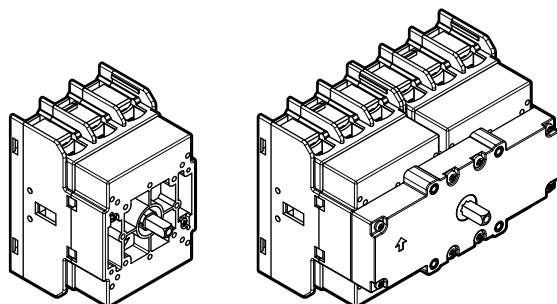




SQN125...R

SQN160...R

REGOLUS SWITCH DISCONNECTORS WITH TYPE "R" PANEL MOUNTING (125 A / 160 A)

SPECIFICATIONS	2
QUICK REFERENCE	4
OVERVIEW.....	5
INSTALLATION.....	7



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.



SQN series 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	3 poles	6 poles	3 + 3 poles (changeover)	AC-21A 690 V	AC-23A 400 V
SQN125	SQN125003R	SQN125006R	SQN125033R	125 A	125 A
SQN160	SQN160003R	SQN160006R	SQN160033R	160 A	160 A

Main features:

- rear panel mounting
- screw fixing

Additional references:

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

SPECIFICATIONS

General characteristics

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	A11
	terminal screw		M8
	tightening torque	EN60947-1 UL508	6 N·m 53 lb·in (6 N·m)
Connectable section	flexible conductors	SQN125 SQN160	50 mm ² 70 mm ² AWG 0 AWG 00
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

		SQN125	SQN160
Rated operating voltage	U _e	690 V	690 V
Rated insulation voltage	U _i	800 V	800 V
Rated impulse withstand voltage (sectionable)	U _{imp}	8 kV	8 kV
Rated thermal current	I _{th}	125 A	160 A
Rated enclosed thermal current	I _{the}	125 A	160 A
Frequency		50/60 Hz	50/60 Hz

Alternate current

Rated operating current			le	SQN125	SQN160
AC-21A	Switching of resistive loads, including moderate overloads	690 V		125 A	160 A
AC-22A	Switching of mixed resistive and inductive loads, including moderate overloads	500 V		125 A	160 A
		690 V		125 A	160 A
AC-23A	Switching of motor loads or other highly inductive loads	3 phases - 3 poles	400 V	125 A	160 A
			500 V	100 A	125 A
			690 V	80 A	100 A

Direct current

DC-21B	Switching of resistive loads, including moderate overloads	600 V	10 A	10 A
--------	--	-------	------	------

Short circuit characteristics

		SQN125	SQN160
Rated short-time short circuit withstand current (1 s)	I _{cw}	3000 A	3000 A
Rated short circuit making capacity	I _{cm}	4500 A	4500 A
Conditional rated short circuit withstand current		10 kA 10 kA	10 kA 10 kA
Fuse rating (type gG)	690 V	125 A	125 A

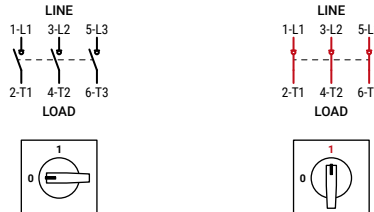
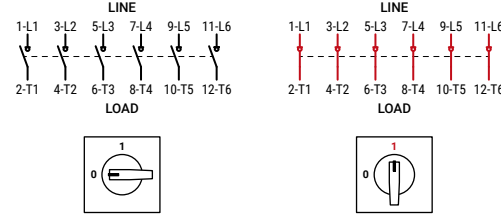
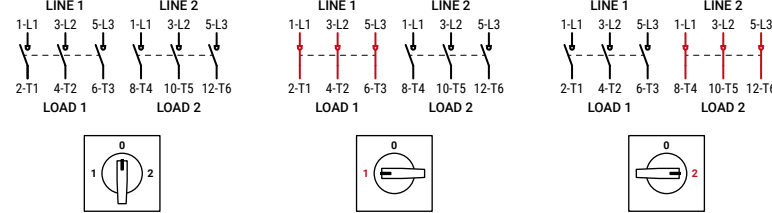
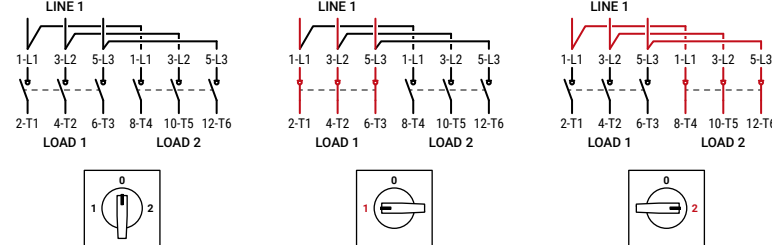
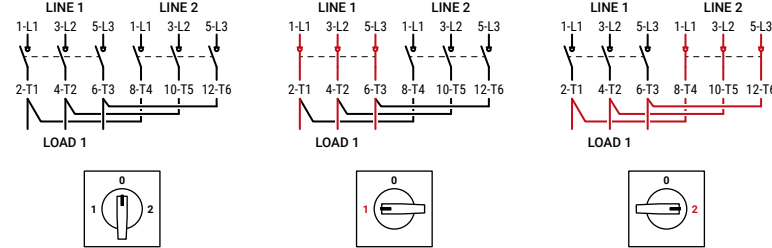
UL 508 characteristics

			SQN125	SQN160
General use		600 V AC	125 A	150 A
Standard motor load	3 phases - 3 poles	240 V AC	25 HP	25 HP
		480 V AC	50 HP	50 HP
		600 V AC	60 HP	60 HP

Marking

SQN...03R	CE, UL, UKCA
SQN...06R	CE, UKCA
SQN...33R	CE, UL, UKCA

QUICK REFERENCE

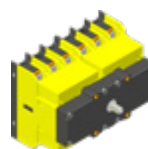
Switch disconnecter	Notes	Operational scheme	
 3 poles SQN125003R SQN160003R	Installation intructions: p.7		One input LINE manages one LOAD.
 6 poles SQN125006R SQN160006R	Installation instructions: p.9		One input LINE manages one LOAD.
 3 + 3 poles (changeover) SQN125033R SQN160033R	Standard configuration without changeover bridges. Installation instructions: p.11		Two input LINE 1 and LINE 2 manage two 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 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 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	0	1	/	0	0	0	1
Actuator				Wording			



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

ACTUATOR

67×67

Grey/Black
padlock

Ø 22



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



...0001



...0001



...0008

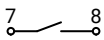
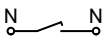
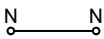
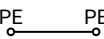
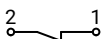
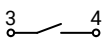
Installation
instructions

p.7

p.9

p.11

Accessories

Additional poles				Installation instructions
Additional pole NO			SQN125AFPR SQN160AFPR	p.13
4th pole (early make contact)			SQN125ANIR SQN160ANIR	p.13
Neutral terminal			SQN125ANPR SQN160ANPR	p.13
Ground terminal			SQN125APER SQN160APER	p.13
Auxiliary contacts				
Auxiliary contact 1 NC			SQ010AS5R	p.14 p.14
Auxiliary contact 1 NO			SQ010AS6R	p.14 p.14
Terminal protections				
Terminal protection for 3 poles			20900064	p.15
Terminal protection for 1 pole			20900065	p.15

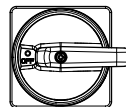
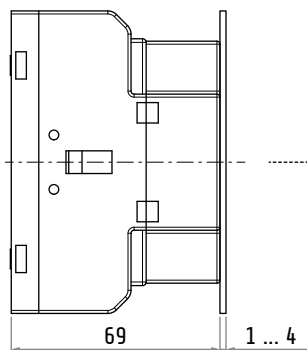
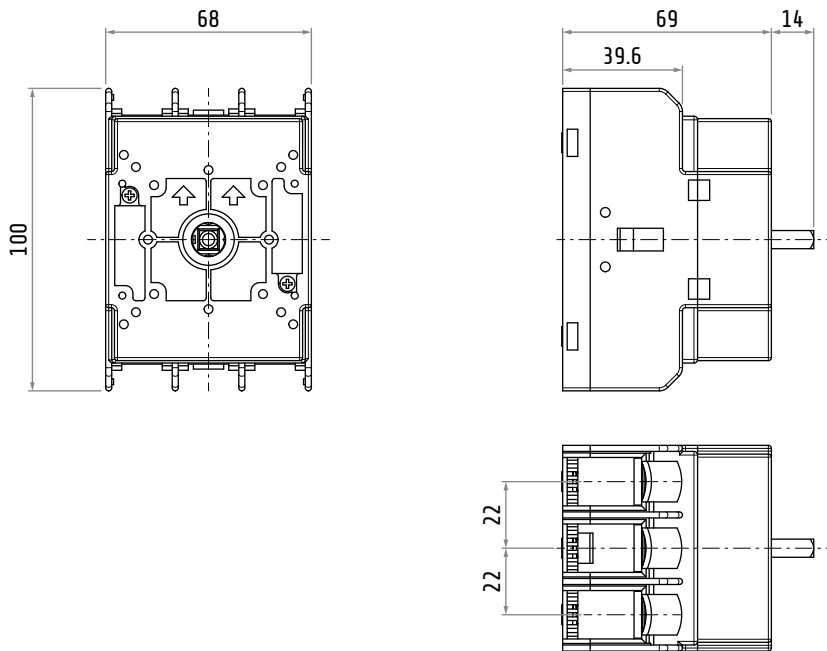
INSTALLATION

2 / 3 poles switch disconnecter installation

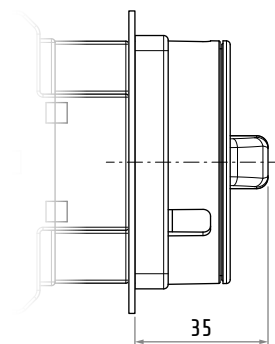
Switch disconnectors involved

SQN125003R

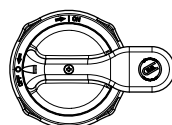
SQN160003R



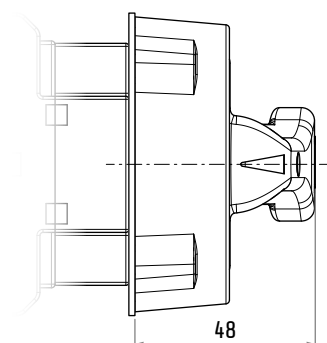
319/0001
320/0001



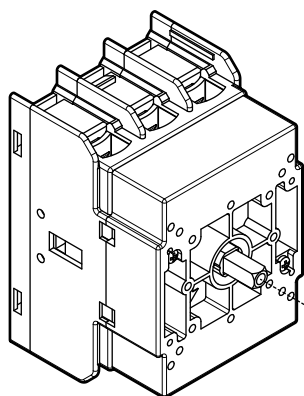
Dimensions in mm
Illustrations NOT in scale



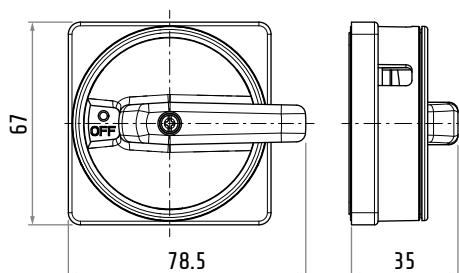
309/0001
310/0001



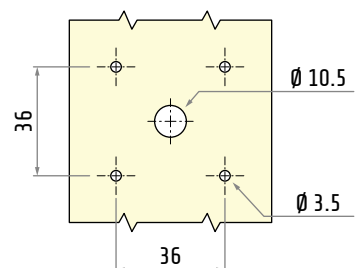
(continued on next page)



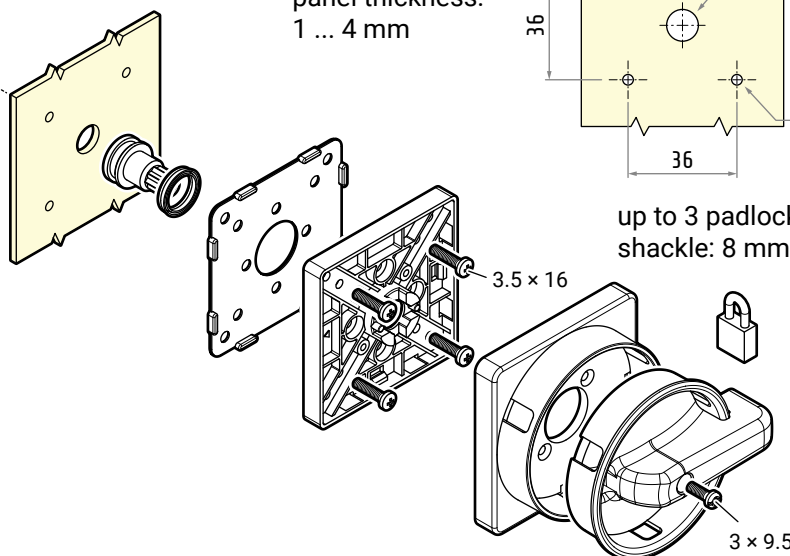
319/0001 • 320/0001



panel thickness:
1 ... 4 mm

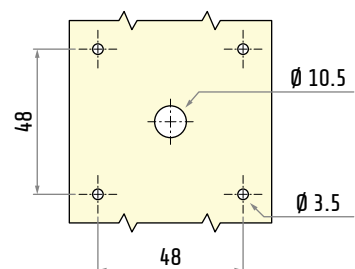


up to 3 padlocks
shackle: 8 mm max

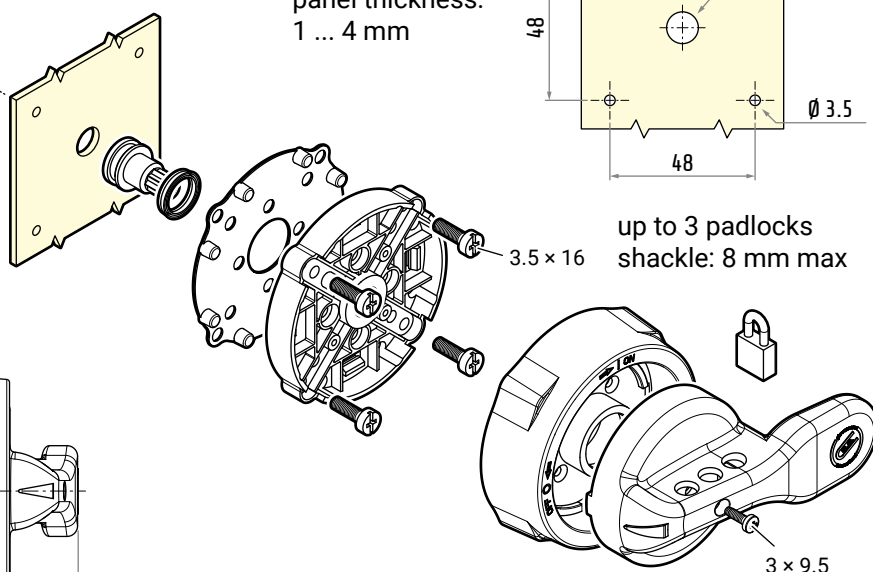


ATTENTION
(where padlocking is relevant)
Padlocking is possible only in
OFF position.

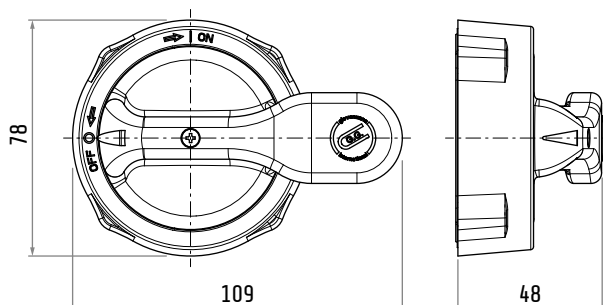
panel thickness:
1 ... 4 mm



up to 3 padlocks
shackle: 8 mm max



309/0001 • 310/0001

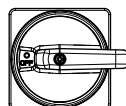
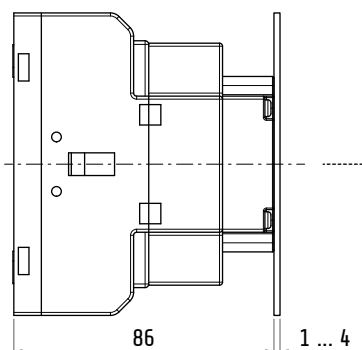
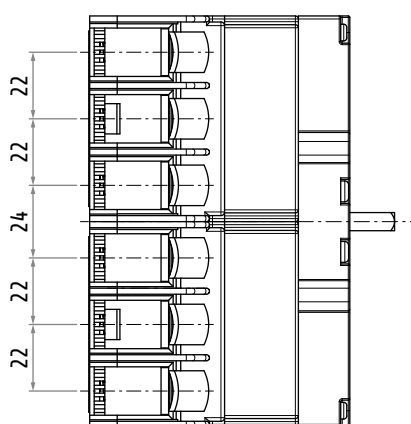
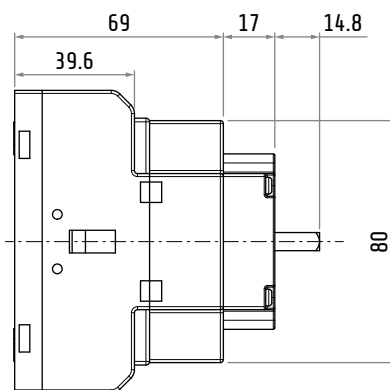
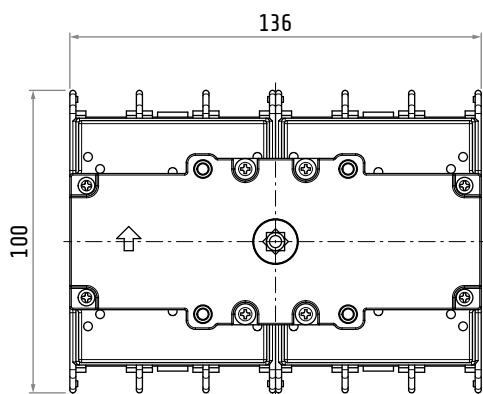


6 poles switch disconnecter installation

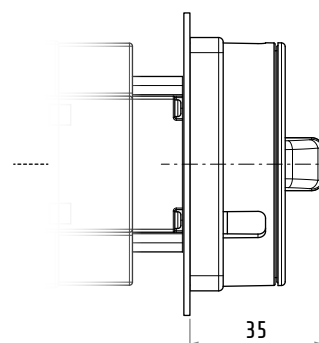
Switch disconnectors involved

SQN125006R

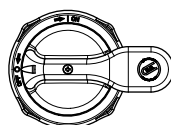
SQN160006R



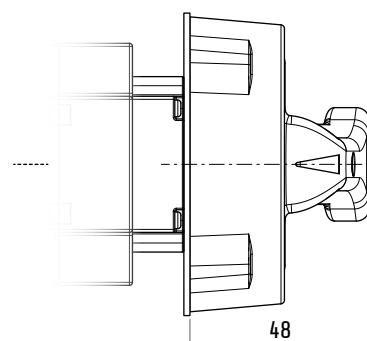
319/0001
320/0001



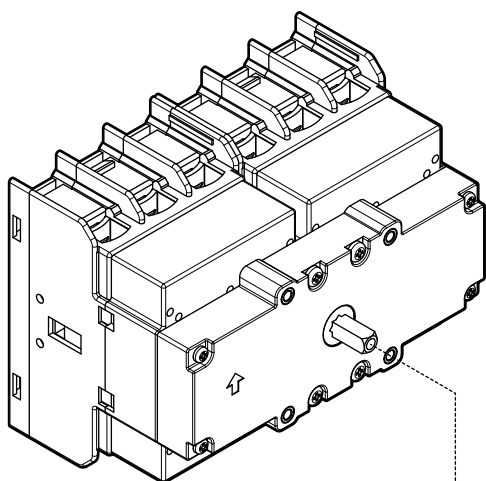
Dimensions in mm
Illustrations NOT in scale



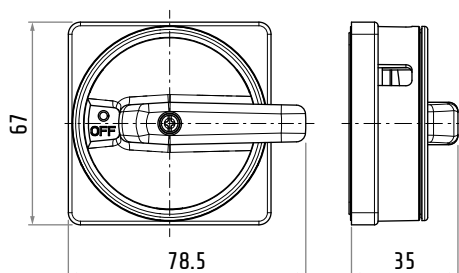
309/0001
310/0001



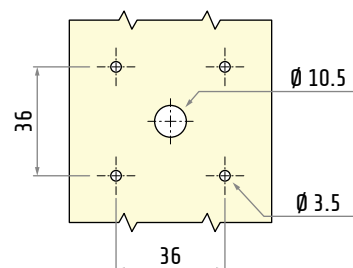
(continued on next page)



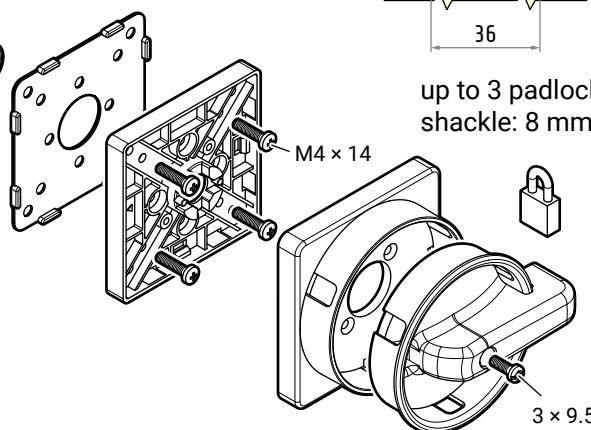
319/0001 • 320/0001



panel thickness:
1 ... 4 mm

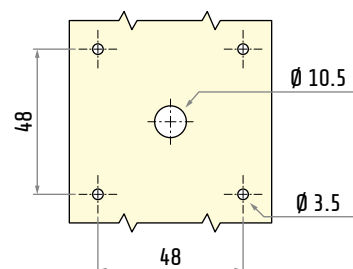


up to 3 padlocks
shackle: 8 mm max



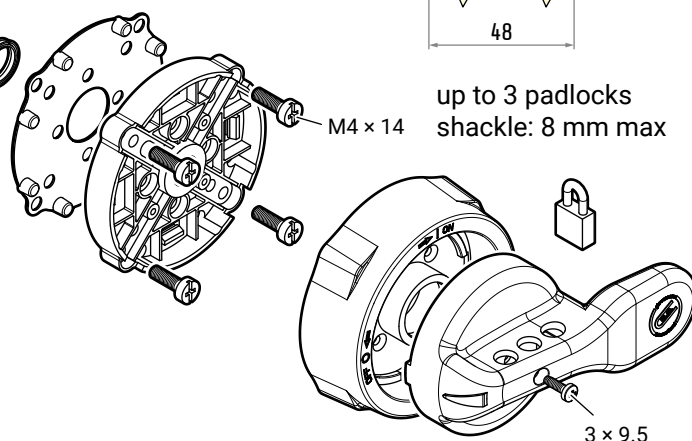
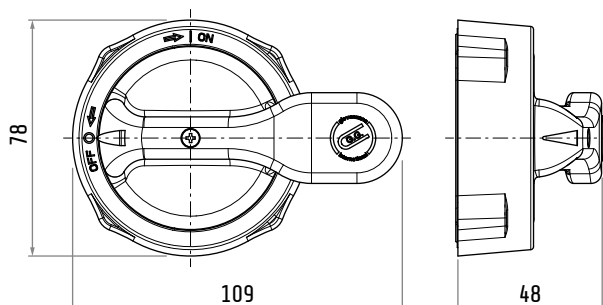
ATTENTION
(where padlocking is relevant)
Padlocking is possible only in
OFF position.

panel thickness:
1 ... 4 mm



up to 3 padlocks
shackle: 8 mm max

309/0001 • 310/0001

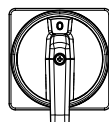
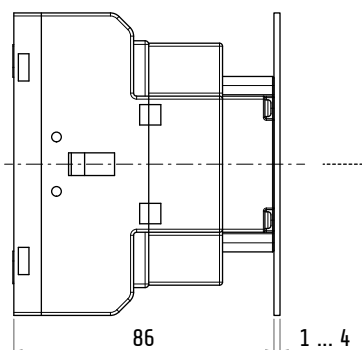
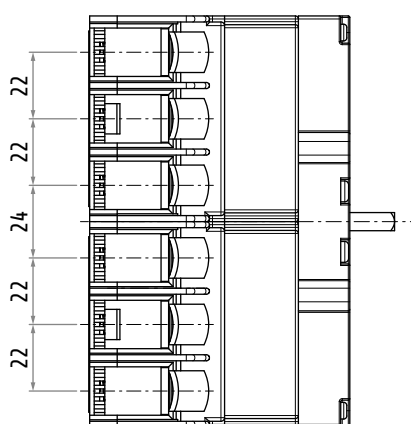
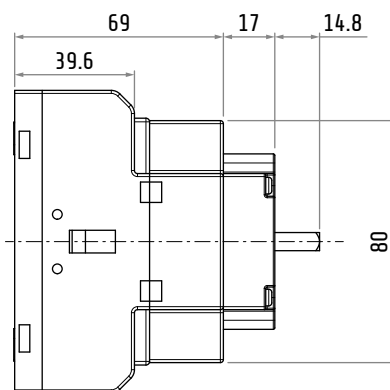
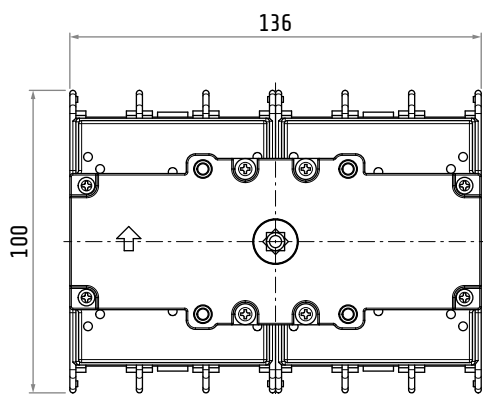


3 + 3 poles (changeover) switch disconnecter installation

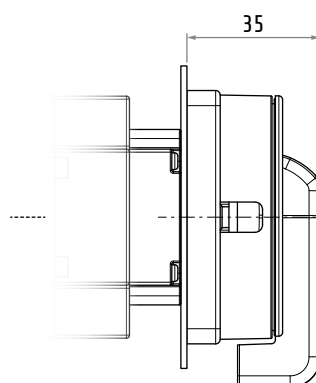
Switch disconnectors involved

SQN125033R

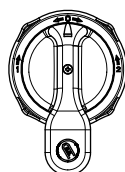
SQN160033R



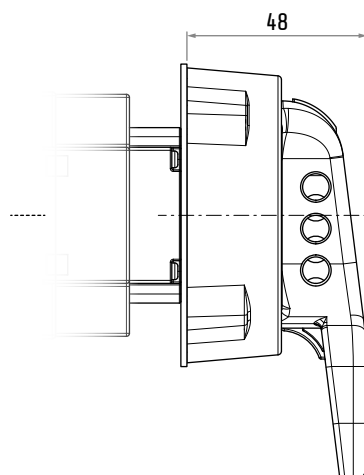
319/0008
320/0008



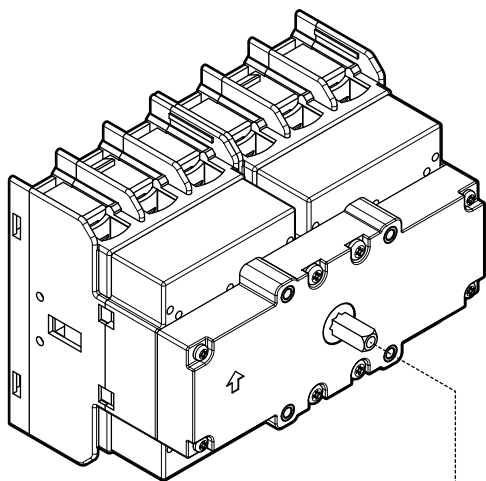
Dimensions in mm
Illustrations NOT in scale



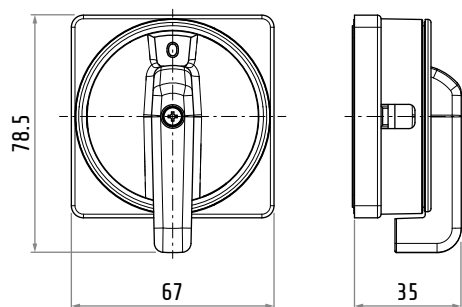
309/0008
310/0008



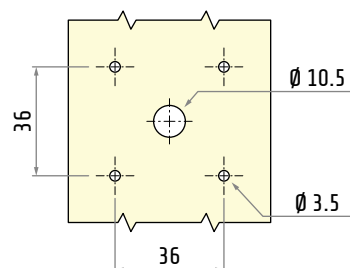
(continued on next page)



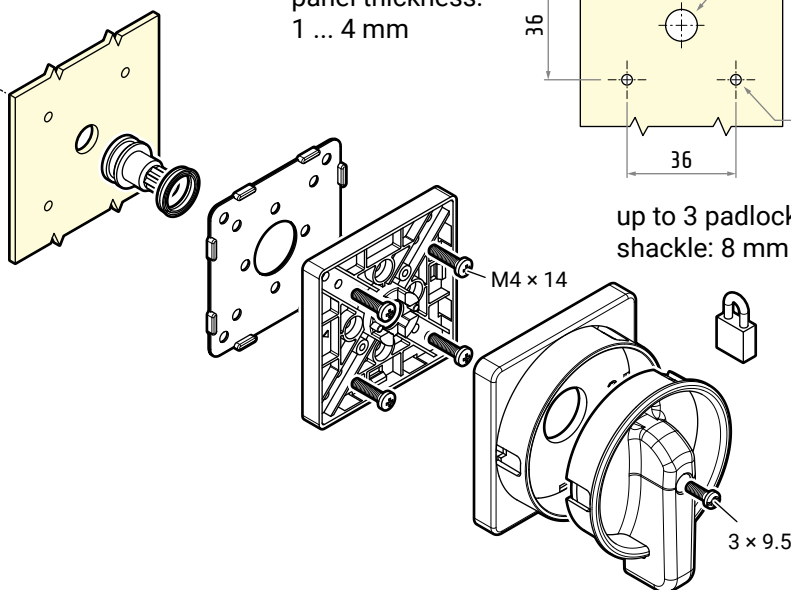
319/0008 • 320/0008



panel thickness:
1 ... 4 mm

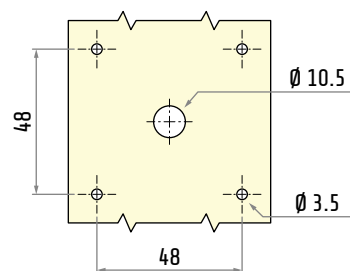


up to 3 padlocks
shackle: 8 mm max

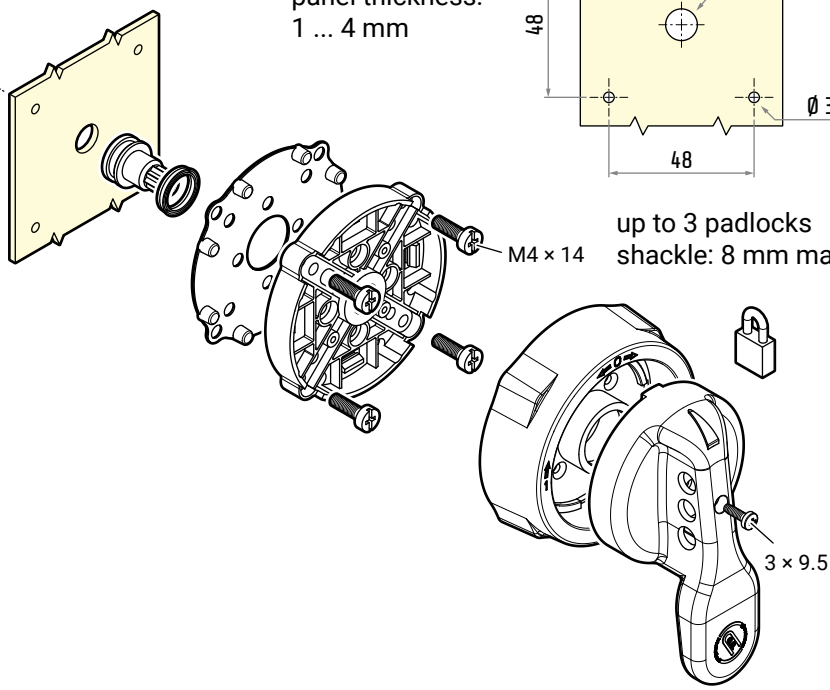


ATTENTION
(where padlocking is relevant)
Padlocking is possible only in
OFF position.

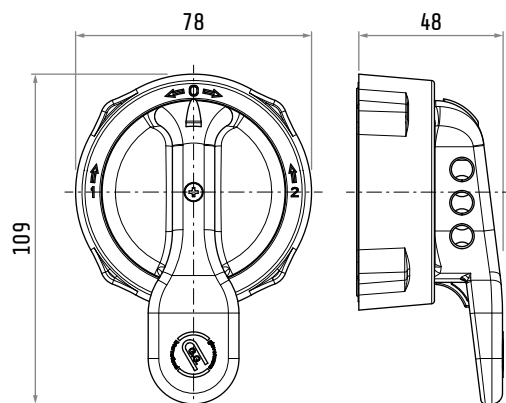
panel thickness:
1 ... 4 mm



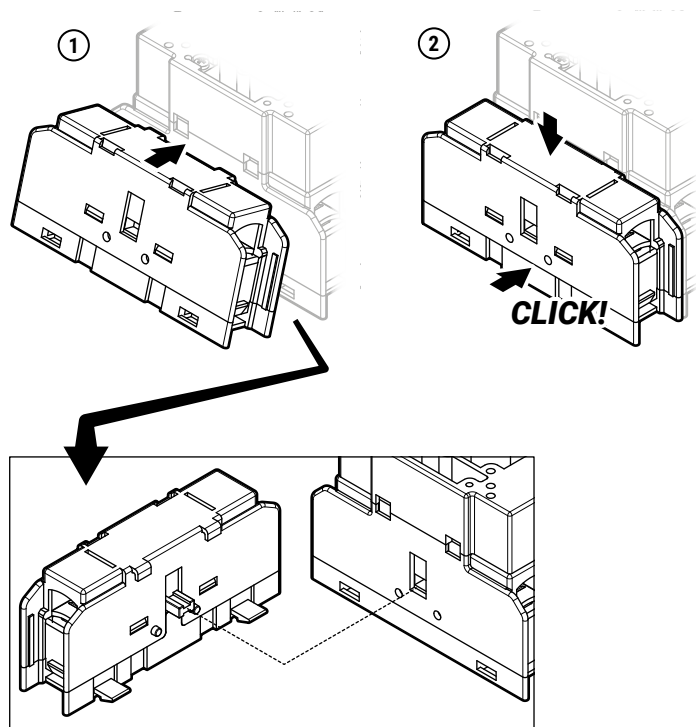
up to 3 padlocks
shackle: 8 mm max



309/0008 • 310/0008



Additional poles mounting



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

Additional poles

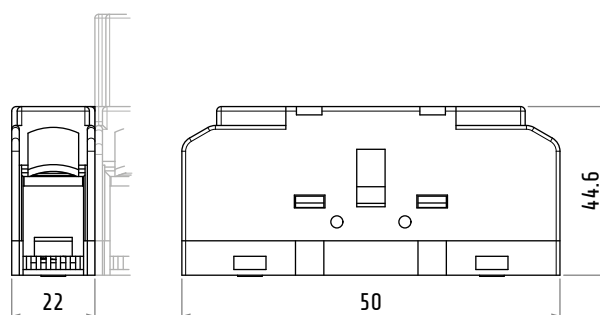
SQN125AFPR
SQN160AFPR

SQN125ANIR
SQN160ANIR

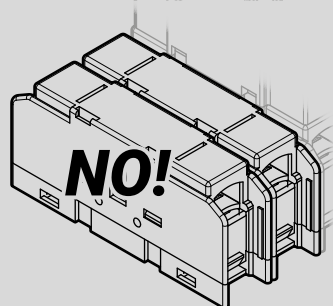
SQN125ANPR
SQN160ANPR

SQN125APER
SQN160APER

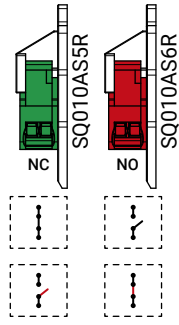
Dimensions in mm
Illustrations NOT in scale



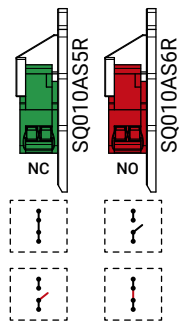
ATTENTION
IT IS STRICTLY FORBIDDEN TO INSTALL AN
ADDITIONAL POLE ON ANOTHER ADDITIONAL
POLE.



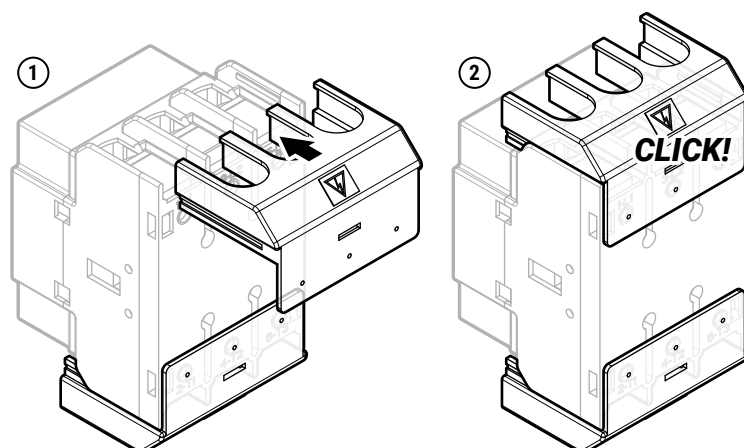
SQ010AS5R
SQ010AS6R



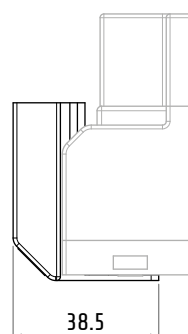
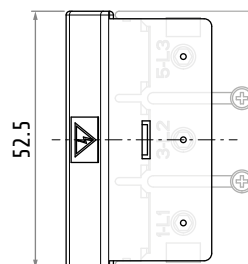
SQ010AS5R
SQ010AS6R



Terminal protection mounting

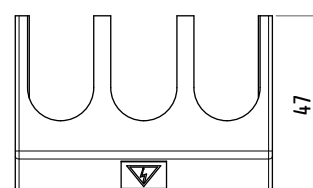


Dimensions in mm
Illustrations NOT in scale

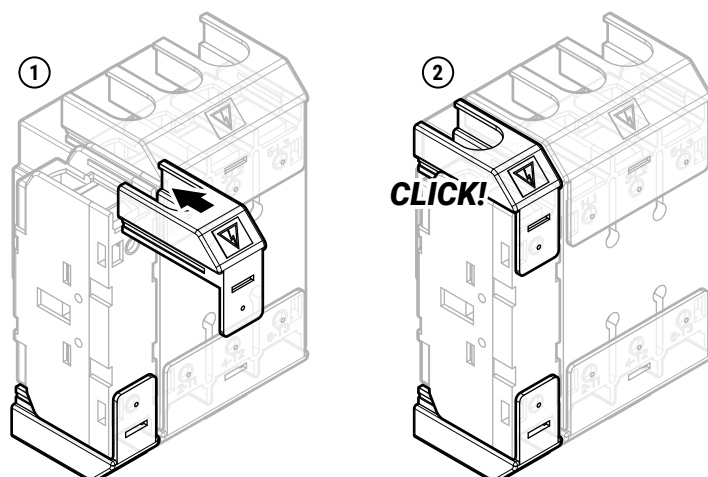


Terminal protection

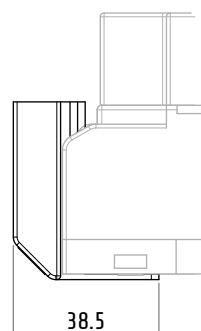
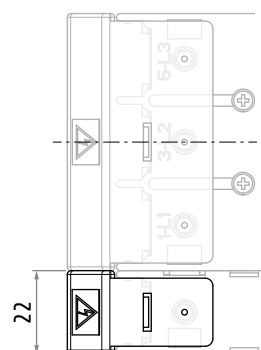
20900064



Additional poles protection mounting



Dimensions in mm
Illustrations NOT in scale



Additional poles protection

20900065

