# PCA PCP

Pendant stations PCA/PCP can be used to control the motors of hoisting machines (hoists, windlasses, winches, etc.). Designed for heavy duty PCA/PCP is aimed specifically for the industrial market.

Two series are available. The PCA units are used for auxiliary control. It operates as an auxiliary controller of electrical motors through a power interface, such as a contactor or PLC. The PCP series is used for direct control.

They provide an ergonomic grip for ease of use, they have small overall dimensions and, because of the new design of the pendant stations, the contact elements (be they for auxiliary or for direct control) are easily assembled and connected.

The pendant stations are equipped with dust-proof rubber pushbuttons with a rubber protection holding disks featuring wear resistant symbols thanks to the double two-colour injection moulding procedure.

Materials and components are wear resistant and protect the equipment against water and dust. The disks with symbols and assemblies can be customised according to the customer's requirements.

A variety of contact elemens, NO (normally open) and NC (normally closed), are available. The PCA pendant stations are equipped with one, two or three-speed slow action contact elements, while the PCP units feature one or two-speed snap action contact elements.

The emergency STOP mushroom pushbutton complies with the EN 418 standard and is equipped with positive opening NC contact elements.

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# TECHNICAL SPECIFICATIONS

Conformity to Community Directives	73/23/CEE, 93/68/CEE	
Conformity to Standards	EN 60204-1, EN 60947-1, EN 60947-5-1, (EN 60947-3 pro PCP),	
	EN 60529, EN 41	8, EN 50013, IEC 536
Ambient temperature	Storage	-40°C/+70°C
	Operational	-25°C/+70°C
Protection degree	IP 65	
Insulation category	Class II	
Cable entry	Rubber cable sleeve Ø 6,5 $\div$ 19 mm and cable clamp	
Operating positions	any position	
Homologations	CE (UL – (c)UL control stations available on request)	

## OVERALL DIMENSIONS







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# CONTACT ELEMENTS FOR PCA - TECHNICAL DATA

Utilisation category	AC 15
Rated operational current	1,9 A
Rated operational voltage	380 V
Rated thermal current	10 A
Rated insulation voltage	500 V AC
Mechanical life	1 000 000 operations
Terminal referencing	according to EN 50013
Connections	screw-type terminals, wires 1x2,5 mm <sup>2</sup> or 2x1,5 mm <sup>2</sup>
	screw tightening torque 0,8 Nm
Homologations	CE - UL - (c)UL

 brass fixed and movable contact holders, silver-nickel alloy contacts, stainless steel springs, self-extinguishing plastic material

- all contact elements are single
- possibility mechanical interlock
- $-\,$  all NC contact elements are positive opening operation type

The contact elements have the following reference for internal wiring.









Contact element PRSL0503PI: 1NO (it is possible to assemble up to two switches under each control element)



One-speed contact element PRSL0504PI: 2NO+1NC







Three-speed contact element PRSL0507PI: 1NO>>1NO>>1NO





# CONTACT ELEMENTS FOR PCP - TECHNICAL DATA

Utilisation category	AC 3, AC 4 (AC 23B for PRSL0508PI) according to EN 60947–3, 100 V / 0,7 A – L/R=100ms according to EN 60947–3 for brake operating contact
Rated operational current	10 A according to EN 60947-3
Rated operational voltage	400 V AC according to EN 60947-3
Rated operational power	3 kW according to EN 60947-3
Rated thermal current	20 A according to EN 60947-3
Rated insulation voltage	660 V AC according to EN 60947-3
Mechanical life	1 000 000 operations
Terminal referencing	according to EN 50013
Connections	screw-type terminals, wires 1x2,5 mm <sup>2</sup> or 2x1,5 mm <sup>2</sup>
	screw tightening torque 0,8 Nm
Homologations	CE

 brass fixed and movable contact holders, silver-cadmium oxide alloy contacts, stainless steel springs, self-extinguishing plastic material

- possibility mechanical interlock
- all NC contact elements are positive opening operation type

The contact elements have the following reference for internal wiring.



PRSL0458PI

One-speed two-pole contact element with brake contact PRSL0459PI: 2NO+BK/2NO+BK



PRSL0459PI



Two-speed two-pole



ontact element with brake contact PRSL0461PI: 2x (2NO+BK>>1NC+1NO)





One-speed three-pole

contact element

PRSL0471PI:

(2x 2NO)+2NO

14 24

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PRSL0472PI

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One-speed single contact element PRSL0508PI: 3NC



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### COMPONENTS

REFERENCE	PCP CODE	DESCRIPTION
01*	PRGO0110PE	rubber cable sleeve
02*	PRGA0010PE	hook
03*	PRSL0517PE	blanking plug
04*	PRSL0600PI	emergency STOP mushroom pushbutton
05*	PRTAXXXXPI (see standard disks)	disk for dust-tight pushbutton
06*	PRSL0552PI	dust-tight pushbutton (without button)
07*	PRSL5855PI	cover
08*	PRSL9475PI	cable clamp – part 1
09*	PRSL9210AU	cable clamp – part 2
10*	PRVI0206PE	cable clamp screw
11	PRSL7817PI	mechanical interlock
12	PRSL5858PI	holding plate for contact elements
	PRSL0508PI	single one-speed contact element 3NC
	PRSL0458PI	double one-speed contact element
	PRSL0459PI	double one-speed contact element with brake contact
13	PRSL0460PI	double two-speed contact element
	PRSL0461PI	double two-speed contact element with brake contact
	PRSL0471PI	double one-speed three-poles contact element
	PRSL0472PI	double one-speed three-poles contact element with brake contact

15 PRVI0022PE	screw for double contact elements
16* PRVI0051PE	screw for contact elements holding plate
17 PRSL5856PI	cover
18* PRVI0200PE	screw

## STANDARD DISK FOR DUST-TIGHT PUSHBUTTONS

PRTA004XPI



PRTA018XPI

PRTA032XPI











PRTA019XPI

PRTA097XPI



PRTA022XPI

PRTA098XPI

PRTA003XPI









PRTA005XPI

PRTA013XPI





PRTA006XPI

PRTA014XPI





PRTA007XPI

PRTA015XPI



PRTA016XPI

PRTA008XPI







STATIONS

PCA/PCP PENDANT CONTROL

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PRTA099XPI

# STANDARD PCA PENDANT STATION CODES

Code No.	CONTACT ELEMENTS AND DESCRIPTION
PF27610001	2x one-speed PRSL0503PI (1NO), without STOP pushbutton
PF27620001	2x one-speed PRSL0503PI (1NO) and PRSL0502PI (1NC) for STOP pushbutton
PF27630001	2x two-speed PRSL0505PI (1NO+1NC>>1NO), without STOP pushbutton
PF27640001	2x two-speed PRSL0505PI (1NO+1NC>>1NO) and PRSL0502PI (1NC) for STOP pushbutton

# STANDARD PCP PENDANT STATION CODES

# PCP WITH TWO-POLES ONE-SPEED CONTACT ELEMENTS

Code No.	CONTACT ELEMENTS AND DESCRIPTION
PF27670001	1x PRSL0458PI (2NO/2NO), without STOP pushbutton
PF27680001	1x PRSL0458PI (2NO/2NO) and PRSL0508PI (3NC) for STOP pushbutton
PF27690001	1x PRSL0459PI (2NO+BK/2NO+BK), without STOP pushbutton
PF27700001	1x PRSL0459PI (2NO+BK/2NO+BK) and PRSL0508PI (3NC) for STOP pushbutton

# PCP WITH TWO-POLES TWO-SPEED CONTACT ELEMENTS

CODE NO.	CONTACT ELEMENTS AND DESCRIPTION
PF 27710001	1x PRSL0460PI (2x (2NO>>1NC+1NO)), without STOP pushbutton
PF 27720001	1x PRSL0460PI (2x (2NO>>1NC+1NO)) and PRSL0508PI (3NC) for STOP pushbutton
PF 27730001	1x PRSL0461PI (2x (2NO+BK>>1NC+1NO), without STOP pushbutton
PF 27740001	1x PRSL0461PI (2x (2NO+BK>>1NC+1NO) and PRSL0508PI (3NC) for STOP pushbutton

#### PCP WITH THREE-POLES ONE-SPEED CONTACT ELEMENTS

CODE NO.	CONTACT ELEMENTS AND DESCRIPTION
PF 27810001	1x PRSL0471PI ((2x 2NO)+2NO), without STOP pushbutton
PF 27820001	1x PRSL0471PI ((2x 2NO)+2NO) and PRSL0508PI (3NC) for STOP pushbutton
PF 27830001	1x PRSL0472PI ((2x (2NO+BK))+2NO), without STOP pushbutton
PF 27840001	1x PRSL0472PI ((2x (2NO+BK))+2NO) and PRSL0508PI (3NC) for STOP pushbutton





#### STANDARD PCA/PCP CONTROL STATION

Standard control station code No.

#### NON STANDARD PCA/PCP CONTROL STATION



#### INSTRUCTIONS

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#### STANDARD CONTROL STATION

- fill in the standard control station code No. (see page 7 this documents)

#### NON STANDARD CONTROL STATION

- write the number corresponding to the control element required (broken line box). When pushbuttons are required and when
  necessary, mark the direction of the arrow into the corresponding circle.
- write the number corresponding to the single or double contact elements required, keeping in mind that it is possible to assemble up to two contact element number 1 and 2 (1NC, 1NO) under each control element, but only one of the other contact elements
- mark the rectangular box between the pushbuttons when the mechanical interlock is required

#### REMARKS

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# Use and Maintenance Instructions

The PCA/PCP 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 73/23/CEE and of the Machine Directive 89/392/CEE.

The pendant station PCA/PCP is designed for industrial use and also for use under particularly severe climatic conditions (operational temperature from  $-25^{\circ}$ C to  $+70^{\circ}$ 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.

The PCA pendant station control elements (14) 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 control element (14). The PCP pendant station control elements (13) are designed for direct control (utilisation category AC 3, AC 4, AC 23B according to EN 60947-3).

Do not oil or grease the control elements (4, 6) or the switches (13, 14).

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 PCA/PCP

- remove the screws (18) on the lower cover (17) to open the pendant station
- cut the variable section rubber cable sleeve (1) and insert the cable tight enough to guarantee protection against water and/or dust
- fix the cable to the cable sleeve (1) using a cable tie (not supplied)
- strip the cable to a length suitable for wiring the contact elements (13, 14)
- tape the stripped part of the cable
- fix the cable inside the pendant station using the cable clamp (8, 9, 10)
- connect all the switches (13, 14) according to the contact scheme printed on the contact elements (tighten the wires into the terminals with a torque equal to 0.8 Nm; insertability of wires into the contact element terminals equal to 2x1.5mm<sup>2</sup> – 1x2.5 mm<sup>2</sup>)
- close the pendant station

#### Additional steps for replacing the contact elements

- uncouple all the wires from the contact element
- push the two clips on the sides of the contact element to remove it from contact element holder (12). For removing the PCP double contact elements remove the screws (15).
- assemble the new contact element on the contact element holder (12) checking that the two clips are properly coupled.
   For the PCP double contact elements screw on the screws (15).
- couple all the wires on the contact element. Tighten the wires into the terminals with a torque equal to 0.8 Nm.

#### **Periodic maintenance steps**

- check the proper tightening of the screws (18) of the enclosure (7, 17)
- check the proper tightening of the contact elements (13, 14) terminal screws
- check all wiring (in particular where wires clamp into the contact elements)
- check the conditions of the rubber the lower cover, of the rubber of the control elements (4, 6) and of the cable sleeve (1)
- check that the plastic enclosure (7, 17) of the pendant station PCA/PCP 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.



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