



PAGE 1-2

- SM1A**
- Thermal trip adjustment ranges 9-32A (5 choices)
 - Breaking capacity Icu at 400V: – 50kA
 - Suitable for mounting in consumer switchboards with minimum 58mm depth.



PAGE 1-2

- SM1B**
- Thermal trip adjustment ranges 0.1-32A (15 choices)
 - Breaking capacity Icu at 400V: – 100kA (ranges 0.1-10A) – 25kA (ranges 9-32A)
 - Suitable for mounting in consumer switchboards with minimum 58mm depth.



PAGE 1-2

- SM1C**
- Same characteristics per SM1B breaker
 - Suitable for mounting in consumer switchboards with minimum 45mm depth.



PAGE 1-3

- SM2A**
- Thermal trip adjustment ranges 28-50A (3 choices)
 - Breaking capacity Icu at 400V: – 50kA.



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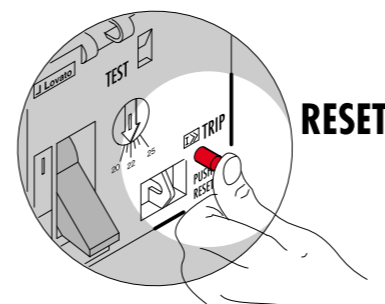
- SM3A**
- Thermal trip adjustment ranges 45-100A (4 choices)
 - Breaking capacity Icu at 400V: – 50kA.



PAGE 1-10

- LMS25**
- Thermal trip adjustment ranges 0.1-25A (13 choices)
 - Breaking capacity Icu at 400V: – 100kA (ranges 0.1-6.3A) – 6kA (ranges 6.3-10A) – 4kA (ranges 10-25A)
 - Suitable for mounting in consumer switchboards with minimum 45mm depth.

- ◆ *Wide adjustment range 0.1 to 100A*
- ◆ *Breaking capacity Icu 50kA (400V) up to 100A*
- ◆ *Suitable for isolation*
- ◆ *Comprehensive line of accessories*
- ◆ *Front mount contacts*
- ◆ *Automatic trip indicators*
- ◆ *High reliability and accuracy of tripping.*



Short-circuit tripping indicator, standard supplied on all circuit breakers, type SM1. Reset the indicator, as illustrated, to restore the breaker.



PLANET - SWITCH

Motor protection circuit breakers

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1 Motor protection circuit breakers SM1 up to 32A



11 SM1A...



11 SM1B...



11 SM1C...

Order code	Thermal trip adjustment range	Short circuit breaking capacity at 400V		Qty per pkg	Wt
		Icu	Ics		
	[A]	[kA]	[kA]	n°	[kg]
Breaking capacity Icu 50kA at 400V.					
11 SM1A 40	9-14	50	25	5	0.270
11 SM1A 44	13-18	50	25	5	0.270
11 SM1A 48	17-23	50	25	5	0.270
11 SM1A 52	20-25	50	25	5	0.270
11 SM1A 56	24-32	50	25	5	0.270
Breaking capacity Icu 100kA (0.1-10A) / 25kA (9-32A) at 400V.					
11 SM1B 00	0.1-0.16	100	100	5	0.270
11 SM1B 04	0.16-0.25	100	100	5	0.270
11 SM1B 08	0.25-0.4	100	100	5	0.270
11 SM1B 12	0.4-0.63	100	100	5	0.270
11 SM1B 16	0.63-1	100	100	5	0.270
11 SM1B 20	1-1.6	100	100	5	0.270
11 SM1B 24	1.6-2.5	100	100	5	0.270
11 SM1B 28	2.5-4	100	100	5	0.270
11 SM1B 32	4-6.5	100	100	5	0.270
11 SM1B 36	6.3-10	100	100	5	0.270
11 SM1B 40	9-14	25	12.5	5	0.270
11 SM1B 44	13-18	25	12.5	5	0.270
11 SM1B 48	17-23	25	12.5	5	0.270
11 SM1B 52	20-25	25	12.5	5	0.270
11 SM1B 56	24-32	25	12.5	5	0.270
Breaking capacity Icu 100kA (0.1-10A) / 25kA (9-32A) at 400V. Suitable for mounting in modular consumer switchboards ①.					
11 SM1C 00①	0.1-0.16	100	100	5	0.270
11 SM1C 04①	0.16-0.25	100	100	5	0.270
11 SM1C 08①	0.25-0.4	100	100	5	0.270
11 SM1C 12①	0.4-0.63	100	100	5	0.270
11 SM1C 16①	0.63-1	100	100	5	0.270
11 SM1C 20①	1-1.6	100	100	5	0.270
11 SM1C 24①	1.6-2.5	100	100	5	0.270
11 SM1C 28①	2.5-4	100	100	5	0.270
11 SM1C 32①	4-6.5	100	100	5	0.270
11 SM1C 36①	6.3-10	100	100	5	0.270
11 SM1C 40①	9-14	25	12.5	5	0.270
11 SM1C 44①	13-18	25	12.5	5	0.270
11 SM1C 48①	17-23	25	12.5	5	0.270
11 SM1C 52①	20-25	25	12.5	5	0.270
11 SM1C 56①	24-32	25	12.5	5	0.270

① The SM1C version consents to the mounting in enclosures and modular consumer switchboards with minimum depth of at least 45mm between the DIN rail and the opening. See page D-2 for exact breaker dimensions. No front-mount auxiliary contacts 11 SMX11... can be used.

General characteristics

The SM1 is a modern series of circuit breakers with thermal and magnetic trip releases and high breaking capacity. Motor control and protection, up to 15kW at 400V, are possible by choosing the suitable adjustment range, 0.1 to 32A.

A magnetic trip indicator integrated on the SM1 breakers avoids dangerous closing operations during short-circuit conditions, previously disconnected by the breaker.

The SM1 types are suitable for isolation according to IEC/EN 60947 standards.

Their high breaking capacity consents to exclude protection fuses on the majority of the installations.

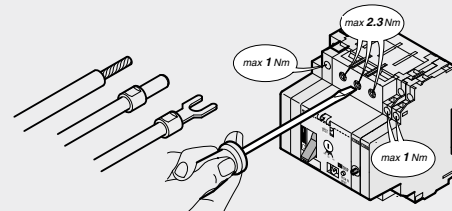
Operational characteristics

- Rated insulation voltage Ui: 690V
- Rated impulse withstand voltage: 6kV
- Rated frequency: 50/60Hz
- Maximum rated current: 32A
- Number of adjustment ranges:
 - SM1A: 5 (9 to 32A)
 - SM1B: 15 (0.1 to 32A)
 - SM1C: 15 (0.1 to 32A)
- Breaking capacity: see table below
- Power dissipation: 2.2-9.7W
- Magnetic tripping: 12In max
- Thermal tripping class: 10A
- Phase failure sensitive
- Mechanical life: 100,000 cycles
- Electrical life: 100,000 cycles
- Mounting on 35mm DIN rail (IEC/EN 60715)
- Mounting position: Any
- Utilisation category: A
- Degree of protection: IP20.

Certifications and compliance

Certifications obtained: cULus; GOST and CCC for SM1B type only.

Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-2, IEC/EN 60947-4-1.

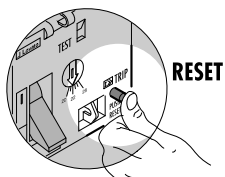
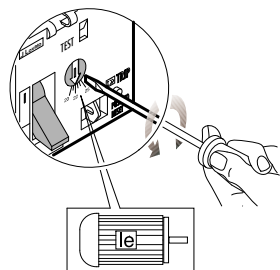


NOTE: When more than one breaker are mounted, side by side, without leaving space between each to consent free air circulation on the breaker sides, and have simultaneous operation, the thermal trip adjuster must be positioned at a value 15% higher than the rated motor current.

Breaking capacity

Type	Rated short-circuit breaking capacity [kA]								Protection fuses when I > Icu (gL or gG fuses) ②			
	230V		400V		500V		690V		230V	400V	500V	690V
	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	[A]	[A]	[A]	[A]
SM1A 40	100	100	50	25	10	5	4	2	▲	100	80	63
SM1A 44 - 56	100	100	50	25	10	5	4	2	▲	125	80	63
SM1B 00 - 20 SM1C 00 - 20	100	100	100	100	100	100	100	100	▲	▲	▲	▲
SM1B 24 - 28 SM1C 24 - 28	100	100	100	100	100	100	8	8	▲	▲	▲	35
SM1B 32 / SM1C 32	100	100	100	100	100	100	8	8	▲	▲	▲	40
SM1B 36 / SM1C 36	100	100	100	100	42	21	8	8	▲	▲	63	50
SM1B 40 / SM1C 40	100	100	25	12.5	10	5	2	2	▲	80	63	50
SM1B 44 - 56 SM1C 44 - 56	100	100	25	12.5	4	2	2	2	▲	100	80	63

② Fuses are used only in those cases when the value of short-circuit current at the breaker installation point exceeds the breaking capacity of the breaker. ▲ Fuse not required.



Motor protection circuit breakers SM2A - SM3A up to 100A



11 SM2A...



11 SM3A...

Order code	Short circuit thermal trip adjustment range		Short circuit breaking capacity at 400V		Qty per pkg	Wt
	Icu	Ics	Icu	Ics		
	[A]	[kA]	[kA]	n°	[kg]	
Breaking capacity Icu 50kA at 400V.						
11 SM2A 68	28-40	50	25	1	0.960	
11 SM2A 72	36-45	50	25	1	0.960	
11 SM2A 76	40-50	50	25	1	0.960	
Breaking capacity Icu 50kA at 400V.						
11 SM3A 84	45-63	50	25	1	2.100	
11 SM3A 88	57-75	50	25	1	2.100	
11 SM3A 92	70-90	50	25	1	2.100	
11 SM3A 96	80-100	50	25	1	2.100	

General characteristics

The SM2A and SM3A types are circuit breakers with a wide adjustment range, 28 to 100A, in only two frame sizes enabling motor control and protection up to 45kW (400V).

A magnetic trip indicator and padlockable operating handle are integrated on the SM2A and SM3A breakers. Both are suitable for isolation according to IEC/EN 60947 standards.

Their high breaking capacity consents to exclude protection fuses on the majority of the installations.

Operational characteristics

- Rated insulation voltage U_i : 690V
- Rated impulse withstand voltage: 6kV
- Rated frequency: 50/60Hz
- Maximum rated current: 50A (SM2A) and 100A (SM3A)
- Number of adjustment ranges:
SM2A: 3 (28 to 50A)
SM3A: 4 (45 to 100A)
- Breaking capacity: See table below
- Power dissipation:
SM2A: 7.1-20W
SM3A: 10-38W
- Magnetic tripping: 13In max
- Thermal tripping class: 10
- Phase failure sensitive
- Life (cycles):

	Mechanical	Electrical (Ie AC3)
SM2A	50,000	25,000
SM3A	50,000	25,000
- Mounting:
SM2A - Screw fixing or on 35mm DIN rail (IEC/EN 60715)
SM3A - Screw fixing or on DIN rail 35mm (IEC/EN 60715) or 75mm (IEC/EN 60715)
- Mounting position: Any
- Utilisation category: A
- Degree of protection: IP00.

Certifications and compliance

Certifications obtained: GOST; cULus, CSA.
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-2, IEC/EN 60947-4-1.

NOTE: When more than one breaker are mounted, side by side, without leaving space between each to consent free air circulation on the breaker sides, and have simultaneous operation, the thermal trip adjuster must be positioned at a value 15% greater than the rated motor current.

Breaking capacity

Type	Rated short-circuit breaking capacity [kA]								Protection fuses when $I > I_{cu}$ (gL or gG fuses) ①			
	230V		400V		500V		690V		230V	400V	500V	690V
	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	[A]	[A]	[A]	[A]
SM2A 68 / SM2A 72	100	100	50	25	10	5	4	2	▲	160	100	63
SM2A 76	100	100	50	25	10	5	4	2	▲	160	100	80
SM3A 84	100	100	50	25	12	6	6	3	▲	160	100	80
SM3A 88	100	100	50	25	8	4	5	3	▲	160	125	100
SM3A 92 / SM3A 96	100	100	50	25	8	4	5	3	▲	160	125	125

① Fuses are used only in those cases when the value of short-circuit current at the breaker installation point exceeds the breaking capacity of the breaker.
▲ Fuse not required.

1 Add-on blocks and accessories



11 SMX11...



11 SMX12...



11 SMX13 11



11 SMX14...



11 SMX15...



11 SMX16...



11 SMX18 10



11 SMX90 30



11 SMX90 31

11 SMX90 3...
11 SMX90 4...

Order code	Characteristics	Qty per pkg	Wt
		n°	[kg]
Add-on auxiliary contacts.			
11 SMX11 20Ⓢ	Front mount 2NO	10	0.010
11 SMX11 11Ⓢ	Front mount 1NO+1NC	10	0.010
11 SMX12 11	Side mount 1NO+1NC	10	0.045
11 SMX12 02	Side mount 2NC	10	0.045
11 SMX12 20	Side mount 2NO	10	0.045
11 SMX13 11	Side-mount indicator contacts for thermal and magnetic tripping 1NO+1NCⓈ	10	0.045
Undervoltage trip releases.			
11 SMX14 BC	110VAC 50/60Hz	5	0.100
11 SMX14 CL	230VAC 50/60Hz	5	0.100
11 SMX14 EA	400VAC 50/60Hz	5	0.100
11 SMX15 CL	230VAC 50/60Hz with early-make contacts	5	0.100
11 SMX15 EA	400VAC 50/60Hz with early-make contacts	5	0.100
Shunt trip releases.			
11 SMX16 AF	24VAC 50/60Hz	5	0.100
11 SMX16 BC	110VAC 50/60Hz	5	0.100
11 SMX16 CL	230VAC 50/60Hz	5	0.100
11 SMX16 EA	400VAC 50/60Hz	5	0.100
Padlockable attachment for operating lever.			
11 SMX18 10	3 padlocks max Ø 5mm	1	0.021
Adjuster sealing kit.			
11 SMX18 12	For all types	1	0.003
Padlockable door coupling handle.			
11 SMX18 14	3 padlocks maximum IP65. Yellow/red colour	1	0.720
11 SMX18 15	3 padlocks maximum IP65. Black colour	1	0.710
Terminal block for busbar supply.			
11 SMX90 30	For all types	10	0.033
Safety cover.			
11 SMX90 31	For unused busbar terminals	10	0.005
Three-phase connection busbars 45mm spacing.			
11 SMX90 32	For 2 breakers without side-mount contacts	10	0.027
11 SMX90 33	For 3 breakers without side-mount contacts	10	0.048
11 SMX90 34	For 4 breakers without side-mount contacts	10	0.068
11 SMX90 35	For 5 breakers without side-mount contacts	10	0.090
Three-phase connection busbars 54mm spacing.			
11 SMX90 42	For 2 breakers complete with side-mount contacts	10	0.034
11 SMX90 43	For 3 breakers complete with side-mount contacts	10	0.054
11 SMX90 44	For 4 breakers complete with side-mount contacts	10	0.078
11 SMX90 45	For 5 breakers complete with side-mount contacts	10	0.103

Ⓢ Not suitable for fixing on SM1C types.
Ⓢ Tripping is indicated by flag indicator on front.

General and operational characteristics

ADD-ON AUXILIARY BLOCKS

- Snap on to the front or the right side of the breaker
- Maximum combination: 6 auxiliary contacts of which 2 on front (SM1C excluded) and 4 on the side (2 normal contacts and 2 indicators)
- Conventional free air thermal current Ith: 6A (2.5A for SMX11...)
- Rated insulation voltage Ui: 690V (250V for SMX11...)
- Designation according to IEC/EN 60947-5-1: C600 Q600 (C300 R300 for SMX11...)
- Conductor cross section minimum-maximum (1 or 2 wires): 0.75-2.5 mm² or 18/14 AWG
- Width of side-mount auxiliary contacts equal to 0.5 standard DIN 46880 module.

UNDERVOLTAGE TRIP RELEASE

- Connectable to the left side of the breaker
- Consumption in-rush/holding: 12/3.5VA
- Drop-out voltage: 0.35-0.7Us
- Pick-up voltage: 0.85-1.1Us
- Conductor cross section minimum-maximum (1 or 2 wires): 0.75-2.5mm² or 18/14 AWG.

SHUNT TRIP RELEASE

- Connectable to the left side of the breaker
- In-rush consumption: 20VA
- Operating limits: 0.7-1.1Us
- Conductor cross section minimum-maximum (1 or 2 wires): 0.75-2.5mm² or 18/14 AWG.

THREE-PHASE CONNECTION BUSBAR

- I_{max} 63A
- SMX90 3... 45mm spacing to reduce the width to the minimum
- SMX90 4... 54mm spacing to consent to fit one side-mount auxiliary contact block on the breaker
- Conductor cross section minimum-maximum connectable to terminal block for busbar supply: 4-25mm² or 10/4 AWG.

TERMINAL BLOCK FOR BUSBAR SUPPLY

- I_{max} 63A
- Conductor cross section minimum-maximum: 4-25mm² or 10/4 AWG.

Certifications and compliance

Certifications obtained: GOST; cULus for auxiliary contacts, releases and padlockable attachment for operating lever; CCC for SMX12... and SMX13 11 auxiliary contacts.
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-5-1.



11 SMX90 03



SMX31 41
SMX31 42
SMX32 41



11 SMX90 10



11 SMX90 12



11 SMX90 14



11 SMX17 10
11 SMX17 11



11 SMX17 20



11 SMX17 35



11 SMX17 40



11 SMX17 45



Order code	Characteristics	Qty per pkg	Wt [kg]
		n°	[kg]
Rigid SM1 breaker-contactor connections.			
11 SMX90 03	For SM1 breaker with BG mini-contactor.	10	0.020
SMX31 41	For SM1 breaker with BF09A-BF25A contactor. Complete with cover	10	0.042
SMX31 42	For SM1 breaker with BF9D-BF25D and BF9L-BF25L contactor. Complete with cover	10	0.052
SMX32 41	For SM1 breaker with BF26A-BF38A contactor. Complete with cover	10	0.053
Adapter plates.			
11 SMX90 10	Adapter plate for direct-on-line starter (SM1 breaker and BG or BF09A-BF38A contactors)	1	0.052
11 SMX90 12	Adapter plate for reversing contactor assembly (SM1 breaker and BG or BF09A-BF38A contactors)	1	0.078
11 SMX90 14	Adapter plate for star-delta starter (SM1 breaker and 45mm wide contactors BF09A-BF38A)	1	0.104
11 SMX90 18	35mm DIN rail (IEC/EN 60715) for cable bypass of contactor used with SMX90 14 plate	1	0.088
11 SMX90 19	35mm DIN rail extension for 55mm wide contactors	1	0.004
Surface mount enclosures.			
11 SMX17 10	IP40. 100mm wide	1	0.295
11 SMX17 11	IP40. 85mm wide	1	0.250
Flush mount enclosure.			
11 SMX17 20	IP40. 102mm wide	1	0.230
ACCESSORIES FOR ENCLOSURES.			
Padlockable rotary actuator.			
11 SMX17 30	IP65. Grey/black colour. For SMX17 10 and SMX17 20 enclosures	1	0.110
11 SMX17 35	IP65. Red-yellow colour. For SMX17 10 and SMX17 20 enclosures	1	0.110
Actuator with emergency stop button.			
11 SMX17 40	IP65. For SMX17 11 enclosure	10	0.100
IP65 membrane complete with rim.			
11 SMX17 45	For SMX17 11 enclosure	10	0.010
Neutral connection.			
11 SMX17 50	For SMX17 10 and SMX17 20 enclosures only	10	0.015
Pilot light.			
23 NEONV	Green	10	0.006
23 NEONR	Red	10	0.006
Marking elements.			
BFX30	Blank label for writing	50	0.001

① To obtain IP65 degree of protection, mount the 11 SMX17 45 membrane.
 ② The device obtained with this actuator is not suitable for isolation per IEC/EN 60947-2 standards.
 ③ Complete with required voltage.
 Available voltages: 24 / 110 / 220 / 380VAC.

General and operational characteristics

SM1 - CONTACTOR CONNECTION

The SMX90 03, SMX31 41 and SMX32 41 rigid connections electrically and mechanically fasten the breaker together with the contactor forming a single-unit starter for quick installation on 35mm DIN rail (IEC/EN 60715).

STARTER ASSEMBLY ADAPTER PLATES

The elements consent to preassemble starters and to form trim and compact single-unit equipment for quick and easy installation. The starter adapter plates install on 35mm DIN rail (IEC/EN 60715).

SURFACE MOUNT ENCLOSURE

- Top or bottom entry:
 - PG16 threaded knockouts for SMX17 10
 - 22.5mm knockouts for SMX17 11
- Rear entry:
 - 22.5mm knockouts
- Holds a SM1 breaker equipped with one side-mount contact block, one front-mount block (except for SM1C) and either one shunt or undervoltage release
- Earth terminal included
- Operating temperature: -5...+40°C
- Storage temperature: -50...+80°C.

FLUSH MOUNT ENCLOSURE

- Use with breaker, complete with 1 front-mount (except for SM1C) and 1 side-mount blocks and one shunt or undervoltage release
- Earth terminal included
- 102x142.8mm cutout
- Operating temperature: -5...+40°C
- Storage temperature: -50...+80°C.

ENCLOSURE ACCESSORIES

PADLOCKABLE ROTARY ACTUATOR:

- Suitable for SMX17 10 or SMX17 20 type only
- Raises the degree of protection of the enclosure to IP65
- 3 padlocks maximum.

ACTUATOR WITH EMERGENCY PUSH-BUTTON:

- Suitable for SMX17 11 only
- Raises the degree of protection of the enclosure to IP65.

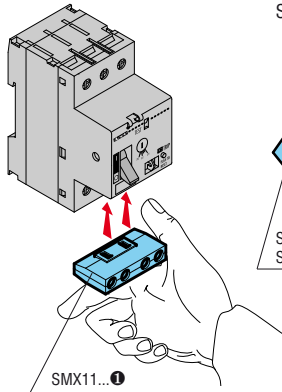
Certifications and compliance

Certifications obtained: GOST; cULus for SMX90 03, SMX31 41 and SMX32 41 connections.
 Compliant with standards: IEC/EN 60947-1.

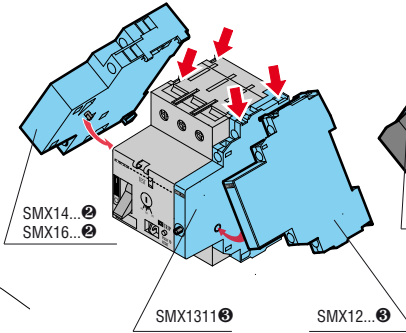
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Combinations

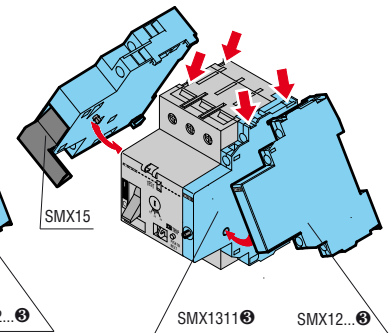
Front-mount contacts.



Side-mount contacts.
Undervoltage trip release.
Shunt trip release.

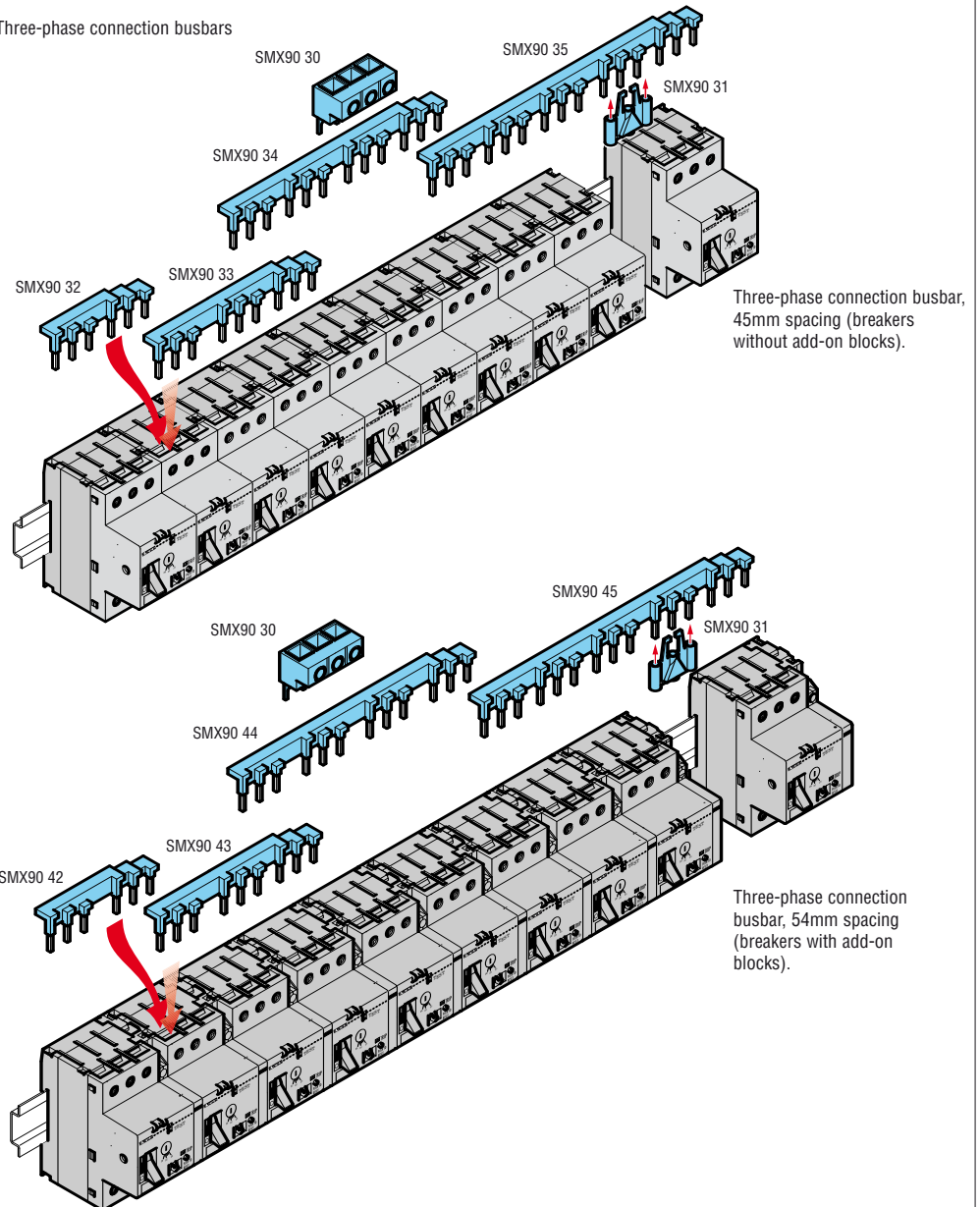


Side-mount contacts.
Undervoltage trip release with auxiliary contacts.



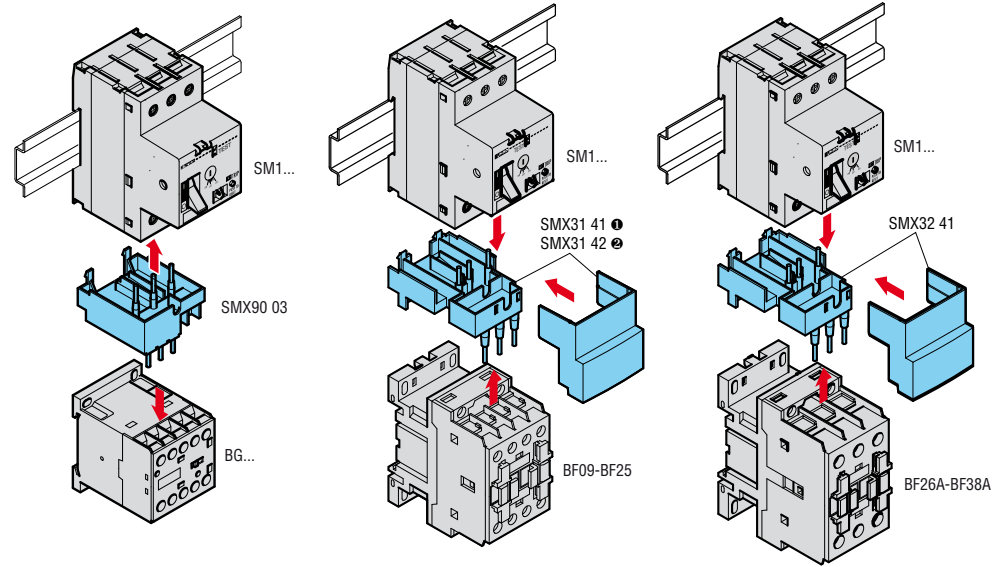
- ❶ Not suitable for use with SM1C type.
- ❷ Only one add-on block can be fixed on the left side of the breaker.
- ❸ One of the following combinations can be mounted on the right side of the breaker:
 - One each of SMX13 11 and SMX12...
 - or one only SMX13 11
 - or one only SMX12 ...

Three-phase connection busbars



Combinations

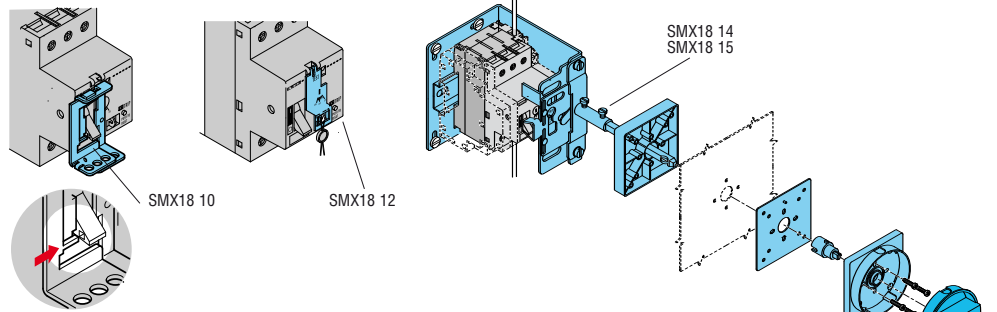
Rigid breaker-connector connection and protection cover



Padlockable attachment for operating lever

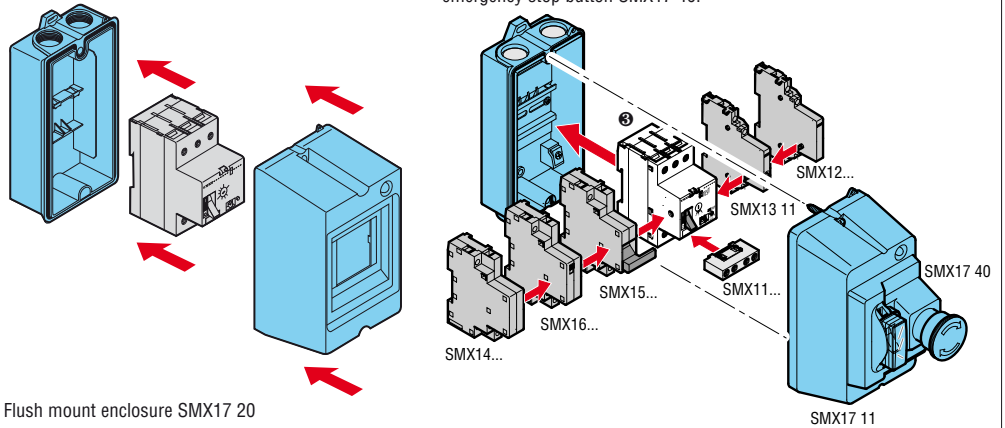
Adjuster sealing kit

Padlockable door coupling handle

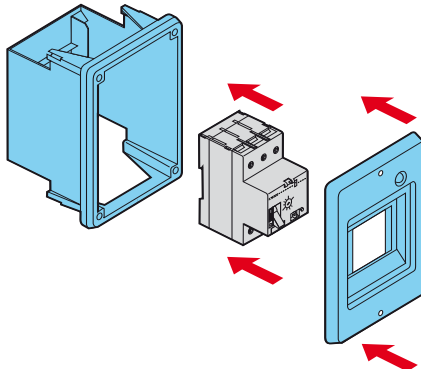


Surface mount enclosure SMX17 10 or SMX17 11

Surface mount enclosure SMX17 11 complete with emergency stop button SMX17 40.



Flush mount enclosure SMX17 20



- ❶ For BF09A-BF25A contactors.
- ❷ For BF09D-BF25D and BF09L-BF25L contactors.
- ❸ One only add-on block can be mounted on each side of the breaker.

1 Add-on blocks and accessories



11 SMX20 11
11 SMX21 11



11 SMX22...



11 SMX23 11



11 SMX24...
11 SMX25...
11 SMX26...

Order code	Characteristics	Qty per pkg	Wt [kg]
		n°	[kg]
Add-on auxiliary contacts.			
11 SMX20 11	Front mount 1 changeover	10	0.016
11 SMX21 11	Front mount 1NO+1NC	10	0.018
11 SMX22 02	Side mount 2NC	2	0.046
11 SMX22 11	Side mount 1NO+1NC	2	0.046
11 SMX22 20	Side mount 2NO	2	0.046
11 SMX23 11	Side-mount indicator contacts (1NO+1NC) for thermal trip and (1NO+1NC) for magnetic trip ①	1	0.092
Undervoltage trip releases.			
11 SMX24 BC	110VAC 50/60Hz	1	0.135
11 SMX24 CL	230VAC 50/60Hz	1	0.135
11 SMX24 EA	400VAC 50/60Hz	1	0.135
11 SMX25 CL	230VAC (50/60Hz) with early-make contacts	1	0.135
11 SMX25 EA	400VAC (50/60Hz) with early-make contacts	1	0.135
Shunt trip releases.			
11 SMX26 AF	24VAC 50/60Hz	1	0.135
11 SMX26 BC	110VAC 50/60Hz	1	0.135
11 SMX26 CL	230VAC 50/60Hz	1	0.135
11 SMX26 EA	400VAC 50/60Hz	1	0.135
Padlockable door coupling rotary actuator.			
11 SMX28 05	IP65. 3 padlocks maximum. Black colour	1	0.100
11 SMX28 10	IP65. 3 padlocks maximum. Red/yellow colour	1	0.100

① See diagram on p. W-2 for the exact operation.

General and operational characteristics

ADD-ON AUXILIARY BLOCKS

- Insert on the top front or snap on the left side of the breaker
- Maximum combination: 8 auxiliary contacts of which 2 on front and 6 on the sides (2 normal contacts and 4 indicators)
- Conventional free air thermal current I_{th}: 10A (2.5A for SMX21 11)
- Rated insulation voltage U_i: 690V (250V for SMX20... and SMX21...)
- Designation according to IEC/EN 60947-5-1: A600 Q300 (C300 R300 for SMX20... and SMX21...)
- Conductor cross section minimum-maximum (1 or 2 wires): 0.5-2.5mm² or 18/14 AWG.

UNDERVOLTAGE TRIP RELEASE

- Snap on to the right side of the breaker
- Consumption inrush/holding: 20.2/7.2 VA; 13/2.4 W
- Drop-out voltage: 0.35-0.7Us
- Pick-up voltage: 0.85-1.1Us
- Conductor cross section minimum-maximum (1 or 2 wires): 0.5-2.5mm² or 18/14 AWG.

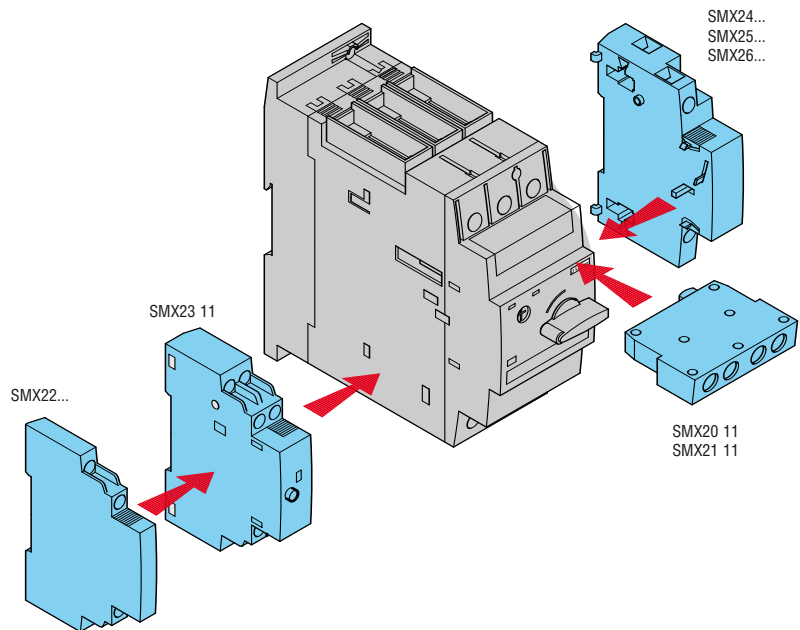
SHUNT TRIP RELEASE

- Snap on to the right side of the breaker
- In-rush consumption: 20.2VA; 13W
- Operating voltage: 0.7-1.1Us
- Conductor cross section minimum-maximum (1 or 2 wires): 0.5-2.5mm² or 18/14 AWG.

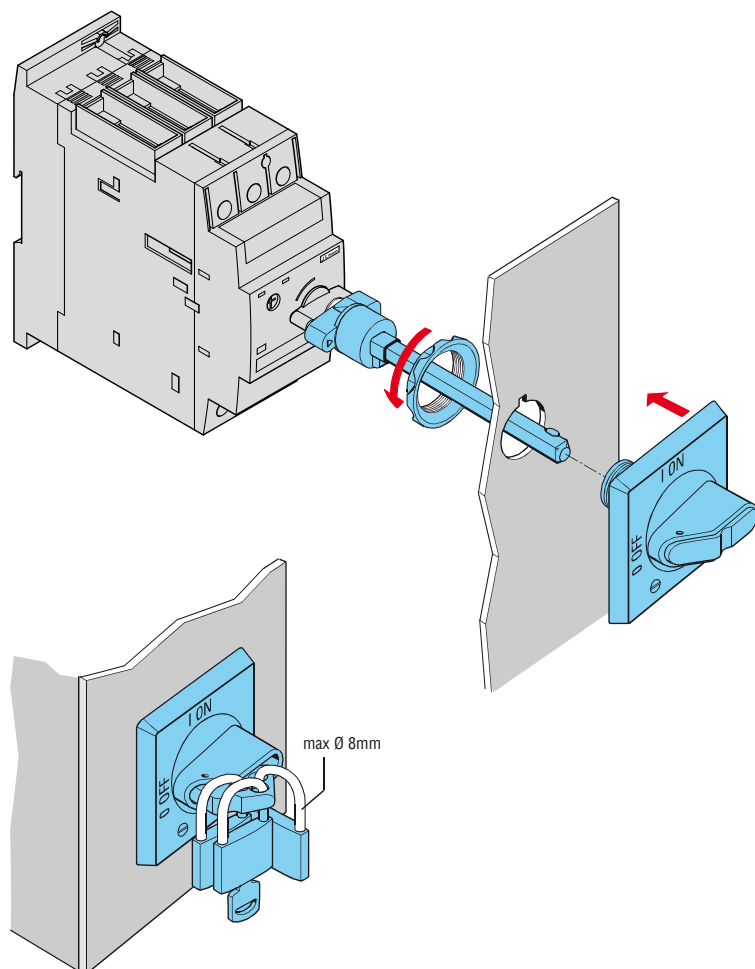
Certifications and compliance

Certifications obtained: GOST; cULus and CSA for auxiliary contacts and releases.
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-5-1.

Combinations



Padlockable door coupling rotary actuator SMX28 05 - SMX28 10



1

Manual motor starter LMS25 up to 25A



11 LMS 25...

Order code	Thermal adjustment range	Short circuit breaking capacity at 400V		Qty per pkg	Wt
		Icu	Ics		
	[A]	[kA]	[kA]	n°	[kg]
Breaking capacity Icu at 400V: 100kA (0.1-6.3A) / 4kA (10-25A) at 400V / 6kA (6.3-10A).					
11 LMS25 016T	0.1 - 0.16	100	100	5	0.250
11 LMS25 025T	0.16 - 0.25	100	100	5	0.250
11 LMS25 04T	0.25 - 0.4	100	100	5	0.250
11 LMS25 063T	0.4 - 0.63	100	100	5	0.250
11 LMS25 1T	0.63 - 1	100	100	5	0.250
11 LMS25 1V6T	1 - 1.6	100	100	5	0.250
11 LMS25 2V5T	1.6 - 2.5	100	100	5	0.250
11 LMS25 4T	2.5 - 4	100	100	5	0.250
11 LMS25 6V3T	4 - 6.3	100	100	5	0.250
11 LMS25 10T	6.3 - 10	6	3	5	0.250
11 LMS25 16T	10 - 16	4	2	5	0.250
11 LMS25 20T	16 - 20	4	2	5	0.250
11 LMS25 25T	20 - 25	4	2	5	0.250

General characteristics

The LMS25 manual motor starter is particularly suitable for controlling small operating machines. Releases and auxiliary contacts make it also suitable for more complex uses. Wall and flush-mount enclosures allow to install the LMS25 starter in the most disparate environmental conditions (dust, humidity, aggressive environmental agents, etc.).

Operational characteristics

- Rated insulation voltage U_i : 690V
- Rated impulse withstand voltage: 6kV
- Rated frequency: 50/60Hz
- Maximum rated current: 25A
- 13 adjustment ranges 0.1 to 25A
- Breaking capacity: see table below
- Power dissipation: 2-15W
- Magnetic tripping: 12In max
- Thermal tripping class: 10
- Phase failure sensitive
- Mechanical life: 100,000 cycles
- Electrical life 25A (AC3): 100,000 cycles
- Mounting on 35mm DIN rail (IEC/EN 60715) or screw fixing
- Mounting position: Any
- Utilisation category: A
- Degree of protection: IP20.

Certifications and compliance

Certifications obtained: GOST; cULus.
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-2, IEC/EN 60947-4-1.

Breaking capacity

Type	Rated short-circuit breaking capacity [kA]								Protection fuses when $I > I_{cu}$ (gL or gG fuses) ①			
	230V		400V		500V		690V		230V	400V	500V	690V
	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	[A]	[A]	[A]	[A]
LMS25 016T / LMS25 025T LMS25 04T / LMS25 063T LMS25 1T / LMS25 1V6T	100	100	100	100	100	100	100	100	▲	▲	▲	▲
LMS25 2V5T	100	100	100	100	3	3	2.5	2.5	▲	▲	25	20
LMS25 4T	100	100	100	100	3	3	2.5	1.9	▲	▲	35	25
LMS25 6V3T	100	100	100	100	3	2.2	2.5	1.9	▲	▲	50	35
LMS25 10T	100	100	6	3	3	2.2	2.5	1.9	▲	▲	80	35
LMS25 16T	6	6	4	2	2.5	1.9	2	1.5	80	80	63	35
LMS25 20T / LMS25 25T	6	4.5	4	2	2.5	1.9	2	1.5	80	80	63	50

① Fuses are used only in those cases when the short-circuit current value at the starter installation point exceeds the breaking capacity of the starter itself.
▲ Fuse not required.

Add-on blocks and accessories



11 LMH...



11 LMU... - 11 LMA...



11 SMX90 32



11 SMX90 30



11 LMZ111 - 11 LMZ112



11 LMZ113 - 11 LMZ114



11 LMZ105

11 LMZ106



11 LMNPE



23 NEON...V

Order code	Characteristics	Qty per pkg	Wt [kg]
		n°	[kg]
Add-on auxiliary contacts. Side mount.			
11 LMH 01	1NC	10	0.037
11 LMH 10	1NO	10	0.036
11 LMH 11	1NO + 1NC	10	0.042
11 LMH 20	2NO	10	0.037
Undervoltage trip release.			
11 LMU [ⓐ]	To fit inside starter. For all types	10	0.064
Shunt trip release.			
11 LMA [ⓐ]	To fit inside starter. For all types	10	0.064
Terminal block for busbar supply.			
11 SMX90 30	For all types	10	0.033
Three-phase connection busbars 45mm spacing.			
11 SMX90 32	For 2 breakers without side-mount contacts	10	0.027
11 SMX90 33	For 3 breakers without side-mount contacts	10	0.048
11 SMX90 34	For 4 breakers without side-mount contacts	10	0.068
11 SMX90 35	For 5 breakers without side-mount contacts	10	0.090
Three-phase connection busbars 54mm spacing.			
11 SMX90 42	For 2 breakers complete with side-mount contacts	10	0.034
11 SMX90 43	For 3 breakers complete with side-mount contacts	10	0.054
11 SMX90 44	For 4 breakers complete with side-mount contacts	10	0.078
11 SMX90 45	For 5 breakers complete with side-mount contacts	10	0.103
Surface mount enclosures.			
11 LMZ 112	IP54. 80mm wide	1	0.220
11 LMZ 111	IP55. 80mm wide	1	0.230
Flush mount enclosures.			
11 LMZ 114	IP41. 85mm wide	1	0.150
11 LMZ 113	IP55. 85mm wide	1	0.160
Accessories for enclosures. Locking mechanism.			
11 LMZ 105	3 padlocks maximum	10	0.083
Emergency stop button. IP55 protection.			
11 LMZ 106	For all types	1	0.049
Neutral connection.			
11 LMN PE	For all types	10	0.010
Pilot light.			
23 NEON [ⓐ] V	Green	10	0.006
23 NEON [ⓐ] V	Red	10	0.006
Spare IP55 membrane complete with rim for enclosures.			
11 LMM	For LMZ 11... enclosures	10	0.002
M25 to PG16 entry adapter.			
11 LM M25 PG16	For LMZ111 and LMZ112 enclosures	10	0.009

[ⓐ] Specify rated voltage. Add suffix 60 if frequency is 60Hz. Available voltages: 24 / 48 / 110 / 220-240 indicate 220 / 380-415 indicate 380 / 440-460 indicate 440 / 480 and 575VAC.

[ⓑ] Indicate required voltage value. Available voltages: 24 / 110 / 220 / 380VAC.

General and operational characteristics

ADD-ON AUXILIARY CONTACTS

- Connectable to right or left side of starter
- Maximum combination: 4 auxiliary contacts
- Rated insulation voltage Ui: 500V
- Conventional free air thermal current Ith: 6A
- Operational current AC15: 3.5A 230V; 2A 400V
- Protection fuse (gL or gG): 6A maximum
- Conductor cross section minimum-maximum (1 or 2 wires): 0.75-2.5mm²
- Width of the auxiliary contacts LMH... equal to 0.5 standard DIN43880 modules.

UNDERVOLTAGE AND SHUNT TRIP RELEASES

- Must be fitted inside the motor starter.

	Undervoltage	Shunt
Release range	0.35-0.7Us	—
Operating range	0.85-1.1Us	0.7-1.1Us
On-load factor	100%	—

THREE-PHASE CONNECTION BUSBAR

- I_{max} 63A
- SMX90 3... 45mm spacing to reduce the width to the minimum
- SMX90 4... 54mm spacing to consent to fit one side-mount auxiliary contact block on the breaker
- Conductor cross section minimum-maximum terminal block for busbar supply: 4-25mm² or 10/4 AWG.

TERMINAL BLOCK FOR BAR SUPPLY

- I_{max} 63A
- Conductor cross section minimum-maximum: 4-25mm² or 10/4 AWG.

SURFACE MOUNT ENCLOSURE

- Top or bottom entry:
 - M25 threaded knockouts
- Rear entry:
 - 15.5mm knockouts
- Up to two auxiliary contact blocks may be mounted
- Earth terminal included
- Operating temperature: -5...+40°C
- Storage temperature: -50...+80°C.

FLUSH MOUNT ENCLOSURE

- Window size 70x115mm
- Up to two auxiliary contact blocks may be mounted
- Earth terminal included
- Operating temperature: -5...+40°C
- Storage temperature: -50...+80°C.

ACCESSORIES FOR ENCLOSURES

- Locking mechanism:
 - Prevents closing operation; 3 padlocks maximum.

Emergency stop button:

- Turn to release
- Red push-button Ø 35mm

NOTE: Once mounted on the enclosure, these accessories raise the degree of protection from IP41 to IP55.

Certifications and compliance

Certifications obtained: GOST; cULus for auxiliary contacts and trip releases.

Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-5-1.