

# ALPHA PENDANT CONTROL STATION

Brochure & Installation Guide

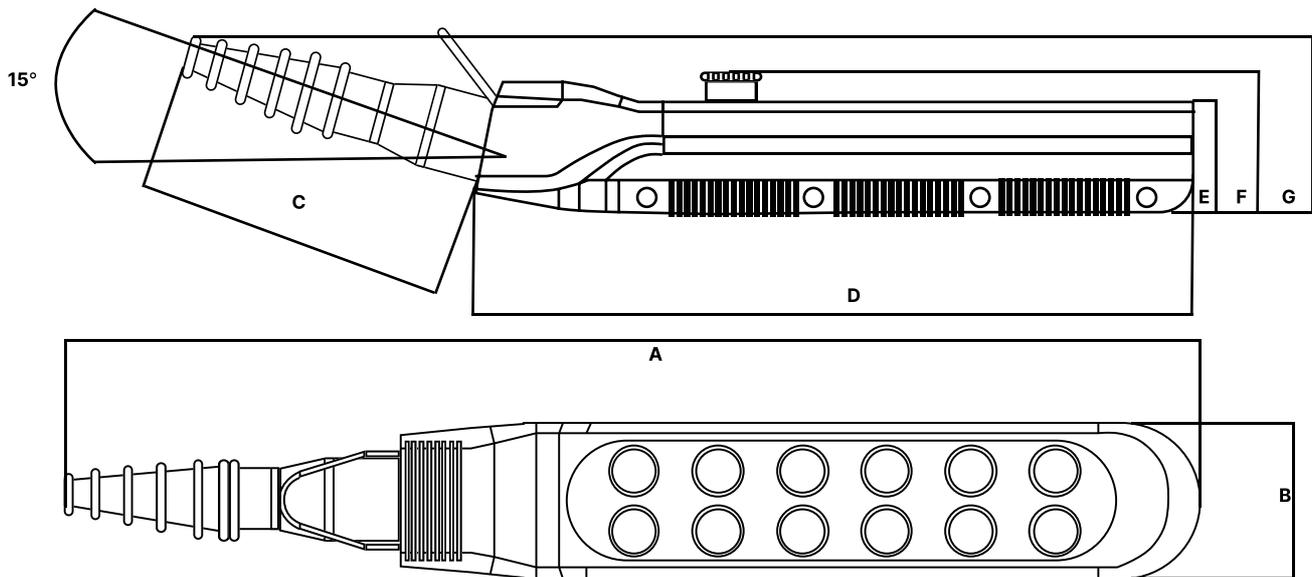


# Alpha Pendant Control Station

## General Information

The Alpha Pendant Control Station is a heavy duty auxiliary control device intended for use on industrial overhead cranes or other mobile electrical equipment. It is available with 2 to 13 buttons arranged in 2 columns to allow for pairing of opposing functions and reducing the overall length. Alpha offers an innovative design, where commonly used motions are featured graphically in place of text. It has also been designed to facilitate ease of wiring and maintenance, reducing time for installation. Materials are wear resistant and protect the equipment against water and dust ingress. Alpha can be customized with labels and colors according customer requirements. The ergonomic pendant station features an angle of inclination that allows for optimal view of all control elements when in use. The cable entry gland can accommodate up to and including 24 conductor 16 AWG round PVC pendant cable. All electric connections use screw-type terminals. The emergency stop mushroom push button complies with the EN 418 standards and is equipped with positive opening NC switches.

## Overall Dimensions



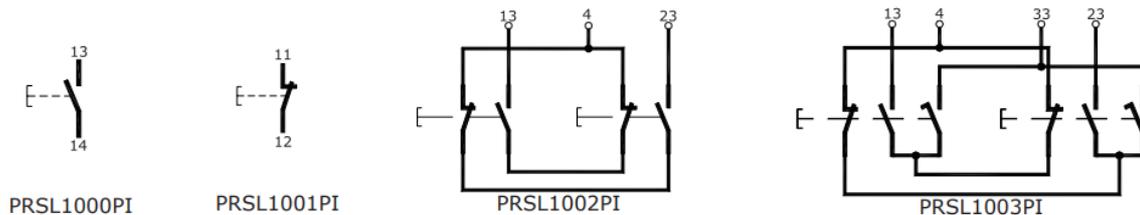
| No. of buttons | Weight (kg) | Overall dimensions (mm) |    |     |     |    |    |    |
|----------------|-------------|-------------------------|----|-----|-----|----|----|----|
|                |             | A                       | B  | C   | D   | E  | F  | G  |
| 4              | 0.470       | 382                     | 75 | 169 | 220 | 60 | 78 | 97 |
| 8              | 0.720       | 460                     | 75 | 169 | 302 | 60 | 78 | 97 |
| 12             | 0.890       | 537                     | 75 | 169 | 382 | 60 | 78 | 97 |

# Alpha Pendant Control Station

## Technical Specifications

### Technical Specifications

|   |   |
|---|---|
| <b>Conformity to Community Directives</b> | 72/23/CEE 93/68CEE  |
| <b>Conformity to Standards</b>            | EN 60204-1 EN 60947-1 EN60947-5-1 EN 60529<br>EN 418 EN 50013 IEC 536 |
| <b>Ingress Protection</b>                 | IP 65   |
| <b>Ambient Temperature</b>                | Storage -40°C/+70°C Operational -25°C/+70°C                           |
| <b>Insulation Category</b>                | Class II  |
| <b>Cable Entry</b>                        | Rubber cable sleeve (Ø 14÷26 mm)                                      |
| <b>Operating Positions</b>                | Any position  |
| <b>Homologations</b>                      | CE, cCSAus  |



### Switch Technical Specifications

|                                  |                                |
|----------------------------------|--------------------------------|
| <b>Utilisation Category</b>      | AC 15                          |
| <b>Rated Operational Current</b> | 3 A                            |
| <b>Rated Operational Voltage</b> | 250 V                          |
| <b>Rated Thermal Current</b>     | 10 A                           |
| <b>Rated Insulation Voltage</b>  | 500 V~                         |
| <b>Mechanical Life</b>           | 0.5×10 <sup>6</sup> operations |
| <b>Terminal Nomenclature</b>     | According to EN 50013          |
| <b>Connections</b>               | Screw-type terminals           |
| <b>Certifications</b>            | CE - UL - (c)UL                |

### Switch Features

The single speed switch PRSL1000PI has 1 NO contact

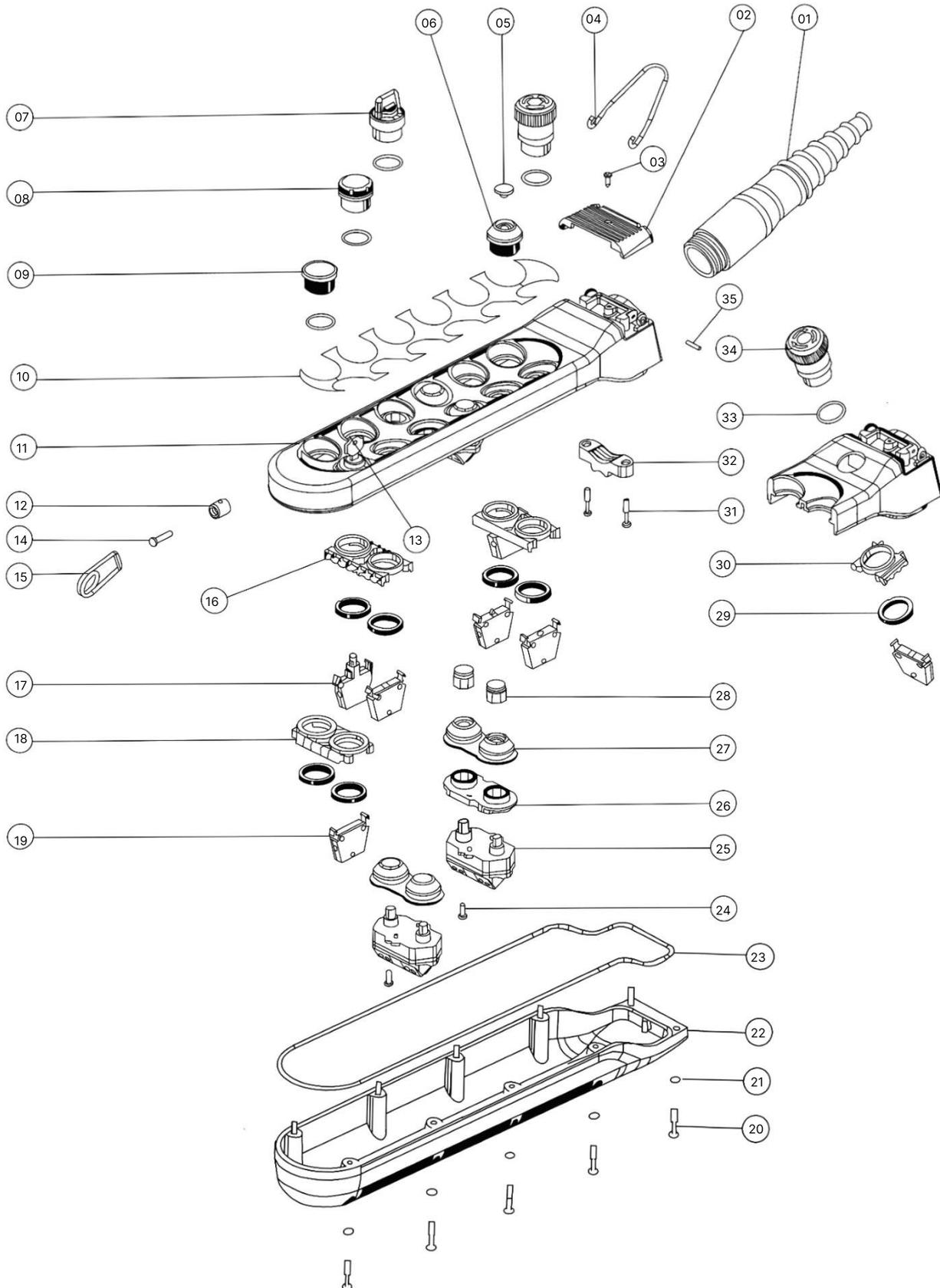
The single speed switch PRSL1001PI has 1 NC contact

The single speed double switch PRSL1002PI features 1 NO contact for each opposing function and an electrical interlock

The 2 speed double switch PRSL1003PI features 1 NO contact for each opposing function, 1 NO shared high speed contact and an electrical interlock

# Alpha Pendant Control Station

## Detailed Drawing



# Alpha Pendant Control Station

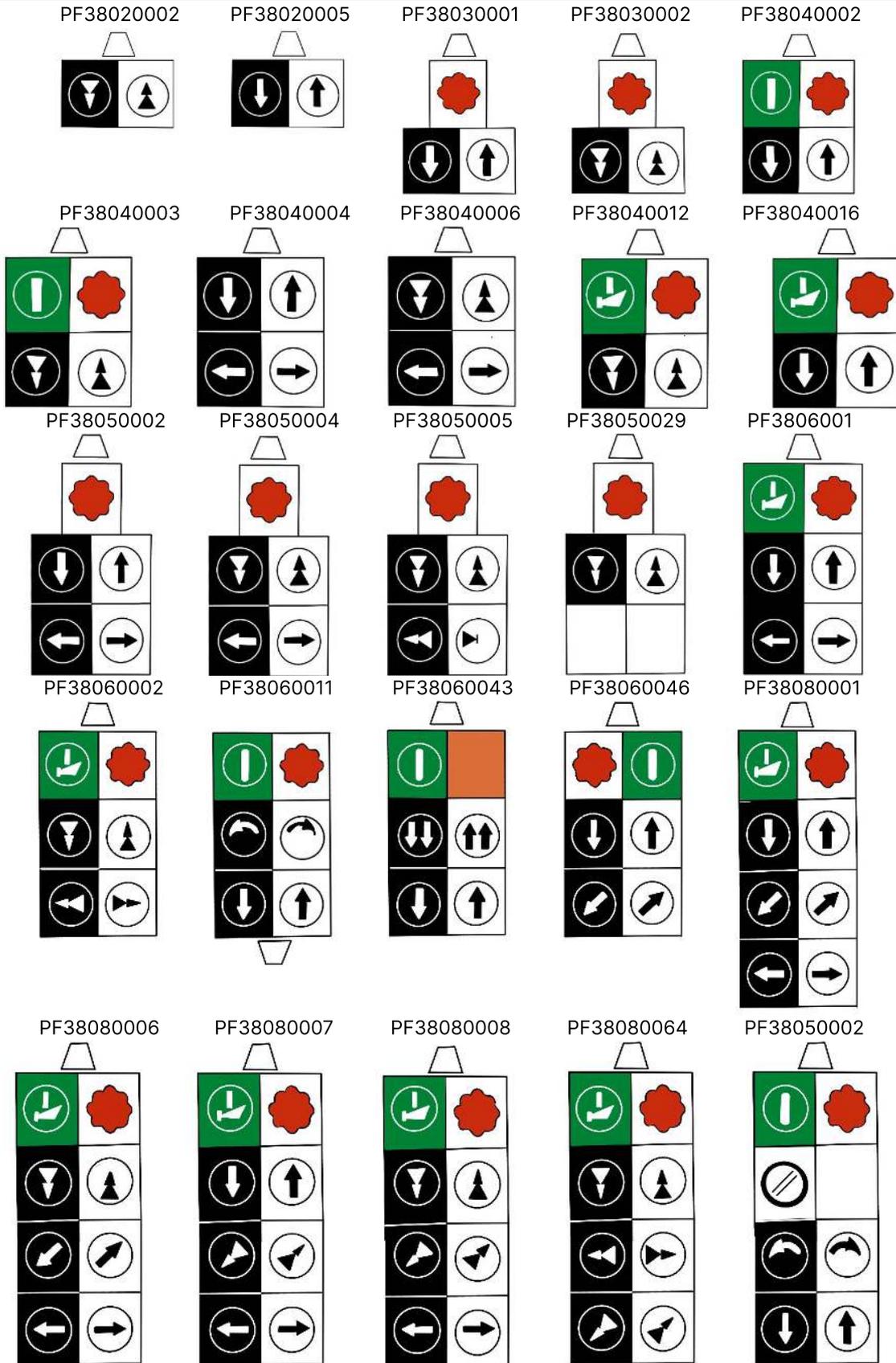
## Switches, Buttons & Components

| REFERENCE      | PART #     | DESCRIPTION                                    |
|----------------|------------|--|
| 01             | PRSL0145PE | Cable sleeve                                   |
| 02             | PRSL5603PI | Small cover                                    |
| 03             | PRVI0036PE | Screw 3.5×10                                   |
| 04             | PRGA0020PE | Upper hook                                     |
| 05             | PRSL9551PI | Button for single pushbutton                   |
| 06 (+29)       | PRSL1010PI | Single pushbutton (without button)             |
| 07 (+32+29)    | PRSL1015PI | Spring return selector switch (on-off)         |
| 08 (+32+29)    | PRSL1016PI | Red pilot light                                |
| 09 (+32+29)    | PRSL1026PI | Blanking plug                                  |
| 10             | PRSL1027PI | Label  |
| 11 (+34)       | PRSL1012PI | Cover 2/4                                      |
| 12             | PRSL1013PI | Support for hook                               |
| 13 (+32+29)    | PRSL1017PI | Key selector switch (on-off)                   |
| 14             | PRVI0126PE | Screw 4×20                                     |
| 15 (12++14)    | PRGA0051PE | Lower hook                                     |
| 16             | PRSL8736PI | Holding plate for 3+3 switches                 |
| 17             | PRSL1004PI | Lamp holder                                    |
| 18             | PRSL8735PI | Holding plate for 2+2 switches                 |
| 19             | PRSL1000PI | 1 NO switch                                    |
| 20             | PRVI0120PE | Screw 3.9×22                                   |
| 21             | PRRN8000PE | Fiber washer                                   |
| 22 (+20+21+23) | PRSL5066PI | Housing 2/3/4/5                                |
| 23             | PRGU0045PE | Gasket   |
| 24             | PRVI0106PE | Screw 4×10                                     |
| 25             | PRSL1002PI | 1 speed double switch                          |
| 26             | PRSL8737PI | Holding plate for rubber                       |
| 27             | PRGO0020PE | Rubber for double pushbutton (without buttons) |
| 28             | PRSL9552PI | Button for double pushbutton                   |
| 29             | PRSL9184PI | Ring   |
| 30             | PRSL8739PI | Holding plate for 3 switches                   |
| 31 (+20)       | PRSL1020PI | Cable clamp                                    |
| 32             | PRGU0056PE | O-Ring 2075                                    |
| 33 (+32+29)    | PRSL1009PI | Emergency stop mushroom pushbutton             |
| 34             | PRVV1502PE | Pin  |



# Alpha Pendant Control Station

## Standard Control Stations



# Alpha Pendant Control Station

## Standard Control Stations

|            |            |            |            |            |
|------------|------------|------------|------------|------------|
| PF38090022 | PF38100001 | PF38100002 | PF38100017 | PF38100085 |
|            |            |            |            |            |
| PF38100086 | PF38100088 | PF38120001 | PF38120002 | PF38120068 |
|            |            |            |            |            |
| PF38120089 | PF38130023 |            |            |            |
|            |            |            |            |            |

**LEGEND**

- PRSL1009PI Emergency stop mushroom push button
- PRSL1023PI Blanking plug
- PRSL1012PI Red pilot light
- PRSL1014PI Green pilot light
- PRSL1016PI Selector switch (on-off)
- Cable sleeve assembled on the top
- Cable sleeve assembled on the bottom





# Alpha Pendant Control Station

## Use and Maintenance Instructions

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Alpha 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  $-25^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ , 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 (17, 19, 25) 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 (17, 19, 25).

Do not oil or grease the control elements (06, 07, 13, 28, 33) or the switches (17, 19, 25). The installation of the pendant station shall be carried out by 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.

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### Installation Instructions

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1. Remove the screws on the enclosure (22) to open the pendant station.
2. Cut the variable section rubber cable sleeve (01) and insert the cable tight enough to guarantee protection against water and/or dust.
3. Fix the cable to the cable sleeve (01) using a cable tie (not supplied).
4. Strip the cable to a length suitable for wiring the switches (17, 19, 25).
5. Tape the stripped part of the cable- fix the cable inside the pendant station using the cable clamp (31).
6. Connect all the switches (17, 19, 25) according to the contact scheme printed on the switches (tighten the wires into the terminals with a torque equal to 0.6 Nm; insert ability of wires into the switch terminals equal to  $2 \times 1.5\text{mm}^2 - 1 \times 2.5\text{mm}^2$ ).
7. Close the pendant station checking the proper positioning of the rubber (23) in the enclosure (22).

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### Maintenance Instructions

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1. Check the proper tightening of the screws (20) of the enclosure (11, 22)
2. Check the proper tightening of the switch (17, 19, 25) terminal screws
3. Check the wiring conditions (in particular where wires clamp into the switches)
4. Check the conditions of the rubber (23) fit into the enclosure (22), of the rubber of the control elements (06, 27) and of the cable sleeve (01)
5. Check that the plastic enclosure (11, 22) 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.