






MOBILE-PENDANT FIXING (with WALL BRACKET accessories) WALL FIXING



Characteristics:

- Compact and modern design
- Bi-directional, mechanically interlocked
- IP 65 double insulation IEC/EN60529
- Laser engraved symbols comply with EN60204-1, FEM 9.941
- Contact block with spring cage terminal
- Shock proof and heat resistant
- Mobile-Pendant (with wall bracket accessories) or wall fixed mounting

CODE	TLP1.EPP	TLP1.ESR	TLP2	TLP3.B	TLP3.D	TLP4.E	TLP4.C
weight [gr.]	120	120	200	255	255	314	314
N° push button	1	1	2	3	3	4	4
L lenght [mm]	80	80	115	150	150	185	185
LAYOUT	push pull	twist release					
DIMENSIONS							

General characteristics		P02 – P03 – HP03 – PL – PLB – TLP							DC30		
In conformity to standards		IEC / EN60947-5-1							IEC / EN60947-3		
Material		P02	P03	HP03	PL	PLB	TLP	ABS			
		PP	ABS	ABS	ABS	ABS	PP				
Material group		II							II		
Pollution class		3							3		
Climate temperature	operating	-25°C + 70°C							-25°C + 70°C		
	storage	-30°C + 70°C							-30°C + 70°C		
Climate resistance	IEC68 part 2-3	hot damp							hot damp		
	IEC68 part 2-30	unsettled hot damp							unsettled hot damp		
Cable entry		<ul style="list-style-type: none"> ▪ P02 – P03: rubber cable sleeve Ø7...18mm ▪ PL – PLB: rubber cable sleeve Ø9...24mm ▪ HP03: spiral cable gland M20 – TLP: cable gland M20 							cable gland M25		
Electrical characteristics contact blocks		P02 – P03 – HP03 – PL – PLB – TLP							DC30		
Markings											
Rated insulation voltage [Ui]		690V							500V		
Rated thermal current [Ith]		16A							25A		
Rated impulse withstand voltage [Uimp]		4kV							4kV		
Frequency		50Hz – 50/60 Hz type PCW (HP03-TLP)							50Hz		
Rated operating current [Ie]											
AC-15 alternate current	type: PL004.. P02/P03/DC30 e-stop/PL/PLB	(V)	24	60	110	240	400	440	500	690	
		(A)	16	12	8	6	4	3.5	3	1	-
		(A)	10	8	6	5	4	4	4	2	-
DC-13 direct current	type: PL004.. P02/P03/DC30 e-stop/PL/PLB	(V)	24	48	60	110	220	250			
		(A)	2	1.2	0.85	0.4	0.25	-			-
		(A)	2	2	1	0.4	-	0.4			-
AC-3 alternate current	1phase-2poles 230V-400V								2.2kW		
	3phase-3poles 230V-400V								3kW		
Conditional short circuit withstand current		1000A							1000A		
Fuse rating		gG 10A - 500V							aM 12A - 500V		
Contact insulation resistance		≤ 25mΩ							-		
Switching mechanism	type: PL004.. P02/P03/DC30 e-stop/PL/PLB	slow break double gap contacts single pad							slow break double gap contacts single pad		
	type: PCW.. HP03-TLP	slow break double gap contacts three pads									
Positive operation		NC contact block 							-		
Terminal type	type: PL004.. P02/P03/DC30 e-stop/PL/PLB	M3.5 screw							M3.5 screw		
	type: PCW.. HP03-TLP	spring cage terminal									
Terminal capacity	type: PL004.. P02/P03/DC30 e-stop/PL/PLB	No. 1 or 2 flexible and solid conductor min 1 max 2.5 mm ²							No. 1 or 2 flexible and solid conductor min 1 max 2.5 mm ²		
	type: PCW.. HP03-TLP	No. 1 or 2 flexible and solid conductor min 0.5 max 2.5 mm ²									
UL508 characteristics											
General use	600V ac	16A							-		
Designation code (HD) Heavy Duty		A600-Q600							-		

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.

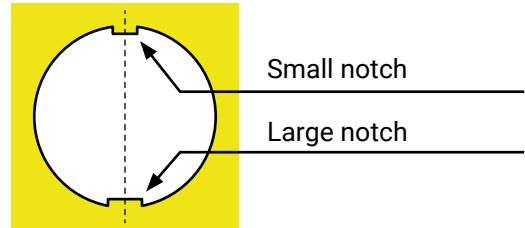


DANGER, the information highlighted by this symbol concerns environments with a potentially explosive atmosphere or the presence of corrosive substances and salt fog.



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 (**vertical**).



ATTENTION

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

Tools required (not supplied)



Phillips screwdriver



Flathead screwdriver



Torque screwdriver with its flat and Phillips heads



Scissors

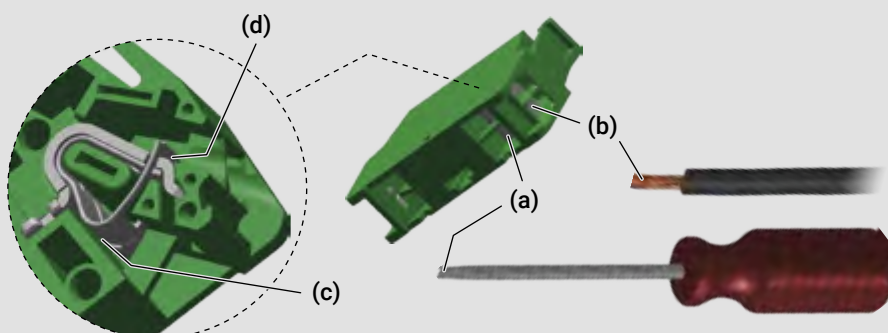


PCF key (to be purchased separately)



Wrench 33 mm

Contact block with spring terminals



Insert the flathead screwdriver into the opening (a) and turn it half a turn. Insert the end of the cable into the opening (b) and remove the screwdriver to lock the end of the cable. In detail, the mechanical action of the screwdriver on (c) opens (d) and allows to insert the end of the cable.

TECHNICAL CARACTERISTICS

Pendant station technical data

Compliant to standards		IEC / EN60947-5-1
Material		PP
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		cable gland M20
Weight		120 ... 314 g

Versions

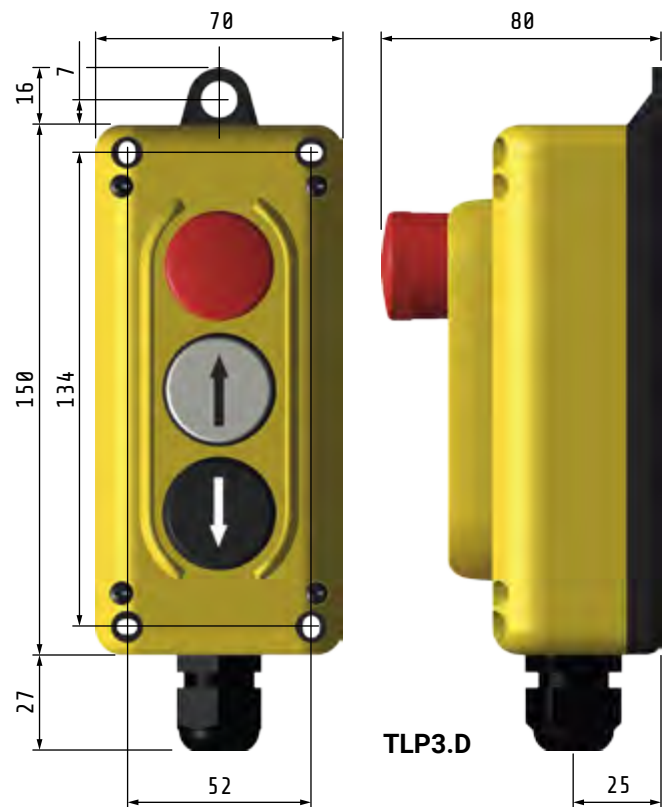
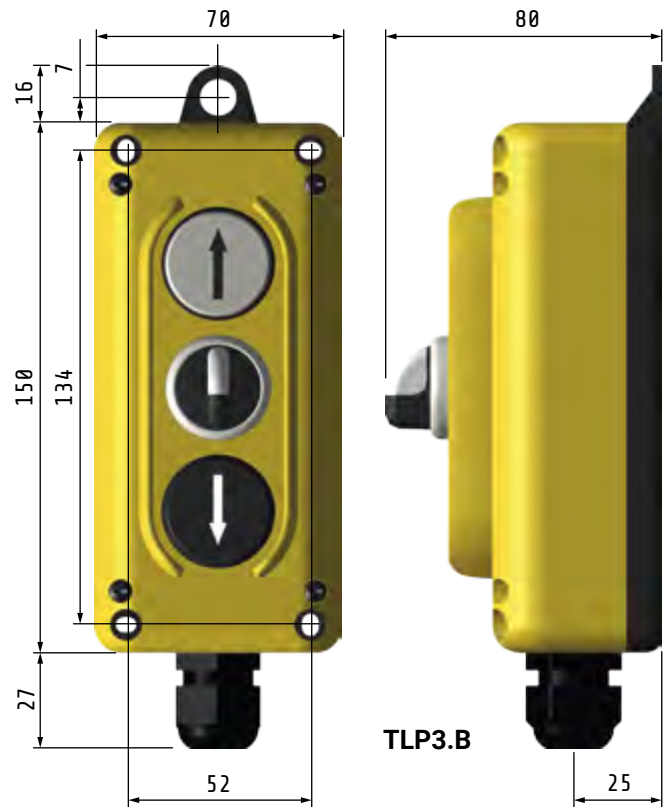
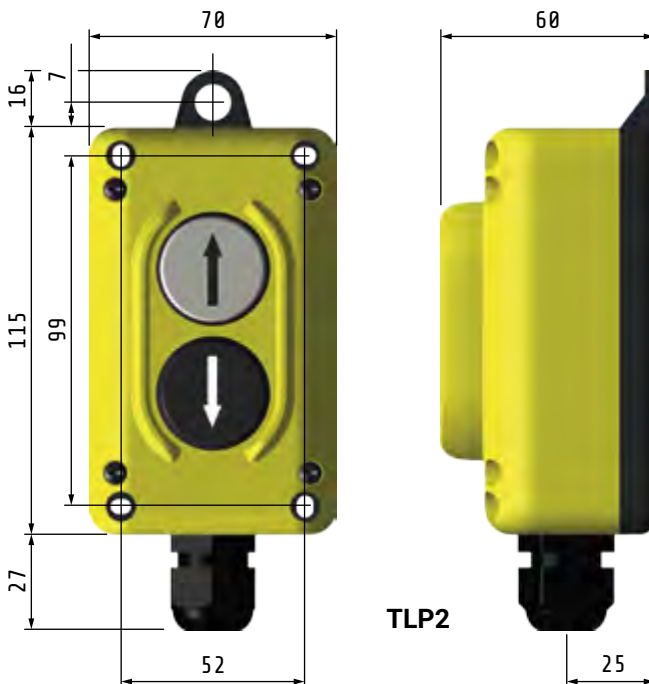
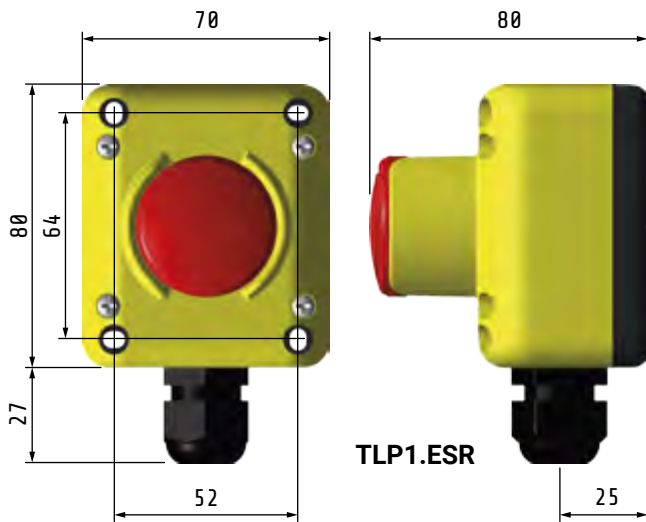
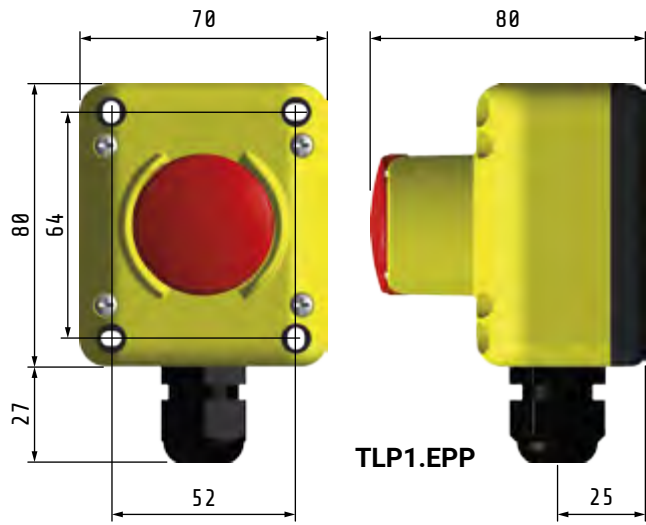
- TLP1.EPP - TLP1.ESR
- TLP2
- TLP3.B - TLP3.D
- TLP4.E - TLP4.C

Compliance and certifications

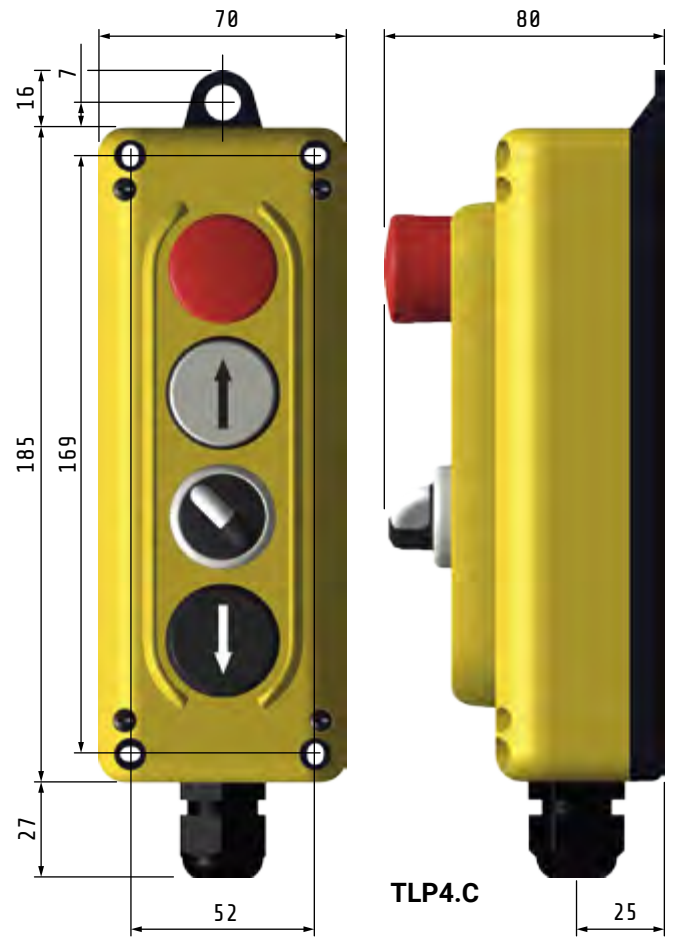
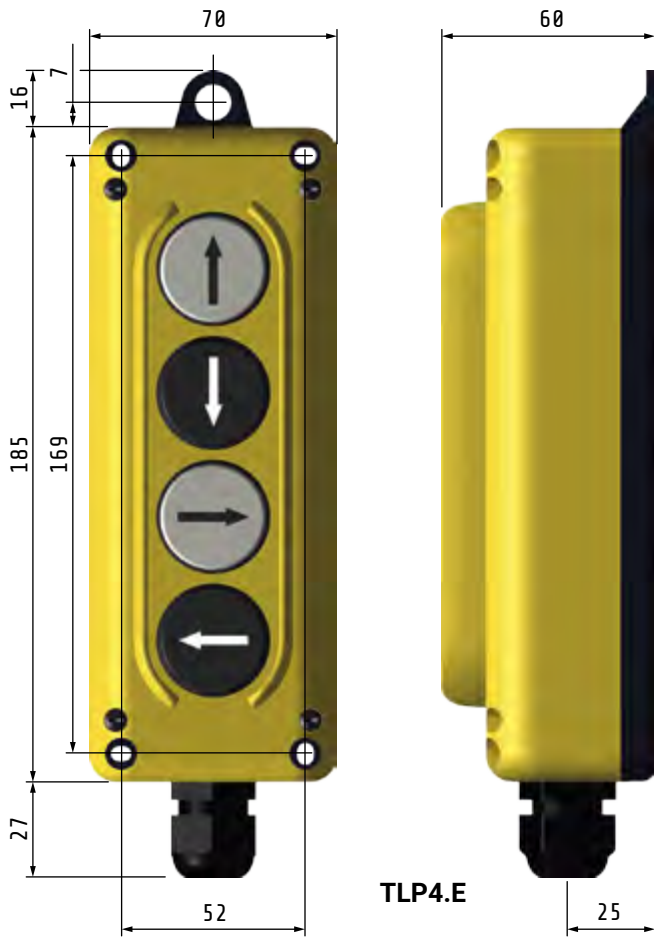
- 2014/35/UE
- 2011/65/UE RoHS
- EN 60947-1 (2007/A1 : 2011/A2 : 2014)
- EN 60947-5-1 (2004/A1 : 2009/AC : 2004/AC : 2005
EN ISO 13850 2015)
- EN 60204-1 (2006/A1 : 2009)
- EN-ISO 13849-1 (2015)
- EN ISO 13849-2 (2012)
- EN 60529 (1991/A1 : 2000/A2 : 2013)

Dimensions

Dimensions in mm
Drawing NOT in scale



Dimensions in mm
Drawing NOT in scale



STANDARD VERSIONS



TLP1.EPP



TLP1.ESR



TLP2



TLP3.B



TLP3.D



TLP4.E



TLP4.C

Standard button / contact combination



PCW01 (NC)
red



PCW10 (NC)
green

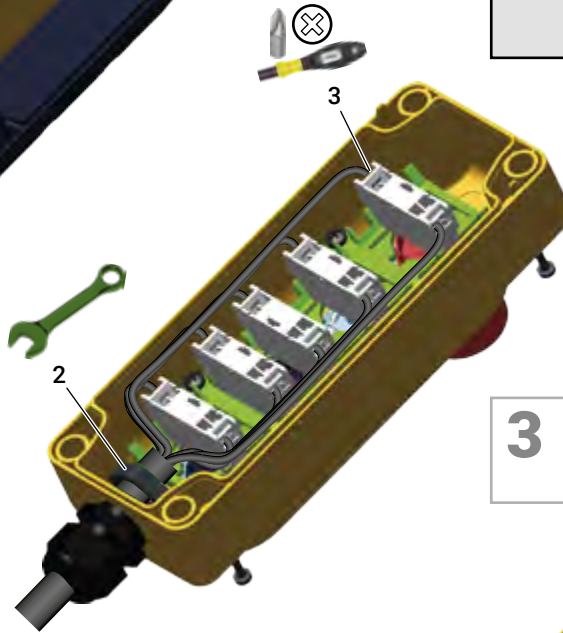
STANDARD VERSIONS WIRING

1 Loosen the screws (a) to remove the bottom (b) of the pendant station.



ATTENTION
The illustrations show a pendant station of TLP4... series: the same operations are valid for the other pendant stations.

2 Loosen the cable clamp nut with a 33 mm wrench and insert a cable suitable for the wiring to be carried out.



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 8.

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

4 Tighten the cable clamp with a 33 mm wrench.



TIGHTENING TORQUE
1.2-1.4 N×m
10.6-12.4 lb×in

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

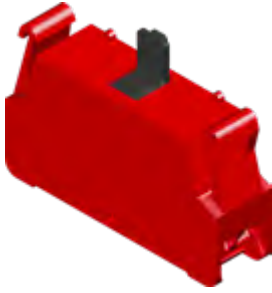


TIGHTENING TORQUE
1.3-1.7 N×m
11.5-15 lb×in

ATTENTION
Is shown the wiring of a push-button panel with only one contact element per key. The procedure is identical for 2 or 3 contact elements per key.

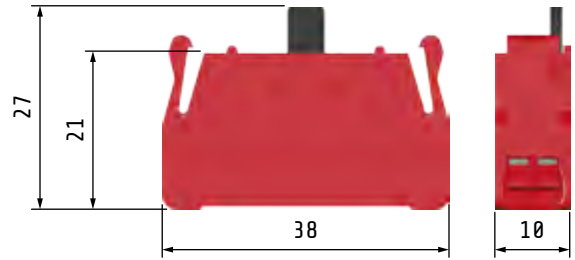
CHARACTERISTICS OF CONTACT BLOCKS

PCW01

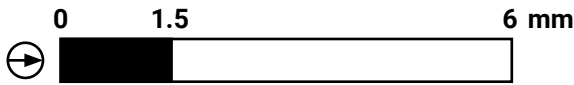


NC
Red

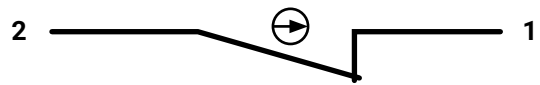
Contact block
with spring
terminals



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	110	240	400	440	500	690	V
		16*	12	5	5*	4	4	4*	2*	A
DC-13 direct current		24	48	60	110	250	V			
		2	2*	1*	0.4	0.4*	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

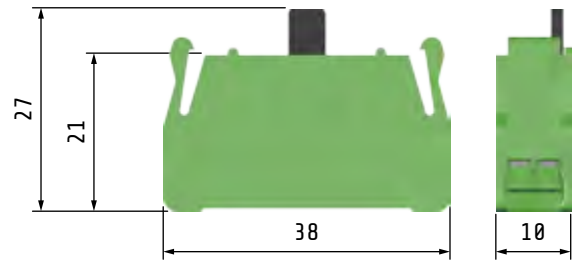
Rated insulation voltage	Ui	10 A - 600 V ac / 2.5 A - 125 V dc
Rated impulse withstand voltage	Uimp	A600 - Q600

* IMQ approved values

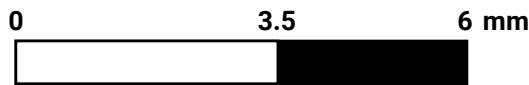
PCW10



NO
Green
Contact block
with spring
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	110	240	400	440	500	690	V
		16*	12	5	5*	4	4	4*	2*	A
DC-13 direct current		24	48	60	110	250	V			
		2	2*	1*	0.4	0.4*	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	milioni di cicli					
Terminal type		vite 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								

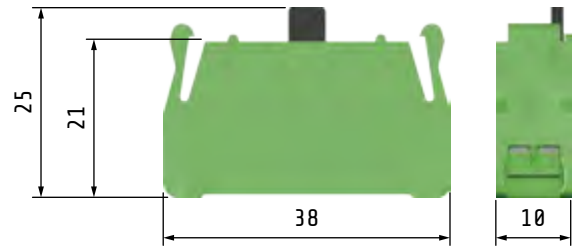
* IMQ approved values

PCW02



NO
Green

Contact block
with spring
terminals



Functions



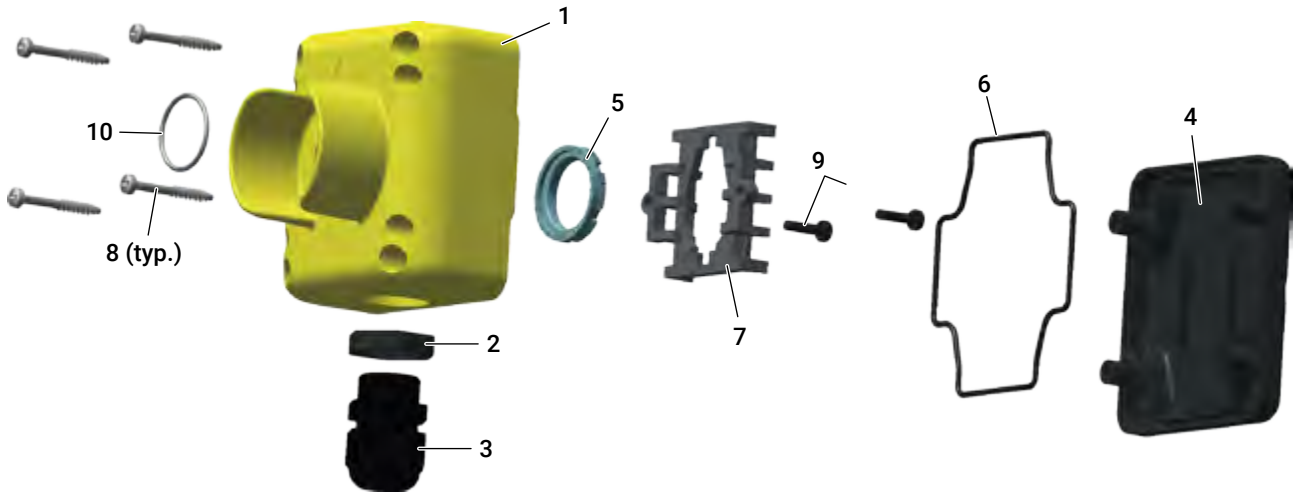
Scheme



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	110	240	400	440	500	690	V
		16*	12	5	5*	4	4	4*	2*	A
DC-13 direct current		24	48	60	110	250	V			
		2	2*	1*	0.4	0.4*	A			
Conditional short circuit withstand current		1000 A *								
Fuses rating gG		10 A * - 500 V								
Contact insulation resistance		≤ 25 mΩ								
Switching mechanism		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		vite 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

TLP2K



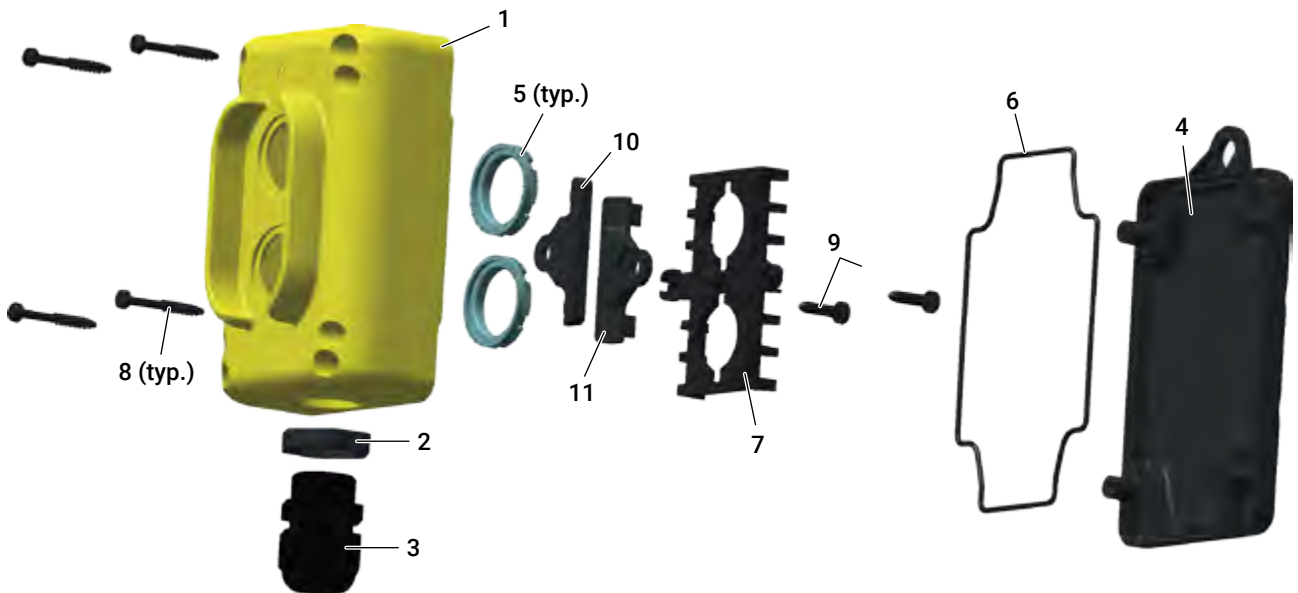
1	Pendant station cover	1x
2	Nut M20x1.5	1x
3	Cable clamp	1x
4	Pendant station base	1x
5	Threaded ring nut M22x1	1x
6	Gasket	1x
7	4 spring contact blocks support	1x

8	Self-tapping screw 4x30 partial thread	4x
9	Self-tapping screw 3.5x9.5	2x
10	O-ring	1x

Components excluded that must be ordered separately:

- Operators
- Contact blocks

TLP3K



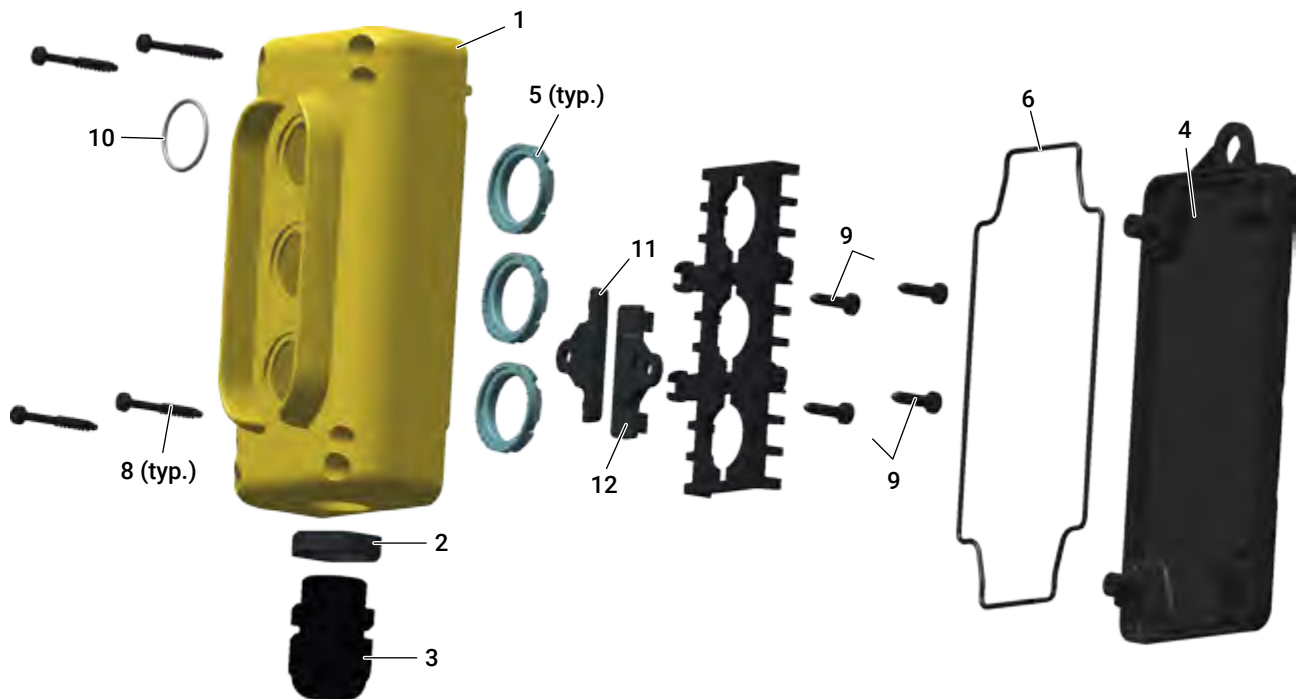
1	Pendant station cover	1x
2	Nut M20x1.5	1x
3	Cable clamp	1x
4	Pendant station base	1x
5	Threaded ring nut M22x1	2x
6	Gasket	1x
7	Coupling plate with 2 holes	1x

8	Self-tapping screw 4x30 partial thread	4x
9	Self-tapping screw 3.5x9.5	2x
10	Bottom mechanical interlock 16 A	1x
11	Top mechanical interlock 16 A	1x

Components excluded that must be ordered separately:

- Operators
- Contact blocks

TLP3K

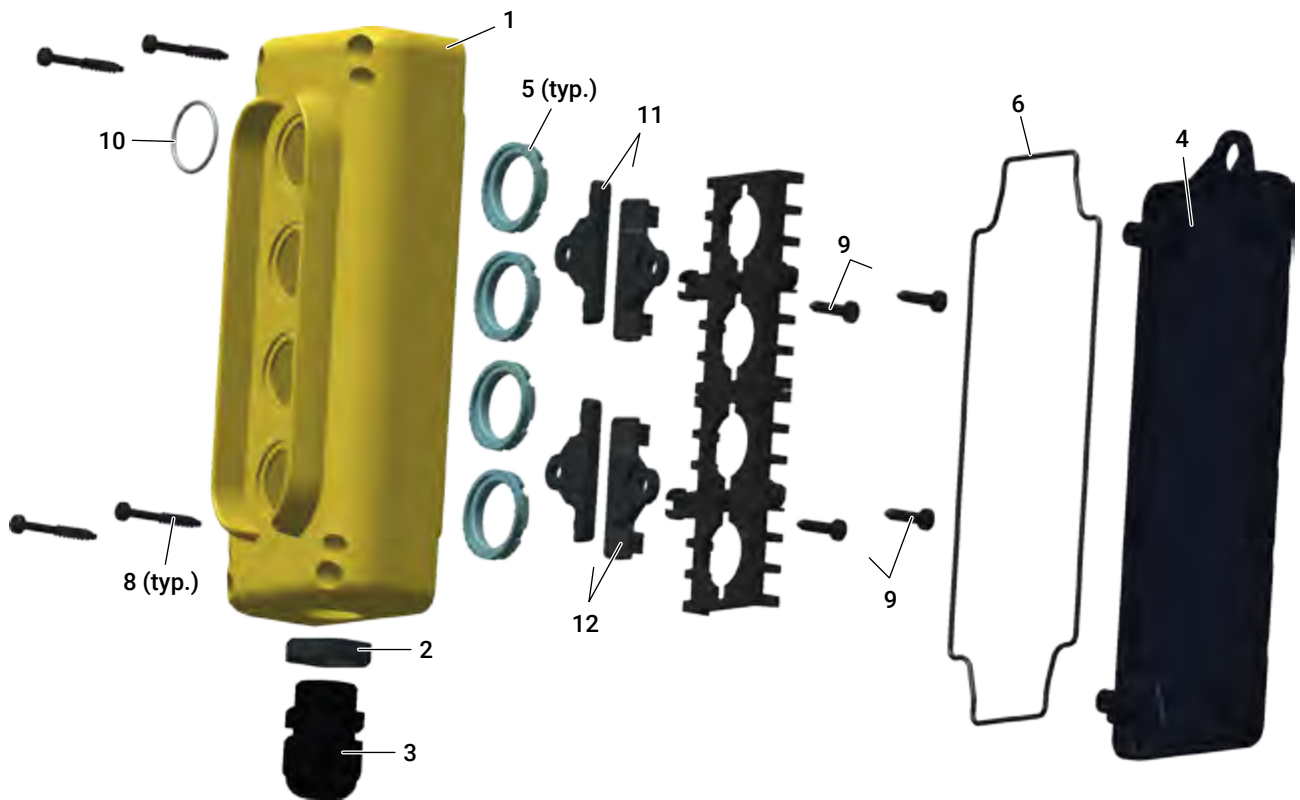


1	Pendant station cover	1×
2	Nut M20×1.5	1×
3	Cable clamp	1×
4	Pendant station base	1×
5	Threaded ring nut M22×1	3×
6	Gasket	1×
7	Coupling plate with 3 holes	1×
8	Self-tapping screw 4×30 partial thread	4×
9	Self-tapping screw 3.5×9.5	4×
10	O-ring	1×
11	Bottom mechanical interlock 16 A	1×
12	Top mechanical interlock 16 A	1×

Components excluded that must be ordered separately:

- Operators
- Contact blocks

TLP4K



1	Pendant station cover	1x
2	Nut M20x1.5	1x
3	Cable clamp	1x
4	Pendant station base	1x
5	Threaded ring nut M22x1	4x
6	Gasket	1x
7	Coupling plate with 2 holes	2x
8	Self-tapping screw 4x30 partial thread	4x
9	Self-tapping screw 3.5x9.5	4x
10	O-ring	1x
11	Bottom mechanical interlock 16 A	2x
12	Top mechanical interlock 16 A	2x

Components excluded that must be ordered separately:

- Operators
- Contact blocks

OPERATORS

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.

Neutral operators (code PL...)

Pair with the contact block with the matching label

A



PL005034 (blue)



PL005035 (white)



PL005036 (black)



PL005037 (red)



PL005038 (green)



PL005039 (yellow)

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

CONTACT BLOCK

Contact blocks

Pair with the operator
with the matching label

A



NC
PCW01



NO
PCW10

Lights

Pair with the operator
with the matching label

B



PCW5L12 (AC/DC 12 V)
PCW5L24 (AC/DC 24 V)
PCW5L48 (AC/DC 48 V)
PCW5L110 (AC/DC 110 V)
PCW5L220 (AC 220 V)



PCWAD

CUSTOM PENDANT STATION ASSEMBLY

Cable clamp

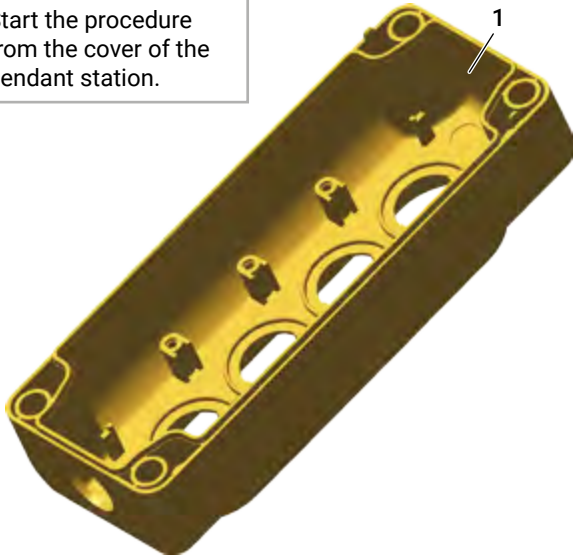


ATTENTION

The illustrations show a pendant station of TLP4... series: the same operations are valid for the other pendant stations.

1

Start the procedure from the cover of the pendant station.

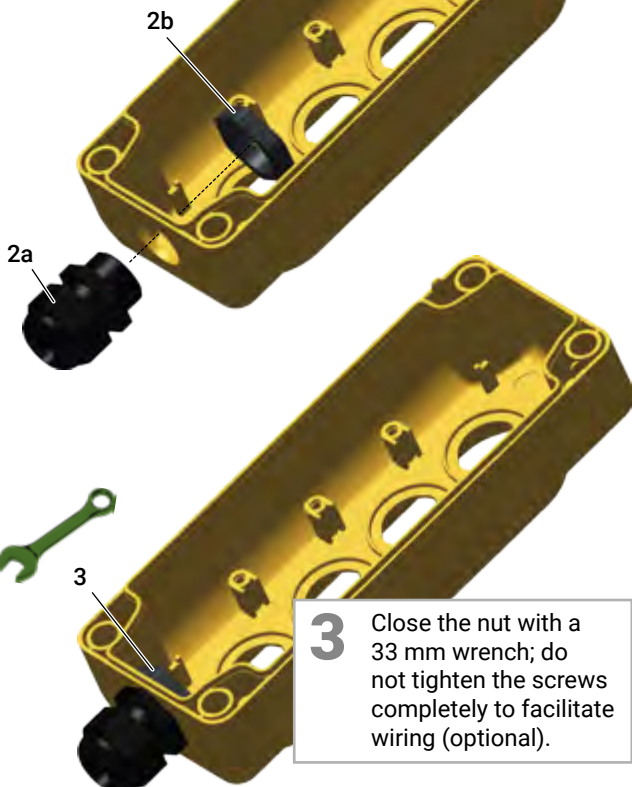


ATTENTION

Place carefully the cable clamp to ensure the seal of the pendant station.

2

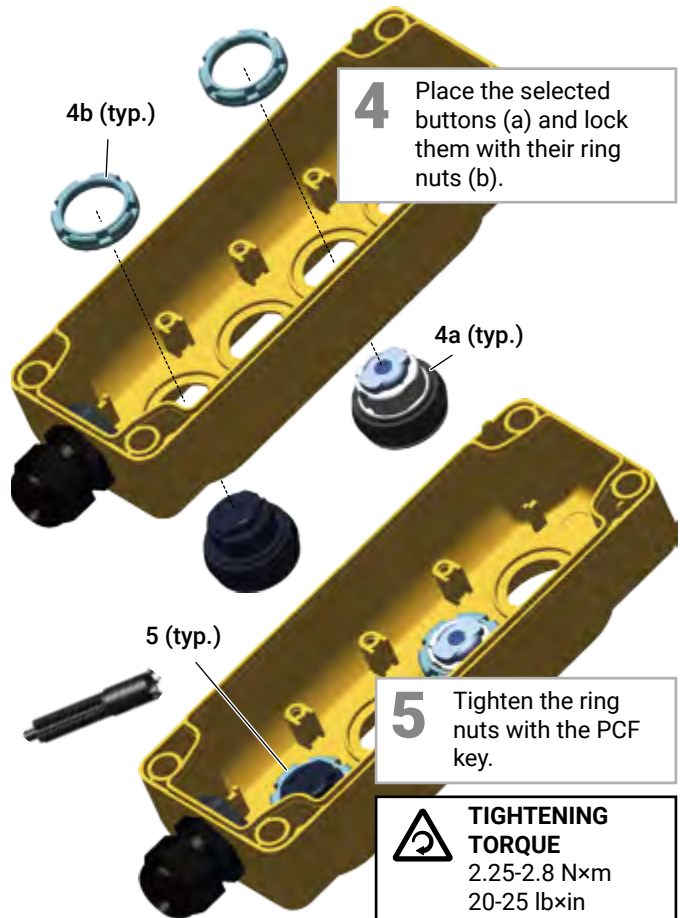
Assemble the cable clamp (a) with the fixing nut (b).



3

Close the nut with a 33 mm wrench; do not tighten the screws completely to facilitate wiring (optional).

Operators



4

Place the selected buttons (a) and lock them with their ring nuts (b).

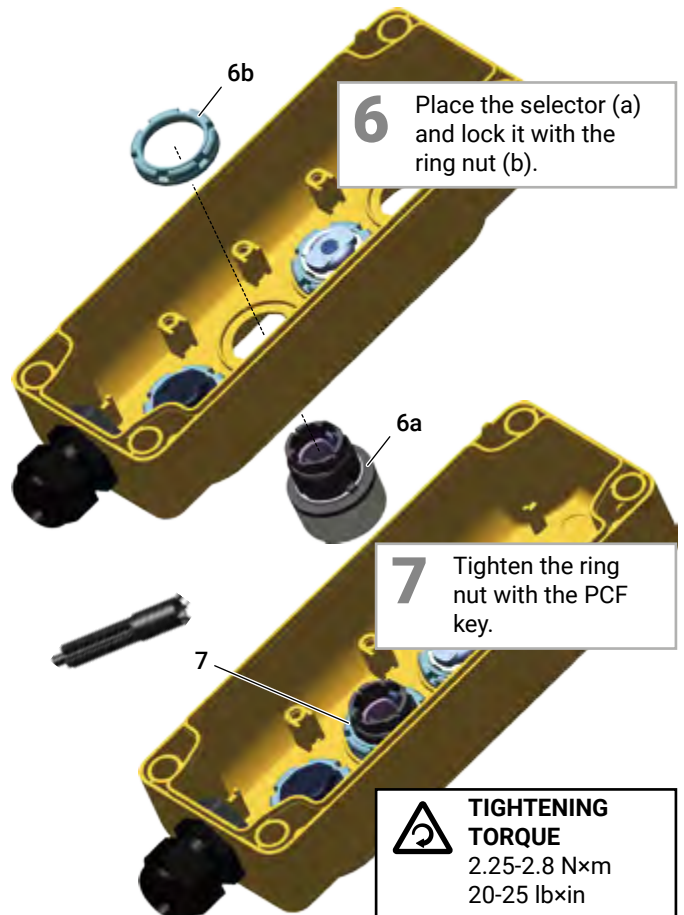
5

Tighten the ring nuts with the PCF key.



TIGHTENING TORQUE

2.25-2.8 N×m
20-25 lb×in



6

Place the selector (a) and lock it with the ring nut (b).

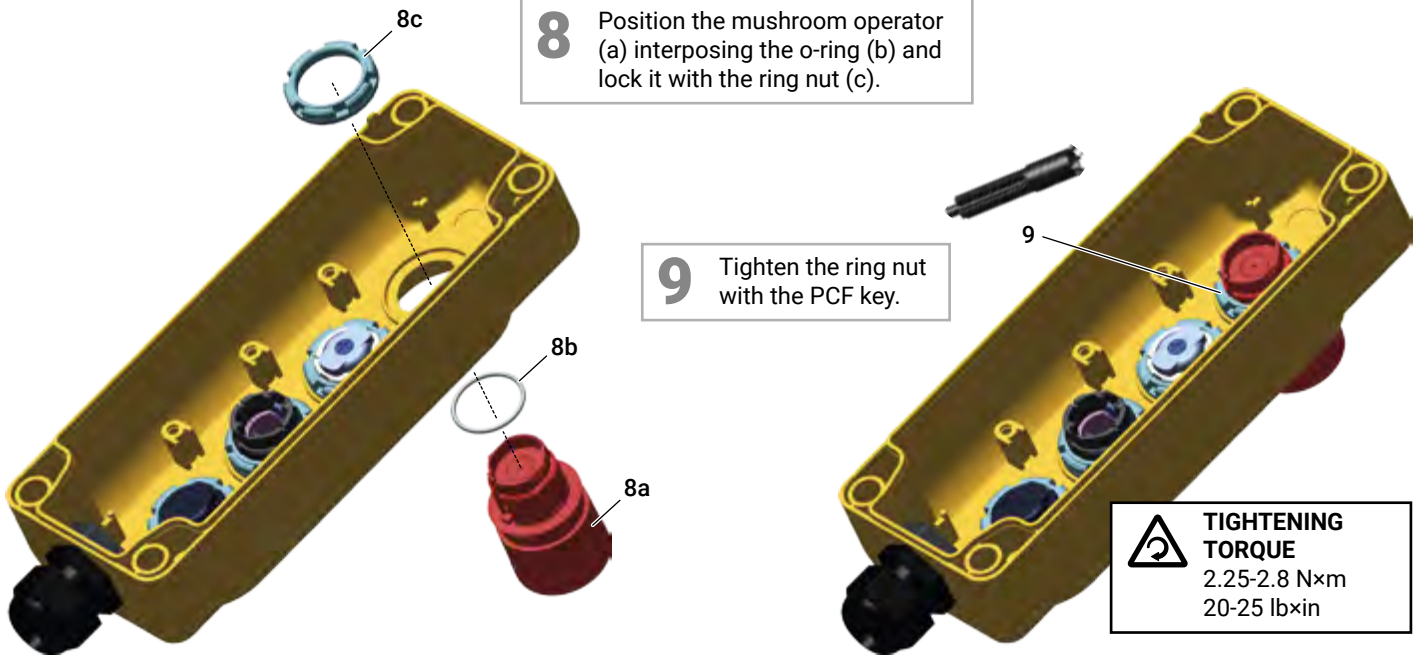
7

Tighten the ring nut with the PCF key.



TIGHTENING TORQUE

2.25-2.8 N×m
20-25 lb×in

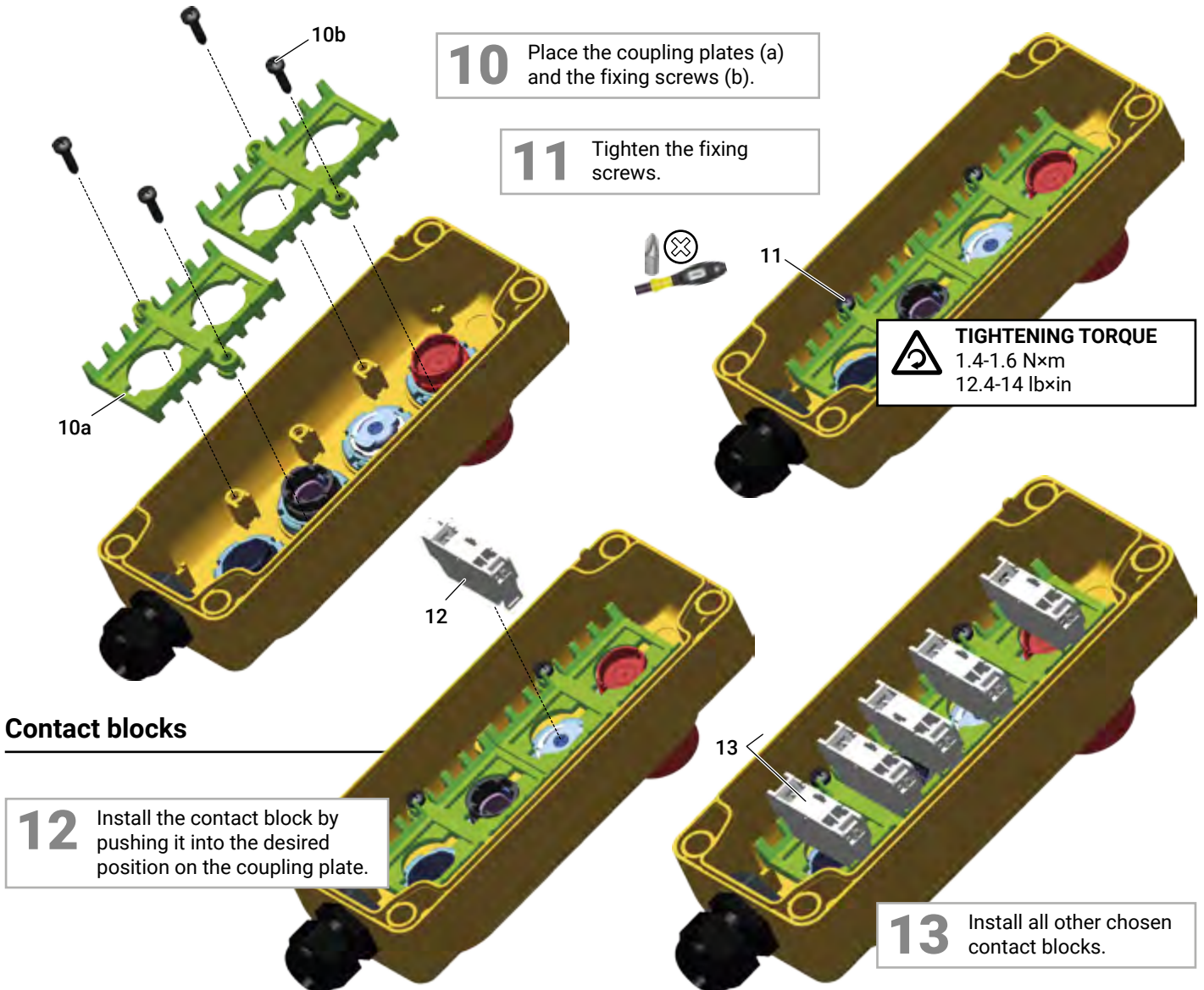


8 Position the mushroom operator (a) interposing the o-ring (b) and lock it with the ring nut (c).

9 Tighten the ring nut with the PCF key.

TIGHTENING TORQUE
 2.25-2.8 Nxm
 20-25 lbin

Coupling plates



10 Place the coupling plates (a) and the fixing screws (b).

11 Tighten the fixing screws.

TIGHTENING TORQUE
 1.4-1.6 Nxm
 12.4-14 lbin

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.

Wiring



ATTENTION

Wiring is optional and can be carried out later.



ATTENTION

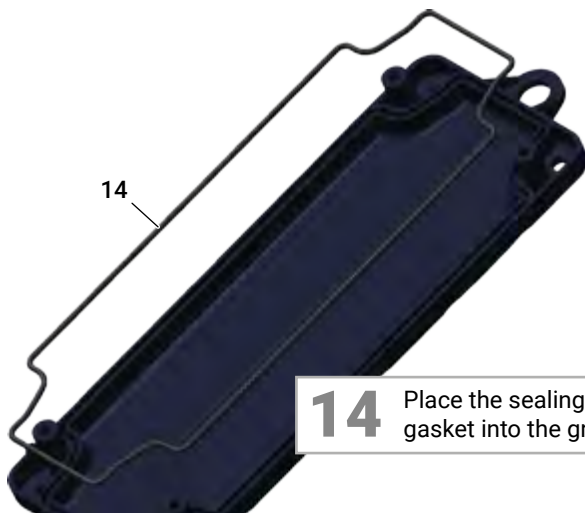
Wire as shown in the paragraph "STANDARD VERSIONS WIRING" on page 7



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 8 e nel paragrafo "CHARACTERISTICS OF ADDITIONAL CONTACT BLOCKS" on page 20

Pendant station base



14

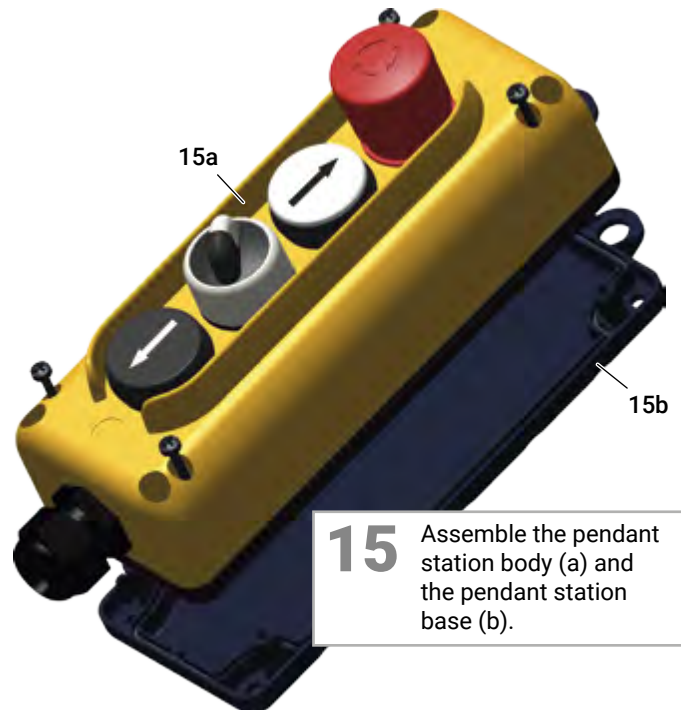
Place the sealing gasket into the groove.



ATTENTION

Carefully position the sealing gasket to ensure tightness.

Close the pendant station



15

Assemble the pendant station body (a) and the pendant station base (b).

16

Tighten the fixing screws of the base of the pendant station.



16



TIGHTENING TORQUE

1.3-1.7 N×m
11.5-15 lb×in

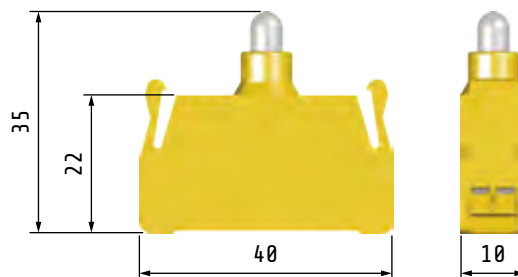
CHARACTERISTICS OF ADDITIONAL CONTACT BLOCKS

PCWAD



Yellow

Contact block with screw terminals



Scheme



Power supply

PCW5L12	AC/DC 12 V
PCW5L24	AC/DC 24 V
PCW5L48	AC/DC 48 V
PCW5L110	AC/DC 110 V
PCW5L220	AC 220 V

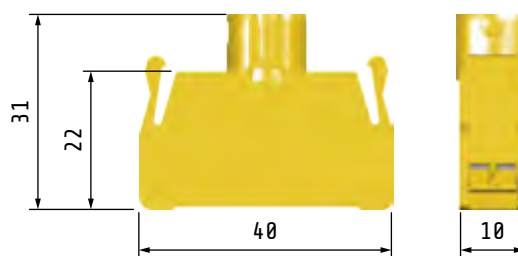
PCWAD



Yellow

Contact block with screw terminals

Light bulb non included



Scheme



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