



PLB PLBN

PENDANT STATION



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.



PLB-PLBN pendant stations are designed and manufactured according to IEC international standard and EN European regulations.



Improper installation or tampering can cause serious damage to people and property, therefore installation and maintenance must be carried out by specialized and authorized personnel.



The device is not intended for use in environments with a potentially explosive atmosphere or in the presence of corrosive substances and in salt fog.



Double-row pendant station for crane control circuits:

- Bi-directional, mechanically interlocked
- IP65 double insulation IEC / EN 60529
- Laser engraved symbols comply with EN 60204-1, FEM 9.941
- Shock proof and heat resistant
- Single speed or two speed motor
- Available in UL/CSA requirements
- Kit version available

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IMPORTANT INFORMATION

THE INFORMATION SHOWN ON THIS PAGE IS ESSENTIAL FOR THE CORRECT INTERPRETATION OF WHAT HAS BEEN EXPOSED IN THIS BOOKLET.

Symbols

The following symbols are used in this booklet:



Read carefully before use.



Information note.



ATTENTION, the information highlighted by this symbol is very important.

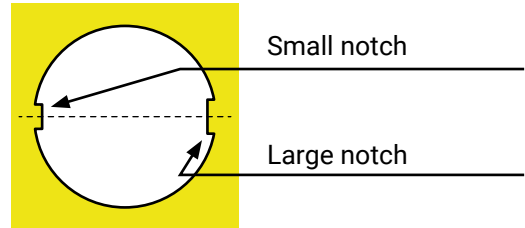


DANGER, the information highlighted by this symbol concerns environments with a potentially explosive atmosphere or the presence of corrosive substances and salt fog.



This symbol highlights the recommended tightening torques to guarantee the degree of protection of the product and to prevent it from breaking.

Orientation and type of operators



The operators' housing holes follow the diagram shown in the figure (**horizontal**).



PL...



PLN...

The push buttons are available in two versions coded as shown in the figure, thus with a **vertical** installation scheme. For the construction of a kit it is necessary to adjust the keys following the procedure "PUSH BUTTONS TRANSFORMATION FOR DOUBLE-ROW PENDANT STATIONS" on page 24. The pendant stations shown here are equipped with **PLN...** push-buttons.

Tools required (not supplied)



ATTENTION

IT IS DANGEROUS TO OPERATE THE PUSH-BUTTONS AT THE SAME TIME



Phillips screwdriver



Flathead screwdriver



Torque screwdriver with its flat and Phillips heads

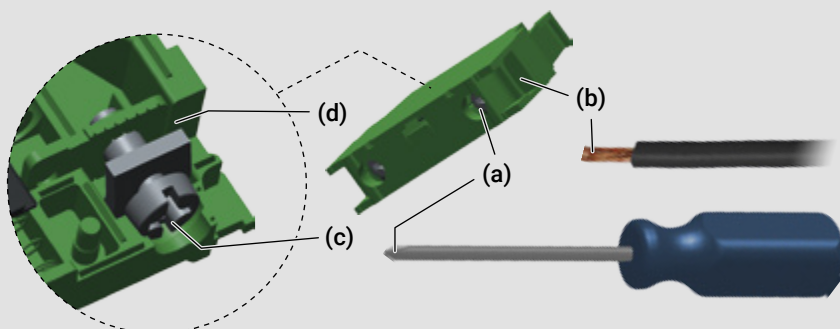


Scissors



PCF key (to be purchased separately)

Contact block with screw terminals



Loosen the screw (a) with a Phillips screwdriver and insert the end of the cable into the opening (b). Tighten the screw with a torque screwdriver to lock the end of the cable. In detail, the action on the screw (c) loosens the stop (d) and allows you to insert the end of the cable.



TIGHTENING TORQUE

0.8 N×m / 7.2 lb×in (EN60947-1)
7.5 lb×in / 0.85 N×m (UL508)

TECHNICAL CHARACTERISTICS

Pendant station technical data

Compliant to standards		IEC / EN60947-5-1
Material		ABS
Material group		II
Pollution class		3
Temperature	operating storage	-25°C ... +70°C -30°C ... +70°C
Climate resistance	IEC68 part 2-3 IEC68 part 2-30	hot damp unsettled hot damp
Cable entry		rubber cable sleeve Ø 9 ... 24 mm
Weight		530 ... 1445 g

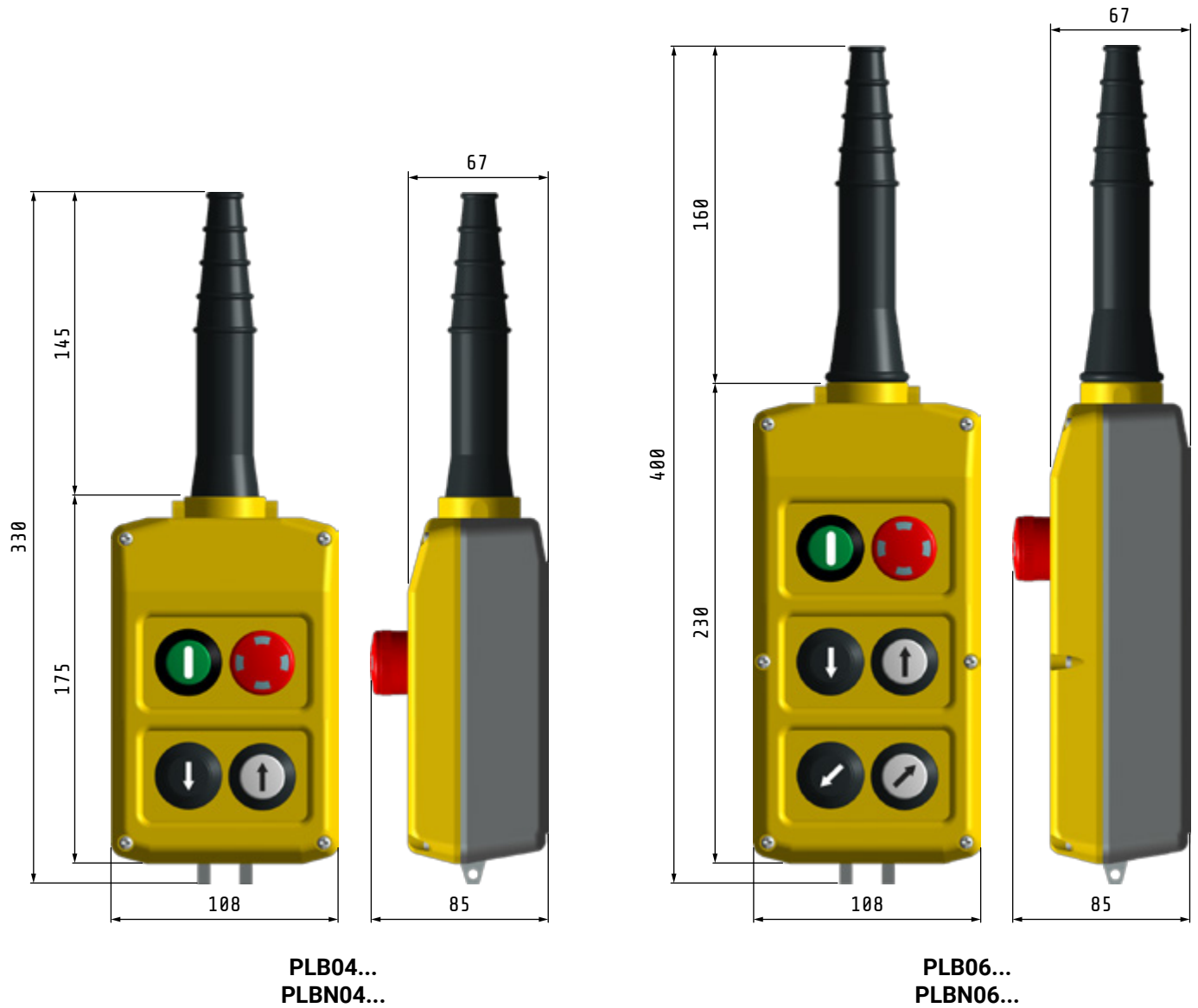
Versions

- PLB04 - PLB04D2
- PLB06 - PLB06D2 - PLB06D4
- PLB08 - PLB08D2 - PLB08D4 - PLB08D6
- PLB10
- PLB12
- PLB14
- PLBN04 - PLBN04D2
- PLBN06 - PLBN06D2 - PLBN06D4
- PLBN08 - PLBN08D2 - PLBN08D4 - PLBN08D6
- PLBN10
- PLBN12
- PLBN14

Compliance and certifications

- 2014/35/UE
- 2011/65/UE RoHS
- EN 60947-1 (2007/A1 : 2011/A2 : 2014)
- EN 60947-5-1 (2004/A1 : 2009/AC : 2004/AC : 2005
EN ISO 13850 2015)
- EN 60204-1 (2006/A1 : 2009)
- EN-ISO 13849-1 (2015)
- EN ISO 13849-2 (2012)
- EN 60529 (1991/A1 : 2000/A2 : 2013)

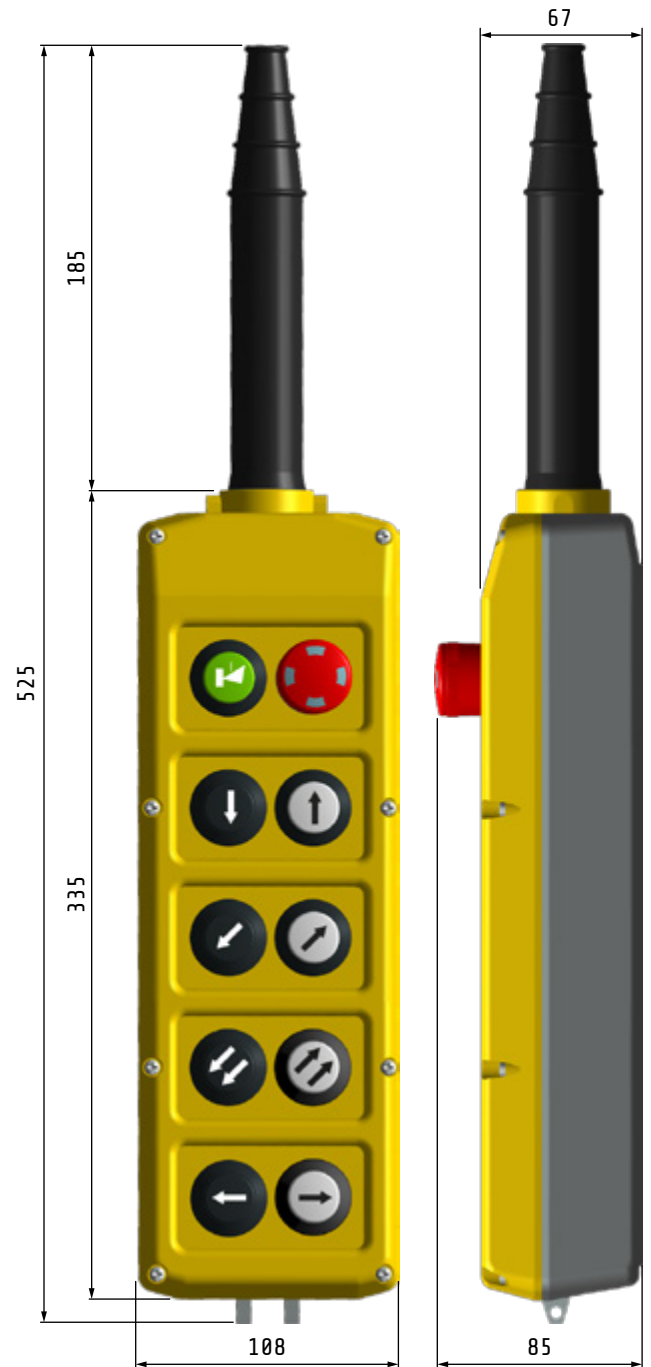
Dimensions



Dimensions in mm
Drawing NOT in scale



**PLB08...
PLBN08...**

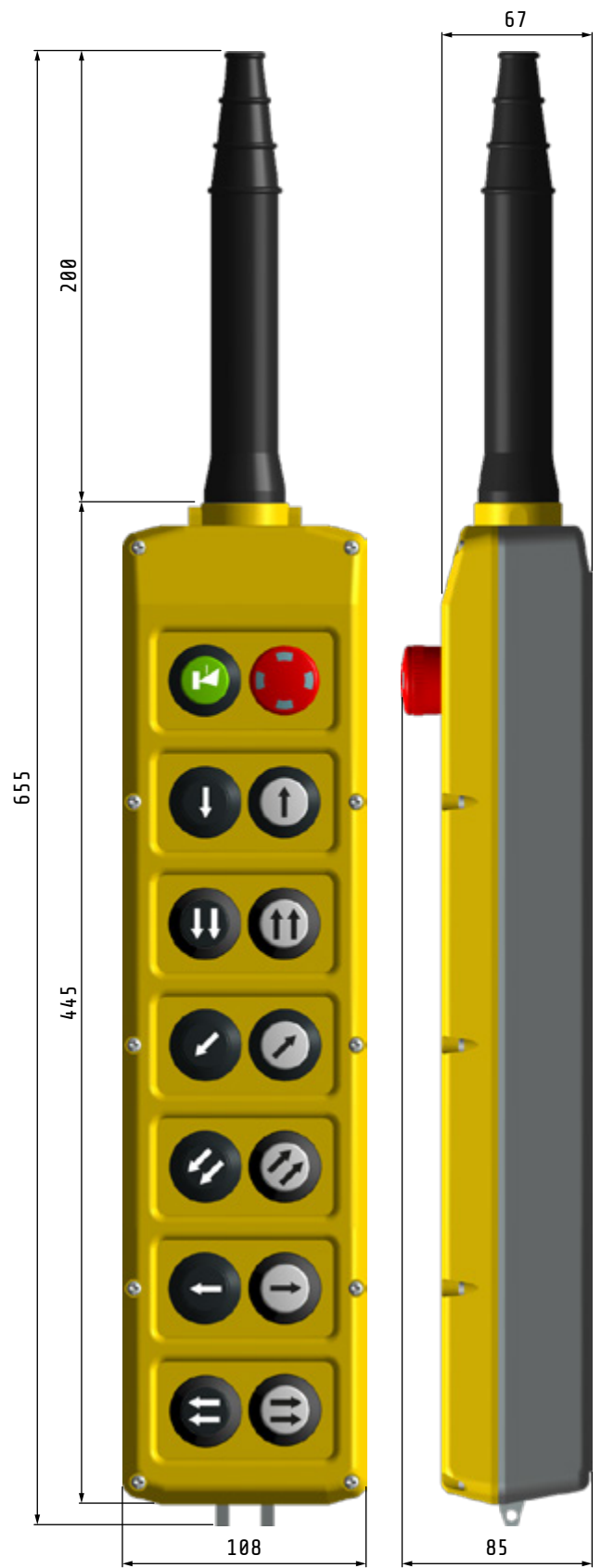


**PLB10
PLBN10**

Dimensions in mm
Drawing NOT in scale



**PLB12
PLBN12**



**PLB14
PLBN14**

Dimensioni in mm
Illustrazioni NON in scala

STANDARD VERSIONS

PLB04... - PLBN04... - PLB06... - PLBN06..

To identify the contact block combined with each push button see the section "Standard button / contact combination" on page 10.



PLB04
PLBN04

PLB04D2
PLBN04D2



PLB06
PLBN06

PLB06D2
PLBN06D2

PLB06D4
PLBN06D4

PLB08... - PLBN08...

To identify the contact block combined with each push button see the section "Standard button / contact combination" on page 10.



PLB08
PLBN08



PLB08D2
PLBN08D2



PLB08D4
PLBN08D4



PLB08D6
PLBN08D6

PLB10 - PLBN10 - PLB12 - PLBN12 - PLB14 - PLBN14

To identify the contact block combined with each push button see the section "Standard button / contact combination" on page 10.

































































PLB10
PLBN10

PLB12
PLBN12

PLB14
PLBN14

Standard button / contact combination

						
						
Single speed	Single speed	Single speed	Single speed	Single speed	Single speed	
						
PL004002 (NO) green	PL004002 (NO) green	PL004002 (NO) green	PL004002 (NO) green	PL004002 (NO) green	PL004002 (NO) green	PL004002 (NO) green
						
						
Double speed	Double speed	Double speed	Double speed	Double speed	Double speed	
						
PL004010 (NO) green	PL004010 (NO) green	PL004010 (NO) green	PL004010 (NO) green	PL004010 (NO) green	PL004010 (NO) green	PL004002 (NO) green
						
						
Single speed	Single speed	Single speed	Single speed	Single speed	Single speed	
						PL004002 (NC) red
PL004002 (NO) green	PL004002 (NO) green	PL004002 (NO) green	PL004002 (NO) green	PL004002 (NO) green	PL004002 (NO) green	

STANDARD VERSIONS WIRING



ATTENTION

The illustrations show the PLB08 / PLBN08 pendant station: the same operations are valid for the other pendant stations of this series.



ATTENTION

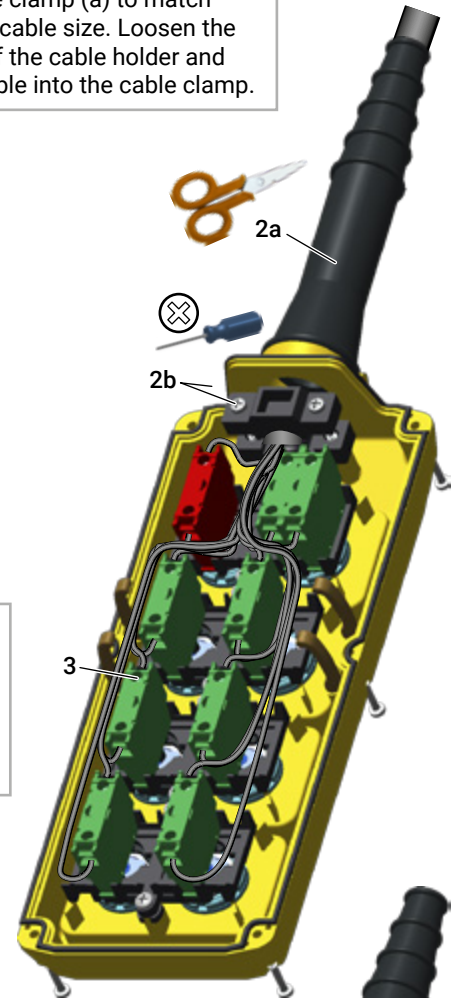
The contact blocks for the pushbutton of the other pendant station could be different. The wiring procedure does not change.

1

Loosen the screws to remove the bottom of the pendant station.

2

Cut the cable clamp (a) to match the selected cable size. Loosen the screws (b) of the cable holder and insert the cable into the cable clamp.



3

Wire the contact blocks following the procedure "Contact block with screw terminals" on page 2.



ATTENTION

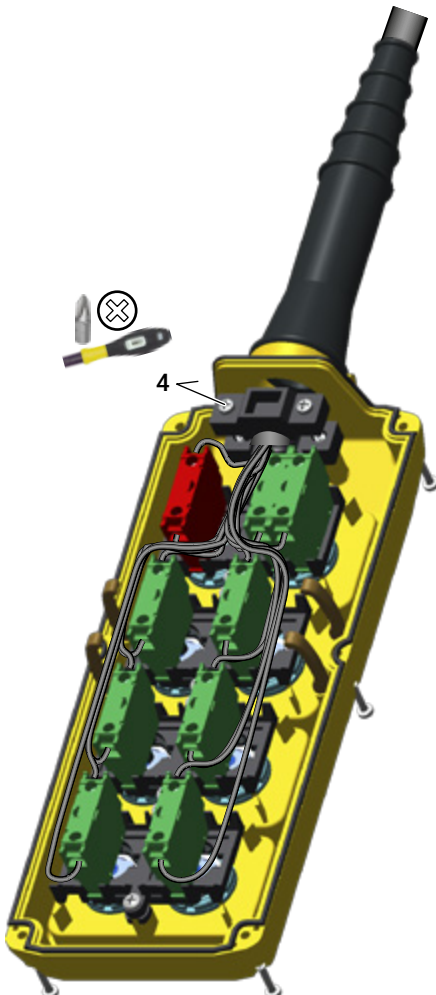
The sections that can be connected to the contact blocks are shown in the paragraph "CHARACTERISTICS OF CONTACT BLOCKS FOR STANDARD VERSIONS" on page 12.

4

Tighten the cable holder screws.



TIGHTENING TORQUE 1.2-1.4 Nxm
10.6-12.4 lbfxin



5

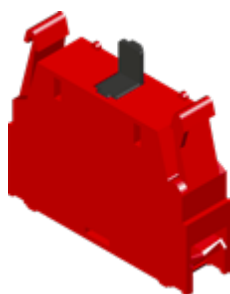
Refit the bottom of the pendant station and screw it in place.



TIGHTENING TORQUE 1.3-1.7 Nxm
11.5-15 lbfxin

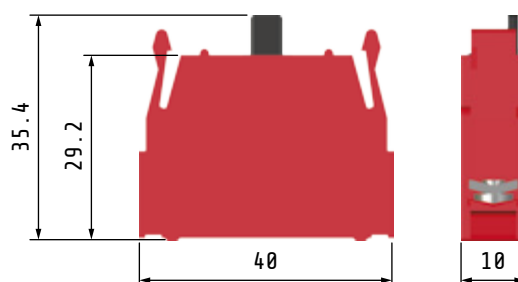
CHARACTERISTICS OF CONTACT BLOCKS FOR STANDARD VERSIONS

PL004001

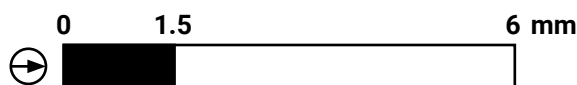


NC
Red

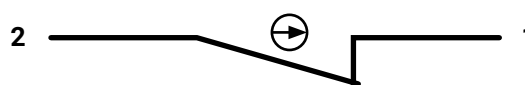
Contact block
with screw
terminals



Functions



Scheme



Rated insulation voltage	Ui	690 V *								
Rated impulse withstand voltage	Uimp	4 kV *								
Frequency		50/60 Hz *								
Rated thermal current	Ith	16 A *								
Rated operating current	Ithe	10 A								
Rated operating current		Ie								
AC-15 alternate current		24	60	120	240	400	440	500	690	V
		16*	12	8	6	4.5	3.5	3*	1	A
DC-13 direct current		24	48	60	110	220	V			
		2*	1.2	0.85	0.4	0.25*	A			
Conditional short circuit withstand current		1000 A *								
Fuses rating gG		10 A * - 500 V								
Contact insulation resistance		≤ 25 mΩ								
Switching mechanism		slow break double gap contacts								
Positive operation		NC contact block ⊖								
Operating force		4 N								
Electric durability AC-15		1	2	3	A					
		1.5	0.5	0.25	millions of cycles					
Terminal type		M3.5 screw								
Terminal capacity		No. 1 or 2 flexible and solid conductor 1... 2.5 mm ²								

UL508 characteristics

Rated insulation voltage	Ui	10 A - 600 V ac / 2.5 A - 125 V dc	
Rated impulse withstand voltage	Uimp	A600 - Q600	

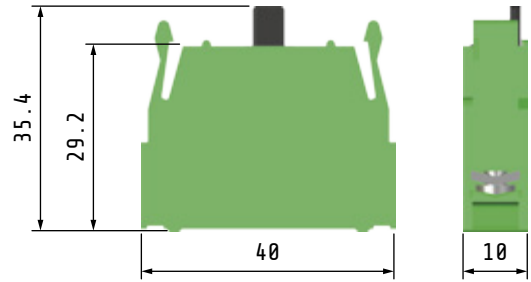
* IMQ approved values

PL004002

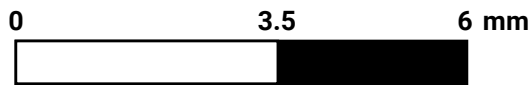


NO
Green

Contact block
with screw
terminals



Functions



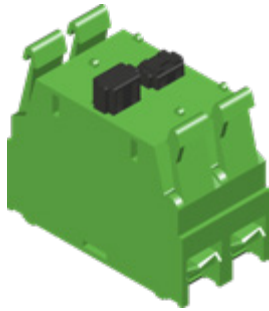
Scheme



Rated insulation voltage	Ui	690 V *								
Rated impulse withstand voltage	Uimp	4 kV *								
Frequency		50/60 Hz *								
Rated thermal current	Ith	16 A *								
Rated operating current	Ithe	10 A								
Rated operating current		Ie								
AC-15 alternate current		24	60	120	240	400	440	500	690	V
		16*	12	8	6	4.5	3.5	3*	1	A
DC-13 direct current		24	48	60	110	220	V			
		2*	1.2	0.85	0.4	0.25*	A			
Conditional short circuit withstand current		1000 A *								
Fuses rating gG		10 A * - 500 V								
Contact insulation resistance		≤ 25 mΩ								
Switching mechanism		slow break double gap contacts								
Operating force		4 N								
Electric durability AC-15		1	2	3	A					
		1.5	0.5	0.25	millions of cycles					
Terminal type		screw M3.5								
Terminal capacity		No. 1 or 2 flexible and solid conductor 1... 2.5 mm ²								
UL508 characteristics										
Rated insulation voltage	Ui	10 A - 600 V ac / 2.5 A - 125 V dc								
Rated impulse withstand voltage	Uimp	A600 - Q600								

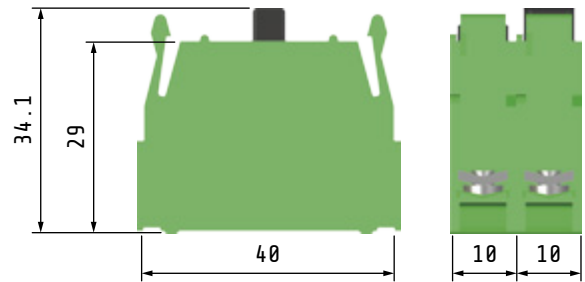
* IMQ approved values

PL004010



NO
NO
Green

Contact block
with screw
terminals



Functions		Scheme
0	3.5	6 mm
0	3.5	6 mm



Rated insulation voltage	Ui	690 V *
Rated impulse withstand voltage	Uimp	4 kV *
Frequency		50/60 Hz *
Rated thermal current	Ith	16 A *
Rated operating current	Ithe	10 A
Rated operating current		
	Ie	
AC-15 alternate current		24 60 120 240 400 440 500 690 V 16* 12 8 6 4.5 3.5 3* 1 A
DC-13 direct current		24 48 60 110 220 V 2* 1.2 0.85 0.4 0.25* A
Conditional short circuit withstand current		1000 A *
Fuses rating gG		10 A * - 500 V
Contact insulation resistance		≤ 25 mΩ
Switching mechanism	1 st speed 2 nd speed	slow break double gap contacts snap break
Operating force		4 N
Electric durability AC-15		1 2 3 A 1.5 0.5 0.25 millions of cycles
Terminal type		screw M3.5
Terminal capacity		No. 1 or 2 flexible and solid conductor 1... 2.5 mm ²
UL508 characteristics		
Rated insulation voltage	Ui	10 A - 600 V ac / 2.5 A - 125 V dc
Rated impulse withstand voltage	Uimp	A600 - Q600

* IMQ approved values

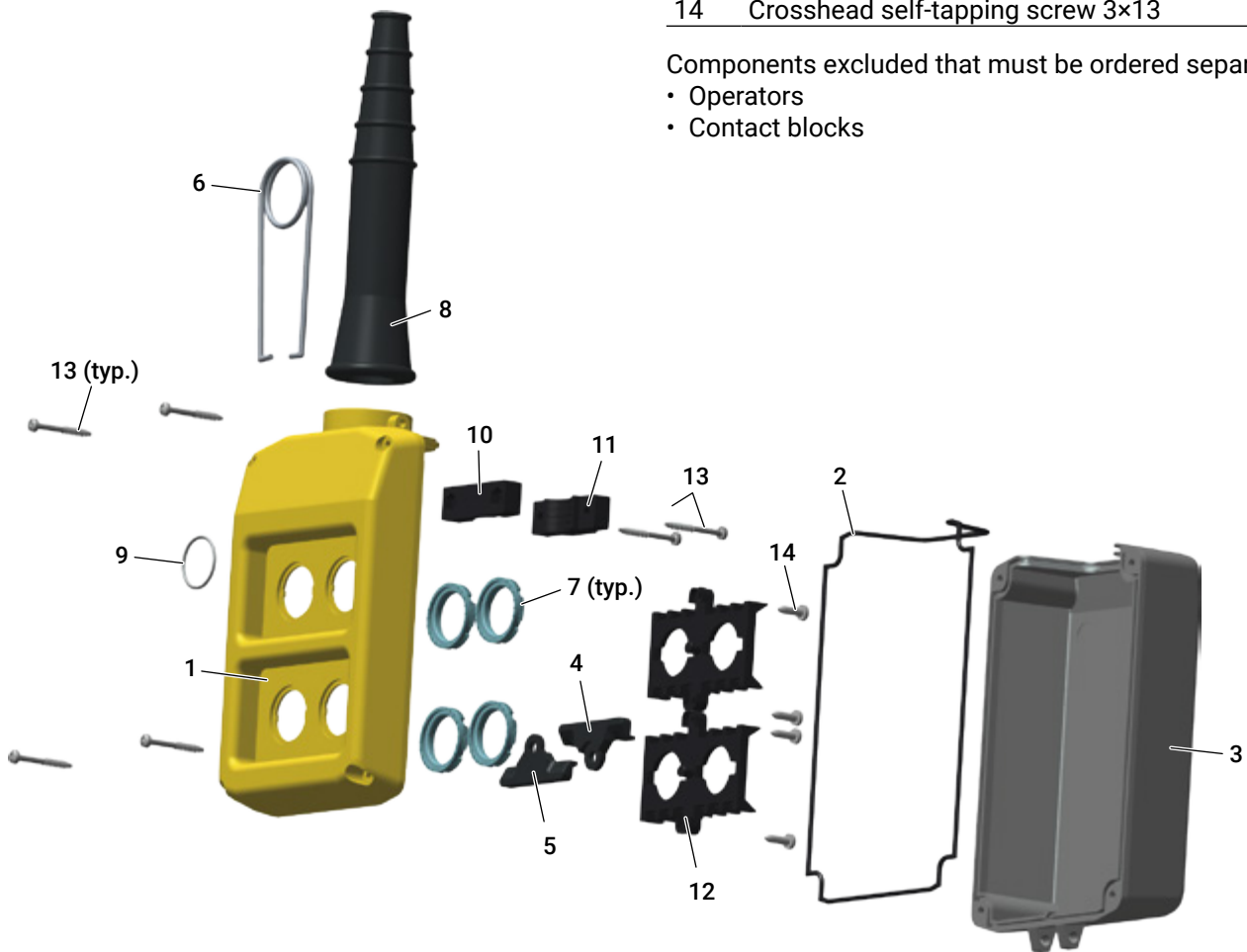
CUSTOM KIT

PLB04K

1	Double row pendant station cover	1 x
2	Rubber gasket	1 x
3	Single row pendant station base	1 x
4	Bottom mechanical interlock 16 A	1 x
5	Top mechanical interlock 16 A	1 x
6	Suspension ring	1 x
7	Threaded ring nut M22x1	4 x
8	Cable clamp	1 x
9	O-ring	1 x
10	Bottom cable holder	1 x
11	Top cable holder	1 x
12	Coupling plate with 2 holes	2 x
13	Self-tapping screw 4x30 partial thread	6 x
14	Crosshead self-tapping screw 3x13	4 x

Components excluded that must be ordered separately:

- Operators
- Contact blocks

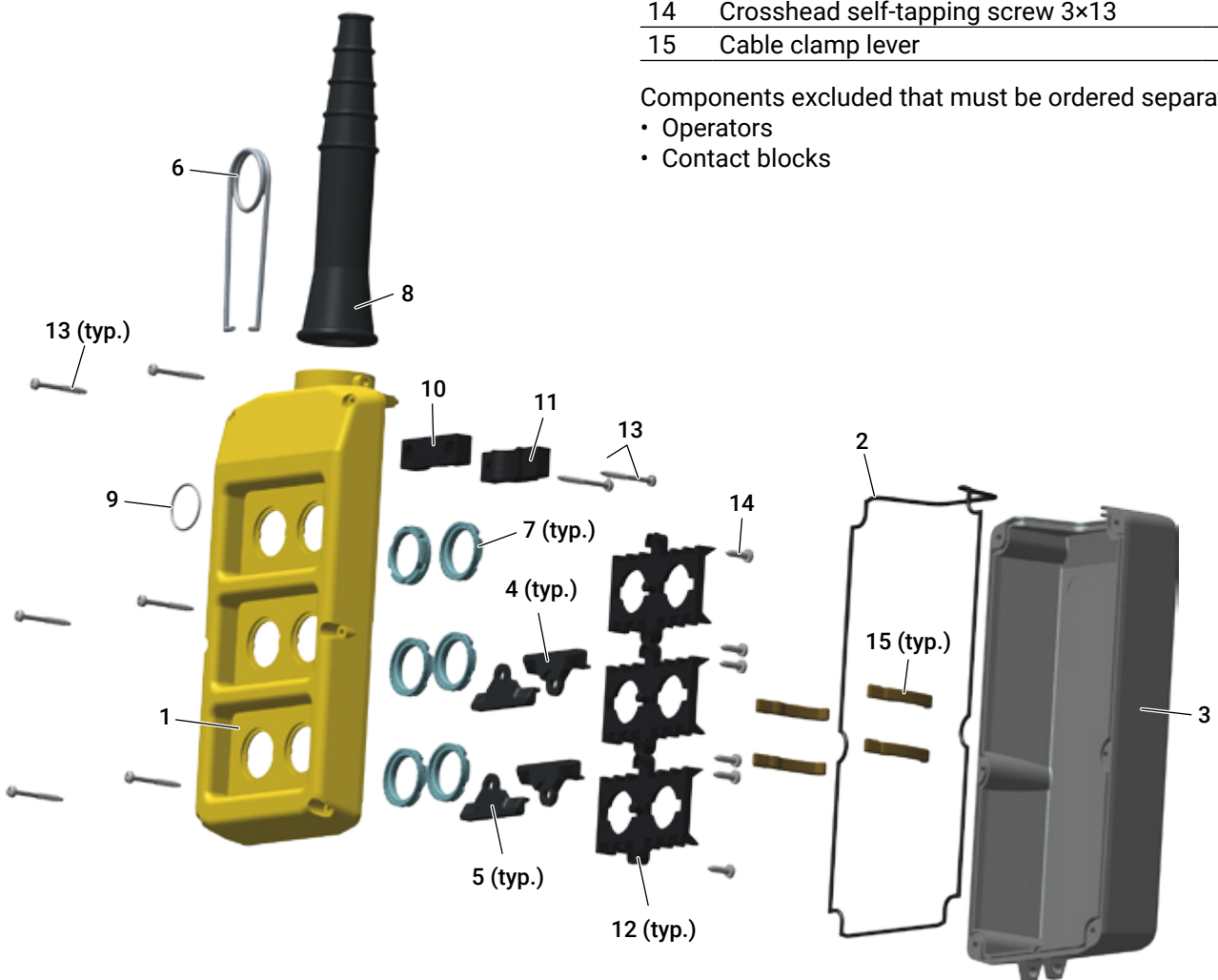


PLB06K

1	Double row pendant station cover	1 x
2	Rubber gasket	1 x
3	Single row pendant station base	1 x
4	Bottom mechanical interlock 16 A	2 x
5	Top mechanical interlock 16 A	2 x
6	Suspension ring	1 x
7	Threaded ring nut M22x1	6 x
8	Cable clamp	1 x
9	O-ring	1 x
10	Bottom cable holder	1 x
11	Top cable holder	1 x
12	Coupling plate with 2 holes	3 x
13	Self-tapping screw 4x30 partial thread	8 x
14	Crosshead self-tapping screw 3x13	6 x
15	Cable clamp lever	4 x

Components excluded that must be ordered separately:

- Operators
- Contact blocks

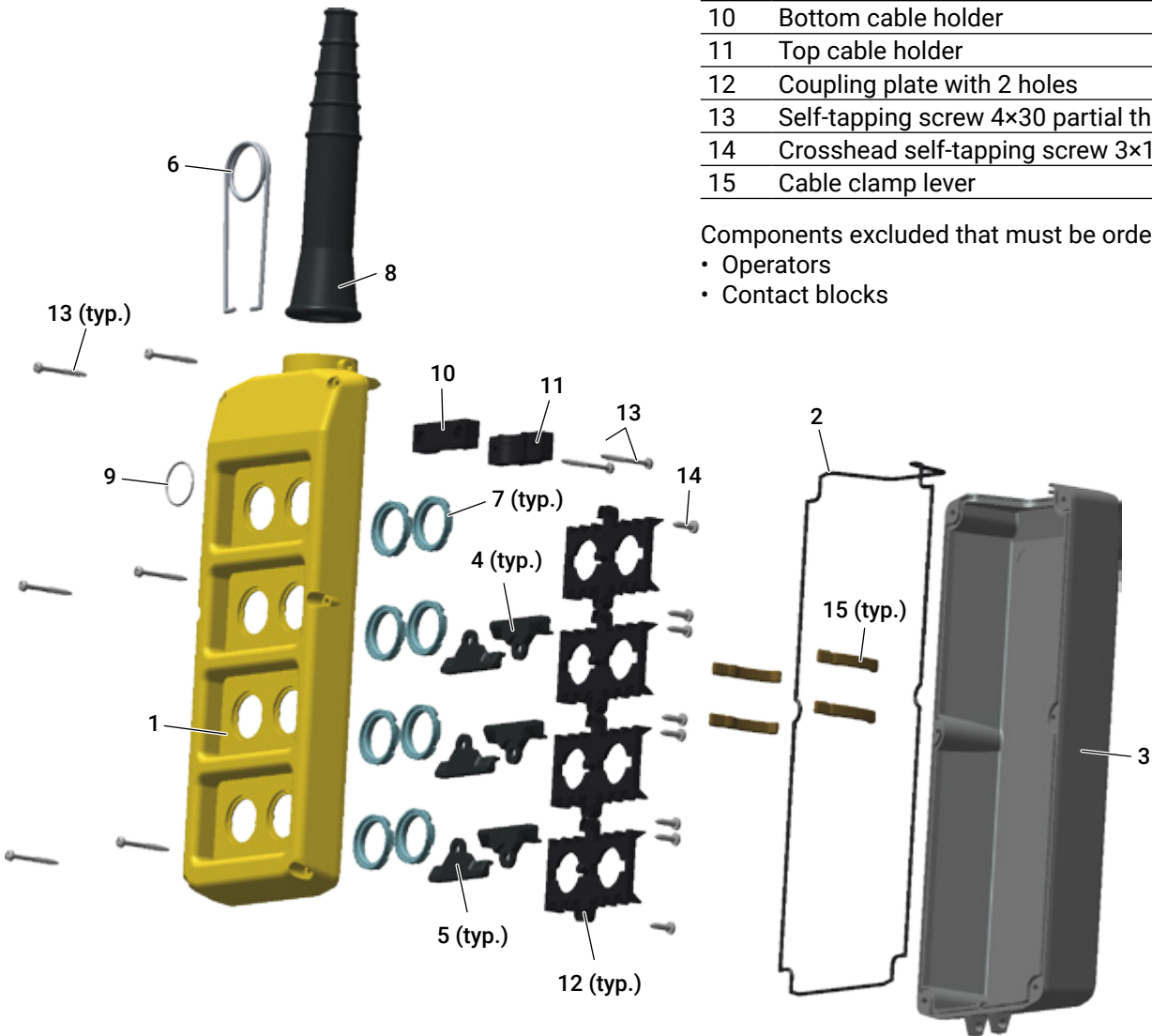


PLB08K

1	Double row pendant station cover	1 x
2	Rubber gasket	1 x
3	Single row pendant station base	1 x
4	Bottom mechanical interlock 16 A	2 x
5	Top mechanical interlock 16 A	2 x
6	Suspension ring	1 x
7	Threaded ring nut M22x1	6 x
8	Cable clamp	1 x
9	O-ring	1 x
10	Bottom cable holder	1 x
11	Top cable holder	1 x
12	Coupling plate with 2 holes	3 x
13	Self-tapping screw 4x30 partial thread	8 x
14	Crosshead self-tapping screw 3x13	6 x
15	Cable clamp lever	4 x

Components excluded that must be ordered separately:

- Operators
- Contact blocks

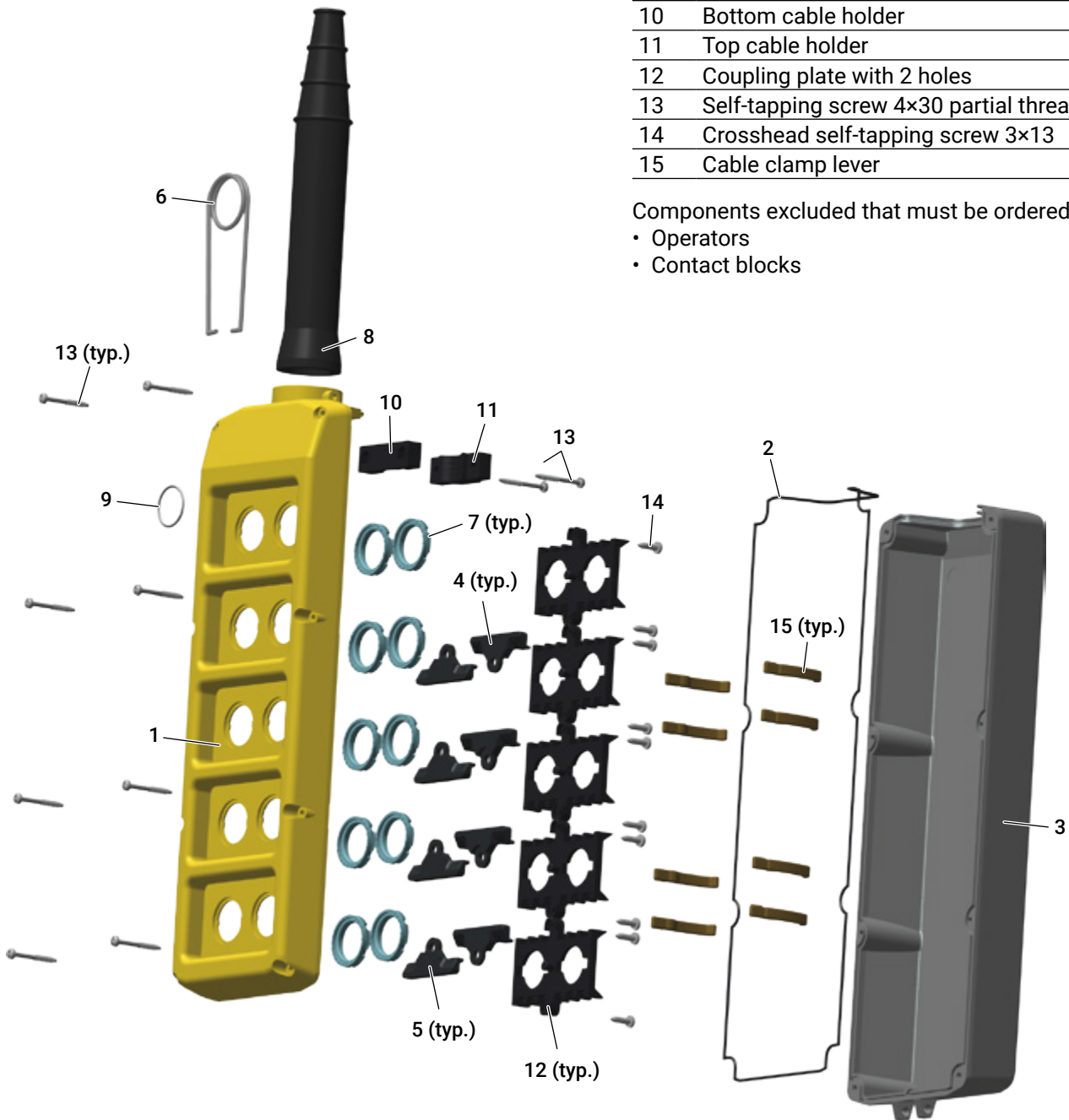


PLB10K

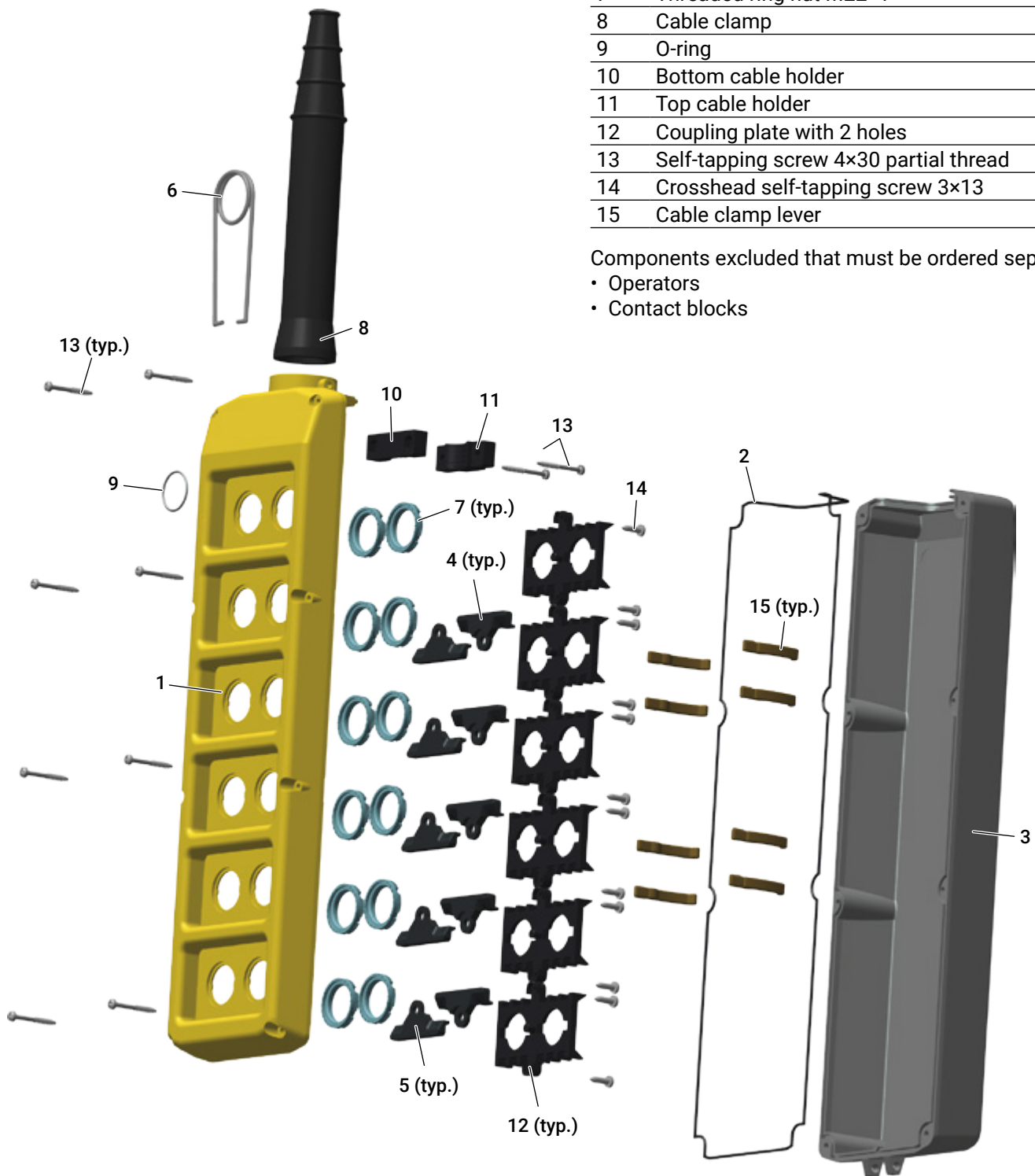
1	Double row pendant station cover	1 x
2	Rubber gasket	1 x
3	Single row pendant station base	1 x
4	Bottom mechanical interlock 16 A	2 x
5	Top mechanical interlock 16 A	2 x
6	Suspension ring	1 x
7	Threaded ring nut M22x1	6 x
8	Cable clamp	1 x
9	O-ring	1 x
10	Bottom cable holder	1 x
11	Top cable holder	1 x
12	Coupling plate with 2 holes	3 x
13	Self-tapping screw 4x30 partial thread	8 x
14	Crosshead self-tapping screw 3x13	6 x
15	Cable clamp lever	4 x

Components excluded that must be ordered separately:

- Operators
- Contact blocks



PLB12K

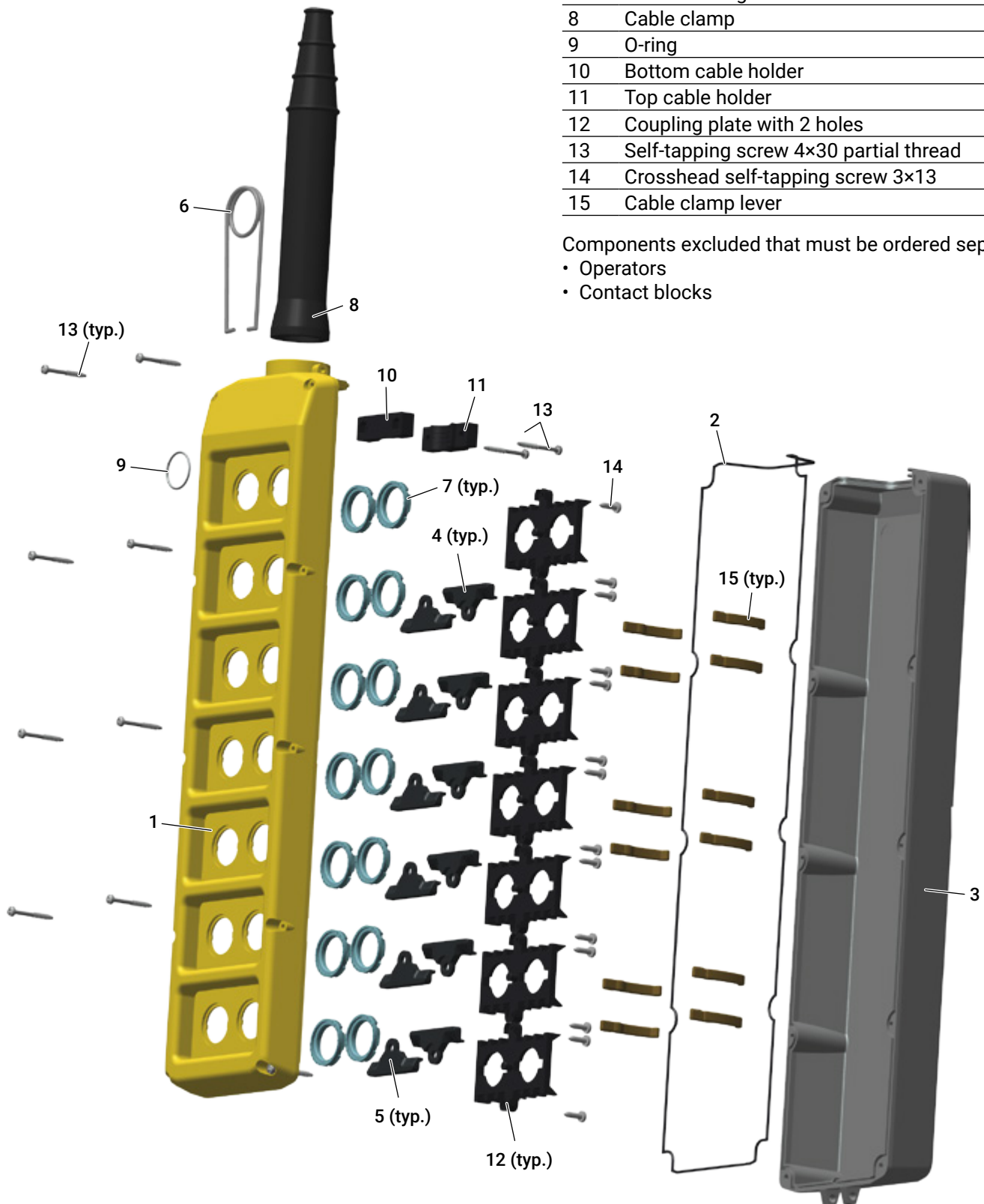


1	Double row pendant station cover	1 ×
2	Rubber gasket	1 ×
3	Single row pendant station base	1 ×
4	Bottom mechanical interlock 16 A	2 ×
5	Top mechanical interlock 16 A	2 ×
6	Suspension ring	1 ×
7	Threaded ring nut M22×1	6 ×
8	Cable clamp	1 ×
9	O-ring	1 ×
10	Bottom cable holder	1 ×
11	Top cable holder	1 ×
12	Coupling plate with 2 holes	3 ×
13	Self-tapping screw 4×30 partial thread	8 ×
14	Crosshead self-tapping screw 3×13	6 ×
15	Cable clamp lever	4 ×

Components excluded that must be ordered separately:

- Operators
- Contact blocks

PLB14K



1	Double row pendant station cover	1 ×
2	Rubber gasket	1 ×
3	Single row pendant station base	1 ×
4	Bottom mechanical interlock 16 A	2 ×
5	Top mechanical interlock 16 A	2 ×
6	Suspension ring	1 ×
7	Threaded ring nut M22×1	6 ×
8	Cable clamp	1 ×
9	O-ring	1 ×
10	Bottom cable holder	1 ×
11	Top cable holder	1 ×
12	Coupling plate with 2 holes	3 ×
13	Self-tapping screw 4×30 partial thread	8 ×
14	Crosshead self-tapping screw 3×13	6 ×
15	Cable clamp lever	4 ×

Components excluded that must be ordered separately:

- Operators
- Contact blocks

OPERATORS FOR CUSTOM KIT

Operators without wording (code PL...)

Pair with the contact block with the matching label

A



PL005019



PL005004



PL005020



PL005005



PL005031



PL005016



PL005027



PL005012



PL005028



PL005013



PL005032



PL005017



PL005023



PL005008



PL005024



PL005009



PL005033



PL005018



PL005001



PL005002



PL005003

Symbols according to FEM 9.941. Customized engraving available on minimum quantity request.

Double speed operators (code PL...)

Pair with the contact block with the matching label

C



PL005021



PL005006



PL005025



PL005010



PL005029



PL005014

Symbols according to FEM 9.941. Customized engraving available on minimum quantity request.

Operators without wording (code PLN...)

Pair with the contact block with the matching label

A



Double speed operators (code PLN...)

Pair with the contact block with the matching label

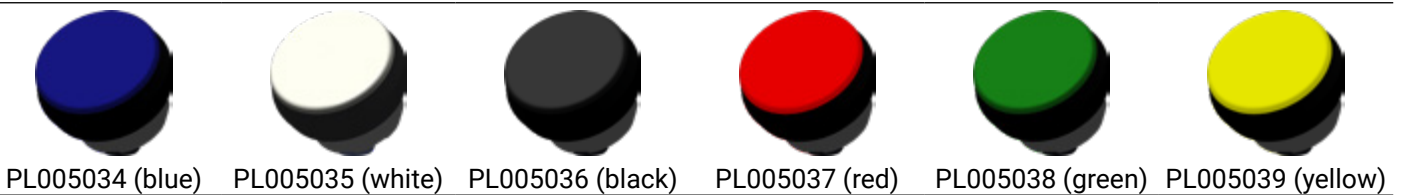
C



Neutral operators (code PL...)

Pair with the contact block with the matching label

A



Neutral operators (code PLN...)

Pair with the contact block with the matching label

A



Gems

Pair with the contact block with the matching label

B



PL008001 (red)



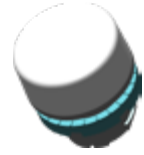
PL008002 (green)



PL008003 (yellow)



PL008004 (blue)



PL008005 (white)

Mushrooms and selectors

Pair with the contact block with the matching label

A

Emergency mushroom Ø40 momentary



PL013003

Emergency mushroom Ø40 key unlock



PPFN1C4NX

Emergency mushroom Ø30 rotation unlock



PL013001 with vision

Emergency mushroom Ø30 rotation unlock



PL013002 standard

Handle selector



PL007001 0-1 / 90°
PL007002 1-0-2 / 45°
PL007003 1>0<2 / 45°

Handle selector with removable key in "0"



PL006001 0-1 / 90°
PL006002 1-0-2 / 45°
PL006004 1>0<2 / 45°

Other components

/

Hole plug



PL015001

Fixing key

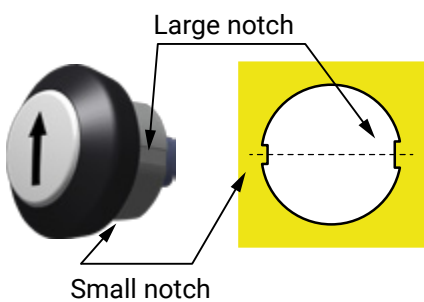
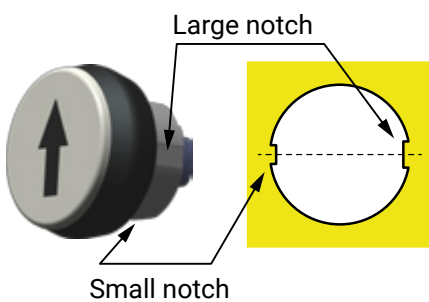
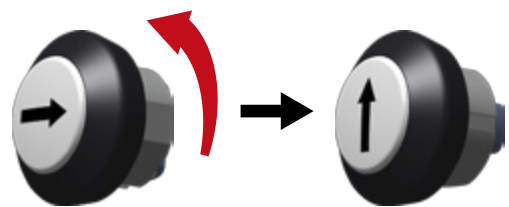
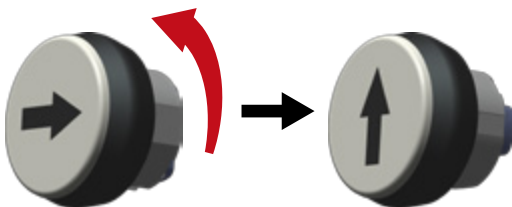
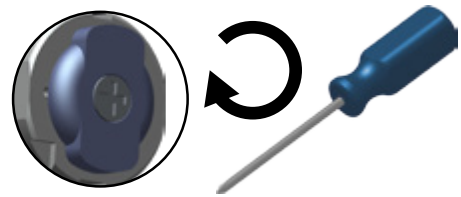
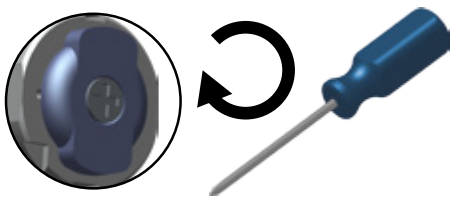
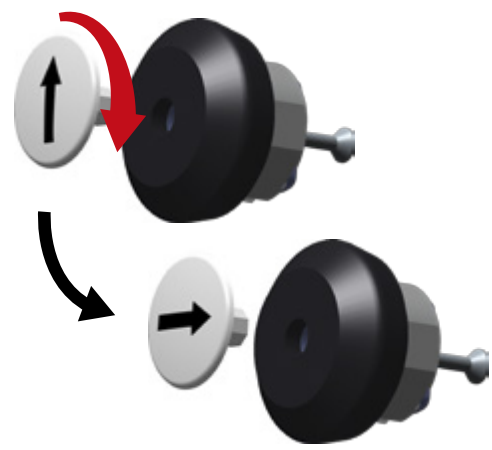
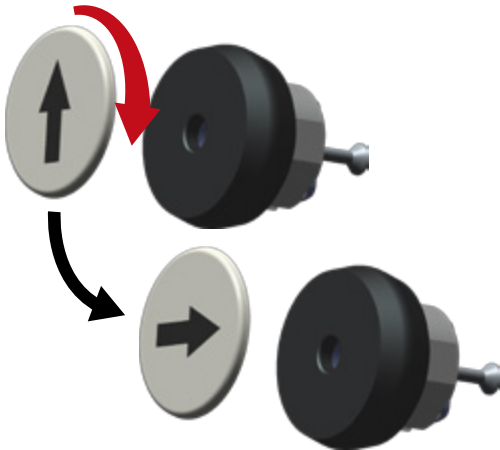
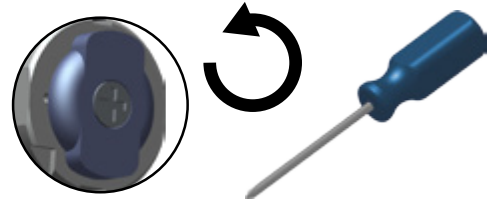
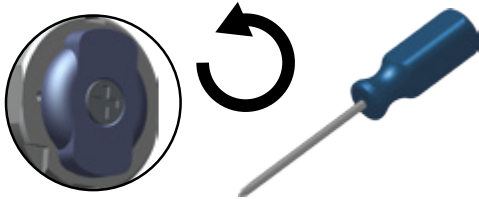
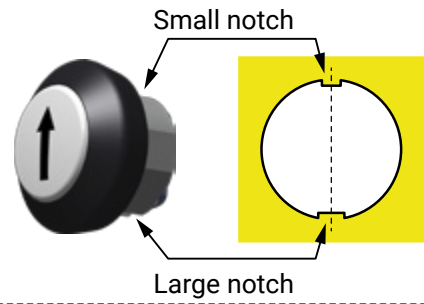
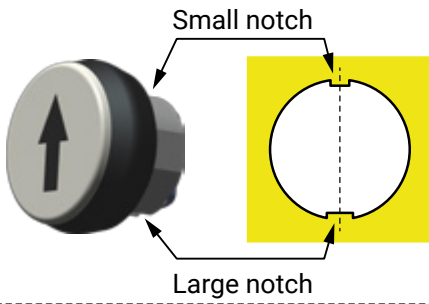


PCF

PUSH BUTTONS TRANSFORMATION FOR DOUBLE-ROW PENDANT STATIONS

Push buttons PL...

Push buttons PLN...



CONTACT BLOCK FOR CUSTOM KIT

Contact blocks

Pair with the operator
with the matching label

A



NC
PL004001



NO
PL004002

Lights

Pair with the operator
with the matching label

B



PL0045L12 (AC/DC 12 V)
PL0045L24 (AC/DC 24 V)
PL0045L48 (AC/DC 48 V)
PL0045L110 (AC/DC 110 V)
PL0045L220 (AC 220 V)



PL004007

Contact blocks

Pair with the operator
with the matching label

C

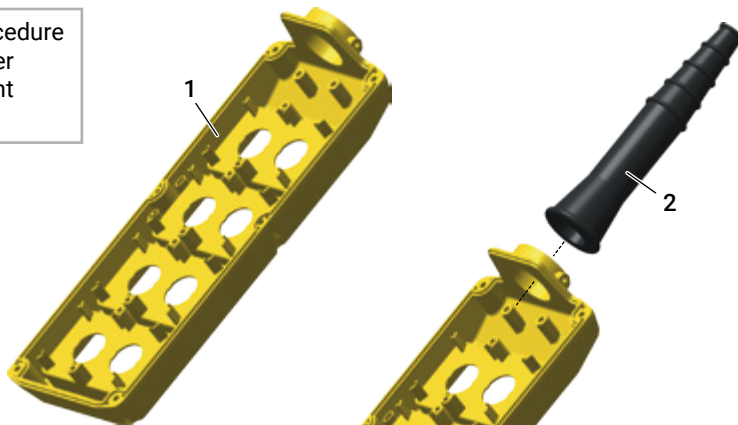


double step NO+NO
PL004010

CUSTOM PENDANT STATION ASSEMBLY

Cable clamp and cable holder

- 1** Start the procedure from the cover of the pendant station.



- 2** Insert the cable clamp in the hole.

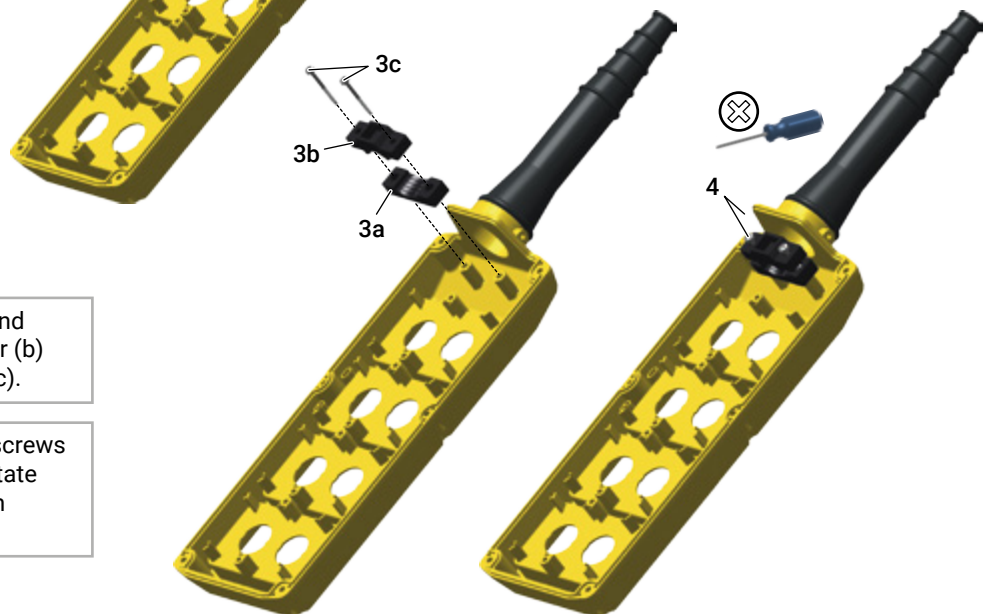
⚠ ATTENTION
Place carefully the cable clamp to ensure the seal of the panel.



ATTENTION
The illustrations show the PLB08 / PLBN08 pendant station: the same operations are valid for the other pendant stations of this series.

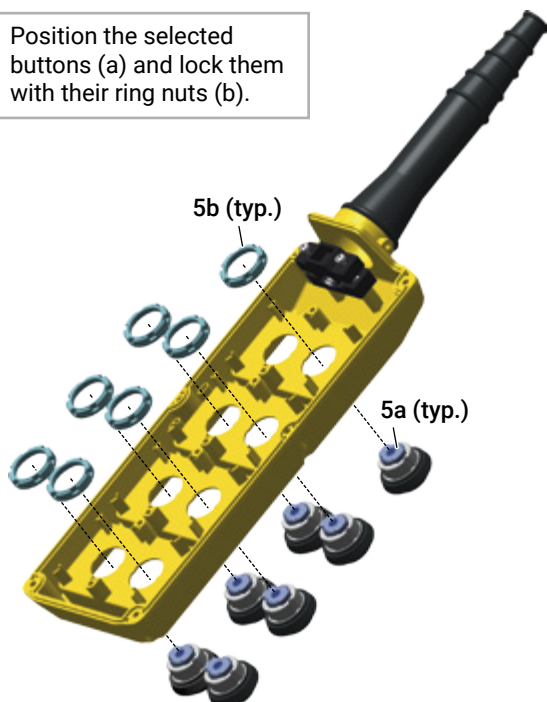
- 3** Mount the top (a) and bottom cable holder (b) with the 2 screws (c).

- 4** Do not tighten the screws completely to facilitate the wiring operation (optional).



Operators

- 5** Position the selected buttons (a) and lock them with their ring nuts (b).



- 6** Tighten the ring nuts with the PCF key.



TIGHTENING TORQUE
2.25-2.8 N×m
20-25 lb×in

7 Position the mushroom operator (a) interposing the o-ring (b) and lock it with the ring nut (c).



8 Tighten the ring nut with the PCF key.



TIGHTENING TORQUE
2.25-2.8 N×m
20-25 lb×in

Coupling plates and cable clamp levers

9 Place the top mechanical interlock (a), the bottom mechanical interlock (b), the coupling plates (c) and the fixing screws (d).



10 Tighten the fixing screws.



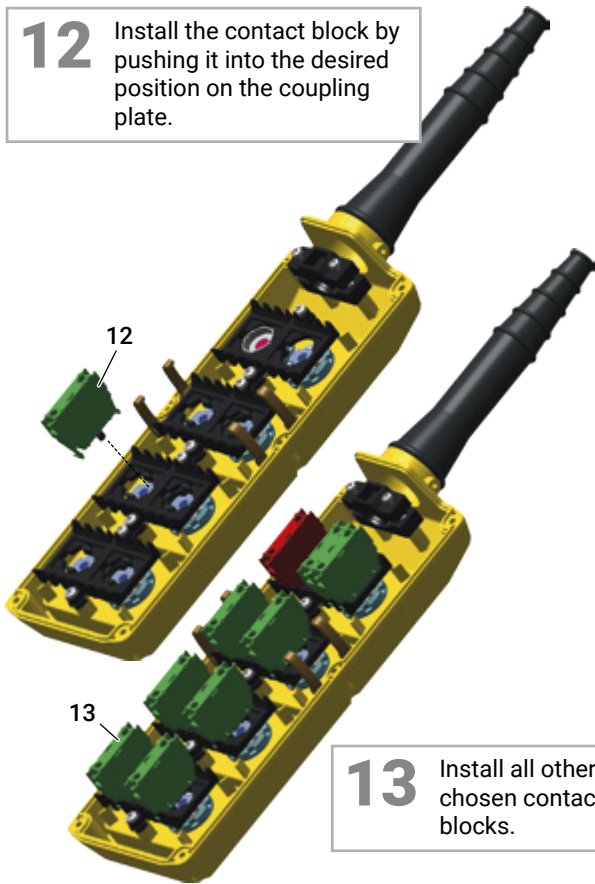
TIGHTENING TORQUE
1.4-1.6 N×m
12.4-14 lb×in

11 Insert the cable-holder rods in their respective seats.



Contact blocks

12 Install the contact block by pushing it into the desired position on the coupling plate.

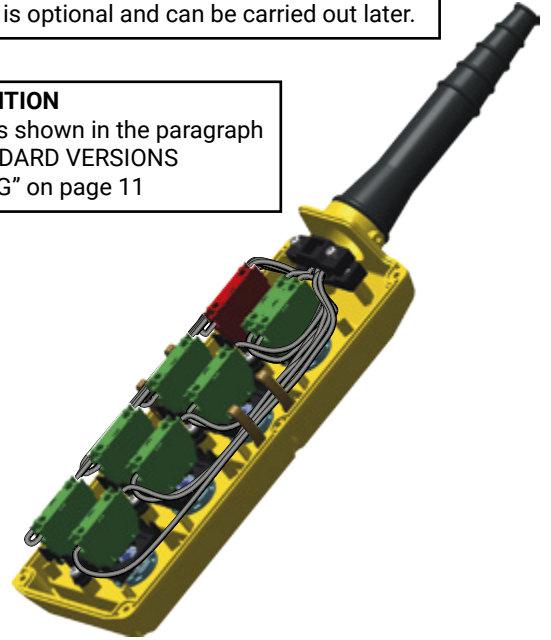


13 Install all other chosen contact blocks.

Cablaggio

ATTENTION
Wiring is optional and can be carried out later.

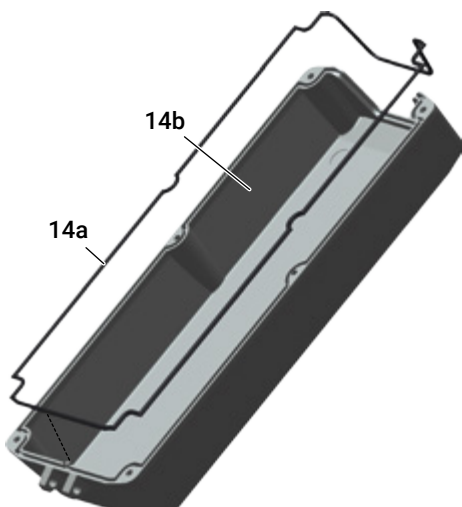
ATTENTION
Wire as shown in the paragraph "STANDARD VERSIONS WIRING" on page 11



ATTENTION
The sections that can be connected to the contact blocks are shown in the paragraph "CHARACTERISTICS OF CONTACT BLOCKS FOR STANDARD VERSIONS" on page 12 e nel paragrafo "CHARACTERISTICS OF ADDITIONAL CONTACT BLOCKS" on page 29

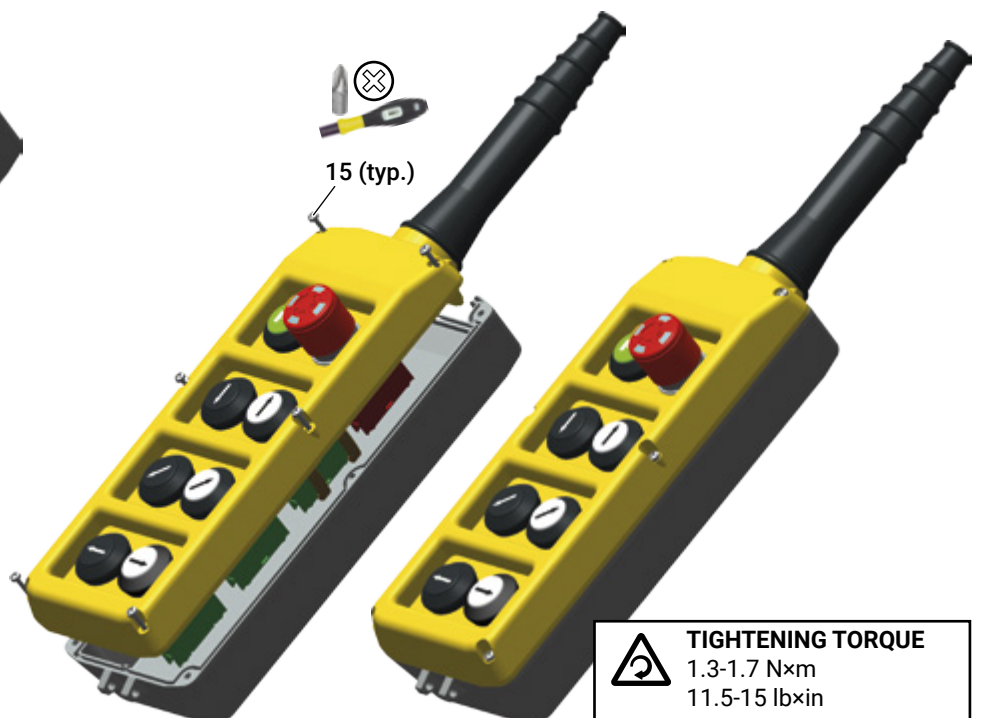
Close the pendant station

14 Place the sealing gasket (a) into the groove (b).



ATTENTION
Carefully position the sealing gasket to ensure tightness.

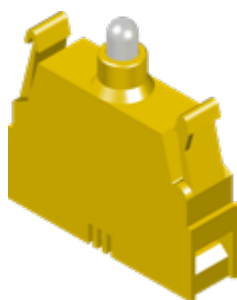
15 Position the cover of the pendant station and tighten the fixing screws.



TIGHTENING TORQUE
1.3-1.7 N×m
11.5-15 lb×in

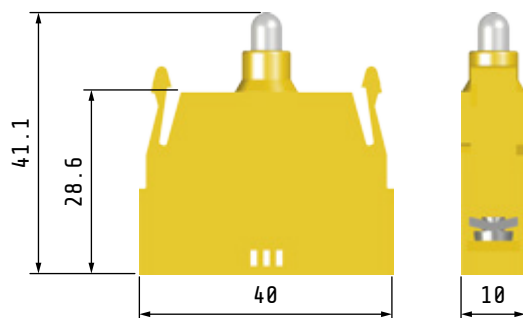
CHARACTERISTICS OF ADDITIONAL CONTACT BLOCKS

PL0045L...



Yellow

Contact block with screw terminals



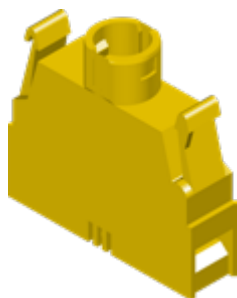
Scheme



Power supply

PL0045L12	AC/DC 12 V
PL0045L24	AC/DC 24 V
PL0045L48	AC/DC 48 V
PL0045L110	AC/DC 110 V
PL0045L220	AC 220 V

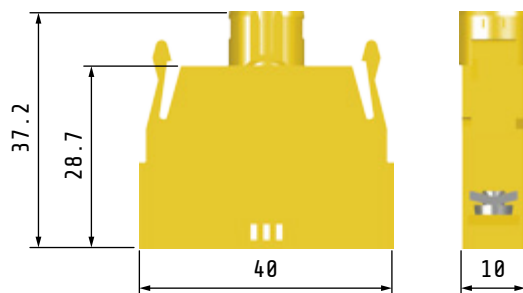
PL004007



Yellow

Contact block with screw terminals

Light bulb non included



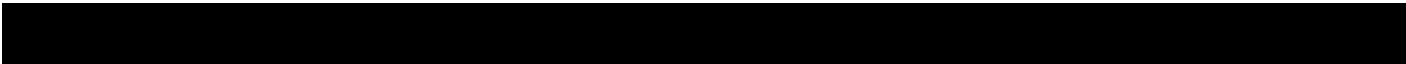
Scheme



Connection		BA9s
Power supply	max	400 V
Absorbed power	max	2.4 W



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A series of horizontal dashed lines spanning the width of the page, providing a template for writing or drawing.

