

NPA PENDANT CONTROL STATION



— The NPA pendant station is a control device for all industrial machinery. It operates as an auxiliary controller of electrical motors through a power interface, such as a contactor or PLC. Designed for heavy duty, NPA is aimed specifically for the industrial market.

— Both thermoplastic rectangular buttons and round disks are available, the latter mounted on rubber pushbuttons to guarantee protection against dust which may cause the pushbuttons to stick when the equipment is used under particular environmental conditions. Buttons and discs comprise of a moulded two-colour arrangement offering a combination of clear reading of symbols and text with maximum wear resistance.

— Materials and components are wear resistant and protect the equipment against water and dust. The pendant station can be customised with labels and colours according to the customer's requirements.

— By turning the cable sleeve on the central part axis, the pendant station is kept at an angle of inclination of 20° which allows the best view of all control elements, allowing the operator to work in a natural and non-tiring position.

— One, two or three speed switches are available. The emergency stop mushroom pushbutton complies with the EN 418 standard and is equipped with positive opening nc switches.

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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 EN60947-5-1 EN 60529 EN 418 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	2÷6 buttons: rubber cable sleeve Ø 10÷18 mm 8÷12 buttons: rubber cable sleeve Ø 17÷26 mm
Operating positions	Any position
Homologations	CE (UL - (c)UL control stations available on request)

TECHNICAL SPECIFICATIONS

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~
Mechanical life	1x10 ⁶ operations
Terminal referencing	According to EN 50013
Connections	Screw-type terminals
Homologations	CE - UL - (c)UL

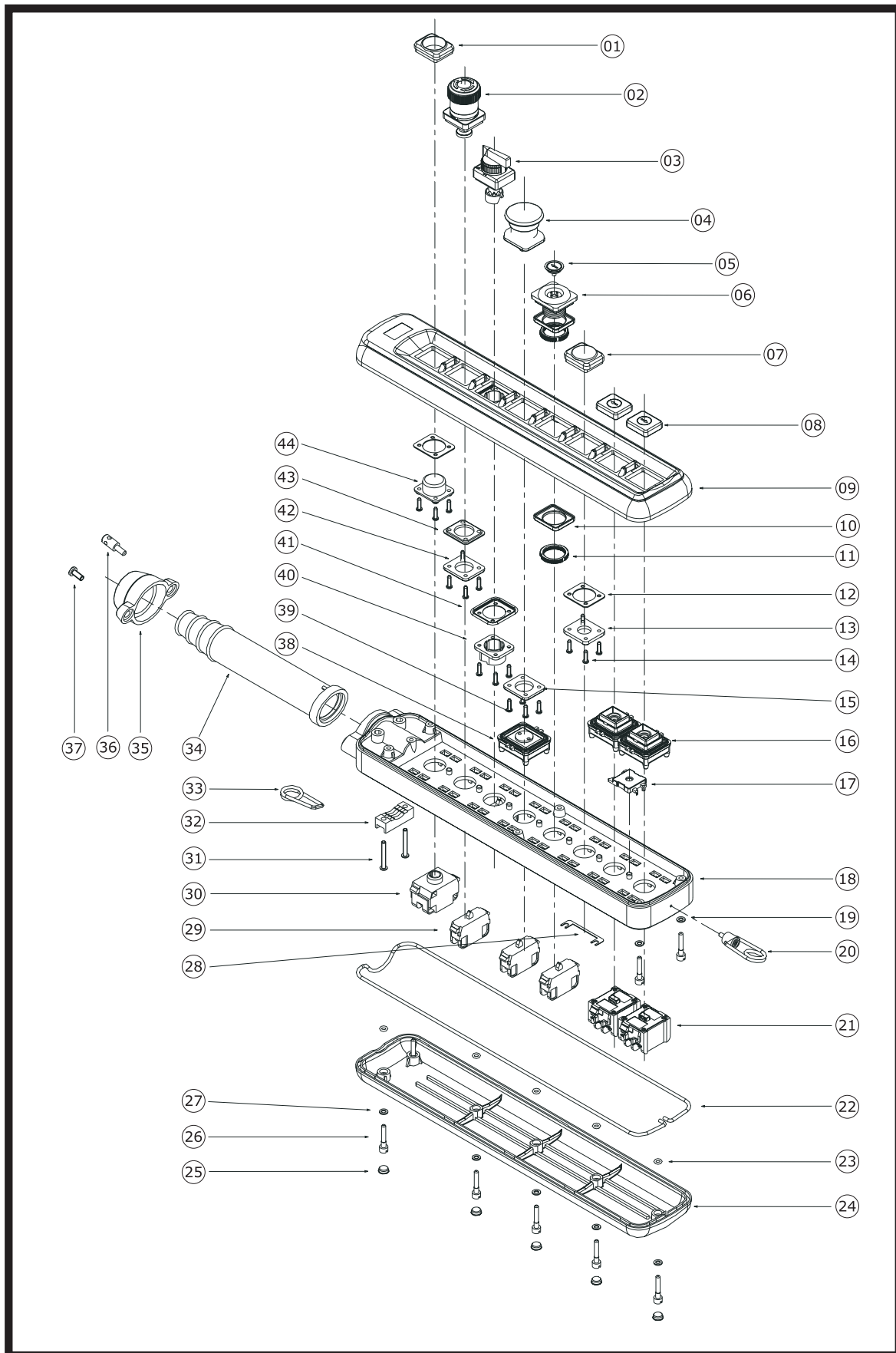
OVERALL DIMENSIONS

The technical drawings illustrate the NPA Pendant Control Station from three perspectives: a side view showing the cable entry (E) and overall length (A), a top view showing the button array (B) and width (C), and an angled view showing the cable length (F). The device is cylindrical with a button array on top and a cable entry on the side.

No. of buttons	Weight (kg)	Overall dimensions (mm)					
		A	B	C	D	E	F
2	0,450	292	140	76	70	99	87
3	0,550	333	181	76	70	99	87
4	0,650	372	222	76	70	99	87
6	0,900	459	307	76	70	99	87
8	1,200	605	393	83	70	99	116
10	1,400	685	474	83	70	99	116
12	1,700	771	560	90	70	99	116

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DETAILED DRAWING

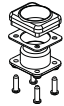


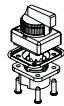

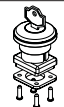










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SPARE PARTS

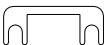


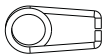


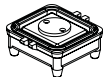
REFERENCE	DRAWING	CODE	DESCRIPTION
01 + 12+14+44		PRSL0515PI PRSL0516PI PRSL0521PI	Red pilot light Green pilot light Yellow pilot light
02 + 14+42+43		PRSL0500PI	Emergency stop mushroom pushbutton
03 + 14+40+41		PRSL0513PI	3 position key selector switch
03 + 14+40+41		PRSL0514PI PRSL0519PI	3 position selector switch Spring return 3 position selector switch
04 + 15+39		PRSL0512PI	Impulse mushroom pushbutton
04 + 15+39		PRSL0520PI	Key mushroom pushbutton
05		PRTAxxxxxx See standard disks	Disk for dust-tight pushbutton
06 + 10+11		PRSL0550PI	Dust-tight pushbutton
07 + 12+13+14		PRSL0517PI	Blanking plug
08		PRTAxxxxxx See standard buttons	Button
16		PRSL0518PI	Button housing
17		PRSL7816PI	Mechanical interlock
20		PRGA0051PE	Lower hook
21		PRSL0504PI PRSL0505PI PRSL0506PI PRSL0507PI	1 speed switch - 1no+1nc+1no simultaneous 2 speed switch - 1no+1nc+1no sequenced 1 speed switch - 3no simultaneous 3 speed switch - 3no sequenced

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REFERENCE	DRAWING	CODE	DESCRIPTION
28		PRTR6120PE	22 mm connecting bridge
		PRTR6121PE	28 mm connecting bridge
		PRTR6122PE	25 mm connecting bridge
		PRTR6123PE	31 mm connecting bridge
		PRTR6124PE	47 mm connecting bridge
29		PRSL0502PI	1nc switch
		PRSL0503PI	1no switch
30		PRSL0501PI	Lamp holder
33		PRGA0001PE	Upper hook
34		PRGO0100PE	Cable sleeve for 2÷6 button units
		PRGO0105PE	Cable sleeve for 8÷12 button units
36		PRT06626PE	Wire fixing
38		PRSL0522PI	Actuating base for PRSL0512PI and PRSL0520PI

STANDARD DISKS

GREEN		RED		YELLOW		GREEN									
	PRTA001XPI		PRTA002XPI		PRTA003XPI		PRTA004XPI		PRTA005XPI		PRTA006XPI		PRTA007XPI		PRTA008XPI
															
	PRTA009XPI	PRTA010XPI	PRTA011XPI	PRTA012XPI	PRTA013XPI	PRTA014XPI	PRTA015XPI	PRTA016XPI							
															
	PRTA018XPI	PRTA019XPI	PRTA022XPI	PRTA023XPI	PRTA026XPI	PRTA027XPI	PRTA030XPI	PRTA031XPI							
		YELLOW		WHITE		BLACK									
	PRTA032XPI		PRTA097XPI		PRTA098XPI		PRTA099XPI								

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STANDARD BUTTONS

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PRTA101XPI GREEN	PRTA102XPI RED	PRTA103XPI YELLOW	PRTA104XPI GREEN	PRTA105XPI	PRTA105XPB	PRTA106XPI	PRTA106XPB	PRTA107XPI	PRTA107XPB	PRTA108XPI	PRTA108XPB
PRTA109XPI	PRTA109XPB	PRTA110XPI	PRTA110XPB	PRTA111XPI	PRTA112XPI	PRTA112XPB	PRTA113XPI	PRTA114XPI	PRTA114XPB	PRTA115XPI	PRTA116XPI
PRTA116XPB	PRTA117XPI	PRTA117XPB	PRTA118XPI	PRTA119XPI	PRTA119XPB	PRTA120XPI	PRTA121XPI	PRTA121XPB	PRTA122XPI RED	RESET LINE GREEN	STOP LINE RED
ALARM PRTA132IPI YELLOW	RESET ALARM PRTA133IPI GREEN	UP LIFTING PRTA134IPI	DOWN LIFTING PRTA135IPI	UP FAST LIFT PRTA136IPI	DOWN FAST LIFT PRTA137IPI	UP 1-2 SPEEDS L. PRTA138IPI	DOWN 1-2 SPEEDS L. PRTA139IPI	FAST ROTATION PRTA140IPI	FAST LIFTING PRTA141IPI	FORW. TRANSL. PRTA142IPI	BACKW. TRANSL. PRTA143IPI
ROTATION PRTA144IPI	ROTATION PRTA145IPI	FAST ROT. PRTA146IPI	FAST ROT. PRTA147IPI	1-2 SPEEDS R. PRTA148IPI	1-2 SPEEDS R. PRTA149IPI	BRAKE PRTA150IPI	MICRO LIFTING PRTA151IPI	FORW. TROLLEY PRTA152IPI	BACKW. TROLLEY PRTA153IPI	FORW. FAST TROLLEY PRTA154IPI	BACKW. FAST TROLLEY PRTA155IPI
FORW. 1-2 SPEED T. PRTA156IPI	BACKW. 1-2 SPEED T. PRTA157IPI	FORW. BRIDGE PRTA170IPI	BACKW. BRIDGE PRTA171IPI	FORW. FAST BRIDGE PRTA172IPI	BACKW. FAST BRIDGE PRTA173IPI	FORW. 1-2 SPEEDS B. PRTA174IPI	BACKW. 1-2 SPEEDS B. PRTA175IPI	LEFT TROLLEY PRTA176IPI	RIGHT TROLLEY PRTA177IPI	LEFT FAST TROLLEY PRTA178IPI	RIGHT FAST TROLLEY PRTA179IPI
LEFT 1-2 SPEEDS T. PRTA180IPI	RIGHT 1-2 SPEEDS T. PRTA181IPI	EAST 1-2 SPEED T. PRTA183IPI	NORTH BRIDGE PRTA184IPI	SOUTH BRIDGE PRTA185IPI	SOUTH FAST BRIDGE PRTA186IPI	NORTH FAST BRIDGE PRTA187IPI	NORTH 1-2 SPEED B. PRTA188IPI	SOUTH 1-2 SPEED B. PRTA189IPI	WEST TROLLEY PRTA190IPI	EAST TROLLEY PRTA191IPI	WEST FAST TROLLEY PRTA192IPI
EAST FAST TROLLEY PRTA193IPI	WEST 1-2 SPEED T. PRTA194IPI	PRTA199XPI BLACK	UP PRTA201IPI	DOWN PRTA202IPI	NORTH PRTA203IPI	SOUTH PRTA204IPI	EAST PRTA205IPI	WEST PRTA206IPI	UP 1-2 SPEED PRTA207IPI	DOWN 1-2 SPEED PRTA208IPI	NORTH 1-2 SPEED PRTA209IPI
SOUTH 1-2 SPEED PRTA210IPI	EAST 1-2 SPEED PRTA211IPI	WEST 1-2 SPEED PRTA212IPI	START PRTA213IPI GREEN	RAISE PRTA214IPI	LOWER PRTA215IPI	FORWARD PRTA216IPI	REVERSE PRTA217IPI	PRTA220XPI YELLOW	PRTA221XPI GREEN	PRTA223XPI	PRTA223XPB
PRTA229XPI WHITE	PRTA361XPI	PRTA361XPB	PRTA362XPI	PRTA362XPB	PRTA363XPI	PRTA363XPB	PRTA364XPI	PRTA364XPB	PRTA365XPI	PRTA365XPB	PRTA372XPI
PRTA372XPB	PRTA375XPI	PRTA375XPB									

Standard buttons in Italian, French, Spanish and German are available.
Buttons with non-standard letterings and symbols are available on request.



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REQUEST FORM FOR NON STANDARD PENDANT STATIONS

CONTROL ELEMENTS		SWITCHES		BUTTONS	
<input type="checkbox"/> 1	<input type="checkbox"/> 8	<input type="checkbox"/> 15	<input type="checkbox"/> 22	<input type="checkbox"/> 1 PRSL0501PI	Lamp holder
<input type="checkbox"/> 2	<input type="checkbox"/> 9	<input type="checkbox"/> 16	<input type="checkbox"/> 23	<input type="checkbox"/> 2 PRSL0502PI	1 nc switch
<input type="checkbox"/> 3	<input type="checkbox"/> 10	<input type="checkbox"/> 17	<input type="checkbox"/> 24	<input type="checkbox"/> 3 PRSL0503PI	1no switch
<input type="checkbox"/> 4	<input type="checkbox"/> 11	<input type="checkbox"/> 18	<input type="checkbox"/> 25	<input type="checkbox"/> 4 PRSL0504PI	1 speed 1no+1nc+1nosimultaneous
<input type="checkbox"/> 5	<input type="checkbox"/> 12	<input type="checkbox"/> 19	<input type="checkbox"/> 26	<input type="checkbox"/> 5 PRSL0505PI	2 speed 1no+1nc+1no sequenced
<input type="checkbox"/> 6	<input type="checkbox"/> 13	<input type="checkbox"/> 20	<input type="checkbox"/> 27	<input type="checkbox"/> 6 PRSL0506PI	1 speed 3no simultaneous
<input type="checkbox"/> 7	<input type="checkbox"/> 14	<input type="checkbox"/> 21	<input type="checkbox"/> 28	<input type="checkbox"/> 7 PRSL0507PI	1 speed 3no sequenced
<input type="checkbox"/> 29 PRSL0500PI	Emergency stop mushroom pushbutton			<input type="checkbox"/> 1	Rectangular buttons
<input type="checkbox"/> 30 PRSL0512PI	Impulse mushroom pushbutton			<input type="checkbox"/> 2	Disks (dust-tight)
<input type="checkbox"/> 31 PRSL0513PI	3 position key selector switch				
<input type="checkbox"/> 32 PRSL0514PI	3 position selector switch				
<input type="checkbox"/> 33 PRSL0515PI	Red pilot light				
<input type="checkbox"/> 34 PRSL0516PI	Green pilot light				
<input type="checkbox"/> 35 PRSL0517PI	Blanking plug				
<input type="checkbox"/> 36 PRSL0519PI	Spring return 3 pos. selector switch				
<input type="checkbox"/> 37 PRSL0520PI	Key mushroom pushbutton				
<input type="checkbox"/> 38 PRSL0521PI	Yellow pilot light				

INSTRUCTIONS

- Fill in the **pendant station** scheme for the number of control elements required (2, 3, 4, 6, 8, 10, or 12 buttons).
- Write the number corresponding to the **control element** required (broken line box). When buttons are required and when necessary, mark the direction of the arrow into the corresponding circle. In case buttons different from those listed above are needed, write the code number required.
- Write the number corresponding to the **switches** required, keeping in mind that it is possible to assemble up to two switches number 2 and 3 under each control element, but only one of the other switches.
- Mark the box corresponding to the type of **buttons** required (rectangular or disks).
- Mark the rectangular box between the pushbuttons when the **mechanical interlock** is required.
- Mark the appropriate box to show where the **cable sleeve** and the **hook** must be assembled (top or bottom).

REMARKS

Hook

Cable sleeve

Switches

Control elements

PRTA _____ PI

Control elements

PRTA _____ PI

Control elements

PRTA _____ PI

Control elements

PRTA _____ PI

Control elements

PRTA _____ PI

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USE AND MAINTENANCE INSTRUCTIONS

The NPA 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 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.

The switches (20, 28) 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, 28). Do not oil or grease the control elements (02, 03, 04, 06, 08, 15) or the switches (20, 28).

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 (25) on the lower cover (23) to open the pendant station
- cut the variable section rubber cable sleeve (33) and insert the cable tight enough to guarantee protection against water and/or dust
- fix the cable to the cable sleeve (33) 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 (31)
- connect all the switches (20, 28) according to the contact scheme printed on the switches (tighten the wires into the terminals with a torque equal to 0.8 Nm; insertability of wires into the switch terminals equal to 2x1.5mm² - 1x2.5 mm²)
- close the pendant station checking the proper positioning of the rubber (21) in the cover (23) and of the "O" rings (22)
- put the rubber caps for the screws (24) into the holes in the lower cover (23)

Additional steps for mounting/replacing control/signalling bulbs into the lamp holders

- push the two clips on the sides of the lamp holder (29) to remove it from the central part (17) of the pendant station
- put the bayonet-type bulb into its seat (use BA9s 125V-2.6 W(max) bulbs)
- assemble the lamp holder (29) on the central part (17) of the pendant station checking that the two clips are properly coupled

Periodic maintenance steps

- check the proper tightening of the screws (25) of the enclosure (09, 17, 23)
- check the proper tightening of the switch (20, 28) terminal screws
- check all wiring (in particular where wires clamp into the switches)
- check the conditions of the rubber (21) fit into the lower cover (23), of the rubber of the control elements (06) and of the cable sleeve (33)
- check that the plastic enclosure (09, 17, 23) 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.

