SPA
Pendant control station

Pendant station for auxiliary control, sturdy and reliable, designed for heavy industry.
Modular enclosure with actuators arranged on a double row to pair opposite functions and keep size compact.

FEATURES

- Modular enclosure with actuators placed on a double row to enable grouping of a large number of functions in a single control.
- Rectangular pushbuttons in thermoplastic material or rubber pushbuttons with symbol disks to ensure protection against dust.
- The emergency stop mushroom pushbutton complies with standard EN 418.
- Positive opening NC contacts for safety functions.
- Mechanical life of switches: 1 million operations.
- IP protection degree: SPA is classified IP65.
- Extreme temperature resistance: -25°C to +70°C.
- All materials and components used are wear resistant and guarantee protection of the unit against water and dust.

OPTIONS

- Available in configuration from 2 to 20 actuators, arranged on a double row.
- One or two speed switches with NO or NC contacts.
- Double switches with mechanical interlock to prevent simultaneous operation of opposite functions.
- Wide range of actuators: pushbuttons, selector switches and key-selector switches, pilot lights, impulse or latched mushroom pushbuttons with rotation release.

CERTIFICATIONS

- CE marking and EAC certification.

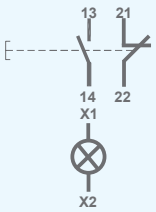
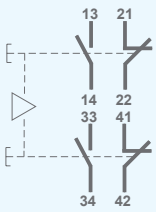
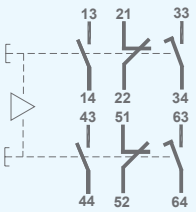
CERTIFICATIONS

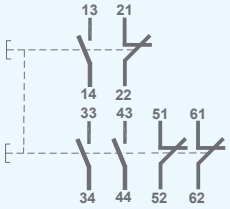
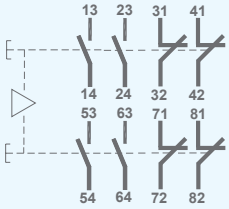
Conformity to Community Directives	2014/35/UE Low Voltage Directive
	2006/42/CE Machinery Directive
Conformity to CE Standards	EN 60204-1 Safety of machinery - Electrical equipment of machines
	EN 60947-1 Low-voltage switchgear and controlgear
	EN 60947-5-1 Low-voltage switchgear and controlgear - Control circuit devices and switching elements - Electromechanical control circuit devices
	EN 60529 Degrees of protection provided by enclosures
	EN 418 Safety of machinery - Emergency stop equipment, functional
Markings and homologations	CE EAC

GENERAL TECHNICAL SPECIFICATIONS

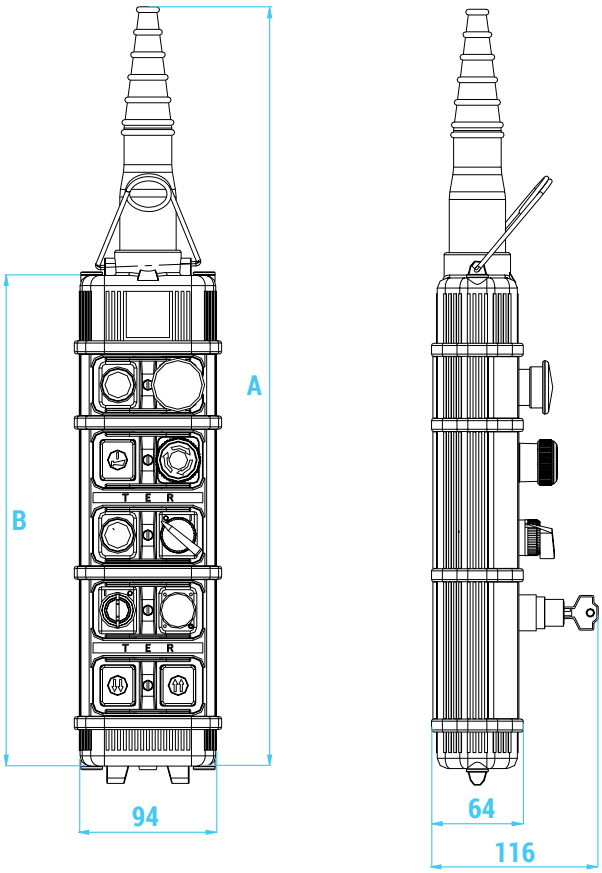
Ambient temperature	Storage -40°C/+70°C
	Operational -25°C/+70°C
IP protection degree	IP 65
Insulation category	Class II
Cable entry	Rubber cable sleeve (Ø 14÷26 mm)
Operating positions	Any position

TECHNICAL SPECIFICATIONS OF THE MICROSWITCHES

Code	PRSL0073XX	PRSL0074XX	PRSL0075XX
Utilisation category	AC 15		
Rated operational current	1.9 A		
Rated operational voltage	380 Vac		
Rated thermal current	10 A		
Rated insulation voltage	500 Vac		
Mechanical life	$1x10^6$ operations		
Connections	Screw-type terminal		
Wires	1x2.5 mm^2, 2x1.5 mm^2 (UL - (c)UL: use 60°C or 75°C copper (CU) conductor and wire 16-18 AWG)		
Tightening torque	0.8 Nm		
Microswitch type	Single switch, one speed with lamp holder with bayonet coupling (bulb not supplied)	Double switch, one speed with mechanical interlock	Double switch, two speeds with mechanical interlock
Contacts	1NO+1NC (All NC contacts are of the positive opening operation type)	1NO+1NC/1NO+1NC (All NC contacts are of the positive opening operation type)	1NO+1NC+1NO/1NO+1NC+1NO (All NC contacts are of the positive opening operation type)
Scheme			
Markings and homologations	CE cULus		

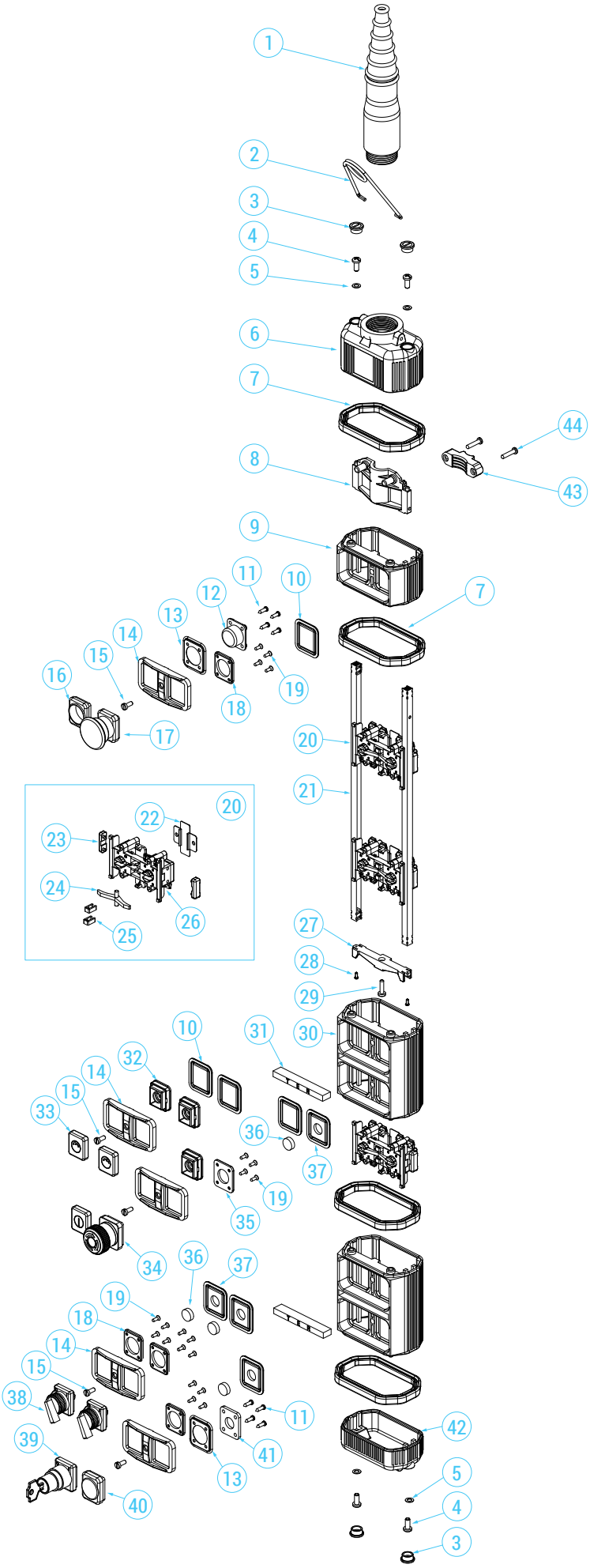
Code	PRSL0076XX	PRSL0077XX
Utilisation category	AC 15	
Rated operational current	1.9 A	
Rated operational voltage	380 Vac	
Rated thermal current	10 A	
Rated insulation voltage	500 Vac	
Mechanical life	$1x10^6$ operations	
Connections	Screw-type terminal	
Wires	1x2.5 mm^2, 2x1.5 mm^2 (UL - (c)UL: use 60°C or 75°C copper (CU) conductor and wire 16-18 AWG)	
Tightening torque	0.8 Nm	
Microswitch type	Double switch, one speed	Double switch, one speed with mechanical interlock
Contacts	1NO+1NC/2NO+2NC (All NC contacts are of the positive opening operation type ⊖)	2NO+2NC/2NO+2NC (All NC contacts are of the positive opening operation type ⊖)
Scheme		
Markings and homologations	CE cULus	

OVERALL DIMENSIONS (mm)



No. of actuators	Dimensions (mm)		Weight (kg)
	A	B	
2	318	132	0.520
4	370	184	0.700
6	422	236	0.880
8	474	288	1.040
10	526	340	1.300
12	578	392	1.380
14	630	444	1.550
16	682	496	1.710
18	734	548	1.890
20	786	600	2.050

EXPLODED DRAWING

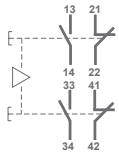


STANDARD CONTROL STATIONS

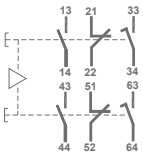
Standard pendant stations are equipped with cable sleeve, hook and mechanical interlock between opposite function pushbuttons.

2 actuators

PF02020007

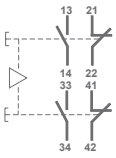
Switch scheme	Switch type	Actuator type	
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton

PF02020039

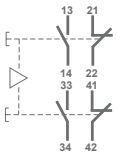
Switch scheme	Switch type	Actuator type	
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton

4 actuators

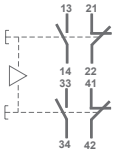
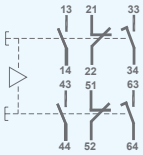
PF02040185

Switch scheme	Switch type	Actuator type	
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Blanking plug	Latched mushroom pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton

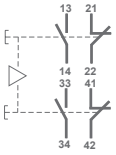
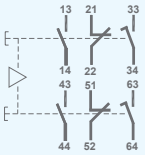
PF02040241

Switch scheme	Switch type	Actuator type	
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton GREEN	Latched mushroom pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton

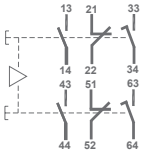
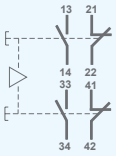
PF02040186

Switch scheme	Switch type	Actuator type	
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Blanking plug	Latched mushroom pushbutton
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton

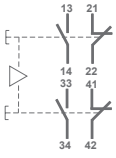
PF02040240

Switch scheme	Switch type	Actuator type	
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton GREEN	Latched mushroom pushbutton
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton

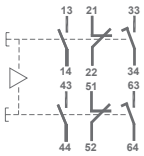
PF02040242

Switch scheme	Switch type	Actuator type	
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton

PF02040063

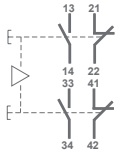
Switch scheme	Switch type	Actuator type	
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton

PF02040243

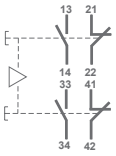
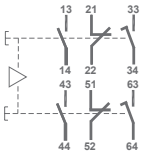
Switch scheme	Switch type	Actuator type	
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton

6 actuators

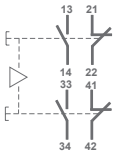
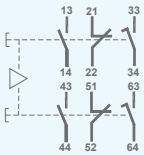
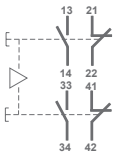
PF02060455

Switch scheme	Switch type	Actuator type	
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Blanking plug	Latched mushroom pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton

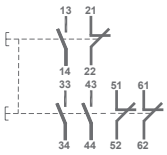
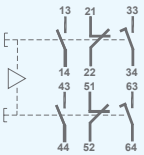
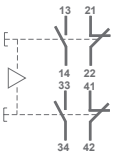
PF02060401

Switch scheme	Switch type	Actuator type	
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Blanking plug	Latched mushroom pushbutton
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton

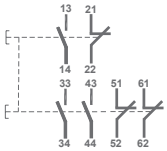
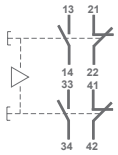
PF02060456

Switch scheme	Switch type	Actuator type	
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Blanking plug	Latched mushroom pushbutton
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton

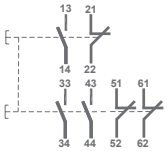
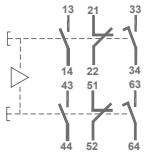
PF02060439

Switch scheme	Switch type	Actuator type	
	PRSL0076XX 1NO+1NC/2NO+2NC 1 speed	Pushbutton GREEN	Latched mushroom pushbutton
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton

PF02060355

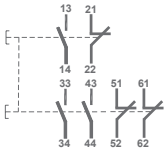
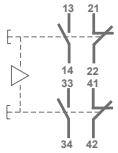
Switch scheme	Switch type	Actuator type	
	PRSL0076XX 1NO+1NC/2NO+2NC 1 speed	Pushbutton GREEN	Latched mushroom pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton

PF02060356

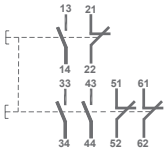
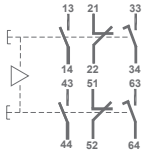
Switch scheme	Switch type	Actuator type	
	PRSL0076XX 1NO+1NC/2NO+2NC 1 speed	Pushbutton GREEN	Latched mushroom pushbutton
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton

8 actuators

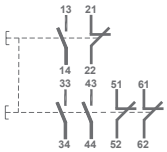
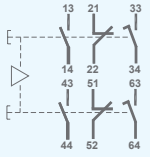
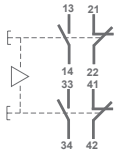
PF02080237

Switch scheme	Switch type	Actuator type	
	PRSL0076XX 1NO+1NC/2NO+2NC 1 speed	Pushbutton GREEN	Latched mushroom pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton

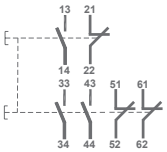
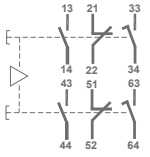
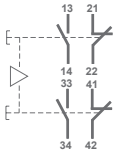
PF02080440

Switch scheme	Switch type	Actuator type	
	PRSL0076XX 1NO+1NC/2NO+2NC 1 speed	Pushbutton GREEN	Latched mushroom pushbutton
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton

PF02080702

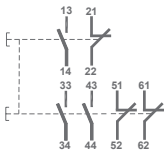
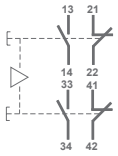
Switch scheme	Switch type	Actuator type	
	PRSL0076XX 1NO+1NC/2NO+2NC 1 speed	Pushbutton GREEN	Latched mushroom pushbutton
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton

PF02080703

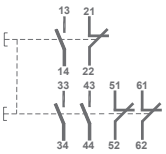
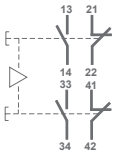
Switch scheme	Switch type	Actuator type	
	PRSL0076XX 1NO+1NC/2NO+2NC 1 speed	Pushbutton GREEN	Latched mushroom pushbutton
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton
	PRSL0075XX 1NO+1NC/1NO+1NC 2 speeds	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton

10 actuators

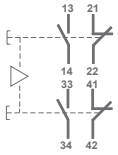
PF02100324

Switch scheme	Switch type	Actuator type	
	PRSL0076XX 1NO+1NC/2NO+2NC 1 speed	Pushbutton GREEN	Latched mushroom pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton

PF02100308

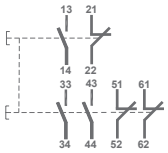
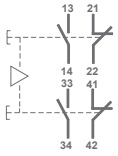
Switch scheme	Switch type	Actuator type	
	PRSL0076XX 1NO+1NC/2NO+2NC 1 speed	Pushbutton GREEN	Latched mushroom pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton

PF02101187

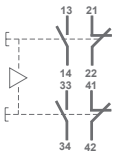
Switch scheme	Switch type	Actuator type	
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton YELLOW	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton GREEN	Latched mushroom pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton

12 actuators

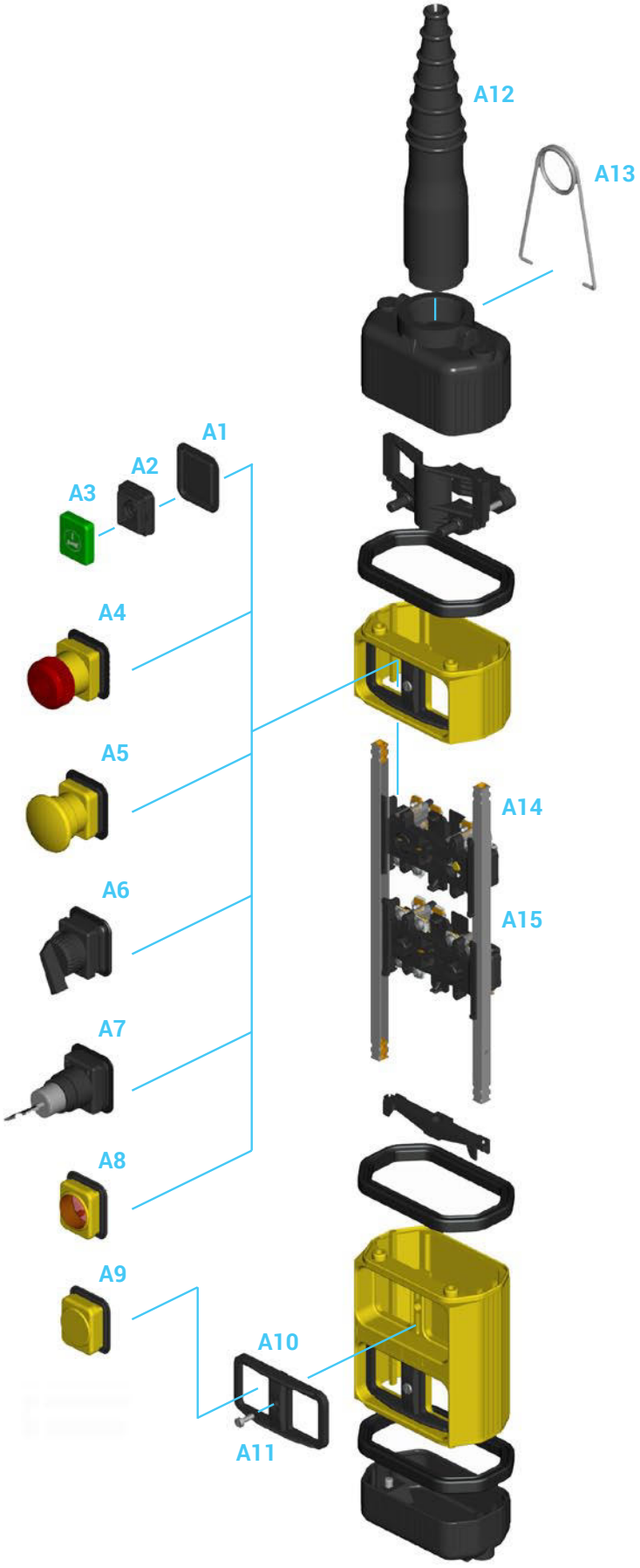
PF02120306

Switch scheme	Switch type	Actuator type	
	PRSL0076XX 1NO+1NC/2NO+2NC 1 speed	Pushbutton GREEN	Latched mushroom pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO + 1NC / 1NO + 1NC 1 speed	Pushbutton	Pushbutton

PF02101187

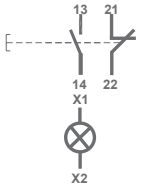
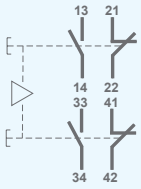
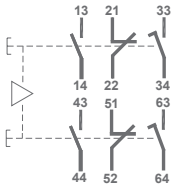
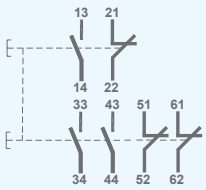
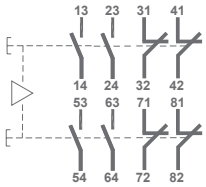
Switch scheme	Switch type	Actuator type	
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton YELLOW	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton GREEN	Latched mushroom pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton
	PRSL0074XX 1NO+1NC/1NO+1NC 1 speed	Pushbutton	Pushbutton

ASSEMBLY DRAWING

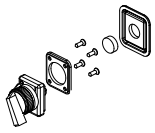
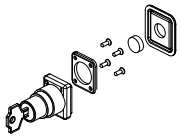
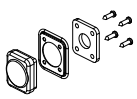


COMPONENTS

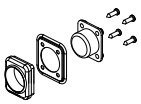
Switches

Ref.	Drawing	Description	Scheme	Code
A14		One speed, 1NO+1NC single switch with lamp holder with bayonet coupling (bulb not supplied)		PRSL0073XX
A15		One speed, 1NO+1NC/1NO+1NC double switch with mechanical interlock		PRSL0074XX
		Two speed, 1NO+1NC+1NO/1NO+1NC+1NO double switch with mechanical interlock		PRSL0075XX
		One speed, 1NO+1NC/2NO+2NC double switch		PRSL0076XX
		One speed, 2NO+2NC/2NO+2NC double switch with mechanical interlock		PRSL0077XX

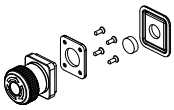
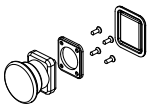
Actuators

Ref.	Drawing	Description	Code
A1		Rubber for button	PRGU6031PE
A2		Button holder	PRSL9284PI
A3		Button	PRTA_ _ _ _ _ _ See standard buttons
A6		Selector switch 0/1 maintained positions	PRSL3540PI
		Selector switch 1/0/2 maintained positions	PRSL3543PI
A7		Key selector switch 0/1 maintained positions, pull-out position 0	PRSL3539PI
A9		Blanking plug	PRSL5557PI

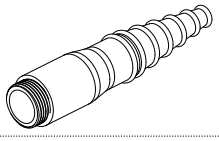
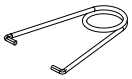
Pilot lights

Ref.	Drawing	Color	Code
A8		Red	PRSL3534PI
		Yellow	PRSL3535PI
		Green	PRSL3542PI

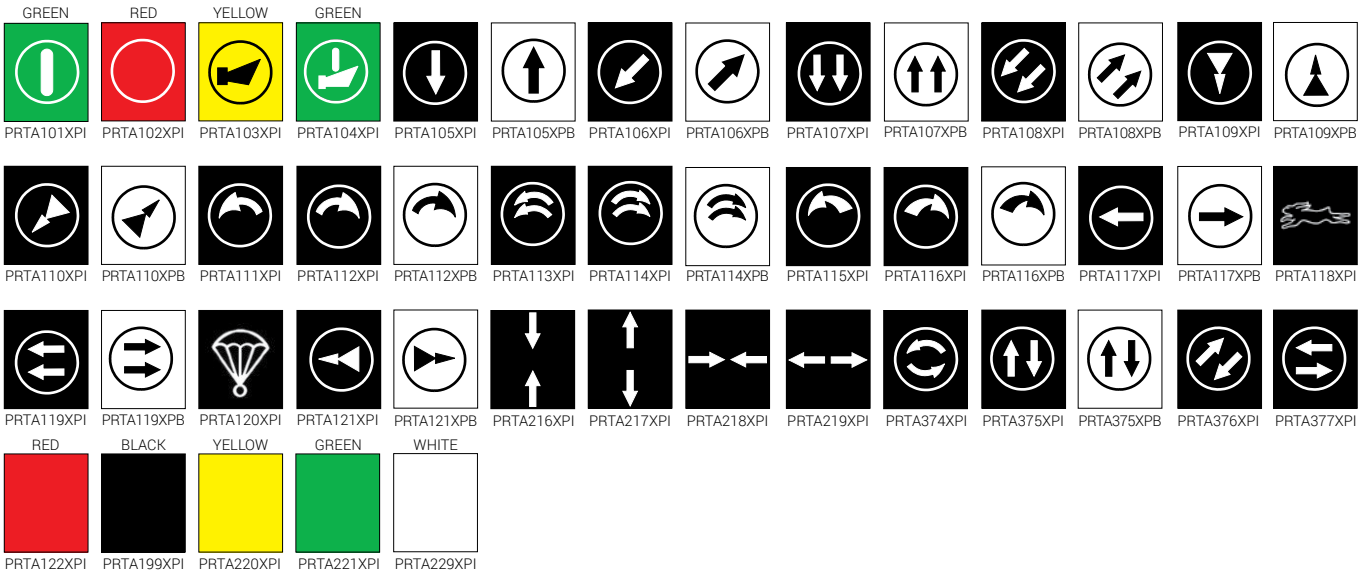
Mushroom pushbuttons

Ref.	Drawing	Description	Code
A4		Latched mushroom pushbutton for emergency stop	PRSL3500PI
A5		Impulse mushroom pushbutton	PRSL3531PI

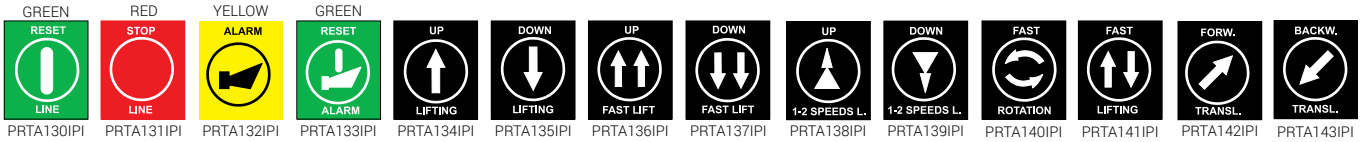
Accessories

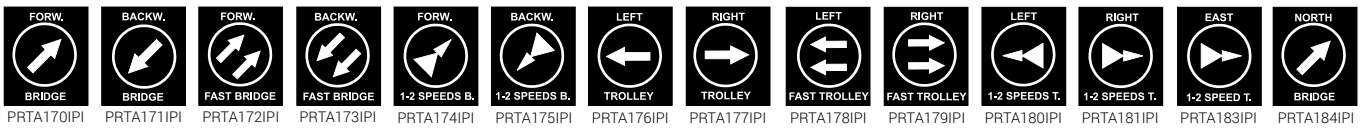
Ref.	Drawing	Description	Code
A10		2 holes frame	PRSL5535PI
		1 hole frame	PRSL5537PI
		Frame without holes	PRSL5538PI
A11		Screw for frame	PRVV6027PE
A12		Cable sleeve	PRSL0145PE
A13		Hook	PRGA0012PE

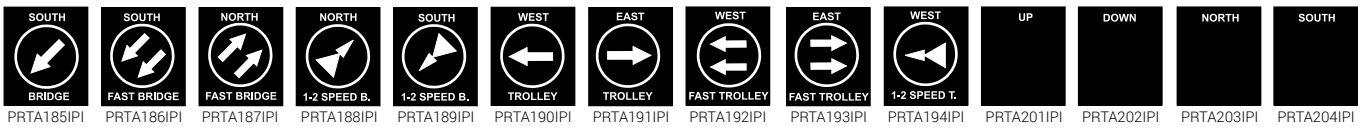
Standard buttons - Symbols

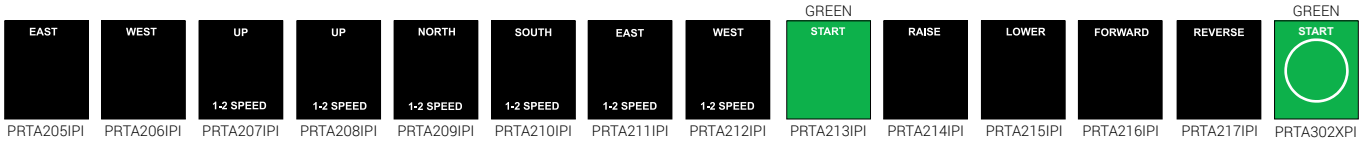


Standard buttons - English

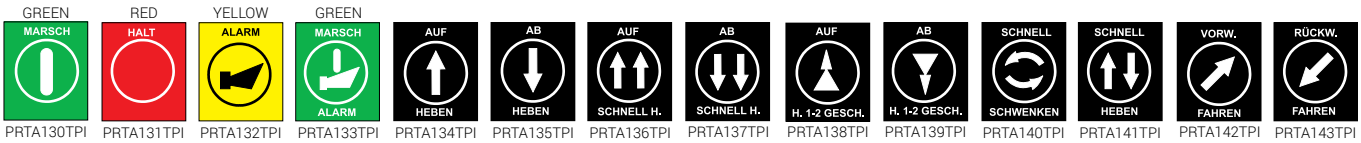




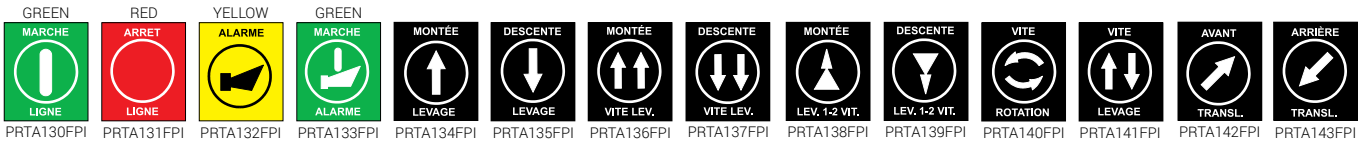


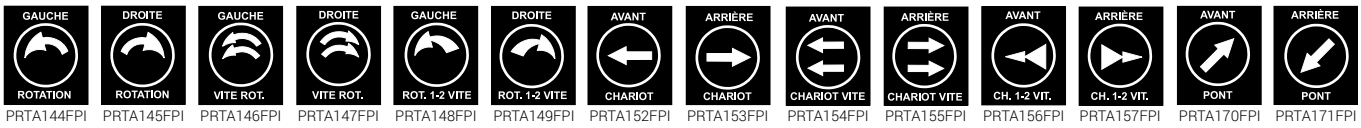


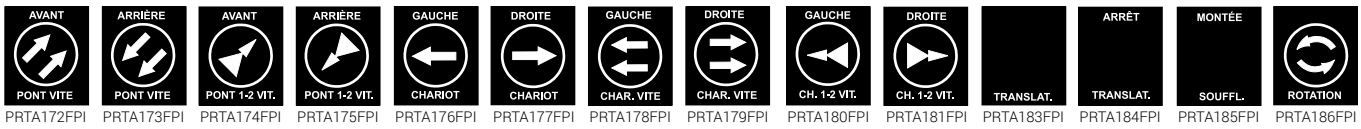
Standard buttons - German



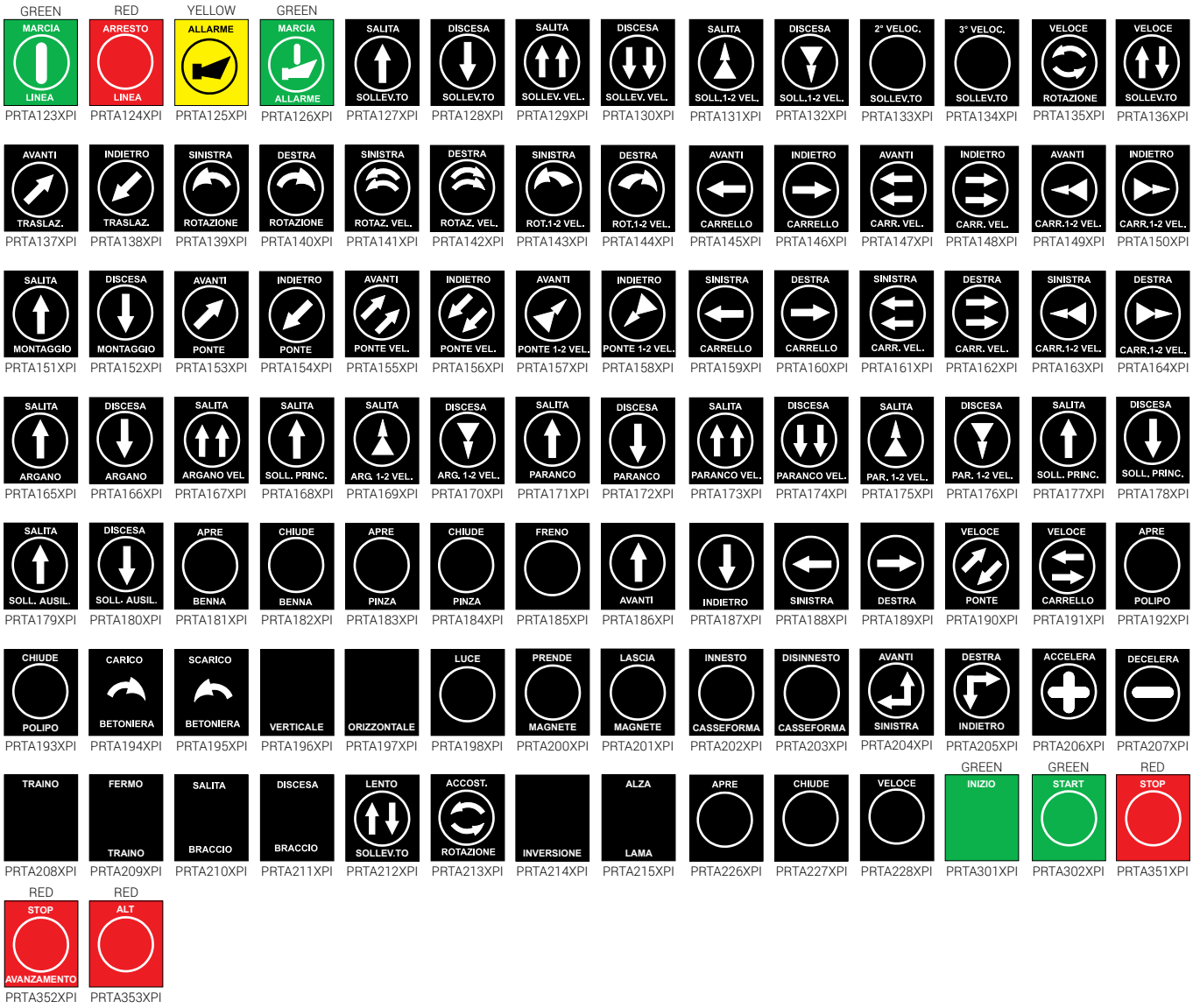
Standard buttons - French



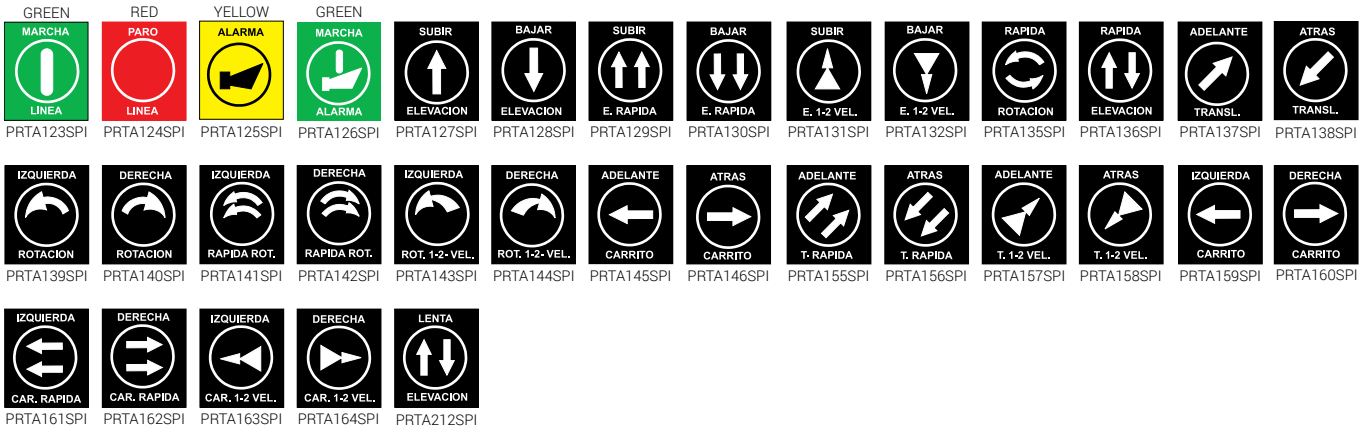




Standard buttons - Italian



Standard buttons - Spanish



SPA - REQUEST FORM FOR NON STANDARD PENDANT STATION

Control elements

1	PRSL3500PI	Emergency stop mushroom pushbutton
2	PRSL3531PI	Impulse mushroom pushbutton
3	PRSL3539PI	2 position key selector switch
4	PRSL3540PI	2 position selector switch
5	PRSL3543PI	3 position selector switch
6	PRSL3534PI	Red pilot light
7	PRSL3535PI	Green pilot light
8	PRSL3542PI	Yellow pilot light
9	PRSL5557PI	Blanking plug

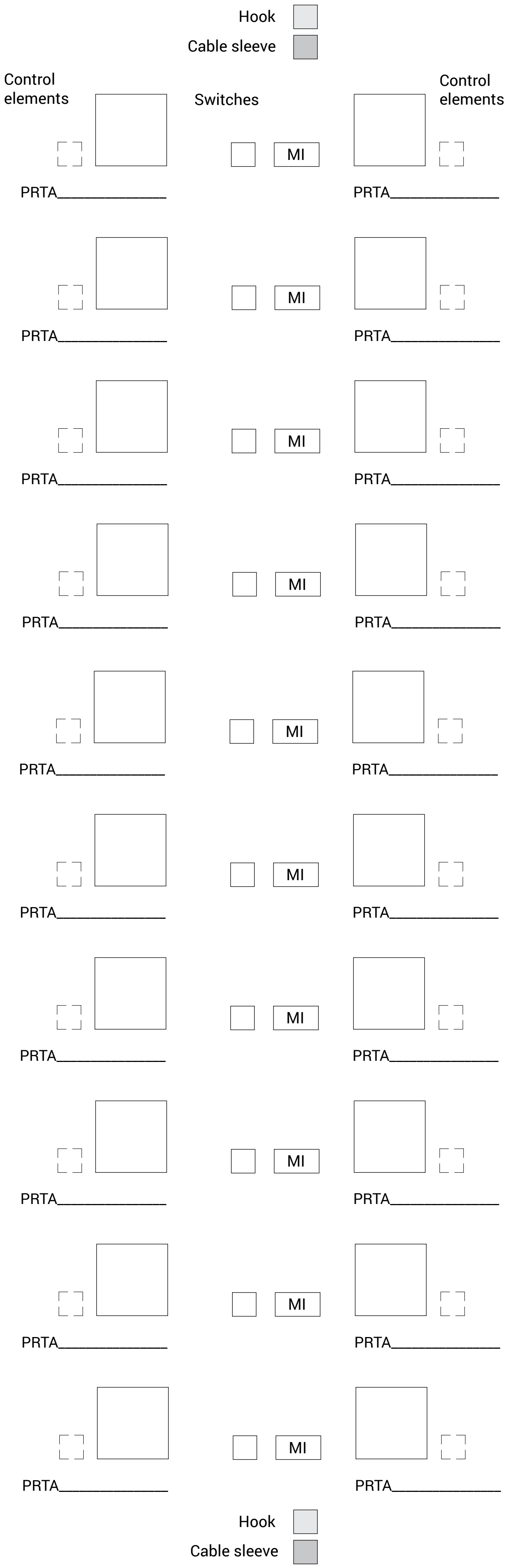
Switches

20	PRSL0073XX	1NO+1NC/Lamp holder
21	PRSL0074XX	1NO+1NC/1NO+1NC
22	PRSL0075XX	2NO+1NC/2NO+1NC
23	PRSL0076XX	1NO+1NC/2NO+2NC
24	PRSL0076XX	2NO+2NC/1NO+1NC
25	PRSL0077XX	2NO+2NC/2NO+2NC

Instructions

- Fill in the pendant station scheme for the number of control elements required (2, 4, 6, 8, 10, 12, 14, 16, 18 or 20 actuators).
- Write the number corresponding to the control element required (broken line box). When buttons are required, fill in the PRTA_____ code and mark the direction of the arrow into the corresponding box.
- Write the number corresponding to the switches required.
- Tick the box corresponding to the mechanical interlock between pushbuttons when required. MI
- Tick the appropriate box to show where the cable sleeve and the hook must be assembled (top or bottom).

Remarks



USE AND MAINTENANCE INSTRUCTIONS

The SPA Pendant Control Station is an electromechanical device for low voltage control circuits (EN 60947-1, EN 60947-5-1) to be used as electrical equipment on machines (EN 60204-1) in compliance with the fundamental requirements of the Low Voltage Directive 2014/35/UE and of the Machine Directive 2006/42/CE.

The pendant station is designed for industrial use and also for use under particularly severe climatic conditions (operational temperature from –25°C to +70°C, suitable for use in tropical environment). The equipment is not suitable for use in environments with potentially explosive atmosphere, corrosive agents or a high percentage of sodium chloride (saline fog). Oils, acids or solvents may damage the equipment; avoid using them for cleaning.

The switches (20)* are designed for auxiliary control of contactors or electromagnetic loads (utilisation category AC-15 according to EN 60947-5-1). Do not connect more than one phase to each switch (20). Do not oil or grease the control elements (17, 33, 34, 38, 39) or the switches (20).

The installation of the pendant station shall be carried out by an expert and trained personnel. Wiring shall be properly done according to the current instructions.

Prior to the installation and the maintenance of the pendant station, the main power of the machinery shall be turned off.

Steps for the proper installation of the pendant station
- Remove the plastic plugs (3) from the lower cover (42).
- Remove the screws (4) from the lower cover (42).
- Remove the lower cover (42), the rubber frames (7) and the sections (9, 30) from the inner part of the pendant station; make sure to follow the same sequence when reassembling the sections (9, 30).
- Remove the plastic plugs (3) from the upper cover (6).
- Remove the screws (4) from the upper cover (6) and the latter from the inner part of the pendant station.
- Screw the variable section rubber cable sleeve (1) on the upper cover (6).
- Cut the variable section rubber cable sleeve (1) and insert the cable tight enough to guarantee protection against water and/or dust.
- Strip the cable to a length suitable for wiring the switches (20).
- Tape the stripped part of the cable.
- Fix the cable inside the pendant station using the cable clamp (43, 44).
- Connect all the switches (20) (tighten the terminal screws with a torque of 0.8 Nm; insertability of wires into the terminals 1x2.5 mm^2 - 2x1.5mm^2); for the correct positioning of the wires into the pendant station, remove the wire covers (22) from the switches (20), place the wires into the seats and fix the wire covers again (22).
- Mount the upper cover (6) on the inner part of the pendant station and fasten the screws (4); when placing the upper cover (6), make sure that the writing “TER” and the label identifying the product are on the same side of the actuators (17, 33, 34, 38, 39).
- Screw the plastic plugs (3) on the upper cover (6).
- Fix the cable to the cable sleeve (1) using a cable tie (not supplied).
- Assemble the rubber frames (7) and the sections (9, 30) alternatively, making sure to follow the right sequence.
- Mount the lower cover (42) on the inner part of the pendant station and tighten the screws (4).
- Screw the plastic plugs (3) on the lower cover (42).
- Assemble the hook (2).

Additional steps for replacing the switches
- Open the pendant station as explained in the installation steps.
- Remove possible wires from the switch (20) needing replacement.
- Loosen the screw (29) on the bottom of the inner part of the pendant station.
- Remove the two plastic guides (23) from the switch (20) and remove the latter from the pendant station.
- Remove the two plastic guides (23) from the new switch (20).
- Place the switch (20) on the inner part of the pendant station.
- Place back the two plastic guides (23) checking that they are on the right side (the slightly raised part of the guides must be in touch with the metal rods (21) of the pendant station).
- Tighten the screw (29) on the bottom of the inner part of the pendant station in order to fix the switches (20).
- Wire back the switch and close the pendant station as explained in the installation steps.

Additional steps for mounting/replacing control/signalling bulbs into the lamp holders
- Remove the central screw (15) from the frame (14) assembled on the pilot light (12, 16).
- Remove the frame (14).
- Put the bayonet-type bulb into its seat (use BA9s 125V-2,6 W(max) bulbs).
- Place the frame back (14) and tighten the screw (15).

Periodic maintenance steps
- Check the proper tightening of the screws (4, 15).
- Check the proper tightening of the switch (20) terminal screws.
- Check all wiring (in particular where wires clamp into the switches).
- Check the conditions of the rubber frames (7), of the rubber of the actuators (10, 13, 37) and of the cable sleeve (1).
- check that the plastic enclosure (6, 9, 30, 42) of the pendant station is not broken.

In case any component of the pendant station is modified, the validity of the markings and the guarantee on the equipment are annulled. Should any component need replacement, use original spare parts only.

TER declines all responsibility for damages caused by the improper use or installation of the equipment.

* Please refer to the exploded drawing in the catalogue.