



- 16A to 1600A ratings
- Versions: direct operating handle, door coupling, door mount and in enclosure
- Wide range of accessories
- Type for photovoltaic applications up to 850A, 1000VDC (DC21B)
- Switch disconnectors and changeover switches in plastic, metal and stainless steel AISI 304 enclosure.

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GA SERIES
16A TO 160A (AC21A)

- UL60947-4-1 and UL98 certified three-pole switch disconnectors; add-on fourth pole available
- Switch disconnectors with direct operating handle and door coupling version
- Switch disconnectors door mount version
- Switch disconnectors in plastic, metal and AISI 304 stainless-steel enclosure
- Changeover switches in plastic and metal enclosure.



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GL SERIES
160A TO 315A (AC21A)

- IEC and UL98 certified three-pole switch disconnectors; add-on fourth pole available
- IEC and UL1008 certified changeover switches
- Switch disconnectors with direct operating handle and door coupling version
- Switch disconnectors in metal enclosure
- Changeover switches in metal enclosure.



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GE SERIES
50A TO 1600A (AC21A)

- IEC version three and four-pole switch disconnectors
- IEC version three and four-pole switch disconnectors with NFC, NH and BS type fuse holders
- Switch disconnectors with direct operating handle and door coupling version
- Three and four-pole changeover switches; add-on motorised control unit available.



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GM SERIES
30A TO 800A (AC21A)

- UL98 certified three-pole switch disconnectors with CC, J and L type fuse holders
- Direct operating and door coupling versions.



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FOR PHOTOVOLTAIC APPLICATIONS
UP TO 850A 1000VDC (DC21B)

- Switch disconnectors
- Direct operating and door coupling versions
- Switch disconnectors in non-metallic enclosure
- Connection of 2, 3, 4 poles in series.

GA series 16A to 160A



	DIRECT OPERATING HANDLE AND DOOR COUPLING VERSION											DOOR MOUNT VERSION									
	36mm/1.42" width					70mm/2.75" width						36mm/1.42" width				70mm/2.75" width					
	16A	25A	32A	40A	63A	30A	63A	80A	100A	125A	160A	16A	25A	32A	40A	30A	63A	80A	100A	125A	
AC21A (IEC/EN)	16A	25A	32A	40A	60A	30A	60A	100A	100A	100A	-	16A	25A	32A	40A	30A	60A	100A	100A	100A	
GENERAL USE 600VAC (UL/CSA)	16A	25A	32A	40A	60A	30A	60A	100A	100A	100A	-	16A	25A	32A	40A	30A	60A	100A	100A	100A	
Certifications																					
UL60947-4-1	●	●	●	●	●							●	●	●	●						
UL98						●	●	●	●	●						●	●	●	●	●	
Three-pole	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
4th pole - simultaneous closing		●			●	●		●	●	●	●		●			●		●	●	●	
4th pole - early make		●			●			●					●					●			
Fuse holder 10x38mm		●																			
Fuse holder 10x38mm type CC		●																			
Mechanical 6-8 pole coupling system			●					●													
Mechanical interlock for line switching			●					●													



	PLASTIC ENCLOSED VERSION WITH RED/YELLOW OR BLACK HANDLE										METAL ENCLOSED VERSION WITH RED/YELLOW OR BLACK HANDLE									
	16A	25A	32A	40A	63A	63A	80A	100A	125A	160A	16A	25A	32A	40A	63A	63A	80A	100A	125A	160A
AC21A (IEC/EN)	16A	25A	32A	40A	60A	60A	100A	100A	100A	-										
GENERAL USE 600VAC (UL/CSA)	16A	25A	32A	40A	60A	60A	100A	100A	100A	-										
SWITCH DISCONNECTORS																				
Three-pole IEC/EN	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Four-pole IEC/EN	●		●	●	●	●		●	●	●	●		●	●	●	●		●	●	●
Three-pole UL 60947-4-1	●	●	●	●	●															
Three-pole UL98						●	●	●	●											
Four-pole UL 60947-4-1	●		●																	
Four-pole UL98						●		●	●											
CHANGEOVER SWITCHING																				
Three-pole IEC/EN											●		●	●	●		●	●	●	
Four-pole IEC/EN											●		●	●	●		●	●	●	
Three-pole UL 60947-4-1		●		●	●					●										
Three-pole UL98							●		●											
Four-pole UL 60947-4-1		●		●	●															
Four-pole UL98							●		●											



	STAINLESS STEEL AISI 304 ENCLOSED VERSION WITH RED/YELLOW OR BLACK HANDLE						
	16A	25A	32A	40A	63A	63A	100A
AC21A (IEC/EN)	16A	25A	32A	40A	63A	63A	100A
SWITCH DISCONNECTORS							
Three-pole IEC/EN	●	●	●	●	●	●	●

GL series 160A to 315A



AC21A (IEC/EN)	DIRECT OPERATING HANDLE AND DOOR COUPLING VERSION				METAL ENCLOSED VERSION WITH RED/YELLOW OR BLACK HANDLE			
	160A	200A	250A	315A	160A	200A	250A	315A
GENERAL USE 600VAC (UL/CSA)		200A						
SWITCH DISCONNECTORS								
Three-pole IEC/EN	●	●	●	●	●	●	●	●
Three-pole UL98		●						
4th pole - simultaneous closing			●		●	●	●	●
CHANGEOVER SWITCHES								
Three and four-pole IEC/EN	●	●	●	●	●	●	●	●
Three and four-pole UL1008		●						

GE series 50A to 1600A



AC21A (IEC/EN)	DIRECT OPERATING AND DOOR COUPLING VERSION													
	50A	125A	160A	200A	250A	315A	400A	500A	630A	800A	1000A	1250A	1600A	
SWITCH DISCONNECTORS 50A...1600A														
Three and four-pole			●	●	●	●	●	●	●	●	●	●	●	●
Three and four-pole with NFC fuse holder	●	●												
Three and four-pole with NH fuse holder			●		●		●		●	●				
Three and four-pole with BS fuse holder			●	●	●	●	●		●	●				
Four-pole for photovoltaic applications		●			●	●			●	●		●		
CHANGEOVER SWITCHES 160A...1600A														
Three and four-pole			●	●	●	●	●	●	●	●	●	●	●	●
Motorised control unit				●		●			●		●		●	●

GM series 30A to 800A



	DIRECT OPERATING AND DOOR COUPLING VERSION						
GENERAL USE 600VAC (UL/CSA)	30A	60A	100A	200A	400A	600A	800A
DISCONNECT SWITCHES WITH FUSE HOLDERS 30A...800A							
UL98 three-pole disconnect switches with CC type fuse holders	●						
UL98 three-pole disconnect switches with J type fuse holders	●	●	●	●	●	●	
UL98 three-pole disconnect switches with L type fuse holders							●

For photovoltaic applications



CONVENTIONAL THERMAL CURRENT I _{th}	DIRECT OPERATING AND DOOR COUPLING VERSION									PLASTIC ENCLOSED VERSION WITH RED/YELLOW OR BLACK HANDLE		
	25A	32A	40A	125A	250A	315A	630A	800A	1250A	25A	32A	40A
Three-pole switch disconnectors GA series			●									
4th pole - simultaneous closing GA series			●									
Switch disconnectors GD series	●	●	●							●	●	●
Four-pole switch disconnectors GE series				●	●	●	●	●	●			

VERSATILITY!

COMPACT SIZE

The three-pole 16A to 63A switch disconnectors, are made up of a single unit body, merely 36mm/1.42" wide, while the 63A to 160A ratings, of another body size of only 70mm/2.75" wide.

ACCESSORY FLEXIBILITY

Mounting and removal of the fourth pole and add-on blocks are simple and quick operations with no need for tools.

VERSIONS FOR PHOTOVOLTAIC APPLICATIONS

The GA... type switch disconnectors are suitable for small domestic installations as well as those with a large number of solar cells. Use up to 800V in DC21B category.



CERTIFICATIONS

The 16A to 63A types are listed for Canada and the USA, certified according to UL60947-4-1/CSA C22.2 n° 60947-4-1. The 30A to 125A types are listed for Canada and the USA, certified according to UL98A/CSA C22.2 n° 4.



SIDE MOUNT ADD-ON FOURTH POLE

Simultaneous closing or early-make contact operation of the fourth pole with respect to the switch disconnector poles.



ADD-ON AUXILIARY CONTACTS

Only one add-on block suitable for all the 9 ratings of switch disconnectors, having simultaneous closing with the switch disconnector poles. There are versions with an early-break NO contact with respect to the switch disconnector.

MAXIMUM COMBINATIONS

Mounting up to 4 auxiliary contacts or 1 fourth pole and 3 auxiliary contacts (2 blocks always on the right and 2 on the left side) of each switch disconnector. The earth and neutral terminals and fuse holder also can be added.



DOOR COUPLING HANDLE WITH FRONT DIMENSIONS 48X48MM

The GAX68 and GAX68B handles can be used in panels and boxes of limited dimensions.



6 AND 8 POLE VERSION

Mechanical coupling systems are available for the 16A to 160A switch disconnectors with direct operating handle to provide 6/8 pole disconnectors or a mechanical interlock mechanism for the line changeover function (I - 0 - II). The enclosed switches are cULUS certified.



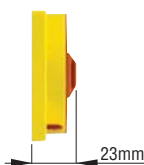
FUSE HOLDERS



A three-pole fuse holder can be added to 16A to 32A switch disconnectors, with direct operating handle, to provide a single compact unit. Access to the fuse can be made only when the disconnector is in OFF position.

REDUCED HANDLE THICKNESS

GAX61 and GAX 61 B handles are only 23mm thick.



IP65 PADLOCKABLE HANDLES

Wide range of selector or pistol grip handles, with screw or ring fixing. All handles are equipped with built-in padlockable mechanism. The selector handle GAX63... snaps onto the door mount switch disconnectors in 16A to 40A ratings, with no need for tools.



HANDLE ADAPTABILITY

The extensive number of fixing holes in the front handle plate can replace switch disconnectors, normally found out in the field, without having to drill others.



UL508A HANDLE VERSION

In compliance with UL508A standards, which require internal panel inspection by authorised personnel with power applied, selector and pistol handles are available with defeatable feature of the door coupling when the switch disconnector is closed, i.e. in ON position.



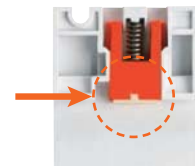
SWITCH STATUS INDICATION

The switch open or closed state is clearly and unequivocally seen at a distance thanks to the simple and modern design of the handles.

DIN RAIL FIXING

Switch disconnector mounting on and removal from the 35mm DIN rail are done by simply pressing it downwards with no need for tools.

ANTI-SLIDE INSERT FOR DIN RAIL



A rubber pad insert prevents the sliding of switch disconnectors on the DIN rail even when out of tolerance or mounted vertically.

TERMINAL ADAPTABILITY

Terminals are suitable to accept any type of cable: flexible, rigid, AWG wire. The terminals can withstand high tightening torques.

HIGH IEC CAPABILITY IN AC23


The rated currents I_e in AC23 at 690VAC are the highest of the category.

MODULARITY

The switch disconnectors can be mounted in modular panels.

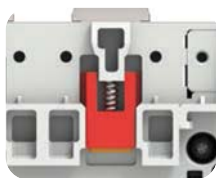
SWITCH DISCONNECTORS



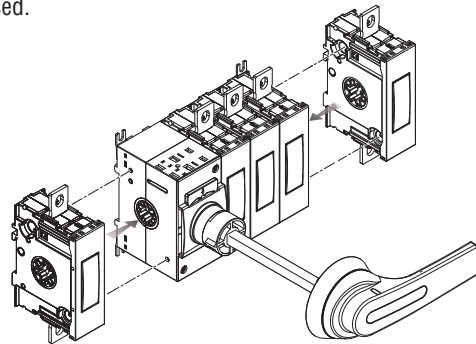
- COMPACT SIZE**
 The three-pole 160A to 315A AC21 switch disconnectors are made up of a body, merely 162mm wide.
- EASY INSTALLATION ON DIN RAIL**
 Switch disconnectors are mounted on DIN rail or on mounting plate by screw fixing.
- UL98 VERSION**
 Switch disconnectors are listed for USA and Canada, certified according to UL98/CSA C22.2 n° 4.
 
- FOUR-POLE VERSION AVAILABLE**
 Switch disconnectors are supplied with three-pole configuration. To realise the four-pole version, a fourth-pole add-on can be purchased.



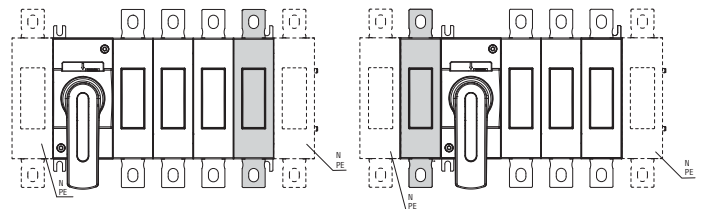
- FLEXIBLE INSTALLATION ORIENTATION**
 Switch disconnectors can be installed in all directions. The clips for screw fixing can be adjusted both in rotation and position (flexible fixing interaxis).




- ANTI-SLIDE INSERT FOR DIN RAIL**
 Two rubber pad inserts prevent the sliding of switch disconnectors on the DIN rail.



- COMPONENT FLEXIBILITY**
 It is possible to mount the fourth pole, neutral and earth/ground terminals on both sides of the switch disconnectors using 2 screws.



CHANGEOVER SWITCHES

- COMPACT SIZE**
 The four-pole 160A to 315A AC21 changeover switches are made up of a body, merely 221mm wide.
- EASY INSTALLATION**
 The changeover switches can be mounted on plate by screws.
- UL1008 VERSION**
 The changeover switches are listed for USA and Canada, certified according to UL1008/CSA C22.2 n° 178.
 
- FOUR-POLE VERSION AVAILABLE**
 Changeover switches are already supplied assembled in three-pole and four-pole configuration.



11 Switch disconnectors

Overview
GL series

● WIDE RANGE OF ACCESSORIES

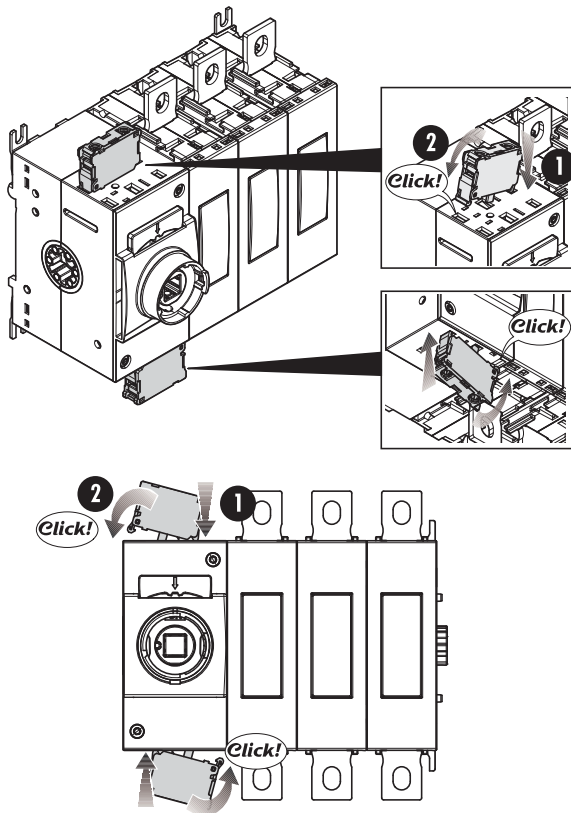
A wide choice of auxiliary contacts, terminal covers, phase barriers, terminal clamps, bridging bars, shafts and handles are available to satisfy every installation need.

● HIGH IEC ELECTRICAL CAPABILITY

The rated currents in AC23 up to 250A - 690VAC are the highest of the category.

● ADD-ON AUXILIARY CONTACTS

The same add-on block is suitable for all the switch disconnectors and changeover switches. Contacts are mounted on main switching actuator (max 8 contacts).



● VISIBLE CONTACTS

Thanks to the window on the individual power poles the open or closed switch status is clearly visible at a distance.



● UL508A HANDLE VERSION

In compliance with UL508A standards, which require internal panel inspection by authorized personnel with power applied, pistol handles are available with defeatable feature of the door coupling when the switch disconnector or the changeover switch is closed, i.e. in ON position.

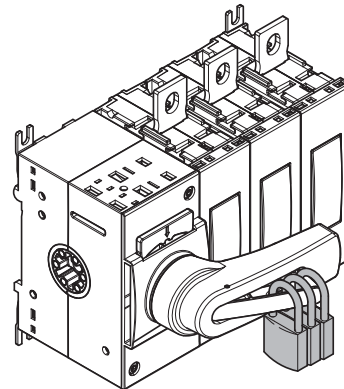
● IP66 AND NEMA 4X HANDLES

A wide range of screw fixing pistol grip handles is available with the maximum degree of protection on the market.



● PADLOCKABLE HANDLES

All direct and door coupling handles are equipped with integrated padlock mechanism.

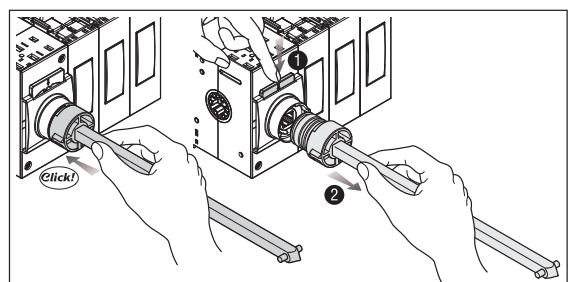


● HANDLES

Switch disconnectors and changeover switches are standard supplied without any handles. By purchasing the direct handle separately it is possible to realise the direct operating version. By purchasing a shaft extension and a door coupling handle separately it is possible to realise the door coupling version.

● SHAFT MOUNTING

Shafts can be mounted and removed very easily by snapping on the front of the switch. This feature allows fast installation and easy accessibility to the panel in case of maintenance.



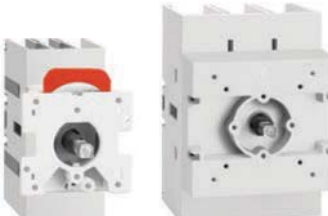
Three-pole switch disconnectors



GA016 A...
GA040 A
GA063 SA

GA030 A
GA063 A...
GA160 A

new



GA016 C...
GA040 C

GA030 C
GA063 C...
GA125 C

new

Fourth pole add-on



GAX42...A
GAX41...A
GAX42 063SA
GAX41 063SA



GAX42 040C
GAX41 040C

- ① For GA016 A...GA040 A only.
- ② For GA063 SA only.
- ③ For GA016 C...GA040 C only.
- ④ For GA030 A and GA063 A...GA125 A only.
- ⑤ For GA030 C and GA063 C...GA125 C only.
- ⑥ For GA030 A and GA063 A only.
- ⑦ For GA030 C and GA063 C only.

Order code	IEC conventional free air thermal current Ith AC21A (≤690V)	IEC rated operational current Ie AC22A (≤690V) AC23A (≤415V)	Qty per pkg	Wt
	[A]	[A]	n°	[kg]

Direct operating version, complete with black handle.
For door coupling version, separately purchase the handle and shaft extension (see page 11-12 and 11-14).
According to UL60947-4-1.

GA016 A	16	16	1	0.146
GA025 A	25	25	1	0.146
GA032 A	32	32	1	0.146
GA040 A	40	40	1	0.146
GA063 SA	63	45	1	0.148

According to UL98.

GA030 A	30	30	1	0.388
GA063 A	63	63	1	0.388
GA080 A	80	80	1	0.388
GA100 A	100	100	1	0.388
GA125 A	125	125	1	0.388

According to IEC.

GA160 A	160	125	1	0.388
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Door mount version, complete with shaft extension (purchase handle separately, see page 11-12).
According to UL60947-4-1.

GA016 C	16	16	1	0.170
GA025 C	25	25	1	0.170
GA032 C	32	32	1	0.170
GA040 C	40	40	1	0.170

According to UL98.

GA030 C	30	30	1	0.404
GA063 C	63	63	1	0.404
GA080 C	80	80	1	0.404
GA100 C	100	100	1	0.404
GA125 C	125	125	1	0.404

Order code	IEC conventional free air thermal current Ith AC21A (≤690V)	IEC rated operational current Ie AC22A (≤690V) AC23A (≤415V)	Qty per pack	Wt
	[A]	[A]	n°	[kg]

Simultaneous closing operation as switch disconnector poles. For GA...A version.

GAX42 040A①	40	40	1	0.045
GAX42 063SA②	63	45	1	0.045
GAX42 063A③	63	63	1	0.126
GAX42 080A	80	80	1	0.126
GAX42 100A	100	100	1	0.126
GAX42 125A	125	125	1	0.126
GAX42 160A	160	125	1	0.126

For GA...C version.

GAX42 040C④	40	40	1	0.045
GAX42 063C⑤	63	63	1	0.128
GAX42 080C	80	80	1	0.128
GAX42 100C	100	100	1	0.128
GAX42 125C	125	125	1	0.128

Early make closing operation with respect to switch disconnector poles. For GA...A version.

GAX41 040A⑥	40	40	1	0.046
GAX41 063SA⑦	63	45	1	0.046
GAX41 125A⑥	125	125	1	0.116

For GA...C version.

GAX41 040C⑥	40	40	1	0.046
GAX41 125C⑥	125	125	1	0.128

General characteristics

- 16A to 160A
- Available versions:
 - Direct operating
 - Door mount
 - Door coupling. Use switch disconnector with direct operating handle and separately purchase the handle and shaft extension for this version. See pages 11-12 and 14.
- Compact and modular size
- Screw or 35mm DIN rail fixing
- Padlockable in 0 position with no extra accessory.

Operational characteristics

- Rated insulation voltage Ui: 1000V
- Rated impulse withstand Uimp: 8kV
- Electrical life in AC21A:
 - 100,000 cycles GA016...GA040, GAX...40A/C
 - 15,000 cycles GA063 SA, GAX...063SA
 - 30,000 cycles GA030 and GA063...GA125, GAX...063...125A/C
 - 1,500 cycles GA160A, GAX42 160A
- Mechanical life:
 - 100,000 cycles GA016...GA040 A/C, GA063 SA, GAX...40A/C, GAX...063SA
 - 30,000 cycles GA030 and GA063...GA160A, GAX...063...125A/C, GAX42 160A.

Certifications and compliance

Certifications obtained:

Type	cULus according to UL60947-4-1 / CSA C22.2 n°60947-4-1	cULus according to UL98 / CSA C22.2 n°4	EAC	KEMA
GA016 A...GA040 A	●	—	●	●
GA063 SA	●	—	●	—
GA016 C...GA040 C	●	—	●	●
GA030 A and GA063 A...GA125 A	—	●	●	—
GA160 A-GAX42 160A	—	—	●	—
GA030 C and GA063 C...GA125 C	—	●	●	—
GAX41 040A-GAX42 040A	●	—	●	—
GAX41 063SA-GAX42 063SA	●	—	●	—
GAX41 040C-GAX42 040C	●	—	●	—
GAX41 125A-GAX42 125C	—	●	●	—
GAX42 063A...GAX42 125A	—	●	●	—
GAX42 063C...GAX42 125C	—	●	●	—

● Certification obtained.

Compliant with standards: IEC/EN 60947-3, IEC/EN 60947-1, UL60947-4-1, UL98, CSA C22.2.

Strokes of GA poles (main poles and add-on pole)

	Travel 0→1 0°	30°	60°	90°
GA016A/C...GA040A/C - GA063SA Main poles			60°	
GAX42040A/C - GAX42063SA Simultaneous closing fourth-pole add on			60°	
GAX41040A/C - GAX41063SA Early-make fourth-pole add on			55°	
GA063A/C...GA125A/C, GA160A Main poles			55°	
GAX42063A/C...GAX42125A/C, GAX42160A Simultaneous closing fourth-pole add on			55°	
GAX41125A/C Early-make fourth-pole add on			48°	
	OFF			ON

11 Switch disconnectors

GA series 16A to 160A
Accessories

Add-on blocks



GAX10 11A GAX10 11C



GAX11 10EA
GAX12 10EA



GAX3...A GAX3...C



GAX50...
GAX60...

Order code	Characteristics	Qty	Wt
		per pack	[kg]
		n°	[kg]

Auxiliary contacts, simultaneous closing as poles of switch disconnector.

GAX10 11A	1NO + 1NC for GA...A, GA063 SA and GA040 D	1	0.030
GAX10 11C	1NO + 1NC for GA...C	1	0.030

Auxiliary contacts, early-break operation with respect to poles of switch disconnector.

GAX11 10EA	1EB (NO) for GA016 A...GA040 A, GA063 SA and GA040 D	1	0.035
GAX12 10EA	1EB (NO) for GA030 A and GA063 A...GA160 A	1	0.035

Neutral terminal.

GAX31 A	For GA016 A...GA040 A, GA063 SA and GA040 D	1	0.040
GAX32 A	For GA030 A and GA063 A...GA160 A	1	0.110
GAX31 C	For GA016 C...GA040 C	1	0.040
GAX32 C	For GA030 C and GA063 C...GA125 C	1	0.110

Earth/Ground terminal.

GAX33 A	For GA016 A...GA040 A, GA063 SA and GA...D	1	0.040
GAX34 A	For GA030 A and GA063 A...GA160 A	1	0.110
GAX33 C	For GA016 C...GA040 C	1	0.040
GAX34 C	For GA030 C and GA063 C...GA125 C	1	0.110

Mechanical interlock for line changeover (I-O-II).

GAX50 00	For GA016 A...GA040 A, GA063 SA, GA040 D and GAX67 B; □ 5mm/0.2" ❶	1	0.050
GAX50 01	For GA030 A, GA063 A...GA160 A and GAX67 B; □ 5mm/0.2" ❶	1	0.075

Mechanical coupling system for 6-8 pole switch disconnectors.

GAX60 00	For GA016 A...GA040 A, GA063 SA and GA040 D; □ 5mm/0.2" ❶	1	0.050
GAX60 01	For GA030 A and GA063 A...GA125 A, □ 7mm/0.3" ❷❸	1	0.075

- ❶ Use GAX7... shaft extensions.
- ❷ Use GAX66... handles and GAX7...A extensions for a door coupling version.
- ❸ Cannot be used with GA160A.

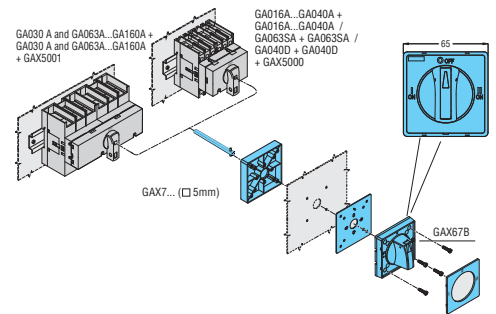
Operational characteristics of auxiliary contacts

- Conventional free air thermal current I_{th}: 10A
- UL/CSA and IEC/EN 60947-5-1 designation: A600-Q600
- Tightening torque: 0.8Nm/7.1lbin.

Operational characteristics for other devices

- Tightening torque:
 - GAX31A/C-GAX33A/C terminals: 1.8...2Nm/16...18lbin
 - GAX32A/C-GAX34A/C terminals: 5...6Nm/45...54lbin
 - GAX5000/1-GAX6000/1 fixing: 0.5Nm/4.4lbin; extension with handle: 0.8Nm/7.1lbin.

Transformation of direct operating version into door coupling type:



Certifications and compliance

Certifications obtained:

Type	cULus according to UL508 / CSA C22.2 n°14	cULus according to UL98 / CSA C22.2 n°4	EAC
GAX10 11A - GAX10 11C	●	—	●
GAX11 10EA	●	—	●
GAX12 10EA	●	—	●
GAX31 A - GAX31 C	●	—	●
GAX32 A - GAX32 C	—	●	●
GAX33 A - GAX33 C	●	—	●
GAX34 A - GAX34 C	—	●	●
GAX50 00 - GAX60 00	●	—	●
GAX50 01 - GAX60 01	—	●	●

● Certification obtained.

Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-3, IEC/EN 60947-5-1, UL508, UL98, CSA C22.2.

Strokes of GA poles (main poles with auxiliary contacts)

	Travel 0 → 1	0°	30°	60°	90°
GA016A/C...GA040A/C - GA063SA Main poles				60°	
GAX10 11A - GAX10 11C Auxiliary contacts (1NO+1NC)				60°	
	NO				
	NC				
GAX11 10EA Auxiliary contact (1EB - NO early-break with respect to main poles)		40°			
	Travel 0 → 1		60°		
	Travel 1 → 0			70°	
GA030A/C and GA063A/C...GA125A/C, GA160A Main poles				55°	
GAX10 11A - GAX10 11C Auxiliary contacts (1NO+1NC)				45°	
	NO				
	NC				
GAX12 10EA Auxiliary contact (1EB NO early-break with respect to main poles)		25°			
	Travel 0 → 1		55°		
	Travel 1 → 0			65°	

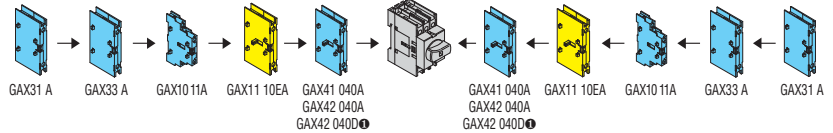
OFF ON

Strokes of GA...D types (main poles and auxiliary contacts)

	Corsa 0 → 1	0°	30°	60°	90°
GA040 D Main poles				60°	
GA042 040D simultaneous closing fourth -pole add on				60°	
GAX10 11A Auxiliary contacts (1NO+1NC)				60°	
	NO				
	NC				
GAX11 10EA auxiliary contact (1EB NO early-break with respect to main poles)		40°			
	Travel 0 → 1		60°		
	Travel 1 → 0			70°	

Maximum combinations

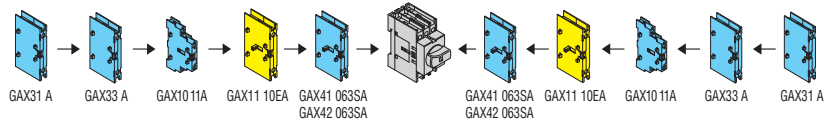
GA016 A...GA040 A Sequence and maximum combination of add-on blocks on direct operating switch disconnectors.
GA040 D



1	1	1	—	1	GA016 A GA025 A GA032 A GA040 A	—	—	2	1	1		
1	1	2	—	—		—	1	—	1	1	1	
1	1	1	—	1		—	—	1	1	1	1	
1	1	1	1	—		—	1	—	1	1	1	
1	1	1	1	—		—	—	—	2	1	1	
1	1	2	—	—		—	—	1	1	1	1	
1	1	2	—	—		GA040 D	—	—	2	1	1	
1	1	—	—	—			1	—	—	—	1	1
1	1	—	—	1			—	—	—	—	1	1
1	1	—	—	—			—	—	—	—	1	1

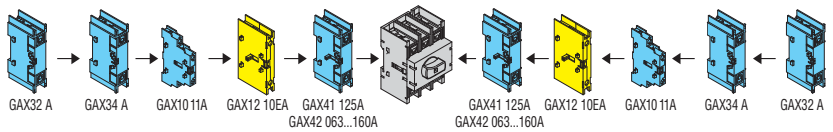
① GAX42 040D can be used with GA040 D switch only.

GA063 SA



1	1	1	—	1	GA063 SA	—	—	2	1	1		
1	1	2	—	—		—	1	—	1	1	1	
1	1	1	—	1		—	—	1	1	1	1	
1	1	1	1	—		—	1	—	1	1	1	
1	1	1	1	—		—	—	—	2	1	1	
1	1	2	—	—		—	—	1	1	1	1	
1	1	2	—	—		GA063 SA	—	—	2	1	1	
1	1	—	—	—			1	—	—	—	1	1
1	1	—	—	1			—	—	—	—	1	1
1	1	—	—	—			—	—	—	—	1	1

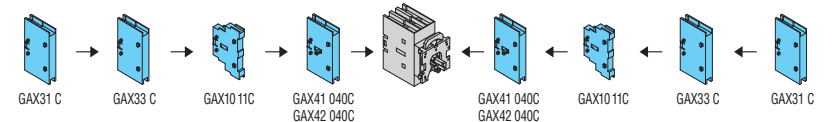
GA030 A and GA063 A...GA160 A



—	—	1	—	1	GA030 A GA063 A GA080 A GA100 A GA125 A GA160 A	—	—	2	—	—		
—	—	2	—	—		—	1	—	1	—	—	
—	—	1	—	1		—	—	1	1	—	—	
—	—	1	1	—		—	1	—	1	—	—	
—	—	2	—	—		—	—	—	2	—	—	
—	—	2	—	—		GA030 A GA063 A GA080 A GA100 A GA125 A GA160 A	—	—	2	—	—	
1	1	—	—	—			1	—	—	1	1	1
1	1	—	—	1			—	—	—	—	1	1
1	1	—	—	—			—	—	—	—	1	1

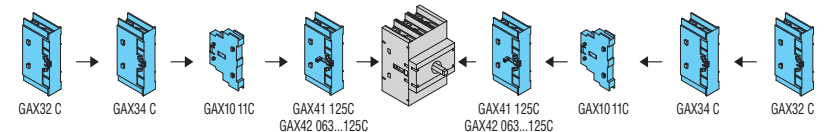
① GA160 A can be fitted with 1 single 4th pole (GAX42160 A) on one side and an auxiliary contact on the other.

GA016 C...GA040 C Sequence and maximum combination of add-on blocks on door mount switch disconnectors.



1	1	1	1	1	GA016 C GA025 C GA032 C GA040 C	—	1	1	1	1	
1	1	1	1	—		—	1	1	1	1	1
1	1	—	1	—		—	—	1	1	1	1
1	1	1	1	—		—	1	—	1	1	1
1	1	1	1	—		—	—	1	1	1	1
1	1	—	—	—		—	—	—	—	1	1

GA030 C and GA063 C...GA125 C



—	—	1	1	—	GA030 C GA063 C GA080 C GA100 C GA125 C	—	1	—	—	—	
—	—	1	—	—		—	1	1	—	—	—
1	1	—	1	—		—	—	1	—	—	—
—	—	1	—	—		—	1	—	1	1	1
—	—	1	—	—		GA030 C GA063 C GA080 C GA100 C GA125 C	—	1	—	—	—
1	1	—	—	—			—	—	—	1	1

11 Switch disconnectors

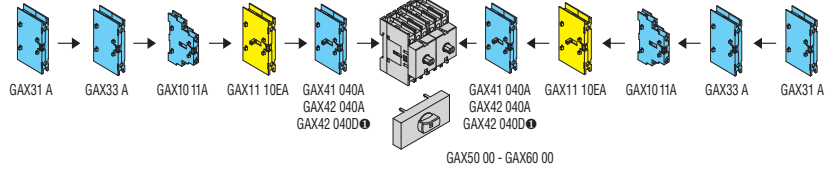
GA series 16A to 160A

Add-on block and accessories

Maximum combinations

**GA016 A...GA040 A
GA040 D
+ GAX50 00 -
GAX60 00**

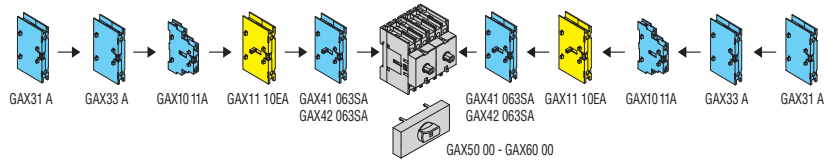
Sequence and maximum combination for mechanical coupling and mechanical interlock for line changeover.



1	1	1	—	1	GA016 A + GA016 A GA025 A + GA025 A GA032 A + GA032 A GA040 A + GA040 A GA040 D + GA040 D ①	1	—	1	1	1
1	1	1	—	1		—	—	2	1	1
1	1	2	—	—		1	—	1	1	1
1	1	1	—	1		—	1	—	1	1
1	1	1	1	—		—	—	2	1	1
1	1	2	—	—		—	—	1	1	1
1	1	2	—	—		—	—	—	2	1
1	1	—	—	1		—	1	—	—	1
1	1	—	—	—		—	—	—	—	1
1	1	—	—	—		—	—	—	—	1

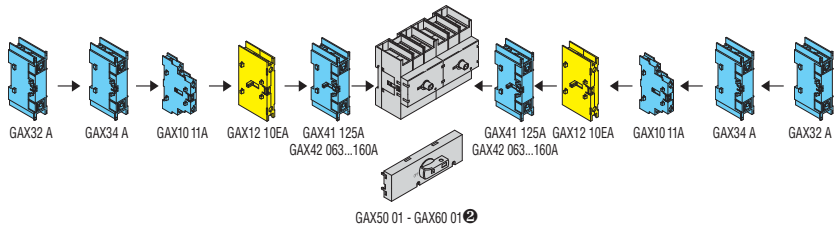
① GAX42 040D can be used with GA040 D switch only.

**GA063 SA
+ GAX50 00 -
GAX60 00**



1	1	1	—	1	GA063SA + GA063SA	1	—	1	1	1
1	1	1	—	1		—	—	2	1	1
1	1	2	—	—		1	—	1	1	1
1	1	1	—	1		—	1	1	1	1
1	1	1	1	—		1	—	1	1	1
1	1	1	1	—		—	—	2	1	1
1	1	2	—	—		—	—	1	1	1
1	1	2	—	—		—	—	—	2	1
1	1	—	—	1		—	1	—	—	1
1	1	—	—	—		—	—	—	—	1

**GA030 A and
GA063 A...GA160 A
+ GAX50 01 -
GAX60 01**



—	—	1	—	1	GA030 A + GA030 A GA063 A + GA063 A GA080 A + GA080 A GA100 A + GA100 A GA125 A + GA125 A GA160 A + GA160 A ①	1	—	1	—	—
—	—	1	—	1		—	—	2	—	—
—	—	2	—	—		1	—	1	—	—
—	—	1	—	1		—	1	—	1	—
—	—	1	1	—		—	—	—	2	—
—	—	2	—	—		—	—	1	1	—
—	—	2	—	—		—	—	—	2	—
1	1	—	—	1		—	1	—	—	1
1	1	—	—	—		—	—	—	—	1
1	1	—	—	—		—	—	—	—	1

① GA160A can be fitted with a single auxiliary contact (GAX1011A) per side.

② Cannot be used with GA160A.

11 Switch disconnectors

GA series 16A to 160A
Accessories

Handles



GAX61



GAX62



GAX66 N

new



GAX68



GAX63 B



GAX63 2B
Low profile



GAX67 B

new

- ❶ For GA...A, GA040 D and GD... switch disconnectors, separately purchase extension GAX7...
- ❷ Snap-on fixing of GA016 C...GA040 C switch disconnectors with the handle.
- ❸ Separately purchase GAX7...AN shaft extension and GAX60 B adaptor having a 7mm square section, not required for GAX60 01.

Order code	Characteristics	Qty per pkg	Wt
		no.	[kg]
DOOR COUPLING VERSION PADLOCKABLE, IP65 (4X). Red/yellow.			
GAX61	For GA...A, GA063 SA, GA...C, GA040 D and GD... Screw fixing. Handle with selector flush-mounted ❶. □ 5mm/0.2"	1	0.073
GAX62	For GA...A, GA063 SA, GA...C, GA040 D and GD... Screw fixing. Handle with selector protruding ❶. □ 5mm/0.2"	1	0.072
GAX63	For GA...A, GA063 SA, GA016 C...GA040 C, GA040 D and GD... Ring fixing. Handle with selector protruding ❶❷. □ 5mm/0.2"	1	0.068
GAX63 2	For GA...A, GA063 SA, GA040 D and GD... Ring fixing low profile. Handle with selector protruding. □ 5mm/0.2" ❶	1	0.057
GAX64	For GA...A, GA063 SA, GA040 D and GD... Ring fixing. Handle with selector protruding - defeatable (requirement UL508A)❸. □ 5mm/0.2"	1	0.064
GAX66N	For GA030 A, GA063 A...GA160 A, and GAX60 01. Screw fixing. Pistol handle - defeatable (req. UL 508A)❸. □ 7mm/0.3"	1	0.140
GAX68	For GA016 A...GA063 SA, GA040 D, GA016 C...GA040 C and GD... Screw fixing. Handle with selector lowered ❶. □ 5mm/0.2"	1	0.060

Black.

GAX61 B	For GA...A, GA063 SA, GA...C, GA040 D and GD... Screw fixing. Handle with selector flush-mounted ❶. □ 5mm/0.2"	1	0.073
GAX62 B	For GA...A, GA063 SA, GA...C, GA040 D and GD... Screw fixing. Handle with selector protruding ❶. □ 5mm/0.2"	1	0.072
GAX63 B	For GA...A, GA063 SA, GA016 C...GA040 C, GA040 D and GD... Ring fixing. Handle with selector protruding ❶❷. □ 5mm/0.2"	1	0.068
GAX63 1B	For GA...A, GA063 SA, GA016 C...GA040 C, GA040 D and GD... Ring fixing. Handle with selector protruding padlockable in ON pos. (UNI 9490 and UNI EN 12845) ❶❷. □ 5mm/0.2"	1	0.074
GAX63 2B	For GA...A, GA063 SA, GA040 D and GD... Ring fixing low profile. Handle with selector protruding. □ 5mm/0.2" ❶	1	0.057
GAX64 B	For GA...A, GA063 SA, GA040 D and GD... Ring fixing. Handle with selector protruding - defeatable (req.UL508A)❸. □ 5mm/0.2"	1	0.064
GAX66N B	For GA030 A, GA063 A...GA160 A and GAX60 01. Screw fixing. Pistol handle - defeatable (req. UL 508A)❸. □ 7mm/0.3"	1	0.140
GAX67 B	For mechanical interlock GAX50... (I-O-II)❶. □ 5mm/0.2"	1	0.078
GAX68 B	For GA016 A...GA063 SA, GA040 D, GA016 C...GA040 C and GD... Screw fixing. Handle with selector lowered ❶. □ 5mm/0.2"	1	0.060

ACCESSORIES FOR DOOR COUPLING CONTROL
For GAX66N and GAX66N B handles.

GAX60 B	Adaptor □ 7mm/0.3" for GA030 A, GA063 A...GA160 A	1	0.010
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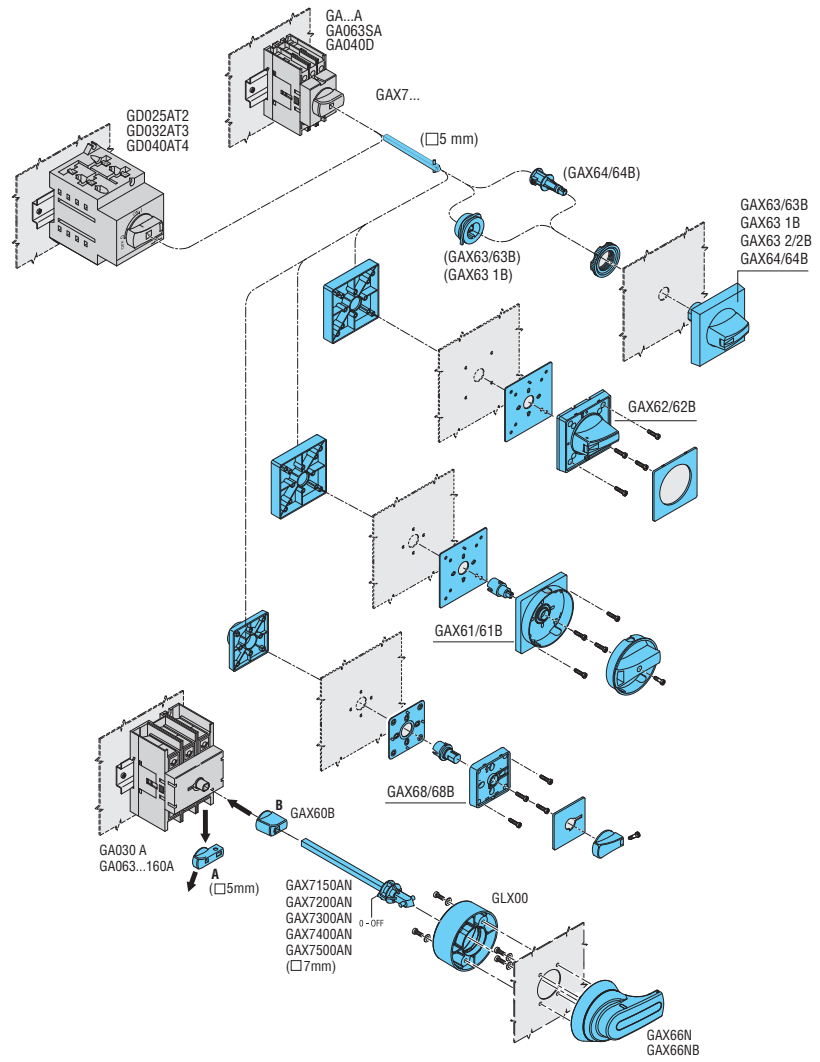
General and operational characteristics

- Choice of handle fixing: ring or screw
- Fixing handle interaxis:
 - GAX61/61B-GAX62/62B-GAX67B: 36x36mm/1.42x1.42" or 48x48mm/1.89x1.89"
 - GAX66N/66N B: 28x40mm/1.10x1.57"
 - GAX68/68B: 28x28mm/1.10x1.10" or 36x36mm/1.42x1.42"
 - Compatible with pre-existing drillings of most common types in the marketplace
- 1 to 3 padlocks in the Ø4...8mm/0.16...0.31" for all handles (except GAX68 only one Ø4...8mm/0.16...0.31")
- Front plate dimensions:
 - GAX61/61B-GAX62/62B-GAX63/63B-GAX64/64B-GAX67/67B: 65x65mm/2.56x2.56"
 - GAX66N/66N B: Ø76mm/2.99"
 - GAX68/68B: 48x48mm/1.89x1.89"
- Tightening torque:
 - Fixing ring types: 2.3Nm/20.4lbin
 - GAX60B: 0.8Nm/7lbin
 - GAX66N/66N B: 1.5Nm/13.3lbin
 - All others: 0.8Nm/7lbin
- Degree of protection for all: IP65
- Degree of protection for GAX66N/66N B: IP66; for UL/CSA data see detail on page 11-14.

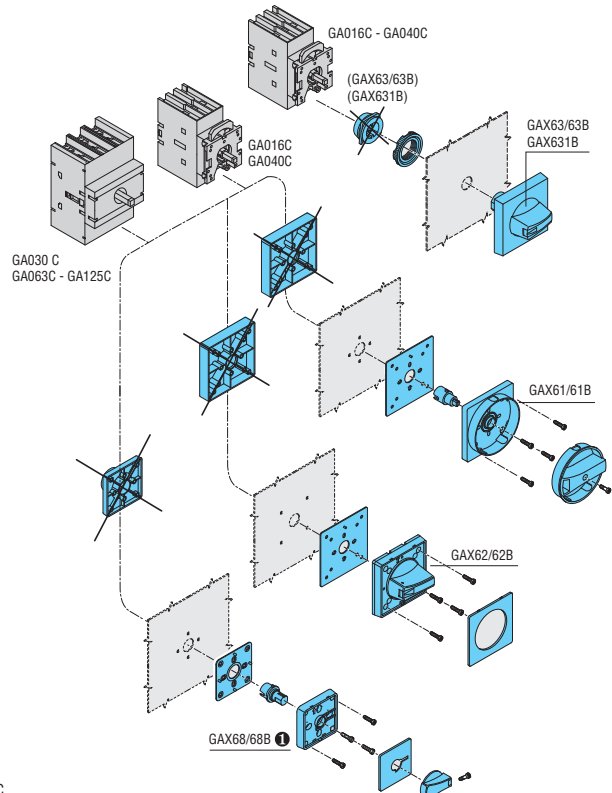
Certifications and compliance

See the table on page 11-14.

Transformation of direct operating version into door coupling version.



Door mount version.



① Only for GA016C...GA040C

11 Switch disconnectors

GA series 16A to 160A
Accessories

Shaft extensions Terminal covers Fuse holders/blocks



GAX7...



GAX7... AN

new



GAX18 S0...

new



GAX8...



GAX39 1

Order code	Characteristics	Qty per pkg	Wt
		n°	[kg]

Shaft extension for door coupling handles GAX61...GAX64, GAX68, GAX61 B...GAX64 B, GAX67 B, GAX68 B and mechanical interlock type GAX50 00, GAX50 01 and mechanical coupling GAX60 00.

GAX7 055	55mm/2.16" long □ 5mm/0.2"	1	0.012
GAX7 070	70mm/2.75" long □ 5mm/0.2"	1	0.014
GAX7 090	90mm/3.54" long □ 5mm/0.2"	1	0.018
GAX7 150	150mm/5.90" long □ 5mm/0.2"	1	0.032
GAX7 200	200mm/7.87" long □ 5mm/0.2"	1	0.070
GAX7 300	300mm/11.81" long □ 5mm/0.2"	1	0.068
GAX7 400	400mm/15.75" long □ 5mm/0.2"	1	0.072
GAX7 500	500mm/19.68" long □ 5mm/0.2"	1	0.090

Shaft extension for door coupling handles GAX66N, GAX66N B and mechanical coupling system GAX60 01.

GAX7 150AN	150mm/5.90" long □ 7mm/0.3"	1	0.090
GAX7 200AN	200mm/7.87" long □ 7mm/0.3"	1	0.112
GAX7 300AN	300mm/11.81" long □ 7mm/0.3"	1	0.160
GAX7 400AN	400mm/15.74" long □ 7mm/0.3"	1	0.200
GAX7 500AN	500mm/19.68" long □ 7mm/0.3"	1	0.250

Support for shaft extension.

GAX18 S05	□ 5mm/0.2"	1	0.160
GAX18 S07	□ 7mm/0.27"	1	0.160

Set of 2 one-pole terminal covers for fourth pole.

GAX81	For GAX42 040A, GAX42 063SA, GAX42 040C, GAX42 040D, GAX41 040A, GAX41 063A and GAX41 040C	1	0.009
GAX82	For GAX42 063A...GAX42 160A	1	0.012

Set of 2 three-pole terminal covers.

GAX83	For GA016 A...GA040 A, GA063 SA, GA016 C...GA040 C and GA040 D	1	0.011
GAX84	For GA030A, GA063 A...GA160 A, GA030 C, GA063 C...GA125 C	1	0.030

Fuse holder for switch disconnectors.

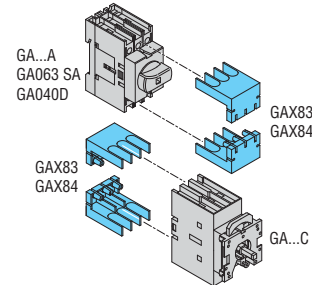
GAX39 1	For GA016 A...GA032 A Suitable for 10.3x38 fuse size	1	0.132
GAX39 1UL	For GA016 A...GA025 A Suitable for Class CC fuses	1	0.135

Operational characteristics of fuse holder

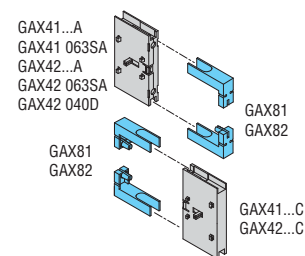
- IEC rated insulation voltage U_i : 1000V
- IEC rated impulse withstand U_{imp} : 8kV
- The fuse holder/blocks connects directly to the switch disconnectors
- Access to fuses only when the switch disconnectors are in OFF position.

Terminal covers

For switch disconnectors



For fourth pole



Certifications and compliance

Certifications obtained:

Type	cULus according to UL60947-4-1 / CSA C22.2 n°60947-4-1	cULus according to UL98 / CSA C22.2 n°4	EAC
GAX61-GAX61 B	●	●	●
GAX62-GAX62 B	●	●	●
GAX63-GAX63 B	●	●	●
GAX63 1B	—	—	●
GAX63 2-GAX63 2B	●	●	●
GAX64-GAX64 B	●	●	●
GAX66N-GAX66N B	—	●	●
GAX67 B	●	●	●
GAX68-GAX68 B	●	—	●
GAX60 B	—	●	●
GAX7 055...GAX7 500	●	●	●
GAX7 150A ... GAX7 300A	—	●	●
GAX81-GAX83	●	—	●
GAX82-GAX84	—	●	●
GAX39 1	—	—	●
GAX39 1UL	●	—	—

● Certification obtained.

NOTE: Types GAX62/62B, GAX63/63B, GAX 632/2B, GAX64/64B are UL/CSA Type 1, 2, 3R, 12, 12K, 4, 4X external use when used with types GA016...40A/C, GA040D and GA063SA while with GA063...GA125A/C, only UL/CSA Type 1.
Type GAX61/61B GAX67, GAX68/68B and GAX66N/66N B are UL/CSA Type 1, 2, 3R, 12, 12K, 4, 4X external use with all GA types.

Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-3, UL60947-4-1, UL98, CSA C22.2.

Empty plastic enclosures IEC/EN IP65 type



GAZ1

GAZ2



GAZ3



GAX30

Order code	Description	Qty per pkg	Wt
		n°	[kg]

For switch disconnectors.
With red/yellow handle. Complete with shaft extension.

GAZ1	For GA016 A...GA040 A/D	1	0.320
GAZ2	For GA063 SA, GA030 A and GA063 A...GA100 A	1	0.780
GAZ3	For GA125 A...GA160 A	1	1.900

With black handle. Complete with shaft extension.

GAZ1 B	For GA016 A...GA040 A/D	1	0.320
GAZ2 B	For GA063 SA, GA030 A and GA063 A...GA100 A	1	0.730
GAZ3 B	For GA125 A...GA160 A	1	1.900

Accessory.

GAX 30	Shielded cable fixing kit for GAZ1 and GAZ1B	1	0.083
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The empty enclosures are supplied with the following accessories:

Enclosure	GAZ1 GAZ1B	GAZ2 GAZ2B	GAZ3 GAZ3B
Red/yellow handle	GAX61	GAX61	GAX61
Black handle	GAX61B	GAX61B	GAX61B
Extension	1	1	1
Neutral plate terminal	1	1	-
Earth/Ground plate terminal	1	1	-

General characteristics

- Enclosure material: ABS
- For four-pole types not indicated, separately purchase corresponding fourth pole GAX4...A and install on enclosed 3-pole version
- Possible accessories to mount afterwards, if any required:
 - GAX30 to provide shielded cable connection continuity (e.g. with static converters)
 - GAZ016...GAZ040...: 1 contact block both on the right and left disconnector side unless 4th pole is installed
 - Other types: 2 contact blocks both on the right and left disconnector side unless 4th pole is installed
 - GAZ125...GAZ160...: if any earth/ground and/or neutral terminal required, separately purchase types GAX3... given on page 11–9.
- Padlockable handles
- Sealable cover
- Tightening torque for cover screws:
 - GAZ016...GAZ040... and GAZ1...: 1.3Nm/16lbin
 - Other types: 1.5Nm/13lbin
- Degree of protection: IP65
- Cable entry:
 - GAZ016..., GAZ040... and GAZ1... types: PG16/M25 and PG13.5/M20 knockouts
 - GAZ063SA...GAZ100... and GAZ2... types: PG16/M25 and PG29/M32 knockouts
 - GAZ125..., GAZ160... and GAZ3 types: smooth surfaces; can be drilled by customer.

Certifications and compliance

Certifications obtained: EAC
Compliant with standards: IEC/EN 60947-3, IEC/EN 60947-1.

Empty plastic enclosures UL/CSA Type 4/4X



GAZ1 UL



GAZ2 UL



GAX30

Order code	Description	Qty per pkg	Wt
		no.	[kg]

For switch disconnectors.
With red/yellow handle. Complete with shaft extension.

GAZ1 UL	For GA016 A...GA040 A and GA040 D	1	0.320
GAZ2 UL	For GA063 SA	1	0.730

With black handle. Complete with shaft extension.

GAZ1 B UL	For GA016 A...GA040 A and GA040 D	1	0.320
GAZ2 B UL	For GA063 SA	1	0.730

Accessory.

GAX 30	Shielded cable fixing kit for GAZ1UL and GAZ1BUL	1	0.083
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The empty enclosures are supplied with the following accessories:

Enclosure	GAZ1UL GAZ1BUL	GAZ2UL GAZ2BUL
Red/yellow handle	GAX61	GAX61
Black handle	GAX61B	GAX61B
Extension	1	1
Neutral plate terminal	1	1
Earth/Ground plate terminal	1	1

General characteristics

- Enclosure material: Polycarbonate
- For four-pole types not indicated, separately purchase corresponding fourth pole GAX4...A and install on enclosed 3-pole UL-suffix version
- Possible accessories to mount afterwards, if any required:
 - GAX30 to provide shielded cable connection continuity (e.g. with static converters)
 - GAZ016...GAZ040...: 1 contact block both on the right and left disconnector side unless 4th pole is installed
 - Other types: 2 contact blocks both on the right and left disconnector side unless 4th pole is installed
- Padlockable handles
- Sealable cover
- Tightening torque for cover screws:
 - GAZ016...GAZ040...UL and GAZ1...UL: 1.3Nm/16lbin
 - Other types: 1.5Nm/13lbin
- Degree of protection: IP65; UL/CSA Type 4/4X
- Cable entry:
 - GAZ016...GAZ040...UL and GAZ1...UL types: PG16/M25 and PG13.5/M20 knockouts
 - GAZ063SA...UL and GAZ2...UL types: PG16/M25 and PG29/M32 knockouts
 - GAZ063...GAZ125...UL types: Smooth surfaces; can be drilled by customer.

Certifications and compliance

Certifications obtained: EAC for all; cULus for GAZ016...GAZ125...UL, GAZ1...UL and GAZ2...UL types.
Compliant with standards: IEC/EN 60947-3, IEC/EN 60947-1, UL60947-4-1 and CSA C22.2 n°60947-4-1 (up to GAZ063SA...), UL98 and CSA C22.2 n°4 (for all others).

11 Switch disconnectors

GA series 16A to 160A

Switch disconnectors in plastic enclosure

IEC/EN IP65 in plastic enclosure



GAZ016...GAZ040...



GAZ063...100 C



GAZ125... GAZ160...

Order code	IEC conventional free air thermal current I _{th} AC21A (≤690V)	Qty per pkg	Wt
	[A]	n°	[kg]

THREE-POLE.
With red/yellow handle.

GAZ016	16	1	0.450
GAZ025	25	1	0.450
GAZ032	32	1	0.450
GAZ040	40	1	0.450
GAZ063 SA	63	1	0.870
GAZ063 C	63	1	1.220
GAZ080 C	80	1	1.220
GAZ100 C	100	1	1.220
GAZ125	125	1	2.220
GAZ160	160	1	2.220

THREE-POLE.
With black handle.

GAZ016 B	16	1	0.450
GAZ025 B	25	1	0.450
GAZ032 B	32	1	0.450
GAZ040 B	40	1	0.450
GAZ063 SAB	63	1	0.870
GAZ063 CB	63	1	1.220
GAZ080 CB	80	1	1.220
GAZ100 CB	100	1	1.220
GAZ125 B	125	1	2.220
GAZ160 B	160	1	2.220

FOUR-POLE.
With red/yellow handle.

GAZ016 T4	16	1	0.550
GAZ032 T4	32	1	0.550
GAZ040 T4	40	1	0.550
GAZ063 SAT4	63	1	0.780
GAZ063 CT4	63	1	1.250
GAZ100 CT4	100	1	1.250
GAZ125 T4	125	1	2.500
GAZ160 T4	160	1	2.500

FOUR-POLE.
With black handle.

GAZ016 T4B	16	1	0.550
GAZ032 T4B	32	1	0.550
GAZ040 T4B	40	1	0.550
GAZ063 SAT4B	63	1	0.780
GAZ063 CT4B	63	1	1.250
GAZ100 CT4B	100	1	1.250
GAZ125 T4B	125	1	2.500
GAZ160 T4B	160	1	2.500

Components

Enclosure	Switch disconnector	Handle
GAZ1	GA016 A	GAX61
GAZ1	GA025 A	GAX61
GAZ1	GA032 A	GAX61
GAZ1	GA040 A	GAX61
GAZ2	GA063 SA	GAX61
GAZ2	GA063 A	GAX61
GAZ2	GA080 A	GAX61
GAZ2	GA100 A	GAX61
GAZ3	GA125 A	GAX61
GAZ3	GA160 A	GAX61

GAZ1 B	GA016 A	GAX61 B
GAZ1 B	GA025 A	GAX61 B
GAZ1 B	GA032 A	GAX61 B
GAZ1 B	GA040 A	GAX61 B
GAZ2 B	GA063 SA	GAX61 B
GAZ2 B	GA063 A	GAX61 B
GAZ2 B	GA080 A	GAX61 B
GAZ2 B	GA100 A	GAX61 B
GAZ3 B	GA125 A	GAX61 B
GAZ3 B	GA160 A	GAX61 B

Enclosure	Switch disconnector	4th pole	Handle
GAZ1	GA016 A	GAX42040A	GAX61
GAZ1	GA032 A	GAX42040A	GAX61
GAZ1	GA040 A	GAX42040A	GAX61
GAZ2	GA063 SA	GAX42063SA	GAX61
GAZ2	GA063 A	GAX42063A	GAX61
GAZ2	GA100 A	GAX42100A	GAX61
GAZ3	GA125 A	GAX42125A	GAX61
GAZ3	GA160 A	GAX42160A	GAX61

GAZ1 B	GA016 A	GAX42040A	GAX61 B
GAZ1 B	GA032 A	GAX42040A	GAX61 B
GAZ1 B	GA040 A	GAX42040A	GAX61 B
GAZ2 B	GA063 SA	GAX42063SA	GAX61 B
GAZ2 B	GA063 A	GAX42063A	GAX61 B
GAZ2 B	GA100 A	GAX42100A	GAX61 B
GAZ3 B	GA125 A	GAX42125A	GAX61 B
GAZ3 B	GA160 A	GAX42160A	GAX61 B

11 Switch disconnectors

GA series 16A to 125A

Switch disconnectors in plastic enclosure

UL/CSA, Type 4/4X in plastic enclosure



GAZ016...GAZ040...UL



GAZ063 SA UL



GAZ063 UL - GAZ125 UL

UL/CSA ratings

Type	1 phase [HP]		3 phase [HP]				General use at 600VAC [A]	Short-circuit rating at 600VAC [kA]	Fuse class - max rating at 600V Type - [A]
	120V	240V	200-208V	240V	480V	600V			
GAZ016...	1	2	5	5	10	10	16	5	RK5 - 20A
GAZ025...	1½	3	7½	7½	15	20	25	5	RK5 - 30A
GAZ032...	2	5	10	10	20	20	32	5	RK5 - 35A
GAZ040...	2	5	10	15	20	25	40	5	RK5 - 45A
GAZ063S...	2	7½	10	15	30	30	60	5	RK5 - 45A

NOTE: Above ratings are valid for GAZ016 - GAZ063S...UL types, according to UL508 and CSA 22.2 n°14. UL Listed for USA and Canada (cULus - File E93602), as Manual Motor Controllers while UL designation is "GENERAL PURPOSE SWITCH. INTERRUPTEUR USAGE GENERAL" and "SUITABLE AS MOTOR DISCONNECT"; GAZ063S... pending.

Type	1 phase [HP]		3 phase [HP]				General use at 600VAC [A]	Short-circuit rating at 600VAC [kA]	Max fuse rating at 600V [A]
	120V	240V	200-208V [Ⓜ]	240V	480V	600V			
[Ⓜ] GAZ063C...	3	7½	20	20	40	40	60	10	100
GAZ080...	3	10	25	25	40	40	100	10	100
GAZ100...	5	10	30	30	50	50	100	10	100
GAZ125...	7½	10	30	30	60	60	100	10	100

NOTE: Above ratings are valid for GAZ063C - GAZ125... types, according to UL98 and CSA C22.2 n°4. For indication and reference purposes only while cCSAus is pending.

- [Ⓜ] Lower ratings in this same UL/CSA category are available on specific request for volume orders. For information, consult Technical support; see contact details on inside front cover.
- [Ⓜ] Voltage value not considered in UL98 / CSA 22.2 n°4 standards.

Order code	IEC conventional free air thermal current Ith AC21A (≤690V)	Qty per pkg	Wt
	[A]	n°	[kg]

THREE-POLE.
With red/yellow handle.

GAZ016 UL	16	1	0.450
GAZ025 UL	25	1	0.450
GAZ032 UL	32	1	0.450
GAZ040 UL	40	1	0.450
GAZ063 SA UL	63	1	0.870
GAZ063 UL	63	1	1.220
GAZ080 UL	80	1	2.220
GAZ100 UL	100	1	2.220
GAZ125 UL	125	1	2.220

THREE-POLE.
With black handle.

GAZ016 B UL	16	1	0.450
GAZ025 B UL	25	1	0.450
GAZ032 B UL	32	1	0.450
GAZ040 B UL	40	1	0.450
GAZ063 SAB UL	63	1	0.870
GAZ063 B UL	63	1	1.220
GAZ080 B UL	80	1	2.220
GAZ100 B UL	100	1	2.220
GAZ125 B UL	125	1	2.220

FOUR-POLE.
With red/yellow handle.

GAZ016 T4 UL	16	1	0.550
GAZ032 T4 UL	32	1	0.550
GAZ063 T4 UL	63	1	1.150
GAZ100 T4 UL	100	1	2.500
GAZ125 T4 UL	125	1	2.500

FOUR-POLE.
With black handle.

GAZ016 T4B UL	16	1	0.550
GAZ032 T4B UL	32	1	0.550
GAZ063 T4B UL	63	1	1.150
GAZ100 T4B UL	100	1	2.500
GAZ125 T4B UL	125	1	2.500

Components

Enclosure	Switch disconnector	Handle
GAZ1 UL	GA016 A	GAX61
GAZ1 UL	GA025 A	GAX61
GAZ1 UL	GA032 A	GAX61
GAZ1 UL	GA040 A	GAX61
GAZ2 UL	GA063 SA	GAX61
GAZ3 [Ⓜ]	GA063 A	GAX61
GAZ3 [Ⓜ]	GA080 A	GAX61
GAZ3 [Ⓜ]	GA100 A	GAX61
GAZ3 [Ⓜ]	GA125 A	GAX61

GAZ1 B UL	GA016 A	GAX61 B
GAZ1 B UL	GA025 A	GAX61 B
GAZ1 B UL	GA032 A	GAX61 B
GAZ1 B UL	GA040 A	GAX61 B
GAZ2 B UL	GA063 SA	GAX61 B
GAZ3 B [Ⓜ]	GA063 A	GAX61 B
GAZ3 B [Ⓜ]	GA080 A	GAX61 B
GAZ3 B [Ⓜ]	GA100 A	GAX61 B
GAZ3 B [Ⓜ]	GA125 A	GAX61 B

Enclosure	Switch disconnector	4th pole	Handle
GAZ1 UL	GA016 A	GAX42040A	GAX61
GAZ1 UL	GA032 A	GAX42040A	GAX61
GAZ3 [Ⓜ]	GA063 A	GAX42063A	GAX61
GAZ3 [Ⓜ]	GA100 A	GAX42100A	GAX61
GAZ3 [Ⓜ]	GA125 A	GAX42125A	GAX61

GAZ1 B UL	GA016 A	GAX42040A	GAX61 B
GAZ1 B UL	GA032 A	GAX42040A	GAX61 B
GAZ3 B [Ⓜ]	GA063 A	GAX42063A	GAX61 B
GAZ3 B [Ⓜ]	GA100 A	GAX42100A	GAX61 B
GAZ3 B [Ⓜ]	GA125 A	GAX42125A	GAX61 B

[Ⓜ] For major details contact our Technical support; see contact details on inside front cover.

11 Switch disconnectors

GA series 16A to 160A

Changeover switches in plastic enclosure

UL/CSA, Type 4/4X in plastic enclosure



GAZ 025 E...GAZ 063SA E...



GAZ 080 E...
GAZ 160 E...

Order code	IEC conventional free air thermal current I _{th} AC21A (≤690V)	IEC rated operational current I _e		Qty per pkg	Wt [kg]
		AC23B (≤400V)	AC23B (≤500V)		
	[A]	[A]	[A]	n°	

3-pole line changeover switches I-O-II.

GAZ025 ET6	25	25	25	1	1.060
GAZ040 ET6	40	40	25	1	1.060
GAZ063SA ET6	63	45	25	1	1.070
GAZ080 ET6	80	80	63	1	2.950
GAZ125 ET6	125	125	100	1	2.950
GAZ160 ET6	160	125	100	1	2.950

4-pole line changeover switches I-O-II.

GAZ025 ET8	25	25	25	1	1.060
GAZ040 ET8	40	40	25	1	1.060
GAZ063SA ET8	63	45	25	1	1.070
GAZ080 ET8	80	80	63	1	2.950
GAZ125 ET8	125	125	100	1	2.950
GAZ160 ET8	160	125	100	1	2.950

UL/CSA ratings

Type	1 phase [HP]		3 phase [HP]				General use at 600VAC	Short-circuit rating at 600VAC	Fuse class - max rating at 600V
	120V	240V	200-208V	240V	480V	600V			
GAZ025...	1½	3	7½	7½	15	20	25	5	RK5 - 30A
GAZ040...	2	5	10	15	20	25	40	5	RK5 - 45A
GAZ063S...	2	7½	10	15	30	30	60	5	RK5 - 45A

NOTE: Above ratings are valid for GAZ025-GAZ040ET... types, according to UL508 and CSA 22.2 n°14. For indication and references purposes only while cCSAus is pending.

Type	1 phase [HP]		3 phase [HP]				General use at 600VAC	Short-circuit rating at 600VAC	Max fuse rating at 600V
	120V	240V	200-208V ^①	240V	480V	600V			
GA080...	3	10	25	25	40	40	100	10	100
GA125...	7½	10	30	30	60	60	100	10	100

NOTE: Above ratings are valid for GAZ080-GAZ125ET... types, according to UL98 and CSA C22.2 N°4. For indication and references purposes only while cCSAus is pending.

① Voltage value not considered in UL98 / CSA 22.2 n°4 standards so not indicated in UL product marking.

Components

Enclosure	Switch disconnectors	Interlock	Handle
GAZ UL ^①	2x GA025A	GAX5000	GAX67 B
GAZ UL ^①	2x GA040A	GAX5000	GAX67 B
GAZ UL ^①	2x GA063SA	GAX5000	GAX67 B
GAZ3 ^①	2x GA080A	GAX5001	GAX67 B
GAZ3 ^①	2x GA125A	GAX5001	GAX67 B
GAZ3 ^①	2x GA160A	GAX5001	GAX67 B
Enclosure	Switch disconnectors	Interlock	Handle
GAZ UL ^①	2x GA025A + 2x GAX42040A	GAX5000	GAX67 B
GAZ UL ^①	2x GA040A+ 2x GAX42040A	GAX5000	GAX67 B
GAZ UL ^①	2x GA063SA+ 2x GAX42063SA	GAX5000	GAX67 B
GAZ3 ^①	2x GA080A+ 2x GAX42080A	GAX5001	GAX67 B
GAZ3 ^①	2x GA125A+ 2x GAX42125A	GAX5001	GAX67 B
GAZ3 ^①	2x GA160A+ 2x GAX42160A	GAX5001	GAX67 B

① For major details contact our Technical support; see contact details on inside front cover.

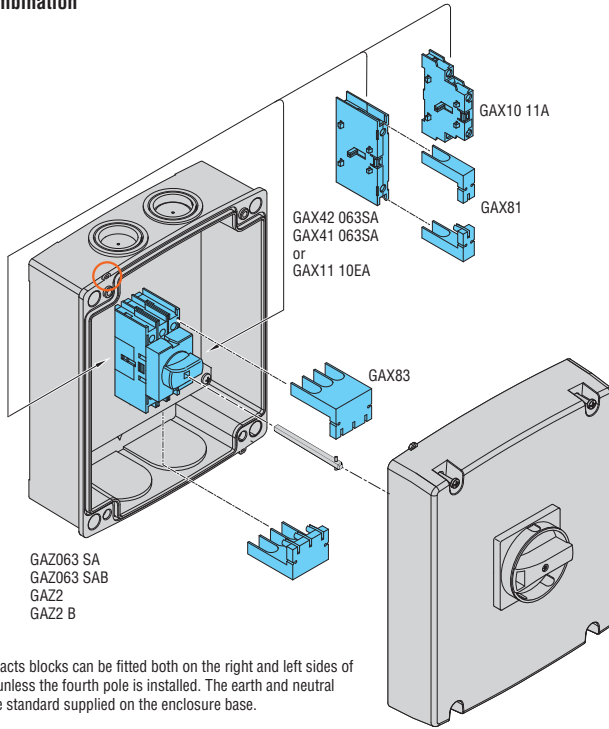
General characteristics

- Enclosure material: Polycarbonate
- Possibility of fitting:
 - 2 contact blocks both on the right and left side for GAZ...ET6 types
 - 1 contact block both on the right and left side for GAZ...ET8 types
- Padlockable handle complete with extension
- Earth and neutral plate terminals
- Sealable enclosure cover
- Tightening torque for cover screws: 1.5Nm/13lbin
- Degree of protection: IP65; UL/CSA type 4/4X
- Cable entry:
 - GAZ025...GAZ063SA... types: PG16/M25 and PG29/M32 knockouts
 - GAZ080... and GAZ160... types: Smooth surfaces; can be drilled by customer.

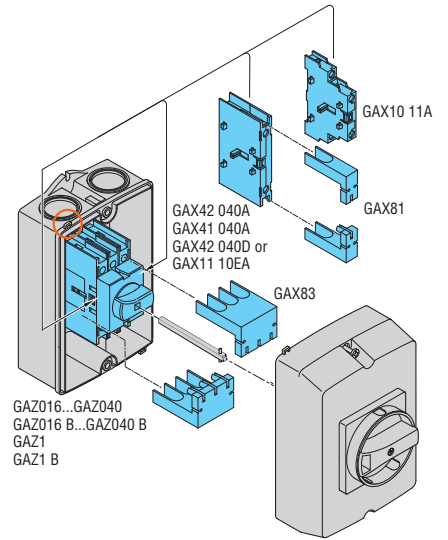
Certifications and compliance

Certifications obtained: cULus (except GAZ160E...), EAC. Compliant with standards: IEC/EN 60947-3, IEC/EN 60947-1, UL60947-4-1 and CSA C22.2 n°60947-4-1 (up to GAZ063SA...), UL98 and CSA C22.2 n°4 (for all others except GAZ160E...).

Maximum combination Enclosures

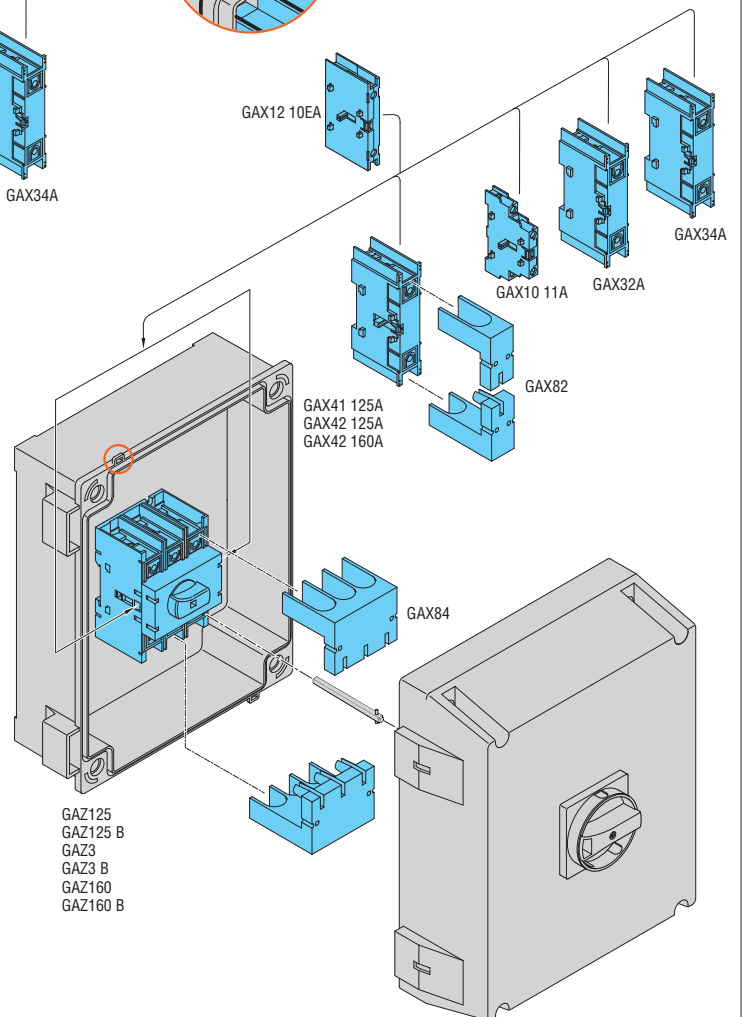
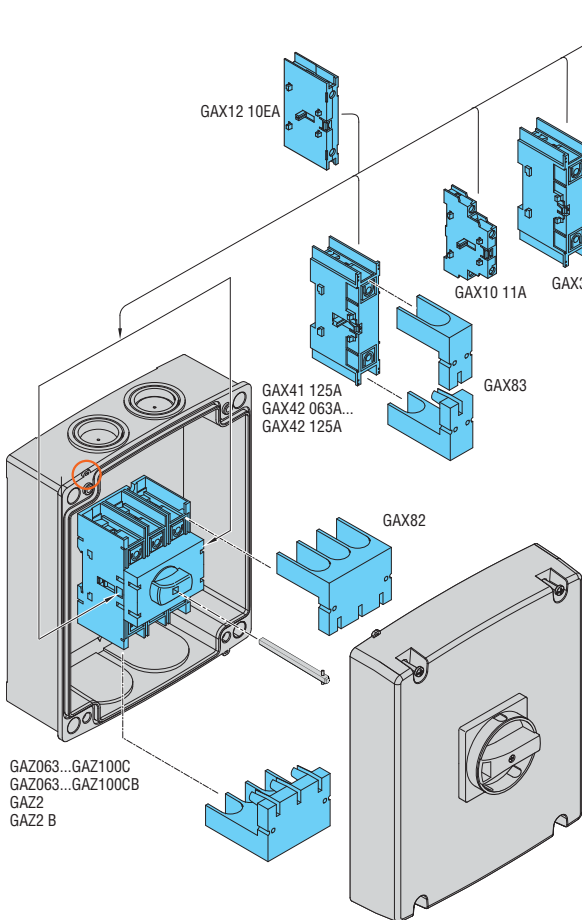
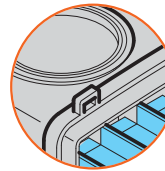


Two auxiliary contacts blocks can be fitted both on the right and left sides of the disconnector unless the fourth pole is installed. The earth and neutral plate terminals are standard supplied on the enclosure base.



One auxiliary contact block can be fitted on the right and left sides of the disconnector unless the fourth pole is installed. The earth and neutral plate terminals are standard supplied on the enclosure base.

Sealing eyelet



Two auxiliary contact blocks can be fitted both on the right and left sides of the disconnector unless the fourth pole is installed. Earth and neutral plate terminals are standard supplied on the box base. If any earth/ground and/or neutral terminals are required, type GAX3... purchase separately.

11 Switch disconnectors

GA series 16A to 160A

Switch disconnectors in metal enclosure

IEC/EN IP65 in metal enclosure



GAZM016...GAZM100...



GAZM125...GAZM160...

Order code	IEC conventional free air thermal current Ith AC21A (≤690V)	Qty per pkg	Wt
	[A]	n°	[kg]

THREE-POLE.
With red/yellow handle.

GAZM016	16	1	2.150
GAZM025	25	1	2.150
GAZM032	32	1	2.150
GAZM040	40	1	2.150
GAZM063 SA	63	1	2.150
GAZM063	63	1	2.380
GAZM080	80	1	2.380
GAZM100	100	1	2.380
GAZM125	125	1	3.550
GAZM160	160	1	3.550

new

THREE-POLE.
With black handle.

GAZM016 B	16	1	2.150
GAZM025 B	25	1	2.150
GAZM032 B	32	1	2.150
GAZM040 B	40	1	2.150
GAZM063 SAB	63	1	2.150
GAZM063 B	63	1	2.380
GAZM080 B	80	1	2.380
GAZM100 B	100	1	2.380
GAZM125 B	125	1	3.550
GAZM160 B	160	1	3.550

new

FOUR-POLE.
With red/yellow handle.

GAZM016 T4	16	1	2.195
GAZM032 T4	32	1	2.195
GAZM040 T4	40	1	2.195
GAZM063 SAT4	63	1	2.195
GAZM063 T4	63	1	2.506
GAZM100 T4	100	1	2.506
GAZM125 T4	125	1	3.676
GAZM160 T4	160	1	3.676

new

FOUR-POLE.
With black handle.

GAZM016 T4B	16	1	2.195
GAZM032 T4B	32	1	2.195
GAZM040 T4B	40	1	2.195
GAZM063 SAT4B	63	1	2.195
GAZM063 T4B	63	1	2.506
GAZM100 T4B	100	1	2.506
GAZM125 T4B	125	1	3.676
GAZM160 T4B	160	1	3.676

new

Components

Enclosure dimensions	Switch disconnector	Handle
150x200x120	GA016 A	GAX61
150x200x120	GA025 A	GAX61
150x200x120	GA032 A	GAX61
150x200x120	GA040 A	GAX61
150x200x120	GA063 SA	GAX61
150x200x120	GA063 A	GAX61
150x200x120	GA080 A	GAX61
150x200x120	GA100 A	GAX61
200x300x120	GA125 A	GAX61
200x300x120	GA160 A	GAX61

150x200x120	GA016 A		GAX61 B
150x200x120	GA025 A		GAX61 B
150x200x120	GA032 A		GAX61 B
150x200x120	GA040 A		GAX61 B
150x200x120	GA063 SA		GAX61 B
150x200x120	GA063 A		GAX61 B
150x200x120	GA080 A		GAX61 B
150x200x120	GA100 A		GAX61 B
200x300x120	GA125 A		GAX61 B
200x300x120	GA160 A		GAX61 B

Enclosure dimensions	Switch disconnector	4th pole	Handle
150x200x120	GA016 A	GAX42040A	GAX61
150x200x120	GA032 A	GAX42040A	GAX61
150x200x120	GA040 A	GAX42040A	GAX61
150x200x120	GA063 SA	GAX42063SA	GAX61
150x200x120	GA063 A	GAX42063A	GAX61
150x200x120	GA100 A	GAX42100A	GAX61
200x300x120	GA125 A	GAX42125A	GAX61
200x300x120	GA160 A	GAX42160A	GAX61

150x200x120	GA016 A	GAX42040A	GAX61 B
150x200x120	GA032 A	GAX42040A	GAX61 B
150x200x120	GA040 A	GAX42040A	GAX61 B
150x200x120	GA063 SA	GAX42063SA	GAX61 B
150x200x120	GA063 A	GAX42063A	GAX61 B
150x200x120	GA100 A	GAX42100A	GAX61 B
200x300x120	GA125 A	GAX42125A	GAX61 B
200x300x120	GA160 A	GAX42160A	GAX61 B

General characteristics

- Painted sheet steel enclosure
- Padlockable handle
- Front door closing with screws
- Degree of protection: IP65
- Cable entry: smooth surfaces; can be drilled by customer.

Certifications and compliance

Certifications: EAC (pending).
Compliant with standards: IEC/EN 60947-3, IEC/EN 60947-1.

11 Switch disconnectors

GA series 16A to 160A

Changeover switches in metal enclosure and switch disconnectors in stainless steel AISI 304 enclosure

IEC/EN IP65 in metal enclosure



GAZM080 ET8...GAZM160 ET8...

new

Order code	IEC conventional thermal current Ith AC21A (≤690V)	IEC rated operational current Ie AC23B (≤400V)	AC23B (≤500V)	Qty per pkg	Wt [kg]
	[A]	[A]	[A]	n°	[kg]
3-pole line changeover switches I-0-II. Black handle					
GAZM025 ET6	25	25	25	1	1.983
GAZM040 ET6	40	40	25	1	1.983
GAZM063SA ET6	63	45	25	1	1.983
GAZM080 ET6	80	80	63	1	3.156
GAZM125 ET6	125	125	100	1	3.156
GAZM160 ET6	160	125	100	1	3.156
4-pole line changeover switches I-0-II. Black handle.					
GAZM025 ET8	25	25	25	1	2.100
GAZM040 ET8	40	40	25	1	2.100
GAZM063SA ET8	63	45	25	1	2.100
GAZM080 ET8	80	80	63	1	5.953
GAZM125 ET8	125	125	100	1	5.953
GAZM160 ET8	160	125	100	1	5.953

new

IEC/EN IP65 in stainless steel AISI 304 enclosure



GAZS016...GAZS100...

new

Order code	IEC conventional free air thermal current Ith AC21A (≤690V)	Qty per pkg	Wt [kg]
	[A]	n°	[kg]
THREE-POLE. With red/yellow handle.			
GAZS016	16	1	2.150
GAZS025	25	1	2.150
GAZS032	32	1	2.150
GAZS040	40	1	2.150
GAZS063 SA	63	1	2.150
GAZS063	63	1	2.380
GAZS100	100	1	2.380
THREE-POLE. With black handle.			
GAZS016 B	16	1	2.150
GAZS025 B	25	1	2.150
GAZS032 B	32	1	2.150
GAZS040 B	40	1	2.150
GAZS063 SAB	63	1	2.150
GAZS063 B	63	1	2.380
GAZS100 B	100	1	2.380

new

Components

Enclosure dimensions	Switches disconnectors	Interlock	Handle
150x200x120	2x GA025A	GAX5000	GAX67 B
150x200x120	2x GA040A	GAX5000	GAX67 B
150x200x120	2x GA063SA	GAX5000	GAX67 B
200x300x120	2x GA080A	GAX5001	GAX67 B
200x300x120	2x GA125A	GAX5001	GAX67 B
200x300x120	2x GA160A	GAX5001	GAX67 B
Enclosure dimensions	Switch disconnectors	Interlock	Handle
150x200x120	2x GA025A + 2x GAX42040A	GAX5000	GAX67 B
150x200x120	2x GA040A+ 2x GAX42040A	GAX5000	GAX67 B
150x200x120	2x GA063SA+ 2x GAX42063SA	GAX5000	GAX67 B
300x400x120	2x GA080A+ 2x GAX42080A	GAX5001	GAX67 B
300x400x120	2x GA125A+ 2x GAX42125A	GAX5001	GAX67 B
300x400x120	2x GA160A+ 2x GAX42160A	GAX5001	GAX67 B

General characteristics

- Painted sheet steel enclosure
- Padlockable handle
- Front door closing with screws and hinges on the right side of the enclosure (GAZM080 ET8...GAZM160 ET8...)
- Degree of protection: IP65
- Cable entry: smooth surfaces; can be drilled by customer.

Certifications and compliance

Certifications: EAC (pending).
Compliant with standards: IEC/EN 60947-3, IEC/EN 60947-1.

Components

Enclosure dimensions	Switch disconnector	Handle
150x200x120	GA016 A	GAX61
150x200x120	GA025 A	GAX61
150x200x120	GA032 A	GAX61
150x200x120	GA040 A	GAX61
150x200x120	GA063 SA	GAX61
150x200x120	GA063 A	GAX61
150x200x120	GA100 A	GAX61
150x200x120	GA016 A	GAX61 B
150x200x120	GA025 A	GAX61 B
150x200x120	GA032 A	GAX61 B
150x200x120	GA040 A	GAX61 B
150x200x120	GA063 SA	GAX61 B
150x200x120	GA063 A	GAX61 B
150x200x120	GA100 A	GAX61 B

General characteristics

- AISI 304 stainless steel enclosure
- Padlockable handle
- Front door closing with screws
- Degree of protection: IP65
- Cable entry: smooth surfaces; can be drilled by customer
- For four-pole versions add the corresponding GAX42...A fourth pole to the switch disconnector.

Certifications and compliance

Certifications: EAC (pending).
Compliant with standards: IEC/EN 60947-3, IEC/EN 60947-1.

11 Switch disconnectors

GL series 160A to 315A

IEC/EN three-pole switch disconnectors



GL...C1

Order code	IEC conventional free air thermal current I _{th} AC21A (≤690V)	IEC rated operational current I _e AC22A (≤690V) AC23A (≤415V)	Qty per pkg	Wt
	[A]	[A]	n°	[kg]

Supplied without handle.
Complete the switch disconnector by selecting shaft extension and handle for door coupling version or the handle for direct operating version (see page 11-25).

GL0160 C1	160	160	1	1.500
GL0200 C1	200	200	1	1.500
GL0250 C1	250	250	1	1.500
GL0315 C1	315	250	1	1.500

new

UL98 three-pole switch disconnectors



GL0200 C1UL

Order code	General purpose current	Max. 3-phase horsepower rating	Qty per pkg	Wt
	[A]	[HP/V]	n°	[kg]

Supplied without handle.
Complete the switch disconnector by selecting shaft extension and handle for door coupling version or the handle for direct operating version (see page 11-25).

GL0200 C1UL	200	75/240 150/480 200/600	1	1.600
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new

IEC/EN fourth pole add-on



GLX42 0315

Order code	IEC conventional free air thermal current I _{th} AC21A (≤690V)	IEC rated operational current I _e AC22A (≤690V) AC23A (≤415V)	Qty per pkg	Wt
	[A]	[A]	n°	[kg]

Simultaneous closing operation as switch disconnector poles. For GL0160 C1...GL0315 C1 versions.

GLX42 0315	315	250	1	0.200
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new

UL98 fourth pole add-on



GLX42 0200UL

Order code	General purpose current	Max. 3-phase horsepower rating	Qty per pkg	Wt
	[A]	[HP/V]	n°	[kg]

Simultaneous closing operation as switch disconnector poles. For GL0200 C1UL version.

GLX42 0200UL	200	75/240 150/480 200/600	1	0.200
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new

General characteristics

- 160 to 315A AC21 versions
- 200A general purpose according to UL98
- Compact dimensions and add-on fourth-pole
- Screw or 35mm DIN rail fixing
- Possibility to adjust the position of the clips for screw fixing on plate
- Visible contacts
- Maximum number of power poles: 4.

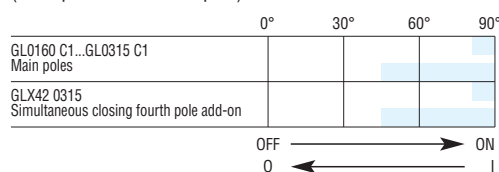
Operational characteristics

- Rated insulation voltage U_i: 1,000V
- Rated impulse withstand U_{imp}: 12kV
- Mechanical life: 20,000 cycles.

Certifications and compliance

Certifications obtained: cULus according to UL98 / CSA C22.2 n°4 for GL...UL and GLX42...UL types.
Compliant with standards: IEC/EN 60947-3, IEC/EN 60947-1.

Strokes of GL poles
(main poles and add-on pole)



11 Switch disconnectors

GL series 160A to 315A

IEC/EN three-pole changeover switches



GLC...C1

new

Order code	IEC conventional free air thermal current Ith AC21A (≤690V)	IEC rated operational current Ie AC22A (≤690V) AC23A (≤415V)	Qty per pkg	Wt [kg]
[A]	[A]	n°	[kg]	

Supplied without handle.

Complete the changeover switch by selecting shaft extension and handle for door coupling version or the handle for direct operating version (see page 11-25).

GLC0160 C1	160	160	1	3.500
GLC0200 C1	200	200	1	3.500
GLC0250 C1	250	250	1	3.500
GLC0315 C1	315	250	1	3.500

General characteristics

- 160 to 315A AC21A versions
- 200A general purpose according to UL1008
- Screw fixing on plate
- Visible contacts.

Operational characteristics

- Rated insulation voltage Ui: 1,000V
- Rated impulse withstand Uimp: 12kV
- Mechanical life: 20,000 cycles.

Certifications and compliance

Certifications pending: cULus according to UL1008 for GLC...UL types.

Compliant with standards: IEC/EN 60947-6-1, IEC/EN 60947-3.

IEC four-pole changeover switches



GLC...T4C1

new

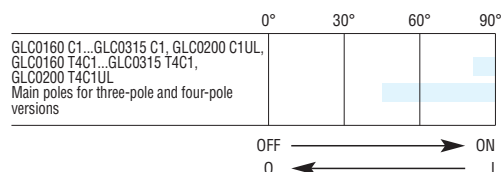
Order code	IEC conventional free air thermal current Ith AC21A (≤690V)	IEC rated operational current Ie AC22A (≤690V) AC23A (≤415V)	Qty per pkg	Wt [kg]
[A]	[A]	n°	[kg]	

Supplied without handle.

Complete the changeover switch by selecting shaft extension and handle for door coupling version or the handle for direct operating version (see page 11-25).

GLC0160 T4C1	160	160	1	3.500
GLC0200 T4C1	200	200	1	3.500
GLC0250 T4C1	250	250	1	3.500
GLC0315 T4C1	315	250	1	3.500

Strokes of GLC poles



UL1008 three-pole changeover switches



GLC0200 C1UL

new

Order code	General purpose current	Max. 3-phase horsepower rating	Qty per pkg	Wt [kg]
[A]	[HP/V]	n°	[kg]	

Supplied without handle.

Complete the changeover switch by selecting shaft extension and handle for door coupling version or the handle for direct operating version (see page 11-25).

GLC0200 C1UL	200	75/240 150/480 200/600	1	3.600
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UL1008 four-pole changeover switches



GLC0200 T4C1UL

new

Order code	General purpose current	Max. 3-phase horsepower rating	Qty per pkg	Wt [kg]
[A]	[HP/V]	n°	[kg]	

Supplied without handle.

Complete the changeover switch by selecting shaft extension and handle for door coupling version or the handle for direct operating version (see page 11-25).

GLC0200 T4C1UL	200	75/240 150/480 200/600	1	3.600
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11 Switch disconnectors

GL series 160A to 315A
Accessories

Add-on blocks



GLX10 10EA



GLX10 01



GLX3 00



GLX3 01



GLX8...



GLX9...



GLX5...



GLX2...

Order code	Characteristics	Qty per pkg	Wt
		n°	[kg]

Auxiliary contacts.

new GLX10 01	1NC with screw terminals	1	0.011
new GLX10 10EA	1EB with screw terminals	1	0.011

Neutral terminal.

new GLX3 00	For GL0160...GL0315	1	0.200
new GLX3 01	For GL0160...GL0315	1	0.200

Earth/ground terminal.

new GLX8 00	3-piece set, each covers 1 pole	1	0.011
new GLX8 01	4-piece set, each covers 1 pole	1	0.011

One-pole terminal covers.

new GLX9 00	6-piece set, each covers 1 pole	1	0.011
new GLX9 01	8-piece set, each covers 1 pole	1	0.011

One-pole phase barrier (needed for voltages > 500V).

new GLX5 00	1-piece set, each covers 1 pole	1	0.011
new GLX5 01	3-piece set, each covers 1 pole	1	0.011

Terminal clamp sets for rigid and flexible cables.

new GLX2 01	1-piece set, each covers 1 pole	1	0.011
new GLX2 02	3-piece set, each covers 1 pole	1	0.011

One-pole bridging bars for changeover parallel connection GLC0160...GLC0315.

new GLX10 01	3-piece set, each covers 1 pole	1	0.011
new GLX10 02	4-piece set, each covers 1 pole	1	0.011

Operational characteristics of auxiliary contacts GLX10...

- Conventional free air thermal current I_{th}: 10A
- Rated insulation voltage: 690V
- Conductivity: 5V, 1mA
- UL/CSA and IEC/EN 60947-5-1 designation: A600 Q600
- Tightening torque: 0.8Nm/7.1lb.in
- Maximum 8 contacts for GL0160...GL0315 switch disconnectors
- Maximum 4 contacts for GLC0160...GLC0315 changeover switches.

Operational characteristics of neutral and earth/ground terminals GLX3...

- Add-on only on GL0160...GL0315 switch disconnectors
- Tightening torque: 15...22Nm/132.7...194.7lb.in.

Operational characteristics for terminal covers and phase barriers GLX8..., GLX9...

- Snap on mounting.

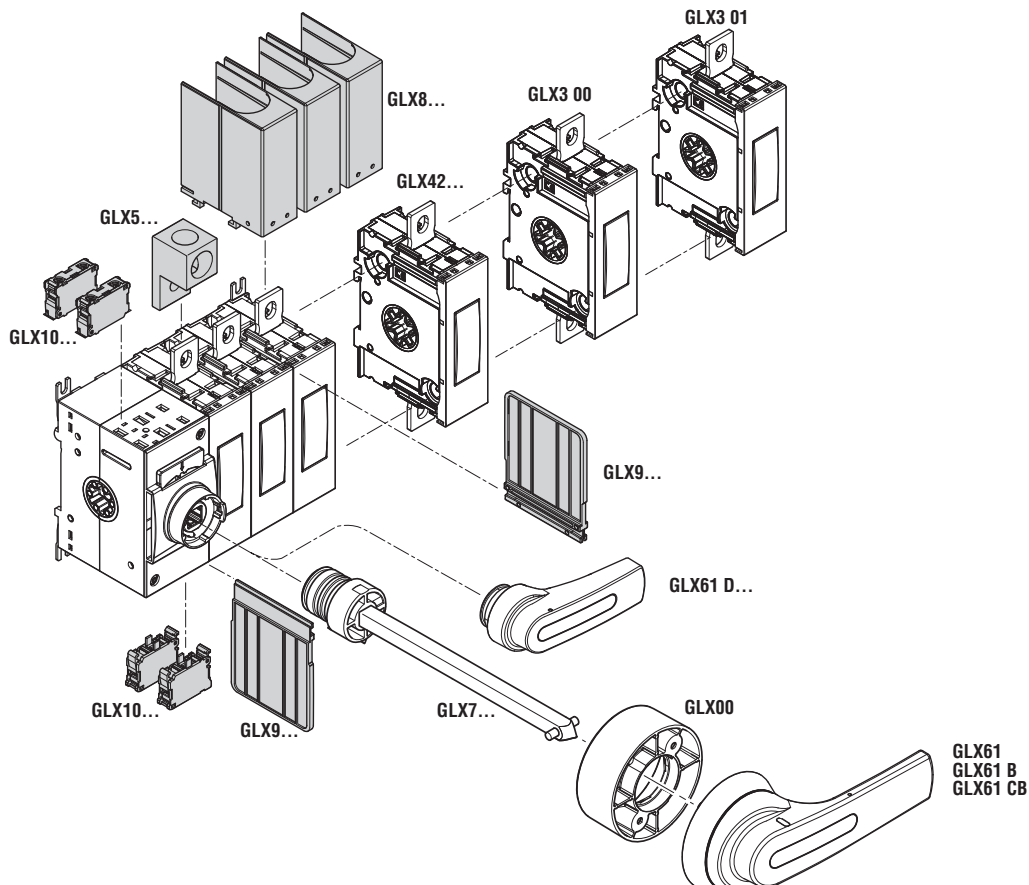
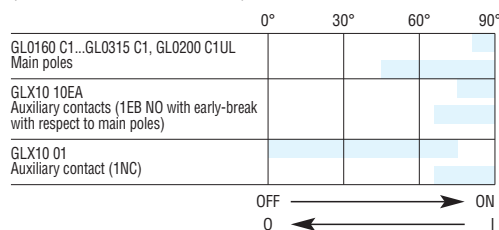
Operational characteristics for terminal clamps GLX5...

- Maximum conductor cross section: 120mm²/250kcmil
- Minimum conductor cross section: 16mm²/6AWG
- Tightening torque: 35Nm/309.7lb.in.

Certifications and compliance

Certifications obtained: cULus
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-3.

Strokes of GL poles
(main poles with add-on pole)



11 Switch disconnectors

GL series 160A to 315A
Accessories

Handles and shafts



GLX61 DB



GLX61 D



GLX61



GLX61 B



GLX61 CB



GLX00



GLX7...

new

new

new

Order code	Characteristics	Qty per pkg	Wt
		n°	[kg]

Direct operating handles.

GLX61 DB	For GL0160...GL0315 and GLC0160...GLC0315. Black	1	0.075
GLX61 D	For GL0160...GL0315. Red/yellow	1	0.075

Door coupling handles.

GLX61	For GL0160...GL0315. Screw fixing. 125mm lever length pistol handle - defeatable (req. UL508A). Red/yellow. □10mm	1	0.200
GLX61 B	For GL0160...GL0315. Screw fixing. 125mm lever length pistol handle - defeatable (req. UL508A). Black. □10mm	1	0.200
GLX61 CB	For GLC0160...GLC0315. Screw fixing. 125mm lever length pistol handle - defeatable (req. UL508A). Black. □10mm	1	0.200

Accessories for door coupling handles.

GLX00	Shaft alignment ring	1	0.040
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Shaft extensions for door coupling handles GLX61, GLX61 B, GLX61 CB type.

GLX7 150 S10	150mm long. □10mm	1	0.120
GLX7 200 S10	200mm long. □10mm	1	0.155
GLX7 300 S10	300mm long. □10mm	1	0.240
GLX7 400 S10	400mm long. □10mm	1	0.280
GLX7 500 S10	500mm long. □10mm	1	0.310

Operational characteristics for direct operating handles

- Snap on mounting on switch disconnectors and changeover switches
- 1 to 3 padlocks in the Ø4...6mm.

Operational characteristics for door coupling handles

- Fixing handles interaxis: 28x40mm
- 1 to 3 padlocks in the Ø4...8mm
- Tightening torque: 1.5Nm/13.3lbin
- Degree of protection: IP66 and NEMA 4X for UL.

NOTE: Types GLX61, GLX61 B, GLX61 CB are UL/CSA Type 1, 2, 3R, 12, 12K, 4, 4X external use.

Certifications and compliance

Certifications obtained: cULus.
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-3.

11 Switch disconnectors

GL series 160A to 315A

Switch disconnectors in metal enclosure

IEC/EN IP65 in metal enclosure



GLZM0160...GLZM315...

new

Order code	IEC conventional free air thermal current I _{th} AC21A (≤690V)	Qty per pkg	Wt
	[A]	n°	[kg]

THREE-POLE.
With red/yellow handle.

GLZM0160	160	1	9.750
GLZM0200	200	1	9.750
GLZM0250	250	1	9.750
GLZM0315	315	1	9.750

new

THREE-POLE.
With black handle.

GLZM0160 B	160	1	9.750
GLZM0200 B	200	1	9.750
GLZM0250 B	250	1	9.750
GLZM0315 B	315	1	9.750

new

FOUR-POLE.
With red/yellow handle.

GLZM0160 T4	160	1	9.950
GLZM0200 T4	200	1	9.950
GLZM0250 T4	250	1	9.950
GLZM0315 T4	315	1	9.950

new

FOUR-POLE.
With black handle.

GLZM0160 T4B	160	1	9.950
GLZM0200 T4B	200	1	9.950
GLZM0250 T4B	250	1	9.950
GLZM0315 T4B	315	1	9.950

Components

Enclosure dimensions	Switch disconnector	Handle
300x400x250	GL0160 C1	GLX61
300x400x250	GL0200 C1	GLX61
300x400x250	GL0250 C1	GLX61
300x400x250	GL0315 C1	GLX61

300x400x250	GL0160 C1	GLX61 B
300x400x250	GL0200 C1	GLX61 B
300x400x250	GL0250 C1	GLX61 B
300x400x250	GL0315 C1	GLX61 B

Enclosure dimensions	Switch disconnector	4th pole	Handle
300x400x250	GL0160 C1	GLX42 0315	GAX61
300x400x250	GL0200 C1	GLX42 0315	GAX61
300x400x250	GL0250 C1	GLX42 0315	GAX61
300x400x250	GL0315 C1	GLX42 0315	GAX61

300x400x250	GL0160 C1	GLX42 0315	GAX61 B
300x400x250	GL0200 C1	GLX42 0315	GAX61 B
300x400x250	GL0250 C1	GLX42 0315	GAX61 B
300x400x250	GL0315 C1	GLX42 0315	GAX61 B

General characteristics

- Painted sheet steel enclosure
- Padlockable handle
- Front door closing with screws and hinges on the right side of the enclosure
- Degree of protection: IP65
- Cable entry: smooth surfaces; can be drilled by customer.

Certifications and compliance

Certifications: EAC (pending).
Compliant with standards: IEC/EN 60947-3, IEC/EN 60947-1.

11 Switch disconnectors

GL series 160A to 315A

Switch disconnectors in metal enclosure

IEC/EN IP65 in metal enclosure



GLZM0160 E...GLZM0315 E...

new

new

Order code	IEC conventional thermal current I _{th}	IEC rated operational current I _e		Qty per pkg	Wt [kg]
	AC21A (≤690V)	AC23B (≤400V)	AC23B (≤500V)		
	[A]	[A]	[A]	n°	
3-pole line changeover switches I-O-II. Black handle					
GLZM0160 ET6	160	160	160	1	11.780
GLZM0200 ET6	200	200	200	1	11.780
GLZM0250 ET6	250	250	250	1	11.780
GLZM0315 ET6	315	250	250	1	11.780
4-pole line changeover switches I-O-II. Black handle.					
GLZM0160 ET8	160	160	160	1	12.180
GLZM0200 ET8	200	200	200	1	12.180
GLZM0250 ET8	250	250	250	1	12.180
GLZM0315 ET8	315	250	250	1	12.180

Components

Enclosure dimensions	Switch disconnectors	Handle
300x400x250	GLC0160 C1	GLX61 CB
300x400x250	GLC0200 C1	GLX61 CB
300x400x250	GLC0250 C1	GLX61 CB
300x400x250	GLC0315 C1	GLX61 CB
Enclosure dimensions	Switch disconnectors	Handle
300x400x250	GLC0160 T4C1	GLX61 CB
300x400x250	GLC0200 T4C1	GLX61 CB
300x400x250	GLC0250 T4C1	GLX61 CB
300x400x250	GLC0315 T4C1	GLX61 CB

General characteristics

- Painted sheet steel enclosure
- Padlockable handle
- Front door closing with screws and hinges on the right side of the enclosure
- Degree of protection: IP65
- Cable entry: smooth surfaces; can be drilled by customer.

Certifications and compliance

Certifications: EAC (pending).
Compliant with standards: IEC/EN 60947-3, IEC/EN 60947-1.

11 Switch disconnectors

GE series 50A to 1600A
Three-pole

Three-pole switch disconnectors



GE...

Order code	IEC conventional free air thermal current Ith AC21A (≤500V)	IEC rated operational current Ie		Qty per pkg	Wt
		AC23A (≤400V)	AC23A (≤500V)		
	[A]	[A]	[A]	n°	[kg]
Separately purchase the handle and shaft extension ❶.					
GE0160 F ❶	160	160	125	1	0.850
GE0160	160	160	125	1	0.850
GE0200	200	160	125	1	0.900
GE0250	250 ❷	160	125	1	0.900
GE0251	250	250	200	1	1.700
GE0315	315	315	250	1	1.700
GE0400	400	400	315	1	1.900
GE0500	500	500	400	1	4.200
GE0630	630	630	500	1	4.200
GE0800	800	800	500	1	4.200
GE1000	1000	1000	800	1	7.000
GE1250	1250	1000	800	1	7.600
GE1600	1600	1000	900	1	20.800

Three-pole switch disconnectors with fuse holder



GE... F - GE... N - GE... B

With NFC fuse holder ❸❹.					
Separately purchase the handle and shaft extension ❶❷.					
Order code	IEC Ith	IEC Ie	IEC Ie	Qty	Wt
GE0050 F ❶	50	50	50	1	1.250
GE0125 F ❶	125	125	125	1	1.700
With NH fuse holder ❸.					
Separately purchase the handle and shaft extension ❶❷.					
GE0160 N	160	160	125	1	1.700
GE0161 N	160	160	160	1	3.100
GE0250 N	250	250	250	1	6.600
GE0400 N	400	400	400	1	6.600
GE0630 N	630	630	630	1	13.000
GE0800 N	800	630	630	1	13.000
With BS fuse holder ❸.					
Separately purchase the handle and shaft extension ❶❷.					
GE0160 B	160	160	160	1	3.500
GE0200 B	200	200	200	1	3.500
GE0250 B	250	250	250	1	6.600
GE0315 B	315	315	315	1	6.600
GE0400 B	400	400	400	1	6.600
GE0630 B	630	630	630	1	13.000
GE0800 B	800	630	630	1	13.000

- ❶ Refer to the side table for the selection of the handle. A shaft insert is standard-supplied with all direct operating handles so no other shaft extension is required in this case.
- ❷ See table on page 11-34 for the types of fuses.
- ❸ The switch disconnector is standard-supplied with fuse protection shield.
- ❹ Standard supplied with IEC IP20 terminal protection.
- ❺ 250A Ith; 200A AC21A ≤500V.

Selection of handles

Refer to the left-hand switch disconnector table for the selection of the handle.
For other accessories see pages 11-34 and 11-35.

Direct operating	Door coupling	
	Black	Red/yellow
GEX65D	GAX66NB	GAX66N
GEX66ND	GEX66NB	GEX66N
GEX67ND	GEX67NB	GEX67N
GEX68ND	GEX68NB	GEX68N

Direct operating	Door coupling	
	Black	Red/yellow
GEX61D	GEX61NB	GEX61N

Direct operating	Door coupling	
	Black	Red/yellow
GEX61D	GEX61NB	GEX61N
GEX62D	GEX66NB	GEX66N
GEX63D	GEX67NB	GEX67N
GEX64D	GEX68NB	GEX68N

Direct operating	Door coupling	
	Black	Red/yellow
GEX62D	GEX66NB	GEX66N
GEX63D	GEX67NB	GEX67N
GEX64D	GEX68NB	GEX68N

General characteristics

- 50A to 1600A
- Available versions: direct operating and door coupling
- Screw fixing: 35mm DIN rail mount adapter kit for GE0160 P on page 11-34
- Padlockable in 0 position with no extra accessory.

Operational characteristics

- IEC rated insulation voltage Ui:
 - 1000V for GE0160...GE1600, GE0160 P, GE0250 N/B...GE0800 N/B
 - 800V for GE0050 F, GE0125 F, GE0160 N, GE0161 N, GE0160 B and GE0200 B
- Mechanical life:
 - 30,000 cycles for GE0160...GE0250, GE0160 P
 - 20,000 cycles for GE0251...GE0400
 - 10,000 cycles for GE0500...GE1600, GE0050 F, GE0125 F, GE0160 N/B...GE0400 N/B
 - 5,000 cycles for GE0630 N/B and GE0800 N/B.

Certifications and compliance

Certifications obtained: EAC.
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-3.

11 Switch disconnectors

GE series 50A to 1600A
Four-pole

Four-pole switch disconnectors



GE...T4...

Four-pole switch disconnectors with fuse holder



GE... FT4 - GE...NT4-GE...BT4

Order code	IEC conventional free air thermal current Ith	IEC rated operational current Ie		Qty per pkg	Wt
	AC21A (≤500V)	AC23A (≤400V)	AC23A (≤500V)		
	[A]	[A]	[A]	n°	[kg]
Separately purchase the handle and shaft extension ❶.					
GE0160 T4P ❶	160	160	125	1	1.000
GE0160 T4	160	160	125	1	1.000
GE0200 T4	200	160	125	1	1.000
GE0250 T4	250❷	160	125	1	1.000
GE0251 T4	250	250	200	1	1.900
GE0315 T4	315	315	250	1	1.900
GE0400 T4	400	400	315	1	2.100
GE0500 T4	500	500	400	1	4.500
GE0630 T4	630	630	500	1	4.500
GE0800 T4	800	800	500	1	4.500
GE1000 T4	1000	1000	800	1	7.600
GE1250 T4	1250	1000	800	1	7.600
GE1600 T4	1600	1000	900	1	20.800

With NFC fuse holder ❸❹.

Separately purchase the handle and shaft extension ❶❷.

GE0050 FT4 ❹	50	50	50	1	1.550
GE0125 FT4 ❹	125	125	125	1	2.200

With NH fuse holder ❸.

Separately purchase the handle and shaft extension ❶❷.

GE0160 NT4	160	160	125	1	2.200
GE0161 NT4	160	160	160	1	8.000
GE0250 NT4	250	250	250	1	8.000
GE0400 NT4	400	400	400	1	8.000
GE0630 NT4	630	630	630	1	15.000
GE0800 NT4	800	630	630	1	15.000

With BS fuse holder ❸.

Separately purchase the handle and shaft extension ❶❷.

GE0160 BT4	160	160	160	1	4.000
GE0200 BT4	200	200	200	1	4.000
GE0250 BT4	250	250	250	1	4.000
GE0315 BT4	315	315	315	1	8.000
GE0400 BT4	400	400	400	1	8.000
GE0630 BT4	630	630	630	1	15.000
GE0800 BT4	800	630	630	1	15.000

❶ Refer to the side table for the selection of the handle. A shaft insert is standard-supplied with all direct operating handles so no other shaft extension is required in this case.

❷ See table on page 11-35 also for the types of fuses.

❸ The switch disconnector is standard-supplied with fuse protection shield.

❹ Standard supplied with IEC IP20 terminal protection.

❺ 250A Ith; 200A AC21A ≤500V.

Selection of handles

Refer to the left-hand switch disconnector table for the selection of the handle.

For the other accessories see pages 11-34 and 11-35.

Direct operating	Door coupling	
	Black	Red/yellow
GEX65D	GAX66NB	GAX66N
GEX66ND	GEX66NB	GEX66N
GEX67ND	GEX67NB	GEX67N
GEX68ND	GEX68NB	GEX68N

Direct operating	Door coupling	
	Black	Red/yellow
GEX61D	GEX61NB	GEX61N

Direct operating	Door coupling	
	Black	Red/yellow
GEX61D	GEX61NB	GEX61N
GEX62D	GEX66NB	GEX66N
GEX63D	GEX67NB	GEX67N
GEX64D	GEX68NB	GEX68N

Direct operating	Door coupling	
	Black	Red/yellow
GEX62D	GEX66NB	GEX66N
GEX63D	GEX67NB	GEX67N
GEX64D	GEX68NB	GEX68N

General characteristics

- 50A to 1600A
- 4-pole types (3P+N) with early-make late-break neutral pole
- Available versions: direct operating and door coupling
- Screw fixing: 35mm DIN rail mount adapter kit for GE0160 T4P on page 11-34
- Padlockable in 0 position with no extra accessory.

Operational characteristics

- IEC rated insulation voltage Ui:
 - 1000V for GE0160 T4...GE1600 T4, GE0160 T4P, GE0250...GE0800 NT4/BT4
 - 800V for GE0160 NT4/BT4, GE0050 FT4, GE0125 FT4, GE0161 NT4, GE0200 BT4
- Mechanical life:
 - 30,000 cycles for GE0160 T4...GE0250 T4, GE0160 T4P
 - 20,000 cycles for GE0251 T4...GE0400 T4
 - 10,000 cycles for GE0500 T4...GE1600 T4, GE0050 FT4, GE0125 FT4, GE0160...GE0400 NT4/BT4.
 - 5,000 cycles for GE0630 BT4/BT4 and GE0800 NT4/BT4.

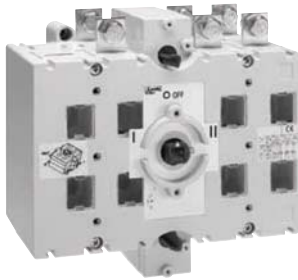
Certifications and compliance

Certifications obtained: EAC.
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-3.

11 Switch disconnectors

GE series 50A to 1600A
Changeover switches

Three-pole changeover switches



GE...E

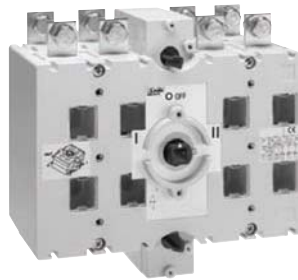
Order code	IEC conventional free air thermal current Ith AC21A (≤500V)	IEC rated operational current Ie		Qty per pkg	Wt [kg]
		AC23B (≤400V)	AC23B (≤500V)		
	[A]	[A]	[A]	n°	[kg]
Separately purchase the handle and shaft extension ❶.					
GE0160 E	160	160	125	1	1.800
GE0200 E	200	160	125	1	1.900
GE0201 E	200	160	125	1	4.800
GE0250 E	250	180	150	1	4.800
GE0315 E	315	200	160	1	5.000
GE0400 E	400	250	200	1	5.000
GE0500 E	500	400	250	1	11.500
GE0630 E	630	500	315	1	11.500
GE0800 E	800	630	400	1	11.900
GE1000 E	1000	1000	800	1	21.800
GE1250 E	1250	1000	900	1	23.600
GE1600 E	1600	1000	900	1	50.000

Selection of handles

Refer to the left-hand changeover switch table for the selection of the handle.
For the other accessories see pages 11-31 and 11-32.

Direct operating	Door coupling
Black	Black
GEX61E	GEX61NC
GEX62NE	GEX62NC
GEX63NE	GEX63NC
GEX64NE	GEX64NC

Four-pole changeover switches



GE...ET4

Order code	IEC conventional free air thermal current Ith AC21A (≤500V)	IEC rated operational current Ie		Qty per pkg	Wt [kg]
		AC23B (≤400V)	AC23B (≤500V)		
	[A]	[A]	[A]	n°	[kg]
Separately purchase the handle and shaft extension ❶.					
GE0160 ET4	160	160	125	1	2.100
GE0200 ET4	200	160	125	1	2.200
GE0201 ET4	200	160	125	1	5.300
GE0250 ET4	250	180	150	1	5.300
GE0315 ET4	315	200	160	1	5.500
GE0400 ET4	400	250	200	1	5.500
GE0500 ET4	500	400	250	1	12.600
GE0630 ET4	630	500	315	1	12.600
GE0800 ET4	800	630	400	1	13.200
GE1000 ET4	1000	1000	800	1	24.300
GE1250 ET4	1250	1000	900	1	26.700
GE1600 ET4	1600	1000	900	1	55.000

Selection of handles

Refer to the left-hand changeover switch table for the selection of the handle.
For the other accessories see pages 11-31 and 11-32.

Direct operating	Door coupling
Black	Black
GEX61E	GEX61NC
GEX62NE	GEX62NC
GEX63NE	GEX63NC
GEX64NE	GEX64NC

❶ Refer to the side table for the selection of the handle. A shaft insert is standard-supplied with all direct operating handles so no other shaft extension is required in this case.

General characteristics

- 160A to 1600A
- 4-pole types (3P+N) with early-make late-break neutral pole
- Available versions: direct operating and door coupling
- Screw fixing
- Padlockable in 0 position with no extra accessory.

Operational characteristics

- IEC rated insulation voltage Ui: 1000V
- Mechanical life: 30,000 cycles for GE0160 E/ET4 and GE0200 E/ET4 only; 10,000 cycles for other types.

Certifications and compliance

Certifications obtained: EAC.
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-3.

11 Switch disconnectors

GE series 50A to 1600A

Add-on blocks and accessories



GEX10...



GEX89 00



GEX8...



GEX691C



new

GEX69...

Order code	Description	Qty per pkg	Wt
		n°	[kg]

Auxiliary contacts ①②.

GEX10 11①②	1NO/1NC changeover	1	0.032
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Auxiliary contacts for switch disconnector types GE0050 F, GE0050 FT4, GE0125 F, GE0125 FT4, GE0160 N and GE0160 NT4.

GEX10 11N②	1NO/1NC changeover	1	0.024
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Auxiliary contacts for switch disconnector types GE0160 E, GE0200 E, GE0160 ET4, GE0200 ET4, GE1600 E and GE1600 ET4.

GEX10 11M②	1NO/1NC changeover	1	0.016
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Adapter kit for 35mm DIN fixing.

GEX89 00	For GE...P types only	1	0.040
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Set of terminal covers consisting of pieces given below. See pages from 11-33 to 11-35 and 11-39 for choice according to switch disconnector type.

Screw fixing.

GEX81 01	1-piece set, transparent sheet covering 4 poles	1	0.048
GEX81 11	2-piece set, each covers two poles	1	0.080
GEX81 21	2-piece set, each covers two poles	1	0.140
GEX81 31	2-piece set, each covers two poles	1	0.170
GEX81 41	2-piece set, each covers two poles	1	0.440

Snap-on fixing.

GEX82 01	3-piece set, each covers one pole	1	0.090
GEX82 03	4-piece set, each covers one pole	1	0.120
GEX82 11	3-piece set, each covers one pole	1	0.120
GEX82 12	3-piece set, each covers one pole	1	0.120
GEX82 13	4-piece set, each covers one pole	1	0.160
GEX82 21	3-piece set, each covers one pole	1	0.240
GEX82 22	3-piece set, each covers one pole	1	0.240
GEX82 23	4-piece set, each covers one pole	1	0.320
GEX82 31	3-piece set, each covers one pole	1	0.340
GEX82 32	3-piece set, each covers one pole	1	0.340
GEX82 33	4-piece set, each covers one pole	1	0.440
GEX83 11	3-piece set, each covers one pole	1	0.120
GEX83 12	4-piece set, each covers one pole	1	0.160
GEX83 21	3-piece set, each covers one pole	1	0.260
GEX83 22	4-piece set, each covers one pole	1	0.340
GEX83 31	3-piece set, each covers one pole	1	0.360
GEX83 32	4-piece set, each covers one pole	1	0.460

Motorised control unit for changeover switches.

Rated auxiliary supply voltage 230VAC.

Complete with control handle, shaft extension and fixing elements.

GEX69 0C	For GE0160 E...GE0200 E and GE0160 ET4...GE0200 ET4	1	3.000
GEX69 1C	For GE0201 E...GE0400 E and GE0201 ET4...GE0400 ET4	1	3.000
GEX69 2C	For GE0500 E...GE0800 E and GE0500 ET4...GE0800 ET4	1	3.000
GEX69 3C	For GE1000 E...GE1250 E and GE1000 ET4...GE1250 ET4	1	5.753
GEX69 4C	For GE1600 E and GE1600 ET4	1	5.900

① Unsuitable for switch disconnectors type GE0050 F, GE0050 FT4, GE0125 F, GE0125 FT4, GE0160 N, GE0160 NT4, GE0160 E, GE0200 E, GE0160 ET4, GE0200 ET4, GE1600 E and GE1600 ET4.

② Changeover contact.

Selection of add-on contacts and accessories

Refer to the combinations given on pages 11-33 to 35 and 11-39 for a correct choice based on the switch disconnector type used.

General characteristics for auxiliary contacts

IEC conventional free air thermal current I_{th}: 16A.

General characteristics for motorised control units

- IEC rated auxiliary supply voltage: 230VAC
- 4 static outputs, 24VDC 120mA total
- 4 inputs, contacts powered at 24VDC or 5VDC (500mA) for changeover control (pulsed or continuous)
- RS485 Modbus (only for GEX69 2C, GEX69 3C and GEX69 4C) serial port for control, monitoring, programming
- Padlockable at 0 position
- Programming by position inputs
- 4-digit display for status-error indications.

Certifications and compliance

Certifications obtained: EAC.

Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-3.

11 Switch disconnectors

GE series 50A to 1600A
Handles and shaft extensions



GEX...D-GEX...E



GEX6 2NE



GAX66N

new



GEX6 6N



GEX6 8N

new



GEX6 7NB

new



GAX7...AN



GEX7...

Order code	Characteristics	Qty per pkg	Wt
		n°	[kg]

DIRECT OPERATING LEVER HANDLE, PADLOCKABLE ①.
Rotating type with screw fixing on switch disconnector.
Complete with shaft extension.

GEX6 1D	95mm/3.7" black lever	1	0.340
GEX6 1E	50mm/2" black lever	1	0.052
GEX6 2D	105mm/4.1" black lever	1	0.268
GEX6 2NE	143mm/5.6" black lever	1	0.266
GEX6 3D Ⓣ	245mm/9.6" black lever	1	0.536
GEX6 3NE	176mm/6.9" black lever	1	0.424
GEX6 4D Ⓣ	360mm/14.2" black lever	1	0.612
GEX6 4NE Ⓣ	396mm/15.6" black lever	1	0.612
GEX6 5D	50mm/2" black lever	1	0.054
GEX6 6ND	115mm/4.5" black lever	1	0.216
GEX6 7ND	143mm/5.6" black lever	1	0.322
GEX6 8ND Ⓣ	396mm/15.6" black lever	1	0.328

DOOR COUPLING LEVER HANDLE, PADLOCKABLE ①.
Red/yellow rotating type with screw fixing on door.
Shaft extension to order separately ②.
Defeatable (requirement UL508A).

GAX66N Ⓣ	65mm/2.6" lever. □ 7mm/0.3" Ⓣ. IP66	1	0.075
GEX6 1N	94mm/3.7" lever. □ 7mm/0.3" IP65	1	0.326
GEX6 6N	115mm/4.5" lever. □ 10mm/0.4" IP65	1	0.248
GEX6 7N	143mm/5.6" lever. □ 14mm/0.6" IP65	1	0.302
GEX6 8N Ⓣ	396mm/15.6" lever. □ 14mm/0.6" IP65	1	0.312

DOOR COUPLING LEVER HANDLE, PADLOCKABLE ①.
Black rotating type with screw fixing on door.
Shaft extension to order separately ②.
Defeatable (requirement UL508A).

GAX66N B Ⓣ	65mm/2.6" □ 7mm/0.3" Ⓣ. IP66	1	0.075
GEX6 1NB	94mm/3.7" □ 7mm/0.3" IP65	1	0.334
GEX6 1NC	94mm/3.7" □ 7mm/0.3" IP65	1	0.074
GEX6 2NC	143mm/5.6" □ 10mm/0.4" IP65	1	0.252
GEX6 3NC	176mm/6.9" □ 14mm/0.6" IP65	1	0.302
GEX6 4NC Ⓣ	396mm/15.6" □ 14mm/0.6" IP65	1	0.488
GEX6 6NB	115mm/4.5" □ 10mm/0.4" IP65	1	0.246
GEX6 7NB	143mm/5.6" □ 14mm/0.6" IP65	1	0.298
GEX6 8NB Ⓣ	396mm/15.6" □ 14mm/0.6" IP65	1	0.310

SHAFT EXTENSIONS for door coupling handles ①.

GAX7 150AN	150mm/5.9", □ 7mm/0.3"	1	0.090
GAX7 200AN	200mm/7.9", □ 7mm/0.3"	1	0.112
GAX7 300AN	300mm/11.8", □ 7mm/0.3"	1	0.160
GAX7 400AN	400mm/15.7", □ 7mm/0.3"	1	0.200
GAX7 500AN	500mm/19.7", □ 7mm/0.3"	1	0.250
GEX7 162N	177mm/7", □ 7mm/0.3"	1	0.056
GEX7 195N	195mm/7.7", □ 14mm/0.6"	1	0.248
GEX7 227N	227mm/8.9", □ 10mm/0.4"	1	0.154
GEX7 239N	239mm/9.4", □ 14mm/0.6"	1	0.310
GEX7 250N	250mm/9.8", □ 7mm/0.3"	1	0.084
GEX7 345N	345mm/13.6", □ 14mm/0.6"	1	0.480
GEX7 375N	375mm/14.7", □ 10mm/0.4"	1	0.274
GEX7 387N	387mm/15.2", □ 7mm/0.3"	1	0.142
GEX7 536N	536mm/21.1", □ 10mm/0.4"	1	0.408
GEX7 535N	535mm/21", □ 14mm/0.6"	1	0.784
GEX7 485N	485mm/19.1", □ 14mm/0.6"	1	0.930

① See tables on pages 11-33 to 35 and 11-39 for the correct choice based on the switch disconnector type used.

② 2-hand control.

③ Use with GAX7...AN extension types only.

Certifications and compliance

Certification obtained: EAC for all; cULus according to UL98A/CSA C22.2 no. 4 only for types GAX66N... and GAX7...AN.

Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-3.

Form and handle length	Handle types
50mm/2"	GEX61E-GEX65D
65mm/2.6"	GAX66N-GAX66NB
94mm/3.7"	GEX61N-GEX61NB GEX61NC
95mm/3.74"	GEX61D
105mm/4.1"	GEX62D
115mm/4.5"	GEX66ND-GEX66NB GEX66N
143mm/5.6"	GEX62NC-GEX62NE GEX67N-GEX67NB GEX67ND
176mm/6.9"	GEX63NC-GEX63NE
245mm/9.6"	2-hand GEX63D
360mm/14.2"	2-hand GEX64D
396mm/15.6"	2-hand GEX64NC-GEX64NE GEX68N-GEX68NB GEX68ND

For the correct choice of handles and shaft extensions with switch disconnector see tables on pages 11-32 to 35 and 11-39.

Summary table of combinations - Three and four-pole changeover switches

Type	IEC conventional thermal current I _{th}	IEC rated free air current		Direct operating handle			Door coupling handles			Extensions for door coupling handles (the last 3 digits of GEX code indicate length in mm/in)		Auxiliary contacts 1NO/1NC	Motorised control unit	Terminal covers for:		
		AC21A (≤500V)	AC23B (≤400V)	AC23B (≤500V)	Black	Black	Red/yellow	Exten. section	Max panel depth	Line 1	Line 2			Load		
Order code	[A]	[A]	[A]	Order code	Order code	Order code	Order code	<input type="checkbox"/>	[mm/in]	Order code	Order code	Order code	Order code	Order code		

Three-pole changeover switches.

GE0160 E	160	160	125	GEX61E	GEX61NC	—	GEX7162N	7mm/	269/10.59"	GEX1011M	GEX690C	GEX8101	Ⓢ	GEX8101	
GE0200 E	200	160	125					0.3"	342/13.36"						479/18.86"
GE0201 E	200	160	125	GEX62NE	GEX62NC	—	GEX7227N	10mm/	279/10.98"	GEX1011	GEX691C	GEX8212	GEX8211	GEX8311	
GE0250 E	250	180	150					0.4"	427/16.81"						588/23.15"
GE0315 E	315	200	160												
GE0400 E	400	250	200												
GE0500 E	500	400	250	GEX63NE	GEX63NC	—	GEX7195N	14mm/	257/10.12"	GEX1011M	GEX692C	GEX8222	GEX8221	GEX8321	
GE0630 E	630	500	315					0.6"	407/16.02"						597/23.50"
GE0800 E	800	630	400												
GE1000 E	1000	1000	800	GEX64NE	GEX64NC	—	GEX7345N		280/11.02"	GEX1011M	GEX693C	GEX8232	GEX8231	GEX8331	
GE1250 E	1250	1000	900					0.6"	430/16.93"						620/24.41"
GE1600 E	1600	1000	900	—	—	—	GEX7239N	14mm/	579/22.79"	GEX1011M	GEX694C	GEX8141	—	GEX8141	
							GEX7485N	0.6"	825/32.48"						

Four-pole changeover switches.

GE0160 ET4	160	160	125	GEX61E	GEX61NC	—	GEX7162N	7mm/	269/10.59"	GEX1011M	GEX690C	GEX8101	Ⓢ	GEX8101	
GE0200 ET4	200	160	125					0.3"	342/13.36"						479/18.86"
GE0201 ET4	200	160	125	GEX62NE	GEX62NC	—	GEX7227N	10mm/	279/10.86"	GEX1011	GEX691C	GEX8213	GEX8213	GEX8312	
GE0250 ET4	250	180	150					0.4"	427/16.81"						588/23.15"
GE0315 ET4	315	200	160												
GE0400 ET4	400	250	200												
GE0500 ET4	500	400	250	GEX63NE	GEX63NC	—	GEX7195N	14mm/	257/10.12"	GEX1011M	GEX692C	GEX8223	GEX8223	GEX8322	
GE0630 ET4	630	500	315					0.6"	407/16.02"						597/23.50"
GE0800 ET4	800	630	400												
GE1000 ET4	1000	1000	800	GEX64NE	GEX64NC	—	GEX7345N		280/11.02"	GEX1011M	GEX693C	GEX8233	GEX8233	GEX8332	
GE1250 ET4	1250	1000	900					0.6"	430/16.93"						620/24.41"
GE1600 ET4	1600	1000	900	—	—	—	GEX7239N	14mm/	579/22.79"	GEX1011M	GEX694C	GEX8141	—	GEX8141	
							GEX7485N	0.6"	825/32.48"						

Ⓢ GEX8101 terminal cover protects the input of both Line 1 and Line 2; nothing else is required for Line 2.

Summary table of combinations - Three-pole switch disconnectors

Three pole type ①	IEC conventional free air thermal current I _{th}		IEC rated operational current I _e		Direct operating handle	Door coupling handles		Extensions for door coupling handles (the last 3 digits of GEX code indicate length in mm/in)		Auxiliary contacts 1NO/1NC	Type of fuse	Terminal covers for:	
	AC21A (≤500V)	AC23A (≤400V)	AC23A (≤500V)		Black	Black	Red/yellow	Exten. section	Max panel depth			Line	Load
Order code	[A]	[A]	[A]		Order code	Order code	Order code	<input type="checkbox"/>	[mm/in]	Order code		Order code	Order code

Switch disconnectors.

GE0160 P ②	160	160	125		GEX65D	GAX66NB	GAX66N	GAX7150AN ③	7mm/ 0.3"	214/8.42"	GEX1011	—	④	④
GE0160	160	160	125					GAX7200AN ③		264/10.39"			GEX8101	GEX8101
GE0200	200	160	125					GAX7300AN ③		364/14.33"				
GE0250 ⑤	250 ⑤	160	125											
GE0251	250	250	200		GEX66ND	GEX66NB	GEX66N	GEX7227N	10mm/ 0.4"	267/10.51"			GEX8111	GEX8111
GE0315	315	315	250					GEX7375N		415/16.34"				
GE0400	400	400	315					GEX7536N		576/22.68"				
GE0500	500	500	400		GEX67ND	GEX67NB	GEX67N	GEX7195N	14mm/ 0.6"	251/9.88"			GEX8121	GEX8121
GE0630	630	630	500					GEX7345N		401/15.79"				
GE0800	800	800	500					GEX7535N		591/23.27"				
GE1000	1000	1000	800		GEX68ND	GEX68NB	GEX68N			267/10.51"			GEX8131	GEX8131
GE1250	1250	1000	800							417/16.42"				
										607/23.90"				
GE1600	1600	1000	900					GEX7239N	14mm/ 0.6"	399/15.71"			GEX8141	GEX8141
								GEX7485N		645/25.39"				

Switch disconnectors with NFC fuse holder.

GE0050 F ⑥	50	50	50		GEX61D	GEX61NB	GEX61N	GEX7162N	7mm/ 0.3"	192/7.56"	GEX1011N	14x51	④	④
GE0125 F ⑥	125	125	125					GEX7250N		265/10.43"		22x58		
								GEX7387N		402/15.83"				

Switch disconnectors with NH fuse holder.

GE0160 N	160	160	125		GEX61D	GEX61NB	GEX61N	GEX7162N	7mm/ 0.3"	192/7.56"	GEX1011N	00	GEX8201	GEX8201
								GEX7250N		265/10.43"				
								GEX7387N		402/15.83"				
GE0161 N	160	160	160		GEX62D	GEX66NB	GEX66N	GEX7227N	10mm/ 0.4"	302/11.89"	GEX1011	0	GEX8211	GEX8212
								GEX7375N		450/11.72"				
								GEX7536N		611/24.05"				
GE0250 N	250	250	250		GEX63D	GEX67NB	GEX67N	GEX7195N	14mm/ 0.6"	271/10.67"		1	GEX8221	GEX8222
GE0400 N	400	400	400					GEX7345N		421/16.57"		2		
								GEX7535N		611/24.05"				
GE0630 N	630	630	630		GEX64D	GEX68NB	GEX68N			285/11.22"		3	GEX8231	GEX8232
GE0800 N	800	630	630							435/17.12"				
										625/24.61"				

Switch disconnectors with BS fuse holder.

GE0160 B	160	160	160		GEX62D	GEX66NB	GEX66N	GEX7227N	10mm/ 0.4"	302/11.89"	GEX1011	A4	GEX8211	GEX8212
GE0200 B	200	200	200					GEX7375N		450/11.72"		B1-B2		
GE0250 B	250	250	250					GEX7536N		611/24.05"				
GE0315 B	315	315	315		GEX63D	GEX67NB	GEX67N	GEX7195N	14mm/ 0.6"	271/10.67"		B1-B2-B3	GEX8221	GEX8222
GE0400 B	400	400	400					GEX7345N		421/16.57"		B1-B2-B3-B4		
								GEX7535N		611/24.05"				
GE0630 B	630	630	630		GEX64D	GEX68NB	GEX68N			285/11.22"		C1-C2	GEX8231	GEX8232
GE0800 B	800	630	630							435/17.12"		C1-C2-C3		
										625/24.61"				

① The motorised control unit cannot be installed.

② Standard supplied with IP20 terminal protection warranted by wired equipment with only maximum conductor section of 95mm². Suitable for mounting on 35mm DIN rail, GEX89 00 kit is available on page 11-31.

③ 250A I_{th}; 200A AC21A ≤500V.

④ Standard supplied with IEC IP20 terminal protection warranted by wired equipment with only maximum conductor section of 35mm² for GE0050 F and of 95mm² for GE0125 F.

⑤ Extension length for type GAX7150AN is 186mm/7.32", type GAX7200AN 236mm/9.29" and type GAX7300AN 336mm/13.23".

Summary table of combinations - Four-pole switch disconnectors

Four pole type ①	IEC conventional free air thermal current Ith			IEC rated operational current Ie			Direct operating handle			Door coupling handles			Extensions for door coupling handles (the last 3 digits of GEX code indicate length in mm/in)		Auxiliary contacts 1NO/1NC	Type of fuse	Terminal covers for:	
	AC21A (≤500V)	AC23A (≤400V)	AC23A (≤500V)	Black	Black	Red/yellow	Exten. section	Max panel depth	Line	Load								
Order code	[A]	[A]	[A]	Order code	Order code	Order code	Order code	<input type="checkbox"/>	[mm/in]	Order code		Order code	Order code					

Switch disconnectors.

GE0160 T4P ②	160	160	125	GEX65D	GAX66NB	GAX66N	GAX7150AN ③	7mm/	214/8.42"	GEX1011	—	④	⑤		
GE0160 T4	160	160	125					0.3"	264/10.39"					GEX8101	GEX8101
GE0200 T4	200	160	125					GAX7200AN ③	364/14.33"						
GE0250 T4 ⑥	250	160	125												
GE0251 T4	250	250	200	GEX66ND	GEX66NB	GEX66N	GEX7227N	10mm/	267/10.51"	GEX8111	GEX8111				
GE0315 T4	315	315	250					0.4"	415/16.34"						
GE0400 T4	400	400	315					GEX7375N	576/22.68"						
GE0500 T4	500	500	400									GEX7536N			
GE0630 T4	630	630	500	GEX67ND	GEX67NB	GEX67N	GEX7195N	14mm/	251/9.88"	GEX8121	GEX8121				
GE0800 T4	800	800	500					0.6"	401/15.79"						
GE1000 T4	1000	1000	800					GEX7345N	591/23.27"						
GE1250 T4	1250	1000	800									GEX7535N			
GE1600 T4	1600	1000	900	GEX68ND	GEX68NB	GEX68N	GEX7239N	267/10.51"	GEX8131	GEX8131					
								0.6"			417/16.42"				
								GEX7485N			607/23.90"				
												14mm/	399/15.71"		
				0.6"	645/25.39"	GEX8141	GEX8141								

Switch disconnectors with NFC fuse holder.

GE0050 FT4 ④	50	50	50	GEX61D	GEX61NB	GEX61N	GEX7162N	7mm/	192/7.56"	GEX1011N	14x51	④	④
GE0125 FT4 ④	125	125	125					0.3"	265/10.43"				

Switch disconnectors with NH fuse holder.

GE0160 NT4	160	160	125	GEX61D	GEX61NB	GEX61N	GEX7162N	7mm/	192/7.56"	GEX1011N	00	GEX8203	GEX8203
								0.3"	265/10.43"				
GE0161 NT4	160	160	160	GEX62D	GEX66NB	GEX66N	GEX7227N	10mm/	302/11.89"	GEX1011	0	GEX8213	GEX8213
								0.4"	450/17.72"				
GE0250 NT4	250	250	250					GEX7375N	611/24.05"				
GE0400 NT4	400	400	400										
GE0630 NT4	630	630	630	GEX63D	GEX67NB	GEX67N	GEX7195N	14mm/	271/10.67"	GEX8223	GEX8223		
GE0800 NT4	800	630	630					0.6"	421/16.57"				
								GEX7345N	611/24.05"				
												GEX7535N	
				GEX64D	GEX68NB	GEX68N	GEX7195N	285/11.22"	GEX8233	GEX8233			
								0.6"			435/17.12"		
								GEX7345N			625/24.61"		
												GEX7535N	

Switch disconnectors with BS fuse holder.

GE0160 BT4	160	160	160	GEX62D	GEX66NB	GEX66N	GEX7227N	10mm/	302/11.89"	GEX1011	A4	GEX8213	GEX8213
GE0200 BT4	200	200	200					0.4"	450/17.72"				
GE0250 BT4	250	250	250					GEX7375N	611/24.05"				
GE0315 BT4	315	315	315	GEX63D	GEX67NB	GEX67N	GEX7195N			14mm/	271/10.67"	GEX8223	GEX8223
GE0400 BT4	400	400	400					0.6"	421/16.57"				
GE0630 BT4	630	630	630					GEX7345N	611/24.05"				
GE0800 BT4	800	630	630							GEX7535N			
				GEX64D	GEX68NB	GEX68N	GEX7195N	285/11.22"	GEX8233		GEX8233		
								0.6"		435/17.12"			
								GEX7345N		625/24.61"			
												GEX7535N	

① The motorised control unit cannot be installed.

② Standard supplied with IP20 terminal protection warranted by wired equipment with only maximum conductor section of 95mm². Suitable for mounting on 35mm DIN rail, GEX89 00 kit is available on page 11-31.

③ 250A Ith; 200A AC21A ≤500V.

④ Standard supplied with IEC IP20 terminal protection warranted by wired equipment with only maximum conductor section of 35mm² for GE0050 FT4 and of 95mm² for GE0125 FT4.

⑤ Extension length for type GAX7150AN is 186mm/7.32", type GAX7200AN 236mm/9.29" and type GAX7300AN 336mm/13.23".

11 Fusible disconnect switches (UL98)

GM series 30A to 800A

Three-pole disconnect switches with fuse holder (UL98)



GMF...030 C12



GMFJ 100 C03



GMFJ 400 C03



GMFJ 800 C03

Order code	General purpose current	UL fuse type	Command pole position	Qty per pkg	Wt
	[A]	[A]		n°	[kg]

Supplied without handle.
Complete the disconnect switch by selecting shaft extension and handle for door coupling version or the handle for direct operating version.

GMF C030 C12	30	CC	Central	1	0.700
GMF J030 C12	30	J	Central	1	0.700
GMF J060 C12	60	J	Central	1	1.135
GMF J060 C03	60	J	Left	1	1.135
GMF J100 C03	100	J	Left	1	1.815
GMF J200 C03	200	J	Left	1	3.000
GMF J400 C03	400	J	Left	1	6.800
GMF J600 C03	600	J	Left	1	13.00
GMF L800 C03	800	L	Left	1	13.00

new

UL/CSA ratings

Type	1 phase [HP]		3 phase [HP]			Short-circuit rating at 600VAC [kA]	Fuse type	
	120V	240V	240V	480V	600V		[A]	[class]
GMF C030 C12	2	3	7.5	15	20	200	30	CC
GMF J030 C12	2	3	7.5	15	20	200	30	J
GMF J060 C12	-	-	15	30	50	200	60	J
GMF J060 C03	-	-	15	30	50	200	60	J
GMF J100 C03	-	-	30	60	75	200	100	J
GMF J200 C03	-	-	60	125	150	200	200	J
GMF J400 C03	-	-	125	250	350	200	400	J
GMF J600 C03	-	-	200	400	500	200	600	J
GMF L800 C03	-	-	250	500	500	200	800	L

Add-on blocks



GMX10 10



GMX3...



GMX8 00
GMX8 01



GMX8 02
GMX8 03
GMX8 04



GMX5...



GMXF M...

new

Order code	Description	Qty per pkg	Wt
		n°	[kg]

Auxiliary contacts, mounting to the switch mechanism.

GMX10 11 ①	1NO/NC changeover	1	0.020
GMX10 10	1NO	1	0.030
GMX10 01	1NC	1	0.030

Module for auxiliary contacts mounting on the side of the switch mechanism.

new

GMX3 3	For GMF...030 types	1	0.060
GMX3 4	For GMF...60 to GMF...800 types	1	0.065

Terminal covers.

GMX8 00	3-piece set, each covers 1 pole for GMF J100 C03	1	0.080
GMX8 01	3-piece set, each covers 1 pole for GMF J200 C03	1	0.090
GMX8 02	1-piece set, covers 3 poles for GMF J400 C03	1	0.080
GMX8 03	1-piece set, covers 3 poles for GMF J600 C03	1	0.080
GMX8 04	1-piece set, covers 3 poles for GMF L800 C03	1	0.080

Terminal clamp sets for rigid and flexible cables.

new

GMX5 00	6-piece set for GMF J100 C03	1	0.200
GMX5 01	6-piece set for GMF J200 C03	1	0.200
GMX5 02	6-piece set for GMF J400 C03	1	0.500
GMX5 03	6-piece set for GMF J400 C03	1	1.000
GMX5 04	6-piece set for GMF J600 C03 and GMF L800 C03	1	1.600

Fuse monitor modules ②.

new

GMXF M1	Rated voltage 120...240V	1	0.145
GMXF M2	Rated voltage 380...600V	1	0.140

Crimp terminals for fuse monitor GMXF... cables.

GMX5 05	6-piece set. Terminal size 2.8-0.8mm/0.11-0.03"	1	0.004
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① Only for GMF...030 types.
② For all GM switch disconnectors. Suitable for 1 or 3 phase circuits. Includes 1 NO and 1 NC auxiliary contacts and red/green LED lights for indication.

General characteristics

- General purpose current according to UL98: 30A to 800A
- Compact dimensions
- Available versions: direct operating and door coupling
- Screw or 35mm DIN rail fixing for GMF...030 types
- Possibility to adjust the position of the clips for fixing screw on plate for GMF..060 to GMFL800 types.

Operational characteristics

- IEC rated insulation voltage U_i : 1000V
- UL max operating voltage: 600V
- IEC rated impulse withstand U_{imp} : 12kV
- Mechanical life:
 - 10,000 cycles for GMF..030 and GMF..060
 - 8,000 cycles for GMF J100 C03 and GMF J200 C03
 - 5,000 cycles for GMF J400 C03 and GMF J600 C03
 - 3,000 cycles for GMF L800 C03.

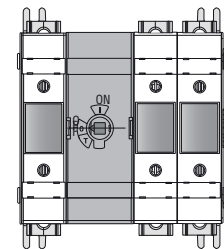
Certifications and compliance

Certifications obtained: cULus according to UL98 / CSA C22.2 n°4.

Compliant with standards: IEC/EN 60947-3, IEC/EN 60947-1.

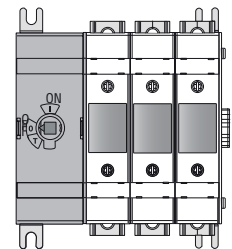
GMF...C12 type

Central command pole



GMF...C03 type

Left command pole



Operational characteristics of auxiliary contacts GMX10 11

- IEC conventional free air thermal current I_{th} : 10A
- IEC rated insulation voltage: 400V
- Conductivity: 12V, 25mA
- Tightening torque: 0.8Nm/7.1lb.in
- Maximum 6 contacts for GMF..030 disconnect switches.

Operational characteristics of auxiliary contacts GMX10 10/01

- IEC/UL conventional free air thermal current I_{th} : 16A/10A
- IEC/UL rated insulation voltage: 690V/600V
- Conductivity: 24V, 10mA
- UL/CSA and IEC/EN 60947-5-1 designation: A600 R300
- Tightening torque: 0.8Nm/7.1lb.in
- Maximum 8 contacts for GMF...060 to GMF L800 disconnect switches.

Operational characteristics for terminal clamps

- Minimum and maximum conductor cross section:
 - GMX5 00: 2.5...70mm² / 14-2AWG
 - GMX5 01: 25...150mm² / 4-300Kcmil
 - GMX5 02: 35...300mm² / 2-600Kcmil
 - GMX5 03: (2)x 35...150mm² / (2x) 4-300Kcmil
 - GMX5 04: (2)x 35...300mm² / (2x) 2-600Kcmil
- Tightening torque:
 - GMX5 00: 13Nm / 120lb.in.
 - GMX5 01: 22Nm / 200lb.in.
 - GMX5 02: 42Nm / 375lb.in.
 - GMX5 03: 22Nm / 200lb.in.
 - GMX5 04: 56Nm / 500lb.in.

Operational characteristics for terminal covers

- Snap on mounting.

Certifications and compliance

Certifications obtained: cULus for GMX10 10, GMXF M1 and GMXF M2.

Compliant with standards: IEC/EN 60947-3, IEC/EN 60947-1.

11 Fusible disconnect switches (UL98)

GM series 30A to 800A
Accessories

Handles and shafts



GMX62 DB

new



GMX62

new



GLX00

new



GMX7...S06

new

new

NFPA handle



GMX61 NFPA

new



GMXC L...

new



GMX3 0

new

Order code	Characteristics	Qty per pkg	Wt
		n°	[kg]
Direct operating handles.			
GMX61 DB	For GMF...030. Black	1	0.050
GMX62 DB	For GMF J060...GMF J200. Black	1	0.150
GMX63 DB	For GMF J400. Black	1	0.350
GMX64 DB	For GMF J600...GMF L800. Black	1	1.100
Door coupling handles.			
GAX66N	For GMF...030...GMF J200. Screw fixing. 65mm/2.56" lever length pistol handle - defeatable (req. UL508A). Red/yellow. □ 6mm/0.24"	1	0.050
GAX66N B	For GMF...030...GMF J200. Screw fixing. 65mm/2.56" lever length pistol handle - defeatable (req. UL508A). Black. □ 6mm/0.24"	1	0.050
GMX61	For GMF J400. Screw fixing. 125mm/4.92" lever length pistol handle - defeatable (req. UL508A). Red/yellow. □ 12mm/0.47"	1	0.050
GMX61 B	For GMF J400. Screw fixing. 125mm/4.92" lever length pistol handle - defeatable (req. UL508A). Black. □ 12mm/0.47"	1	0.200
GMX62	For GMF J600...GMF L800. Screw fixing. 175mm/6.89" lever length pistol handle - defeatable (req. UL508A). Red/yellow. □ 12mm/0.47"	1	0.200
GMX62 B	For GMF J600...GMF L800. Screw fixing. 175mm/6.89" lever length pistol handle - defeatable (req. UL508A). Black. □ 12mm/0.47"	1	0.200
Accessories for door coupling handles.			
GLX00	Shaft alignment ring	1	0.040
Shaft extensions for door coupling handles GAX66N and GAX66N B types.			
GMX7150 S06	150mm/5.90", □ 6mm/0.24"	1	0.120
GMX7300 S06	300mm/11.81", □ 6mm/0.24"	1	0.155
Shaft extensions for door coupling handles GMX61, GMX61 B, GMX62 and GMX62 B types.			
GMX7150 S12	150mm/5.90", □ 12mm/0.47"	1	0.240
GMX7300 S12	300mm/11.81", □ 12mm/0.47"	1	0.280
GMX7500 S12	500mm/19.68", □ 12mm/0.47"	1	0.310

Operational characteristics for direct operating handles

- Screw fixing on disconnect switches
- 1 to 3 padlocks in the Ø5...6.2mm/0.2...0.24".

Operational characteristics for door coupling handles

- Fixing handles interaxis: 28x40mm/1.1x1.57"
- 1 to 3 padlocks in the Ø4...8mm/0.16...0.31" for all handles
- Tightening torque: 1.5Nm/13.3lbin
- Degree of protection: IP66 and NEMA 4X per UL.

NOTE: the handles type GAX66N, GAX66N B, GMX61, GMX61 B, GMX62, GMX62 B are in accordance with UL/CSA Type 1, 2, 3R, 12, 12K, 4, 4X for external use.

Certifications and compliance

Certifications obtained: cULus for GMX62 DB, GMX63 DB, GMX64 DB, GAX66 N, GAX66 NB, GMX61, GMX61 B, GMX62, GMX62 B, GLX00, GMX7...
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-3.

Order code	Characteristics	Qty per pkg	Wt
		n°	[kg]
Flange handle.			
GMX61 NFPA	For GMF...030...GMF J200. NEMA 4, 4X. Black	1	1.850
Flexible connection cables for GMX61 NFPA.			
GMXC L36	Cable length 914mm/36"	1	0.400
GMXC L48	Cable length 1220mm/48"	1	0.500
GMXC L60	Cable length 1520mm/60"	1	0.550
GMXC L72	Cable length 1828mm/72"	1	0.650
Support and operating mechanism for GMX61 NFPA.			
GMX3 0	For GMF...030	1	0.830
GMX3 1	For GMF J060 C12	1	1.180
GMX3 2	For GMF...060...GMF J200	1	1.520

General characteristics for NFPA handle

The GMX61 NFPA lever handle complies with the requirements of the North American NFPA79 standard. This standard requires that the switch disconnecter can be operated without accessories or tools whether the door is closed or open. In case of operation with an open door, a device is integrated into the GMX61 NFPA handle to prevent it from being activated unless a voluntary action is taken to unlock it.

Certifications and compliance

Certifications obtained: cURus for GMX61 NFPA.
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-3.

GA series switch disconnectors



GA040 D



GAX42...D

Order code	IEC conventional free air thermal current I _{th}	IEC rated operational current I _e DC21B [Ⓢ]			Qty per pkg	Wt [kg]
		3 poles 500V	4 poles 600V	800V		
[A]	[A]	[A]	[A]	[A]	n°	[kg]

Switch disconnector complete with black handle.

GA040 D	40	12	—	—	1	0.135
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Fourth pole.

GAX42 040D	40	—	20	15	1	0.040
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- ① Connection of 4 poles in series.
- ② For other operational voltages, refer to technical characteristics on page 11-59.

GD series switch disconnectors



GD040 AT4

Order code	IEC conventional free air thermal current I _{th}	IEC rated operational current I _e DC21B [Ⓢ]			Qty per pkg	Wt [kg]
		800V	1000V	1200V		
[A]	[A]	[A]	[A]	[A]	n°	[kg]

Switch disconnector complete with black handle.

GD025 AT2	25	25	16	—	1	0.100
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GD032 AT3	32	32	32	—	1	0.110
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GD040 AT4	40	40	40	32	1	0.120
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- ② For other operational voltages, refer to technical characteristics on page 11-59.

IEC/EN IP65 plastic enclosed GD series switch disconnectors



GAZ016 DT2



GAZ040 DT4

Order code	IEC conventional thermal current I _{th}	IEC rated operational current I _e DC21B [Ⓢ]			Qty per pkg	Wt [kg]
		800V	1000V	1200V		
[A]	[A]	[A]	[A]	[A]	n°	[kg]

With red/yellow handle.

GAZ025 DT2	25	25	16	—	1	0.450
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GAZ032 DT3	32	32	32	—	1	1.050
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GAZ040 DT4	40	40	40	32	1	1.050
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With black handle.

GAZ025 DT2B	25	25	16	—	1	0.450
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GAZ032 DT3B	32	32	32	—	1	1.050
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GAZ040 DT4B	40	40	40	32	1	1.050
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- ② For other operational voltages, refer to technical characteristics on page 11-59.

General characteristics

- Up to 40A, 1000VDC and 32A, 1200VDC
- Modular construction
- Jumpers for connecting the poles in series supplied as standard with disconnectors GD series...
- Available versions:
 - Direct operating
 - Door coupling version. Use switch disconnector with direct actuator and separately purchase the handle and shaft extension for this version. See pages 11-12 to 11-14
- Screw or 35mm DIN rail fixing
- Padlockable in 0 position with no extra accessory.

Operational characteristics

- Rated insulation voltage for GA...D and GD...
 - Ui: 1000V (pollution degree 3)
- Rated insulation voltage for GD...
 - Ui: 1500V (pollution degree 2)
- Rated impulse withstand U_{imp}: 8kV
- Mechanical life:
 - 100,000 cycles GA040 D
 - 10,000 cycles GD...
- Operating temperature: -25°C...+55°C
- Storage temperature: -40°C...+70°C
- Degree of protection: IP20.

Certifications and compliance

Certifications obtained: EAC for GA...D; UL Listed for USA and Canada (cULus - File E93602) as Manual Motor Controllers, to UL508/CSA C22.2 n° 14 for GA040 D and GAX42 040D. Compliant with standards: IEC/EN 60947-3, IEC/EN 60947-1, UL60947-4-1.

Strokes of GA...D types (main poles and add-on pole)

	Travel 0→1	0°	30°	60°	90°
GA040 D Main poles				60°	
GAX420 40D Simultaneous fourth-pole add on				60°	

Components

Enclosure	Switch disconnector	Handle
GAZ1	GD025 AT2	GAX61
GAZ2 [Ⓢ]	GD032 AT3	GAX61
GAZ2 [Ⓢ]	GD040 AT4	GAX61
GAZ1B	GD025 AT2	GAX61B
GAZ2B [Ⓢ]	GD032 AT3	GAX61B
GAZ2B [Ⓢ]	GD040 AT4	GAX61B

- ② For further details contact our Technical support; see contact details on inside front cover.

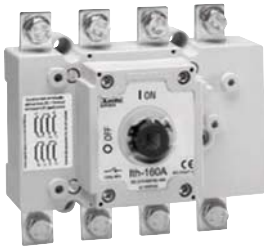
General characteristics

- Enclosure material: ABS
- Possible accessories to mount afterwards, if any required:
 - GAX30 to provide shielded cable connection continuity (e.g. with static converters)
- Padlockable handles
- Sealable cover
- Tightening torque for cover screws:
 - GAZ025...: 1.3Nm/16lbin
 - Other types: 1.5Nm/13lbin.
- Degree of protection: IP65
- Cable entry:
 - GAZ025... types: PG16/M25 and PG13.5/M20 knockouts
 - GAZ032... and GAZ040... types: PG16/M25 and PG29/M32 knockouts.

Certifications and compliance

Certifications obtained: EAC
Compliant with standards: IEC/EN 60947-3, IEC/EN 60947-1.

GE series four-pole switch disconnectors



GE...DT4

Order code	IEC conventional free air thermal current I _{th}	IEC rated operational current I _e DC21B ②③			Qty per pkg	Wt [kg]
		220V	800V	1000V		
	[A]	[A]	[A]	[A]	n°	[kg]

Direct operating and door coupling versions.
Separately purchase the handle and shaft extension ①.

GE0125 DT4	125	125	125	100	1	1.900
GE0250 DT4	250	250	250	200	1	2.000
GE0315 DT4	315	315	280	250	1	4.000
GE0630 DT4	630	630	600	500	1	4.500
GE0800 DT4	800	800	630	630	1	4.500
GE1250 DT4	1250	1250	1000	850	1	8.900

- ① Refer to the side table for the selection of the handle. A shaft insert is standard-supplied with all direct operating handles so no other shaft extension is required in this case.
- ② Connection of 4 poles in series.
- ③ For other operational voltages, refer to technical characteristics on page 11-60.

Selection of handles and accessories

Refer to the left-hand switch disconnector table for the selection of the handle.
For the other accessories see pages 11-31 and 11-32.

Direct operating	Door coupling	
	Black	Red/yellow
GEX66ND	GEX66NB	GEX66N
GEX67ND	GEX67NB	GEX67N
GEX68ND	GEX68NB	GEX68N

General characteristics

- Up to 850A, 1000VAC
- Available versions:
 - Direct operating
 - Door coupling. Use switch disconnector with direct actuator and separately purchase the handle and shaft extension for this version. See page 11-32
- Screw fixing
- Padlockable in 0 position with no extra accessory.

Operational characteristics

- IEC rated insulation voltage U_i: 1000V
- Mechanical life:
 - 20,000 cycles for GE0125 DT4, GE0250 DT4, GE0315 DT4
 - 10,000 cycles for GE0630 DT4, GE0800 DT4, GE1250 DT4.

Certifications and compliance

Certifications obtained: EAC.
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-3.

Summary table of combinations - switch disconnectors for photovoltaic applications

Four pole type ⑤	IEC conventional free air thermal current I _{th}	IEC rated operational current I _e DC21B ②			Direct operating handle	Door coupling handles		Extensions for door coupling handles (the last 3 digits of GEX code indicate length in mm/in)	Auxiliary contacts 1NO/1NC	Terminal covers for:			
		600V	800V	1000V	Black	Black	Red/yellow			Line	Load		
Order code	[A]	[A]	[A]	[A]	Order code	Order code	Order code	Order code	□	[mm/in]	Order code	Order code	Order code

Switch disconnectors for photovoltaic applications.

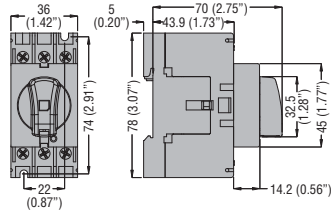
GE0125 DT4	125	125	125	100	GEX66ND	GEX66NB	GEX66N	GEX7227N GEX7375N GEX7536N	10mm/ 0.4"	267/10.51" 415/16.34" 576/22.68"	GEX1011	GEX8111	GEX8111
GE0250 DT4	250	250	200										
GE0315 DT4	315	315	280	250									
GE0630 DT4	630	630	600	500	GEX67ND	GEX67NB	GEX67N	GEX7195N GEX7345N GEX7535N	14mm/ 0.6"	251/9.88" 401/15.79" 591/23.27"	GEX8121	GEX8121	
GE0800 DT4	800	700	630	630									
GE1250 DT4	1250	1250	1000	850									
					GEX68ND	GEX68NB	GEX68N			267/10.51" 417/16.42" 607/23.90"	GEX8131	GEX8131	

⑤ The motorised control unit cannot be installed.

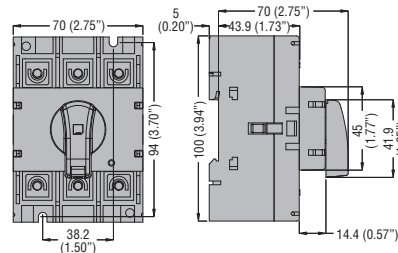
GA SERIES - 16A TO 160A SWITCH DISCONNECTORS

Direct operating version

GA016 A...GA040 A
GA063 SA
GA040 D

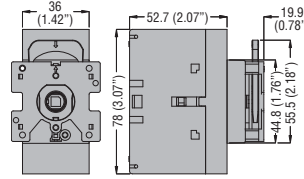


GA030 A - GA063 A...GA160 A

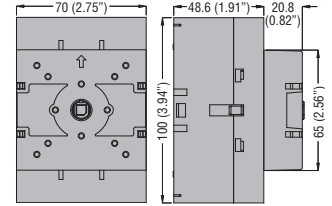


Door mount version

GA016 C...GA040 C



GA030 C - GA063 C...GA125 C

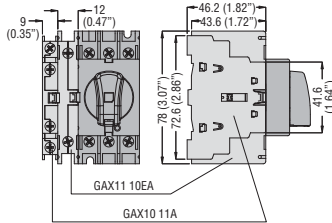


ADD-ON BLOCKS AND ACCESSORIES

For GA016 A...GA040 A, GA063 SA, GA040 D

Auxiliary contacts

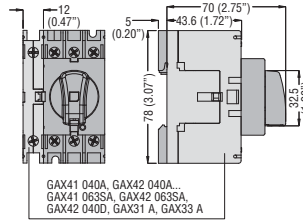
GAX10 11A
GAX11 10EA



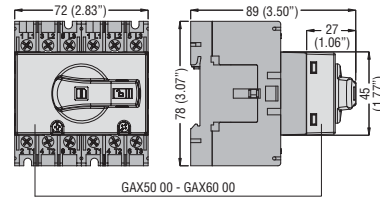
Fourth pole

GAX41 040A - GAX42 040A
GAX41 063SA - GAX42 063SA
GAX42 040D

Neutral **GAX31 A** - earth/ground **GAX33 A** terminals



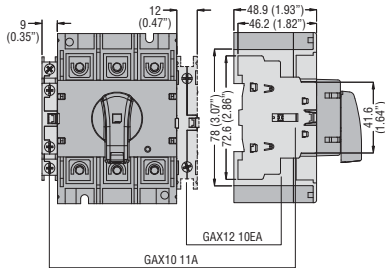
Mechanical interlock **GAX50 00** and mechanical coupling system **GAX60 00**



For GA030 A, GA063 A...GA160 A

Auxiliary contacts

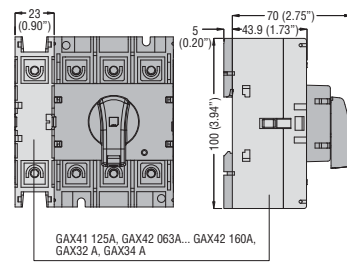
GAX10 11A
GAX12 10EA



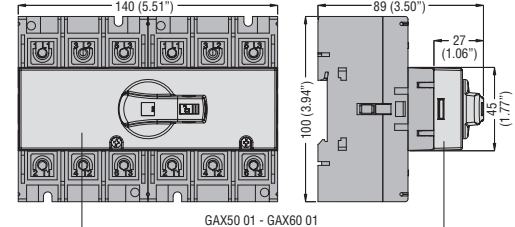
Fourth pole

GAX41 125A
GAX42 063A...GAX42 160A

Neutral **GAX32 A** - earth/ground **GAX34 A** terminals



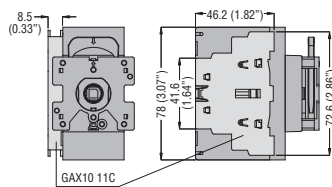
Mechanical interlock **GAX50 01** and mechanical coupling system **GAX60 01**



For GA016 C...GA040 C

Auxiliary contacts

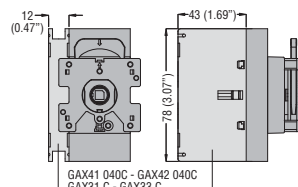
GAX10 11C



Fourth pole

GAX41 040C - GAX42 040C

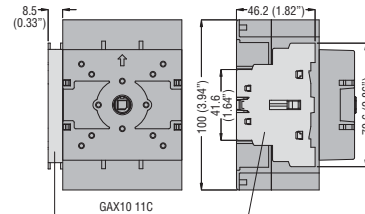
Neutral **GAX31 C** - earth/ground **GAX33 C** terminals



For GA030 C, GA063 C...GA125 C

Auxiliary contacts

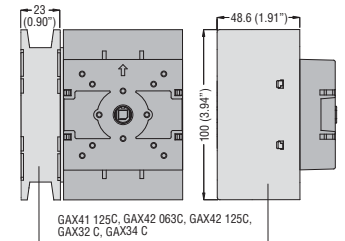
GAX10 11C



Fourth pole

GAX41 125C - GAX42 063C...GAX42 125C

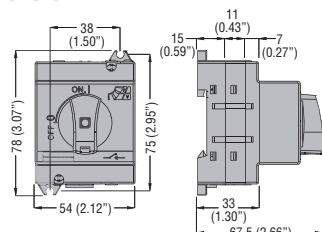
Neutral **GAX32 C** - earth/ground **GAX34 C** terminals



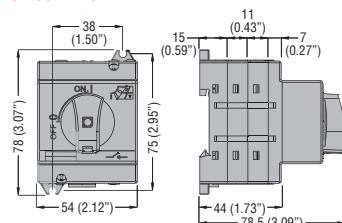
GD SERIES SWITCH DISCONNECTORS

Direct operating version

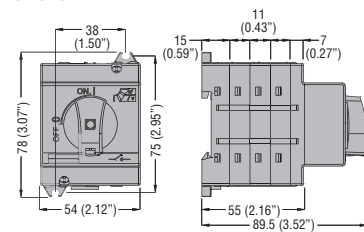
GD025 AT2



GD032 AT3



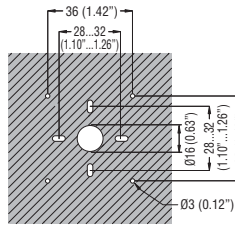
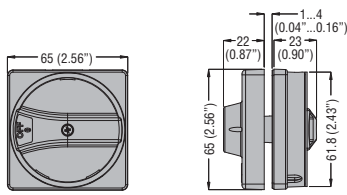
GD040 AT4



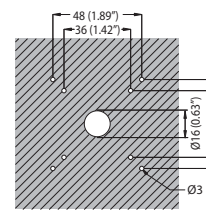
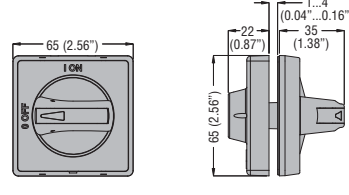
11 Switch disconnectors

Dimensions [mm(in)]

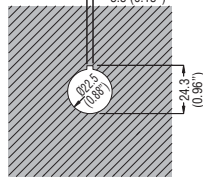
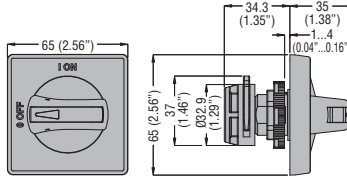
Handles GAX61/61B



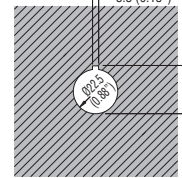
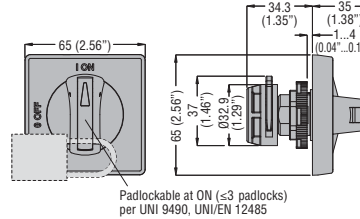
GAX62/62B



GAX63/63B

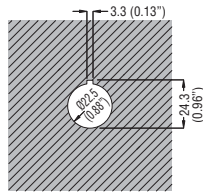
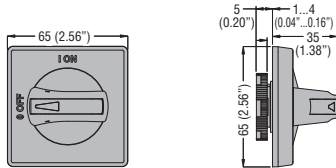


GAX63 1B

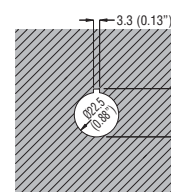
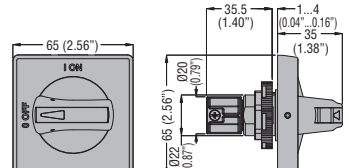


Padlockable at ON (≤3 padlocks)
per UNI 9490, UNI/EN 12485

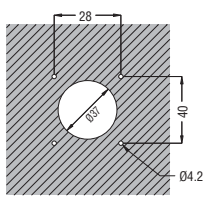
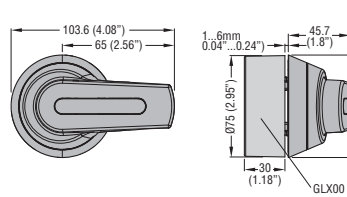
GAX63 2/2B



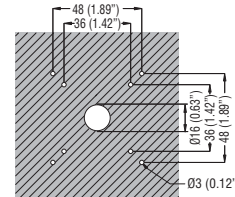
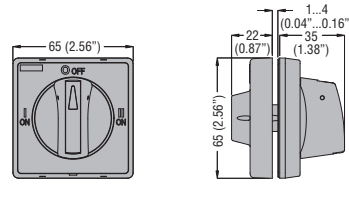
GAX64/64B



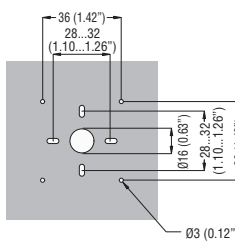
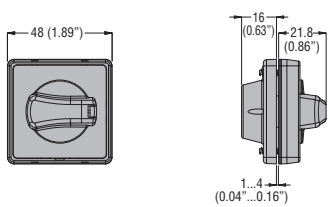
GAX66N/66NB



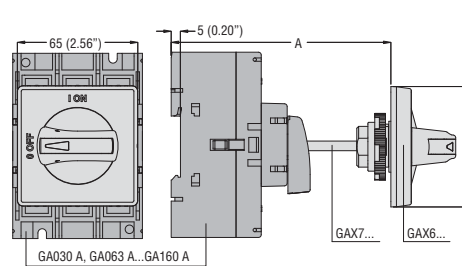
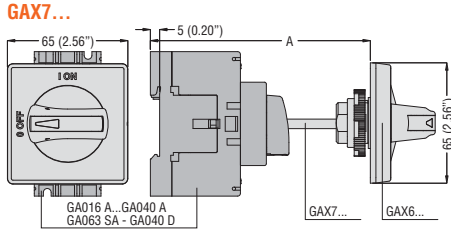
GAX67 B



GAX68/68B

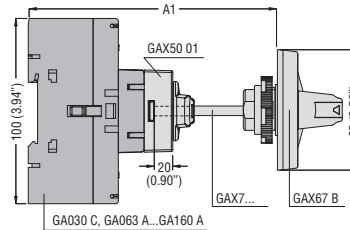
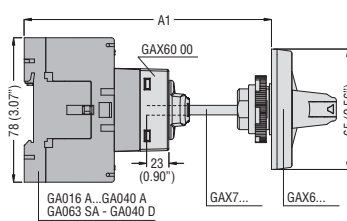


Shaft extensions for door coupling handles GAX7...



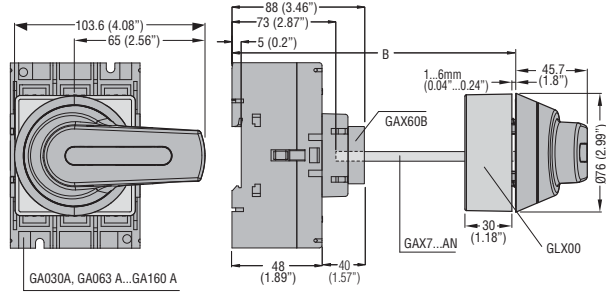
Extension	Length [mm (in)]	A [mm (in)] maximum					
		Type of handle					
		GAX61...	GAX62...	GAX63...	GAX64...	GAX67 B	GAX68...
GAX7055	55 (2.16)	99 (3.90)	97 (3.82)	102 (4.01)	116 (4.57)	97 (3.82)	98.5 (3.88)
GAX7070	70 (2.75)	114 (4.49)	112 (4.41)	117 (4.61)	131 (5.16)	112 (4.41)	113.5 (4.47)
GAX7090	90 (3.54)	134 (5.27)	132 (5.20)	137 (5.39)	151 (5.94)	132 (5.20)	133.5 (5.25)
GAX7150	150 (5.90)	194 (7.64)	192 (7.56)	197 (7.75)	211 (8.31)	192 (7.56)	193.5 (7.62)
GAX7200	200 (7.87)	244 (9.61)	242 (9.53)	247 (9.72)	261 (10.27)	242 (9.53)	243.5 (9.59)
GAX7300	300 (11.81)	344 (13.54)	342 (13.46)	347 (13.66)	361 (14.21)	342 (13.46)	343.5 (13.52)
GAX7400	400 (15.75)	444 (17.48)	442 (17.40)	447 (17.60)	461 (18.15)	442 (17.40)	443.5 (17.46)
GAX7500	500 (19.68)	544 (21.42)	542 (21.34)	547 (21.53)	561 (22.09)	542 (21.34)	543.5 (21.40)

GAX7... used with GAX50 00, GAX50 01 and GAX60 00

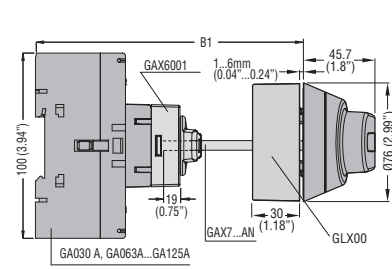


Extension	Length [mm (in)]	A1 [mm (in)] maximum				
		Used with GAX60 00		Used with GAX50 00/GAX50 01		
		Type of handle				
		GAX61...	GAX62...	GAX63...	GAX64...	GAX67 B
GAX7055	55 (2.16)	116 (4.57)	114 (4.49)	119 (4.68)	133 (5.24)	115.5 (4.55)
GAX7070	70 (2.75)	131 (5.16)	129 (5.08)	134 (5.27)	148 (5.83)	129 (5.08)
GAX7090	90 (3.54)	151 (5.94)	149 (5.87)	154 (6.06)	168 (6.61)	150.5 (5.92)
GAX7150	150 (5.90)	211 (8.31)	209 (8.23)	214 (8.42)	228 (8.98)	209 (8.23)
GAX7200	200 (7.87)	261 (10.27)	259 (10.20)	264 (10.39)	278 (10.94)	260.5 (10.26)
GAX7300	300 (11.81)	361 (14.21)	359 (14.13)	364 (14.33)	378 (14.88)	360.5 (14.13)
GAX7400	400 (15.75)	461 (18.15)	459 (18.07)	464 (18.27)	468 (18.42)	460.5 (18.13)
GAX7500	500 (19.68)	561 (22.09)	559 (22.01)	564 (22.20)	578 (22.75)	560.5 (22.07)

GAX7...AN used with GAX60 B and GAX66N/66NB



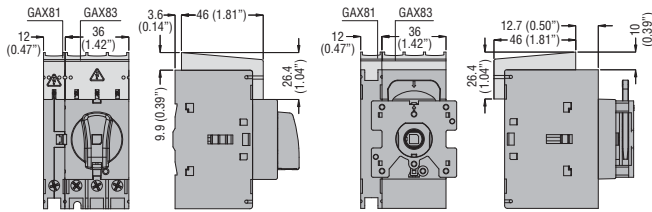
GAX7...A used with GAX60 01 and GAX66N/66NB



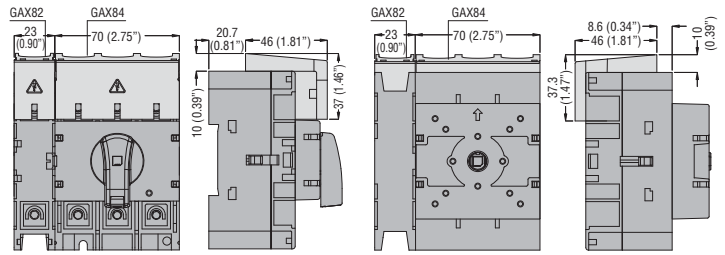
Extension	Length	B		B1
		with GAX66/66B handle		
	[mm(in)]	[mm(in)]	[mm(in)]	[mm(in)]
GAX7 150AN	178 (7.00")	120...226 (4.72"...9.00")	120...223 (4.72"...8.80")	120...223 (4.72"...8.80")
GAX7 200AN	228 (8.98")	120...276 (4.72"...10.87")	120...273 (4.72"...10.75")	120...273 (4.72"...10.75")
GAX7 300AN	328 (12.91")	120...376 (4.72"...14.80")	120...373 (4.72"...14.68")	120...373 (4.72"...14.68")
GAX7 400AN	428 (16.85")	120...476 (4.72"...18.74")	120...473 (4.72"...18.62")	120...473 (4.72"...18.62")
GAX7 500AN	528 (20.79")	120...576 (4.72"...22.68")	120...573 (4.72"...22.56")	120...573 (4.72"...22.56")

Terminal covers

GAX81 - GAX83

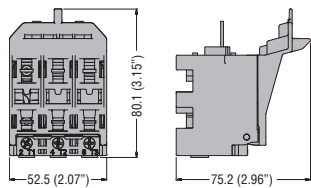


GAX82 - GAX84



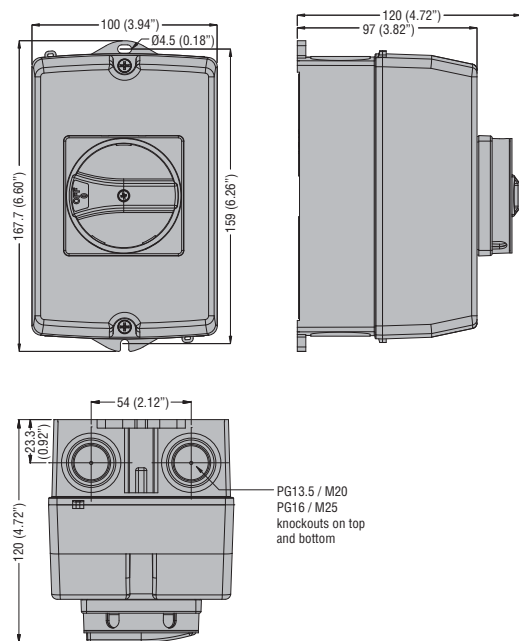
Fuse holder

GAX39 1 - GAX39 1UL

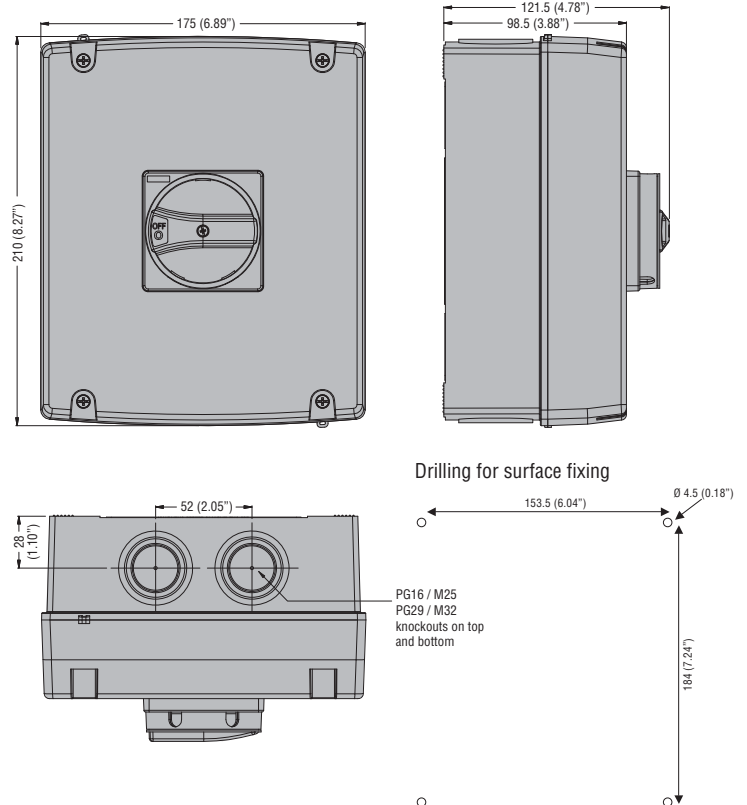


ENCLOSED SWITCH DISCONNECTORS AND EMPTY ENCLOSURES

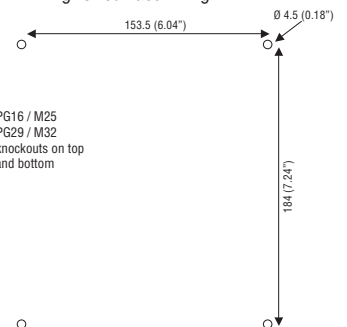
GAZ016...GAZ040... GAZ016...GAZ040...UL GAZ1... - GAZ1...UL GAZ025D...



GAZ063 SA...GAZ100 C... GAZ063 SAUL... GAZ2... - GAZ2...UL



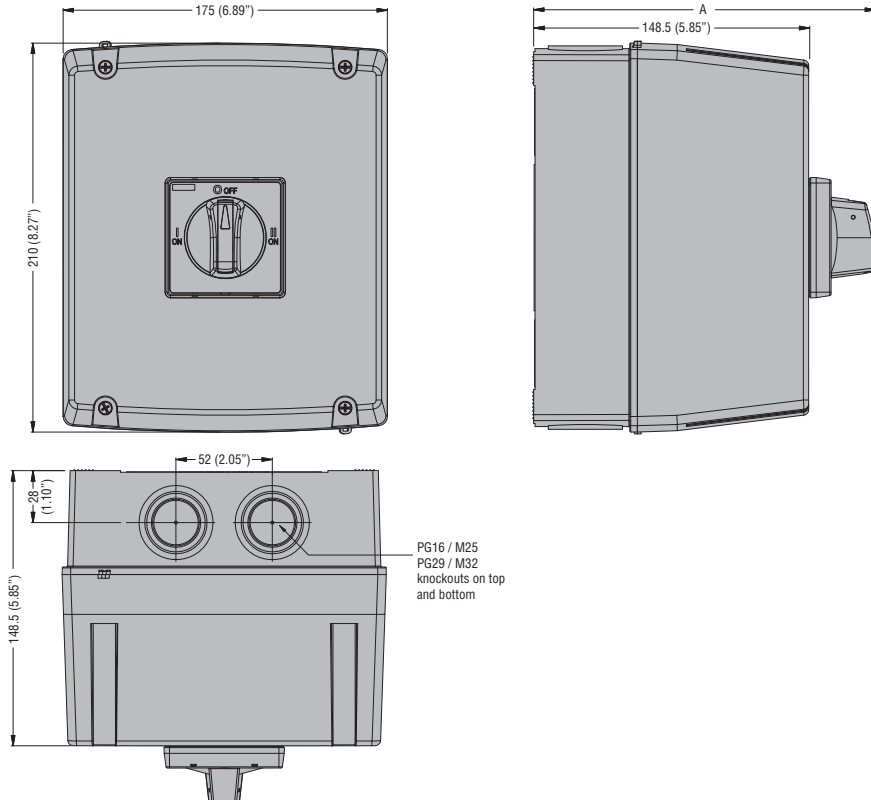
Drilling for surface fixing



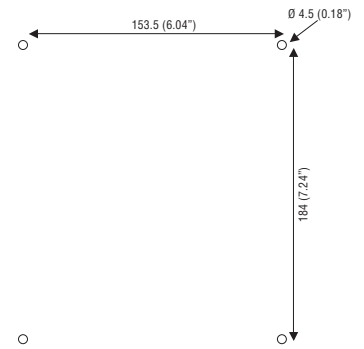
11 Switch disconnectors

Dimensions [mm(in)]

GAZ025 ET6...GAZ063 SAET6 - GAZ025 ET8...GAZ063 SAET8 - GAZ032 D... - GAZ040 D...

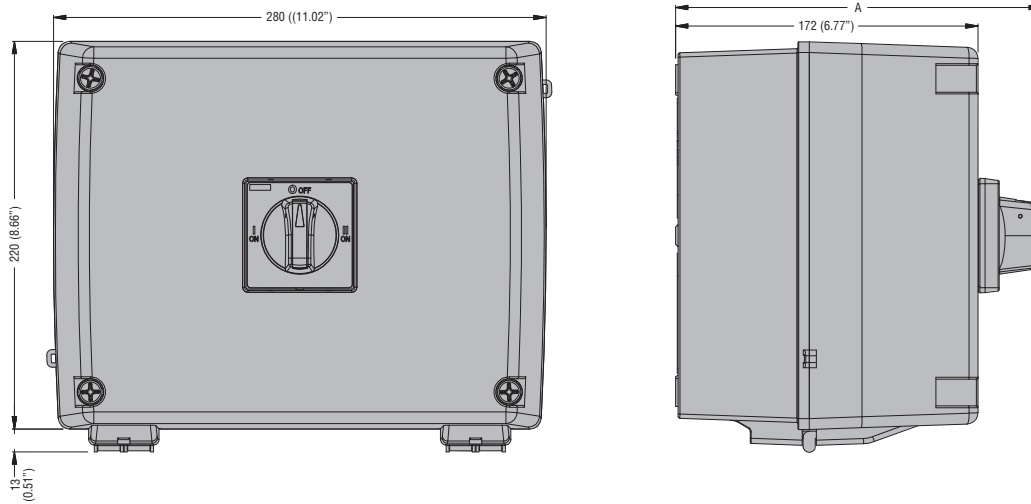


Drilling



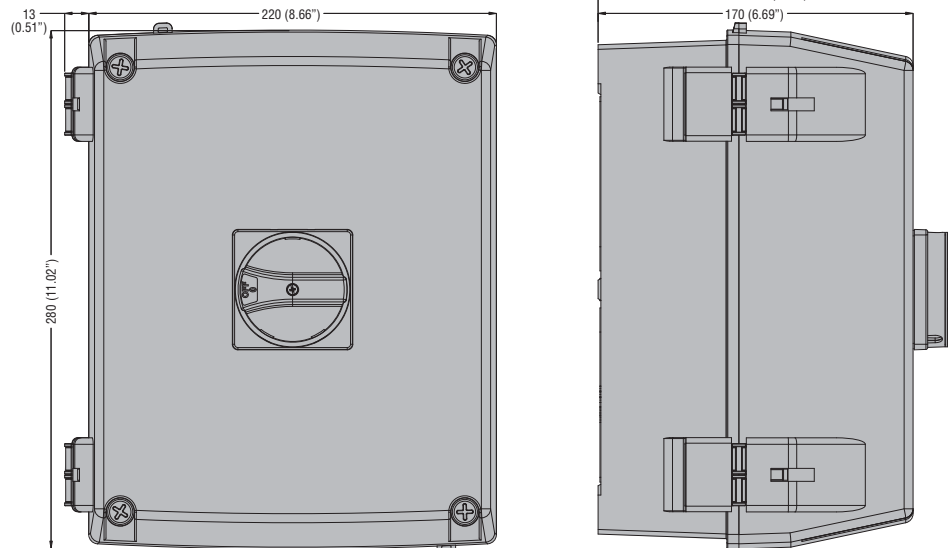
Type	A
GAZ032 D...	171.5 (6.75")
GAZ040 D...	171.5 (6.75")
GAZ025 ET...	183.5 (7.22")
GAZ063 SAET...	183.5 (7.22")

GAZ125... - GAZ063...UL - GAZ125...UL - GAZ080 ET6 - GAZ125 ET6 - GAZ160 ET6 - GAZ080 ET8 - GAZ125 ET8 - GAZ160 ET8



Type	A
GAZ125	193 (7.60")
GAZ063...UL	193 (7.60")
GAZ125...UL	193 (7.60")
GAZ080 ET6	208 (8.19")
GAZ125 ET6	208 (8.19")
GAZ160 ET6	208 (8.19")
GAZ080 ET8	208 (8.19")
GAZ125 ET8	208 (8.19")
GAZ160 ET8	208 (8.19")

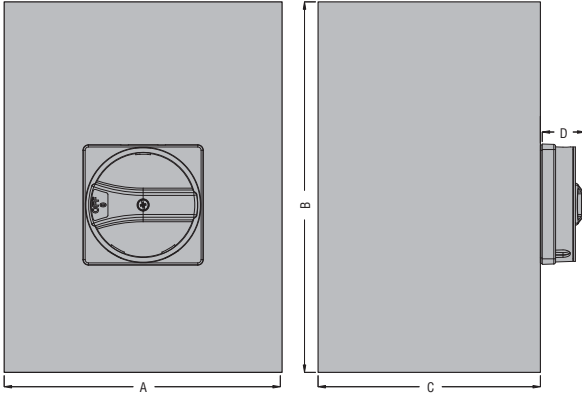
GAZ125... - GAZ160... - GAZ080 UL...GAZ125...UL - GAZ3...



11 Switch disconnectors

Dimensions [mm(in)]

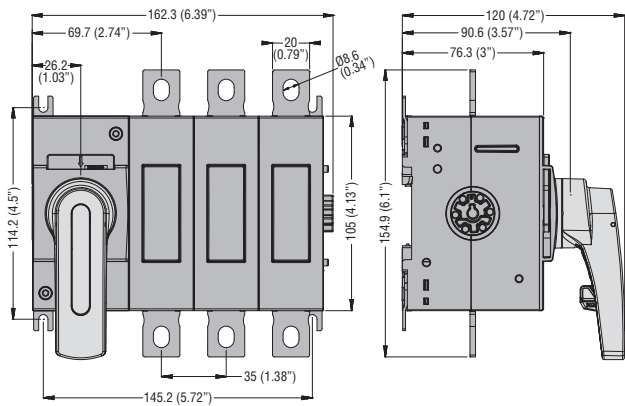
SWITCH DISCONNECTORS AND CHANGEOVER SWITCHES IN METAL AND STAINLESS STEEL AISI 304 ENCLOSURES



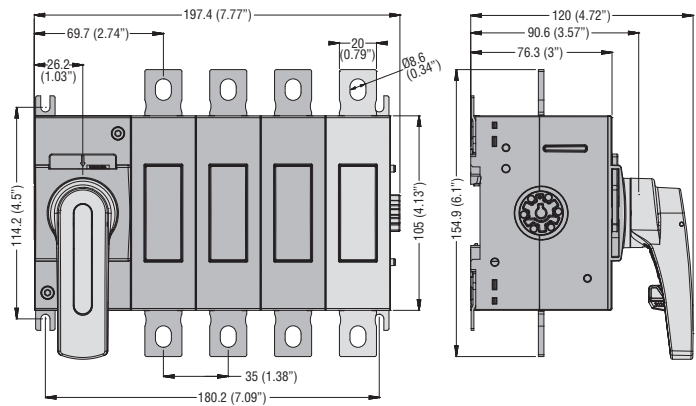
Type	A	B	C	D
GAZM016...GAZM100...	150 (5.90")	200 (7.87")	120 (4.72")	23 (0.90")
GAZM125...GAZM160...	200 (7.87")	300 (11.81")	120 (4.72")	23 (0.90")
GAZM016 E...GAZM063SA E...	150 (5.90")	200 (7.87")	120 (4.72")	35 (1.38")
GAZM063 ET6...GAZM160 ET6...	200 (7.87")	300 (11.81")	120 (4.72")	35 (1.38")
GAZM063 ET8...GAZM160 ET8...	300 (11.81")	400 (15.75")	120 (4.72")	35 (1.38")
GAZS016...GAZS100...	150 (5.90")	200 (7.87")	120 (4.72")	23 (0.90")
GLZM0160...GLZM0315...	300 (11.81")	400 (15.75")	250 (9.84")	45,7 (1.80")
GLZM0160 E...GLZM0315 E...	300 (11.81")	400 (15.75")	250 (9.84")	45,7 (1.80")

GL SERIES 160A TO 315A SWITCH DISCONNECTORS

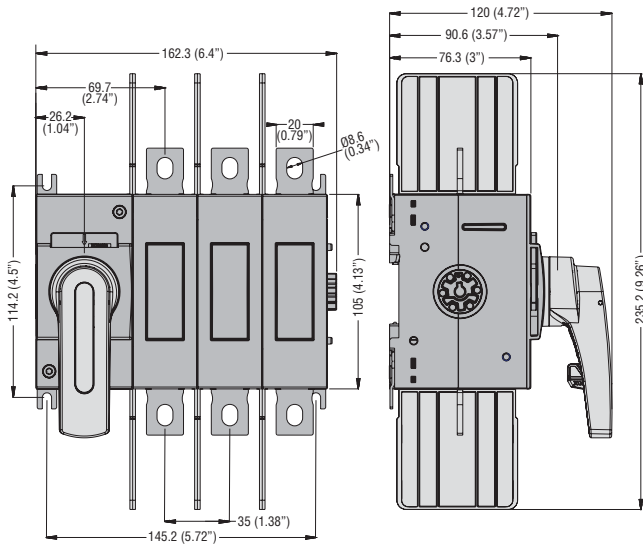
GL0160C1...GL0315C1



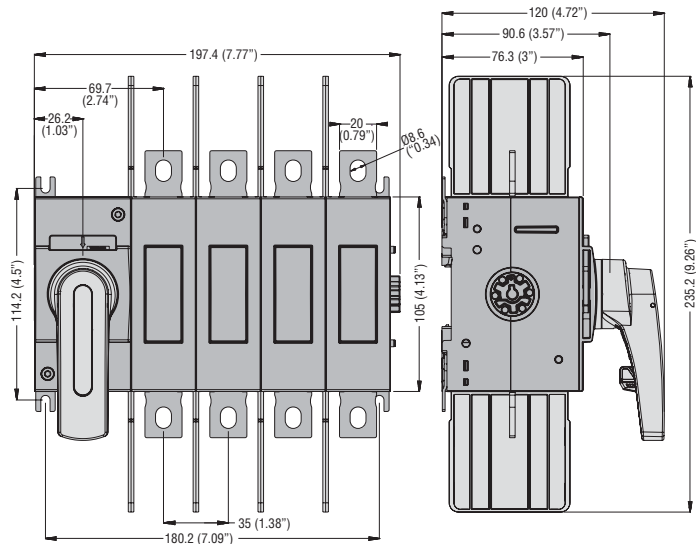
GL0160C1...GL0315C1 with add-on fourth pole GLX42 0315



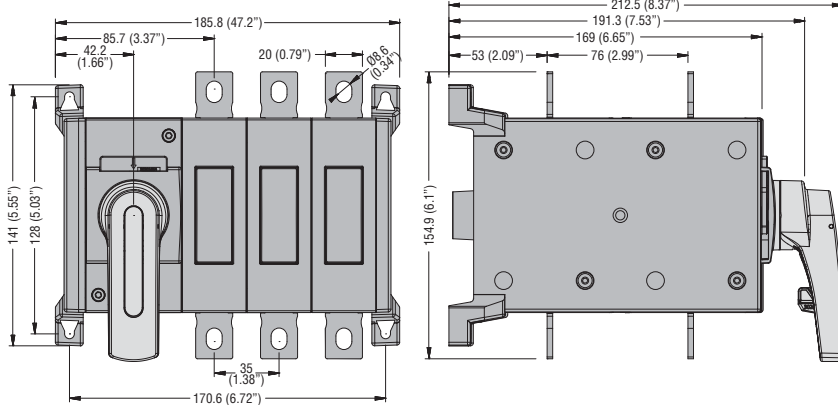
GL0200 C1UL



GL0200 C1UL with add-on fourth pole GLX42 0200UL



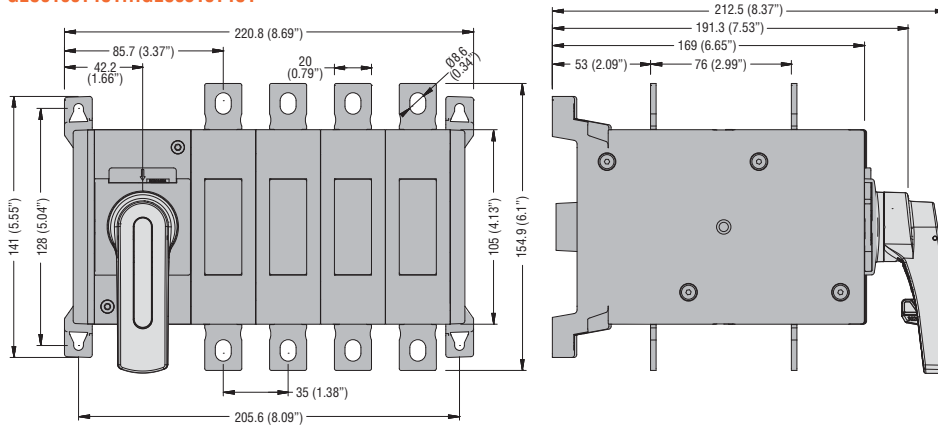
GLC0160C1...GLC0315C1



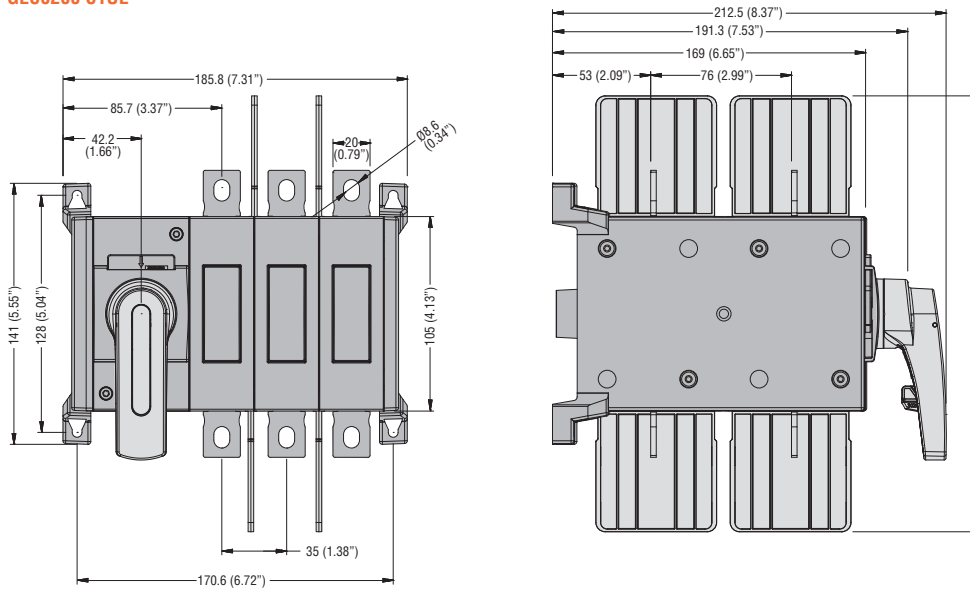
11 Switch disconnectors

Dimensions [mm(in)]

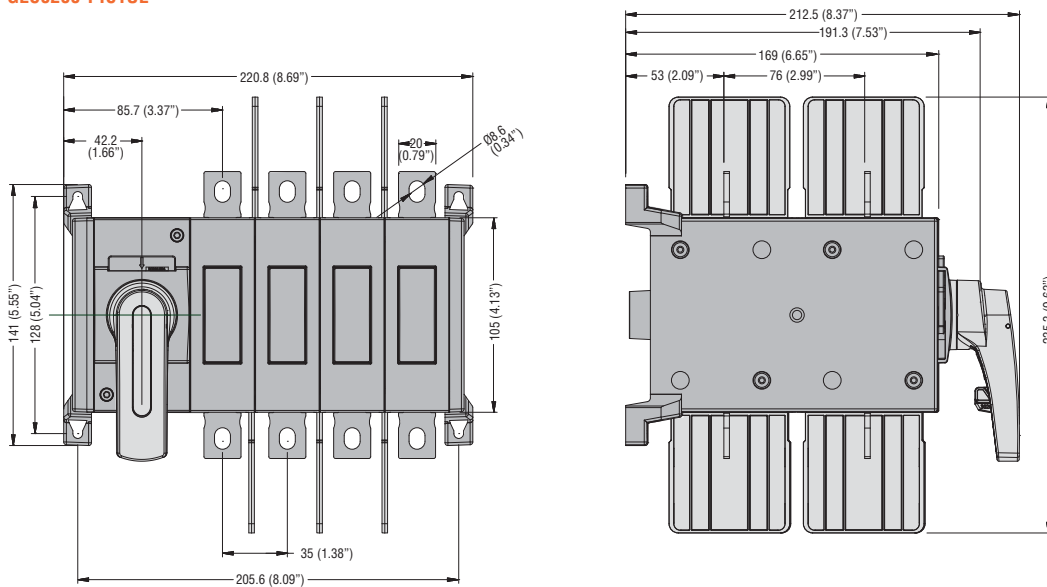
GLC0160T4C1...GLC0315T4C1



GLC0200 C1UL



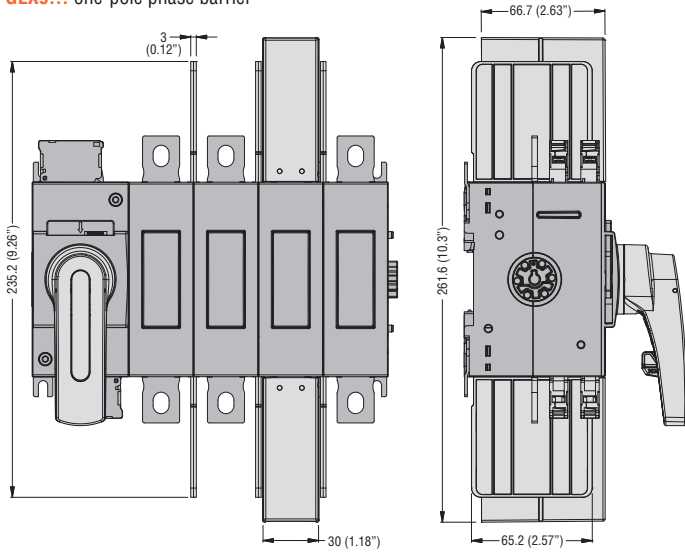
GLC0200 T4C1UL



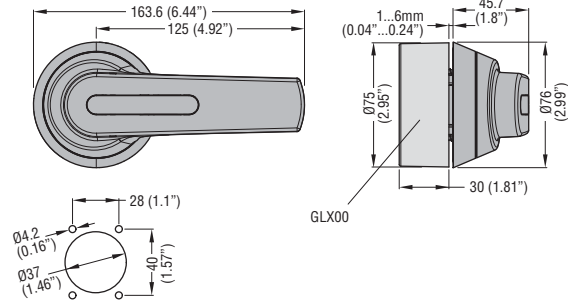
11 Switch disconnectors

Dimensions [mm(in)]

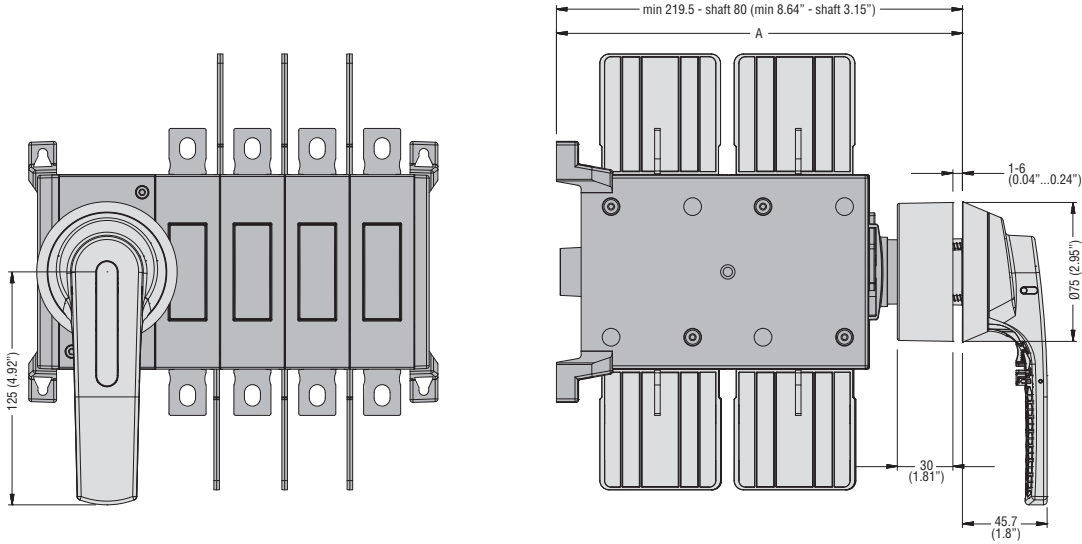
GLX8... terminal covers
GLX9... one-pole phase barrier



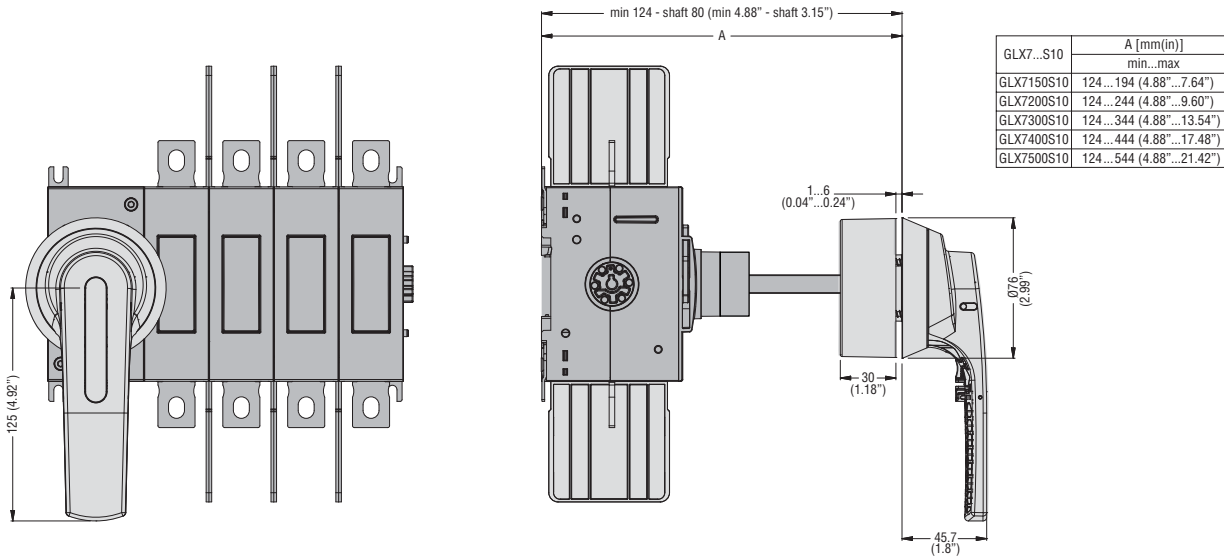
GLX61 - GLX61B - GLX61CB handles



GLX00 shaft alignment ring



GLX7... shaft extensions for door coupling handles

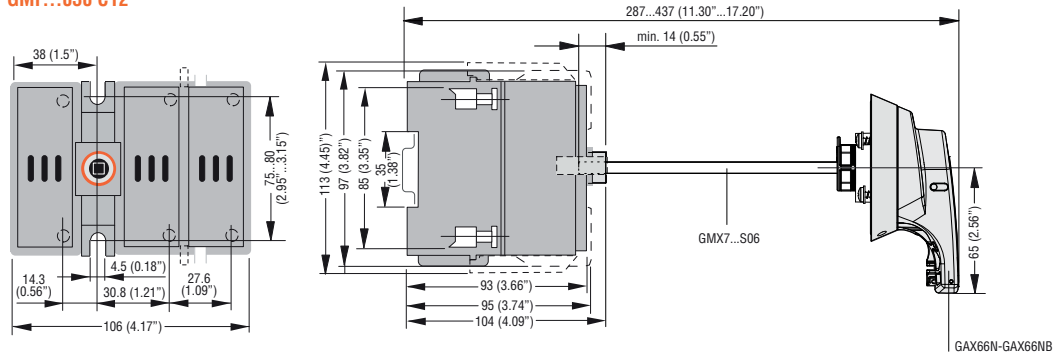


11 Switch disconnectors

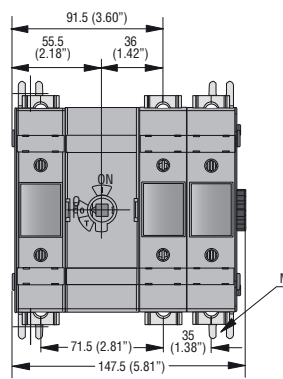
Dimensions [mm(in)]

GM SERIES 30A TO 800A SWITCH DISCONNECTORS

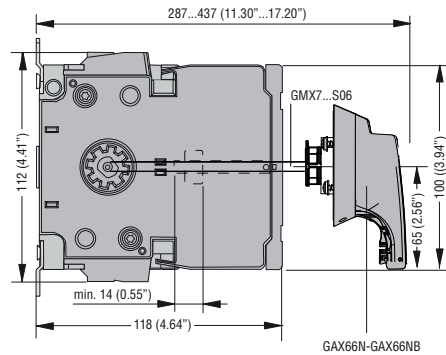
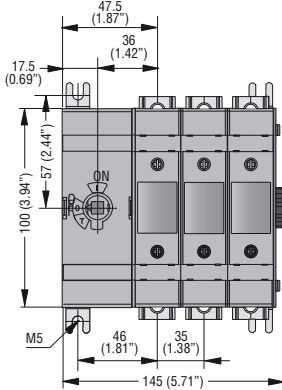
GMF...030 C12



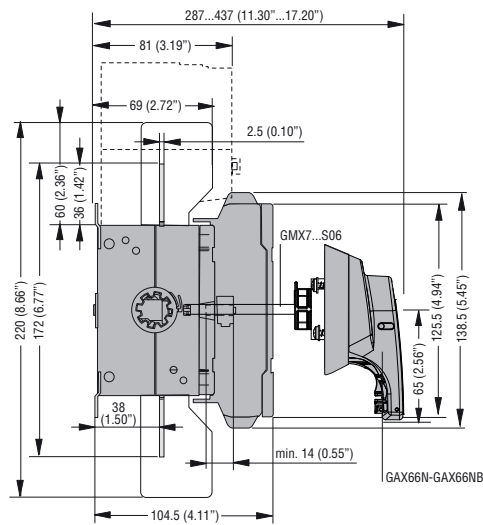
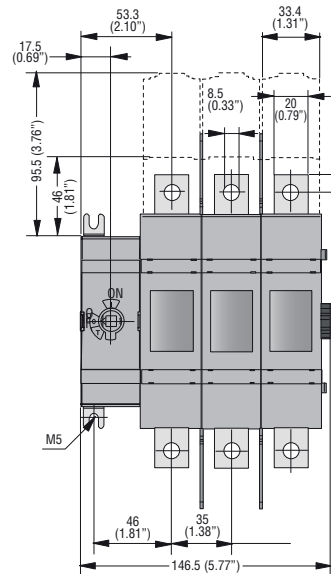
GMF J060 C12



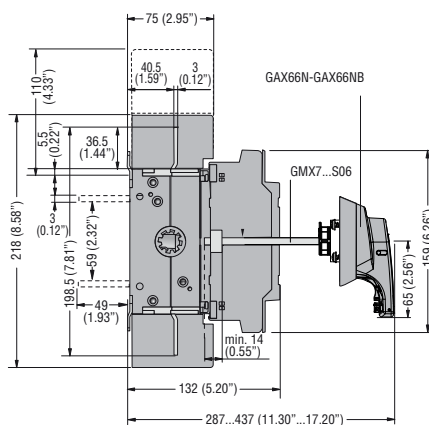
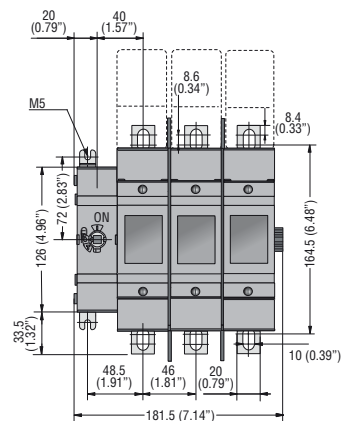
GMF J060 C03



GMF J100 C03



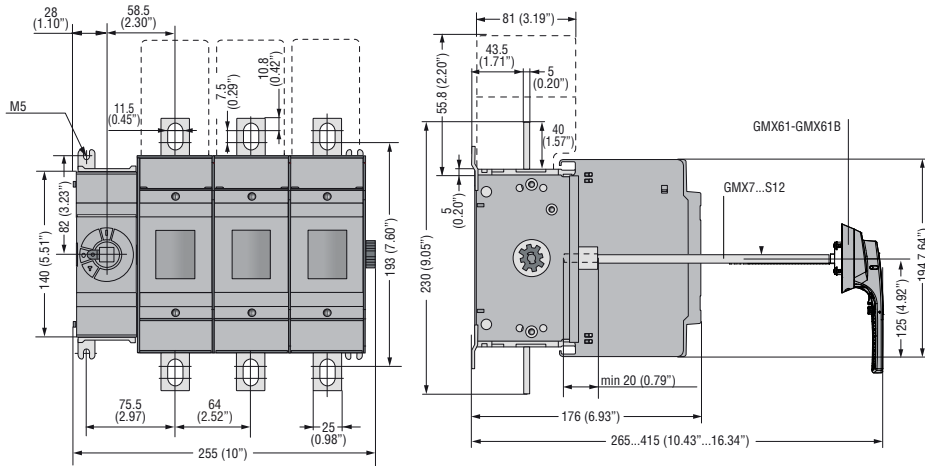
GMF J200 C03



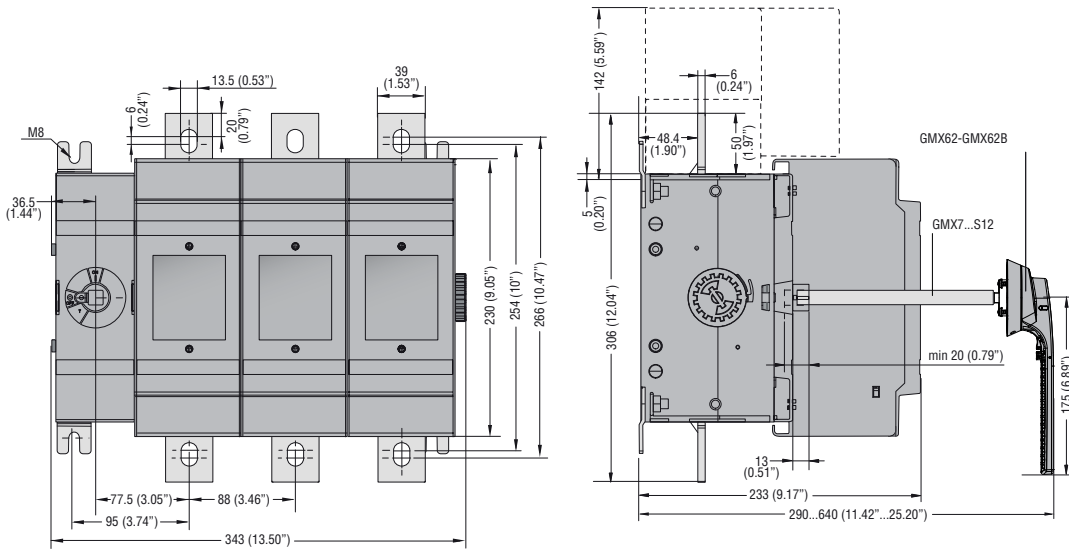
11 Switch disconnectors

Dimensions [mm(in)]

GMF J400 C03



GMF J600 C03 - GMF L800 C03

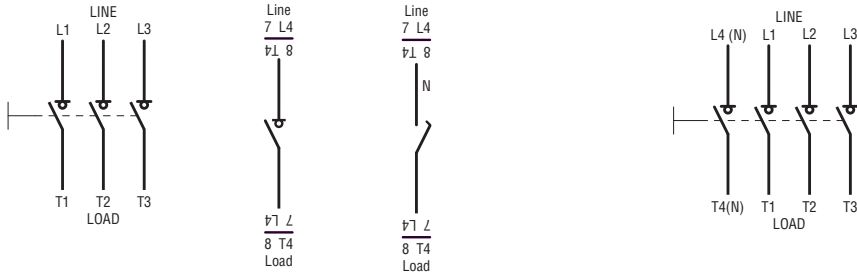


OPEN AND ENCLOSED GA SERIES 16A TO 160A SWITCH DISCONNECTORS

Three-pole disconnectors
GA016...GA160A/C
GAZ016...GAZ160/B
GAZ016UL...GAZ125UL
GAZM016...GAZM160/B
GAZS016...GAZS100/B

Fourth pole
GAX42... **GAX41...**

Four-pole disconnectors
GAZ016 T4...GAZ160 T4/B
GAZ016 T4UL...GAZ125 T4UL
GAZM016 T4...GAZM160 T4/B



ADD-ON BLOCKS AND ACCESSORIES

Auxiliary contacts
GAX10...

GAX11... - GAX12...

Neutral terminal
GAX31... - GAX32...

Earth/Ground terminal
GAX33... - GAX34...

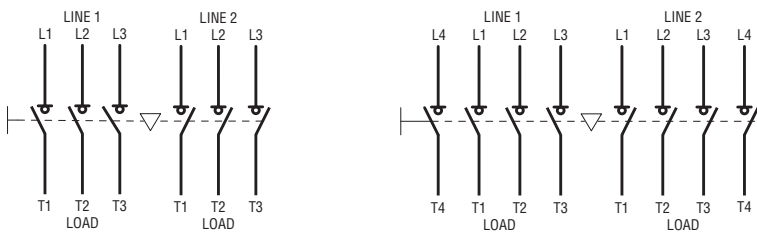
Fuse holder
GAX39 1 - GAX39 1UL



ENCLOSED CHANGEOVER SWITCHES

Three-pole **GAZ...ET6**

Four-pole **GAZ...ET8**

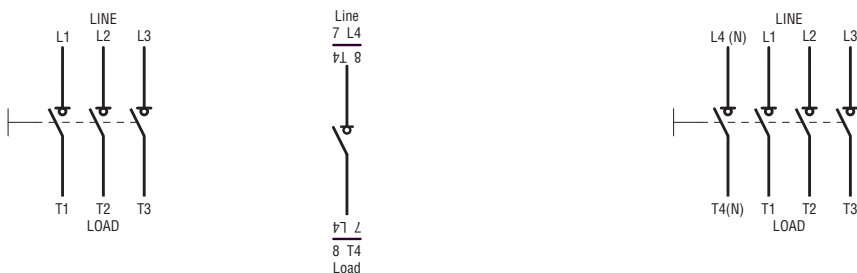


OPEN AND ENCLOSED GL SERIES 160 TO 315A SWITCH DISCONNECTORS

Three-pole
GL0160...GL0315...
GLZM0160...GLZM0315/B

Fourth pole
GLX42...

Four-pole
GLZM0160 T4...GLZM0315 T4/B



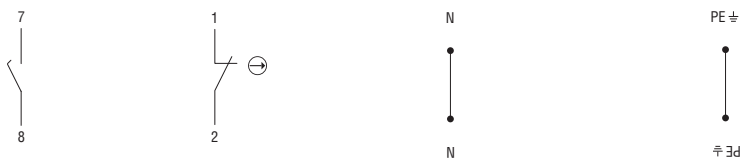
ADD-ON BLOCKS AND ACCESSORIES

Auxiliary contacts
GLX10 10EA

GLX10 01

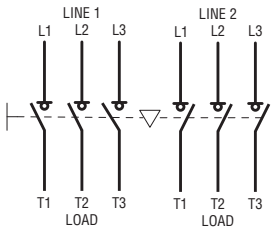
Neutral terminal
GLX3 00

Earth/Ground terminal
GLX3 01

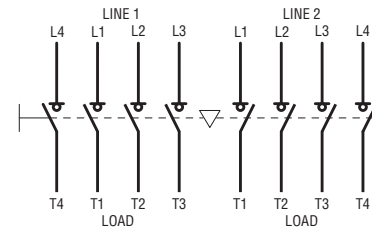


OPEN AND ENCLOSED GL SERIES 160 TO 315A CHANGEOVER SWITCHES

Three-pole
GLC...C1
GLZM...ET6

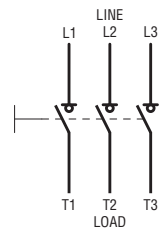


Four-pole
GLC...T4C1
GLZM...ET8

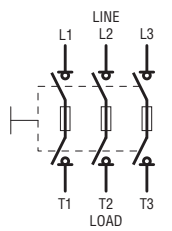


GE SERIES 50A TO 1600A SWITCH DISCONNECTORS

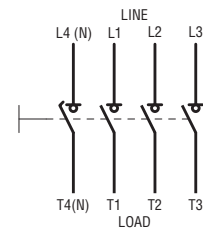
Three-pole
GE0160 - GE1600
GE0160 P



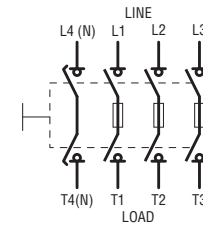
Three-pole with fuse holder
GE0050 F - GE0125 F
GE0160 N - GE0800 N
GE0160 B - GE0800 B



Four-pole
GE0160 T4 - GE1600 T4
GE0160 T4P

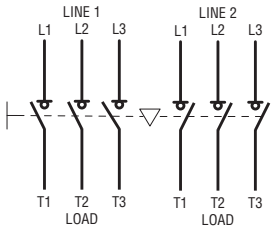


Four-pole with fuse holder
GE0050 FT4 - GE0125 FT4
GE0160 NT4 - GE0800 NT4
GE0160 BT4 - GE0800 BT4

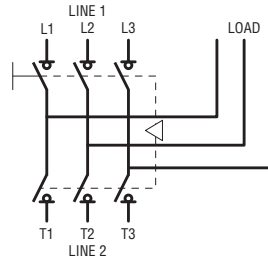


GE SERIES 160 TO 1250A CHANGEOVER SWITCHES

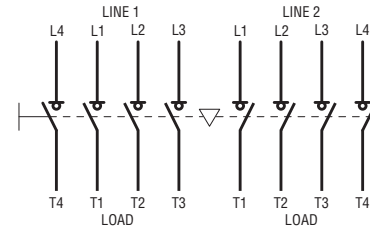
Three-pole
GE0200 E - GE0200 E



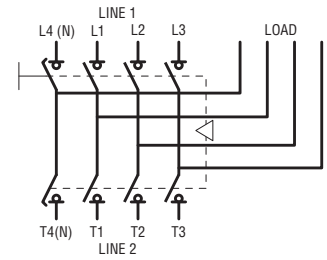
GE0201 E - GE1600 E



Four-pole
GE0160 ET4 - GE0200 ET4



GE0201 ET4 - GE1600 ET4

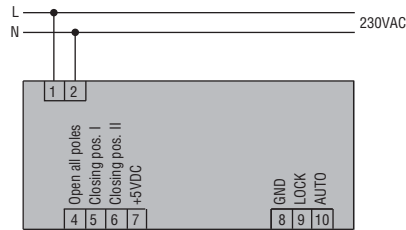


ADD-ON BLOCKS AND ACCESSORIES

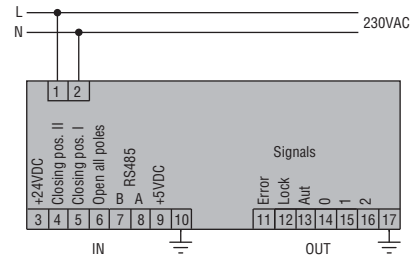
Auxiliary contacts
GEX10 11 - GEX10 11M - GEX10 11N



Motorised control unit
GEX69 0C - GEX69 1C - GEX69 2C

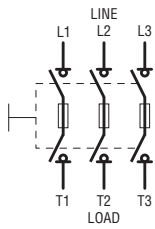


Motorised control unit
GEX69 3C - GEX69 4C



GM SERIES 30A TO 800A SWITCH DISCONNECTORS

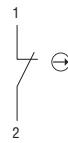
GM...030 .. GML800



Auxiliary contacts
GMX10 10



GMX10 01

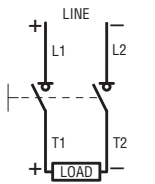


GMX10 11

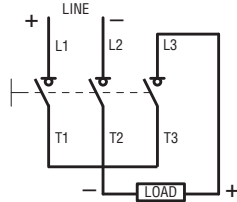


SWITCH DISCONNECTORS FOR PHOTOVOLTAIC APPLICATIONS GA...D (poles in series to wire)

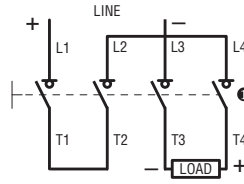
One-line control
2 poles in series



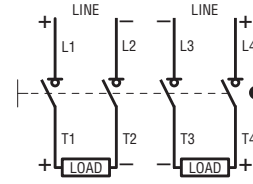
3 poles in series



4 poles in series



Two-lines control
2+2 poles in series

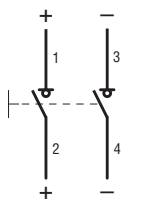


❶ The positive pole fitted on the right side of the disconnector can also be fitted on the left side; the connections must be changed in consequence.

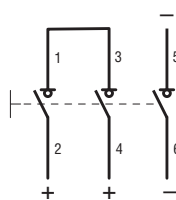
SWITCH DISCONNECTORS FOR PHOTOVOLTAIC APPLICATIONS GD... (jumpers supplied as standard)

One-line control

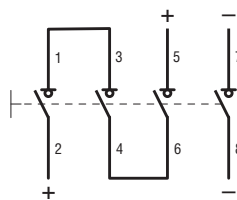
GD025 AT2



GD032 AT3



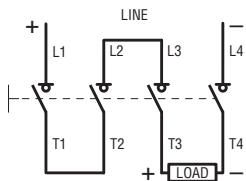
GD040 AT4



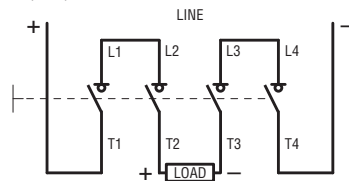
SWITCH DISCONNECTORS FOR PHOTOVOLTAIC APPLICATIONS GE...DT4 (poles in series to wire)

One-line control

4 poles in series



4 (2+2) poles in series



11 Switch disconnectors

Technical characteristics

GA series 16A to 160A - Switch disconnectors

TYPE	3-pole	GA016...	GA025...	GA032...	GA040...	GA063 SA	GA030...	GA063...	GA080...	GA100...	GA125...	GA160A	
	4th pole	GAX42 040...	GAX42 040...	GAX42 040...	GAX42 040...	GAX42 063SA	GAX42 063...	GAX42 063...	GAX42 080...	GAX42 100...	GAX42 125...	GAX42 160A	
CONTACT CHARACTERISTICS													
IEC conventional free air thermal current I _{th} (≤40°C)	A	16	25	32	40	63	30	63	80	100	125	160	
IEC rated insulation voltage U _i	V	1000											
IEC rated impulse withstand voltage U _{imp}	kV	8											
IEC rated operational current I _e													
AC21A	400V	A	16	25	32	40	63	30	63	80	100	125	160
	500V	A	16	25	32	40	63	30	63	80	100	125	160
	690V	A	16	25	32	40	63	30	63	80	100	125	160
AC22A	400V	A	16	25	32	40	45	30	63	80	100	125	125
	500V	A	16	25	32	40	45	30	63	80	100	125	125
	690V	A	16	25	32	40	45	30	63	80	100	125	125
AC23A	400V	A	16	25	32	40	45	30	63	80	100	125	125
	500V	A	16	25	25	25	25	30	63	63	80	100	100
	690V	A	16	25	25	25	25	30	47	47	47	47	47
Power dissipation	W/pole	0.2	0.4	0.6	1.0	2.9	0.4	1.6	2.6	4.0	6.3	12	
IEC rated operational power													
AC23A	400V	kW	7.5	11	15	18.5	22	15	30	45	55	55	
	690V	kW	11	22	22	22	22	30	45	45	45	45	
IEC reactive power for control of capacitors 400V	kvar	7.5	10	12.5	15	15	12.5	25	30	40	50	50	
Short circuit protection													
Rated short-time current (1s) I _{cs}	A rms	800					2500						
Conditional short-circuit current	kA rms	50											
With fuse class gG	A	16	25	32	40	63	63	63	80	100	125	160	
Making capacity AC23A 400V	A	400				450		1250					
Breaking capacity AC23A 400V	A	320				360		1000					
Mechanical life	cycles	100,000				100,000		30,000					
Electrical life (AC21A)	cycles	100,000				15,000		30,000					1,500
Terminals	type	Pillar terminal											
	A mm	5.6				12.4							
	B mm	6.5				10.4							
	Screw	M4				M8							
	Tool	Phillips 2				Metric Allen key 4							
Tightening torque	Nm	1.8...2				5...6							
	lbin	16...18				45...54							
Conductor section min...max	mm ²	0.75...16				4...70							
	AWG	18...6				12...1							
AMBIENT CONDITIONS													
Temperature	Operating	°C	-25...+55										
	Storage	°C	-40...+70										
Maximum altitude	m	3000											
Mounting position	Normal	Vertical											
	Admissible	Any											
Fixing	Screw or 35mm DIN rail (IEC/EN 60715)												



TECHNICAL DATA ACCORDING TO UL/CSA RATINGS

TYPE	3-pole	GA016...	GA025...	GA032...	GA040...	GA063 SA	GA030...	GA063...	GA080...	GA100...	GA125...	GA160A	
	4th pole	GAX42 040...	GAX42 040...	GAX42 040...	GAX42 040...	GAX42 063SA	GAX42 063...	GAX42 063...	GAX42 080...	GAX42 100...	GAX42 125...	GAX42 160A	
Compliance		UL60947-4-1; CSA C22.2 n°60947-4-1					UL98; CSA C22.2 n°4						—
General purpose current ratings	A	16	25	32	40	60	30	60	100	100	100	—	
Max operating voltage	V	600											
Horsepower ratings/motor FLA current three-phase	240V	HP/A	5/15.2	7.5/22	10/28	15/42	15/42	10/28	20/54	25/68	30/80	30/80	—
	480V	HP/A	10/14	15/21	20/27	20/27	30/40	20/27	40/52	40/52	50/65	60/77	—
	600V	HP/A	10/11	20/22	20/22	25/27	30/32	30/32	40/41	40/41	50/52	60/62	—
Short circuit ratings	KA rms	5					50						—
With fuse	type/A	RK5/30	RK5/30	RK5/35	RK5/45	RK5/45	J/60	J/60	J/100	J/100	J/100	—	

11 Switch disconnectors

Technical characteristics
GL series 160A to 315A - Switch disconnectors

TECHNICAL DATA ACCORDING TO IEC/EN 60947

TYPE	3-pole	GL0160...	GL0200... / GL0200...UL	GL0250...	GL0315...	
	4-pole	GLX42 0315				
CONTACT CHARACTERISTICS						
IEC conventional free air thermal current I _{th} (≤40°C)	A	160	200	250	315	
IEC rated insulation voltage U _i	V	1000				
IEC rated impulse withstand U _{imp}	kV	12				
IEC rated operational current I _e						
AC21A	400V	A	160	200	250	315
	500V	A	160	200	250	315
	690V	A	160	200	250	315
AC22A	400V	A	160	200	250	315
	500V	A	160	200	250	315
	690V	A	160	200	250	315
AC23A	400V	A	160	200	250	250
	500V	A	160	200	250	250
	690V	A	160	200	250	250
Power dissipation	W/pole	3.2	4	6.5	6.5	
IEC rated operational power						
AC23A	400V	kW	90	110	140	140
	690V	kW	144	200	250	250
IEC reactive power for control of capacitors 400V	kvar	80	100	115	145	

SHORT CIRCUIT PROTECTION

Rated short-time current (1s) I _{cs}	kA rms	8			
Conditional short-circuit current	kA rms	100			
With fuse class gG	A	160	200	250	315
Making capacity AC23A 400V	A	1600	2000	2500	2500
Breaking capacity AC23A 400V	A	1280	1600	2000	2000
Mechanical life	cycles	20000			
Terminal for busbars	mm	M8 x 25			
Tightening torque	Nm	15...22			
	lbin	132...194			
Conductor section min.	mm ²	70	95	120	185
	AWG/ Kcmil	00	000	250	400

AMBIENT CONDITIONS

Temperature	Operating	°C	-25...+55		
	Storage	°C	-40...+70		
Maximum altitude	m	3000			
Mounting position	Normal	Vertical			
	Admissible	Any			
Fixing	By screw or on 35mm DIN rail (IEC/EN 60715)				

TECHNICAL DATA ACCORDING TO UL/CSA RATINGS

TYPE	3-pole	—	GL0200...UL	—	—
	4-pole	—	GLX42 0200UL	—	—
Compliance		—	UL98 CSA C22.2 N°4	—	—
General purpose current ratings	A	—	200	—	—
Max operating voltage	V	—	600	—	—
Horsepower ratings /motor FLA current three-phase	240V	HP/A	75/192	—	—
	480V	HP/A	150/180	—	—
	600V	HP/A	200/192	—	—
		KA rms	—	200	—
Short circuit ratings	KA rms	—	200	—	—
With fuse class J	A	—	200	—	—
Terminal kit lugs		—	GLX5...	—	—
Minimum enclosure dimensions at rated current	mm	—	400 x 250 x 150	—	—

11 Switch disconnectors

Technical characteristics
GL series 160A to 315A - Changeover switches

TYPE	3-pole		GLC0160...	GLC0200...	GLC0250...	GLC0315...
	4-pole		GLC0160T4C1	GLC0200T4C1	GLC0250T4C1	GLC0315T4C1
CONTACT CHARACTERISTICS						
IEC conventional free air thermal current I _{th} (≤40°C)	A		160	200	250	315
IEC rated insulation voltage U _i	V		1000			
IEC rated impulse withstand U _{imp}	kV		12			
IEC rated operational current I _e						
AC31B	400V	A	160	200	250	315
	500V	A	160	200	250	315
	690V	A	160	200	250	315
AC32B	400V	A	160	200	250	315
	500V	A	160	200	250	315
	690V	A	160	200	250	315
AC33B	400V	A	160	200	250	250
	500V	A	160	200	250	250
	690V	A	160	200	250	250
AC21A	400V	A	160	200	250	315
	500V	A	160	200	250	315
	690V	A	160	200	250	315
AC22A	400V	A	160	200	250	315
	500V	A	160	200	250	315
	690V	A	160	200	250	315
AC23A	400V	A	160	200	250	250
	500V	A	160	200	250	250
	690V	A	160	200	250	250
DC21B	600V	A	160	200	250	250
Power dissipation	W/pole	3.2	4	6.5	6.5	
IEC rated operational power						
AC23A	400V	kW	90	110	140	140
	690V	kW	144	200	250	250
IEC reactive power for control of capacitors 400V	kvar	80	100	115	145	
SHORT CIRCUIT PROTECTION						
Rated short-time current (1s) I _{cw}	kA rms	8				
Conditional short-circuit current	kA rms	100				
With fuse class gG	A	160	200	250	315	
Making capacity AC23A 400V	A	1600	2000	2500	2500	
Breaking capacity AC23A 400V	A	1280	1600	2000	2000	
Mechanical life	cycles	10000				
Terminal for busbars	mm	M8 x 25				
Tightening torque	Nm	15...22				
	lbin	132...194				
Conductor section min.	mm ²	70	95	120	185	
	AWG/ Kcmil	00	000	250	400	
AMBIENT CONDITIONS						
Temperature	Operating	°C				
	Storage	°C				
Maximum altitude	m	3000				
Mounting position	Normal	Vertical				
	Admissible	Any				
Fixing	By screw					

11 Switch disconnectors

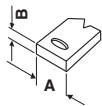
Technical characteristics

GE series 160 to 1600A - Three and four-pole

TYPE	3-pole	GE0160P GE0160	GE0200	GE0250	GE0251	GE0315	GE0400	GE0500	GE0630	GE0800	GE1000	GE1250	GE1600
	4-pole ^⑥	GE0160 T4P GE0160 T4	GE0200 T4	GE0250 T4	GE0251 T4	GE0315 T4	GE0400 T4	GE0500 T4	GE0630 T4	GE0800 T4	GE1000 T4	GE1250 T4	GE1600 T4

CONTACT CHARACTERISTICS

IEC conventional free air thermal current I _{th} (≤40°C)	A	160	200	250	250	315	400	500	630	800	1000	1250	1600	
IEC rated insulation voltage U _i	V	1000												
IEC rated impulse withstand U _{imp}	kV	8						12						
IEC rated operational current I _e														
AC21A	400V	A	160	200	200	250	315	400	500	630	800	1000	1250	1600
	500V	A	160	200	200	250	315	400	500	630	800	1000	1250	1600
	690V	A	160	180	180	200	250	250	500	630	800	1000	1000	1600
AC22A	400V	A	160	200	200	250	315	400	500	630	800	1000	1250	1600
	500V	A	160	200	200	250	315	400	500	630	800	1000	1000	1250
	690V	A	125	160	160	160	200	200	400	500	500	630	630	1000
AC23A	400V	A	160	160	160	250	315	400	500	630	800	1000	1000	1000
	500V	A	125	125	125	200	250	315	400	500	500	800	800	900
	690V	A	80	80	80	160	160	160	250	315	315	500	500	630
Power dissipation	w/pole	4	6	9	2,5	6,5	10,5	22	35	56	50	78	128	
IEC reactive power for control of capacitors 400V senφ=0,65	kvar	72	72	72	112	142	180	225	284	284	360	360	450	
IEC rated operational power														
AC23A	400V	kW	90	90	90	138	174	220	220	349	443	443	554	
	690V	kW	75	75	75	153	153	153	239	300	300	478	600	
Short circuit protection														
Rated short-time current (1s) I _{cs}	kA rms	7			12			16			25		50	
Conditional short-circuit current ^①	kA rms	100												
With fuse class gG	A	160	200	250		315	400	500	630	800	1000	1250	2x800	
Making capacity AC23A 400V	A	1600			2500	3150	4000	5000	6300		8000		10000	
Breaking capacity AC23A 400V	A	1280			2000	2520	3200	4000	5000		6400		8000	
Mechanical life	cycles	30,000			20,000			10,000						
Electrical life (AC23A 400V)	cycles	1,000						500						
Terminals	type	Lug terminal ^③ or bars												
	A mm	18	26		25		25	30		40		60		
	B mm	3			4			5			8		10	
	screw	M8	M10						M14		M14			
Tightening torque	Nm	13 ^④	18				24				45		55	
	lbft	10 ^④	13				18				33		40	
Max. conductor section	mm ²	95	120		185			2x185	2x240		2x300		—	
Max. bar size (thickness-width)	mm	5-25 ^⑤	5-30		7-25			6-40	2x 5-40		2x 10-50		2x 7-80	



AMBIENT CONDITIONS

Temperature	Operating	°C	-25...+55										
	Storage	°C	-40...+70										
Maximum altitude		m	3000										
Mounting position	Normal		Vertical										
	Admissible		Any										
Fixing			Screw										

① With protection fuse limiting peak current and specific through energy.

② Not suitable for types GE0160 P and GE0160 T4P.

③ Types GE...P have hex terminals IP20.

④ 4Nm/3lbft only for types GE...P.

⑤ The 4-pole types (3P+N) have early-make late-break neutral pole.

11 Switch disconnectors

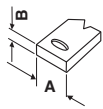
Technical characteristics

GE series 50 to 800A - Three and for-pole with fuse holder

TYPE	NFC	3-pole	GE0050 F	GE0125 F	-	-	-	-	-	-	-	-
		4-pole [Ⓢ]	GE0050 FT4	GE0125 FT4	-	-	-	-	-	-	-	-
BS	3-pole	-	-	GE0160 B	-	GE0200 B	GE0250 B	GE0315 B	GE0400 B	GE0630 B	GE0800 B	
	4-pole [Ⓢ]	-	-	GE0160 BT4	-	GE0200 BT4	GE0250 BT4	GE0315 BT4	GE0400 BT4	GE0630 BT4	GE0800 BT4	
NH	3-pole	-	-	GE0160 N	GE0161 N	-	GE0250 N	-	GE0400 N	GE0630 N	GE0800 N	
	4-pole [Ⓢ]	-	-	GE0160 NT4	GE0161 NT4	-	GE0250 NT4	-	GE0400 NT4	GE0630 NT4	GE0800 NT4	

CONTACT CHARACTERISTICS

IEC conventional free air thermal current I _{th} (≤40°C)	A	50	125	160	160	200	250	315	400	630	800	
IEC rated insulation voltage U _i	V	800	800	800				1000				
IEC rated impulse withstand U _{imp}	kV	8	8	8				12				
IEC rated operational current I _e												
AC21A	400V	A	50	125	160	160	200	250	315	400	630	800
	500V	A	50	125	160	160	200	250	315	400	630	800
	690V	A	50	125	160	160	200	250	315	400	630	630
AC22A	400V	A	50	125	160	160	200	250	315	400	630	800
	500V	A	50	125	160	160	200	250	315	400	630	800
	690V	A	50	100	125	160	200	250	315	400	630	630
AC23A	400V	A	50	125	160	160	200	250	315	400	630	630
	500V	A	50	125	125	160	200	250	315	400	630	630
	690V	A	50	80	100	125	160	200	250	315	400	400
Power dissipation	NFC	W/pole	4.7	12.5	—	—	—	—	—	—	—	—
	BS	W/pole	—	—	12	—	13	12	24	29	44	63
	NH	W/pole	—	—	11.8	13.5	—	18.7	—	30	48	57
IEC reactive power for control of capacitors 400V	kvar	18	52	60	60	75	115	150	200	250	325	
IEC rated operational power AC23A	400V	kW	25	65	90	90	110	132	185	220	355	355
	690V	kW	42	80	90	110	132	160	200	250	370	370
Short circuit protection	Spec. through energy I ² t	kA ² s	0.076	0.19	0.19	0.478	0.478	1.6	1.6	1.6	4.6	4.6
	Conditional short circuit current	kA rms	50	50	100 [Ⓛ]	100	100	100	100	100	100	100
Making capacity AC23A 400V	A	500	1250	1600		2000	2500	3150	4000	6300		
Breaking capacity AC23A 400V	A	400	1000	1280		1600	2000	2600	3200	5100		
Mechanical life	cycles	10,000	10,000	10,000				5,000				
Electrical life (AC23A 400V)	cycles	1,500	1,500	1,000				500				
Terminals	type			Lug terminal or bars								
	A mm	—	—	20	25		30		35	40	50	
	B mm	—	—	3			4		5	6		
	screw	M6	M6	M8		M10			M12	4x M8		
Tightening torque	Nm	3	4	13		24			45	13		
	lbft	2.2	3	10		18			33	10		
Max. conductor section	mm ²	35	93	95	120		240		2x185		2x240	
Max. bar size (thickness-width)	mm	—	—	3-25	5-25		6-40		2x 7-50		2x 7-50	



AMBIENT CONDITIONS

Temperature	Operating	°C	-25...+55									
	Storage	°C	-40...+70									
Maximum altitude	m	3000										
Mounting position	Normal	Vertical										
	Admissible	Any										
Fixing	Screw											

[Ⓛ] 50kA rms for types GE0160 N and GE0160 NT4.

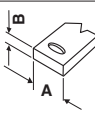
[Ⓢ] Types GE...F have hex terminals IP20.

[Ⓢ] The 4-pole types (3P+N) have early-make late-break neutral pole..

11 Switch disconnectors

Technical characteristics

GE series 160A to 1600A - Three and four-pole changeover switches

TYPE	3-pole	GE0160 E	GE0200 E	GE0201 E	GE0250 E	GE0315 E	GE0400 E	GE0500 E	GE0630 E	GE0800 E	GE1000 E	GE1250 E	GE1600 E	
	4-pole ^②	GE0160 ET4	GE0200 ET4	GE0201 ET4	GE0250 ET4	GE0315 ET4	GE0400 ET4	GE0500 ET4	GE0630 ET4	GE0800 ET4	GE1000 ET4	GE1250 ET4	GE1600 ET4	
CONTACT CHARACTERISTICS														
IEC conventional free air thermal current I _{th} (≤40°C)	A	160	200	250	315	400	500	630	800	1000	1250	1600		
IEC rated insulation voltage U _i	V	1000						1000						
IEC rated impulse withstand U _{imp}	kV	8						12						
IEC rated operational current I _e														
AC21A	400V	A	160	200	200	250	315	400	500	630	800	1000	1250	1600
	500V	A	160	200	200	250	315	400	500	630	800	1000	1250	1600
	690V	A	160	200	200	250	315	400	500	630	800	1000	1250	1600
AC22A	400V	A	160	200	200	250	315	400	500	630	800	1000	1250	1600
	500V	A	160	200	200	250	315	400	500	630	800	1000	1250	1250
	690V	A	125	160	160	200	250	315 ^③	400	500	630 ^③	800	1000 ^③	1000
AC23B	400V	A	160	160	160	180	200	250	400	500	630	1000	1000	1000
	500V	A	125	125	125	150	160	200	250	315	400	800	900	900
	690V	A	80	80	80	100	125	160	250	250	315	630	630	630
Power dissipation	W/pole	4	6	8	8,5	13,5	22	28	44,5	72	76	118	128	
IEC reactive power for control of capacitors 400V	kvar	72	72	83	104	131	166	208	262	333	415	415	450	
IEC rated operational power AC23A	400V	kW	89	89	100	100	125	125	200	200	315	500	525	550
	690V	kW	76	76	69	86	108	138	173	216	272	544	575	600
Short circuit protection														
Rated short-time current (1s) I _{cw}	kA rms	7	7	8				13				25		35
Conditional short-circuit current ^①	kA rms	100	100	100						72				
With fuse class gG	A	160	200	250		315	400	500	630	800	1000	1250	2x800	
Making capacity AC23A 400V	A	1600	1600	3150			4000		6300		8000	10000	10000	10000
Breaking capacity AC23A 400V	A	1280	1280	2520			3200		5040		6400	8000	8000	8000
Mechanical life	cycles	30,000	30,000	10,000						10,000				
Electrical life (AC22A 400V)	cycles	1,000	1,000	1,000						500				
Terminals 	type	Lug terminal or bars												
	A mm	18	26	25			35	40			50	60		
	B mm	3	3						5			6	10	
	screw	M8	M10						M12			M14	M14	
Tightening torque	Nm	13	24						45			55		
	lbft	10	18						33			40		
Max. conductor section	mm ²	95	120	240			2x240			-	-	-		
Max. bar size (thickness-width)	mm	4-13	13-18	2x 5-30			2x 6-45			2x 10-60		2x 7-80		
AMBIENTAL CONDITIONS														
Temperature	Operating	°C	-25...+55											
	Storage	°C	-40...+70											
Maximum altitude	m	3000												
Mounting position	Normal	Vertical												
	Admissible	Any												
Fixing	Screw													

① With protection fuse limiting peak current and specific through energy.

② The 4-pole types (3P+N) have early-make late-break neutral pole.

③ Value in AC22B.

11 Switch disconnectors

Technical characteristics

GM series 30A to 800A - Three-pole with fuse holder (UL98)



TECHNICAL DATA ACCORDING TO IEC/EN 60947

TYPE	3-pole	GMF...030...	GMFJ060...	GMFJ100C03	GMFJ200C03	GMFJ400C03	GMFJ600C03	GMFL800C03	
CONTACT CHARACTERISTICS									
IEC conventional free air thermal current I _{th} (≤40°C)	A	32	63	160	200	400	630	800	
IEC rated insulation voltage U _i	V	1000							
IEC rated impulse voltage withstand U _{imp}	kV	12							
IEC rated operational current I _e									
AC21A	400V	A	32	63	160	200	400	630	800
	500V	A	32	63	160	200	400	630	800
	690V	A	32	63	160	200	400	630	800
AC22A	400V	A	32	63	160	200	400	630	800
	500V	A	32	63	160	200	400	630	800
	690V	A	32	63	160	200	400	630	800
AC23A	400V	A	32	63	160	200	400	630	800
	500V	A	32	63	160	200	400	630	800
	690V	A	32	63	160	200	400	630	800
Power dissipation (without fuse)	W/pole	2	4	9	8	30	46	75	
Max fuse power dissipation	in open air	W	3.5	7.5	12	17	45	60	65
	in enclosure	W	3.5	7.5	12	15	30	50	55
IEC rated operational power									
AC23A	400V	kW	15	30	75	110	220	355	450
	690V	kW	22	55	132	200	400	630	710
IEC short circuit protection									
Rated short-time current (1s) I _{cw}	kA rms	1	2.5	5	8	14	20	20	
Conditional short circuit current	kA rms	200							
With fuse	A/class	30/J-CC	60/J	100/J	200/J	400/J	600/J	800/L	
Making capacity AC23A 690V	A	320	630	1600	2000	4000	6300	8000	
Breaking capacity AC23A 690V	A	256	504	1280	1600	3200	6400	6400	
Mechanical life	cycles	10.000		8.000		5.000		3.000	
Min. electrical endurance (pf=0.75...0.8)	cycles	6000				1000	1000	500	
Fuse-links bolts tightening torque	Nm	-	-	4	4	20	40	40	
Terminal lug kits		Built-in		GMX5 00	GMX5 01	GMX5 02	GMX5 04	GMX5 04	
Conductor section min...max	mm ²	1...10	2.5...25	2.5...70	25...150	35...300	2X35...600	2X35...600	
	AWG	18-8	14-4	14-2/0	4-300MCM	2-600MCM	(2)x2-600MCM	(2)x2-600MCM	
Conductor tightening torque	Nm	2	3.5	13.5	31	42.5	56.5	56.5	
	ib.in	17	30	120	275	375	500	500	
Terminal lugs tightening torque	Nm	-	-	5.5	8	27	54	54	
	ib.in	-	-	50	72	240	480	480	

AMBIENT CONDITIONS

Temperature	operating	°C	-25...+55					
	storage	°C	-40...+70					
Maximum altitude	m	3000						
Mounting position	normal	Vertical						
	admissible	Any						
Fixing		Screw or 35mm DIN rail (IEC/EN 60715)	Screw					

TECHNICAL DATA ACCORDING TO UL/CSA RATINGS

TYPE	3-pole	GMF...030...	GMFJ060...	GMFJ100C03	GMFJ200C03	GMFJ400C03	GMFJ600C03	GMFL800C03	
CHARACTERISTICS									
Compliance		UL98							
General purpose rating (≤40°C)	A	30	60	100	200	400	600	800	
Max operating voltage U _i	V	600							
Horsepower ratings/motor FLA current three-phase									
	240V	HP/A	7.5/22	15/42	30/80	60/154	125/312	200/480	250/602
	480V	HP/A	15/21	30/40	60/77	125/156	250/302	400/477	500/590
	600V	HP/A	20/22	50/52	75/77	150/144	350/336	500/472	600/472
Short circuit ratings	KA rms	200							
With fuse	A/class	30/J-CC	60/J	100/J	200/J	400/J	600/J	800/L	
Terminal lug kits		Built-in		GMX5 00	GMX5 01	GMX5 02	GMX5 04	GMX5 04	

11 Switch disconnectors

Technical characteristics


GA and GD series for photovoltaic applications

TYPE	3-pole	GA040 D	GD025 AT2	GD032 AT3	GD040 AT4
	4th pole	GAX42 040 D	—	—	—
CONTACT CHARACTERISTICS					
IEC conventional free air thermal current I _{th} (≤40°C)	A	40	25	32	40
IEC rated insulation voltage U _i	V	1000	1000		1000 / 1500 ^①
IEC rated impulse withstand U _{imp}	kV	8			
IEC rated operational current I _e DC21B ^②					
	600V A	—	25	32	40
	800V A	—	25	32	40
	1000V A	—	16	32	40
	①1200V A	—	—	—	32
	①1500V A	—	—	—	25
2 poles in series	300V A	16	—	—	—
3 poles in series	48V A	40	—	—	—
	110V A	35	—	—	—
	220V A	32	—	—	—
	500V A	12	—	—	—
4 poles in series	400V A	35	—	—	—
	440V A	32	—	—	—
	500V A	32	—	—	—
	600V A	20	—	—	—
	700V A	15	—	—	—
	750V A	15	—	—	—
	800V A	15	—	—	—
Power dissipation	w/pole	1.0	0.8	1.2	1.9
Mechanical life	cycles	100,000	10,000		
Terminals	type	Mantle	Screw with washer		
	A mm	5.6	—		
	B mm	6.5	—		
	Screw	M4	—		
	Tool	Phillips 2	Phillips 1		
Tightening torque	Nm	1.8...2	1.2...1.6		
	lbin	16...18	10...14		
Conductor section min.-max.	mm ²	0.75...16	1...10		
	AWG	18...6	18...8		
AMBIENT CONDITIONS					
Temperature	Operating	°C	-25...+55		
	Storage	°C	-40...+70		
Maximum altitude	m	3,000	2,000		
Mounting position	Normal		Vertical		
	Admissible		Any		
Fixing			Screw or 35mm DIN rail (IEC/EN 60715)		

① 1000V pollution degree 3; 1500V pollution degree 2.
 ② For GD series refer to wiring diagrams on page 11-51.

11 Switch disconnectors

Technical characteristics
GE series for photovoltaic applications

TYPE	4-pole	GE0125 DT4	GE0250 DT4	GE0315 DT4	
CONTACT CHARACTERISTICS					
IEC conventional free air thermal current I _{th} (≤40°C)	A	125	250	315	
IEC rated insulation voltage U _i	V	1000			
IEC rated impulse withstand U _{imp}	kV	8			
IEC rated operational current I _e DC21B	48V A	125	250	315	
4 poles in series	110V A	125	250	315	
	220V A	125	250	315	
	400V A	125	250	315	
	440V A	125	250	315	
	500V A	125	250	315	
	600V A	125	250	315	
	750V A	125	250	290	
	800V A	125	250	280	
	850V A	125	240	270	
	900V A	125	220	260	
1000V A	100	200	250		
Mechanical life	cycles	20,000			
Terminals		type	Lug terminal or bars		
		A mm	20	25	25
		B mm	4	4	4
		screw	M8	M10	M10
Tightening torque	Nm	13	18	18	
	lbft	10	13	13	
Max. bar size (thickness-width)	mm	7-25			
Max. conductor section	mm ²	185			
AMBIENT CONDITIONS					
Temperature	Operating	°C	-25...+55		
	Storage	°C	-40...+70		
Maximum altitude		m	3000		
Mounting position	Normal		Vertical		
	Admissible		Any		
Fixing			Screw		

11 Switch disconnectors

Technical characteristics
GE series for photovoltaic applications

	GE0630 DT4	GE0800 DT4	GE1250 DT4
	630	800	1250
		1000	
		12	
	630	800	1250
	630	800	1250
	630	800	1250
	630	800	1250
	630	750	1250
	630	700	1250
	630	700	1250
	630	650	1050
	600	630	1000
	600	630	940
	600	630	870
	500	630	850
		10,000	
		Lug terminal or bars	
	30	30	40
	5	5	8
	M10	M10	M14
	24	24	45
	18	18	33
	2x 5-40 (thickness-width)	2x 5-40	2x 10-50
	2x240	2x240	2x300
		-25...+55	
		-40...+70	
		3000	
		Vertical	
		Any	
		Screw	



- Modular size for 10x38, 14x51 and 22x58mm fuses
- Finger safe - IEC IP20 degree of protection against accidental contact with live parts and with sealable cover for operators' safety
- Version with status indicator to quickly determine if the fuse is still operative or needs to be replaced
- UL and CSA certified versions.

	SEC. - PAGE
Fuse holders	
AC fuse holders	12 - 2
AC fuse holders class CC for the North American market	12 - 3
DC fuse holders for photovoltaic applications	12 - 4
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Dimensions	12 - 6
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AC FUSE HOLDERS

- Version without indicator: 1P, 1P+N, 2P, 3P, 3P+N
- Version with indicator: 1P
- For fuses 10x38, 14x51 and 22x58mm IEC class gG or aM.
- IEC rated current: 32A, 50A, 100A
- IEC rated voltage: 690VAC.



Page 12-3

AC FUSE HOLDERS CLASS CC FOR THE NORTH AMERICAN MARKET

- Version without indicator: 1P, 2P, 3P
- Version with indicator: 1P
- For 10x38mm UL/CSA class CC fuses
- IEC rated current: 30A
- IEC rated voltage: 600VAC.



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DC FUSE HOLDERS FOR PHOTOVOLTAIC APPLICATIONS

- Version without indicator: 1P, 2P
- Version with indicator: 1P, 2P
- For 10x38mm IEC class gPV fuses
- IEC rated current: 32A
- IEC rated voltage: 1000VDC
- IEC utilisation category: DC20B.



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DC FUSES FOR PHOTOVOLTAIC APPLICATIONS

- 10x38mm, IEC class gPV
- Rated current: 20A
- Rated voltage: 1000VDC.

Fuse holders UL Recognized and CSA Certified



FB01 F... FB01 F 1PL



FB02 A... FB02 A 1PL



FB03 A... FB03 A 1PL

Order code	Pole arrangement	Status indicator	DIN size	Qty per pkg	Wt
			n°	n°	[kg]

For 10x38mm fuses.
IEC 32A rated current at 690VAC.

FB01 F 1P	1P	—	1	12	0.066
FB01 F 1PL	1P	YES	1	12	0.065
FB01 A 1M	1P+N	—	1	12	0.062
FB01 F 1N	1P+N	—	2	6	0.134
FB01 F 2P	2P	—	2	6	0.132
FB01 F 3P	3P	—	3	4	0.188
FB01 F 3N	3P+N	—	4	3	0.260

For 14x51mm fuses.
IEC 50A rated current at 690VAC.

FB02 A 1P	1P	—	1.5	6	0.113
FB02 A 1PL	1P	YES	1.5	6	0.114
FB02 A 1N	1P+N	—	3	3	0.237
FB02 A 2P	2P	—	3	3	0.224
FB02 A 3P	3P	—	4.5	2	0.335
FB02 A 3N	3P+N	—	6	1	0.460

For 22x58mm fuses.
IEC 100A rated current at 690VAC.

FB03 A 1P	1P	—	2	6	0.167
FB03 A 1PL	1P	YES	2	6	0.167
FB03 A 1N	1P+N	—	4	3	0.354
FB03 A 2P	2P	—	4	3	0.334
FB03 A 3P	3P	—	6	2	0.500
FB03 A 3N	3P+N	—	8	1	0.720

Use with gG/aM class 125A fuses, not dissipating more than 12W power.

NOTE:
For FB01 F type: UL Recognized as "Fuseholders - Component". Current rating: 30A. Voltage rating: 750V max. CSA certified as "Fuseholder Assemblies". Current rating: 30A. Voltage rating: 600V max.
For FB02 A type: UL Recognized as "Fuseholders - Component". Current rating: 50A. Voltage rating: 750V max.
For FB03 A type: UL Recognized as "Fuseholders - Component". Current rating: 100A. Voltage rating: 750V max.

Operational characteristics

- IEC rated voltage U_n :
 - 690VAC (FB01 A 1M excluded)
 - 400VAC (FB01 A 1M only)
- IEC rated current I_n :
 - FB01 A 1M: 32A
 - FB01 F: 32A
 - FB02 A: 50A
 - FB03 A: 100A
- IEC utilisation category:
 - FB01 A 1M: AC22B 400V
 - FB01 F: AC22B 500V, AC21B 690V
 - FB02 A: AC22B 500V, AC21B 690V
 - FB03 A: AC21B 690V
- Suitable for IEC fuse class: gG and aM
- IEC degree of protection: IP20.

Certifications and compliance

Certifications obtained: EAC.

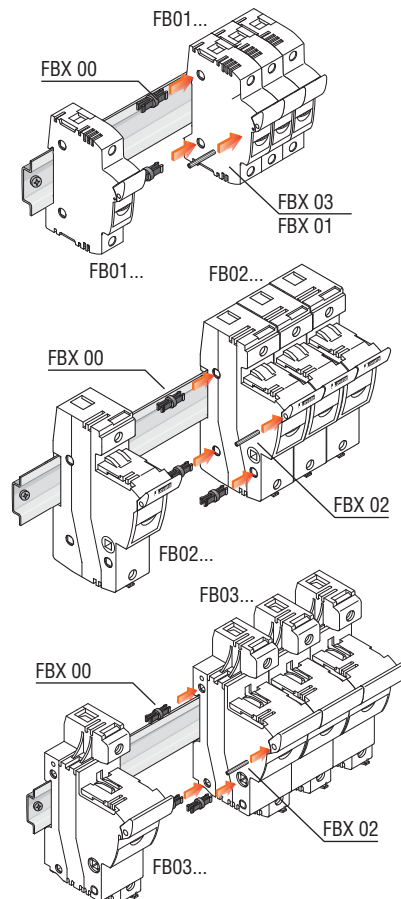
Type	CSA certified (File 252040 class 3211)	UL Recognized for USA and Canada (cURus - File E343395)
FB01 F...	●	●
FB02 A...	—	●
FB03 A...	—	●

● Certification obtained.

cURus - "UL Recognized": Products having this type of marking are intended for use as components of complete workshop-assembled equipment.

Compliant with standards: IEC/EN 60269-1, IEC 60269-2, IEC/EN 60947-1, IEC/EN 60947-3, UL 4248-1, UL 4248-4, CSA C22.2 n°4248.1, CSA C22.2 n°4248.4.

Fuse holder combinations



Fuse holders



FB01 B... FB01 B 1PL

Order code	Pole arrangement	Status indicator	DIN size	Qty per pkg	Wt
			n°	n°	[kg]

For 10x38mm fuses.
IEC 32A rated current at 690VAC.

FB01 B 1P	1P	—	1	12	0.062
FB01 B 1PL	1P	YES	1	12	0.064
FB01 B 1N	1P+N	—	2	6	0.127
FB01 B 2P	2P	—	2	6	0.128
FB01 B 3P	3P	—	3	4	0.185
FB01 B 3N	3P+N	—	4	3	0.247

Operational characteristics

- IEC rated voltage Un: 690VAC
- IEC rated current In: 32A
- IEC utilisation category: AC22B 500V, AC21B 690V
- Suitable for IEC fuse class: gG and aM
- IEC degree of protection IP20.

Reference standards

Certifications obtained: EAC.
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-3, IEC/EN 60269-1, IEC 60269-2.

Fuse holders UL Listed and CSA Certified for class CC fuses for the North American market



FB01 G... FB01 G 1PL

Order code	Pole arrangement	Status indicator	DIN size	Qty per pkg	Wt
			n°	n°	[kg]

For 10x38mm fuses.
IEC 30A rated current at 600VAC.

FB01 G 1P	1P	—	1	12	0.070
FB01 G 1PL	1P	YES	1	12	0.072
FB01 G 2P	2P	—	2	6	0.140
FB01 G 3P	3P	—	3	4	0.210

NOTE: UL Listed and CSA certified as "Fuseholders, Cartridge Fuse" for use with Class CC fuses. Interrupting rating 200,000 Amps rms symmetrical. Voltage rating 600V. Current rating 30A.

Operational characteristics

- IEC rated voltage Un: 600VAC
- IEC rated current In: 30A
- IEC utilisation category: AC22B 500V, AC21B 690V
- Suitable for UL/CSA fuse class: CC
- IEC degree of protection IP20.

Certifications and compliance

Certifications obtained: UL Listed for USA (UL - File E343395) and CSA certified for Canada only (File 252040 class 6225), EAC.
Compliant with standards: IEC/EN 60269-1, IEC 60269-2, IEC/EN 60947-1, IEC/EN 60947-3, UL 4248-1, UL 4248-4, CSA C22.2 n°4248.1, CSA C22.2 n°4248.4.

12 Fuse holders and fuses

DC fuse holders for photovoltaic applications.

Fuse holders for photovoltaic applications UL Listed / CSA certified



FB01 D...



FB01 D 1PL

Order code	Pole arrangement	Status indicator	DIN size	Qty per pkg	Wt
			n°	n°	[kg]

For 10x38mm fuses.
IEC 32A rated current at 1000VDC.

FB01 D 1P	1P	—	1	12	0.064
FB01 D 1PL	1P	YES	1	12	0.065
FB01 D 2P	2P	—	2	6	0.127
FB01 D 2PL	2P	YES	2	6	0.130

NOTE: UL Listed and CSA certified as "Photovoltaic fuseholders" for use with Photovoltaic Fuses. Interrupting rating 30,000 DC Amps. Voltage rating 1000V. Current rating 30A.

Operational characteristics

- IEC rated voltage U_n : 1000VDC
- IEC rated current I_n : 32A
- IEC utilisation category: DC20B 1000VDC
- Suitable for IEC fuse class: gPV
- IEC degree of protection: IP20.

Certifications and compliance

Certifications obtained: UL Listed for USA (UL - File E366062) and CSA certified for Canada (File 252040 class 3211), EAC.
Compliant with standards: IEC/EN 60269-1, IEC 60269-2, IEC/EN 60947-1, IEC/EN 60947-3, UL 4248-1, UL4248-18, CSA C22.2 n° 4248-1, CSA C22.2 n° 4248-18.

Fuses for photovoltaic applications



FE01 D...

Order code	Rated current I_n	Qty per pkg	Wt
	[A]	n°	[kg]

10x38mm fuses.
IEC 30kA breaking capacity at 1000VDC.

FE01 D 00200	2	10	0.008
FE01 D 00400	4	10	0.008
FE01 D 00600	6	10	0.008
FE01 D 00800	8	10	0.008
FE01 D 01000	10	10	0.008
FE01 D 01200	12	10	0.008
FE01 D 01600	16	10	0.008
FE01 D 02000	20	10	0.008

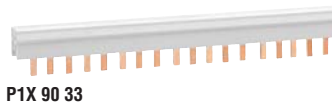
Operational characteristics

- IEC rated voltage U_n : 1000VDC
- IEC rated current I_n : 2...20A
- IEC fuse class: gPV.

Reference standards

Certifications obtained: EAC.
Compliant with standards: IEC/EN 60269-6.

Accessories



P1X 91 33



P1X 92 01

P1X 92 10

P1X 92 02

Order code	Description	Qty per pkg	Wt [kg]
		n°	[kg]
FBX 00	Coupling clip for 10x38, 14x51 and 22x58mm sizes	100	0.003
FBX 01	Coupling pin for 10x38mm size type FB01 A1M, FB01 B1P and FB01 B1PL only	100	0.005
FBX 02	Coupling pin for 14x51 and 22x58mm sizes	100	0.008
FBX 03	Coupling pin for 10x38mm size types FB01 F, FB01 G, FB01 D only	100	0.005
For FB01 F, FB01 A1M, FB01 B and FB01 G types, AC duty.			
P1X 90 31	Single-pole supply busbar	10	0.160
P1X 90 32	Two-pole supply busbar	10	0.320
P1X 90 33	Three-pole supply busbar	10	0.474
P1X 90 34	Four-pole supply busbar	10	0.600
P1X 90 90	P1RC4P + 8 P1MB1MB supply busbar	10	0.158
P1X 91 30	Kit of 5 isolating covers for unused busbar terminals	10	0.030
P1X 91 31	End cap for P1X9031	50	0.001
P1X 91 32	End cap for P1X9032	50	0.001
P1X 91 33	End cap for P1X9033	50	0.001
P1X 91 34	End cap for P1X9034	50	0.001
P1X 92 01	Single-pole terminal for busbar supply; conductor cross section 25mm ² max.	25	0.010
P1X 92 10	Single-pole terminal for supplying busbar; conductor cross section 25mm ² max.; left entry	25	0.010
P1X 92 02	Single-pole terminal for busbar supply; conductor cross section 50mm ² max.	25	0.022

General and operational characteristics

SINGLE-POLE SUPPLY BUSBAR

- Rated operational voltage Ue: 1000V
- Central point of power supply: 100A max.
- Side point of power supply: 63A max.
- Spacing: 17.5mm/0.69"
- Busbar section: 10mm²
- For paralleling connection
- For 57 modules, 1000mm/39.37" long (57 1P breakers)
- Length can be cut in shorter sections.

TWO-POLE, THREE-POLE AND FOUR-POLE SUPPLY BUSBARS

- Rated operational voltage Ue: 690V
- Central point of power supply: 100A max.
- Side point of power supply: 63A max.
- Pitch: 18mm/0.71"
- Busbar section: 10mm²
- For paralleling connection
- Two-pole: for 56 modules, 1000mm/39.37" long (28 2P fuseholders)
- Three-pole: for 57 modules, 1012mm/39.84" long (19 3P fuseholders)
- Four-pole: for 56 modules, 1000mm/39.37" long (14 4P fuseholders)
- Length can be cut in shorter sections.

Certification and compliance

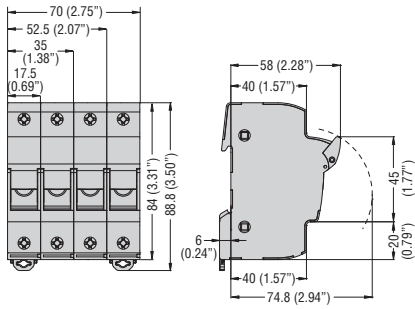
Certifications obtained: EAC.

- ① See technical characteristics under derating factor of FB01... type for derating factor.

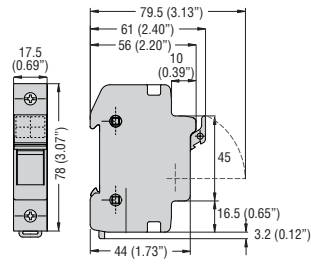
12 Fuse holders and fuses

Dimensions [mm (in)]

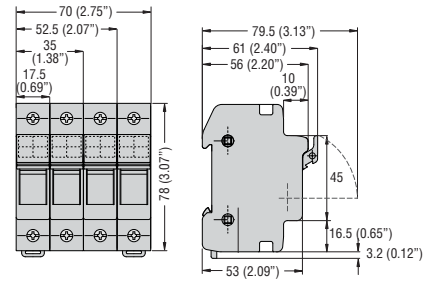
FB01 F... FB01 G... FB01 D...



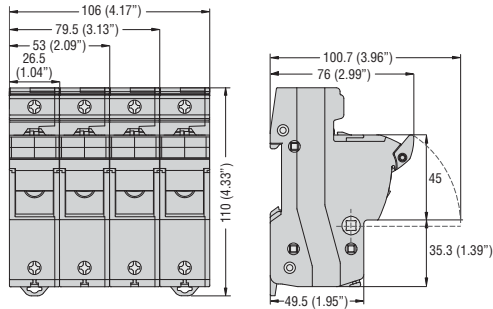
FB01 A1M



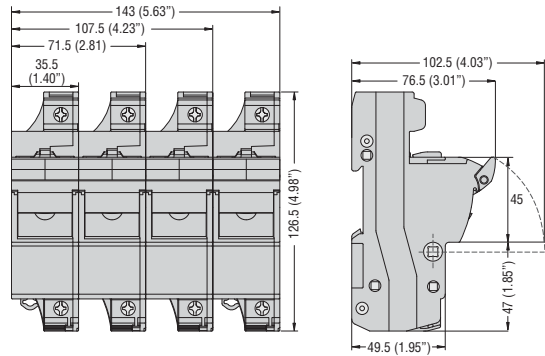
FB01 B...



FB02 A...

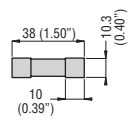


FB03 A...

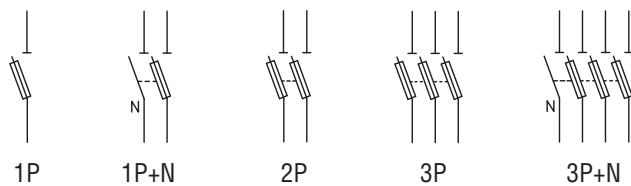


FUSES

FE01 D 0...



Wiring diagrams



TYPE	FB01 F... - FB01 A1M	FB01 B...	FB02 A...	FB03 A...	FB01 G...	FB01 D...
Range	AC				Class CC (AC)	DC
IEC maximum rated current In	32A		50A	100A ^②	30A	32A
IEC maximum rated voltage Un	690VAC; 400VAC ^①	690VAC			600VAC	1000VDC
IEC utilisation category	AC22B 500V; AC21B 690V; AC22B 400V ^①			AC21B 690V	AC22B 500V; AC21B 690V	DC20B 1000VDC
Maximum power dissipation	3W		5W	9.5W	3W	4W
Derating factor of current In for different ambient temperatures	20°C	1				
	30°C	0.95				
	40°C	0.9				
	50°C	0.8				
	60°C	0.7				
	70°C	0.5				
Derating factor of current In for side-by-side fuse holders - number of poles	1-4	1				
	5-6	0.8				
	7-9	0.7				
	≥10	0.6				
Voltage for status indicator	120...690VAC		230...690VAC		120...600VAC	350...1000VDC
CONNECTIONS						
Maximum tightening torque	2.5Nm; 2Nm ^① / 22lbin		3Nm / 26lbin	4Nm / 35lbin	2.5Nm / 22lbin	
Maximum conductor cross section	flexible/stranded	1x16mm ² ; 1x6mm ² ^① / 8AWG	1x25mm ² / 6AWG	1x35mm ² / 2AWG	1x16mm ² / 8AWG	1x16mm ² / 8AWG
	rigid/solid	1x16mm ² ; 1x10mm ² ^① / 8AWG	1x35mm ² / 8AWG	1x50mm ² / 1AWG	1x16mm ² / 8AWG	1x16mm ² / 8AWG
AMBIENT CONDITIONS						
Operating temperature	-20...+70°C					
Storage temperature	-40...+80°C					
Maximum altitude	3,000m					
Operation position	Any					
Fixing	On 35mm DIN rail (IEC/EN 60715)					

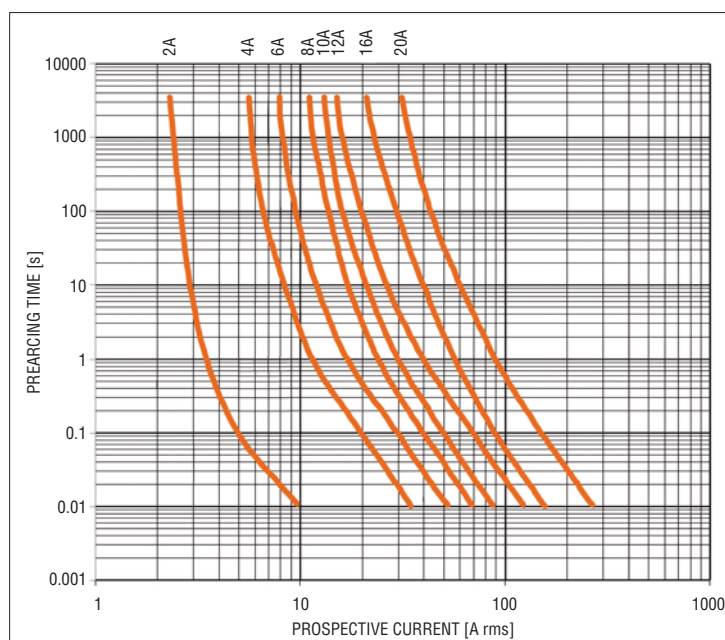
^① Values valid only for FB01 A 1M type.

^② Use with gG/aM class 125A fuses, not dissipating more than 12W power.

TECHNICAL CHARACTERISTICS FOR FE01 D... FUSES

TYPE	Rated current [A]	Power consumption at 0.7 In [W]	Power consumption at In [W]	Prearcing I ² t [A ² s]	Total I ² t at 1000VDC [A ² s]
FE01 D 00200	2	0.78	1.45	0.62	1
FE01 D 00400	4	0.64	1.57	6.9	11
FE01 D 00600	6	0.76	1.84	24	38
FE01 D 00800	8	0.8	1.92	62	99
FE01 D 01000	10	0.94	2.2	10	48
FE01 D 01200	12	0.98	2.4	18	94
FE01 D 01600	16	1.1	2.7	46	110
FE01 D 02000	20	1.2	2.9	118	282

TIME-CURRENT CHARACTERISTICS FOR FE01 D... FUSES





- Protection against overvoltage and high surge conditions caused by direct or indirect lightning strikes
- Types with plug-in cartridge provide fast servicing capability
- Mechanical indicator for visual failure status signalling of single modules
- Versions with or without output for remote SPD status indication
- Versions for data and signal lines
- Versions for photovoltaic applications.

Surge protection devices (SPD)

	SEC. - PAGE
Type 1 and 2 monoblock $I_{imp}=25kA$	14 - 4
Type 1 and 2 with plug-in cartridge $I_{imp}=12.5kA$	14 - 4
Type 1 and 2 monoblock $I_{imp}=12.5kA$	14 - 4
Type 2 with plug-in cartridge	14 - 5
Type 3 with plug-in cartridge and compact versions	14 - 6
Type C2-D1 for data and signal lines	14 - 6
Type 2 for photovoltaic applications	14 - 7

Dimensions	14 - 8
Wiring diagrams	14 - 9
Technical characteristics	14 - 11



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SURGE PROTECTION DEVICES TYPE 1 AND 2 MONOBLOCK VERSIONS

- 1P, 1P+N, 2P, 3P, 3P+N, 4P
- IEC impulse current Iimp (10/350 μ s): 25kA
- IEC maximum discharge current I_{max} (8/20 μ s): 100kA
- SPD status indicator
- Version with output for remote status indication.



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SURGE PROTECTION DEVICES TYPE 1 AND 2 VERSIONS WITH PLUG-IN CARTRIDGE

- 1P, 1P+N, 2P, 3P, 3P+N, 4P
- IEC impulse current Iimp (10/350 μ s): 12.5kA
- IEC maximum discharge current I_{max} (8/20 μ s): 60kA
- IEC combined surge U_{oc}/I_{sc} (1.2/50, 8/20 μ s): 10kV/5kA
- Single module status indicator
- Version with output for remote status indication.



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SURGE PROTECTION DEVICES TYPE 1 AND 2 MONOBLOCK VERSIONS

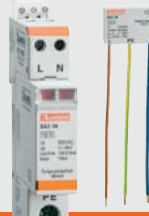
- 1P, 1P+N, 2P, 3P, 3P+N, 4P
- IEC impulse current Iimp (10/350 μ s): 12.5kA
- IEC maximum discharge current I_{max} (8/20 μ s): 50kA
- SPD status indicator
- Version with output for remote status indication.



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SURGE PROTECTION DEVICES TYPE 2 VERSIONS WITH PLUG-IN CARTRIDGE

- 1P, 1P+N, 2P, 3P, 3P+N, 4P
- IEC maximum discharge current I_{max} (8/20 μ s): 50kA or 15kA
- IEC rated discharge current I_n (8/20 μ s): 20kA or 5kA
- Single module status indicator
- Versions with and without output for remote status indication.



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SURGE PROTECTION DEVICES TYPE 3 VERSIONS WITH PLUG-IN CARTRIDGE AND COMPACT VERSIONS

- 1P+N
- Version with plug-in cartridge
 - IEC rated current I_n(8/20 μ s):5kA
 - Combined impulse U_{oc}: 10kV
 - SPD status indicator
 - Output for remote status indication
- Compact version
 - IEC rated current I_n(8/20 μ s):3kA
 - Combined impulse U_{oc}: 6kA
- Acoustic or optical intervention indicator.



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SURGE PROTECTION DEVICES TYPE C2-D1 FOR DATA AND SIGNAL LINES

- Version for line RS485
 - Rated voltage U_n:5VDC
 - C2 Rated current I_n(8/20 μ s):10kA
 - D1 Impulse current Iimp (10/350 μ s): 2.5kA
 - Output for remote status indication
- Version for Ethernet line Cat.6 - POE
 - Rated voltage U_n:48VDC
- C2 Rated current I_n (8/20 μ s) L-PE: 10kA
- D1 Impulse current Iimp (10/350 μ s): 1kA.



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SURGE PROTECTION DEVICES TYPE 2 FOR PHOTOVOLTAIC APPLICATIONS

- Versions with plug-in cartridge: +, -, PE
- IEC maximum operational voltage: 1500VDC
- IEC maximum discharge current I_{max} (8/20 μ s): 40kA
- IEC rated discharge current I_n (8/20 μ s): 20kA
- Single module status indicator
- Versions with or without output for remote status indication
- Tested according to EN 50539-11.



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SPARE PLUG-IN CARTRIDGES

- Versions suitable for SPDs:
 - Type 1 and 2
 - Type 2
 - Type 2 for photovoltaic applications
- Status indicator for single modules.

SAFE INSTALLATIONS!

	Type 1, 2		Type 2	Type 3
LPZ protection zones	0 _A 0 _B	1	2	3
Installation category	IV	III	II	I
Impulse withstand voltage of equipment	6kV	4kV	2.5kV	1.5kV

SURGE PROTECTION DEVICES

The surge arresters commonly defined as SPDs (Surge Protection Devices), are devices designed to protect electric systems and equipment against transient and impulse overvoltages such as those caused by lightning strikes and by electric switching.

Their function is to divert the discharge or impulse current generated by an overvoltage to earth/ground, thereby protecting the equipment downstream.

SPDs are installed in parallel with the electric line to be protected. At the mains rated voltage, they are comparable to an open circuit and have a high impedance at their ends. In the presence of an overvoltage, this impedance falls to very low values, closing the circuit to earth/ground.

Once the overvoltage has ended, their impedance rises again rapidly to the initial value (very high), returning to open loop conditions.

The SA1B and SA0B (monoblock) type protects against direct and indirect lightning strikes as well as induced overvoltage conditions. It can be installed in areas with a high risk of direct lightning strikes, inside main distribution boards or nearby sub-distribution boards. With the SA0 plug-in cartridge type, the same features are available with the advantage of only having to replace the protection cartridge once the SPD blows.

PROTECTION ZONES

Standards define the LPZs (Lightning Protection Zones), which indicate the different zones at risk. These are distinguished among:

LPZ 0A: Area outside a building not protected by LPS (e.g. lightning rods) where a direct lightning strike is possible. In this zone, there is total exposure to induced electromagnetic fields.

LPZ 0B: Area outside a building protected by LPS; therefore, a direct lightning strike is not possible. In this zone, there is total exposure to induced electromagnetic fields.

LPZ 1: Area inside a building so protected against direct lightning strikes. In this zone, there is the possibility of very high overvoltages and of induced electromagnetic fields which may be attenuated depending on the degree of screening. This zone must be protected by an SPD type 1 at the boundary with zone LPZ 0A or 0B.

LPZ 2: Area inside a building (e.g. in a room), in which there is the possibility of low overvoltages since they are limited by SPDs installed upstream. This zone must be protected by an SPD type 2 at the boundary with zone LPZ 1.

LPZ 3: Area inside a building (e.g. the system connected to a socket in a room) characterised by very sensitive equipment, in which there is the possibility of very low overvoltages as they are limited by SPDs installed upstream. This zone must be protected by an SPD type 3 at the boundary with zone LPZ 2.

INSTALLATION CATEGORY

For the correct choice of the SPD, the dielectric strength of the equipment to protect needs to be considered. This level is established by IEC 60664-1 standard.

For a 230/400V installation, it specifies:

Installation category IV: 6kV for devices installed upstream of the distribution board (for example, delivery point with the distribution system).

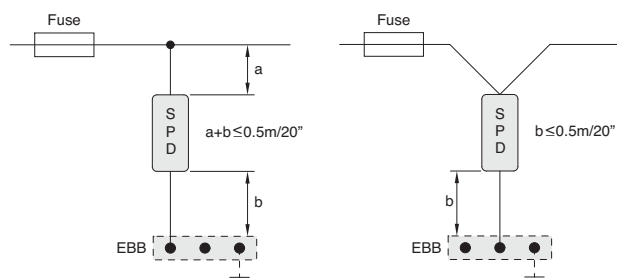
Installation category III: 4kV for devices being part of the fixed system (for example, distribution boards, switching devices, isolators, ducting and their accessories)

Installation category II: 2.5kV for non electronic devices (for example, household appliances or electric tools)

Installation category I: 1.5kV for equipment containing "particularly sensitive" electronic circuits (for example, electronic devices like PCs or TVs)

RECOMMENDATIONS FOR INSTALLATION

For correct installation, it is advisable to make connections between the line and the SPD input (phase or neutral terminals) as well as between the SPD output (earth/ground terminal) and the equipotential bonding connection with a maximum 0.5m/20" length of the leads. To reduce the distance, use of the so-called "V connection" is admissible.

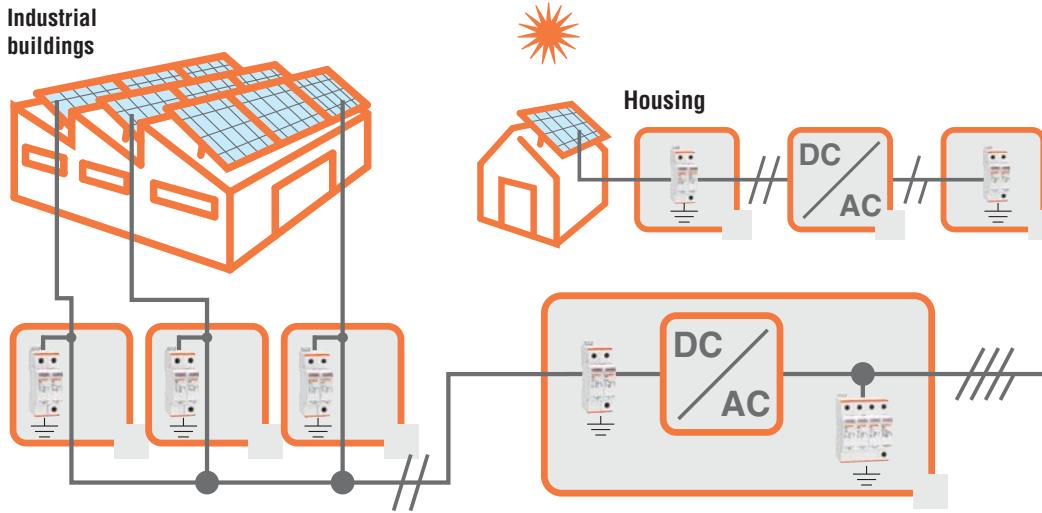


For more details, IEC/EN 62305 standards can be consulted.

Type 2 DC

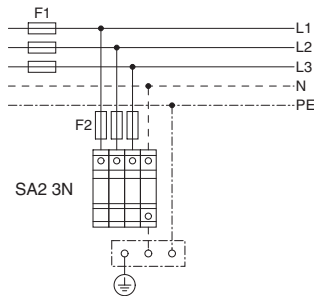
SURGE PROTECTION DEVICES FOR PHOTOVOLTAIC APPLICATIONS

In photovoltaic applications in a domestic environment or industrial facility or other similar circumstances, equipped with lightning rod systems having a safety distance (S), SPD type 2, suitable for DC duty, can be used to protect the installation. It is advisable to install these devices as close as possible to the photovoltaic panels, consequently in the so-called string boards. If the AC/DC inverter is far away from the string boards (indicatively more than 10m/33' apart), another SPD type 2 DC needs to be installed next to the inverter on the DC side. Installation of SPD type 2 suitable of AC duty is also required downstream of the inverter on the AC side. For more details, consult specific national standards and/or application guides issued by local authorities for solar systems concerning protection against lightning. The SA2DG... and SG2DG... types with plug-in cartridges are suitable for connection in the DC side of a solar installation and offer protection against induced overvoltage conditions. The SA2...A300 type is suitable for installation downstream of the inverter on the AC side and in intermediate panels.



BACKUP PROTECTION

Protection against short circuits of SPDs is provided by overcurrent devices (g/L/gG fuses), which should be chosen according to the SPD manufacturer's recommendations.



Fuse size depends on SPD

SPD COORDINATION

In order to obtain an effective protection against overvoltage, it is advisable to install several SPDs coordinated with one another in cascade connection. For instance, it is advisable to have a Type 1 SPD in the main distribution board, a Type 2 SPD in the sub-distribution board and a Type 3 SPD near the terminal equipment to be protected. In this way, the energy originating from an overvoltage gradually decreases as it reaches the equipment to protect.

DEFINITIONS AND RATINGS ACCORDING TO IEC/EN

Maximum continuous voltage U_c :

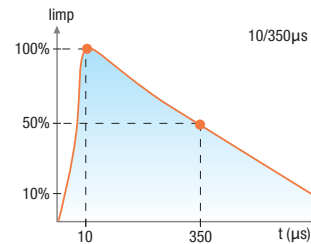
Maximum value of AC or DC voltage that the SPD is capable of permanently withstanding without activating or getting damaged; this is its rated voltage.

Protection level voltage U_p :

Maximum value of the voltage between the terminals of the SPD in presence of an impulsive overvoltage. It is a fundamental parameter to correctly choose the SPD; it must be taken into account with regards to the impulse voltage of the equipment to protect.

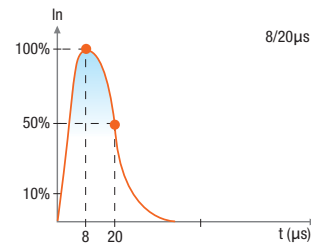
Impulse current I_{imp} :

Crest value of the current that circulates in the SPD with a 10/350 μ s waveform (activation must be guaranteed for 20 times without damage). It is used to classify SPDs in test class I.



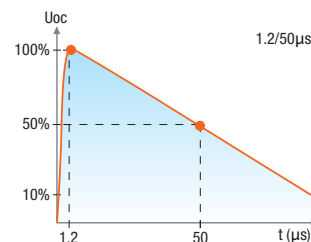
Rated discharge current I_n :

Crest value of the current that circulates in the SPD with an 8/20 μ s waveform (activation must be guaranteed for 20 times without damage). It is used to classify SPDs in test class II.



Open circuit discharge voltage U_{oc} :

Crest value of the no-load discharge voltage delivered by the test generation with a 1.2/50 μ s waveform simultaneously with a short-circuit current of an 8/20 μ s waveform, applied at the SPD terminals. It is used to classify SPDs in test class III.



Monoblock limp=25kA



SA1B 1P A320R



SA1B 3N A320R

Order code	Pole arrangement	Relay output	Number of DIN modules	Qty per pkg	Wt
		(SPDT)		n°	[kg]

MONOBLOCK VERSION.
IEC impulse current limp (10/350µs) 25kA per pole.

SA1B 1P A320R	1P	YES	2	1	0.275
SA1B 1N A320R	1P+N	YES	4	1	0.390
SA1B 2P A320R	2P	YES	4	1	0.395
SA1B 3P A320R	3P	YES	6	1	0.595
SA1B 3N A320R	3P+N	YES	8	1	0.760
SA1B 4P A320R	4P	YES	8	1	0.780

Main characteristics

The surge protection device type SA1B combines the performance of SPD type 1 and 2 into a single product. It protects against direct and indirect lightning strikes as well as induced overvoltage conditions. It can be installed in areas with a high risk of direct lightning strikes, inside main distribution boards or nearby sub-distribution boards.

Operational characteristics

- IEC maximum continuous operating voltage U_c : 320VAC
- IEC maximum discharge current I_{max} (8/20µs): 100kA per pole
- IEC rated discharge current I_n (8/20µs): 25kA per pole
- Version with relay output having changeover contact for remote status indication
- IEC degree of protection: IP20.

Certifications and compliance

Certification obtained: EAC.
Compliant with standards: IEC/EN 61643-11.

Characteristics

Type	IEC rated voltage U_n [V]	IEC voltage protection level U_p [kV] L-N	Power installation system
SA1B 1P A320R	230	<1.4	TN-C, TN-S, TT ^①
SA1B 1N A320R	230	<1.4/1.3	TT, TN-S
SA1B 2P A320R	230	<1.4	TN-S
SA1B 3P A320R	230/400	<1.4	TN-C
SA1B 3N A320R	230/400	<1.4/1.5	TT, TN-S
SA1B 4P A320R	230/400	<1.4	TN-S

① Between L-N only.

With plug-in cartridge limp=12.5kA



SAO 1P A320R



SAO 2P A320R

Order code	Pole arrangement	Relay output	Number of DIN modules	Qty per pkg	Wt
		(SPDT)		n°	[kg]

VERSION WITH PLUG-IN CARTRIDGE.
IEC impulse current limp (10/350µs) 12.5kA per pole.

SAO 1P A320R	1P	YES	1	1	0.195
SAO 1N A320R	1P+N	YES	2	1	0.365
SAO 2P A320R	2P	YES	2	1	0.370
SAO 3P A320R	3P	YES	3	1	0.540
SAO 3N A320R	3P+N	YES	4	1	0.670
SAO 4P A320R	4P	YES	4	1	0.670

PLUG-IN CARTRIDGE

Order code	Description	Qty per pkg	Wt
		n°	[kg]
SAX00 P A320	For SAO... type	1	0.100

Main characteristics

SURGE PROTECTION DEVICES TYPE SAO
It has a plug-in cartridge and combines the performance of SPD type 1 and 2 into a single product. It is ideal in all those systems of reduced extent to protect the load side downstream of main circuit breaker to terminal equipment. It protects against direct and indirect lightning strikes as well as induced overvoltage conditions. It can be installed inside main distribution boards and nearby terminal equipment. The protection cartridges are plug-in and can be easily replaced for quick servicing.

SURGE PROTECTION DEVICES TYPE SAO0

Monoblock version SPD, it combines the performance of SPD type 1 and 2 into a single product. It is ideal in all those systems of reduced extent to protect the load side downstream of main circuit breaker to terminal equipment. It protects against direct and indirect lightning strikes as well as induced overvoltage conditions. It can be installed inside main distribution boards and nearby terminal equipment. The protection cartridges are plug-in and can be easily replaced for quick servicing.

Operational characteristics

- IEC maximum continuous operating voltage U_c : 320VAC
- IEC maximum discharge current I_{max} (8/20µs) per pole: 60kA (SAO...); 50kA (SAO0)
- IEC rated discharge current I_n (8/20µs): 25kA per pole (SAO); 20kA (SAO0)
- Versions with or without relay output having changeover contact for remote status indication
- IEC degree of protection: IP20.

Certifications and compliance

Certification obtained: EAC.
Compliant with standards: IEC/EN 61643-11.

Characteristics

Type	IEC rated voltage U_n [V]	IEC voltage protection level U_p [kV] L-N	Power installation system
SAO... 1P A...	230	<1.5	TN-C, TN-S, TT ^①
SAO... 1N A...	230	<1.5	TT, TN-S
SAO... 2P A...	230	<1.5	TN-S
SAO... 3P A...	230/400	<1.5	TN-C
SAO... 3N A...	230/400	<1.5	TT, TN-S
SAO... 4P A...	230/400	<1.5	TN-S

① Between L-N only.

Monoblock limp=12.5kA



SAO0 1P A320R

new

Order code	Pole arrangement	Relay output	Number of DIN modules	Qty per pkg	Wt
		(SPDT)		n°	[kg]

MONOBLOCK VERSION.
IEC impulse current limp (10/350µs) 12.5kA per pole.

SAO0 1P A320R	1P	YES	2	1	0.205
SAO0 1N A320R	1P+N	YES	2	1	0.155
SAO0 2P A320R	2P	YES	2	1	0.230
SAO0 3P A320R	3P	YES	3	1	0.330
SAO0 3N A320R	3P+N	YES	4	1	0.600
SAO0 4P A320R	4P	YES	4	1	0.600

With plug-in cartridge In=20kA



SG2...

new

Order code	Pole arrangement	Relay output	Number of DIN modules	Qty per pkg	Wt
				n°	[kg]

VERSION WITH PLUG-IN CARTRIDGES.
Rated discharge current In (8/20µs) 20kA per pole.

SG2 1P A300	1P	NO	1	1	0.128
SG2 1P A300R	1P	YES	1	1	0.135
SG2 1N A300	1P+N	NO	2	1	0.234
SG2 1N A300R	1P+N	YES	2	1	0.240
SG2 2P A300	2P	NO	2	1	0.252
SG2 2P A300R	2P	YES	2	1	0.266
SG2 3P A300	3P	NO	3	1	0.366
SG2 3P A300R	3P	YES	3	1	0.376
SG2 3N A300	3P+N	NO	4	1	0.477
SG2 3N A300R	3P+N	YES	4	1	0.486
SG2 4P A300	4P	NO	4	1	0.496
SG2 4P A300R	4P	YES	4	1	0.505

PLUG-IN CARTRIDGE.

Order code	Description	Qty per pkg	Wt
		n°	[kg]
SGX02 P A300	For SG2...A300/300R types	1	0.100

In=5kA



SG2C...

new

Order code	Pole arrangement	Relay output	Number of DIN modules	Qty per pkg	Wt
		(SPDT)		n°	[kg]

VERSION WITH PLUG-IN CARTRIDGES.
Rated discharge current In (8/20µs) 5kA per pole.

SG2C 1N A320	1P+N	NO	1	1	0.126
SG2C 2P A320	2P	NO	1	1	0.144

Main characteristics

SURGE PROTECTION DEVICES TYPE SG2

They are available in plug-in cartridge version and they are suitable for installation in secondary boards and in terminal equipment.

They ensure protection against overvoltages conditions.

The protection cartridges are plug-in and can be easily replaced for quick servicing.

SG2 surge arresters are immune to temporary overvoltages (TOV) and block the circulation of the subsequent network current after the intervention.

SURGE PROTECTION DEVICES TYPE SG2C

They are available in plug-in cartridge version and suitable for installation in residential boards where a 5kA per pole indirect discharge protection is sufficient. They have compact size, 1 module width for two poles.

Operational characteristics

- IEC maximum continuous operating voltage Uc: 300VAC (SG2)/320VAC (SG2C)
- IEC maximum discharge current Imax (8/20µs): 50kA per pole (SG2); 15kA (SG2C)
- IEC rated discharge current In (8/20µs): 20kA per pole (SG2); 5kA (SG2C)
- Versions with or without relay output having changeover contact for remote status indication (SG2)
- IEC degree of protection: IP20.

Certifications and compliance

Certification obtained: EAC.

Compliant with standards: IEC/EN 61643-11.

Characteristics

Type	IEC rated voltage Un [V]	IEC voltage protection level Up [kV] L-N	Power installation system
SG2 1P A..	230	<1,5	TN-C, TN-S, TT ^①
SG2/SG2C 1N A..	230	<1,5	TT, TN-S
SG2/SG2C 2P A..	230	<1,5	TN-S
SG2 3P A..	230/400	<1,5	TN-C
SG2 3N A..	230/400	<1,5	TT, TN-S
SG2 4P A..	230/400	<1,5	TN-S

① Between L-N only.

14 Surge protection devices

Surge protection device type 3
Surge protection device type C2-D1

Type 3 with plug-in cartridge



SA3 1N A320R

new

Order code	Pole arrangement	Relay output	Number of DIN modules	Qty per pkg	Wt
		(SPDT)		n°	[kg]

VERSION WITH PLUG-IN CARTRIDGES.
Combined impulse U_{oc}/I_{cw} (1.2/50 μ s, 8/20 μ s) 10kV/5kA.

SA3 1N A320R	1P+N	YES	1	1	0.140
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General characteristics

SURGE PROTECTION DEVICE TYPE SA3

They are available in pluggable cartridge version for installation on DIN rail or compact version for installation in terminal block or electrical conduit. They are used for protection of end users (Electronic devices). The DIN rail version includes a relay output with exchange contact for status reporting. The compact versions are available with acoustic or light signaling and are provided with pre-wired connectors, length 11cm.

Operational characteristics

- IEC nominal voltage U_n : 230VAC
- IEC rated current I_n (8 / 20 μ s): 5kA (SA3 ... A320R), 3kA (SA3..MS, SA3 ... ML)
- IEC combined impulse U_{oc} : 10kV (SA3 ... A320R), 6kV (SA3..MS, SA3 ... ML)
- IEC Protection level U_p <1.5kV
- IEC degree of protection: IP20.

Certifications and compliance

Certification obtained: EAC.
Compliant with standards: IEC/EN 61643-11.

Type 3 compact version



SA3 1N A275MS SA3 1N A275ML

new

Order code	Pole arrangement	Intervention signaling	Qty per pkg	Wt
			n°	[kg]

COMPACT VERSION.
Combined impulse U_{oc}/I_{cw} (1.2/50 μ s, 8/20 μ s) 6kV/3kA.

SA3 1N A275MS	1P+N	Acoustic	1	0.050
SA3 1N A275ML	1P+N	Optical	1	0.050

Certifications and compliance

Certification obtained: EAC.
Compliant with standards: IEC/EN 61643-11.

Type C2-D1 for data and signal lines



SASD 5VR SASD ET6

new

Order code	Application	Relay output	Qty per pkg	Wt
			n°	[kg]

MONOBLOCK VERSION.
Rated current C2 I_n (8/20 μ s): 10kA.

SASD 5VR	RS485	YES	1	0.058
SASD ET6	Ethernet Cat.6 - POE	–	1	0.120

General characteristics

Surge protection device for data lines type RS485 (5VDC) and Ethernet Cat. 6 Power Over Ethernet (POE). Typically used for protection of televisions, data lines, PCs, video cameras, electronic control units, measuring devices, switches and routers.

Operational characteristics

- TYPE SASD 5VR
- IEC rated voltage U_n : 5VDC
 - C2 rated current I_n (8 / 20 μ s): 10kA
 - D1 impulse current I_{imp} (10 / 350 μ s): 2.5kA
 - IEC degree of protection: IP20.

TYPE SASD ET6

- IEC rated voltage U_n : 48VDC (POE)
- C2 rated current I_n (8 / 20 μ s) L-PE: 10kA
- D1 I_{imp} impulsive current (10 / 350 μ s): 1kA
- IEC degree of protection: IP20.

Certifications and compliance

Certification obtained: EAC.
Compliant with standards: IEC/EN 61643-11.

14 Surge protection devices

Type 2 surge protection devices for photovoltaic application

With plug-in cartridge



SA2 DG 600M2R



SG2 DG K10M3R

Order code	Pole arrangement	Relay output	Number of DIN modules	Qty per pkg	Wt
		(SPDT)		n°	[kg]

VERSION WITH PLUG-IN CARTRIDGE.

EN short-circuit current rating I_{scpv} 100A.

SA2 DG 600M2	+, -, PE	NO	2	1	0.320
SA2 DG 600M2R	+, -, PE	YES	2	1	0.325

EN short-circuit current rating I_{scpv} 1000A.

SG2 DG K10M3	+, -, PE	NO	3	1	0.396
SG2 DG K10M3R	+, -, PE	YES	3	1	0.406
SG2 DG K50M3	+, -, PE	NO	3	1	0.444

new

PLUG-IN CARTRIDGES

Order code	Description	Qty per pkg	Wt
		n°	[kg]
SAX02 DG 600M2	For SA2 DG 600M2/M2R type	1	0.100
SGX02 DG K10M3	For SG2 DG K10M3/M3R type	1	0.100
SGX02 DG K50M3	For SG2 DG K50M3 type	1	0.100

new

Main characteristics

The surge protection device type SA2 D and SG2 DG with plug-in cartridge for photovoltaic applications is suitable for installation on the direct-current end of a photovoltaic installation and protects against induced overvoltage conditions.

The protection cartridges are plug-in and can be easily replaced for quick servicing.

Operational characteristics

- EN maximum continuous voltage U_{cpv}: 600VDC, 1100VDC, 1500VDC
- Versions with or without relay output having changeover contact for remote status indication
- EN degree of protection: IP20.

Characteristics

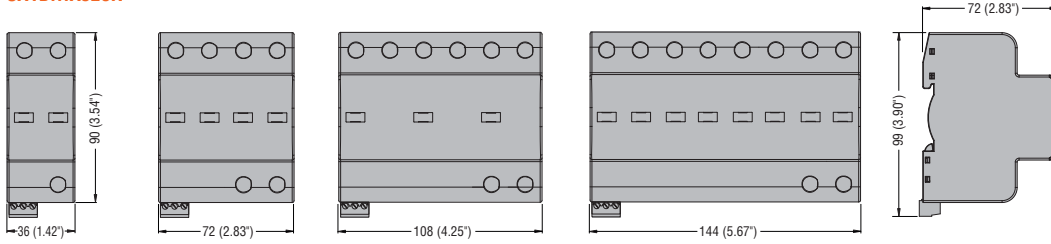
Type	EN rated voltage U _n	EN continuous voltage U _{cpv}	EN voltage protection level U _p
	[VDC]	[VDC]	[kV]
SA2 DG 600M2	600	600	<1.9
SA2 DG K10M3	1100	1100	<3.8
SA2 DG K50M3	1500	1500	<5.0

Certifications and compliance

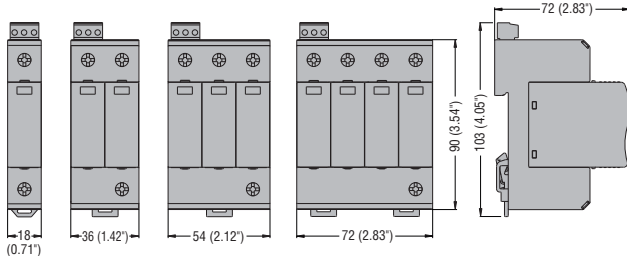
Certification obtained: EAC.

Compliant with standards: IEC/EN 50539-11.

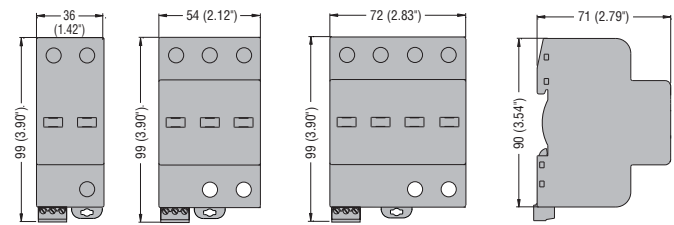
SA1B...A320R



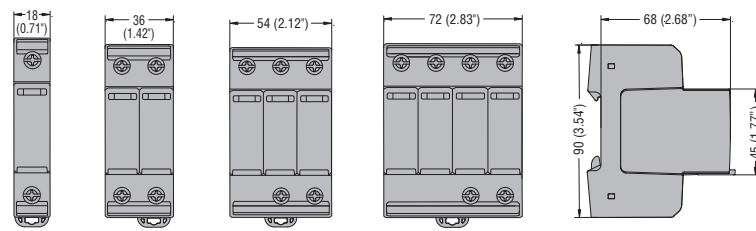
SA0...A320R



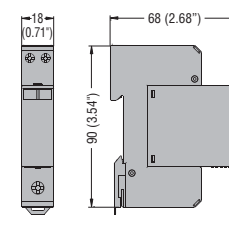
SA0B...A320R



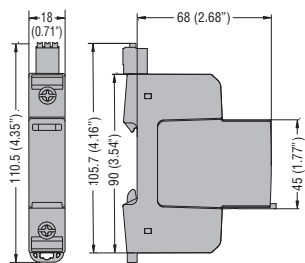
SG2... A300



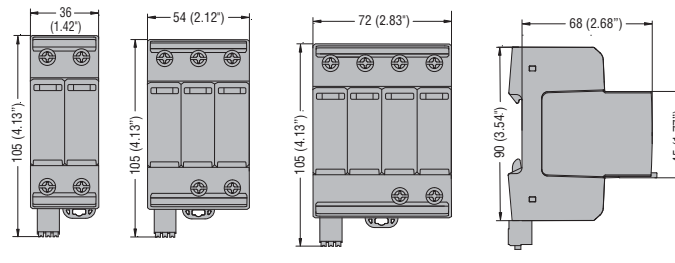
SG2C... A320



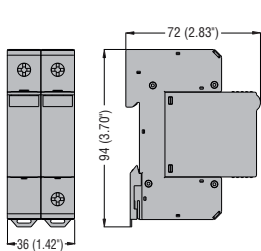
SG2 1P A300R



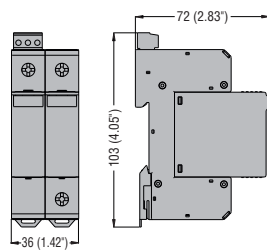
SG2... A300R



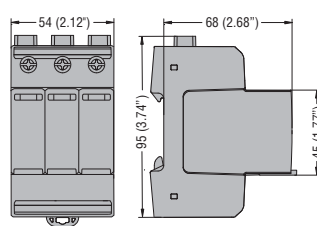
SA2 DG...



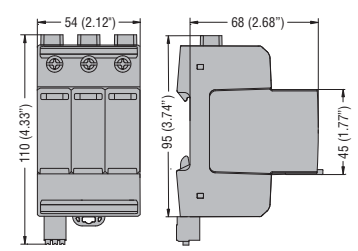
SA2 DG...R



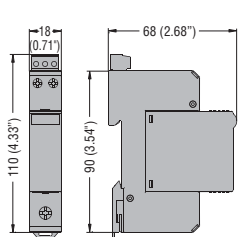
SG2 DG...M3



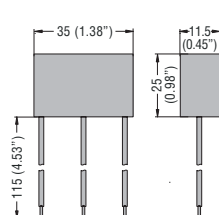
SG2 DG...M3R



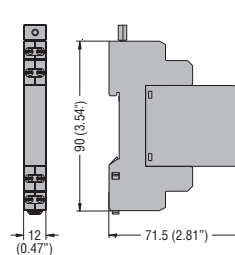
SA3 1N A320R



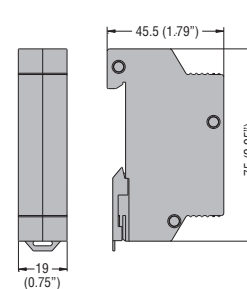
SA3 1N A275M...



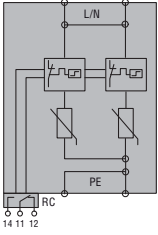
SASD 5VR



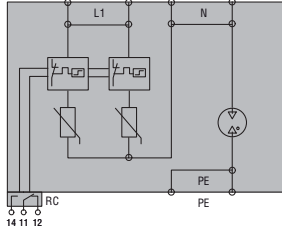
SASD ET6



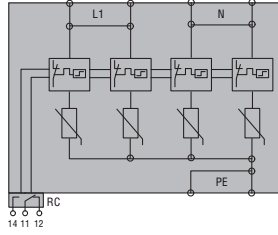
SA1B 1P A320R



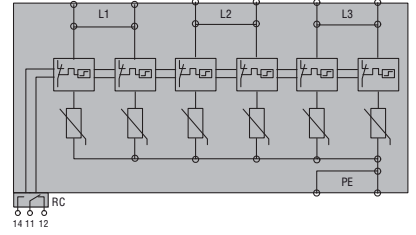
SA1B 1N A320R



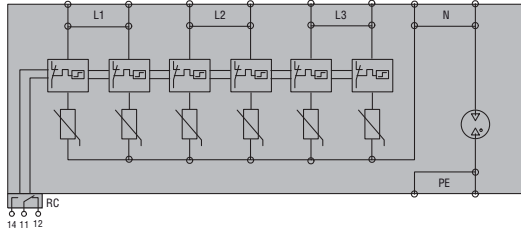
SA1B 2P A320R



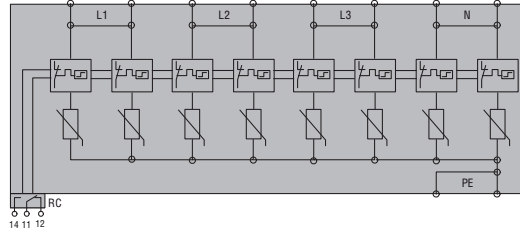
SA1B 3P A320R



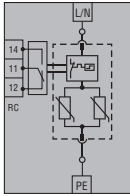
SA1B 3N A320R



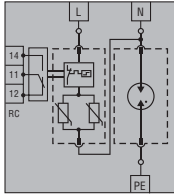
SA1B 4P A320R



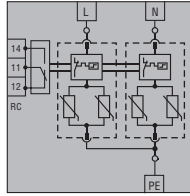
SAO 1P A320R



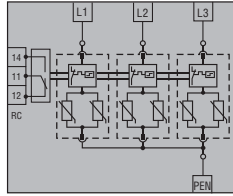
SAO 1N A320R



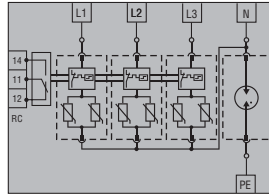
SAO 2P A320R



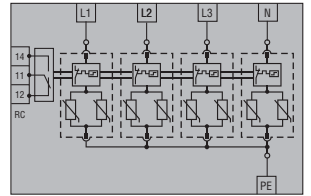
SAO 3P A320R



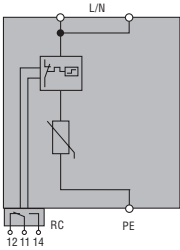
SAO 3N A320R



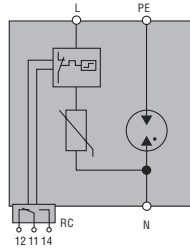
SAO 4P A320R



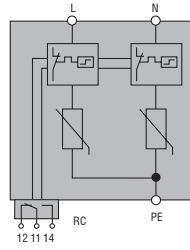
SAOB 1P A320R



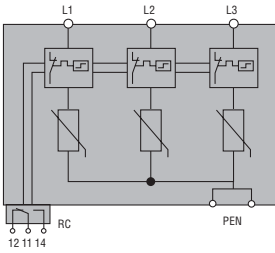
SAOB 1N A320R



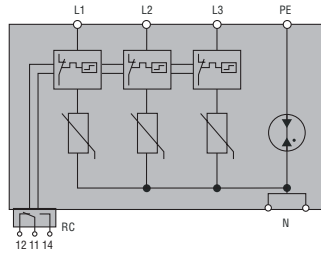
SAOB 2P A320R



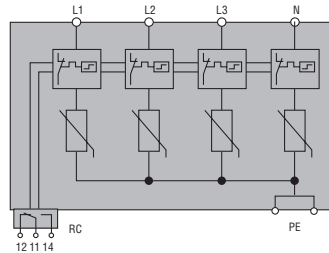
SAOB 3P A320R



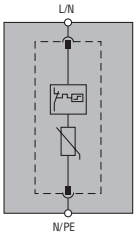
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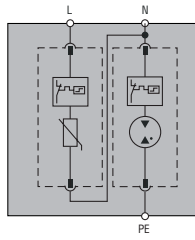
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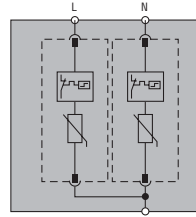
SG2 1P A300



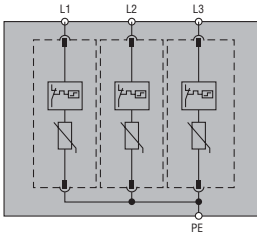
SG2 1N A300



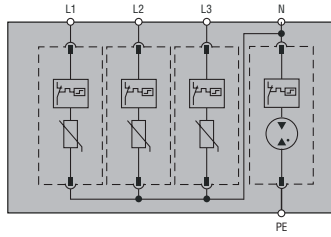
SG2 2P A300



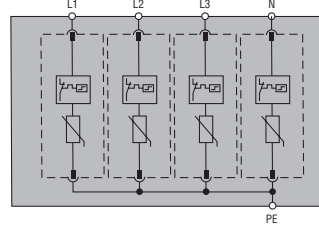
SG2 3P A300



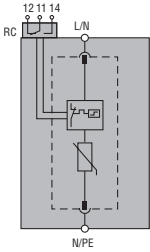
SG2 3N A300



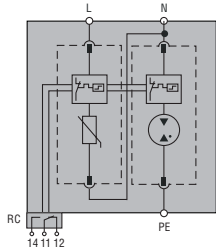
SG2 4P A300



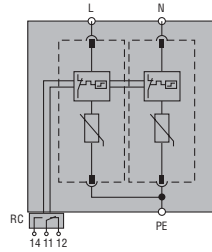
SG2 1P A300R



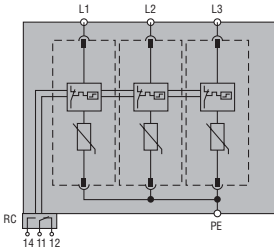
SG2 1N A300R



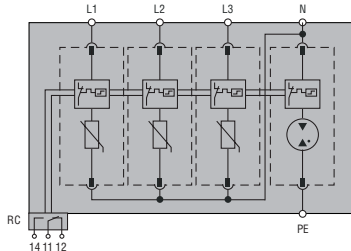
SG2 2P A300R



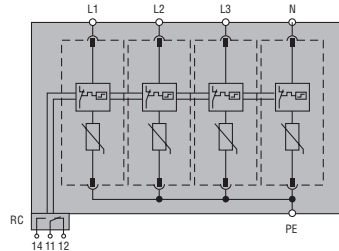
SG2 3P A300R



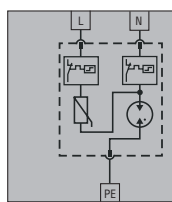
SG2 3N A300R



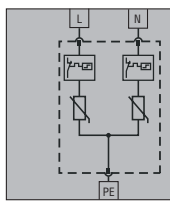
SG2 4P A300R



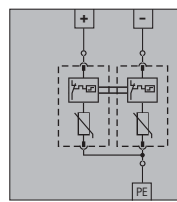
SG2C 1N A320



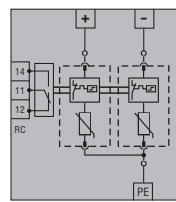
SG2C 2P A320



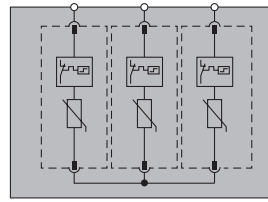
SA2 DG 600M2



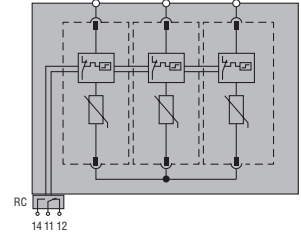
SA2 DG 600M2R



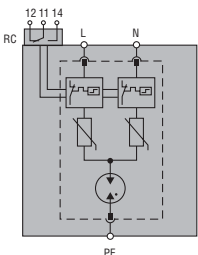
**SG2 DG K10M3
SG2 DG K50M3**



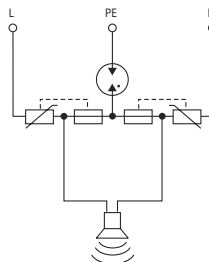
SG2 DG K10M3R



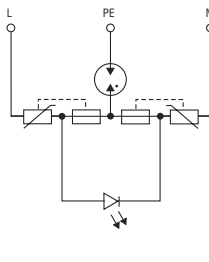
SA3 1N A320R



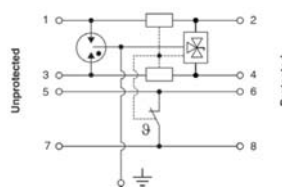
SA3 1N A275MS



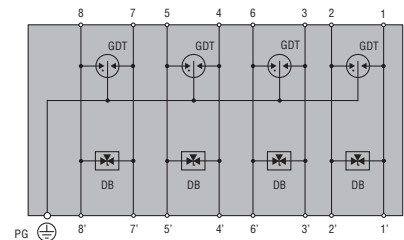
SA3 1N A275ML



SASD 5VR



SASD ET6



TYPE	with relay output	SA1B 1P A320R	SA1B 1N A320R	SA1B 2P A320R	SA1B 3P A320R	SA1B 3N A320R	SA1B 4P A320R
ELECTRICAL PROPERTIES							
SPD per IEC/EN 61643-11		Type 1, 2 (test class I, II)					
IEC rated voltage U_n	VAC	230	230	230	230 / 400	230 / 400	230 / 400
IEC maximum continuous voltage U_c	VAC	320					
IEC impulse current I_{imp} (10/350) (L-N/N-PE)	kA	25	25 / 50	25 per pole	25 per pole	25 / 100	25 per pole
IEC max impulse current I_{max} (8/20) (L-N/N-PE)	kA	100	100 / 100	100 per pole	100 per pole	100 / 100	100 per pole
IEC rated discharge current I_n (8/20) (L-N/N-PE)	kA	25	25 / 50	25 per pole	25 per pole	25 / 100	25 per pole
IEC voltage protection level U_p (L-N/N-PE)	kV	<1.4	<1.4 / <1.3	<1.4	<1.4	<1.4 / <1.5	<1.4
Temporary overvoltage (TOV) U_t (L-N for 5s)	VAC	335					
IEC residual voltage U_{res} (L-N/N-PE) at 5kA (8/20)	kV	1	1	1	1.1	1.1	1.1
IEC follow current I_f (N-PE)	Arms	no	>100	no	no	>100	no
Tripping time t_a (L-N/N-PE)	ns	<25	<25 / 100	<25	<25	<25 / 100	<25
Thermal isolation protection		Yes					
IEC backup protection fuse (supply >250A) (L-N/N-PE)	fuse A	250 gL/gG					
IEC maximum short-circuit current 50Hz	kA	50					
Status indicator - operating / failure	colour	Green / Red					
CONNECTIONS							
IEC degree of protection		IP20					
Terminal tightening torque	Nm	3					
Maximum conductor section	mm ²	25 (flexible) / 35 (rigid)					
RELAY OUTPUT FOR REMOTE STATUS INDICATION							
Type of contact		Changeover (NO/NC - SPDT)					
Contact capacity	A	0.5A at 250VAC; 3A at 125VAC; 0.1A at 250VDC; 0.2A at 125VDC					
Contact terminal tightening torque	Nm	0.25					
Maximum contact conductor section	mm ²	1.5					
AMBIENT CONDITIONS							
Operating temperature		-40...+80°C					
Fixing		On 35mm DIN rail (IEC/EN 60715)					
Housing material		Thermoplastic, RAL 7035, UL 94 V-0					

TYPE	with relay output	SAO 1P A320R	SAO 1N A320R	SAO 2P A320R	SAO 3P A320R	SAO 3N A320R	SAO 4P A320R
ELECTRICAL PROPERTIES							
SPD per IEC/EN 61643-11		Type 1, 2, 3 (test class I, II, III)					
IEC Rated voltage Un	VAC	230	230	230	230 / 400	230 / 400	230 / 400
IEC maximum continuous voltage U _c	VAC	320					
IEC impulse current I _{imp} (10/350) (L-N/N-PE)	kA	12.5	12.5 / 50	12.5 per pole	12.5 per pole	12.5 / 50	12.5 per pole
IEC max discharge current I _{max} (8/20) (L-N/N-PE)	kA	60	60 / 50	60 per pole	60 per pole	60 / 50	60 per pole
IEC rated discharge current I _n (8/20) (L-N/N-PE)	kA	25	25 / 30	25 per pole	25 per pole	25 / 30	25 per pole
IEC combined surge U _{oc} /I _{sc} (1.2/50, 8/20)	kV/kA	10 / 5					
IEC voltage level protection U _p (L-N/N-PE)	kV	<1.5	<1.5 / <1.7	<1.5	<1.5	<1.5 / <1.7	<1.5
IEC temporary overvoltage (TOV) U _t (L-N for 5s)	VAC	335					
IEC residual voltage U _{res} (L-N/N-PE) at 5kA (8/20)	kV	0.8	0.8 / 0.2	0.8	0.8	0.8 / 0.2	0.8
IEC follow current I _f (N-PE)	Arms	no	>100	no	no	>100	no
Tripping time t _a (L-N/N-PE)	ns	<25	<25 / 100	<25	<25	<25 / 100	<25
Thermal isolation protection		Yes					
IEC backup fuse (supply > 160A) (L-N/N-PE)	fuse A	160 gG					
IEC maximum short-circuit current 50Hz	kA	25					
Status indicator - operating / failure	colour	- / Red					
CONNECTIONS							
IEC degree of protection		IP20					
Terminal tightening torque	Nm	3					
Maximum conductor section	mm ²	25 (flexible) / 35 (rigid)					
RELAY OUTPUT FOR REMOTE STATUS INDICATION							
Type of contact		Changeover (NO/NC - SPDT)					
Contact capacity	A	0.5A at 250VAC; 3A at 125VAC; 0.1A at 250VDC; 0.2A at 125VDC					
Contact terminal tightening torque	Nm	0.25					
Maximum contact conductor section	mm ²	1.5					
AMBIENT CONDITIONS							
Operating temperature		-40...+80°C					
Fixing		On 35mm DIN rail (IEC/EN 60715)					
Housing material		Thermoplastic, RAL 7035, UL 94 V-0					

TYPE	with relay output	SA0B 1P A320R	SA0B 1N A320R	SA0B 2P A320R	SA0B 3P A320R	SA0B 3N A320R	SA0B 4P A320R
ELECTRICAL PROPERTIES							
SPD per IEC/EN 61643-11		Type 1, 2 (test class I, II)					
IEC Rated voltage Un	VAC	230	230	230	230 / 400	230 / 400	230 / 400
IEC maximum continuous voltage Uc	VAC	320					
IEC impulse current Iimp (10/350) (L-N/N-PE)	kA	12.5	12.5 / 50	12.5	12.5	12.5 / 50	12.5
IEC max discharge current I _{max} (8/20) (L-N/N-PE)	kA	50	50 / 100	50	50	50 / 100	50
IEC rated discharge current I _n (8/20) (L-N/N-PE)	kA	20	20 / 50	20	20	20 / 50	20
IEC voltage level protection U _p (L-N/N-PE)	kV	<1.5	<1.5 / <1.5	<1.5	<1.5	<1.5 / <1.5	<1.5
IEC temporary overvoltage (TOV) U _t (L-N for 5s)	VAC	335					
IEC follow current I _f (N-PE)	Arms	no	>100	no	no	>100	no
Tripping time t _a (L-N/N-PE)	ns	<25	<25 / 100	<25	<25	<25 / 100	<25
Thermal isolation protection		Yes					
IEC backup fuse (supply>250A) (L-N/N-PE)	fuse A	250 gG					
IEC maximum short-circuit current 50Hz	kA	50					
Status indicator - operating / failure	colour	Green / Red					
CONNECTIONS							
IEC degree of protection		IP20					
Terminal tightening torque	Nm	3					
Maximum conductor section	mm ²	25 (flexible) / 35 (rigid)					
RELAY OUTPUT FOR REMOTE STATUS INDICATION							
Type of contact		Changeover (NO/NC - SPDT)					
Contact capacity	A	0.5A at 250VAC; 3A at 125VAC					
Contact terminal tightening torque	Nm	0.25					
Maximum contact conductor section	mm ²	1.5					
AMBIENT CONDITIONS							
Operating temperature		-40...+85°C					
Fixing		On 35mm DIN rail (IEC/EN 60715)					
Housing material		Thermoplastic, RAL 7035, UL 94 V-0					

TYPE	without relay output	SG2 1P A300	SG2 1N A300	SG2 2P A300	SG2 3P A300	SG2 3N A300	SG2 4P A300
	with relay output	SG2 1P A300R	SG2 1N A300R	SG2 2P A300R	SG2 3P A300R	SG2 3N A300R	SG2 4P A300R
ELECTRICAL PROPERTIES							
SPD per IEC/EN 61643-11		Type 2 (test class II)					
IEC Rated voltage Un	VAC	240	240	240	240 / 400	240 / 400	240 / 400
IEC maximum continuous voltage Uc	VAC	300					
IEC max discharge current I _{max} (8/20) (L-N/N-PE)	kA	50	50 / 65	50	50	50 / 65	50
IEC rated discharge current I _n (8/20) (L-N/N-PE)	kA	20	20 / 40	20	20	20 / 40	20
IEC level protection U _p (L-N/N-PE)	kV	<1.5	<1.5 / <1.5	<1.5	<1.5	<1.5 / <1.5	<1.5
IEC temporary overvoltage (TOV) U _t (L-N for 5s)	VAC	337					
IEC follow current I _f (N-PE)	Arms	no	100	no	no	100	no
Tripping time t _a (L-N/N-PE)	ns	<25	<25 / 100	<25	<25	<25 / 100	<25
Thermal isolation protection		Yes					
IEC backup fuse (supply>315A) (L-N/N-PE)	fuse A	315/250 gG					
IEC maximum short-circuit current 50Hz	kA	25 / 50					
Status indicator - operating / failure	colour	Green / Red					
CONNECTIONS							
IEC degree of protection		IP20					
Terminal tightening torque	Nm	4.5					
Maximum conductor section	mm ²	25 (flexible) / 35 (rigid)					
RELAY OUTPUT FOR REMOTE STATUS INDICATION							
Type of contact		Changeover (NO/NC - SPDT)					
Contact capacity	A	1A at 250VAC; 1A at 125VAC; 0.5A at 48VDC; 0.5A at 24VDC; 0.5A at 12VDC					
Maximum contact conductor section	mm ²	1.5					
AMBIENT CONDITIONS							
Operating temperature		-40...+85°C					
Fixing		On 35mm DIN rail (IEC/EN 60715)					
Housing material		Thermoplastic, RAL 7035, UL 94 V-0					

TYPE		SG2C 1N A320	SG2C 2P A320
ELECTRICAL PROPERTIES			
SPD per IEC/EN 61643-11		Type 2 (test class II)	
IEC Rated voltage Un	VAC	230	
IEC maximum continuous voltage Uc	VAC	320	
IEC max discharge current Imax (8/20) (L-N/N-PE)	kA	15/35	15
IEC rated discharge current In (8/20) (L-N/N-PE)	kA	5/20	5
IEC voltage level protection Up	kV	<1.5	
IEC temporary overvoltage (TOV) Ut (L-N for 5s)	VAC	335	
IEC follow current If (N-PE)	Arms	>100	no
Tripping time ta (L-N/N-PE)	ns	<25 / 100	<25
Thermal isolation protection		Yes	
IEC backup fuse (supply>63A) (L-N/N-PE)	fuse A	63 gG	
IEC maximum short-circuit current 50Hz	kA	6	
Status indicator - operating / failure	colour	- / Red	
CONNECTIONS			
IEC degree of protection		IP20	
Terminal tightening torque	Nm	0.5 (L,N); 3 (PE)	
Maximum conductor section	mm ²	L,N: 4 (flexible) / 6 (rigid) PE: 25 (flexible) / 35 (rigid)	
AMBIENT CONDITIONS			
Operating temperature		-40...+85°C	
Fixing		On 35mm DIN rail (IEC/EN 60715)	
Housing material		Thermoplastic, RAL 7035, UL 94 V-0	

TYPE		SA3 1N A320R	SA3 1N A275MS	SA3 1N A275ML
ELECTRICAL PROPERTIES				
SPD per IEC/EN 61643-11		Type 3 (test class III)		
IEC Rated voltage Un	VAC	230	230	
IEC maximum continuous voltage Uc	VAC	320	275	
Combined impulse (1.2/50; 8/20) Uoc/lcw	kV/kA	10/5	6/3	
IEC max discharge current Imax (8/20)	kA	10	-	
IEC level protection Up (L-N/N-PE)	kV	<1.5	<1.5 / <1.7	
IEC temporary overvoltage (TOV) Ut (L-N for 5s)	VAC	337		
Tripping time ta (L-N/N-PE)	ns	<100ns		
IEC backup protection	A	63A fuse gG (line fuse >63 A)	MCB/B 16A (if MCB >16A)	
IEC maximum short-circuit current 50Hz	kA	10	1	
Status indicator - operating / failure		Red replace + relay output	Buzzer	LED
CONNECTIONS				
IEC degree of protection		IP20		
Terminal tightening torque (L-N / PE)	Nm	0.5 / 3		
Maximum conductor section	mm ²	L-N: 4 (flexible) / 6 (rigid); PE: 25 (flexible) / 35 (rigid)	1 (rigid)	
RELAY OUTPUT FOR REMOTE STATUS INDICATION				
Type of contact		Changeover (NO/NC - SPDT)		
Contact capacity	A	0.5A at 250VAC; 3A at 125VAC		
Contact terminal tightening torque	Nm	0.25		
Maximum contact conductor section	mm ²	1.5		
AMBIENT CONDITIONS				
Operating temperature		-40...+85°C		
Fixing		On 35mm DIN rail (IEC/EN 60715)	Socket circuit	
Housing material		Thermoplastic, RAL 7035, UL 94 V-0		

TYPE		SASD 5VR	SASD ET6
ELECTRICAL PROPERTIES			
SPD according to IEC/EN 61643-21		D1/C1/C2/C3 types	
Application		RS485	Ethernet Cat.6, Power over Ethernet (POE)
IEC rated voltage U_n	VDC	5	48
IEC maximum continuous voltage U_c	VDC	6	50
C2 rated current I_n (8/20)	kA	10	10
Maximum discharge current I_{max} (8/20)	kA	20	10
D1 impulse current I_{imp} (10/350)	kA	2.5	1
EN residual voltage U_{res} at 5kA (8/20)	V	<22	-
Protection level U_p (L-L / L-PE)	V	-	150 / 550
Load current I_L at 25°C	A	1	1
Tripping time t_a	ns	<1	<1
Line resistance	Ω	1.6...2.0	-
Capacity	pF	50	-
Bandwidth	MHz	30	250, Cat.6
CONNECTIONS			
IEC degree of protection		IP20	
Terminal tightening torque	Nm	0.5	(RJ45 sockets)
Conductor section (L / PE)	mm ²	4 (max) / 6 (min)	-
RELAY OUTPUT FOR REMOTE STATUS INDICATION			
Type of contact		NC	-
Contact capacity	A	0.5A 250VAC; 1A 50VDC	-
Maximum contact conductor section	mm ²	0.3...4	-
AMBIENT CONDITIONS			
Operating temperature		-40...+80°C	
Fixing		On 35mm DIN rail	
Housing material		Thermoplastic, V-0	Metal

TYPE	without relay output	SA2 DG 600 M2	SG2 DG K10 M3	SG2 DG K50 M3
	with relay output	SA2 DG 600 M2R	SG2 DG K10 M3R	-
ELECTRICAL PROPERTIES				
SPD according to EN50539-11		Type 2 (test class II)		
IEC rated voltage U_n	VDC	600	1100	1500
Maximum continuous voltage U_{cpv}	VDC	600	1100	1500
Maximum discharge current I_{max} (8/20)	kA	30	40	30
Rated discharge current I_n (8/20)	kA	15	20	20
Protection level U_p	kV	<1.9	<3.8	<5.0
EN residual voltage U_{res} at 5kA (8/20)	kV	1	-	-
Tripping time t_a	ns	<25		
Thermal isolation protection		Yes		
EN maximum short-circuit current I_{scpv}	A	100	11kA	
EN backup protection fuse ($I_{sc}>100A$)	A	100A gPV	-	
Status indication - operating / failure	colour	Green / Red		
CONNECTIONS				
EN degree of protection		IP20		
Terminal tightening torque	Nm	3	4.5	
Maximum conductor section	mm ²	25 (flexible) / 35 (rigid)		
RELAY OUTPUT FOR REMOTE STATUS INDICATION				
Type of contact		Changeover (NO/NC)		
Contact capacity	A	0.5A 250VAC; 3A 125VAC; 0.1A 250VDC; 0.2A 125VDC	1A 250VAC; 1A 125VAC; 0.5A 48VDC; 0.5A 24VDC; 0.5A 12VDC	
Maximum contact conductor section	mm ²	1.5		
AMBIENT CONDITIONS				
Operating temperature		-40...+80°C	-40...+85°C	
Fixing		On 35mm DIN rail (IEC/EN 60715)		
Housing material		Thermoplastic, RAL 7035, UL 94 V-0		



- Two, three and four-pole versions, 20A to 63A
- Very silent during operation or control stage
- Manual control version
- Operating flag indicator
- Add-on auxiliary contacts.

Modular contactors

Contactors	15 - 2
Contactors with manual control	15 - 3
Add-on blocks and accessories	15 - 3

Dimensions	15 - 4
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Wiring diagrams	15 - 4
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Technical characteristics	15 - 5
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Page 15-2

ONE AND TWO-POLE CONTACTORS

- IEC rated current Ith AC1 (400V): 20A and 32A
- IEC rated current AC3 (400V): 9A
- Ideal for domestic and service applications.



Page 15-2

THREE AND FOUR-POLE CONTACTORS

- IEC rated current Ith AC1 (400V): 25A, 32A, 40A and 63A
- IEC rated current AC3 (400V): 8.5A, 22A and 30A
- Ideal for industrial and service applications, such as office buildings, stores, hospitals, hotels, etc.



Page 15-3

ONE AND TWO-POLE CONTACTORS WITH MANUAL CONTROL

- IEC rated current Ith AC1 (400V): 20A and 32A
- IEC rated current AC3 (400V): 9A
- Ideal for functional tests and dual pricing systems in domestic and service applications.



Page 15-3

THREE AND FOUR-POLE CONTACTORS WITH MANUAL CONTROL

- IEC rated current Ith AC1 (400V): 32A
- IEC rated current AC3 (400V): 8.5A
- Ideal for functional tests and dual pricing systems in domestic and service applications.

Contactors



CN20...
CN32 11... - CN32 20...



CN25...
CN32 10... - CN32 01...



CN40...



CN63...

Order code	Rated auxiliary supply voltage	Configuration and number of contacts	Qty per pkg	Wt
	[V]①	1NO 1NC	n°	[kg]
One-pole or two-pole. 1 module. Ith 20A.				
CN20 11 024②⑦	24VAC/DC	1 1②	10	0.135
CN20 11 220②⑦	220...230VAC③	1 1②	10	0.135
CN20 20 024②⑦	24VAC/DC	2 —	10	0.135
CN20 20 220②⑦	220...230VAC③	2 —	10	0.135
One-pole or two-pole. 1 module. Ith 32A.				
CN32 11 024②⑦	24VAC/DC	1 1②	10	0.135
CN32 11 220②⑦	220...230VAC③	1 1②	10	0.135
CN32 20 024②⑦	24VAC/DC	2 —	10	0.135
CN32 20 220②⑦	220...230VAC③	2 —	10	0.135
Three-pole or four-pole. 2 modules. Ith 25A.				
CN25 10 024②	24VAC/DC	4④ —	5	0.260
CN25 10 220②	220...230VAC③	4④ —	5	0.260
CN25 01 024②	24VAC/DC	3 1②	5	0.260
CN25 01 220②	220...230VAC③	3 1②	5	0.260
Three-pole or four-pole. 2 modules. Ith 32A.				
CN32 10 024②	24VAC/DC	4 —	5	0.260
CN32 10 220②	220...230VAC③	4 —	5	0.260
CN32 01 024②	24VAC/DC	3 1②	5	0.260
CN32 01 220②	220...230VAC③	3 1②	5	0.260
Three-pole or four-pole. 3 modules. Ith 40A.				
CN40 10 024②	24VAC/DC	4④ —	5	0.425
CN40 10 220②	220...230VAC③	4④ —	5	0.425
CN40 01 024②	24VAC/DC	3 1②	5	0.425
CN40 01 220②	220...230VAC③	3 1②	5	0.425
Three-pole or four-pole. 3 modules. Ith 63A.				
CN63 10 024	24VAC/DC	4④ —	5	0.425
CN63 10 220	220...230VAC③	4④ —	5	0.425
CN63 01 024	24VAC/DC	3 1②	5	0.425
CN63 01 220	220...230VAC③	3 1②	5	0.425

- ① Other voltages on request. Consult Technical support; see contact details on inside front cover.
- ② 2NC version supplied on request.
- ③ The last (NC) pole has the same characteristics as the power pole. It can therefore be used indifferently as an auxiliary or as a NC power contact.
- ④ The fourth NO or NC pole has the same characteristics as the power poles; therefore it can be used indifferently as auxiliary or as power contact.
- ⑤ On request can be supplied: 2NO + 2NC or 4NC power poles. Consult Technical support; see contact details on inside front cover.
- ⑥ Can also operate at 220VDC.
- ⑦ No auxiliary contacts can be mounted.

Maximum number of contactors side-by-side

When contactors are mounted side by side and operate in continuous service (≥ 1 hour), spacing is needed between equipment to consent appropriate cooling. 9mm spacing is required; there is an accessory, called half-module spacer, order code CNX 80, for this specific type of mounting. The following table indicates details of the space needed between each.

Maximum number of contactors to be mounted side-by-side without spacing; the CNX 80 spacer is required when the number of pieces is more than the indicated below:

	CN20	CN32	CN25	CN40	CN63
Ambient temperature $\leq 40^\circ\text{C}$	3	3	3	3	3
Ambient temperature $> 40^\circ\text{...}55^\circ\text{C}$	2	2	2	3	2

General characteristics

- DC powered magnetic core system assuring silent operation and noise damping during the control phase
- Overvoltage protection circuit and voltage peak limitation of the magnetic core
- Equipped with 2 or 4 closing contacts of equal capacity permitting use in power or auxiliary circuits
- Operation flag indicator.

Operational characteristics

Type	IEC conventional free-air thermal current Ith in AC1 $\leq 400\text{V}$ [A]	Operational current in AC3 $\leq 400\text{V}$ [A]	Protection fuse gG (IEC) [A]
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One-pole or two-pole.

CN20...	20	9	20
CN32...	32	9	32

Three-pole or four-pole.

CN25...	25	8.5	25
CN32...	32	8.5	32
CN40...	40	22	63
CN63...	63	30	80

- Noise level:
 - Closed contactor $< 20\text{dB}$
 - Making/breaking operation $\leq 50\text{dB}$
- IEC degree of protection: IP20
- Mounting on 35mm DIN rail (IEC/EN 60175).

Operational characteristics of contactor-incorporated auxiliary contacts

Type	IEC insulation voltage Ui [V]	IEC rating (AC15 category)	
		230V [A]	400V [A]
CN20...	440	6	6
CN25...	440	6	4
CN32...	440	6	4
CN40...	500	6	4
CN63...	500	6	4

Utilisation

- Lighting systems
- Electric home heating
- Heat pumps
- Conditioning
- Ventilation
- Civil installations.

Lighting circuit switching

See page 15-6.

Certifications and compliance

Certifications obtained: EAC.
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-4-1, IEC/EN 60947-5-1, IEC/EN 61095.

Contactors with manual control



CNM20... - CNM32 20...



CNM32 10...

Order code	Rated auxiliary supply voltage	Configuration and number of contacts	Qty per pkg	Wt
	[V] ❶	1NO 1NC	n°	[kg]
One-pole or two-pole. 1 module. lth 20A.				
CNM20 11 024❷❸	24VAC/DC	1 1❹	10	0.135
CNM20 11 220❷❸	220...230VAC❹	1 1❹	10	0.135
CNM20 20 024❷❸	24VAC/DC	2 —	10	0.135
CNM20 20 220❷❸	220...230VAC❹	2 —	10	0.135
One-pole or two-pole. 1 module. lth 32A.				
CNM32 20 024❷❸	24VAC/DC	2 —	10	0.135
CNM32 20 220❷❸	220...230VAC❹	2 —	10	0.135
Three-pole or four-pole. 2 module. lth 32A.				
CNM32 10 024❷❸	24VAC/DC	4❹ —	5	0.260
CNM32 10 220❷❸	220...230VAC❹	4❹ —	5	0.260

- ❶ Other voltages on request. Consult Technical support; see contact details on inside front cover.
- ❷ 2NC version supplied on request.
- ❸ The last (NC) pole has the same characteristics as the power pole. It can therefore be used indifferently as an auxiliary or as a NC power contact.
- ❹ The fourth NO or NC pole has the same characteristics as the power poles; therefore it can be used indifferently as auxiliary or as power contact.
- ❺ On request can be supplied: 2NO + 2NC or 4NC power poles. Consult Technical support; see contact details on inside front cover.
- ❻ Can also operate at 220VDC.
- ❼ No auxiliary contacts can be mounted.

Maximum number of contactors side-by-side

When contactors are mounted side by side and operate in continuous service (≥ 1 hour), spacing is needed between equipment to consent appropriate cooling. 9mm spacing is required; there is an accessory, called half-module spacer, order code CNX 80, for this specific type of mounting. The following table indicates details of the space needed between each.

Maximum number of contactors to be mounted side-by-side without spacing; the CNX 80 spacer is required when the number of pieces is more than the indicated below:

	CNM20	CNM32
Ambient temperature $\leq 40^\circ\text{C}$	3	3
Ambient temperature $> 40^\circ\text{...}55^\circ\text{C}$	2	2

Add-on blocks and accessories



CNH...



CNP2

Order code	Characteristics	Max qty per contactor	Qty per pkg	Wt
		n°	n°	[kg]
Auxiliary contacts❶.				
CNH 11❷	1NO + 1NC	1	1	0.044
CNH 20❷	2NO	1	1	0.044
Set for terminal protection (also sealable).				
CNP 0	For CN20..., CNM20... and CNM32...	2	1❸	0.001
CNP 1	For CN25... and CNM32...	2	1❸	0.002
CNP 2	For CN40... and CN63...	2	1❸	0.003
Spacer.				
CNX 80	1/2 mod. wide	1	10	0.013

General characteristics

- DC powered magnetic core system assuring silent operation and noise damping during the control phase
- Overvoltage protection circuit and voltage peak limitation of the magnetic core
- Equipped with 2 or 4 closing contacts of equal capacity permitting use in power or auxiliary circuits
- Operation flag indicator
- Handle functions
 - Position A: contactor function.
 - Position B: contactor permanently switched off, even in case of coil control voltage is present.
 - Position I: contactor closed manually; when the coil is supplied the handle automatically moves to A position.

Operational characteristics

Type	IEC conventional free-air thermal current lth in AC1 $\leq 400\text{V}$ [A]	Operational current in AC3 $\leq 400\text{V}$ [A]	Protection fuse gG (IEC) [A]
One-pole or two-pole.			
CNM20...	20	9	20
CNM32...	32	9	32
Three-pole or four-pole.			
CNM32...	32	8.5	32

Operational characteristics of contactor-incorporated auxiliary contacts

Type	IEC insulation voltage Ui [V]	IEC rating (AC15 category)	
		230V [A]	400V [A]
CNM20...	440	6	6
CNM32...	440	6	4

- Noise level:
 - Closed contactor $< 20\text{dB}$
 - Making/breaking operation $\leq 50\text{dB}$
- IEC degree of protection: IP20
- Mounting on 35mm DIN rail (IEC/EN 60175).

Operational characteristics of contactor-incorporated auxiliary contacts

Type	IEC insulation voltage Ui [V]	IEC rating (AC15 category)	
		230V [A]	400V [A]
CNM20...	440	6	6
CNM32...	440	6	4

Utilisation

- Lighting systems
- Electric home heating
- Heat pumps
- Conditioning
- Ventilation
- Civil installations.

Lighting circuit switching

See page 15-6.

Certifications and compliance

Certifications obtained: EAC.
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-4-1, IEC/EN 60947-5-1, IEC/EN 61095.

Operational characteristics for auxiliary contacts

- IEC rated insulation voltage: 440VAC
- IEC conventional free air thermal current lth: 6A
- Minimum switching capacity: 5mA 12V
- Conductor section: 1...2.5mm²
- Maximum tightening torque: 1Nm.

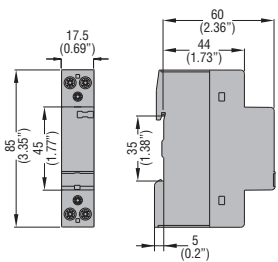
Certifications and compliance

Certifications obtained: EAC.
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-4-1, IEC/EN 60947-5-1, IEC/EN 61095.

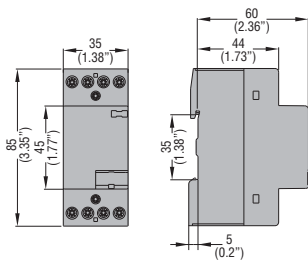
❶ Not suitable for CN20..., CN32 11..., CN32 20..., CNM20... and CNM32... modular contactors.
❷ Set of 2 pieces.

MODULAR CONTACTORS

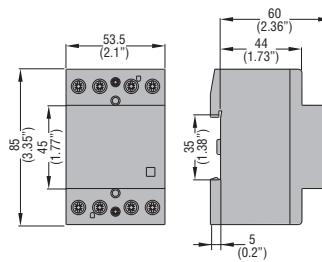
CN20... - CN32... (one-pole - two-pole)



CN25... - CN32... (three-pole - four-pole)

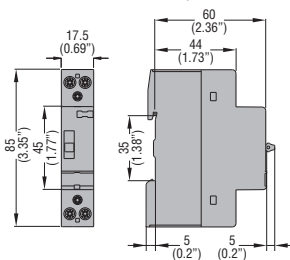


CN40... - CN63... (three-pole - four-pole)

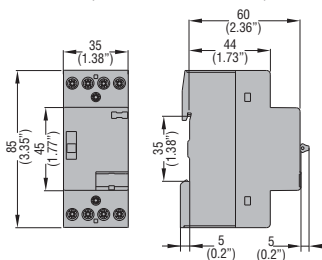


MODULAR CONTACTORS WITH MANUAL CONTROL

CNM20... - CNM32... (one-pole - two-pole)



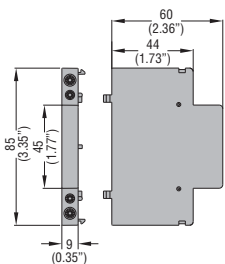
CNM32... (three-pole - four-pole)



ADD-ON BLOCKS AND ACCESSORIES

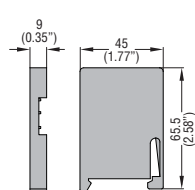
Auxiliary contacts

CNH...



Spacer

CNX80

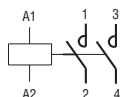
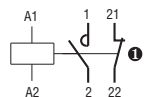


Wiring diagrams

ONE-POLE AND TWO-POLE MODULAR CONTACTORS

CN20 11
CN32 11
CNM20 11

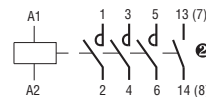
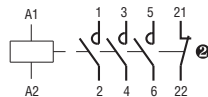
CN20 20
CN32 20
CNM20 20
CNM32 20



THREE-POLE AND FOUR-POLE MODULAR CONTACTORS

CN25 01
CN32 01
CN40 01
CN63 01

CN25 10
CN32 10
CN40 10
CN63 10
CNM32 10



① The NC contact has the same characteristics as the power pole contact. Therefore, it can be used indifferently as an auxiliary or as a NC power pole contact.

② The fourth pole NO or NC has the same characteristics as the power poles. Therefore, it can be used indifferently as auxiliary or as power pole contact.

ADD-ON AUXILIARY CONTACTS

CNH11

CNH20



TYPE		CN20... - CNM20...	CN25...	CN32... - CNM32... (one-pole and two-pole)	CN32... - CNM32... (three-pole and four-pole)	CN40...	CN63...
CONTACT CHARACTERISTICS							
IEC conventional free-air thermal current I _{th} (≤40°C)	A	20	25	32	32	40	63
IEC rated insulation voltage U _i	V	230	440	230	440	440	440
IEC rated impulse withstand voltage U _{imp}	kV	4	4	4	4	4	4
Minimum switching capacity		17V ≥50mA	17V ≥50mA	17V ≥50mA	17V ≥50mA	17V ≥50mA	17V ≥50mA
Power dissipation for I _{th} pole	W	1.7	2	2.5	2.5	4	8
Maximum tightening torque for coil terminals	Nm	0.6	0.6	0.6	0.6	0.6	0.6
	lbft	0.44	0.44	0.44	0.44	0.44	0.44
	Pozidr.	PZ1	PZ1	PZ1	PZ1	PZ2	PZ2
Coil conductor section	min.	mm ² 1					
	max.	mm ² 2.5					
Maximum tightening torque for power terminals	Nm	1.2	1.2	1.2	1.2	2	2
	lbft	0.9	0.9	0.9	0.9	1.48	1.48
	Tool	PZ1	PZ1	PZ1	PZ1	PZ2	PZ2
Power conductor section	min.	mm ² 2.5					
	max.	mm ² 6					
AC/DC CONTROL CIRCUIT							
Average coil consumption in-rush and holding	W	2.5	3	2.5	3	5	5
Operating voltage limits	pick-up	% U _s 85...110					
	drop-out	% U _s 20...75					
OPERATING TIMES							
Average time	closing NO	ms	15...45	15...45	15...45	15...45	15...20
	opening NO	ms	25...50	20...70	20...50	20...70	35...45
LIFE							
Mechanical	cycles	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Electrical (in AC3 duty)	cycles	300,000	500,000	500,000	500,000	150,000	150,000
Electrical (in AC1 duty)	cycles	200,000	200,000	150,000	150,000	100,000	100,000
AMBIENT CONDITIONS							
Operating temperature	°C	-5...+55					
Storage temperature	°C	-30...+80					

LIGHTING CIRCUIT SWITCHING

Lamp features	Lamp power	Rated current	Capacitor power	Maximum number [n] of lamps each contactor pole 230V 50Hz				
	[W]	[A]	[μF]	CN20... - CNM20...	CN25...	CN32... - CNM32...	CN40	CN63
LED LIGHTING BALLAST	N = number of controlled ballasts In = Ballast rated current in mA			N = 2400 / In	N = 3800 / In	N = 4000A / In	N = 11000 / In	N = 18000 / In
INCANDESCENT AND TUNGSTEN HALOGEN	60	0.26	-	33	37	42	67	83
	100	0.44	-	20	22	25	40	50
	500	2.17	-	4	4	5	8	10
	1000	4.35	-	2	2	3	4	5
COMPACT FLUORESCENT (ENERGY SAVING)	3	0.04	-	150	200	250	550	700
	5	0.06	-	90	120	150	330	420
	6	0.07	-	75	100	125	275	350
	7	0.08	-	64	86	107	236	300
	8	0.09	-	56	75	94	206	263
	9	0.1	-	50	67	83	183	233
	10	0.11	-	45	60	75	165	210
	11	0.12	-	41	55	68	150	191
	12	0.13	-	38	50	63	138	175
	13	0.14	-	35	46	58	127	162
	14	0.15	-	32	43	54	118	150
	15	0.16	-	30	40	50	110	140
	16	0.18	-	28	38	47	103	131
	17	0.19	-	26	35	44	97	124
	18	0.2	-	25	33	42	92	117
	20	0.21	-	23	30	38	83	105
	21	0.22	-	21	29	36	79	100
	22	0.23	-	20	27	34	75	95
	23	0.24	-	20	26	33	72	91
	24	0.25	-	19	25	31	69	88
	25	0.26	-	18	24	30	66	84
	26	0.27	-	17	23	29	63	81
	27	0.124	-	17	22	28	61	78
	30	0.15	-	15	20	25	55	70
	50	0.24	-	9	12	15	33	42
	70	0.312	-	6	9	11	24	30
	FLUORESCENT not corrected	18	0.37	-	24	30	35	54
25		0.29	-	30	39	45	69	110
36		0.43	-	20	26	30	47	74
58		0.67	-	13	17	19	30	48
FLUORESCENT corrected	18	0.19	4.5	7	8	9	49	73
	25	0.15	3.5	9	10	11	63	94
	36	0.29	4.5	7	8	9	49	73
	58	0.46	7	4	5	6	31	47
ELECTRONIC FLUORESCENT BALLAST	14	0.08	-	44	59	64	156	225
	2x14	0.15	-	23	32	34	83	120
	18	0.09	-	39	53	57	139	200
	2x18	0.17	-	21	28	30	74	106
	21	0.11	-	32	43	46	114	164
	2x21	0.22	-	16	22	23	57	82
	28	0.14	-	25	34	36	89	129
	2x28	0.27	-	13	18	19	46	67
	36	0.16	-	22	30	32	78	113
	2x36	0.31	-	11	15	16	40	58
	40	0.21	-	17	23	24	60	86
	2x40	0.42	-	8	11	12	30	43
	58	0.25	-	14	19	20	50	72
	2x58	0.48	-	7	10	11	26	38
	70	0.3	-	12	16	17	42	60
	2x70	0.57	-	6	8	9	22	32
HIGH-PRESSURE MERCURY VAPOUR not corrected	50	0.6	-	14	18	20	38	55
	80	0.8	-	10	13	15	29	42
	125	1.2	-	7	9	10	20	29
	250	2.2	-	4	5	6	10	15
	400	3.3	-	2	3	4	7	10
	700	5.4	-	1	2	3	4	6
1000	7.5	-	1	1	2	3	4	

① Usually each LED lamp has one ballast.

In event of one ballast supplies several lamps, the calculation has to consider the number of supplied ballasts.

E.G. If the LED lamp ballast input current is 500mA, (consider CN40=11,000/500=22), the maximum number of ballasts admitted per each pole of CN 40 contactor is 22.

LIGHTING CIRCUIT SWITCHING

Lamp features	Lamp power [W]	Rated current [A]	Capacitor power [µF]	Maximum number [n] of lamps each contactor pole 230V 50Hz				
				CN20... - CNM20...	CN25...	CN32... - CNM32...	CN40	CN63
HIGH-PRESSURE MERCURY VAPOUR corrected	50	0.3	7	4	5	6	31	47
	80	0.4	8	4	5	5	27	41
	125	0.6	10	3	4	4	22	33
	250	1.2	18	1	2	2	12	18
	400	1.8	25	1	1	1	9	13
	700	3.4	40	0	0	1	5	7
	1000	4.8	60	0	0	0	4	5
METAL HALIDE not corrected	35	0.5	-	18	22	28	43	60
	70	1	-	10	12	14	23	32
	100	1.2	-	8	10	11	19	26
	150	1.8	-	5	7	7	12	18
	250	3	-	3	4	4	7	10
	400	4.6	-	3	3	3	6	9
	600	6.2	-	1	2	2	3	4
	1000	9.7	-	1	1	1	2	3
METAL HALIDE corrected	2000	12.2	-	0	0	1	1	2
	35	0.23	6	5	6	6	36	50
	70	0.42	12	2	3	3	18	25
	100	0.55	12	2	3	3	18	25
	150	0.77	20	1	1	1	11	15
	250	1.26	32	0	1	1	6	9
	400	2	45	0	0	0	5	7
	600	3	65	0	0	0	3	5
HIGH-PRESSURE SODIUM VAPOUR not corrected	1000	5	85	0	0	0	2	3
	2000	10.5	125	0	0	0	1	2
	100	1.2	-	7	8	9	25	30
	150	1.8	-	5	6	6	17	22
	250	3	-	3	4	4	10	13
	400	4.4	-	2	2	2	6	8
HIGH-PRESSURE SODIUM VAPOUR corrected	600	6.2	-	1	1	1	4	5
	1000	10.3	-	0	1	1	3	3
	100	0.55	12	2	3	3	18	27
	150	0.77	20	1	1	2	11	16
	250	1.26	32	0	1	1	6	10
	400	2	45	0	0	0	4	6
LOW-PRESSURE SODIUM VAPOUR not corrected	600	2.9	65	0	0	0	3	5
	1000	5.1	100	0	0	0	2	3
	18	0.4	-	22	27	30	71	90
	35	0.6	-	7	9	10	23	30
	55	0.6	-	7	9	10	23	30
	90	0.9	-	4	5	6	14	19
LOW-PRESSURE SODIUM VAPOUR corrected	135	0.9	-	3	4	5	10	13
	180	0.9	-	3	4	5	10	13
	18	0.35	5	6	7	8	44	66
	35	0.28	20	1	1	2	11	16
	55	0.35	20	1	1	2	11	16
	90	0.55	26	1	1	1	8	12
LOW-PRESSURE SODIUM VAPOUR with electronic ballast	135	0.8	40	0	0	1	4	7
	180	1	40	0	0	1	5	8
	35	0.16	-	13	18	21	35	44
	55	0.25	-	8	11	13	22	28



- Modular, flush and internal panel mount version, with or without flag indicator, configurable prealarm indication and fail safe operation
- Versions with automatic toroid connection control
- Choice of supply voltage ranges
- Adjustable fault current $I_{\Delta n}$
- Adjustment and choice of tripping range for both fault current and delay time.

Earth leakage relays

With 1 operation threshold	16 - 2
With 2 operation thresholds	16 - 3
Toroidal current transformers	16 - 3
External multiplier	16 - 3

Dimensions	16 - 4
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Wiring diagrams	16 - 5
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Technical characteristics	16 - 6
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SEC. - PAGE



Page 16-2

FLUSH-MOUNT VERSION

R1D type

- 1 operation threshold
- External toroidal transformer
- Adjustable tripping $I\Delta n$ and delay time.



Page 16-3

FLUSH-MOUNT VERSION

R2D type

- 2 operation thresholds
- External toroidal transformer
- Configurable fail safe operation
- Adjustable tripping $I\Delta n$ and delay time.

R3D type

- 2 operation thresholds
- External toroidal transformer
- Configurable fail safe operation
- Flag indicator
- Adjustable tripping $I\Delta n$ and delay time.



Page 16-3

FLUSH-MOUNT VERSION

R4D type

- 2 operation thresholds
- External toroidal transformer
- Configurable fail safe operation
- Fault current measurement
- Digital display
- Flag indicator
- Shunt tripping circuit
- Adjustable tripping $I\Delta n$ and delay time.



Page 16-2

MODULAR VERSION

RM1 type

- 1 operation threshold
- External toroidal transformer
- Fixed tripping $I\Delta n$ and delay time.

RM type

- 1 operation threshold
- External toroidal transformer
- Adjustable tripping $I\Delta n$ and delay time.



Page 16-2

MODULAR VERSION

RMT type

- 1 operation threshold
- Incorporated toroidal transformer
- Adjustable tripping $I\Delta n$ and delay time.



Page 16-2

COMPACT INTERNAL PANEL VERSION

RC type

- 1 operation threshold
- Incorporated toroidal transformer
- Adjustable tripping $I\Delta n$ and delay time
- 35mm to 110mm diameter.



Page 16-3

TOROIDAL CURRENT TRANSFORMERS

RT type

- Solid core
- 35mm to 210mm diameter.

RTA type

- Split core
- 110mm and 210mm diameter.



Page 16-3

EXTERNAL MULTIPLIER

RX10 type

- 10-fold multiplier.

Relays with 1 operation threshold



R1D...

Order code	Rated auxiliary supply voltage	Output contacts	Qty per pkg	Wt
	[V]	4 ¹ SPDT	n°	[kg]

1 OPERATION THRESHOLD.
Flush mount. External CT.

R1D 48	24-48VAC/DC	1	1	0.280
R1D 415	110-240-415V ①	1	1	0.280

① Supply voltage:
110...125VAC (50/60Hz)/DC
220...240VAC (50/60Hz)
380...415VAC (50/60Hz).

General characteristics

- Earth leakage relay type A
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Flush mount 96x96mm housing with transparent cover
- IEC degree of protection: IP20 terminals, IP40 on front with cover.

ADJUSTMENTS FOR R1D

- Configurable tripping set-point (I Δ n): 0.025...0.25A
2.5...2.5A
25...250A (with external multiplier RX10)
- Configurable tripping delay time (t): 0.02...0.5s
0.2...5s.

Certification and compliance

Certification obtained: EAC.
Compliant with standards: IEC/EN 60947-2.



RM1...

Order code	Rated auxiliary supply voltage	Output contacts	Qty per pkg	Wt
	[V]	4 ¹ SPDT	n°	[kg]

1 OPERATION THRESHOLD.
Modular, 35mm DIN (IEC/EN 60715) rail mounting.
External CT. Fixed tripping set point and time.

RM1 48	24-48VAC/DC	1	1	0.175
RM1 415	110-240-415V AC ①	1	1	0.175

1 OPERATION THRESHOLD.
Modular, 35mm DIN (IEC/EN 60715) rail mounting.
External CT.

31 RM 48	24-48VAC/DC	1	1	0.190
31 RM 415	110-240-415V ①	1	1	0.190

1 OPERATION THRESHOLD.
Modular, 35mm DIN (IEC/EN 60715) rail mounting.
Ø28mm/Ø1.1" incorporated CT. Configurable fail safe.

31 RMT 415	110-240-415V ①	2	1	0.375
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① Supply voltage:
110...125VAC (50/60Hz)/DC
220...240VAC (50/60Hz)
380...415VAC (50/60Hz).

General characteristics

- Earth leakage relay type A
- Configurable fail safe operation for RMT type only
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Modular DIN 43880 housing, 2 module, with transparent cover, suitable for fixing on 35mm DIN rail (IEC/EN 60715)
- IEC degree of protection: IP20 terminals, IP40 on front with cover.

SETTINGS FOR RM1

- Selectable tripping set-point (I Δ n): fixed 0.3A or 0.5A
- Selectable tripping time (t): fixed 0.02s or 0.5s.

ADJUSTMENTS FOR RM AND RMT

- Configurable tripping set-point (I Δ n): 0.025...0.25A
2.5...2.5A
25...250A (with external multiplier RX10 for RM only)
- Configurable tripping delay time (t): 0.02...0.5s
0.2...5s.

Certification and compliance

Certification obtained: EAC.
Compliant with standards: IEC/EN 60947-2.



31 RM...



31 RMT...



31 RC60...



31 RC110...

Order code	Rated auxiliary supply voltage	Output contacts	Qty per pkg	Wt
	[V]	4 ¹ SPDT	n°	[kg]

1 OPERATION THRESHOLD.
Compact panel mount. CT incorporated.

31 RCϕ 48	24-48VAC/DC	1	1	0.485
31 RCϕ 415	110-240-415V ①	1	1	0.485

① Supply voltage:
110...125VAC (50/60Hz)/DC
220...240VAC (50/60Hz)
380...415VAC (50/60Hz).
② Replace with the digit of the required diameter (35-60-80-110mm/
1.38-2.36-3.15-4.33").

General characteristics

- Earth leakage relay type A
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Compact housing for fixing on panel mounting plate
- IEC degree of protection: IP20 terminals.

ADJUSTMENTS FOR RC

- Configurable tripping set-point (I Δ n): 0.025...0.25A
2.5...2.5A
25...250A
- Configurable tripping delay time (t): 0.02...0.5s
0.2...5s.

Certification and compliance

Certification obtained: EAC.
Compliant with standards: IEC/EN 60947-2.

Relays with 2 operation thresholds



R2D...



R3D...



R4D...

Ordering code	Rated auxiliary supply voltage	Output contacts	Qty per pkg	Wt
	[V]	2 SPDT	n°	[kg]

2 OPERATION THRESHOLDS.
Flush mount. External CT. Fail safe.

R2D 415	110-240-415V ^①	2	1	0.395
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2 OPERATION THRESHOLDS.
Flush mount. External CT.
Fail safe. Flag Indicator.

R3D 415	110-240-415V ^①	2	1	0.405
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2 OPERATION THRESHOLDS.
Flush mount. External CT.
Fault current measurement. Digital display.
Fail safe. Flag indicator.

R4D 415	110-240-415V ^①	2	1	0.570
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^① Supply voltage:
110...125VAC (50/60Hz)
220...240VAC (50/60Hz)
380...415VAC (50/60Hz).

General characteristics

- Earth leakage relay type A
- 2 output relays each with changeover contact, configurable 2 tripping or 1 tripping and 1 alarm
- Configurable fail safe prealarm and operation
- Automatic toroid connection control
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Red tripping prealarm LED indicator (ALARM)
- Front TEST button
- Manual resetting by front RESET button or remote contact closing
- Automatic resetting by remote contact closing or rear jumper connection
- Constant toroid-relay circuit control
- Flag indicator (TRIP MEMORY) (R3D-R4D only)
- Digital fault current measurement and display with configurable tripping value memory (R4D only)
- Shunt tripping circuit operating test (TCS) (R4D only)
- Flush mount 96x96mm/3.78"x3.78" housing with transparent cover
- IEC degree of protection: IP20 terminals, IP40 on front with cover.

ADJUSTMENTS FOR R2D and R3D

- Configurable tripping set-point (IΔn): 0.025...0.25A
0.25...2.5A
2.5...25A
25...250A (with external multiplier RX10)
- Prealarm set-point: fixed 70%
- Configurable tripping delay time (t): 0.02...0.5s
0.2...5s.

ADJUSTMENTS FOR R4D

- Configurable tripping set-point (IΔn): 0.03...0.3A
0.3...3A
3...30A
30...300A (with external multiplier RX10)
- Prealarm set-point: fixed 70%
- Configurable tripping delay time (t): 0.03...0.5s
0.3...5s.

Certification and compliance

Certification obtained: EAC.
Compliant with standards: IEC/EN 60947-2.

Toroidal current transformers



31 RT...



31 RT...

Order code	Diameter	Openable	Qty per pkg	Wt.
	[mm/in]		n°	[kg]
31 RT 35	35/1.38"	No	1	0.200
31 RT 60	60/2.36"	No	1	0.245
31 RT 80	80/3.15"	No	1	0.410
31 RT 110	110/4.33"	No	1	0.400
31 RT 210	210/8.27"	No	1	1.200
31 RTA 110	110/4.33"	Yes	1	0.540
31 RTA 210	210/8.27"	Yes	1	1.820

Certification and compliance

Certification obtained: EAC.
Compliant with standards: IEC/EN 60947-2.

External multiplier



31 RX 10

Order code	Description	Qty per pkg	Wt
		n°	[kg]
31 RX 10	10-fold multiplier suitable for R1D, RM, R2D, R3D and R4D types only	1	0.300

General characteristics

- To connect between toroid and relay.

Certification and compliance

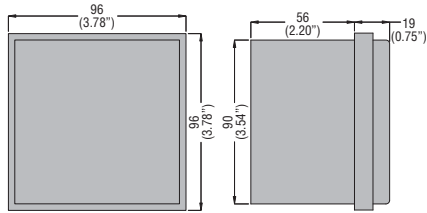
Certification obtained: EAC.
Compliant with standards: IEC/EN 60947-2.

16 Earth leakage relays

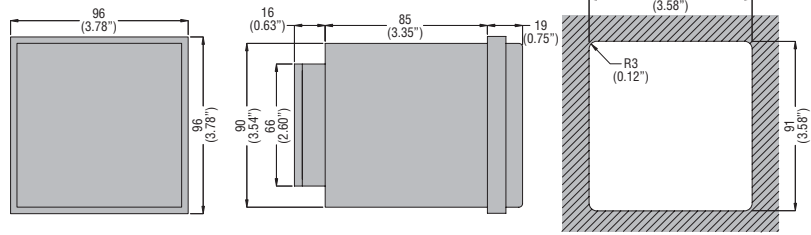
Dimensions [mm (in)]

EARTH LEAKAGE RELAYS

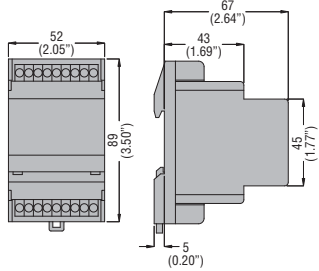
R1D - R2D - R3D



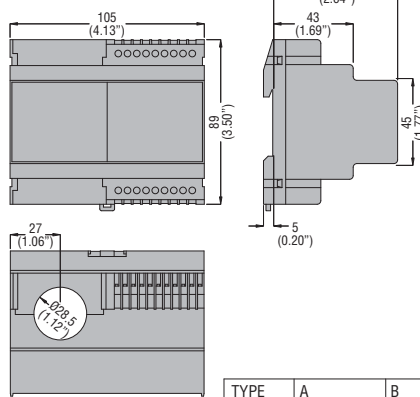
R4D



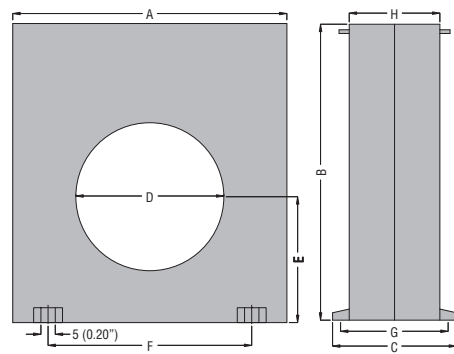
RM1 - RM



RMT



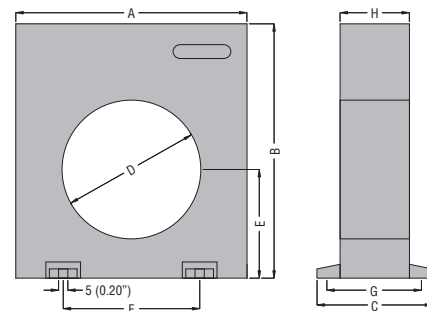
RC



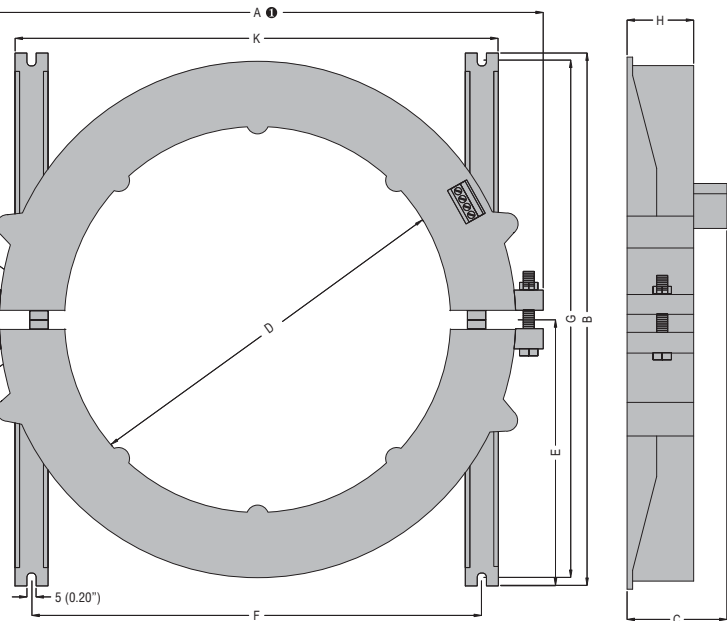
TYPE	A	B	C	D	E	F	G	H
RC35	100 (3.94")	110 (4.33")	70 (2.75")	35 (1.38")	47 (1.85")	60 (2.36")	60 (2.36")	50 (1.97")
RC60	100 (3.94")	110 (4.33")	70 (2.75")	60 (2.36")	47 (1.85")	60 (2.36")	60 (2.36")	50 (1.97")
RC80	150 (5.90")	160 (6.30")	70 (2.75")	80 (3.15")	70 (2.75")	110 (4.33")	60 (2.36")	50 (1.97")
RC110	150 (5.90")	160 (6.30")	70 (2.75")	110 (4.33")	70 (2.75")	110 (4.33")	60 (2.36")	50 (1.97")

TOROIDAL CURRENT TRANSFORMERS AND EXTERNAL MULTIPLIER

RT35 - RT60 - RT80 - RT110 - RX10

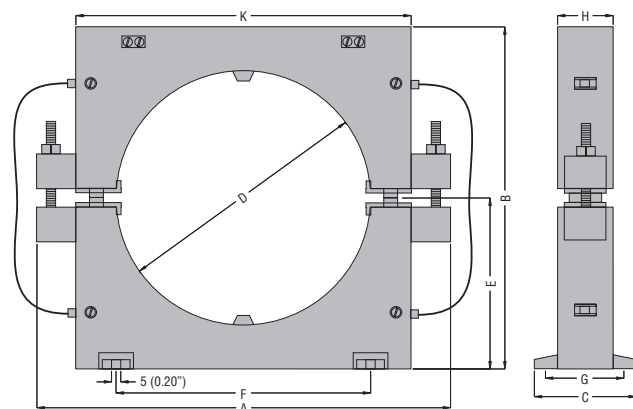


RT210 - RTA210



● With screws, for RTA210 split-core type; fixed structure, without screws, for RT210 type.

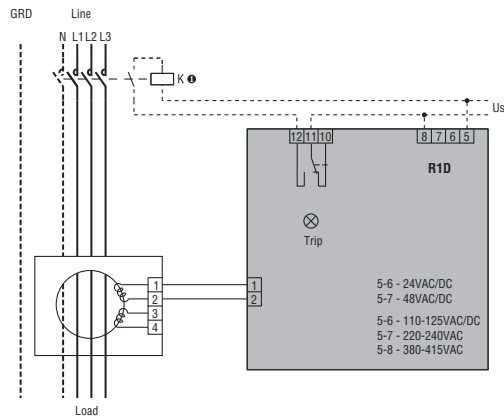
RTA110



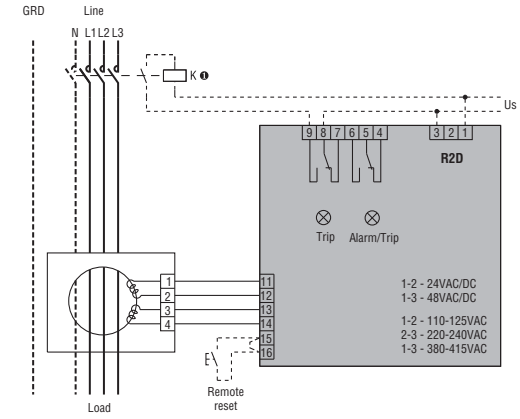
TYPE	A	B	C	D	E	F	G	H	K
RT35	100 (3.94")	110 (4.33")	50 (1.97")	35 (1.38")	47 (1.85")	60 (2.36")	43 (1.69")	30 (1.18")	—
RT60	100 (3.94")	110 (4.33")	50 (1.97")	60 (2.36")	47 (1.85")	60 (2.36")	43 (1.69")	30 (1.18")	—
RT80	150 (5.90")	160 (6.30")	50 (1.97")	80 (3.15")	70 (2.75")	110 (4.33")	43 (1.69")	30 (1.18")	—
RT110	150 (5.90")	160 (6.30")	50 (1.97")	110 (4.33")	70 (2.75")	110 (4.33")	43 (1.69")	30 (1.18")	—
RT210	310 (12.20")	290 (11.41")	54 (2.12")	210 (8.27")	145 (5.71")	240 (9.45")	280 (11.02")	36 (1.42")	258 (10.16")
RTA110	180 (7.09")	150 (5.90")	45 (1.77")	110 (4.33")	75 (2.95")	110 (4.33")	38 (1.50")	25 (0.98")	145 (5.71")
RTA210	310 (12.20")	290 (11.41")	54 (2.12")	210 (8.27")	145 (5.71")	240 (9.45")	280 (11.02")	36 (1.42")	258 (10.16")
RX10	100 (3.94")	110 (4.33")	50 (1.97")	—	—	60 (2.36")	43 (1.69")	30 (1.18")	—

EARTH LEAKAGE RELAYS

R1D

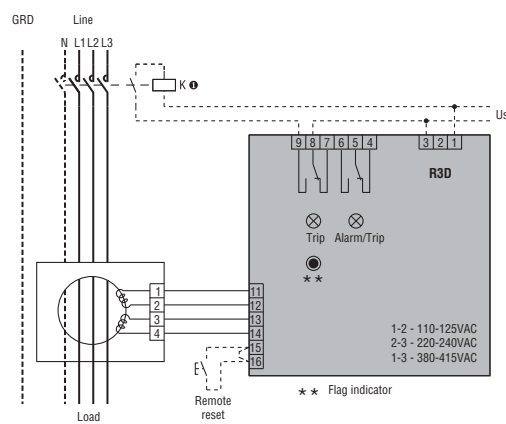


R2D



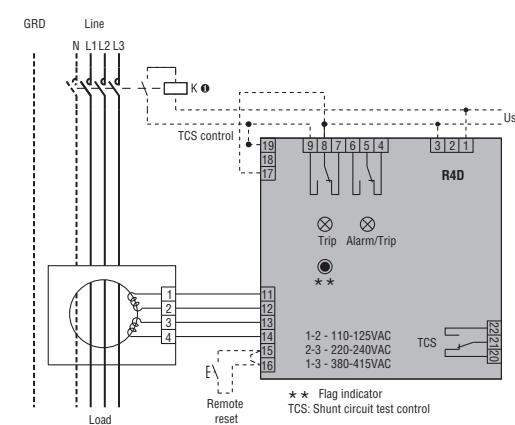
❶ The coil connection can vary depending on the connected type of device (contactor, breaker with shunt trip release or breaker with undervoltage trip release).

R3D



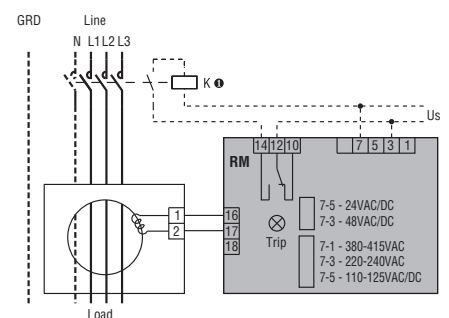
❶ The coil connection can vary depending on the connected type of device (contactor, breaker with shunt trip release or breaker with undervoltage trip release).

R4D



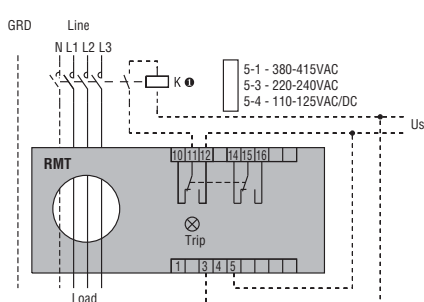
Type	Us	Us Wiring	TCS Wiring
R4D 415	110-125VAC	1-2	17-18
	220-240VAC	2-3	17-18
	380-415VAC	1-3	17-19

RM - RM1

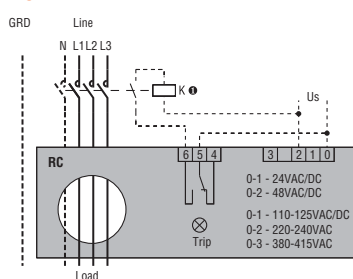


❶ The coil connection can vary depending on the connected type of device (contactor, breaker with shunt trip release or breaker with undervoltage trip release).

RMT



RC



❶ The coil connection can vary depending on the connected type of device (contactor, breaker with shunt trip release or breaker with undervoltage trip release).

16 Earth leakage relays

Technical characteristics

TYPE	R1D ^①	R2D ^①	R3D ^①	R4D ^{①②③}
DESCRIPTION	Flush mount with transparent cover, 1 operating threshold	Flush mount with transparent cover, 2 operating thresholds constant toroid-relay circuit control	Flush mount with transparent cover, 2 operating thresholds constant toroid-relay circuit control	Flush mount with display and cover, 2 operating thresholds - constant toroid-relay circuit control
CONTROL CIRCUIT	External (see types given on page 16-3)			
Toroidal transformer				
Adjustments	0.025...0.25A (x0.1) 0.25...2.5A (x1) 2.5...25A (x10) 25...250A (external multiplier)		0.03...0.3A (x0.1) 0.3...3A (x1) 3...30A (x10) 30...300A (external multiplier)	
Tripping set-point (I Δ n)				
Prealarm set-point	—	70% I Δ n (fixed)	70% I Δ n (fixed)	70% I Δ n (fixed)
Tripping delay time (t)	0.02...0.5s (tx1) 0.2...5s (tx10)		0.03...0.5s (tx1) 0.3...5s (tx10)	
Selection of multiplier for I Δ n and t	By dip switches			
Resetting	Configurable automatic or manual by button on front ^②	Automatic by remote contact closing or rear jumper connection Manual by button on front or remote contact closing		
Shunt circuit control	—	—	—	Yes
AUXILIARY SUPPLY				
Auxiliary voltage U _s (0.85 - 1.1 U _s limit)	24-48VAC/DC 110...125VAC/DC 220...240/380...415VAC	— 110...125/220...240/380...415VAC		
Rated frequency	50...60Hz			
Power consumption (maximum)	4VA			
RELAY OUTPUTS				
State	Normally de-energised	Configurable normally de-energised or energised	Configurable normally de-energised or energised	Configurable normally de-energised or energised
Contact arrangement	1 changeover SPDT (trip)	2 changeover SPDT each (configurable: 2 trip or 1 trip and 1 alarm)		
Rated contact capacity IEC I _{th}	5A - 250VAC			
Electrical life	3 x 10 ⁶ cycles			
Mechanical life	50 x 10 ⁶ cycles			
INSULATION				
Power frequency withstand voltage	2.5kV for 60s			
INDICATIONS				
Auxiliary voltage available (ON)	Green LED			
Relay tripping (TRIP)	Red LED			
Trip prealarm (ALARM)	—	Red LED	Red LED	Red LED
Mechanical (TRIP MEMORY)	—	—	Flag indicator	Flag indicator
Shunt circuit tripping (TCS)	—	—	—	Red LED
CONNECTIONS				
Type of terminals	Fixed		Removable, plug-in	
Tightening torque maximum	0.5Nm (4.5lbin)			
Conductor section min...max	0.2...2.5mm ² (24...12AWG)			
AMBIENT CONDITIONS				
Operating temperature	-10...+60°C			
Storage temperature	-20...+80°C			
Relative humidity	≤90%			
HOUSING				
Material	Self-extinguishing polycarbonate			

① Type A, sensitive to residual sinusoidal AC and pulsating DC currents.

② Remote resetting by removing power for more than 1 second.

③ Digital display of fault current measurement and tripping value memory.

16 Earth leakage relays

Technical characteristics

	RM1... ^①	RM... ^①	RMT... ^①	RC... ^①
	Modular with transparent cover, 1 operating threshold	Modular with transparent cover, 1 operating threshold	Modular with transparent cover, 1 operating threshold	Compact, 1 operating threshold
	External (see types given on page 16-3)	External (see types given on page 16-3)	Incorporated Ø28mm/1.1"	Incorporated 35-60-80-110mm/ 1.38-2.36-3.15-4.33" standard diameter
	0.3A or 0.5A only	0.025...0.25A (x0.1) 0.25...2.5A (x1) 2.5...25A (x10) 25...250A (external multiplier)	0.025...0.25A (x0.1) 0.25...2.5A (x1) 2.5...25A (x10)	0.025...0.25A (x0.1) 0.25...2.5A (x1) 2.5...25A (x10)
	—	—	—	—
	0.02s or 0.5s only	0.02...0.5s (tx1) 0.2...5s (tx10)	0.02...0.5s (tx1) 0.2...5s (tx10)	0.02...0.5s (tx1) 0.2...5s (tx10)
	By dip switches			
	Configurable A: Automatic or M: Manual by button on front			
	—			
	24-48VAC/DC		—	24-48VAC/DC
	110...125VAC/DC 220...240/380...415VAC			
	50...60Hz			
	3VA			
	Normally de-energised	Normally de-energised	Configurable normally de-energised or energised	Normally de-energised
	1 changeover SPDT (trip)	1 changeover SPDT (trip)	2 changeover SPDT each (both trip)	1 changeover SPDT (trip)
	5A - 250VAC			
	3x10 ⁵ cycles			
	50x10 ⁶ cycles			
	2.5kV for 60s			
	Green LED			
	Red LED			
	—			
	—			
	—			
	Fixed			
	0.5Nm (4.5lbin)			
	0.2...2.5mm ² (24...12AWG)			
	-10...+60°C			
	-20...+80°C			
	≤90%			
	Self-extinguishing polycarbonate			

^① Type A, sensitive to residual sinusoidal AC and pulsating DC currents.