# ROMEO-PK

# Joystick station



#### **FEATURES**

- · Designed for Romeo joysticks.
- Carry-on straps and aluminium handles provide for greater ease of use.
- The emergency stop mushroom pushbutton complies with standard EN 418 and is positioned in the middle for intuitive operation in case of danger.
- Mechanical life of switches: 1 million operations.
- IP protection degree: Romeo PK is classified min. IP43 max. IP65, depending on the joystick.
- 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**

- Wide range of actuators: pushbuttons, selector switches and key-selector switches, pilot lights.
- Single switches with NO or NC contacts and double switches with NO contacts, one or two speeds, with electrical interlock to prevent simultaneous operation of opposite functions.
- Available with customized labels and enclosures with different size holes.

#### **CERTIFICATIONS**

· CE marking and EAC certification.

Fill in the "request form" for accurate product configuration.

#### 3

### **CERTIFICATIONS**

| Conformity to Community Directives | 2014/35/UE Low Voltage Directive   |
|------------------------------------|--|
| Conformity to Community Directives | 2006/42/CE Machinery Directive   |
|                                    | EN 60204-1 Safety of machinery - Electrical equipment of machines  |
|                                    | EN 60947-1 Low-voltage switchgear and controlgear  |
| Conformity to CE Standards         | 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         | C € EMI  |

# **GENERAL TECHNICAL SPECIFICATIONS**

| Ambient temperature  | Storage -40°C/+70°C  Operational -25°C/+70°C |
|--|--|
| Grado di protezione IP Min. IP 43 - max. IP 65 depending on the joystick |  |
| Insulation category  | Class II                                     |
| Cable entry  | Cable sleeve (Ø 14÷26 mm)                    |
| Operating positions  | Any position                                 |
| Weight   | ~3.8 kg                                      |

### **TECHNICAL SPECIFICATIONS OF THE SWITCHES**

| Code                       | PRSL1000PI                                      | PRSL1000PI PRSL1001PI  |  |  |  |
|----------------------------|---|--|--|--|--|
| Utilisation category       | AC  | AC 15  |  |  |  |
| Rated operational current  | 3.  | 3 A  |  |  |  |
| Rated operational voltage  | 250   | Vac  |  |  |  |
| Rated thermal current      | 10  | A  |  |  |  |
| Rated insulation voltage   | 500   | Vac  |  |  |  |
| Mechanical life            | 1x10 <sup>6</sup> op                            | 1x10 <sup>6</sup> operations   |  |  |  |
| Connections                | Screw-type                                      | Screw-type terminals   |  |  |  |
| Wires                      | 1x2.5 mm², 2x1.5 mm² (UL - (c)UL: use 60°C or 7 | 1x2.5 mm², 2x1.5 mm² (UL - (c)UL: use 60°C or 75°C copper (CU) conductor and wire 16-18 AWG) |  |  |  |
| Tightening torque          | 0.6   | 0.6 Nm   |  |  |  |
| Microswitch type           | Double break, slow action                       | Double break, slow action  |  |  |  |
| Contacts                   | 1NO   | 1NC  |  |  |  |
| Scheme                     | E   |  |  |  |  |
| Markings and homologations | C € c@us [A[                                    |  |  |  |  |



| Code                       | PRSL1002PI PRSL1003PI   |                         |  |  |
|----------------------------|---|-------------------------|--|--|
| Utilisation category       | AC 15   |                         |  |  |
| Rated operational current  | 3 A   |                         |  |  |
| Rated operational voltage  | 250   | Vac                     |  |  |
| Rated thermal current      | 1(  | ) A                     |  |  |
| Rated insulation voltage   | 500   | Vac                     |  |  |
| Mechanical life            | 1x10 <sup>6</sup> op  | oerations               |  |  |
| Connections                | Screw-type terminals  |                         |  |  |
| Wires                      | 1x2.5 mm², 2x1.5 mm²<br>(UL - (c)UL: use 60°C or 75°C copper (CU) conductor and wire 16-18 AWG) |                         |  |  |
| Tightening torque          | 0.6   | Nm                      |  |  |
| Microswitch type           | Double switch, 1 speed  | Double switch, 2 speeds |  |  |
| Contacts                   | 2NO+common  | 3NO+common              |  |  |
| Scheme                     | 13 4 23   |                         |  |  |
| Markings and homologations | C € c(W)us [A][   |                         |  |  |

### TECHNICAL SPECIFICATIONS OF THE LAMP HOLDERS

| Code                       | PRSL1004PI           |
|----------------------------|----------------------|
| Maximum voltage            | 125 V                |
| Maximum power              | 2.6 W                |
| Lamp type                  | T5.5K 22 mm          |
| Connections                | Screw-type terminals |
| Wires                      | 1x2.5 mm², 2x1.5 mm² |
| Tightening torque          | 0.6 Nm               |
| Markings and homologations | (€                   |

# TECHNICAL SPECIFICATIONS OF THE SWITCHES (JOYSTICK)

| Code                        | PRVV0804PE  |  |  |
|-----------------------------|---|--|--|
| Utilisation category        | AC 15   |  |  |
| Oneveting electrical veges  | Inductive load 48 Vac/1 A<br>125 Vac/1 A<br>250 Vac/0.5 A<br>30 Vdc/1 A |  |  |
| Operating electrical usages | Resistive load 48 Vac/2 A<br>125 Vac/3 A<br>250 Vac/2 A<br>30 Vdc/3 A   |  |  |
| Rated thermal current       | 8 A   |  |  |
| Rated insulation voltage    | 1000 Vac  |  |  |
| Mechanical life             | 5x10 <sup>6</sup> operations  |  |  |
| Connections                 | Screw-type terminals  |  |  |
| Wires                       | 0.2 mm <sup>2</sup> - 2.5 mm <sup>2</sup>                               |  |  |
| Tightening torque           | 0.5 Nm - 0.6 Nm   |  |  |
| Microswitch type            | Single break  |  |  |
| Contacts                    | 1NC   |  |  |
| Scheme                      | 11<br>[7<br>12  |  |  |
| Markings and homologations  | ( E & cAlus voe   |  |  |

# TECHNICAL SPECIFICATIONS OF THE BUTTONS (JOYSTICK)

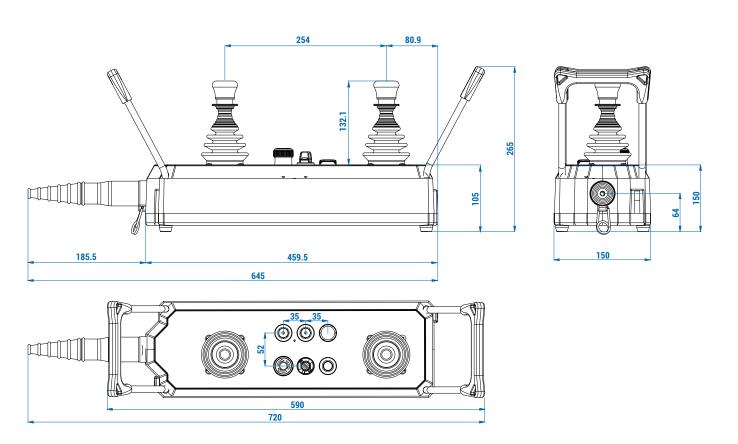
| Code                       | PRVV5019PE  | PRVV5020PE | PRVV5080PE   |
|----------------------------|---|------------|--|
| Color                      | Green   | Black      | Green  |
| Contact rated current      | Resistive load 32 Vac/400 mA<br>Resistive load 50 Vdc/100 mA<br>Resistive load 125 Vac/125 mA |            | Resistive load 28 Vdc/5 A<br>Resistive load 125 Vac/125 mA |
| Contact resistance         | 50 mΩ   |            | -  |
| Mechanical life            | 1x10 <sup>6</sup> operations  |            | 1x10 <sup>6</sup> operations                               |
| Contacts                   | 11  | 1NO        |  |
| Markings and homologations | (€  |            | C€   |

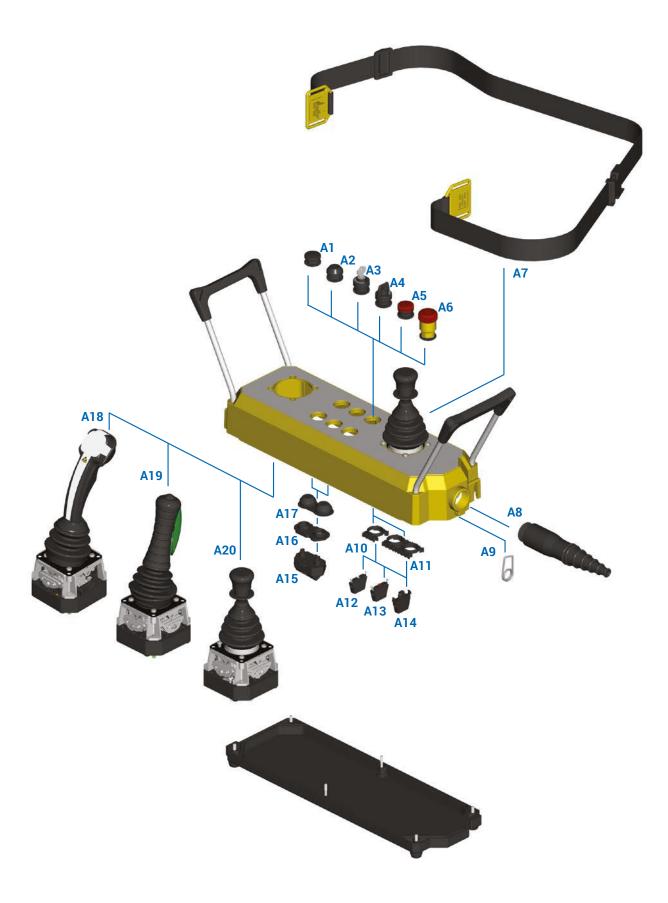


# TECHNICAL SPECIFICATIONS OF THE POTENTIOMETERS (JOYSTICK)

| Code                                 | PRVV9020PE          | PRVV9025PE                  | PRVV9035PE |  |  |  |
|--------------------------------------|---------------------|-----------------------------|------------|--|--|--|
| Ohmic value                          | 4.7 kΩ 10 kΩ 2.2 kΩ |                             |            |  |  |  |
| Indipendent linearity (over AEA -3°) |                     | ±0.25%                      |            |  |  |  |
| Life time                            |                     | 3x10 <sup>6</sup> movements |            |  |  |  |
| Operational ambient temperature      |                     | -55°C/+125°C                |            |  |  |  |
| Mechanical angle                     |                     | 360° continuous             |            |  |  |  |
| Actual Electrical Angle (AEA)        |                     | 355°±5°                     |            |  |  |  |
| Ohmic value tolerance                |                     | ±5%                         |            |  |  |  |
| Temperature drift                    | < 50 PPM/°C         |                             |            |  |  |  |
| Dissipation                          | 4 W                 |                             |            |  |  |  |

# **OVERALL DIMENSIONS (mm)**







Refer to the following tables for descriptions of components: "Switches", "Actuators", "Pilot lights", "Selector switches", "Mushroom pushbuttons", "Joysticks" and "Accessories".

### **COMPONENTS**

### **Switches**

| Ref. | Drawing | Description                           | Scheme                               | Code       |
|------|---------|---------------------------------------|--------------------------------------|------------|
| A12  |         | 1NO switch                            | E\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | PRSL1000PI |
| A13  |         | 1NC switch                            | E                                    | PRSL1001PI |
| A14  |         | Lamp holder                           | -                                    | PRSL1004PI |
| A15  |         | 1 speed, 2NO+common<br>double switch  | 13 4 23                              | PRSL1002PI |
|      |         | 2 speeds, 3NO+common<br>double switch | 13 4 33 23                           | PRSL1003PI |

#### **Actuators**

| Ref. | Drawing | Description                         | Code       |
|------|---------|-------------------------------------|------------|
| A1   |         | Blanking plug                       | PRSL1023PI |
| A2   | 9       | Single pushbutton                   | PRTS000001 |
| A16  | 0.0     | Holding plate for double pushbutton | PRSL8737PI |
| A17  |         | Double pushbutton with rubber       | PRTD000001 |

# **Pilot lights**

| Ref. | Drawing | Color  | Code       |
|------|---------|--------|------------|
|      |         | Red    | PRSL1012PI |
| A5   |         | Yellow | PRSL1013PI |
|      |         | Green  | PRSL1014PI |

# **Selector switches**

| Ref. | Drawing | Positions | Spring return | Maintained positions | Pull-out position | Code       |
|------|---------|-----------|---------------|----------------------|-------------------|------------|
| 4.0  |         | 0/1       |               | Χ                    | 0                 | PRSL1046PI |
| A3   |         | 0/1       | Χ             |                      | 0                 | PRSL1024PI |
|      |         | 0/1       | X             |                      |                   | PRSL1040PI |
|      |         | 0/1       |               | Χ                    |                   | PRSL1029PI |
| A4   |         | 1/0/2     | Χ             |                      |                   | PRSL1026PI |
|      |         | 1/0/2     |               | Χ                    |                   | PRSL1027PI |

# **Mushroom pushbuttons**

| Ref. | Drawing | Description                                    | Code       |
|------|---------|--|------------|
| A6   |         | Latched mushroom pushbutton for emergency stop | PRSL1009PI |

# Joysticks

| Ref. | Drawing | Description                          | Code  |
|------|---------|--------------------------------------|---|
| A15  |         | Romeo Joystick with ergonomic handle | PF58<br>Refer to joystick<br>Romeo<br>documentation |
| A16  |         | Romeo Joystick with handle           | PF58<br>Refer to joystick<br>Romeo<br>documentation |
| A17  |         | Romeo Joystick with knob             | PF58<br>Refer to joystick<br>Romeo<br>documentation |

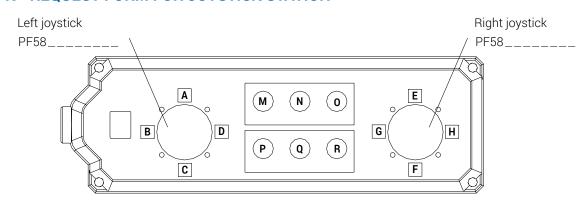
# **Accessories**

| Ref. | Drawing | Description                    | Code       |
|------|---------|--------------------------------|------------|
| A7   |         | Shoulder strap                 | PRSL0161PE |
| A8   |         | Cable sleeve                   | PRSL0145PE |
| A9   | ð       | Hook                           | PRGA0001PE |
| A10  |         | Holding plate for 3 switches   | PRSL8739PI |
| A11  |         | Holding plate for 3+3 switches | PRSL8736PI |



#### **ROMEO-PK - REQUEST FORM FOR JOYSTICK STATION**

**Switches** 



# Control elements and switches Control element

| M | <br>_ | <br> |  |
|---|-------|------|--|
| N | <br>_ | <br> |  |
| 0 | <br>_ | <br> |  |
| P | <br>_ | <br> |  |
| Q | <br>_ | <br> |  |
| R | <br>_ | <br> |  |

#### Joystick label Text

| Α |  |
|---|--|
| В |  |
| С |  |
| D |  |
| E |  |
| F |  |
| G |  |

#### **Control elements label**

Н

|   | Symbol | Label<br>color | Text |
|---|--------|----------------|------|
| M |        |                |      |
| N |        |                |      |
| 0 |        |                |      |
| Р |        |                |      |
| Q |        |                |      |
| R |        |                |      |

#### **Control elements**

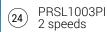
(1)PRSL1009PI Mushroom pushbutton 〔2〕 PRTS000001 Single pushbutton PRTD000001 Double pushbutton PRSL1023PI Blanking plug 5 PRSL1012PI Red pilot light (6) PRSL1013PI Yellow pilot light (7) PRSL1014PI Green pilot light (8) PRSL1040PI Selector switch 0/1 spring return PRSL1029PI Selector switch 0/1 maintained positions (10)PRSL1026PI Selector switch 1/0/2 spring return (11)PRSL1027PI Selector switch 1/0/2 maintained positions (12)PRSL1046PI Key selector switch 0/1 maintained positions (13)PRSL1024PI Key selector switch 0/1 spring return

#### Single switches

| •9 |            |             |
|----|------------|-------------|
| 20 | PRSL1000PI | 1NO         |
| 21 | PRSL1001PI | 1NC         |
| 22 | PRSL1004PI | Lamp holder |
|    |            |             |

#### Double switches





#### Symbols and colors of control element label

| 30 GREEN    | 31 GREEN      | 32 VELLOW | 33 RED   |
|-------------|---------------|-----------|----------|
| YELLOW (O)  |               |           |          |
| GREEN WHITE | YELLOW YELLOW | 42 RED    | 43 BLACK |
| (44)        |               |           |          |

# Position of cable sleeve

Right
Left

#### Instructions

- Write the code number of the left and right joysticks required.
- Write the number or the code corresponding to the control elements and switches (max 3) required in each position.
- Write the text required on the label for each position of the joystick.
- Write the symbol, the color and the text required on the label for each control element.
- Tick the appropriate box to show where the cable sleeve must be assembled.

**REMARKS** 

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|---|---|
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