7	**618489**	1

(1) Main switch rated at 63A
(2) RCD main switch rated at 63A

NOTES:
a) Metal consumer unit also required.
b) Flush frame supplied separately for fitting by the installer.
c) Image shows frame and consumer unit assembled
d) To select the correct frame, match the frame and consumer unit dimension code.

Fix-o-Rail Cover – IP30 insulated enclosure

Modules	Cat. No.	Ref. No.	Pack.
2	E2	**610090**	1
4	E4	**610091**	1

Fix-o-Rail Junior – IP40 insulated enclosure

Modules	Cat. No.	Ref. No.	Pack.
4	EC4E+N	**610151**	1
8	EC8E+N	**610345**	1

Fix-o-Rail Metal – IP30 metal enclosure

Modules	Cat. No.	Ref. No.	Pack.
4	FOR4	**618910**	1

Insulated design enclosures

Modules	Busbar ways	HxWxD code	Cat. No.	Ref. No.	Pack.
4	3	A	CU4BN	**662131**	1
10	9	B	CU10BN	**662132**	1
14	13	C	CU14BN	**662133**	1
18	17	D	CU18BN	**662134**	1

Insulated enclosures supplied with busbar and neutral link cable

Metal design enclosures

Modules	HxWxD code	Cat. No.	Ref. No.	Pack.
10	B	EDU10E+N	**618791**	1
14	C	EDU14E+N	**618792**	1
18	D	EDU18E+N	**618793**	1

Half DIN rail adaptor (metal consumer units only)

Description	Modules	Cat. No.	Ref. No.	Pack
Half DIN rail adaptor	2	HDIN2	**618794**	1

Blanks, shrouds and locks

Description	Modules	Cat. No.	Ref. No.	Pack
Cover blanking plate	4	BLANK4	**610382**	4
Busbar shroud	3	SHR3	**619018**	10
Consumer unit door lock	-	CKEY	**662137**	1
Device padlock bracket	-	KS	**624929**	2

Transparent consumer unit doors

Description	Modules	Cat. No.	Ref. No.	Pack.
Transparent door	4	CD4	**662139**	1
Transparent door	10	CD10	**662140**	1
Transparent door	14	CD14	**662141**	1
Transparent door	18	CD18	**662142**	1

Connection cables and linking pins

Description	Cat. No.	Ref. No.	Pack.
Split load cable kit 10/14 modules	CSLKIT14	**662136**	1
Split load cable kit 18 modules	CSLKIT18	**662138**	1
Live link cable	LLINK1	**409000**	1
Neutral link cable	NLINK1	**594009**	1

Insulated enclosures
Surface mounting

Abaco S — *IP40*

Marking

CE

Standards

EN/IEC 695-2-1, CEI 670, CEI 23-48

Applications

The Abaco surface enclosures are used for power distribution in house building and commercial buildings as offices, banks, etc.

Features

- Protection degree IP40.
- Total insulation: class II⧈ .
- Four dimensions in two colours.
- Colours: grey RAL 7030 and white RAL 9010.
- Range from 8 modules up to 39 modules.
- Flame resistance: self extinguishing material, resists the 650°C.
- Operating temperature: -15°C to +60°C.
- Chemical resistance against water, salt solution, acid rain.
- Surface mounting with flat panels; easy mounting of cable entries.
- The DIN rails can be taken off to make the equipment externally.
- The position of the mounting frame can be adjusted.

Dimensions ● pg F.52

Abaco S - Transparent door

Colour	H x W x D (mm)	Modules 17.5 mm	Number of rows	Ref. No.	Pack.
Grey: RAL 7030	230 x 200 x 110	8/10	1	**619375**	14
White: RAL 9010	230 x 200 x 110	8/10	1	**619376**	14
Grey: RAL 7030	300 x 200 x 110	12/14	1	**619369**	10
White: RAL 9010	300 x 200 x 110	12/14	1	**619372**	10
Grey: RAL 7030	315 x 400 x 110	24/26	2	**619370**	1
White: RAL 9010	315 x 400 x 110	24/26	2	**619373**	1
Grey: RAL 7030	315 x 525 x 110	36/39	3	**619371**	1
White: RAL 9010	315 x 525 x 110	36/39	3	**619374**	1

Accessories

Insulated support for earth and neutral

619319	120

for enclosure 6/10 modules

connection range

2 x 16 mm^2 + 8 x 10 mm^2

619320	120

for enclosure 10/14 modules

connection range

2 x 16 mm^2 + 12 x 10 mm^2

619321	60

for enclosure 24/36 modules

connection range

2 x 16 mm^2 + 12 x 10 mm^2

Blank plate

619323	150

Grey, 5 modules

619338	150

White, 5 modules

619339	1

Metallised black, 5 modules

Security lock

619350	1

24 and 36 modules

Waterproof enclosures Surface mounting

Aquaria *IP65*

Approval / Marking

Standards

EN 60439–1, IEC 695-2-1,
CEI 23-48, CEI 23-49

Applications

Aquaria is the best choice for power distribution purposes in premises with a need for high protection degree eg. power plants, technical areas small laboratories, etc..

Features

- Total insulation ⧈
- Protection degree IP65 - IK08
- Colour: RAL 7035
- Transparent lid or hinged door (3 rows)
- For DIN-rail equipment up to 92.5 mm
- DIN-rails adjustable up to 3 different levels
- Operating temperature: -5°C to +60°C
- Flame resistance: resist the 650°C
- Non UV stable
- Enclosures can not be coupled

Power dissipation

Enclosure	# mod.	Ref. No.	Maximal power dissipation (W)
1 row	5	**597956**	8
1 row	8	**597957**	11
1 row	12	**597958**	17
1 row	12	**597959**	20
2 rows	24	**597960**	30
3 rows	48	**597961**	45

New

Aquaria - Waterproof enclosures surface mounting IP65

Colour	Dimensions mm (H x L x W)	Modules 17,5mm	# rows	Art. No.	ENCLOSURE		EARTH BAR	
					Ref. No.	Pack	Ref. No.	Pack
Gray RAL 7035	120 x 160 x 90	3/5	1	AQA005PG	**597956**	1/40/840	**597962**	1/20/120
Gray RAL 7035	200 x 160 x 90	4/8	1	AQA008PG	**597957**	1/26/546	**597963**	1/20/120
Gray RAL 7035	225 x 200 x 110	6/12	1	AQA012PG	**597958**	1/14/294	**619320**	1/20/120
Gray RAL 7035	250 x 250 x 145	6/12	1	AQA912PG	**597959**	1/1/152	**619320**	1/20/120
Gray RAL 7035	375 x 250 x 145	24	2	AQA024PG	**597960**	1/1/108	**619320**	1/20/120
Gray RAL 7035	550 x 350 x 145	48	3	AQA048PG	**597961**	1/1/44	**619321**	1/10/60

Accessories - Earth bars(1)

Connection	# earth bars	Ref. No.	Pack
2 x 16 mm^2 + 5 x 10 mm^2	1	**597962**	1/20/120
2 x 16 mm^2 + 8 x 10 mm^2	2	**597963**	1/20/120
2 x 16 mm^2 + 12 x 10 mm^2	2	**619320**	1/20/120
2 x 16 mm^2 + 12 x 10 mm^2	4	**619321**	1/10/60

(1) To be ordered separately

New

Insulated enclosures Surface mounting

With screwless earth bar

Fix-o-Rail 150 — *IP40*

Total safety

Complete

Important time saving features

High quality

Great design

Approvals / Marking

CEBEC CE

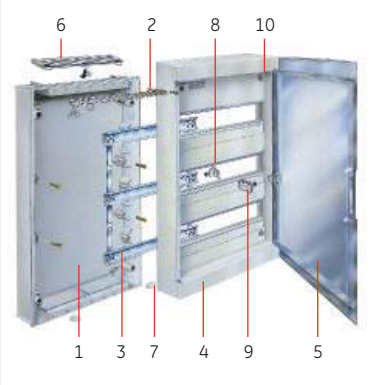
Standards

EN 60439-3

Applications

Fix-o-Rail 150 is the best choice for power distribution purposes in:
- hotels, restaurants, offices, ...
- the house building industry.

For applications in new homes, for replacing old units or adding add-on devices.



Dimensions ● pg F.46

Features

- High protection degree: IP40 with closed door
- Total insulation ⧈
- High impact strength: IK08

- 1-2-3-4 rows / 18 modules per row
- For surface mounting
- With transparent or grey door
  - can be opened to 180°
- For DIN-rail equipment up to 92.5 mm
- Optional security lock
- Generous wiring room:
  - 30 mm behind the mounting frame
  - 150 mm centre distance between DIN-rails
  - above and below the base
  - shallow base

- Fixation with four captive quarter-turn screws
- Removable mounting frame
- All knockouts are easy to remove

- High impact resistance material, colour RAL 7035
- Enclosure and mounting frame are extremely sturdy
- ABS for the base
- Flame resistance: self extinguishing material, resist the 650°C
- Polycarbonate for the lid

Components

A Fix-o-Rail 150 enclosure also includes:
- screwless earth bar
- entry plate
- blank plate
- four insulating caps = ⧈
- labels
- adhesive pictograms
- installation guidelines

1. Shallow base
2. Screwless earth bar
3. Removable mounting frame
4. Protection cover
5. Transparent door
6. Entry plate
7. Insulation caps
8. Fastener
9. Hinge
10. Quarter-turn screw

Fix-o-Rail 150

Transparent overlapping door

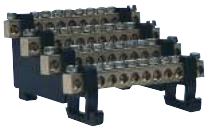
H x W x D (mm)	Equipment	No. of modules	No of rows	Ref. No.	Pack.
270 x 355 x 150	Earth bar screwless: connection 6x16 mm² and 21x4 mm² In 80A	18	1	**610275**	1
450 x 355 x 150	Earth bar screwless: connection 6x16 mm² and 21x4 mm² In 80A	36	2	**610285**	1
600 x 355 x 150	Earth bar screwless: connection 6x16 mm² and 21x4 mm² In 100A	54	3	**610295**	1
750 x 355 x 150	Earth bar screwless: connection 6x16 mm² and 21x4 mm² In 100A	72	4	**610303**	1

Plain overlapping door

270 x 355 x 150	Earth bar screwless: connection 6x16 mm² and 21x4 mm² In 80A	18	1	**610276**	1
450 x 355 x 150	Earth bar screwless: connection 6x16 mm² and 21x4 mm² In 80A	36	2	**610286**	1
600 x 355 x 150	Earth bar screwless: connection 6x16 mm² and 21x4 mm² In 100A	54	3	**610296**	1
750 x 355 x 150	Earth bar screwless: connection 6x16 mm² and 21x4 mm² In 100A	72	4	**610304**	1

Neutral terminal is optional; order the ref nrs **610386** for the 1 and 2 rows
Neutral terminal is optional; order the ref nrs **610385** for the 3 and 4 rows

Accessories



4 pole terminals

610022 18

63A

Connection range

4 x (10 x 16 mm²)

Cu section 6,5 x 9 mm

617992 5

160A

with cover 4x (1 x 10 to 50 mm² incoming

+ 3 x 6 to 35 mm²

+ 8 x 2.5 to 16 mm² outgoing)

Cu section 12 x 10 mm

610020 1

160A

Connection range 4 x (10 x 10mm²)

Cu section 12 x 5 mm

Protective shroud

610021 1

For 160A terminal (ref. 610020)

Support with screwless earthbar

610396 1

Connection: 6x16 mm² and 21x4 mm²

Included with all enclosures

New

Support with earth or neutral terminals

610386 4

Cable section: 14 x 16 mm²

Delivered with 1 and 2 rows enclosure

610385 4

Cable section: 18 x 16 mm²

Delivered with 3 and 4 rows enclosure

Support with terminal bars

610532 4

Cable section: 2 (17 x 16 mm²)

Support with terminal bars L1-L2-L3-N

610387 4

Cable section: 4 (5 x 16 mm²)

Universal entry plate

610264 2

For a sound and safe quality of finish. Increases the dust protection. With moulded-in marks for conduits.

Universal entry cap

610272 1

Width: 355 mm

Can be mounted at the bottom or at the top of the enclosure. Easy to fix. Usefull for the installation of cable glauds or universal cable entries

Accessories Fix-o-Rail 150 (continued)

Transparent replacement door

610277	1
For enclosure 610275	
610287	1
For enclosure 610285	
610297	1
For enclosure 610295	
610305	1
For enclosure 610303	

Plain replacement door

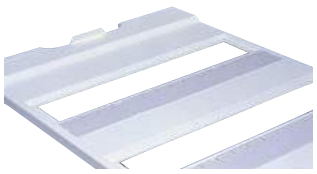
610281	1
For enclosure 610276	
610291	1
For enclosure 610286	
610301	1
For enclosure 610296	
610306	1
For enclosure 610304	

Adhesive pictograms

610380	1

For clear and permanent identification of circuits

Set of 50 pieces



Labels and labelholders

610383	1

Set of 50 pieces

Security lock

610170	1

With 2 keys

Blank plate

610142	4
610484	500

Length: 72 mm

Cut-out width: 45 mm

Can be cut into 9 mm lengths

RAL 7035

Drawing pocket

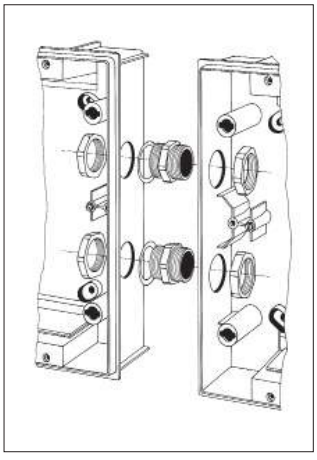
610265	1

To be fixed at the bottom or at the top of the protective cover

Coupling - 2 x PG21

Allows the facility to couple several Fix-o-Rail enclosures laterally, top and bottom

610327	1



Notes

Insulated enclosures
Surface mounting

Fix-o-Rail 55 — *IP55*

Approvals / Marking

Standards

EN 60439-3

Applications

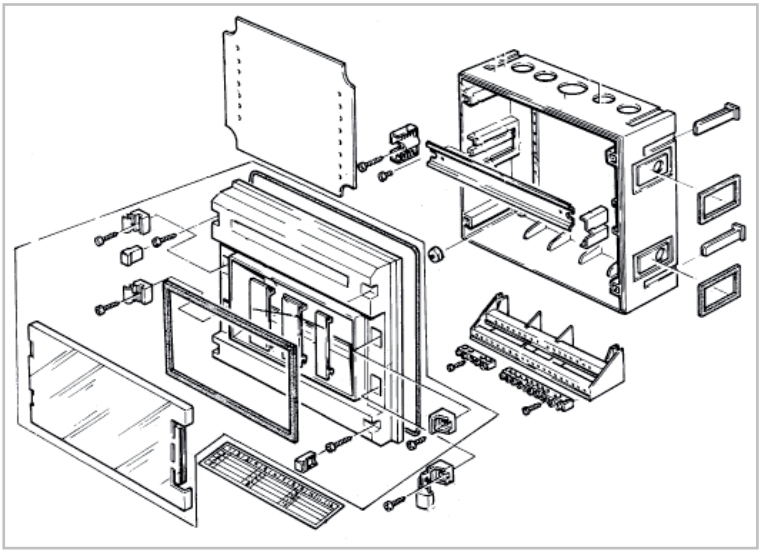
The Fix-o-Rail 55 enclosures are designed for power distribution in environments requiring a high protection degree.

Components

- Rigid base and protection cover, colour RAL 7035
- Transparent door
- DIN-rails, the centre distance between two DIN-rail is 125 mm
- Labeling facilities
- With earth bar for the 12, 24 and 36 modules

Features

- Total insulation ▣
- Protection degree IP55-IK07
- Can be coupled
- Transparent door
- Adjustable DIN-rails, according the height of the DIN equipment
- For equipment up to 92.5 mm
- Padlocking option
- The transparent door can be opened to the left and the right
- Base: • ABS for the 3 up to 8 modules
  • Polystyreen for the 12 up to 36 modules
- Flame resistance: self extinguishing material, resist the 650°C
- Polycarbonate for the transparent door
- Halogene free



Dimensions ● pg F.50

Fix-o-Rail 55

	H x W x D (mm)	Equipment	Number of modules	Number of rows	Ref. No.	Pack.
	175 x 83 x 106	Without earth bar	3	1	**600573**	12
	175 x 125 x 114	Without earth bar	5	1	**600574**	20
	175 x 215 x 114	Without earth bar	8	1	**600575**	12
	250 x 285 x 136	Earth bar, connection range: 2x16 mm^2 and 6x10 mm^2	12	1	**610316**	1
	375 x 285 x 136	Earth bar, connection range: 2x16 mm^2 and 8x16 mm^2	24	2	**610317**	1
	500 x 285 x 136	Earth bar, connection range: 2x16 mm^2 and 12x16 mm^2	36	3	**610318**	1

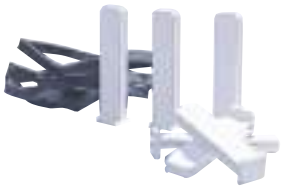
Accessories

Terminal

Additional busbar for earth and neutral connections

	610314	1

Cable section: 2 x 16 mm^2 and 6 x 6 mm^2



Coupling set

To couple two enclosures in a simple way

	610315	1

Locking device

Allows the enclosure to be fitted with a padlocking device

	610313	1

Insulated enclosures
Surface mounting

Europe Line *IP30*

Standards

DIN 43871
DIN VDE 0603 Part 1

Features

- Masking frame, base and protective cover made from high resistance material
- Metal door, powder coated, opens through 180°
- Cable entry from top, below, from side and from rear side
- Cable entry plate (top, bottom) removable for easy cable mounting from front side
- Clamp relief possibility
- Sealing possible
- Label for circuit indification
- Rated voltage up to 400V/50Hz
- Rated current up to 63A
- Protection class II (total isolation)

Europe Line - dimensions

	Type	Dimensions H x W (mm)	Surface depth (mm)
Distribution boards surface mounting without door	KV AP12	245 x 300	103.5
	KV AP24	370 x 300	103.5
	KV AP36	495 x 300	103.5
	KV AP48	620 x 300	103.5
Metal door for surface mounting enclosures	T AP12	189 x 300	8.5
	T AP24	314 x 300	8.5
	T AP36	439 x 300	8.5
	T AP48	564 x 300	8.5

Europe Line - distribution boards

	No. of rows	No. of modules	Cat. No.	Ref. No.	Pack
Surface mounting distribution board without door	1	12	KV AP12	**564538**	1
	2	24	KV AP24	**564539**	1
	3	36	KV AP36	**564540**	1
	4	48	KV AP48	**564541**	1
Versions with screwless earth (PE/N) bar					
	1	12	-	**619413**	1
	2	24	-	**619414**	1
	3	36	-	**619415**	1
	4	48	-	**619416**	1

Europe Line - Accessories

	No. of rows	Cat. No.	Ref. No.	Pack
Plain metal door	1	TAP12	**564533**	1
	2	TAP24	**564546**	1
	3	TAP36	**564547**	1
	4	TAP48	**564548**	1
Metal door with clear window for surface mounting distribution bords	1	AAZTS12A	**564061**	1
	2	AAZTS24A	**564062**	1
	3	AAZTS36A	**564063**	1
	4	AAZTS48A	**564064**	1
Mounting plate	2	AAZM2	**564066**	1
	3	AAZM3	**564067**	1
	4	AAZM4	**564068**	1

	Description	Cat. No.	Ref. No.	Pack.
Door security lock	Surface mounting, different keys	AAZTA2	**564350**	1
	Surface mounting, same keys	AAZTA1	**564056**	1
PE / N bar without support				
	12-pole	AAZK12	**564050**	1
	16-pole	AAZK16	**564051**	1
	33-pole	AAZK33	**564052**	1
Busbars	Screwless terminal PE 1-16 / N 1-16	AAZFPN16	**619393**	20
	Screwless terminal N 1-26	AAZFN1-26	**619394**	20
	Screwless terminal PE 1-26	AAZFPE1-26	**619395**	20
Support	PE terminal	AAZPN16	**564047**	1
	PE / N terminal	AAZP33	**564048**	1
	PE / N terminal	AAZN33	**564049**	1
	N terminal	AAZPN12	**564046**	1

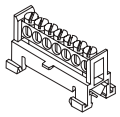
Europe Line - Accessories (continued)

	Description	Cat. No.	Ref. No.	Pack.
	Partition vertical			
	2 rows	AAZA2	**564043**	1
	4 rows	AAZA4	**564045**	1
	Partition horizontal	AAZA10	**564041**	1

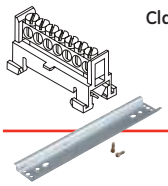
RCCB-Clamps		AAZN3	**564053**	1

Mounting rail with reduced hight	Increase mounting depth by 20 mm	AAZG1	**564054**	1

Label for circuit indification	1, 2 rows	AAZP11	**564352**	1
	3, 4 rows	AAZP12	**564353**	1



Clamps for neutral conductor		LK/N7	**546297**	10
		LK/N12	**546298**	10
		LK/N15	**546299**	10



Clamps for protective conductor		SKU 16/5	**546300**	10
		SKU 35/5	**546301**	10
DIN-rail	EN 50022 - 1000 mm long	PS	**564092**	10
Filling piece	8,75 mm to disperse the heat for DIN-rail EN 50022/05.78	FST	**546331**	25

Notes

Insulated enclosures
Flush mounting

Abaco F *IP40*

Marking

CE

Standards

EN/IEC 695-2-1, CEI 670, CEI 23-48

Applications

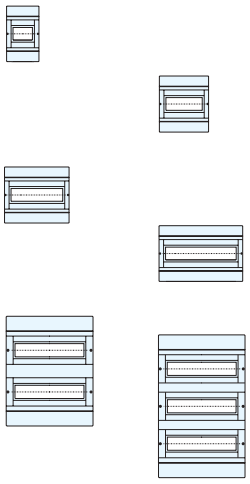
Abaco F enclosures find their place in the power distribution into the house building industry: new homes, apartments, offices, hotels. Due to the design of the masking frame and the door, the Abaco flush mounting enclosure offers significant aesthetic appeal, particularly in applications where appearance is important.

Features

- Flush mounting
- Total insulation ⧈
- Protection degree IP40
- Six dimensions in three colours
- Colours: grey RAL 7030, white RAL 9010 and metallised black
- Range from 2 modules up to 39 modules
- Transparent door made from polycarbonate
- High impact resistance material
- Removable mounting frame
- 20 mm clearance behind the mounting frame
- Colours:
  - Grey: RAL 7035
  - White: RAL 9010
  - Metallised black

Dimensions ● pg F.52

Abaco F - Enclosure base with transparent door



Colour	H x W x D (mm)	Modules 17.5 mm	Number of rows	Ref. No.	Pack.
Grey	120 x 200 x 73	2/4	1	**619300**	12
Metallised black	120 x 200 x 73	2/4	1	**619362**	12
Grey	180 x 200 x 73	4/7	1	**619301**	24
White	180 x 200 x 73	4/7	1	**619325**	24
Metallised black	180 x 200 x 73	4/7	1	**619331**	24
Grey	230 x 200 x 73	6/10	1	**619302**	14
White	230 x 200 x 73	6/10	1	**619326**	14
Metallised black	230 x 200 x 73	6/10	1	**619332**	14
Grey	300 x 200 x 73	10/14	1	**619303**	12
White	300 x 200 x 73	10/14	1	**619327**	12
Metallised black	300 x 200 x 73	10/14	1	**619333**	12
Grey	315 x 400 x 80	24/26	2	**619304**	1
White	315 x 400 x 80	24/26	2	**619328**	1
Metallised black	315 x 400 x 80	24/26	2	**619334**	1
Grey	315 x 525 x 80	36/39	3	**619305**	1
White	315 x 525 x 80	36/39	3	**619329**	1
Metallised black	315 x 525 x 80	36/39	3	**619335**	1

Accessories

Coupling

619322	10/100/600

2/4 and 10/14 modules

Blank plate

619323	150/450

Grey, 5 modules

619338	150/450

White, 5 modules

619339	1/450

Metallised black, 5 modules

Security lock

619323	1

24 and 36 modules

Transparent lid

619340	1

2/4 modules

619341	1

4/7 modules

619342	1

6/10 modules

619343	1

10/14 modules

619344	1

24/26 modules

619345	1

36/39 modules

Insulated support for earth or neutral

619337	1/30/180

for enclosure 4/7 modules

connection range 7 x 10 mm^2

619319	1/20/120

for enclosure 6/10 modules

connection range

2 x 16 mm^2 + 8 x 10 mm^2

619320	1/20/210

for enclosure 10/14 modules

connection range

2 x 16 mm^2 + 12 x 10 mm^2

619321	1/10/60

for enclosure 24/36 modules

connection range

2 x 16 mm^2 + 12 x 10 mm^2

Insulated enclosures
Flush mounting

Fix-o-Rail 150-F4 — *IP40*

- *Total safety*
- *Complete*
- *Important time saving features*
- *High quality*
- *Great design*

Approvals / Marking

CEBEC CE

Standards

EN 60439-3

Applications

The Fix-o-Rail 150-F4 is an electrical distribution board for the following applications:
– homes: new buildings, renovations and add-on devices
– commercial buildings: offices, shops, etc.
Due to the discreet design and colour of the masking frame and door, the Fix-o-Rail 150-F4 flush mounting enclosure offers signifiant aesthetic appeal, particularly in applications where appearance is important.

Features

- High protection degree: IP40-IK07
- **Total insulation** ⧈
- CEBEC-approval

- 1-2-3-4 rows / 14 modules per row
- For all flush mounting installations
- One enclosure for installation in brickwork and studded walls
- Transparent or plain door
- Universal for all modular equipment with a shoulder height of 47 mm and a max. depth of 70 mm
- Wiring space:
  - 20 mm behind the mounting frame
  - 150 mm between the DIN-rails
  - above and below the base

- Removable mounting frame / Removable entries
- Easy to install

- Base, cable entries and protective cover are made in high resistant material
- ABS for the base and cover
- Flame resistance: self extinguishing material, resist the 850°C
- The **door and the masking** frame are **in sheet steel**, coated with a white epoxy powder (colour RAL 9010)
- In accordance with EN 60439-3
- Sturdy enclosure and mounting frame

- Due to the discreet design of the masking frame and door, the Fix-o-Rail 150-F4 offers signifiant aesthetic appeal
- Colour RAL 9010
- Optional security lock

Components

Fix-o-Rail 150-F4 enclosure includes:
- earth bar
- neutral bar
- adhesive pictograms
- labels for circuit identification
- protective plate on the base (against dust and plaster)
- label holders
- installation guidelines
- a blank plate

Dimensions ● pg F.47

Fix-o-Rail 150-F4 - Base and door included

Transparent door

H x W x D (mm)	Equipment		No. of modules	No. of rows	Ref. No.	Pack.
350 x 375 x 108	Earth bar: connection 14 x 16 mm² Neutral bar: connection 14 x 16 mm²	In 50A	14	1	**610368**	1
525 x 375 x 108	Earth bar: connection 14 x 16 mm² Neutral bar: connection 14 x 16 mm²	In 63A	28	2	**610369**	1
675 x 375 x 108	Earth bar: connection 18 x 16 mm² Neutral bar: connection 18 x 16 mm²	In 80A	42	3	**610370**	1
825 x 375 x 108	Earth bar: connection 18 x 16 mm² Neutral bar: connection 18 x 16 mm²	In 100A	56	4	**610371**	1

Plain door

350 x 375 x 108	Earth bar: connection 14 x 16 mm² Neutral bar: connection 14 x 16 mm²	In 50A	14	1	**610372**	1
525 x 375 x 108	Earth bar: connection 14 x 16 mm² Neutral bar: connection 14 x 16 mm²	In 63A	28	2	**610373**	1
675 x 375 x 108	Earth bar: connection 18 x 16 mm² Neutral bar: connection 18 x 16 mm²	In 80A	42	3	**610374**	1
825 x 375 x 108	Earth bar: connection 18 x 16 mm² Neutral bar: connection 18 x 16 mm²	In 100A	56	4	**610375**	1

Accessories

Half-inset frame (RAL 9010)

610376	1
For 1 row enclosure	
610377	1
For 2 rows enclosure	
610378	1
For 3 rows enclosure	
610379	1
For 4 rows enclosure	

Blank plate

610382	500
Length = 72 mm	
Cut-out width = 45 mm	
Section of 9 mm	
Colour RAL 9010	

Labels and label holders

610383	1
Set of 50 pieces	

Adhesive pictograms

610380	1
For clear and permanent identification of circuits	
Set of 50 pieces	

Grips

For building into studded walls

610381	1

Security lock

610384	1
With two keys	

Support with earth or neutral terminals

610385	4
Cable section: 18 x 16 mm²	
Delivered with 3 and 4 rows enclosures	
610386	4
Cable section: 14 x 16 mm²	
Delivered with 1 and 2 rows enclosures	

Support with terminals L1, L2, L3, N

610387	4
Cable section: 4 (5 x 16 mm²)	

Support with terminals

610532	4
Cable section: 2 (17 x 16 mm²)	

Junction boxes

Flex-o-Box — IP65

Approvals / Marking

Features

Flex-o-Box Junior

Technical data
- Suitable for surface mounting
- 2.5 mm² - 500V
- IP65 protection degree
- IK04
- Standards and approvals
  CEBEC: NBN C 68-685-2-0
  NBN EN 60998-1
  KEMA: IEC 60670
- Colour: RAL 7035
- Material: resists the 650°C incandescent wire test
- Halogen-free
- Operating temperature: -5°C to +60°C
- Total insulation: ⧈

Eight flexible entries
- 7 x Ø 20 in the side wall
- 1 x Ø 20 in the back
- Suitable for cable max. Ø 20
- Suitable for tubes Ø 16 and Ø 20

Flex-o-Box JB⁶

Technical data
- Suitable for surface mounting
- 6 mm² - 500V
- IP65 protection degree
- IK04
- Standards and approvals:
  CEBEC: NBN C68-685-2-0
  NBN EN 60998-1
  KEMA: IEC 60670
- Colour: RAL 7035
- Material: resists the 650°C incandescent wire test
- Halogen-free
- Operating temperature: -5°C to +60°C
- Total insulation: ⧈

Nine flexible entries
- 7 x M20 in the side wall
- 2 x Ø 20 mm max. entries in the back of the base
- Suitable for cable max. Ø 18
- Suitable for tubes Ø 16 and Ø 20
- Suitable for cable seals M20 (10 mm min. thread length)

Dimensions ● pg F.53

Flex-o-Box — IP65-IK04

Junior

	Ref. No.	Pack.
Junction box 2.5 mm²	600656	10/100
Junction box 2.5 mm² (40 pieces in a red polybox basket)	600311	1

JB⁶

	Ref. No.	Pack.
Junction box 6 mm²	600651	10/100
Junction box 6 mm² (24 pieces in a grey polybox basket)	600310	1

Accessories

for Junior and JB⁶

Terminal block

600950 — 30

6 mm² - 500V - pin-type

5-terminal blocks

Possible connections per terminal:

6 x 1.5 mm² — 2 x 6 mm²

4 x 2.5 mm² — 2 x 10 mm²

3 x 4 mm²

grey

Terminal strip

600650 — 20

6 mm² - 500V - hole-type

5-terminal strips

Possible connections per terminal:

6 x 1.5 mm² — 3 x 4 mm²

4 x 2.5 mm² — 2 x 6 mm²

grey

only for JB⁶

Cable seal M20

851652 — 50

IP68 - RAL 7035

Cable seal M20

851660 — 50

IP54 - RAL 7035

Entry socket for tube M20

600346 — 25

For tube Ø 16 and Ø 20 - RAL7035

Insulated cap M20

851674 — 100

IP54 - RAL7035

Screws

For cover fastening

600642 — 40

Stainless steel

Junction boxes

Series 55 IP66

Approval

CEBEC

Applications

- As an empty box
- As a junction box (10/16/25 mm^2)
- Coupled

Features

- Standard: EN/IEC 529
- Material: thermoplastic high impact polyphenylene oxyde
- Total insulation: ⧈

Dimensions

Three sizes - three types
55100 - 125 x 125 x 75 mm
55200 - 175 x 175 x 95 mm
55300 - 225 x 175 x 95 mm

Dimensions ● pg F.53

Benefits

The cable entries are selective knockouts placed as close as possible to the wall.

Oval openings in the base allow levelling.
Four fixing holes outside the gasket and two fixing holes inside the box.

The raised bottom avoids obstruction while cabling and bending of the cables.

Raised supports for the placement of the mounting plate.

The screws are thermoplastic, captive, full turn, with a big pitch and placed outside the gasket.

All the boxes are sealable.

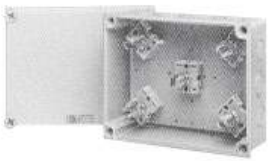
Series 55100 - 10 mm² — IP66 - IK07

	Cover	Entries	Characteristics	Ref. No.	Pack.
	grey	5 x PG 16/21	Empty. Can be equipped with terminal blocks 600516	**600514**	16
	grey	5 x PG 16/21	Equipped with terminal blocks 600516: 5 clamps with maximum capacity: 5 x 4 mm² / 4 x 6 mm² / 3 x 10 mm²	**600515**	16

Series 55200 - 16 mm² — IP66 - IK07

	Cover	Entries	Characteristics	Ref. No.	Pack.
	grey	6 x PG 16/21 5 x PG 21/29	Empty. Can be equipped with terminal blocks 600525 600526 (x5) 600544 (x5) 600545 (x5) 600516	**600517**	9
	grey	6 x PG 16/21 5 x PG 21/29	Equipped with terminal blocks 600525: 5 clamps with maximum capacity: 5 x 6 mm² / 4 x 10 mm² / 3 x 16 mm²	**600524**	9
	transparent	6 x PG 16/21 5 x PG 21/29	Empty	**600523**	9

Series 55300 - 25 mm² — IP66 - IK07

	Cover	Entries	Characteristics	Ref. No.	Pack.
	grey	8 x PG 21 6 x PG 21/29	Empty. Can be equipped with terminal blocks 600544 (x5) 600545 (x5) 600525 600526 (x5)	**600532**	1
	grey	8 x PG 21 6 x PG 21/29	Equipped with terminal blocks 600544 (x5): 5 clamps/nuts with maximum capacity: 4 x 16 mm² / 3 x 25 mm² / 2 x 35 mm²	**600543**	9
	transparent	8 x PG 21 6 x PG 21/29	Empty	**600539**	9

Accessories Series 55

Terminal blocks 500V 10 mm²

600516	6

Set terminal blocks with two fixation screws. With five clamps suitable for Al or Cu connection.
Maximum cable section per clamp:
5 x 4 mm² / 5 x 4 mm² / 5 x 4 mm².
Can be fitted in types 55100 and 55200.

Terminal blocks 500V 16 mm²

600525	6

With five clamps, suitable for Al or Cu connection.
Maximum cable section per clamp:
5 x 6 mm² / 4 x 10 mm² / 3 x 16 mm².
Can be fitted in types 55200 and 55300.

Terminal blocks 500V 16 mm²

600526	24

With one clamp/nut (with nut), suitable for Al or Cu connection.
Maximum cable section per clamp:
5 x 6 mm² / 4 x 10 mm² / 3 x 16 mm².
Can be fitted in types 55200 and 55300.

Terminal blocks 500V 25 mm²

600544	24

With one clamp/nut (with nut), suitable for Al or Cu connection.
Maximum cable section per clamp:
4 x 16 mm² / 3 x 25 mm² / 2 x 35 mm².
Can be fitted in types 55200 and 55300.

Terminal blocks 500V 25 mm²

600545	24

With one clamp/nut (double nut), suitable for Al or Cu connection.
Maximum cable section per clamp:
4 x 16 mm² / 3 x 25 mm² / 2 x 35 mm².
Can be fitted in types 55200 and 55300.

Insulated cap

890838	48

Suitable for terminal blocks
600526
600544
600545

Couplings

600509	1

Set of two pieces
PG21
It is possible to combine types
55200 and 55300

Compression glands

600504	25

PG21 with nut in glass fibre reinforced polyamide. Grey.

600505	25

PG29 with nut in glass fibre reinforced polyamide. Grey.

Compression glands

600501	25

PG21 polyamide with nut in glass fibre reinforced polyamide. Brown.

600502	25

PG29 polyamide with nut in glass fibre reinforced polyamide. Brown.

Locknuts

600506	100

Nut in glass fibre reinforced polyamide to connect compression glands PG21. Grey.

600507	50

Nut in glass fibre reinforced polyamide to connect compression glands PG29. Grey.

Universal entries (grey)

610130	25

Cable max. 18 mm, drill 23 mm, PG16

610132	25

Cable max. 24 mm, drill 29 mm, PG21

610133	25

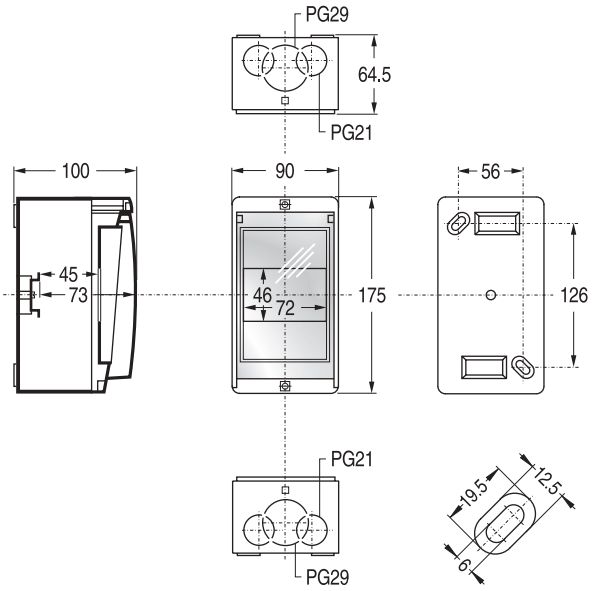
Cable max. 32 mm, drill 38 mm, PG29.

Notes

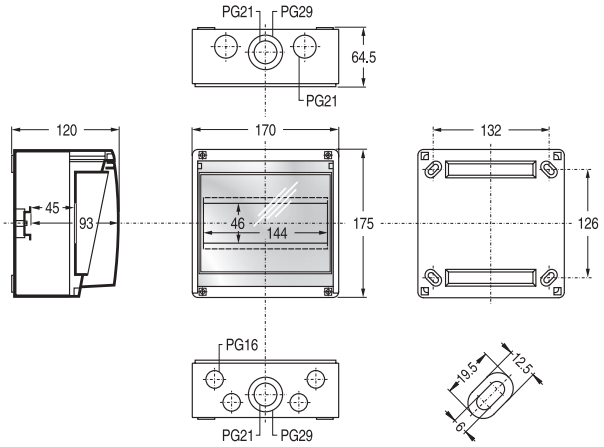
Dimensional drawings

Fix-o-Rail Junior - Surface mounting

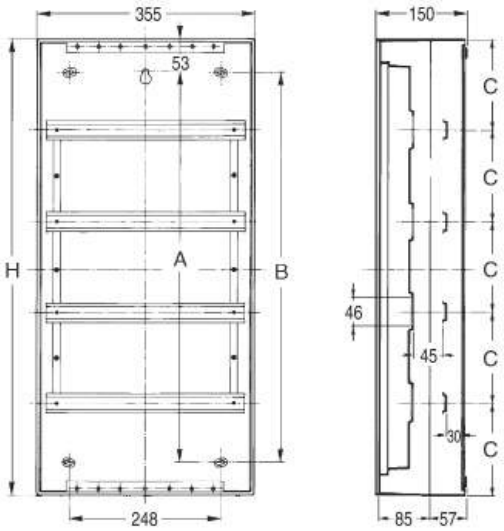
4 modules



8 modules

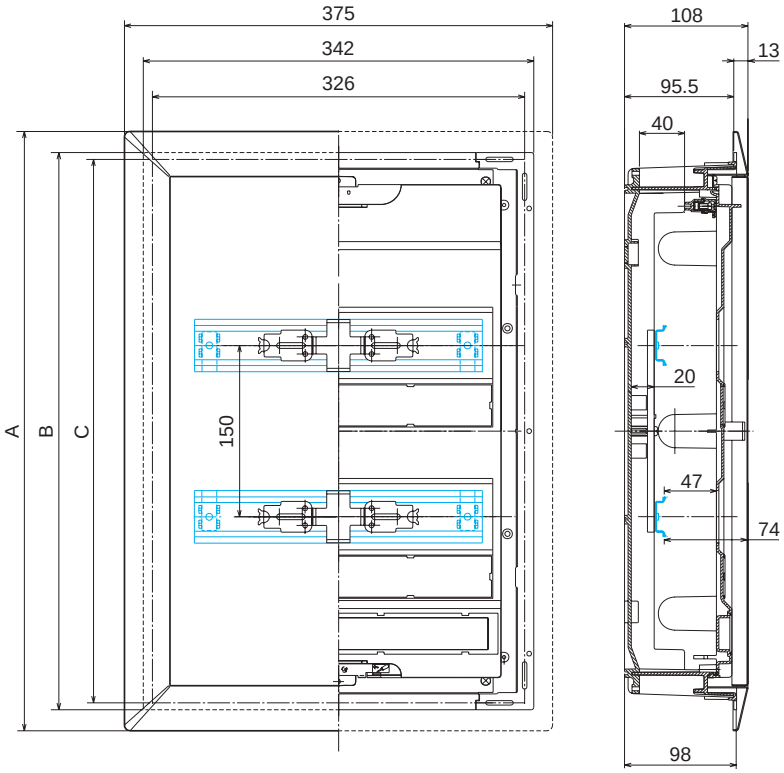


Fix-o-Rail 150 - Surface mounting

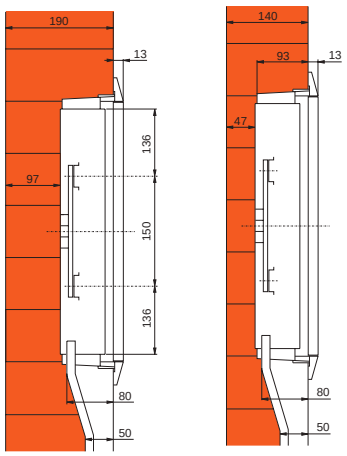


Dimensions (mm)				
Type	H	A	B	C
1 row - 18 mod.	270	163	162	135
2 rows - 36 mod.	450	343	342	150
3 rows - 54 mod.	600	493	492	150
4 rows - 72 mod.	750	643	642	150

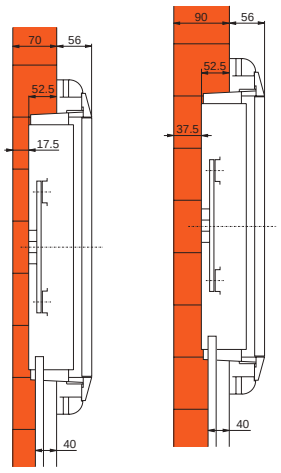
Fix-o-Rail 150-F4 - Flush mounting



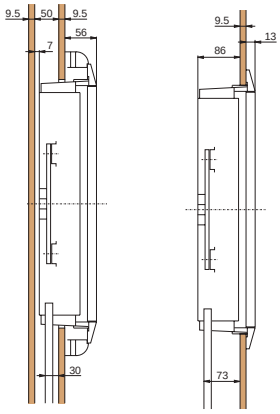
Dimensions (mm)			
Type	**A**	**B**	**C**
1 row - 14 mod.	350	313	301
2 rows - 28 mod.	525	488	476
3 rows - 42 mod.	675	638	626
4 rows - 56 mod.	825	788	776



Flush mounting into brickwork



Flush mounting and semi flush mounting into brickwork

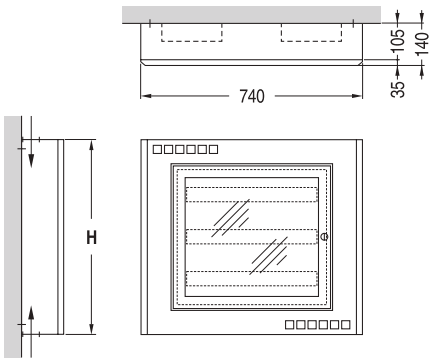


Semi flush mounting into studded walls

Dimensional drawings

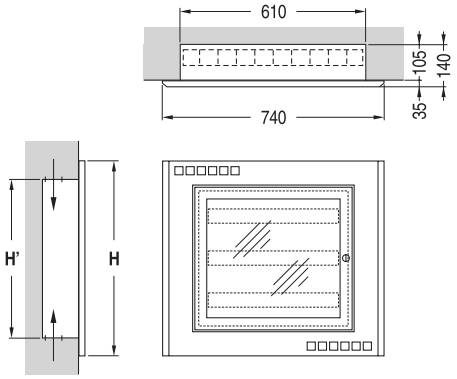
Fix-o-Rail 144

Fix-o-Rail 144 S
Surface mounting

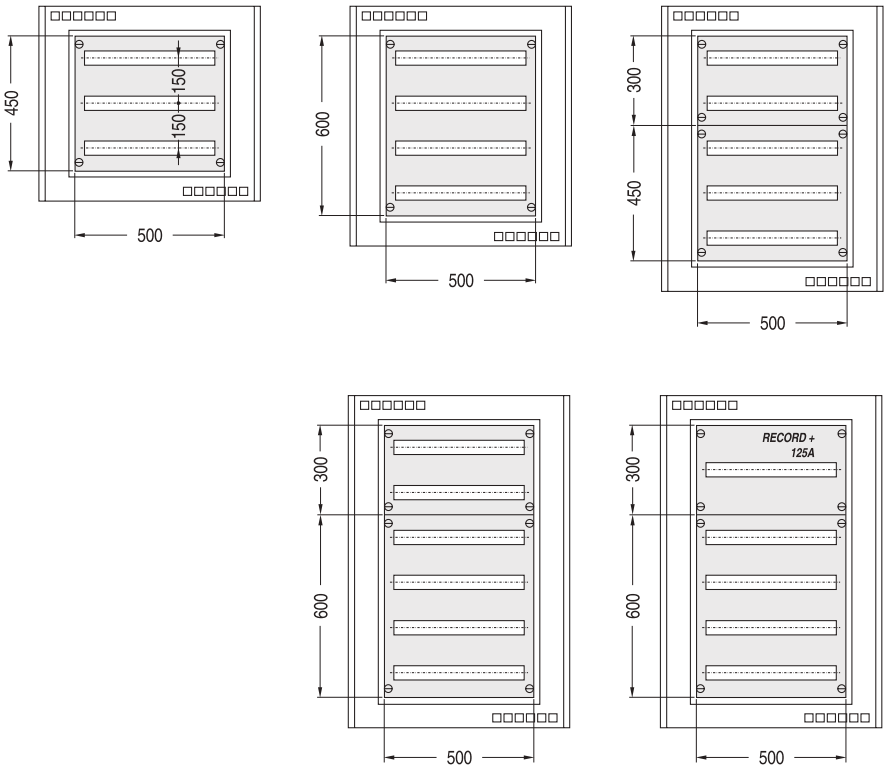


Dimensions (mm)	
	H
3 rows - 72 mod.	650
4 rows - 96 mod.	800
5 rows - 120 mod.	950
6 rows - 144 mod.	1100
4 rows+Record - 120 mod.	1100

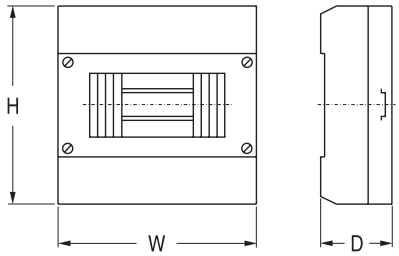
Fix-o-Rail 144 F
Flush mounting



Dimensions (mm)		
	H	H'
3 rows - 72 mod.	650	560
4 rows - 96 mod.	800	710
5 rows - 120 mod.	950	860
6 rows - 144 mod.	1100	1010
4 rows+Record - 120 mod.	1100	1010

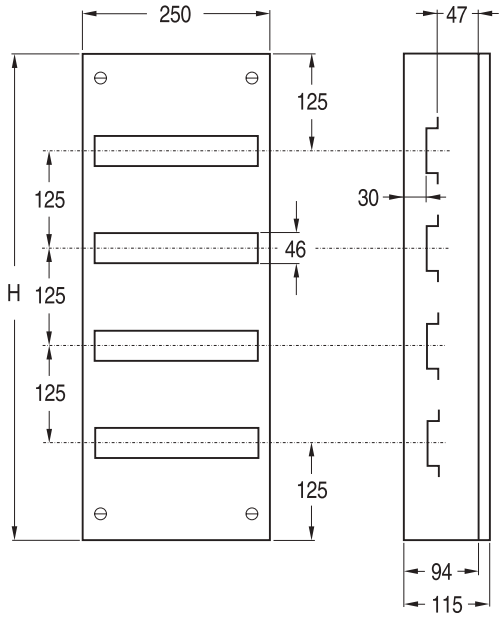


Fix-o-Rail Covers - Surface mounting



Dimensions (mm)			
Type	H	W	D
2 mod.	139	51	61
4 mod.	139	88	61
6 mod.	140	165	72
8 mod.	198	200	72

Fix-o-Rail Classic - Surface mounting

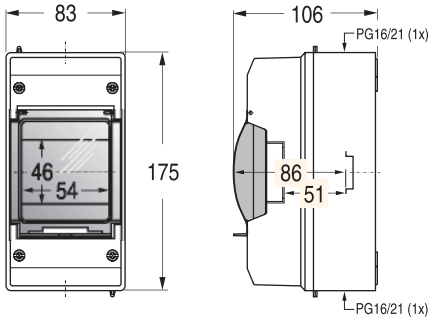


Dimensions (mm)	
Type	H
1 row - 13 mod.	250
2 rows - 26 mod.	375
3 rows - 39 mod.	500
4 rows - 52 mod.	625

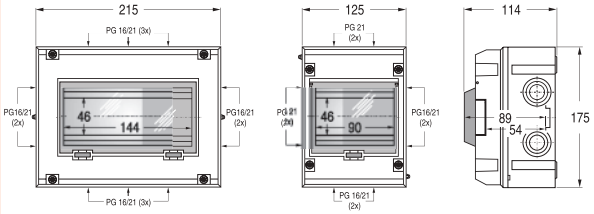
Dimensional drawings

Fix-o-Rail 55 - Surface mounting

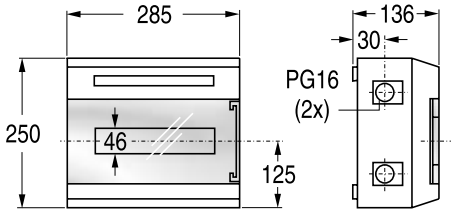
3 modules



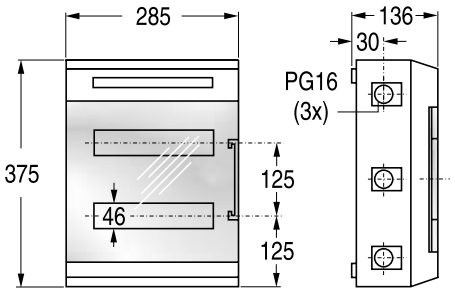
5-8 modules



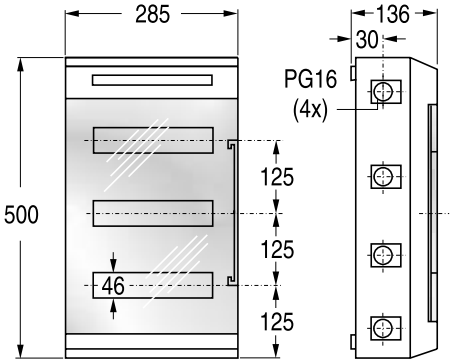
12 modules



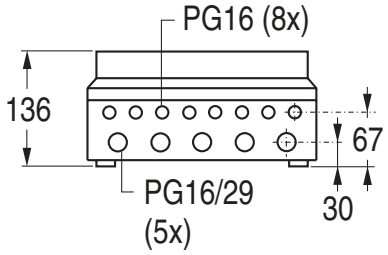
24 modules



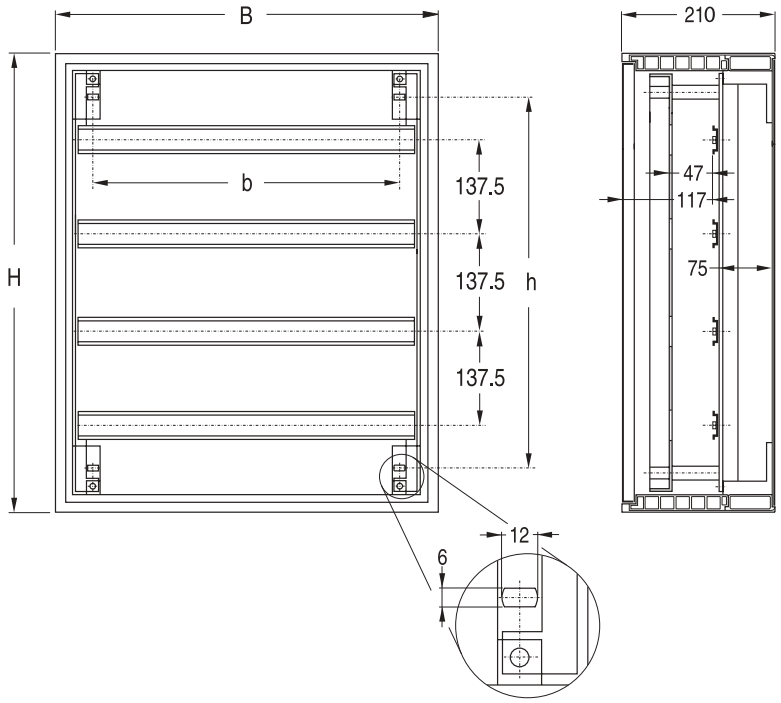
36 modules

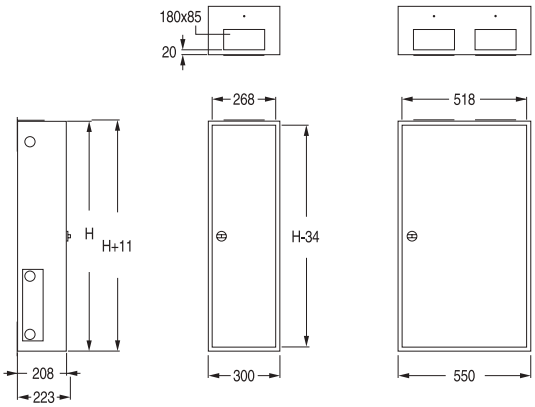


Top/bottom view



Fix-o-Rail Senior - Surface mounting

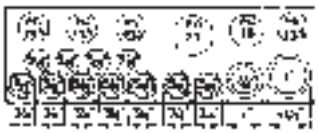




Dimensions (mm)				
Type	B	b	H	Ha
4 rows - 48 mod.	300	191	650	401
5 rows - 60 mod.	300	191	800	551
4 rows - 96 mod.	550	441	650	401
5 rows - 120 mod.	550	441	800	551
6 rows - 144 mod.	550	441	950	701
7 rows - 168 mod.	550	441	1100	851
7 rows - 252 mod.	550	441	1250	1001
8 rows - 192 mod.	800	691	1100	851
8 rows - 288 mod.	800	691	1250	1001

Accessories distribution boards

Gland plate



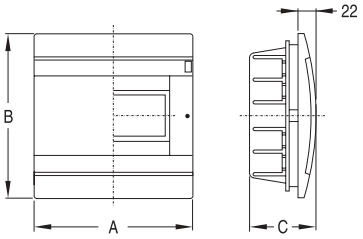
4P terminal 63A

4P terminal 160A

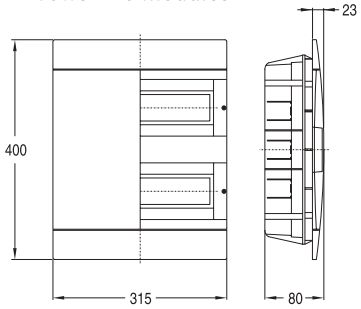
Dimensional drawings

Abaco F - Flush mounting

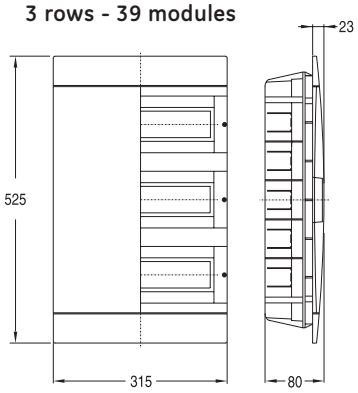
1 row - 14 modules



2 rows - 26 modules

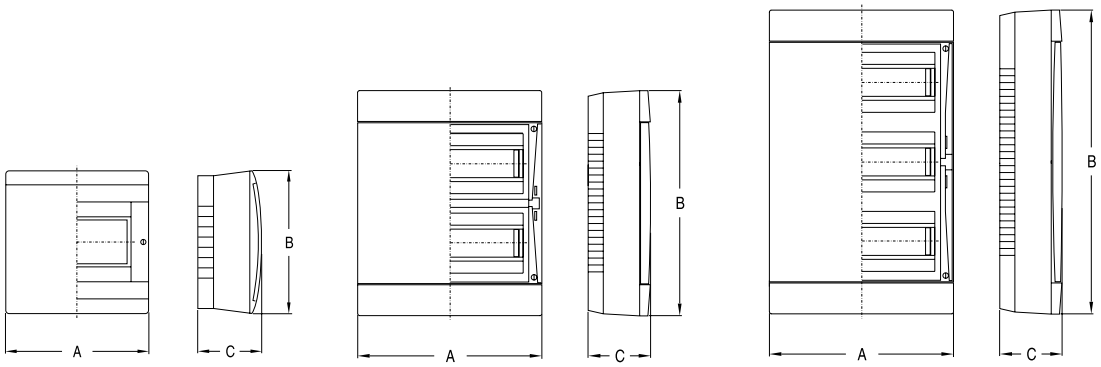


3 rows - 39 modules



Dimensions (mm)			
Type	A	B	C
4 mod.	120	200	73
7 mod.	180	200	73
10 mod.	230	200	73
14 mod.	300	200	73

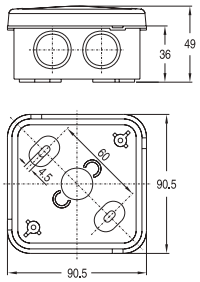
Abaco S - Surface mounting



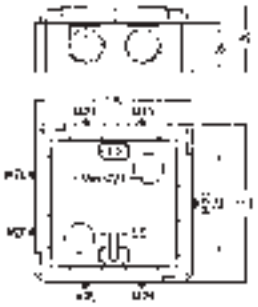
Dimensions (mm)			
Type	A	B	C
1 row - 8/10 mod.	230	200	110
1 row - 12/14 mod.	300	200	110
2 rows - 24/26 mod.	315	400	110
3 rows - 36/39 mod.	315	525	110

Flex-o-Box - Junction box

Flex-o-Box Junior

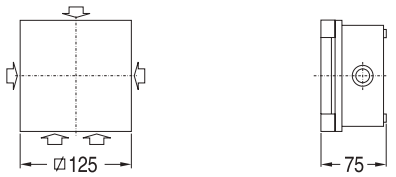


Flex-o-Box JB[6]

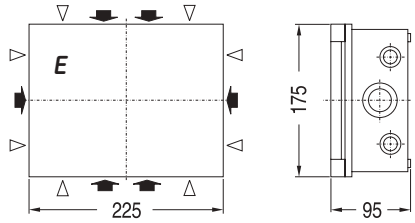


Series 55 - Junction box

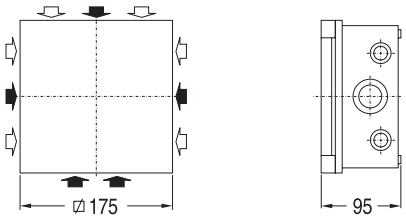
Series 55100



Series 55300



Series 55200



PG 21
PG 16/21
PG 21/29

Notes

Record Plus

G.2 FD frame 160A

G.3 FD - Complete Circuit Breaker - Residual Current Devices

G.4 FD - Internal Accessories - Operators

G.5 FD - Installation Accessories - Connections: Optional

G.6 Dimensional Drawings

Moulded Case Circuit Breakers

FD frame 160A

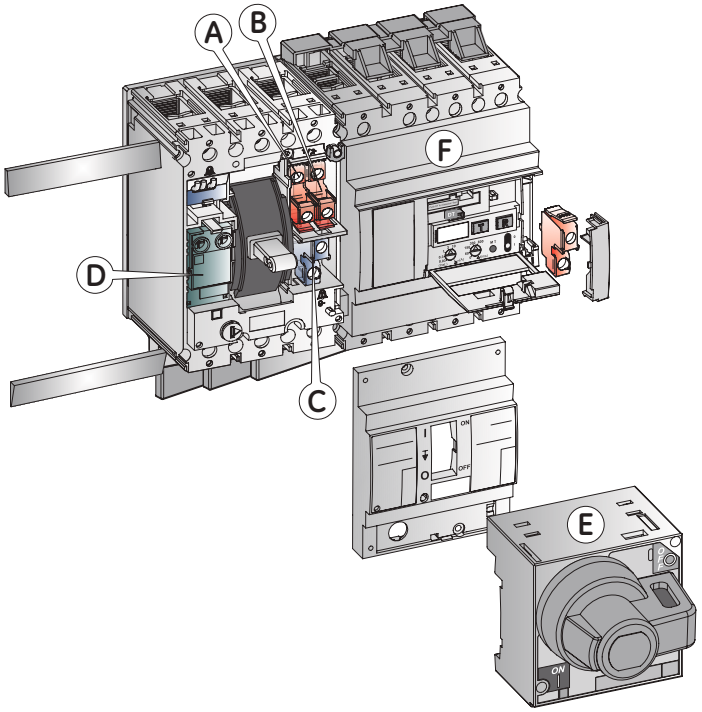
Circuit breaker type		FD63/160E
EN/IEC 60947-2		
Poles	Number of	3, 4
Rated insulation voltage	Ui (V)	750
Rated impulse withstand voltage	Uimp (kV)	8
Rated operational voltage Ue	Volts AC	690
Line Protection Device		
Category of use		A
Suitable for use as a isolator	Positive ON & OFF	yes
Rated current Ith=Ie	A at 40°C	160
Ultimate breaking capacity Icu (kA)	230V AC	40
	400/415V AC	25
	440V AC	14
	500V AC	12
	690V AC	4.5
Service breaking capacity Ics (%Icu)	≤ 500V	75%
Single phase breaking capacity IIT (kA)	230V AC	25
	400/415V AC	4.5
Endurance (CO operations)	Mechanical	10000
	Electrical at In	5000
	Electrical at In/2	10000
Endurance (ON-tripped operations)	Mechanical	4000

Installation

Mounting	On symmetrical DIN-rail	yes
	Fixed	yes
Connection	Front	yes
	Rear	yes
Dimensions (W x H x D) mm	3pole, fixed front connection	81x130x85
	4pole, fixed front connection	108x130x85
Weights (kg)	3pole, fixed front connection	0.9
	4pole, fixed front connection	1.3

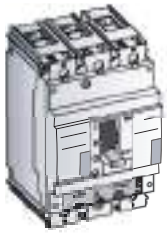
Ⓐ Auxiliary contact left mounted (NO or NC)
Ⓑ Auxiliary contact right mounted (NO or NC)
Ⓒ Bell alarm trip unit (NO or NC)
Ⓓ Shunt or undervoltage release
Ⓔ Operator
Rotary handle
Ⓕ Side mounted RCD (1)

(1) Bottom mounted version is also available (below trip unit)



Dimensions ● pg G.6

FD 63/160 - Complete Circuit Breaker

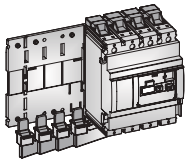
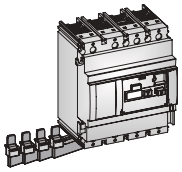


Line Thermal Magnetic LTM (adjustable thermals)

		3 pole 3 trips		4 pole 4 trips[1]	
	In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.
25 kA FDE	16	FDE36TE016ED	**433649**	FDE46TE016ED	**433697**
	20	FDE36TE020ED	**433651**	FDE46TE020ED	**433699**
	25	FDE36TE025ED	**433653**	FDE46TE025ED	**433701**
	32	FDE36TE032ED	**433655**	FDE46TE032ED	**433703**
	40	FDE36TE040ED	**433657**	FDE46TE040ED	**433705**
	50	FDE36TE050ED	**433659**	FDE46TE050ED	**433707**
	63	FDE36TE063ED	**433661**	FDE46TE063ED	**433709**
	80	FDE36TE080GD	**433663**	FDE46TE080GD	**433711**
	100	FDE36TE100GD	**433665**	FDE46TE100GD	**433713**
	125	FDE36TE125GD	**433667**	FDE46TE125GD	**433715**
	160	FDE36TE160GD	**433669**	FDE46TE160GD	**433717**

One code covers a standard, fixed front connection breaker with fixation hardware and DIN rail mounting kit.
Bell alarm mechanism and motor drive accessories can not be used with the FDE type.

FD - Residual current devices

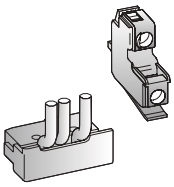
		Standard		3 pole Cat. No.	3 pole Ref. No.	4 pole Cat. No.	4 pole Ref. No.
RCD Side Mounted		Voltage 220/440V AC	(a)	FDQDS3M/6	**431095**	FDQDS4M/6	**431103**
		Voltage 400/690V AC	(a)	FDQDS3H/6	**431090**	FDQDS4H/6	**431101**
	a	One code covers an RCD with: din-rail mounting kit and multidirectional supply kit.					
		Side connected only					
	b	Voltage 220/440V AC	(b)	FDQDI3M/6	**431086**	FDQDI4M/6	**431088**
		One code covers an RCD with: DIN-rail mounting kit and interconnection kit.					

(1) Neutral on the left.

For complete range of Record Plus MCCBs up to 1250A ask for special catalogue

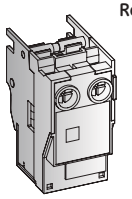
FD - Internal Accessories

Contacts



	Normally open		Normally closed			
	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Cat. No.	Ref. No.
Aux. switch right mounted	FAS10R	**430837**	FAS01R	**430831**		
Aux. switch left mounted	FAS10L	**430834**	FAS01L	**430828**		
Bell alarm trip unit	FABAT10	**430818**	FABAT01	**430815**		
Bell alarm RCD device	FABAT10	**430818**	FABAT01	**430815**		

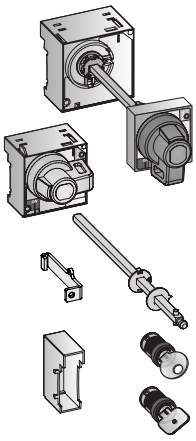
Releases



	Shunt		Undervoltage		Delayed undervoltage	
12V AC/DC	FASHTB	**430840**				
24V AC/DC	FASHTD	**430843**	FAUVRD	**430861**		
48V AC/DC	FASHTF	**430846**	FAUVRF	**430864**		
60V AC/DC	FASHTH	**435118**	FAUVRH	**435120**		
110V AC/DC	FASHTJ	**430849**	FAUVRJ	**430867**		
220/240V AC/DC	FASHTN	**430852**	FAUVRN	**430870**	FAUVDN	**430858**
400/415V AC	FASHTU	**430855**	FAUVR8	**436472**		
440/480V AC			FAUVRU	**430873**		

FD - Operators

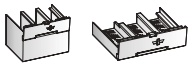
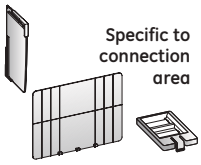
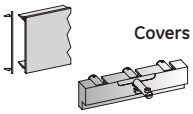
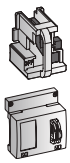
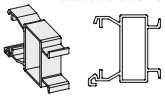
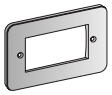
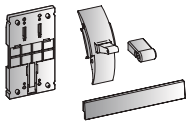
Rotary Handles



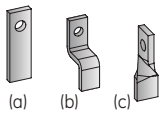
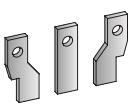
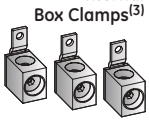
	Direct on unit device		Rotary handle for use through door or cover plate[2]		Panel or door mounted	
Grey (max. 350 mm)	FDNRF/5	**436478**	FDNRC/5	**436474**	FDNRD/5	**436476**
Red (max. 350 mm)	FDNRFV/5	**436479**	FDNRCV/5	**436475**	FDNRDV/5	**436477**
Grey + auxiliary contacts 2xNO			FDNRY/5	**436487**	FDNRZ/5	**436489**
Red + auxiliary contacts 2xNO			FDNRYV/5	**436488**	FDNRZV/5	**436490**
Flex operator adaptor push to trip	FDNFT	**430968**	Only for use with panel or door mounted type			
Extension shaft kit (max. 600 mm)	FDNRE	**430986**				
Side-by-side installation adapter kit	FDNR4	**430971**	Not for use with panel or door mounted type			
Ronis Key lock 1[1]	FA1BR1	**430088**				
Ronis Key lock 2[1]	FA1BR2	**430089**				
Ronis Key lock 3[1]	FA1BR3	**430504**				
Ronis Key lock 4[1]	FA1BR4	**430505**				
Ronis Key lock 5[1]	FA1BR5	**430506**				
Ronis Key lock 6[1]	FA1BR6	**430507**				
Ronis Key lock[1]	FA1BRH	**430068**				
Profalux Key lock[1]	FA1BPH	**430813**				

(1) Key included
(2) Add door flange FDFH to allow use of the door interlock options

FD - Installation Accessories

		Cat. No.	Ref. No.
Terminal shields (with finishing covers) 	Long 3pole, set of 2 pcs.	FDJL3	**430951**
	Long 4pole, set of 2 pcs.	FDJL4	**430954**
	Short 3pole, set of 2 pcs.	FDJS3	**430960**
	Short 4pole, set of 2 pcs.	FDJS4	**430963**
Specific to connection area 	Phase separators, set of 12 pcs.	FDJP	**430957**
	Back plate set of 2 pcs. (3 or 4 pole)	FDJB	**430945**
	Finger protection IPXXB (set of 12 pcs.)	FDJK	**430069**
Covers 	Cutout adaptor, breaker + T.U. 3 pole	FDUF3	**430830**
	Cutout adaptor, breaker + T.U. 4 pole	FDUF4	**430832**
	Cutout filler length 1.2 meter 64mm	FBF6	**883970**
Padlocking devices for toggle operator[1] 	Padlocking removable	FD1PR	**430879**
	Padlocking fixed	FD1PF	**430878**
Circuit indication/ coding	Set of 20 blank labels	FAC	**430821**
Heightening set for ElfaPlus MCBs 	Length 354 mm	FDKE	**617947**
Door Flanges 	Breaker front face 3 pole and RCD bottom mounted	FDFF3	**430941**
	Breaker front face 4 pole	FDFF4	**430942**
	Rotary handle (through cover plate model)	FDFH	**430829**
	Electrical operator	FDFE	**432010**
Spare Parts 	DIN-rail adaptor kit 3pole[2]	FDKD3	**430966**
	DIN-rail adaptor kit 4pole[2]	FDKD4	**430967**
	Spare toggle (set of 5 pieces)	FDUT	**433539**
	Finishing covers 3pole, set of 2 pcs.[2]	FDUA3	**431025**
	Finishing covers 4pole, set of 2 pcs.[2]	FDUA4	**431026**

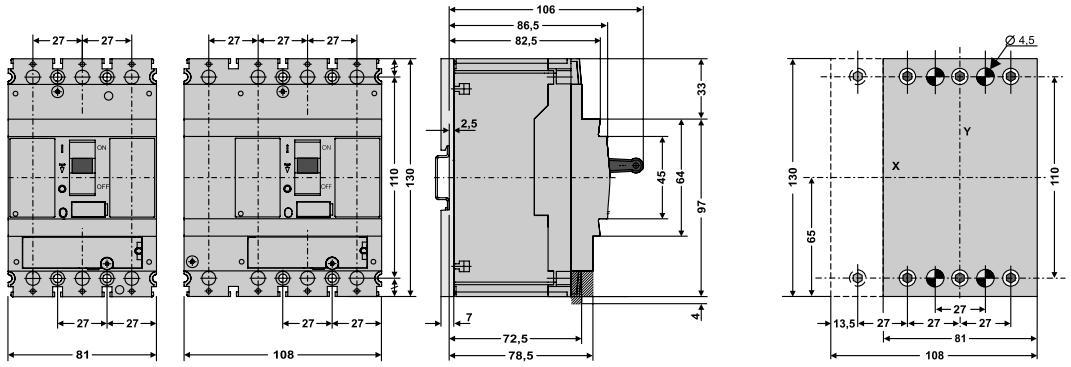
FD - Connections: Optional

			Cat. No.	Ref. No.
Extenders[3]  (a) (b) (c)	Standard 3pole	(a)	FDBES3	**430887**
	Standard 4pole		FDBES4	**430888**
	Heightened 3pole	(b)	FDBEH3	**430885**
	Heightened 4 pole		FDBEH4	**430886**
	Twisted 90° 3pole	(c)	FDBEA3	**430883**
	Twisted 90° 4pole		FDBEA4	**430884**
Spreader Flat[3] 	Pole spacing 35 mm, 3pole		FDBSS3	**430891**
	Pole spacing 35 mm, 4pole		FDBSS4	**430892**
External Box Clamps[3] 	Box clamp Cu/Al 95 mm^2, set 3pole[4]		FDTCA1316	**433400**
	Box clamp Cu/Al 95 mm^2, set 4pole[4]		FDTCA1416	**433401**

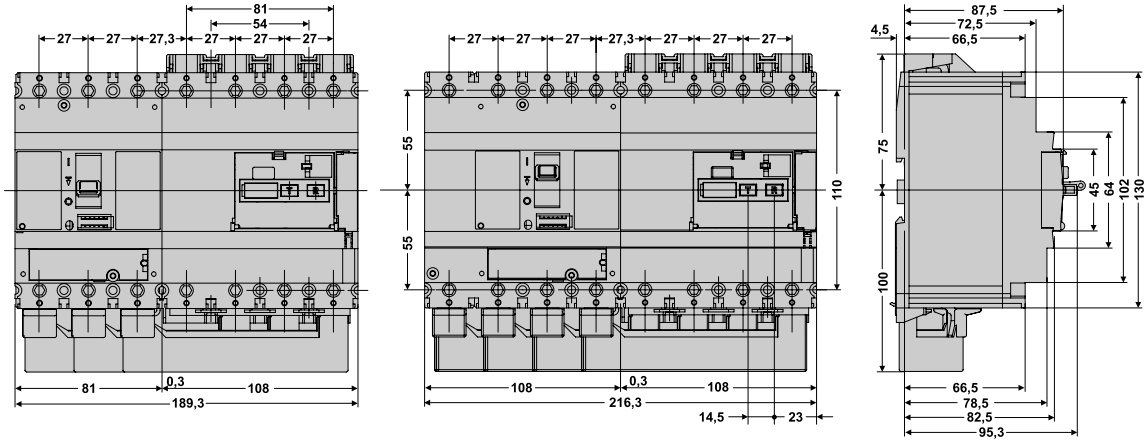
(1) Padlocks not included
(2) Supplied with breakers, not with FDE type
(3) Set for equipping the line OR load side of breaker
(4) External lugs are always delivered with standard extender

Dimensional Drawings

Breakers FD63/160 Fixed, Front connected



RCD Side mounted - FD63/160



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SMS 3	666101	D.21
SMS 6	666102	D.21
T...		
TAP12	564533	F.33
TAP24	564546	F.33
TAP36	564547	F.33
TAP48	564548	F.33
TELE L 110	624945	A.35
TELE L 24	624946	A.35
TELE L-1	672573	C.9
TELE L-2	672574	C.9
TELE LT-1	667252	C.11
TELE LT-2	667253	C.11
TELE MP	672580	C.7
TELE OV 230	667485	D.51
TELE OV 400	667493	D.51
Tele REC PLUS Motor	677132	B.48
TELE U-12	672576	C.9
TELE U-230	672575	C.9
TELE U-24	672577	C.9
TELE U-48	672578	C.9
TOR+110	665917	B.39
TOR+28	665297	B.39
TOR+35	665298	B.39
TOR+60	665299	B.39
TR&KT+C3MOD	665918	D.29
TR&KT+C6MOD	665919	D.29
TR+ B 5	665900	D.29
TR+B 8	665901	D.29
TR+B10	665902	D.29
TR+B15	665903	D.29
TR+B16	665904	D.29
TR+B30	665905	D.29
TR+S15	665909	D.29
TR+S25	665910	D.29
TR+S40	665911	D.29
TR+S63	665912	D.29
TSL222	662152	F.18
TSL255	662155	F.18
TSL345	662153	F.18
TSL442	662154	F.18
TSL444	662156	F.18
V...		
VCM13	618405	F.19
VCM2	618401	F.19
VCM3A3	618416	F.19
VCM4	618402	F.19
VCM4A4	618419	F.19
VCM5A5	618423	F.19
VCM6	618403	F.19
VCM7A7	618489	F.19
VCM9	618404	F.19
VCMA13	618413	F.19
VCMA2	618406	F.19
VCMA4	618407	F.19
VCMA6	618409	F.19
VCMA9	618411	F.19
W...		
WUL	690244	A.41

Notes

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June 2014
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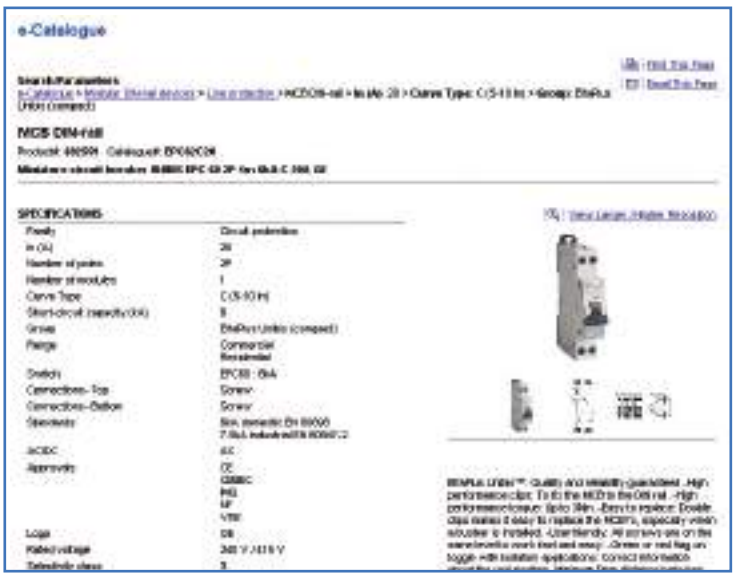

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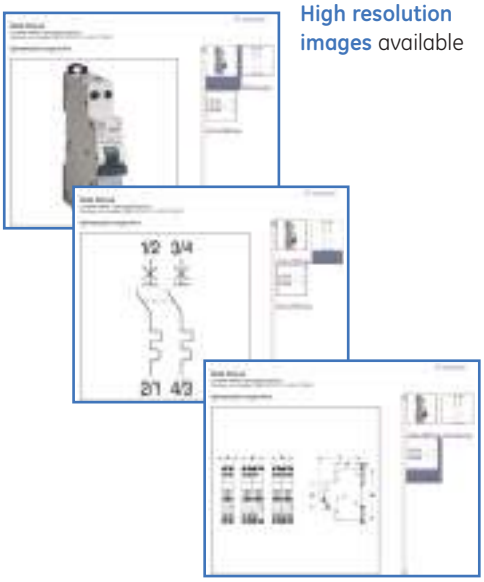

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