NPA-CP
Pendant Control Station

SPRINGER controls company

Pendant station for direct control of industrial machines. Sturdy and handy, NPA-CP is specifically designed for heavy duty in industrial environments.

FEATURES

- The cable sleeve can be angled up to 20° to give the operator the best view of all the control elements and enable a natural, comfortable working position.
- Rubber pushbuttons with symbol disks to ensure protection against dust and prevent jamming when the control station is used in harsh environments.
- Two-colour moulded pushbutton disks to guarantee clear reading and wear resistance
- 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: NPA-CP is classified IP65.
- Extreme temperature resistance: -13°F to +158°F (-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 8 actuators.
- 1 or 2 speed two-pole switches or 1 speed three-pole switches, with or without brake contact, for direct control.
- Mechanical interlock to prevent simultaneous operation of opposite functions.

CERTIFICATIONS

- CE marking and EAC certification.

Fill in the request form for accurate product configuration.

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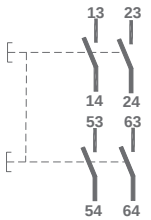
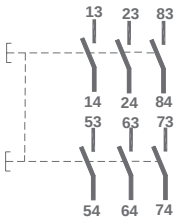
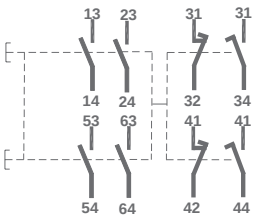
CERTIFICATIONS

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 60947-3 Low-voltage switchgear and controlgear - Switches, disconnectors, switch-dis-connectors and fuse-combination units
	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°F/+158°F (-40°C/+70°C)
	Operational -13°F/+158°F (-25°C/+70°C)
IP protection degree	IP 65
Insulation category	Class II
Cable entry	2÷6 buttons: rubber cable sleeve (Ø 10÷18 mm)
	8 buttons: rubber cable sleeve (Ø 17÷26 mm)
Operating positions	Any position

TECHNICAL SPECIFICATIONS OF THE MICROSWITCHES

Code	PRSL0458PI	PRSL0459PI	PRSL0460PI
Utilisation category	AC 3 - AC 4	AC 3 - AC 4	AC 3 - AC 4
Rated operational current	10 A		
Rated operational voltage	400 Vac		
Rated operational power	2.2 kW		
Rated thermal current	20 A		
Rated insulation voltage	660 Vac		
Brake operating contact	-	100 Vac, 0.7 A, L/R=100 ms	-
Mechanical life	$1x10^6$ operations		
Connections	Screw-type terminal with self-lifting pad		
Wires	1x2.5 mm^2, 2x1.5 mm^2		
Tightening torque	0.8 Nm		
Microswitch type	One speed, two-pole double switch	One speed, two-pole double switch, with brake contact	Two speeds, two-pole double switch
Scheme			
Markings and homologations	CE EAC		

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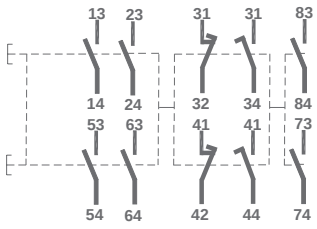
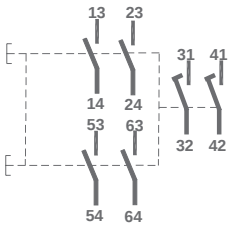
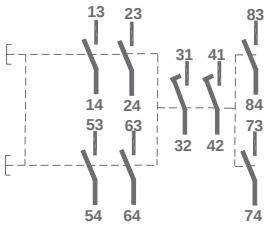
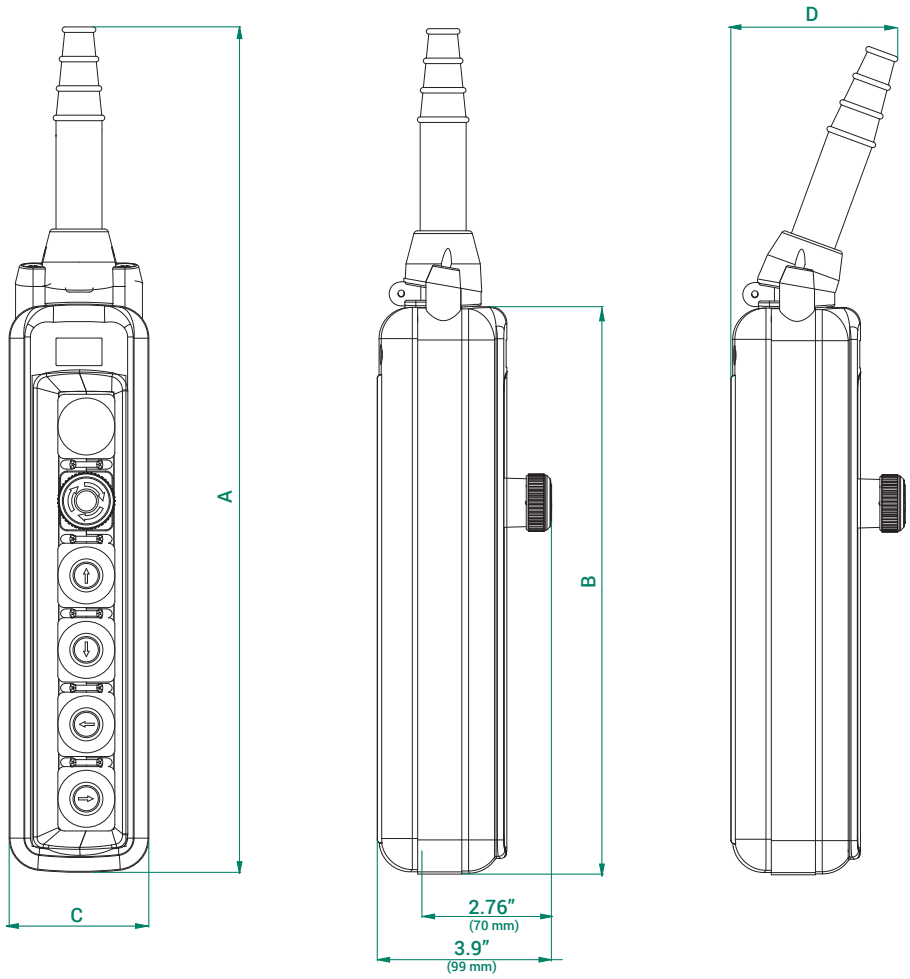
Code	PRSL0461PI	PRSL0471PI
Utilisation category	AC 3 - AC 4	AC 3 - AC 4
Rated operational current	10 A	
Rated operational voltage	400 Vac	
Rated operational power	2.2 kW	
Rated thermal current	20 A	
Rated insulation voltage	660 Vac	
Brake operating contact	100 Vac, 0.7 A, L/R=100 ms	-
Mechanical life	1x10^6 operations	
Connections	Screw-type terminal with self-lifting pad	
Wires	1x2.5 mm^2, 2x1.5 mm^2	
Tightening torque	0.8 Nm	
Microswitch type	Two speeds, two-pole double switch, with brake contact	One speed, three-pole double switch
Scheme		
Markings and homologations	CE EAC	

Code	PRSL0472PI	PRSL0508PI
Utilisation category	AC 3 - AC 4	AC 23B
Rated operational current	10 A	
Rated operational voltage	400 Vac	
Rated operational power	2.2 kW	
Rated thermal current	20 A	
Rated insulation voltage	660 Vac	
Brake operating contact	100 Vac, 0.7 A, L/R=100 ms	-
Mechanical life	1x10^6 operations	
Connections	Screw-type terminal with self-lifting pad	
Wires	1x2.5 mm^2, 2x1.5 mm^2	
Tightening torque	0.8 Nm	
Microswitch type	One speed, three-pole double switch, with brake contact	One speed, three-pole single switch
Scheme		
Markings and homologations	CE EAC	

OVERALL DIMENSIONS



No. of actuators	Dimensions			
	A	B	C	D
2	11.5″ (292 mm)	5.5″ (140 mm)	3″ (76 mm)	3.4″ (87 mm)
3	13.1″ (333 mm)	7.1″ (181 mm)	3″ (76 mm)	3.4″ (87 mm)
4	14.6″ (372 mm)	8.7″ (222 mm)	3″ (76 mm)	3.4″ (87 mm)
6	18.1″ (459 mm)	12.1″ (307 mm)	3″ (76 mm)	3.4″ (87 mm)
8	23.8″ (605 mm)	15.5″ (393 mm)	3.3″ (83 mm)	4.6″ (116 mm)

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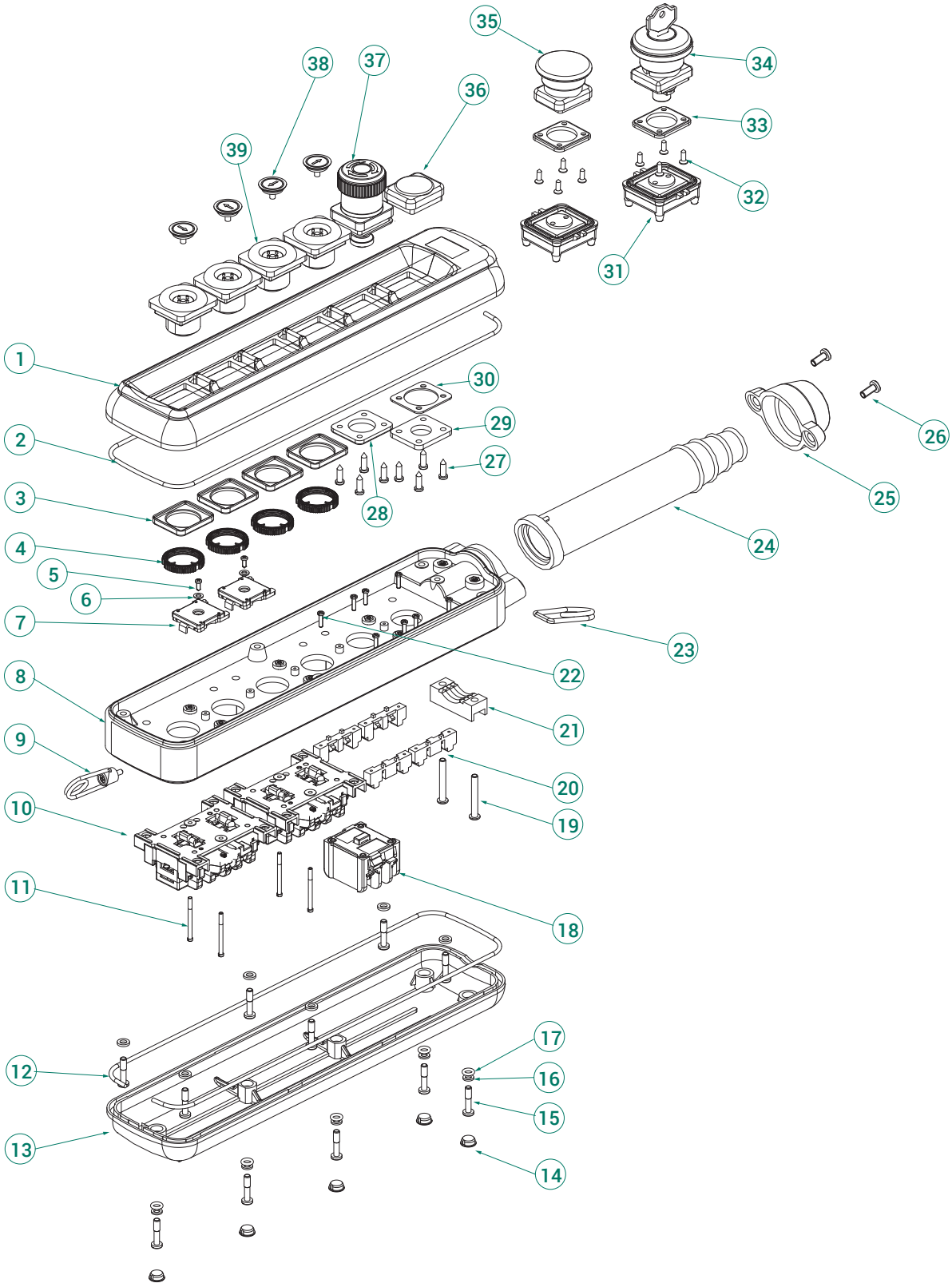
EXPLODED DRAWING

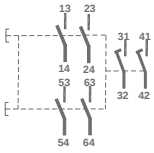


STANDARD CONTROL STATIONS

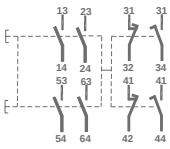
Standard pendant stations are equipped with cable sleeve, hook and mechanical interlock between opposite functions pushbuttons.

3 actuators

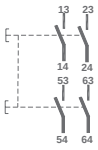
PF30030001

Switch scheme	Switch type	Actuator type
	PRSL0508PI 3NC 1 speed	Latched mushroom pushbutton
	PRSL0471PI 1 speed three-pole	Pushbutton 
		Pushbutton 

PF30030003

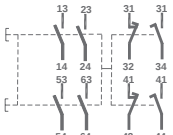
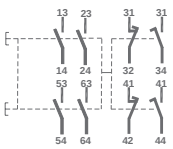
Switch scheme	Switch type	Actuator type
	PRSL0508PI 3NC 1 speed	Latched mushroom pushbutton
	PRSL0460PI 2 speeds two-pole	Pushbutton 
		Pushbutton 

PF30030004

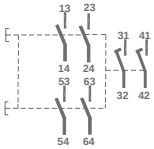
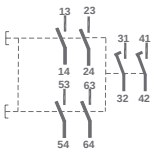
Switch scheme	Switch type	Actuator type
	PRSL0508PI 3NC 1 speed	Latched mushroom pushbutton
	PRSL0458PI 1 speed two-pole	Pushbutton 
		Pushbutton 

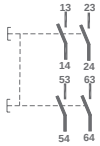
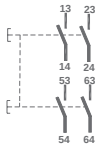
6 actuators

PF30060002

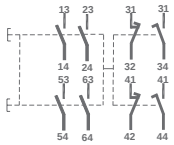
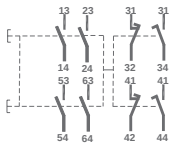
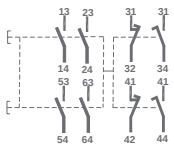
Switch scheme	Switch type	Actuator type
	PRSL0508PI 3NC 1 speed	Latched mushroom pushbutton
-	-	Blanking plug
	PRSL0460PI 2 speeds two-pole	Pushbutton 
		Pushbutton 
	PRSL0460PI 2 speeds two-pole	Pushbutton 
		Pushbutton 

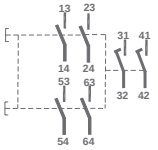
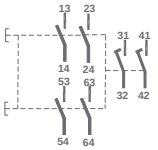
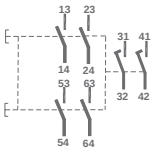
PF30060004

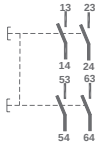
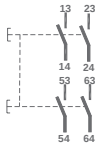
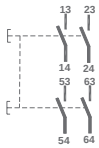
Switch scheme	Switch type	Actuator type
	PRSL0508PI 3NC 1 speed	Latched mushroom pushbutton
-	-	Blanking plug
	PRSL0471PI 1 speed three-pole	Pushbutton 
		Pushbutton 
	PRSL0471PI 1 speed three-pole	Pushbutton 
		Pushbutton 

PF30060019		
Switch scheme	**Switch type**	**Actuator type**
	PRSL0508PI 3NC 1 speed	Latched mushroom pushbutton
-	-	Blanking plug
	PRSL0458PI 1 speed two-pole	Pushbutton 
		Pushbutton 
	PRSL0458PI 1 speed two-pole	Pushbutton 
		Pushbutton 

8 actuators

PF30080001		
Switch scheme	**Switch type**	**Actuator type**
	PRSL0508PI 3NC 1 speed	Latched mushroom pushbutton
-	-	Blanking plug
	PRSL0460PI 2 speeds two-pole	Pushbutton 
		Pushbutton 
	PRSL0460PI 2 speeds two-pole	Pushbutton 
		Pushbutton 
	PRSL0460PI 2 speeds two-pole	Pushbutton 
		Pushbutton 

PF30080010		
Switch scheme	**Switch type**	**Actuator type**
	PRSL0508PI 3NC 1 speed	Latched mushroom pushbutton
-	-	Blanking plug
	PRSL0471PI 1 speed three-pole	Pushbutton 
		Pushbutton 
	PRSL0471PI 1 speed three-pole	Pushbutton 
		Pushbutton 
	PRSL0471PI 1 speed three-pole	Pushbutton 
		Pushbutton 

PF30080022		
Switch scheme	**Switch type**	**Actuator type**
	PRSL0508PI 3NC 1 speed	Latched mushroom pushbutton
-	-	Blanking plug
	PRSL0458PI 1 speed two-pole	Pushbutton 
		Pushbutton 
	PRSL0458PI 1 speed two-pole	Pushbutton 
		Pushbutton 
	PRSL0458PI 1 speed two-pole	Pushbutton 
		Pushbutton 

NOTES

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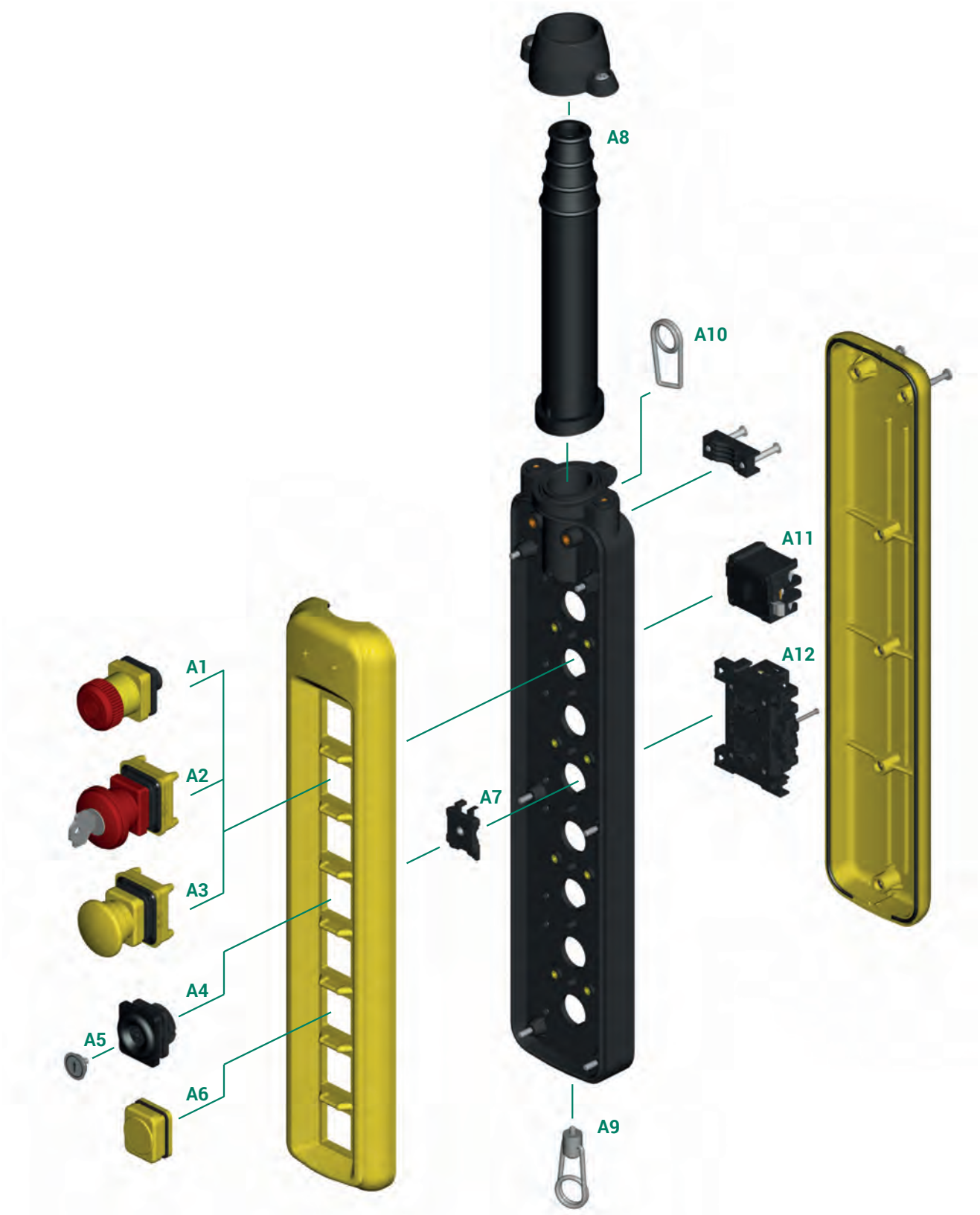
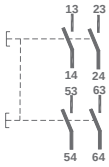
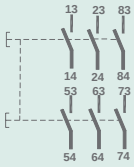
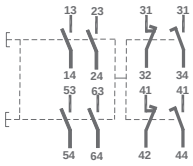
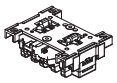
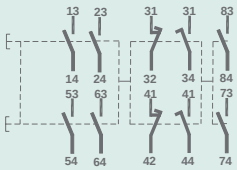
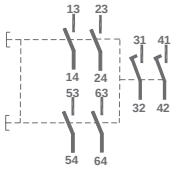
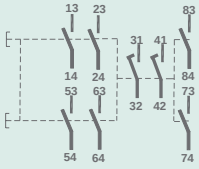
ASSEMBLY DRAWING

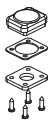


COMPONENTS

Switches

Ref.	Drawing	Description	Scheme	Code
		One speed, two-pole double switch		PRSL0458PI
		One speed, two-pole double switch, with brake contact		PRSL0459PI
		Two speeds, two-pole double switch		PRSL0460PI
A12		Two speeds, two-pole double switch, with brake contact		PRSL0461PI
		One speed, three-pole double switch		PRSL0471PI
		One speed, three-pole double switch, with brake contact		PRSL0472PI
A11		One speed, three-pole single switch, for mushroom pushbutton		PRSL0508PI

Actuators

Ref.	Drawing	Description	Code
A6		Blanking plug	PRSL0517PI
A5		Disk for dust-tight pushbutton	PRTA_ _ _ _ _ _ See standard disk
A4		Dust-tight pushbutton	PRSL0550PI

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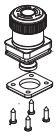
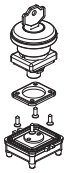
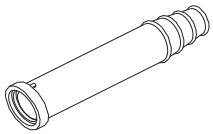
Mushroom pushbuttons

Ref.	Drawing	Description	Code
A1		Latched mushroom pushbutton for emergency stop	PRSL0600PI
A2		Key mushroom pushbutton	PRSL0520PI
A3		Impulse mushroom pushbutton	PRSL0512PI

Accessories

Ref.	Drawing	Description	Code
A7		Mechanical interlock	PRSL7817PI
A8		Cable sleeve for 2 - 6 button units	PRGO0100PE
		Cable sleeve for 8 button units	PRGO0105PE
A9		Wire fixing	PRTO6626PE
A10		Hook	PRGA0001PE

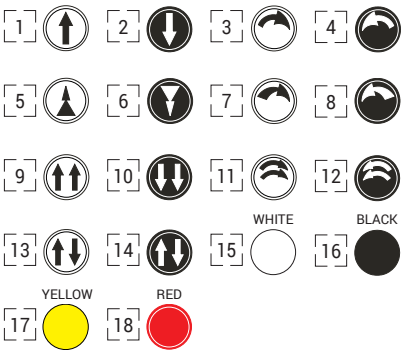
Standard disks

PRTA002XPI PRTA005XPI PRTA006XPI PRTA007XPI PRTA008XPI PRTA011XPI PRTA012XPI PRTA015XPI PRTA016XPI PRTA018XPI

PRTA019XPI PRTA022XPI PRTA023XPI PRTA026XPI PRTA027XPI PRTA097XPI PRTA098XPI PRTA099XPI

NPA-CP - REQUEST FORM FOR NON STANDARD PENDANT STATION

Control elements



19 PRSL0517PI Blanking plug

20 PRSL0600PI Emergency stop mushroom pushbutton

21 PRSL0512PI Impulse mushroom pushbutton

22 PRSL0520PI Key mushroom pushbutton

Mushroom pushbuttons are fitted with PRSL0508PI switches (1 speed 3NC).

1 speed switches

A PRSL0458PI Two-pole switch

B PRSL0459PI Two-pole switch with brake contact

C PRSL0471PI Three-pole switch

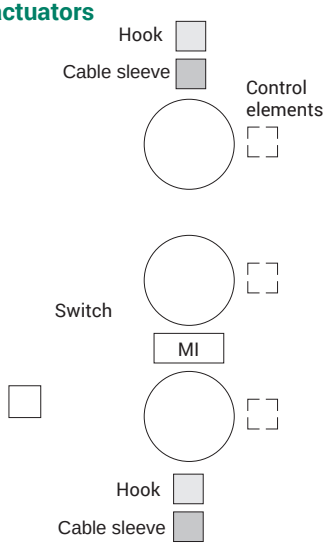
D PRSL0472PI Three-pole switch with brake contact

2 speed switches

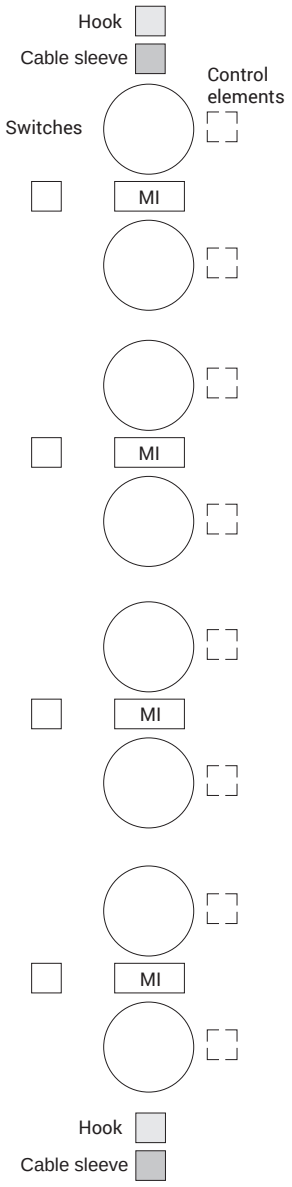
E PRSL0460PI Two-pole switch

F PRSL0461PI Two-pole switch with brake contact

3 actuators



2-4-6-8 actuators



Instructions

- Fill in the pendant station scheme for the number of control elements required (2, 3, 4, 6, or 8 actuators).
- Write the number corresponding to the control element required (broken line box). Mark the direction of the pushbutton arrow into the corresponding circle.
- Write the letters corresponding to the switches required for into the unbroken boxes.
- Check the box corresponding to the mechanical interlock between pushbuttons when required . MI
- Check the appropriate box to show where the cable sleeve and the hook must be assembled (top or bottom).

Notes

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USE AND MAINTENANCE INSTRUCTIONS

The NPA-CP Pendant Control Station is an electromechanical device for low voltage control circuits (EN 60947-3) 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 (10) are designed for direct control of contactors or electromagnetic loads. Do not connect more than one phase to each switch (10, 18). Do not oil or grease the control elements (34, 35, 37, 39) or the switches 10, 18).

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 screws (15) on the lower cover (13) to open the pendant station.
- Cut the variable section rubber cable sleeve (24) and insert the cable tight enough to guarantee protection against water and/or dust.
- Fix the cable to the cable sleeve (24) using a cable tie (not supplied).
- Strip the cable to a length suitable for wiring the switches (20, 28).
- Tape the stripped part of the cable.
- Fix the cable inside the pendant station using the cable clamp (21).
- Connect all the switches (10, 18) according to the contact scheme printed on the switches (tighten the terminal screws with a torque of 0.8 Nm; insertability of wires into the terminals 1x2.5 mm^2 - 2x1.5mm^2).
- Close the pendant station checking the proper positioning of the rubber (12) in the cover (1) and of the "O" rings (17).
- Put the rubber caps for the screws (14) into the holes in the lower cover (13).

Periodic maintenance steps
- Check the proper tightening of the screws (15) of the enclosure (1, 8, 13).
- Check the proper tightening of the switch (10, 18) terminal screws.
- Check all wiring (in particular where wires clamp into the switches).
- Check the conditions of the rubber (12) fit into the lower cover (13), of the rubber of the control elements (39) and of the cable sleeve (24).
- Check that the plastic enclosure (1, 8, 13) 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.

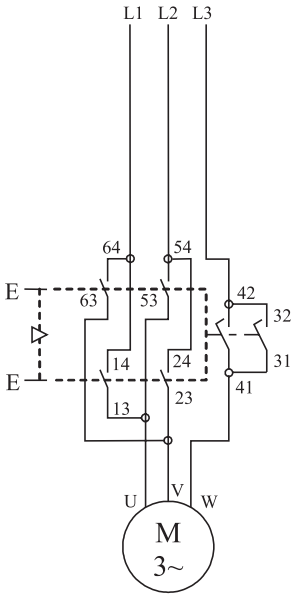
TER declines all responsibility for damages caused by the improper use or installation of the equipment.

* Please refer to the exploded drawing in the catalogue.

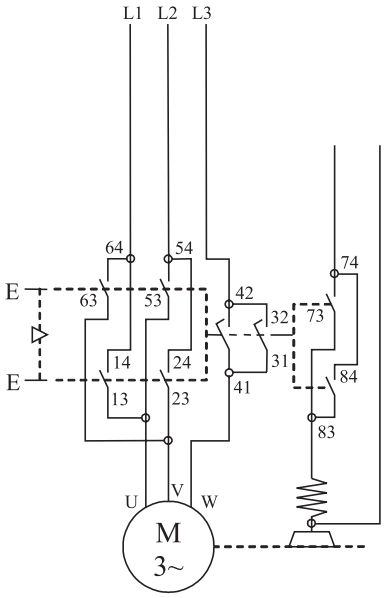
NOTES

Direct control circuits for 1 speed three-phase reversing motors

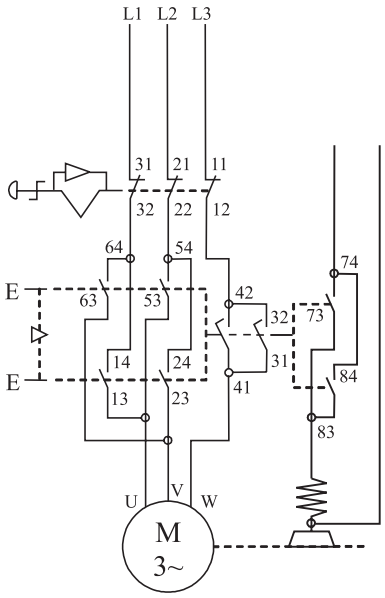
Circuits for 1 speed motors



Circuits for brake wiring

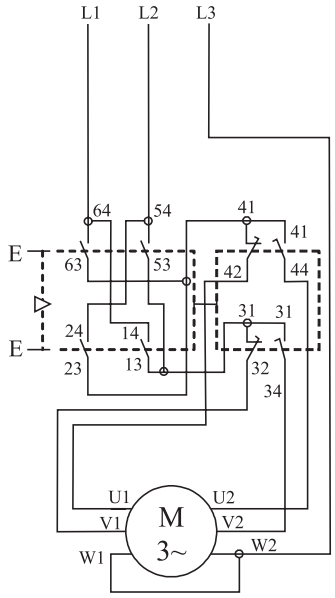


Circuits for brake and mushroom pushbutton wiring

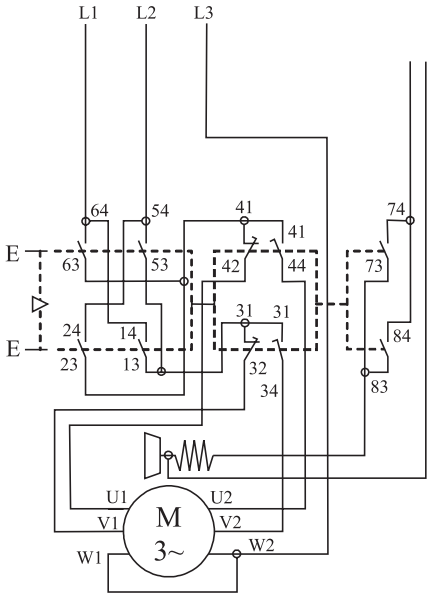


Direct control circuits for 2 speed three-phase reversing motors

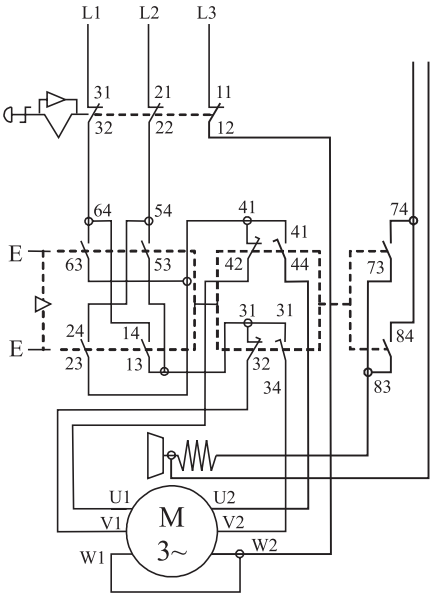
Circuits for 2 speed motors



Circuits for brake wiring



Circuits for brake and mushroom pushbutton wiring



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