

SQ040...R

SQ063...R

REGOLUS SWITCH DISCONNECTORS WITH TYPE "R" PANEL MOUNTING (63 A / 80 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.



Giovenzana International B.V. reserves the right to change the features and data shown in this document at any time and without notice. This document cannot therefore be considered a contract with third parties.




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	6 poles	3 + 3 poles (changeover)	AC-21A 690 V	AC-23A 400 V
SQ040	SQ040002R	SQ040003R	SQ040006R	SQ040033R	63 A	50 A
SQ063	SQ063002R	SQ063003R	SQ063006R	SQ063033R	80 A	75 A

Main features:

- rear panel mounting
- screw fixing

Additional references:

- matching actuators: p.5
- relevant accessories: p.6

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	A8
	terminal screw		M5
	tightening torque	EN60947-1 UL508	3 N·m 32 lb·in (3.6 N·m)
Connectable section	flexible conductors		1.5 ... 25 mm ² AWG 10 ... 2
	solid conductors		1.5 ... 25 mm ² AWG 10 ... 2
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

		SQ040	SQ063
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}	63 A	80 A
Rated enclosed thermal current	I _{the}	63 A	80 A
Frequency		50/60 Hz	50/60 Hz

Alternate current

Rated operating current		le		SQ040	SQ063
AC-21A	Switching of resistive loads, including moderate overloads		690 V	63 A	80 A
AC-22A	Switching of mixed resistive and inductive loads, including moderate overloads		500 V	63 A	80 A
			690 V	63 A	80 A
AC-23A	Switching of motor loads or other highly inductive loads	3 phases - 3 poles	230 V	63 A	80 A
			400 V	50 A	75 A
			500 V	50 A	75 A
			690 V	26 A	32 A
AC-3	Squirrel-cage motors: starting, switches off motors during running time	3 phases - 3 poles	230 V	45 A	60 A
			400 V	40 A	60 A
			500 V	35 A	45 A
			690 V	22 A	25 A
AC-23A	Nominal breaking capacity (cosφ 0.45)		230 V	360 A	600 A
			400 V	360 A	536 A
			500 V	280 A	536 A
			690 V	176 A	256 A

Short circuit characteristics

			SQ040	SQ063
Rated short-time short circuit withstand current (1 s)	lcw		1200 A	1500 A
Rated short circuit making capacity	lcm		2200 A	2800 A
Conditional rated short circuit withstand current			10 kA	10 kA
Fuse rating (type gG)		500 V	80 A	80 A
		690 V	80 A	80 A


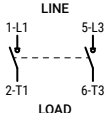
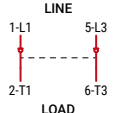



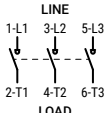
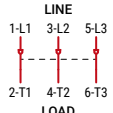



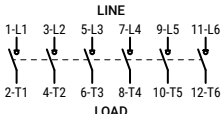
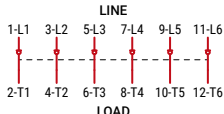



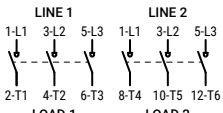
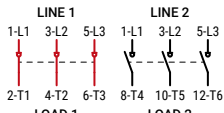
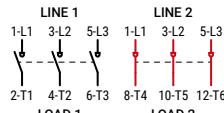



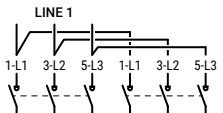
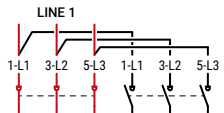
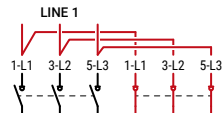



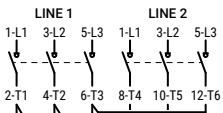
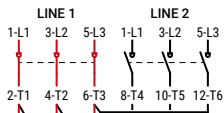
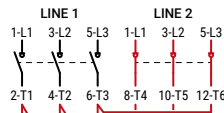



UL 508 characteristics

			SQ040	SQ063		
General use		600 V AC	60 A	80 A		
Standard motor load	1 phase - 2 poles	120 V AC	2 HP	24 FLA	3 HP	34 FLA
		200 - 208 V AC	3 HP		5 HP	
		240 V AC	5 HP	28 FLA	7.5 HP	40 FLA
	3 phases - 3 poles	200 - 208 V AC	7.5 HP		10 HP	
		240 V AC	10 HP	28 FLA	15 HP	42 FLA
		480 V AC	25 HP	34 FLA	30 HP	40 FLA
	600 V AC	30 HP	32 FLA	40 HP	41 FLA	

Marking

SQ...02R / SQ...03R	CE, UL, UKCA
SQ...06R / SQ...33R	CE, UL, UKCA

QUICK REFERENCE

Switch disconnecter	Notes	Operational scheme			
 2 poles SQ040002R SQ063002R	Installation instructions: p.7	   	One input LINE manages one LOAD.		
 3 poles SQ040003R SQ063003R	Installation instructions: p.7	   	One input LINE manages one LOAD.		
 6 poles SQ040006R SQ063006R	Installation instructions: p.9	   	One input LINE manages one LOAD.		
 3 + 3 poles (changeover) SQ040033R SQ063033R	Standard configuration without changeover bridges. Installation instructions: p.11	     	Two input lines LINE 1 and LINE 2 manage two loads LOAD 1 and LOAD 2 which are alternatives to each other (they cannot work together).		
Alternative configuration with changeover bridges on the line side ("L" poles). Installation instructions: p.11	     	One input LINE 1 manages two loads LOAD 1 and LOAD 2 which are alternatives to each other (they cannot work together).			
Alternative configuration with changeover bridges on the load side ("T" poles). Installation instructions: p.11	     	Two input lines LINE 1 and LINE 2 manage a single LOAD 1. This is the classic case of backup: the supply from the power grid arrives at LINE 1 and a generator is connected to LINE 2. If the supply from the power grid fails (LINE 1) it is possible to switch to the generator (LINE 2).			

OVERVIEW

Switch disconnectors / actuators matrix

Actuator code reading

0	4	9	/	0	0	0	1	-	L
Actuator				Wording					



Type	R	R	
Mounting	panel	panel	
Poles	2 / 3	6	3 + 3 (changeover)

ACTUATOR

67×67
Grey/Black
padlock
screw



319/...



319/...



319/...

67×67
Yellow/Red
padlock
screw



320/...



320/...



320/...

Ø78
Grey/Black
padlock
screw



309/...



309/...



309/...

Ø78
Yellow/Red
padlock
screw



310/...



310/...



310/...

WORDING



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...0008

Installation
instructions

p.7

p.9

p.11

Accessories

Additional poles				Installation instructions
Additional pole NO			SQ040AFPR SQ063AFPR	p.13
4th pole (early make contact)			SQ040ANIR SQ063ANIR	p.13
Neutral terminal			SQ040ANPR SQ063ANPR	p.13
Ground terminal			SQ040APER SQ063APER	p.13
Auxiliary contacts				
Auxiliary contact 1 NC			SQ010AS3R	p.13
Auxiliary contact 1 NO			SQ010AS4R	p.13
Terminal protections				
Terminal protection for 3 poles			20900041	p.14
Terminal protection for 1 pole			20900040	p.14

INSTALLATION

2 / 3 poles switch disconnecter installation

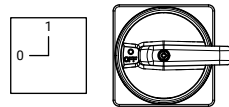
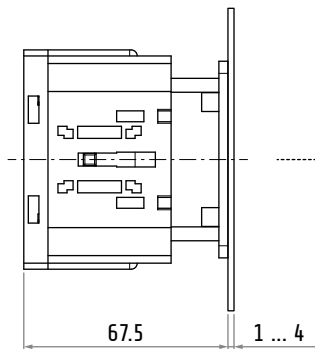
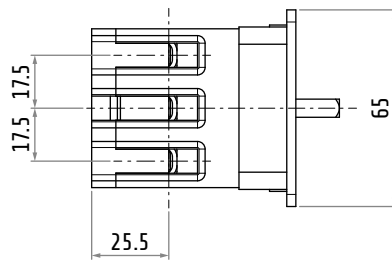
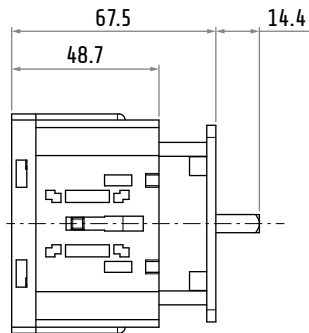
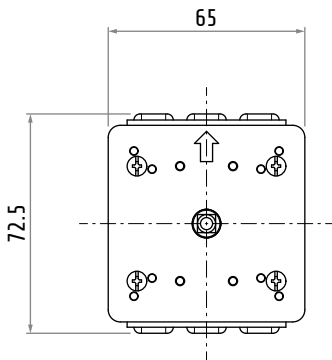
Switch disconnectors involved

SQ040002R

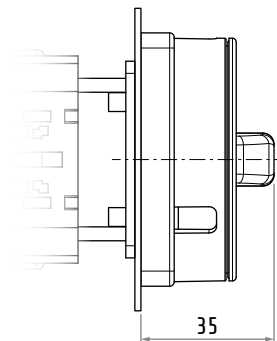
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SQ040003R

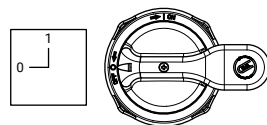
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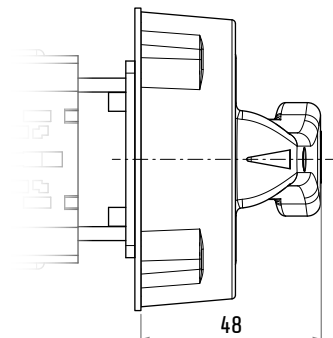
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320/0001



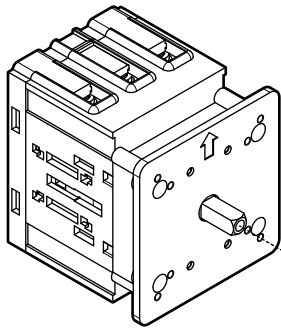
Dimensions in mm
Illustrations NOT in scale



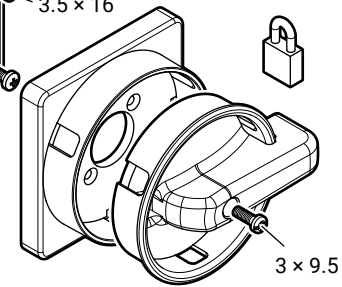
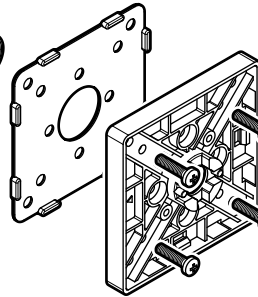
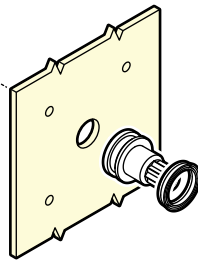
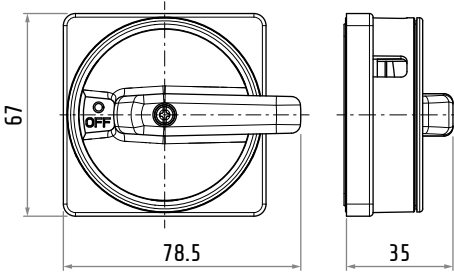
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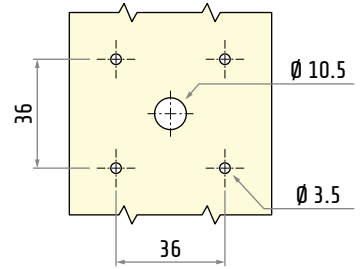
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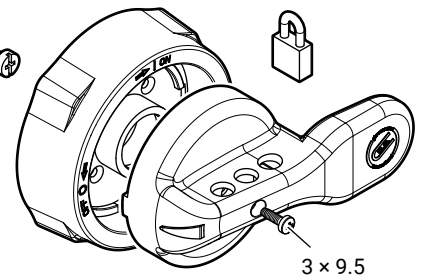
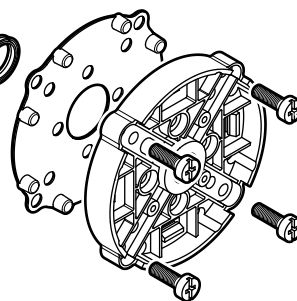
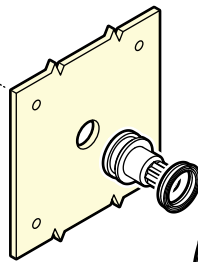


panel thickness:
1 ... 4 mm

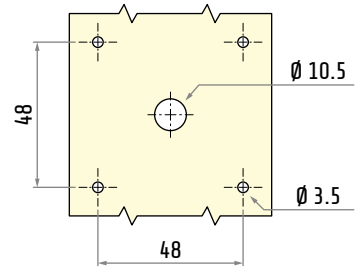


up to 3 padlocks
shackle: 8 mm max

⚠ ATTENTION
(where padlocking is relevant)
Padlocking is possible only in
OFF position.

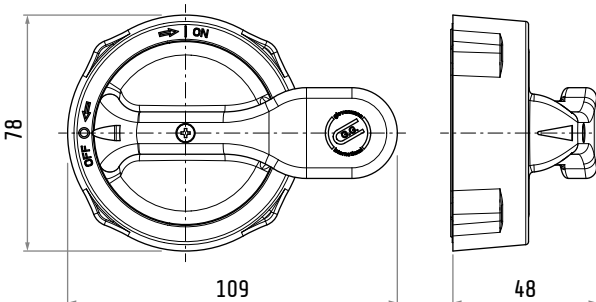


panel thickness:
1 ... 4 mm



up to 3 padlocks
shackle: 8 mm max

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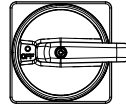
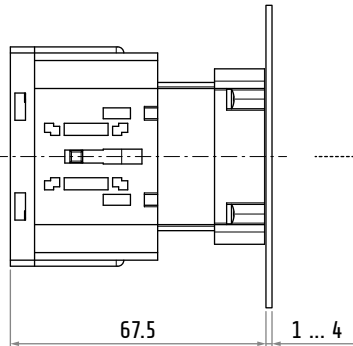
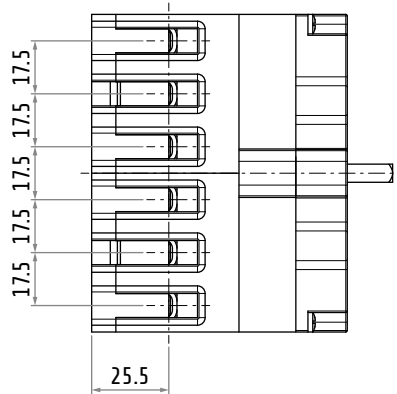
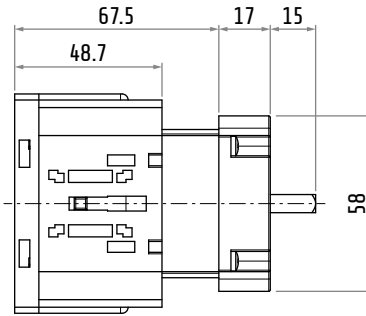
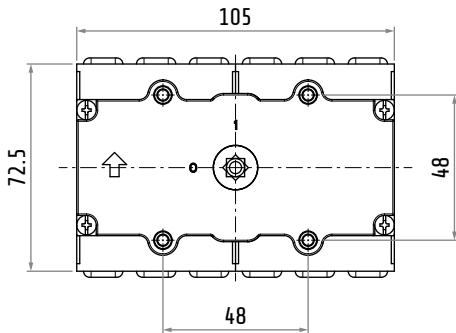


6 poles switch disconnecter installation

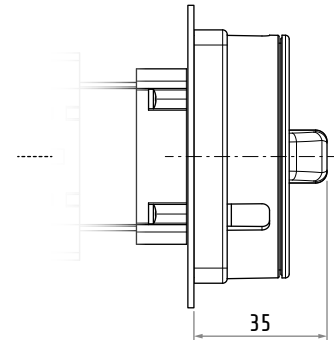
Switch disconnectors involved

SQ040006R

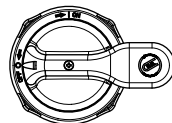
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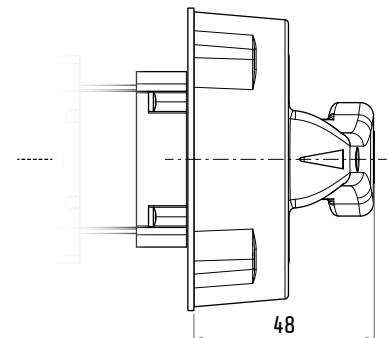
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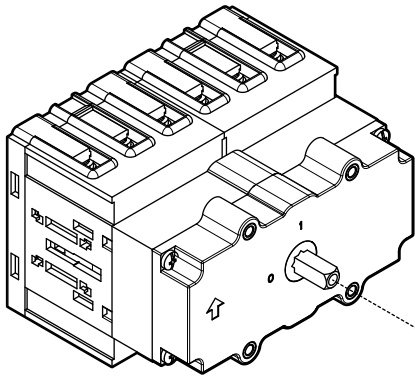
Dimensions in mm
Illustrations NOT in scale



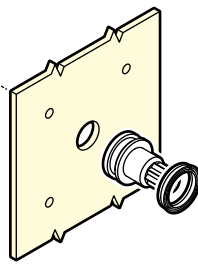
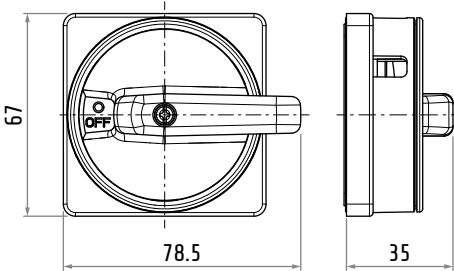
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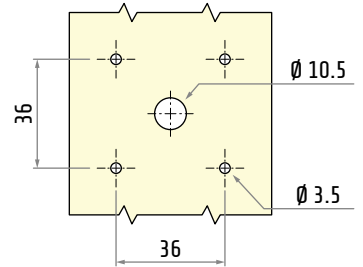
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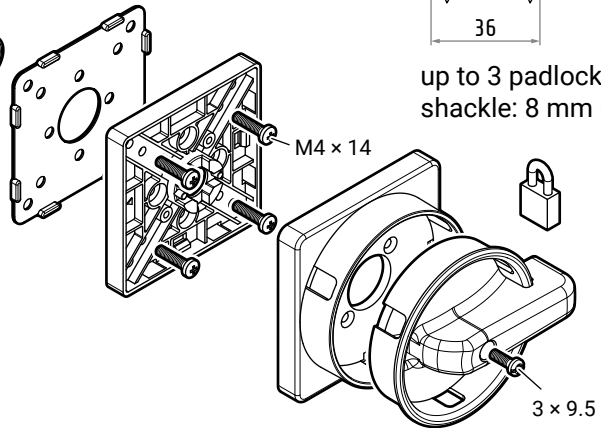
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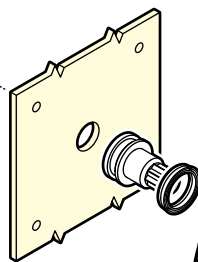
panel thickness:
1 ... 4 mm



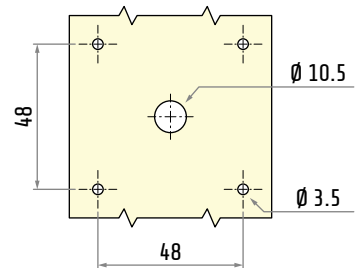
up to 3 padlocks
shackle: 8 mm max



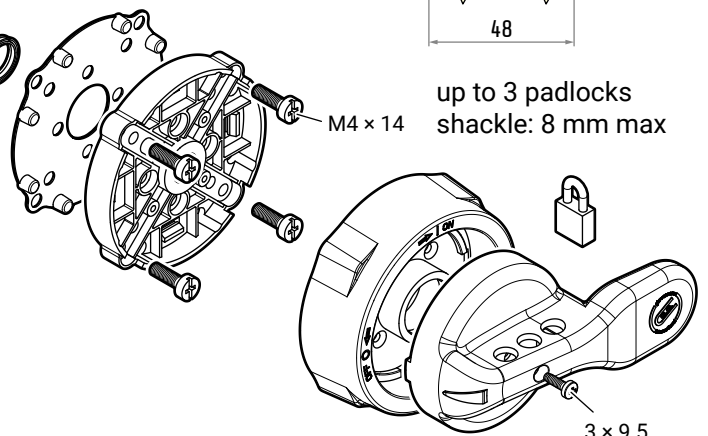
ATTENTION
(where padlocking is relevant)
Padlocking is possible only in
OFF position.



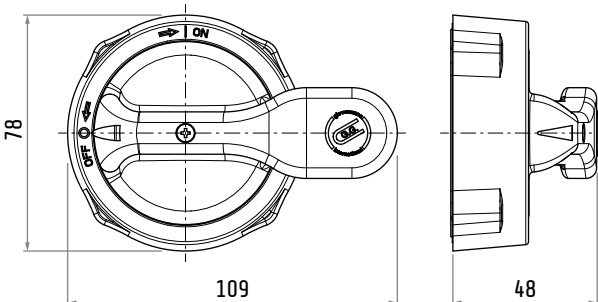
panel thickness:
1 ... 4 mm



up to 3 padlocks
shackle: 8 mm max



309/0001 • 310/0001

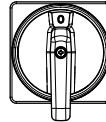
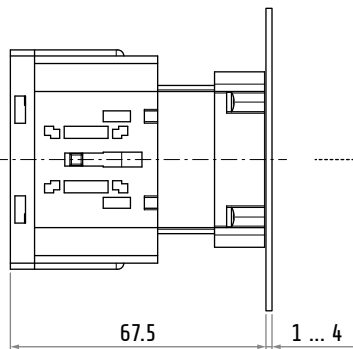
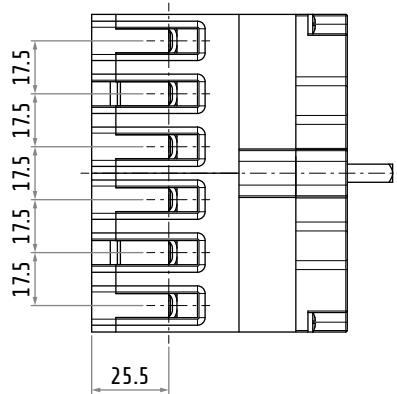
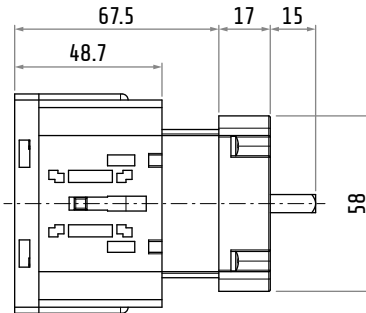
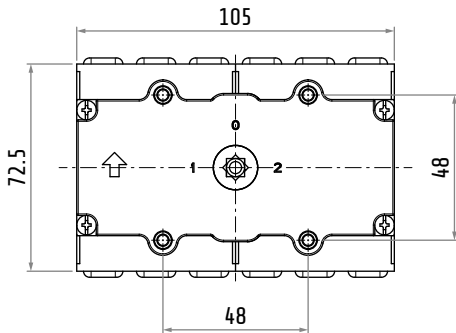


3 + 3 poles (changeover) switch disconnecter installation

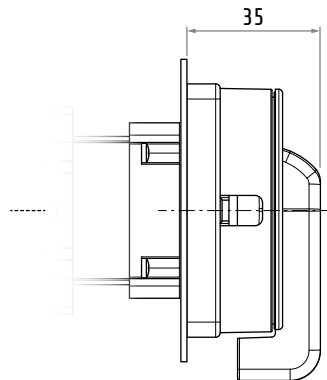
Switch disconnectors involved

SQ040033R

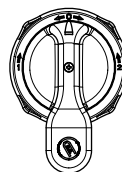
SQ063033R



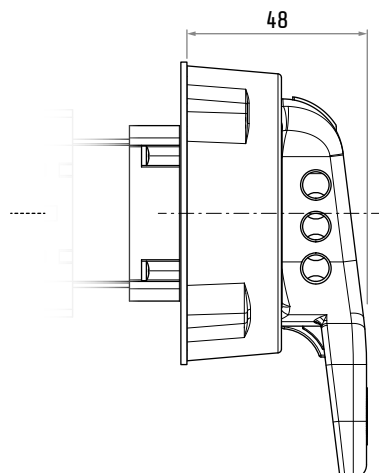
319/0008
320/0008



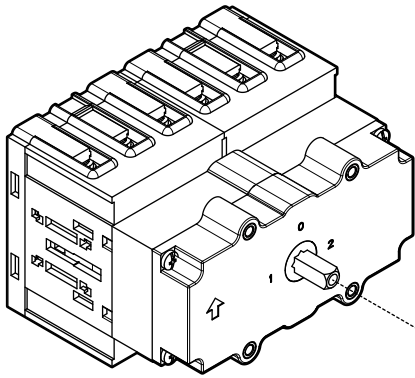
Dimensions in mm
Illustrations NOT in scale



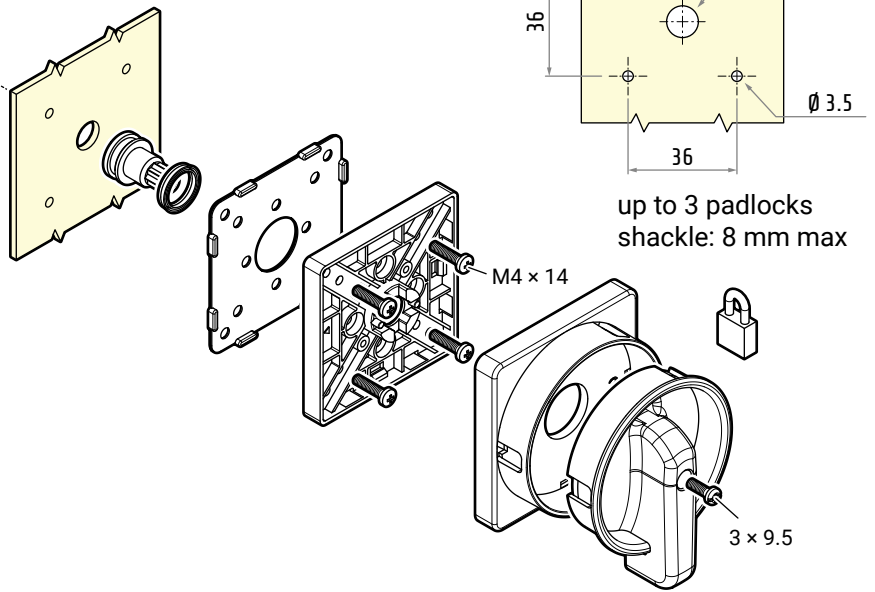
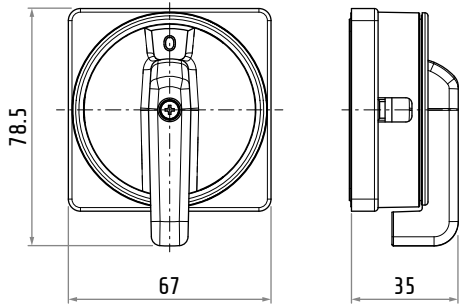
309/0008
310/0008



(continued on next page)



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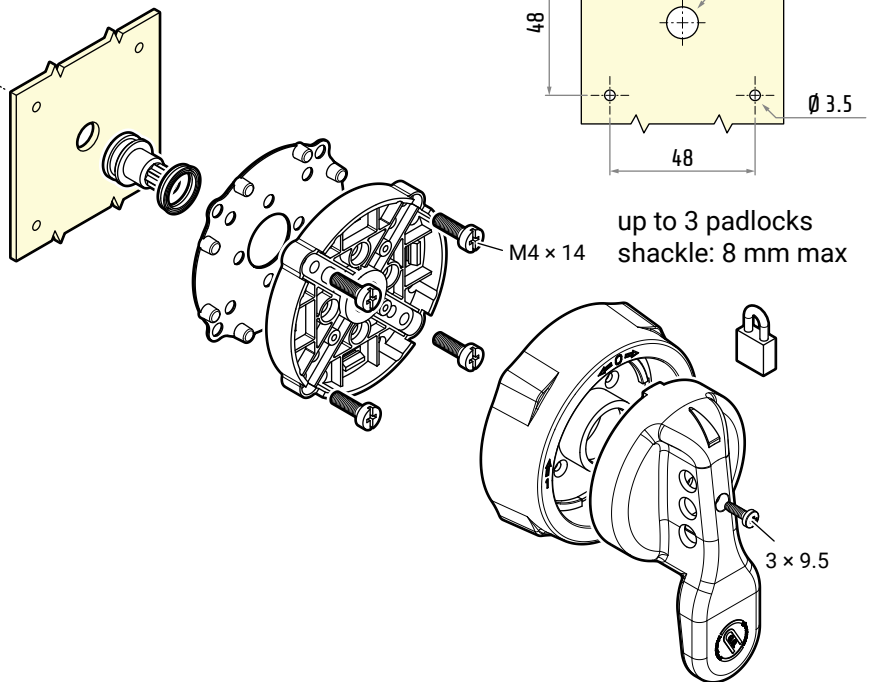
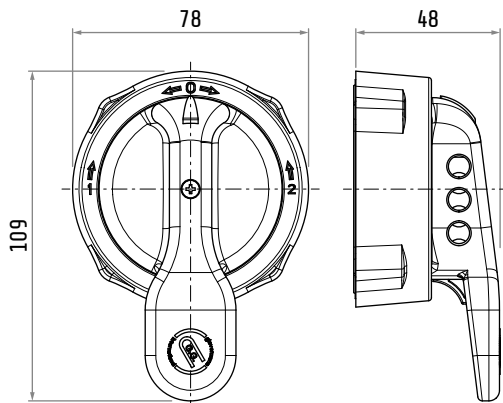


panel thickness:
1 ... 4 mm

up to 3 padlocks
shackle: 8 mm max

⚠ ATTENTION
(where padlocking is relevant)
Padlocking is possible only in
OFF position.

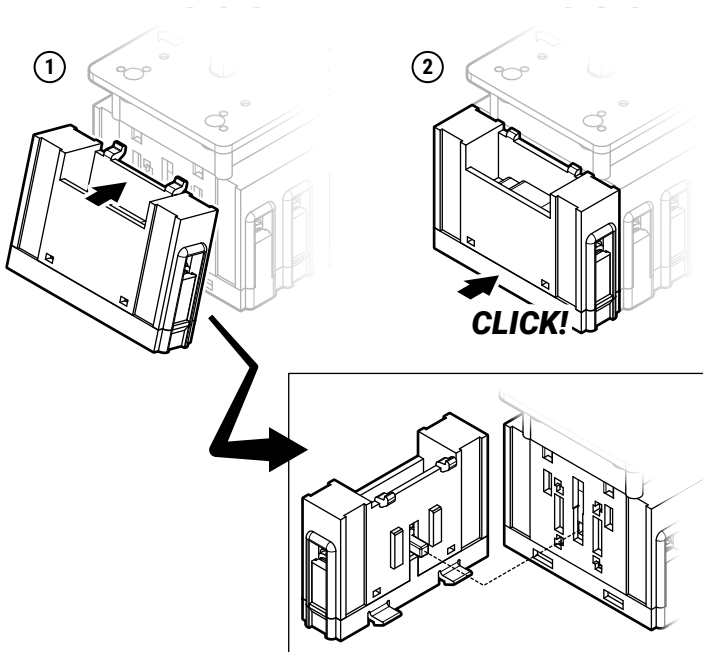
309/0008 • 310/0008



panel thickness:
1 ... 4 mm

up to 3 padlocks
shackle: 8 mm max

Additional poles mounting



- (1) Hook and insert the cursor protrusion into the slot
- (2) Push to fasten

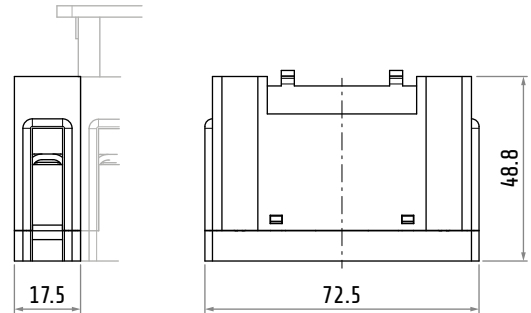
Additional poles

SQ040AFPR
SQ063AFPR

SQ040ANIR
SQ063ANIR

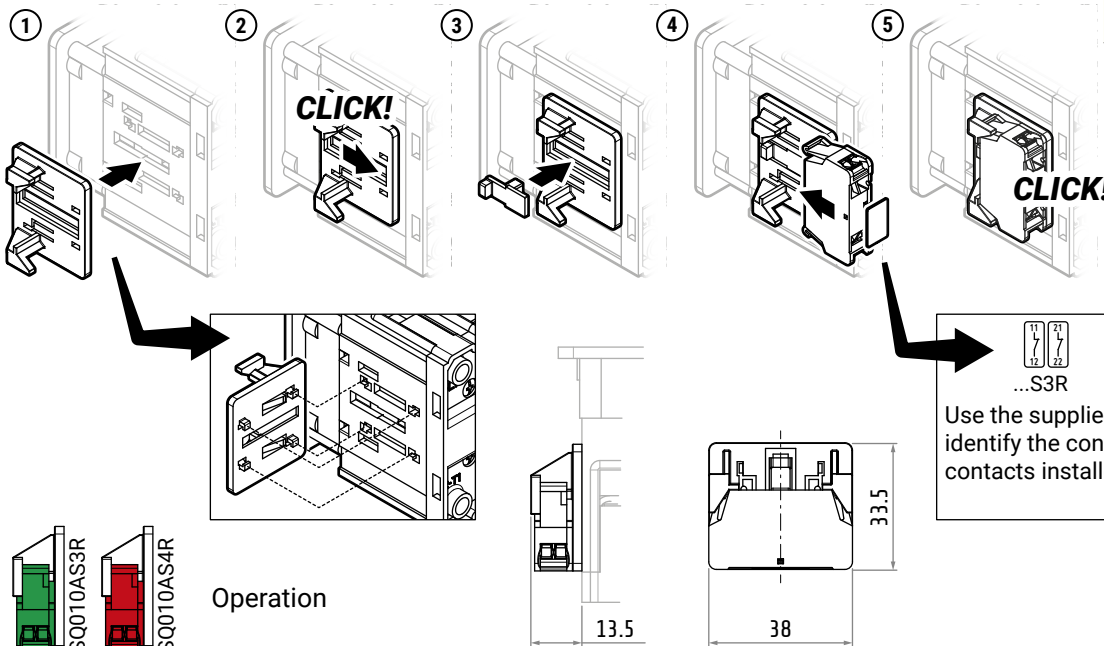
SQ040ANPR
SQ063ANPR

SQ040APER
SQ063APER



Dimensions in mm
Illustrations NOT in scale

Auxiliary contacts mounting

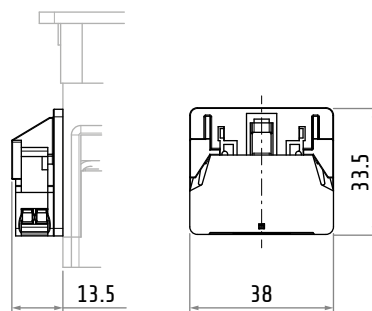


Auxiliary contacts

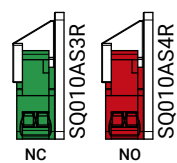
SQ010AS3R

SQ010AS4R

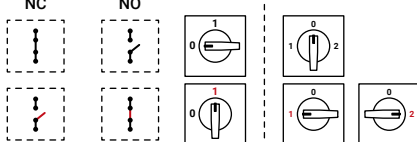
...S3R ...S4R
 Use the supplied labels to identify the contact or the contacts installed.



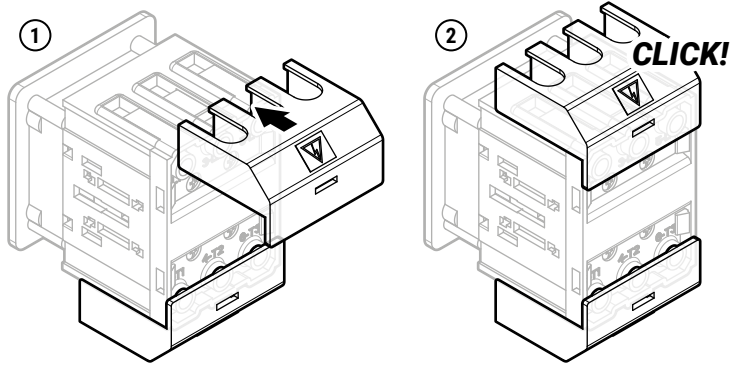
Dimensions in mm
Illustrations NOT in scale



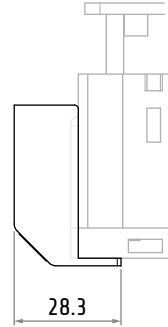
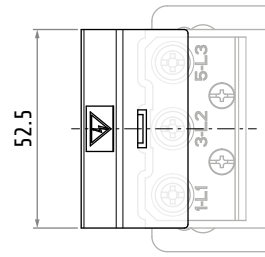
Operation



Terminal protection mounting

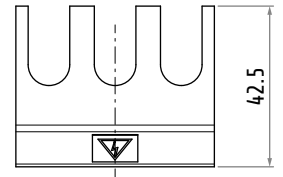


Dimensions in mm
Illustrations NOT in scale

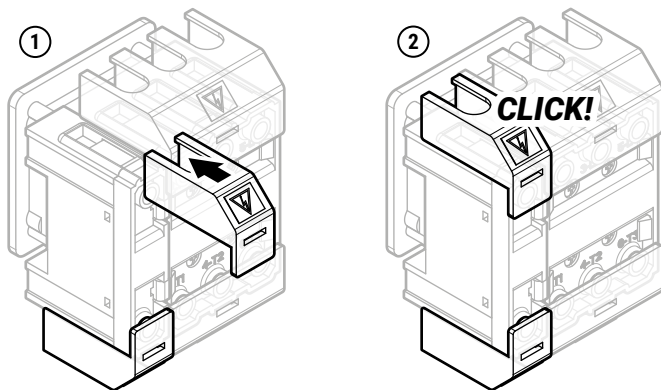


Terminal protection

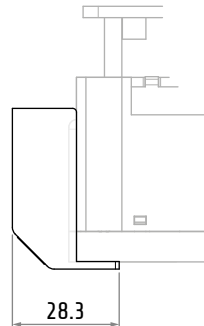
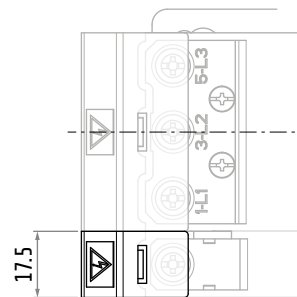
20900041



Additional poles protection mounting



Dimensions in mm
Illustrations NOT in scale



Additional poles protection

20900040

