

SQ025...K

SQ032...K

REGOLUS SWITCH DISCONNECTORS WITH TYPE "K" BASE MOUNTING (32 A / 40 A)

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Before use, read this booklet carefully to acquaint yourself with the features of the product. This booklet is an integral part of the product and therefore must be kept until the product is dismissed.



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SQ series Regolus switch disconnectors are designed and manufactured according to IEC international standard and EN European regulations.



Any improper installation or any tampering of the device may cause serious personnel injury or property damage, therefore, the installation and maintenance must be performed by specialized and authorized personnel.



The use of this device is not allowed in environment with a potentially explosive atmosphere or in presence of corrosive substances and in salt spray.

 **ATTENTION**
Before any installation or maintenance operation, disconnect the power supply to the system. Before restoring the power supply, make sure that all connections to the device have been made correctly. Giovenzana International B.V. disclaims any responsibility for any damage to things and people caused by non-compliance with the rules described here.

Switch disconnectors involved in this instruction manual:

Series	2 poles		3 poles	
	AC-21A 690 V	AC-23A 400 V	AC-21A 690 V	AC-23A 400 V
SQ025	SQ025002K	SQ025003K	32 A	25 A
SQ032	SQ032002K	SQ032003K	40 A	32 A

Main features:

- base mounting
- DIN rail 35 mm mounting (EN 50022-35) or screw mounting
- door locking with shaft fixed on the actuators

Additional references:

- matching actuators: p.4
- relevant accessories: p.5

SPECIFICATIONS

General characteristics

Protection class	terminals		IP 20
Material group		EN 60947-1	II
Pollution grade		EN 60947-1	3
Flammability	live electrical parts	UL94	V0
Ambient temperature	operating storage		-25 ... +55°C -30 ... +70°C
Climate withstand		IEC 68 part 2-3 IEC 68 part 2-30	damp heat, steady state damp heat, cyclic
Connections	terminal block caliber	EN60947-1	A6
	terminal screw		M4
	tightening torque	EN60947-1 UL508	1.2 N·m 7 lb·in (0.8 N·m)
Connectable section	flexible conductors		1.5 ... 10 mm ² AWG 12 ... 8
	solid conductors		1.5 ... 10 mm ² AWG 12 ... 8
Contacts			slow action double breaking
Opening angles			90°
Mechanical lifetime	@ 120 operations / hour		0.1 million cycles
Maximum altitude derating	up to 2000 m over 2000 m	voltage (V) power (A)	standard < 1% each 100 m < 1% each 1000 m

EN 60947-3 characteristics

		SQ025	SQ032
Rated operating voltage	U _e	690 V	690 V
Rated insulation voltage	U _i	690 V	690 V
Rated impulse withstand voltage (sectionable)	U _{imp}	8 kV	8 kV
Rated thermal current	I _{th}	32 A	40 A
Rated enclosed thermal current	I _{the}	32 A	40 A
Frequency		50/60 Hz	50/60 Hz

Alternate current

Rated operating current		le	SQ025		SQ032		
AC-21A	Switching of resistive loads, including moderate overloads	690 V	32 A		40 A		
AC-22A	Switching of mixed resistive and inductive loads, including moderate overloads	500 V	25 A		32 A		
		690 V	25 A		32 A		
AC-23A	Switching of motor loads or other highly inductive loads	3 phases - 3 poles	230 V	25 A	7.5 kW	32 A	10 kW
			400 V	25 A	15 kW	32 A	18.5 kW
			500 V	25 A	15 kW	32 A	22 kW
			690 V	16 A	15 kW	20 A	18.5 kW
AC-3	Squirrel-cage motors: starting, switches off motors during running time	3 phases - 3 poles	230 V	22 A	5.5 kW	27 A	7.5 kW
			400 V	22 A	11 kW	27 A	15 kW
			500 V	22 A	11 kW	27 A	18.5 kW
			690 V	16 A	11 kW	20 A	15 kW
AC-23A	Nominal breaking capacity (cosφ 0.45)	230 V	200 A		256 A		
		400 V	200 A		256 A		
		500 V	200 A		256 A		
		690 V	128 A		160 A		

Short circuit characteristics

		SQ025		SQ032	
Rated short-time short circuit withstand current (1 s)	lcw	800 A		800 A	
Rated short circuit making capacity	lcm	1500 A		1500 A	
Conditional rated short circuit withstand current		10 kA		10 kA	
Fuse rating (type gG)	500 V	40 A		40 A	
	690 V	40 A		40 A	


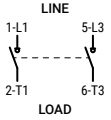

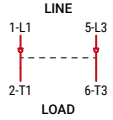


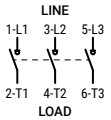

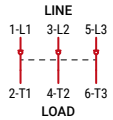

UL 508 characteristics

		SQ025		SQ032		
General use		600 V AC	32 A		40 A	
Standard motor load	1 phase - 2 poles	120 V AC	1.5 HP	20 FLA	2 HP	24 FLA
		200 - 208 V AC	2 HP		3 HP	
		240 V AC	3 HP	17 FLA	5 HP	28 FLA
	3 phases - 3 poles	200 - 208 V AC	7.5 HP		10 HP	
		240 V AC	7.5 HP	22 FLA	10 HP	28 FLA
		480 V AC	10 HP	14 FLA	15 HP	21 FLA
		600 V AC	15 HP	17 FLA	20 HP	22 FLA

Marking

SQ...02K / SQ...03K	CE, UL, IMQ, EAC, CCC, UKCA
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QUICK REFERENCE

Switch disconnecter	Notes	Operational scheme		
 2 poles SQ025002K SQ032002K	Installation instructions: p.6	 	 	One input LINE manages one LOAD.
 3 poles SQ025003K SQ032003K	Installation instructions: p.6	 	 	One input LINE manages one LOAD.

OVERVIEW





Switch disconnectors / actuators matrix

Actuator code reading

0	0	1	/	0	0	0	1
└──────────┘				└──────────┘			
Actuator				Wording			



Type	K
Mounting	base
Poles	2 / 3

ACTUATOR	Grey/Black	Yellow/Red
67x67 padlock		
screw	091/...	092/...
WORDING	 ...0001	 ...0001
Installation instructions	p.6	p.6

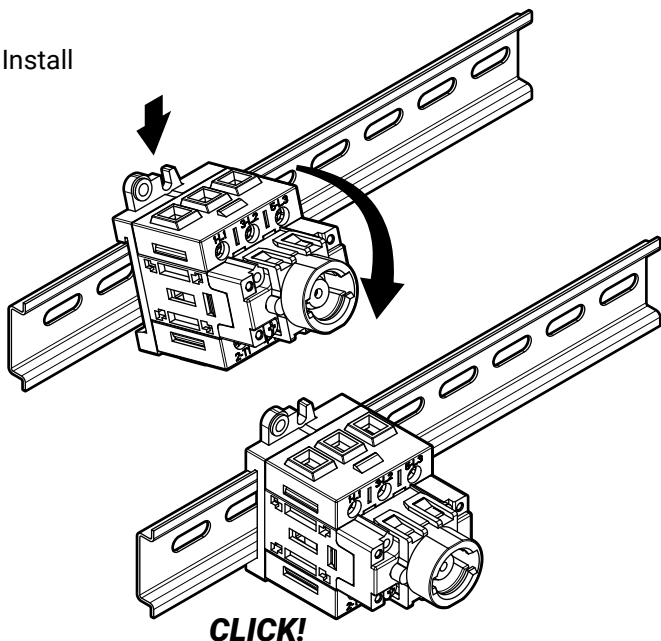
Accessories

Additional poles			Installation instructions
Additional pole NO			SQ025AFPB SQ032AFPB p.8
Fourth pole (early make / late break contact)			SQ025ANIB SQ032ANIB p.8
Neutral terminal			SQ025ANPB SQ032ANPB p.8
Ground terminal			SQ025APEB SQ032APEB p.8
Auxiliary contacts			
Auxiliary contact 1 NC			SQ010AS1B p.8
Auxiliary contact 1 NO			SQ010AS2B p.8
Terminal protections			
Terminal protection for 3 poles			20900023 p.9
Terminal protection for 1 pole			20900025 p.9

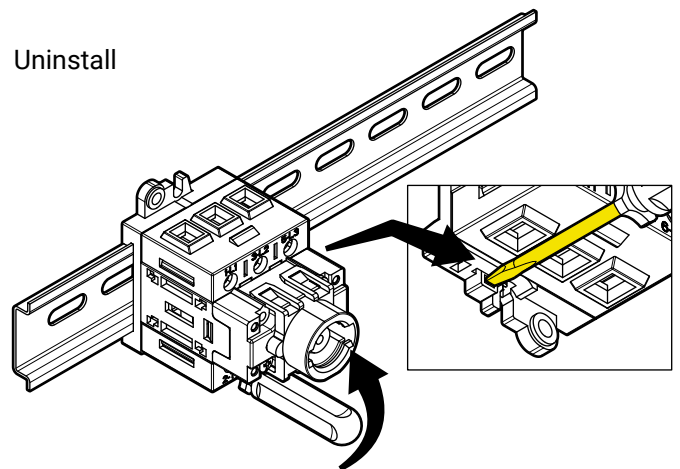
OVERALL INFORMATION

DIN rail mounting

Install



Uninstall



INSTALLATION

2 / 3 poles switch disconnecter installation

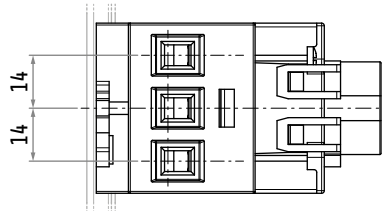
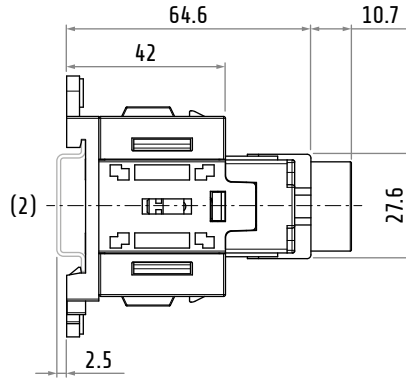
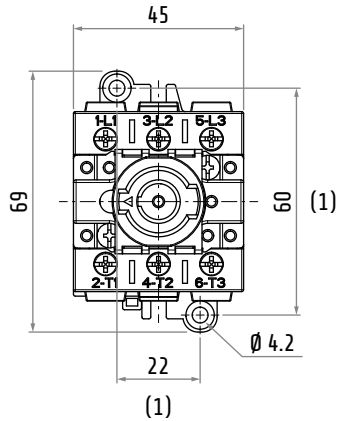
Switch disconnectors involved

SQ025002K

SQ032002K

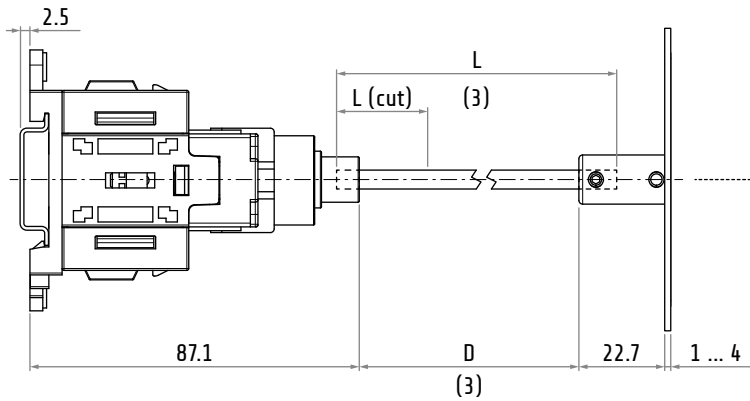
SQ025003K

SQ032003K



(1) Screws mounting (M4)

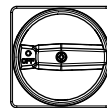
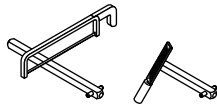
(2) DIN rail mounting
See "Overall information" on p.5.



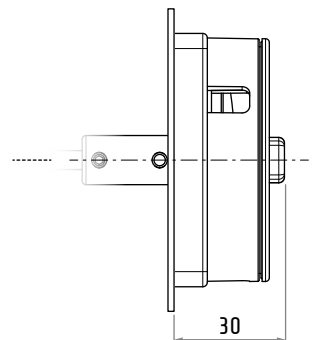
(3) Supplied shaft

Shaft code	L	D (min)	D (max)
-	185 mm	~20 mm	~167 mm

Cut the shaft to the length that fit your needs (finish the cut with a file) referring to this formula:
 $L \text{ (cut)} \approx D + 18 \text{ mm}$

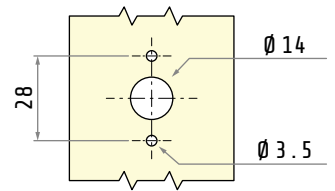
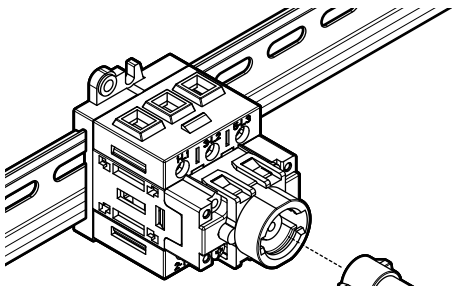


091/0001
092/0001



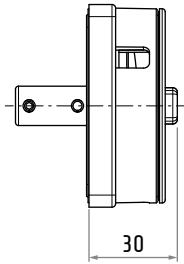
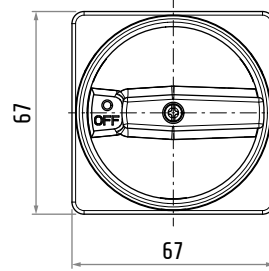
Dimensions in mm
Illustrations NOT in scale

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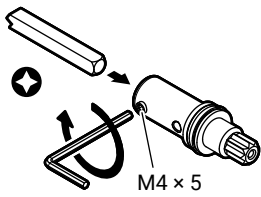


panel thickness:
1 ... 4 mm

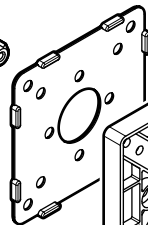
091/0001 • 092/0001



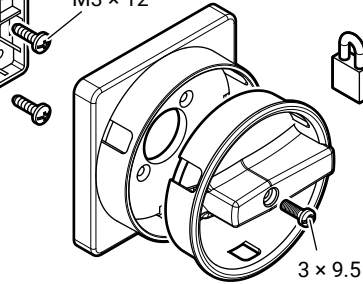
up to 3 padlocks
shackle: 8 mm max



M4 x 5



M3 x 12



3 x 9.5

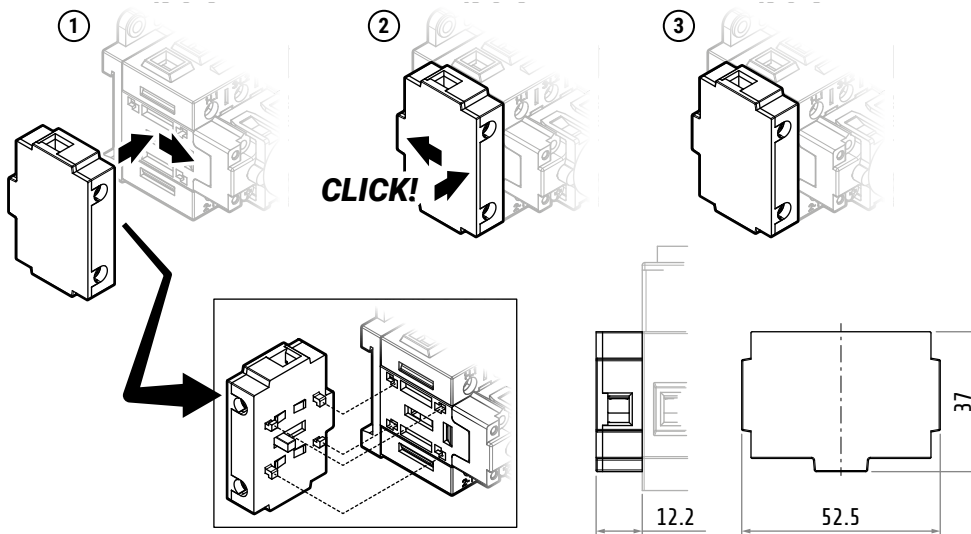


ATTENTION

Padlocking is possible only in OFF position. Padlocking does not lock the door but prevents any operation on the handle.

ACCESSORIES INSTALLATION

Additional poles mounting



Additional poles

SQ025AFPB
SQ032AFPB

SQ025ANIB
SQ032ANIB

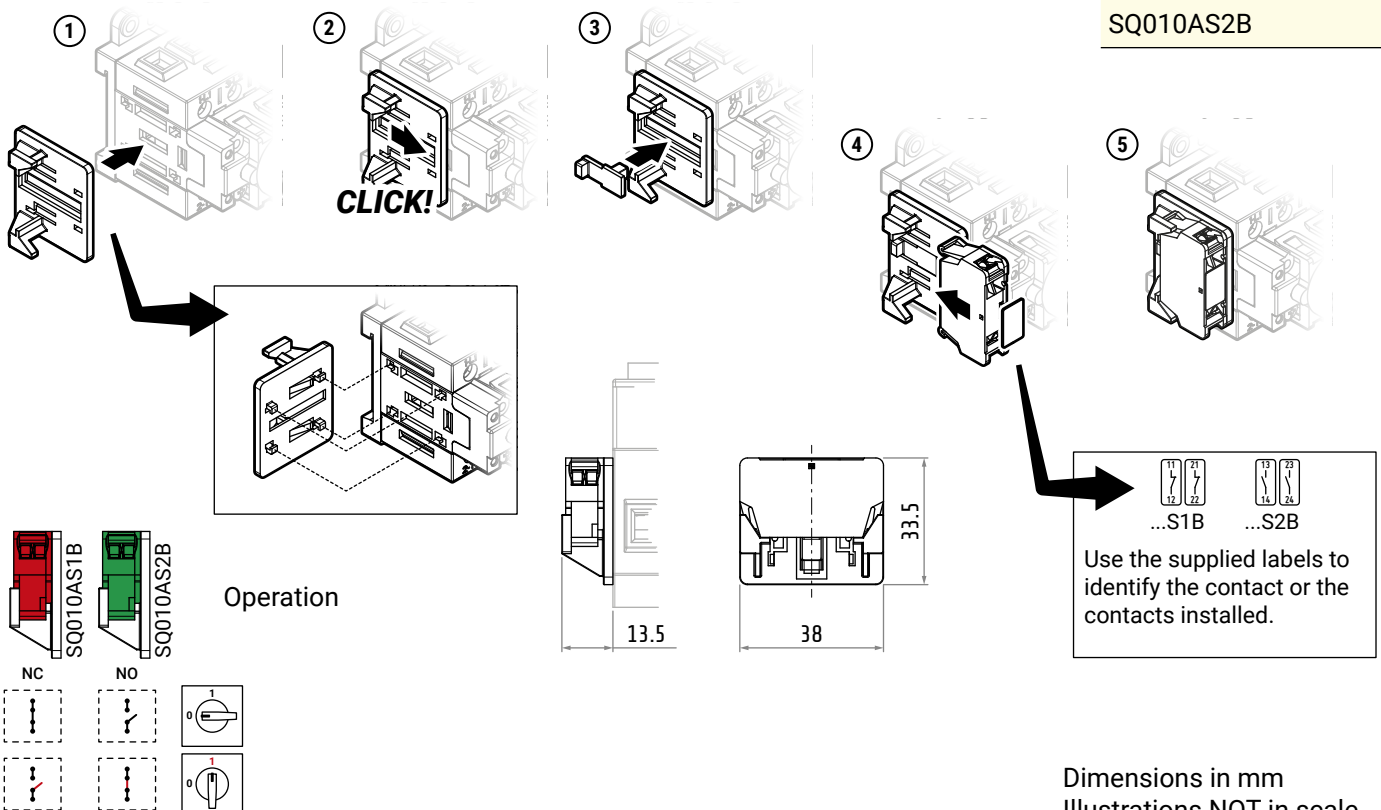
SQ025ANPB
SQ032ANPB

SQ025APEB
SQ032APEB

Dimensions in mm
Illustrations NOT in scale

- (1) Insert the cursor protrusion into the slot and push upward
- (2) Hook and push downward

Auxiliary contacts mounting



Auxiliary contacts

SQ010AS1B

SQ010AS2B

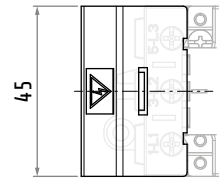
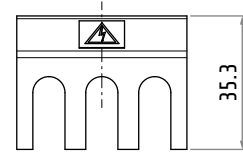
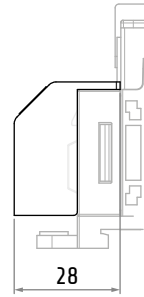
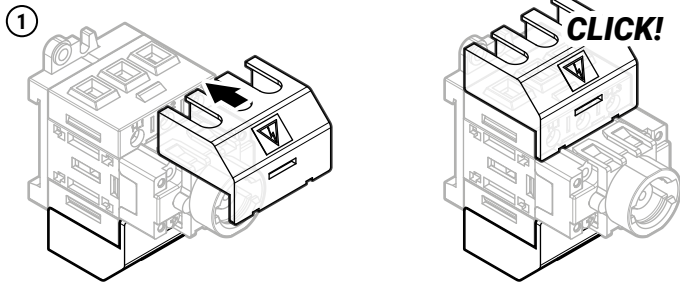
Use the supplied labels to identify the contact or the contacts installed.

Dimensions in mm
Illustrations NOT in scale

Terminal protection mounting

Terminal protection

20900023

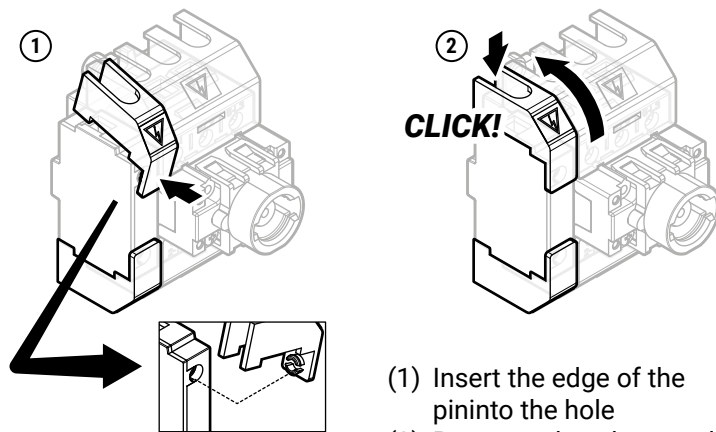


Dimensions in mm
Illustrations NOT in scale

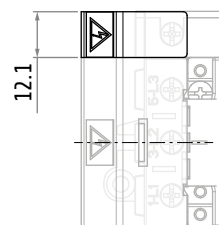
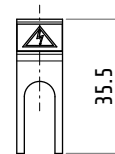
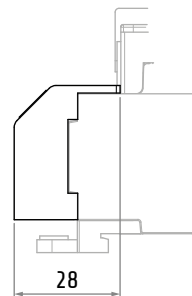
Additional poles protection mounting

Additional poles protection

20900025



- (1) Insert the edge of the pin into the hole
- (2) Rotate and push towards the additional pole



Dimensions in mm
Illustrations NOT in scale



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