

# ROMEO-PK

## JOYSTICK STATION

Romeo-PK joystick stations are control devices for all industrial machinery. They operate as auxiliary controllers of electrical motors through a power interface, such as a contactor or PLC. Designed for heavy duty use by qualified operators, Romeo-PK are aimed specifically for the industrial market.

### FEATURES

The emergency stop mushroom pushbutton complies with the EN 418 standard and it is equipped with positive opening NC switches.

### OPTIONS

Romeo joysticks are available with up to 6 speeds, with or without potentiometer or encoder; a stepless version also available, with integrated analogical actuator, and with current, voltage or PWM outputs.

Three different versions of Romeo are available: with free movement, with "dead man" safety device (with mechanical interlock with or without NO/NC contact), or with electrical interlock.

The Romeo-PK joystick station can be supplied with different labels and colours.

### MATERIALS

Materials and components are wear resistant and protect the equipment against water and dust.



INDUSTRIAL  
LIFTING



CONSTRUCTION  
LIFTING



INDUSTRIAL  
AUTOMATION



STAGE  
TECHNOLOGY

## STANDARDS - MARKINGS - HOMOLOGATIONS


- Conformity to Community Directives:  
2006/95/CE: Low Voltage Directive  
2006/42/CE: Machinery Directive
- Conformity to Standards:  
EN 60204-1 Safety of machinery - Electrical equipment of machines  
EN 60947-1 Low-voltage switchgear and controlgear

- 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
- Markings and homologations: **CE**

## GENERAL TECHNICAL SPECIFICATIONS

- Storage ambient temperature: -40°C/+70°C
- Operational ambient temperature: -25°C/+70°C
- Protection degree:  
min. IP 43 - max. IP 65 depending on the joystick
- Insulation category: Class II
- Cable entry: rubber cable sleeve (Ø 14÷26 mm)
- Operating positions: any position
- Weight: ~3.8 kg
- Markings and homologations: **CE EAC**

## TECHNICAL SPECIFICATIONS OF THE MICROSWITCHES

- Utilisation category: AC 15
- Rated operational current: 3 A
- Rated operational voltage: 250 V
- Rated thermal current: 10 A
- Rated insulation voltage: 500 V~
- Mechanical life: 0.5x10<sup>6</sup> operations
- Terminal referencing: according to EN 50013
- Connections: screw-type terminals
- Wires: 1x2.5 mm<sup>2</sup>, 2x1.5 mm<sup>2</sup>  
(UL - (c)UL: use 60°C or 75°C copper (CU) conductor and wire 16-18 AWG)
- Tightening torque: 0.6 Nm
- Markings and homologations: **CE** 

The single switches PRSL1000PI and PRSL1001PI have 1 NO or 1 NC contact with 2 connecting terminals.

The double switch PRSL1002PI (1 speed) has:

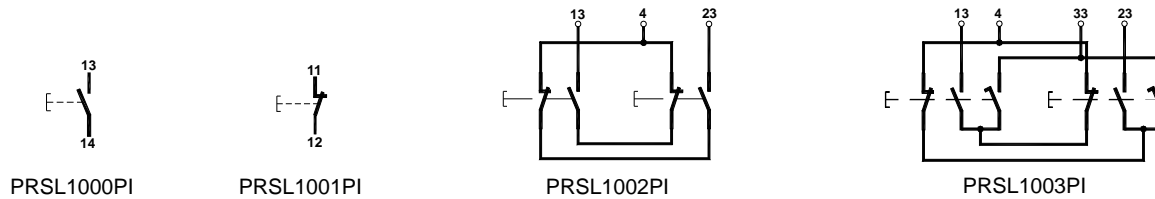
- 1 NO contact with 1 connecting terminal for each opposite function
- 1 single terminal for both functions
- electrical interlock.

The double switch PRSL1003PI (2 speeds) has:

- 1 NO contact with 1 connecting terminal for the first speed for each opposite function
- 1 NO contact with 1 connecting terminal for the second speed for both functions
- 1 single terminal for both functions
- electrical interlock.






All NC contacts are of the positive opening operation type.

The switches have the following reference for internal wiring.

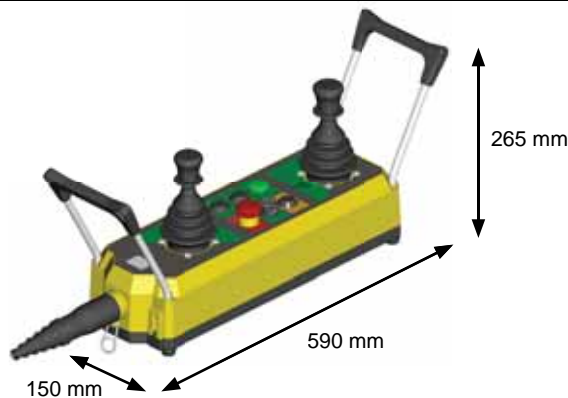


## TECHNICAL SPECIFICATIONS OF THE ROMEO MICROSWITCHES

- Utilisation category: AC 15
- Rated operational current: 2 A
- Rated operational voltage: 48 V~
- Other operating electrical usage:  
125 VAC / 1 A  
250 VAC / 0,5 A  
30 VDC / 1 A

- Rated thermal current: 8 A
- Rated insulation voltage: 60 V~
- Mechanical life: 0.5x10<sup>6</sup> operations
- Connections: terminal board
- Wires: 0.2 mm<sup>2</sup> - 2.5 mm<sup>2</sup>
- Tightening torque: 0.5 Nm - 0.6 Nm
- Markings and homologations: **CE**     

## OVERALL DIMENSIONS



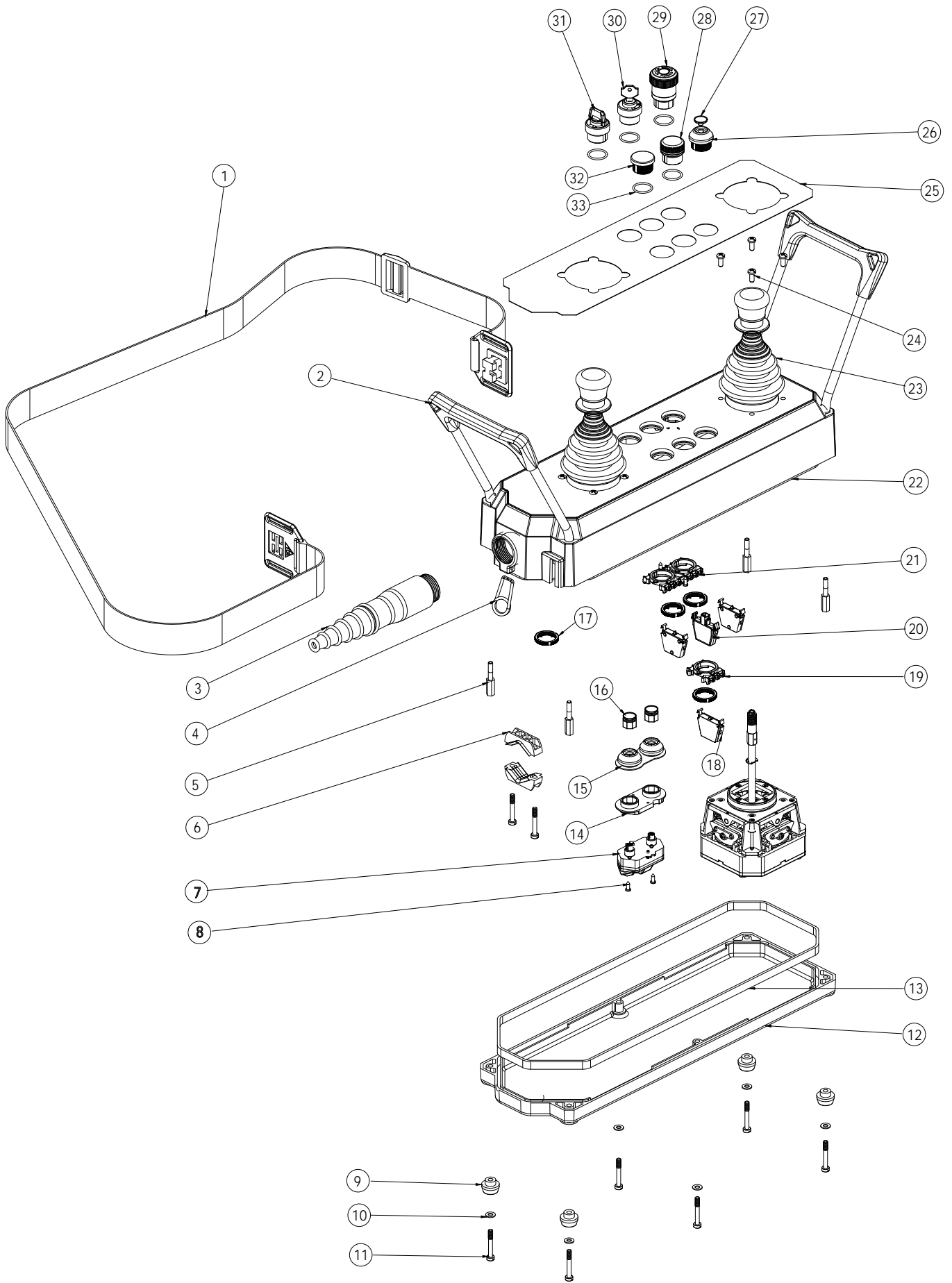
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
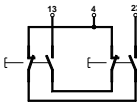
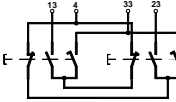




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## COMPONENTS


### SWITCHES

REF	DRAWING	DESCRIPTION	SCHEME	CODE
7		1NO+1NO+common 1 speed double switch		PRSL1002PI
		1NO+1NO+1NO+common 2 speed double switch		PRSL1003PI
18		1 NO switch		PRSL1000PI
		1 NC switch		PRSL1001PI
20		Lamp holder	-	PRSL1004PI


### ACTUATORS

REF	DRAWING	DESCRIPTION	CODE
14		Holding plate for rubber	PRSL8737PI
15+16		Double pushbutton	PRTD000001
19		3 switch holding light plate	PRSL8739PI
21		Holding plate for 2+2 switches	PRSL8735PI
26+27+17		Single pushbutton	PRTS000001
32+33+17		Blanking plug	PRSL1023PI

### PILOT LIGHTS

REF	DRAWING	DESCRIPTION	CODE
28+33+17		Red pilot light	PRSL1012PI
		Yellow pilot light	PRSL1013PI
		Green pilot light	PRSL1014PI

### MUSHROOM PUSHBUTTONS

REF	DRAWING	DESCRIPTION	CODE
29+33+17		Emergency stop mushroom pushbutton	PRSL1009PI

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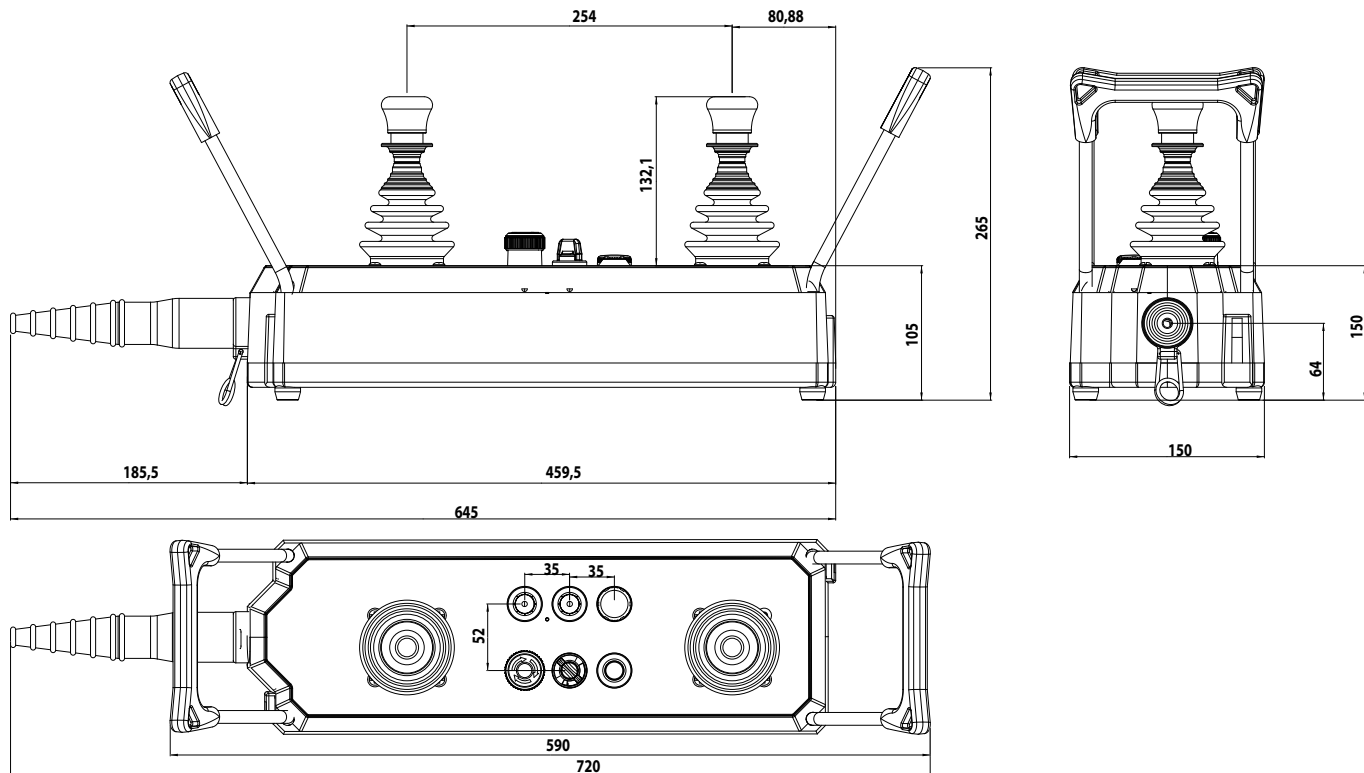
**SELECTOR SWITCHES**

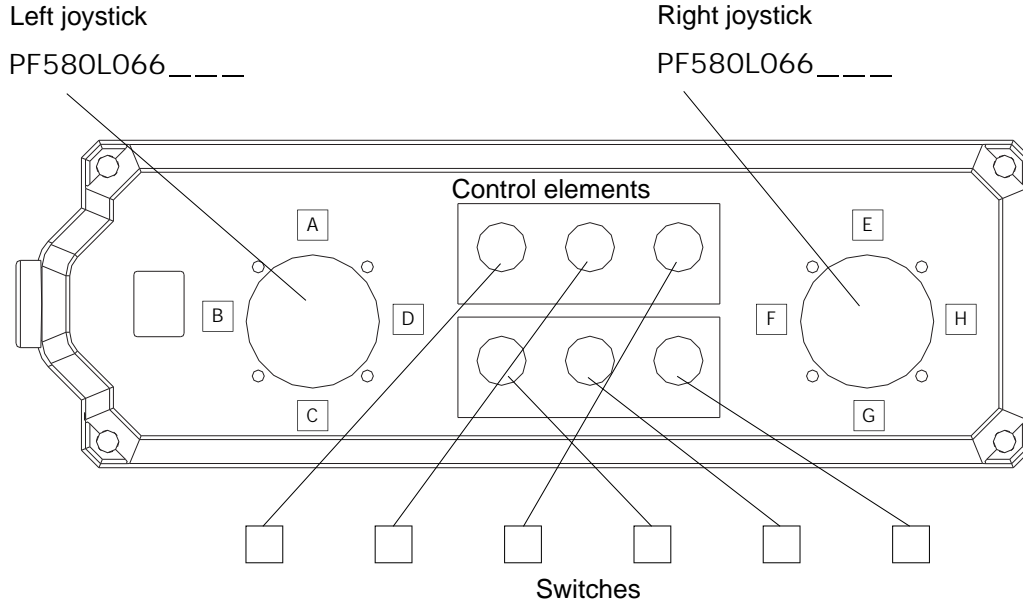
REF	DRAWING	DESCRIPTION	CODE
30+33+17		Key selector switch (on-off)	PRSL1017PI
		Spring return key selector switch	PRSL1024PI
31+33+17		Spring return selector switch (on-off)	PRSL1015PI
		Selector switch (on-off)	PRSL1016PI
		Spring return 3 position selector switch	PRSL1026PI
		3 position selector switch	PRSL1027PI

**ACCESSORIES**

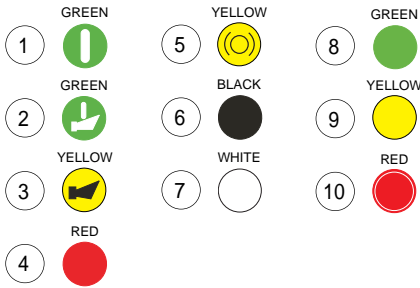
REF	DRAWING	DESCRIPTION	CODE
1		Shoulder strap	PRSL0161PE
3		Cable sleeve	PRSL0145PE
4		Hook	PRGA0001PE

**OVERALL DIMENSIONS (MM)**





**Symbols and Control elements**



- 11 PRSL1009PI Mushroom pushbutton
- 12 PRSL1012PI Red pilot light
- 13 PRSL1013PI Yellow pilot light
- 14 PRSL1014PI Green pilot light
- 15 PRSL1015PI Spring return selector switch on-off
- 16 PRSL1016PI Selector switch on-off
- 17 PRSL1017PI Key selector switch on-off
- 18 PRSL1023PI Blanking plug
- 19 PRSL1024PI Spring return key selector switch
- 20 PRSL1026PI Spring return 3 pos. selector switch
- 21 PRSL1027PI 3 position selector switch

**Single switches**

- 1 PRSL1000PI 1NO
- 2 PRSL1001PI 1NC
- 3 PRSL1004PI Lamp holder

**Double switches**

- 4 PRSL1002PI 1 speed
- 5 PRSL1003PI 2 speeds

**Position of Cable sleeve**

- Right
- Left

**Label**

Pos. Letterings

A \_\_\_\_\_

B \_\_\_\_\_

C \_\_\_\_\_

D \_\_\_\_\_

E \_\_\_\_\_

F \_\_\_\_\_

G \_\_\_\_\_

H \_\_\_\_\_

**Instruction**

- Write the code number of the left and right joysticks required.
- Write the numbers corresponding to the control elements required in the round boxes on the joystick station scheme.
- Write the number corresponding to the single or double switches required in the square boxes.
- Mark the appropriate box to show where the cable sleeve must be assembled.
- Write the letterings required for each position on the label.

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## USE AND MAINTENANCE INSTRUCTIONS

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The Romeo-PK joystick station is an electromechanical device for low voltage control circuits (EN 60947-1, EN 60947-5-1) for use as electric equipment on machines (EN 60204-1) in compliance with the essential requisites of the Low Voltage Directive 2006/95/CE and the Machine Directive 2006/42/CE.

The Romeo-PK joystick station is designed for use in industrial environments with even very severe climatic conditions (working temperatures from -25°C to +70°C and is suitable for use in tropical environments). The equipment is not suitable for use in environments with potentially explosive atmosphere, corrosive agents or high percentage of sodium chloride (saline mist). Oils, acids or solvents may damage the equipment. Do not connect more than one phase to each switch (01). Do not oil or grease the control elements or the switches (01).

For use and warnings relating to the joysticks (02) assembled on the joystick station, please refer to the "Romeo" instructions enclosed.

The installation of the Romeo-PK joystick 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 joystick station, the main power of the machinery shall be turned off.

### Operations for correct installation of the joystick station

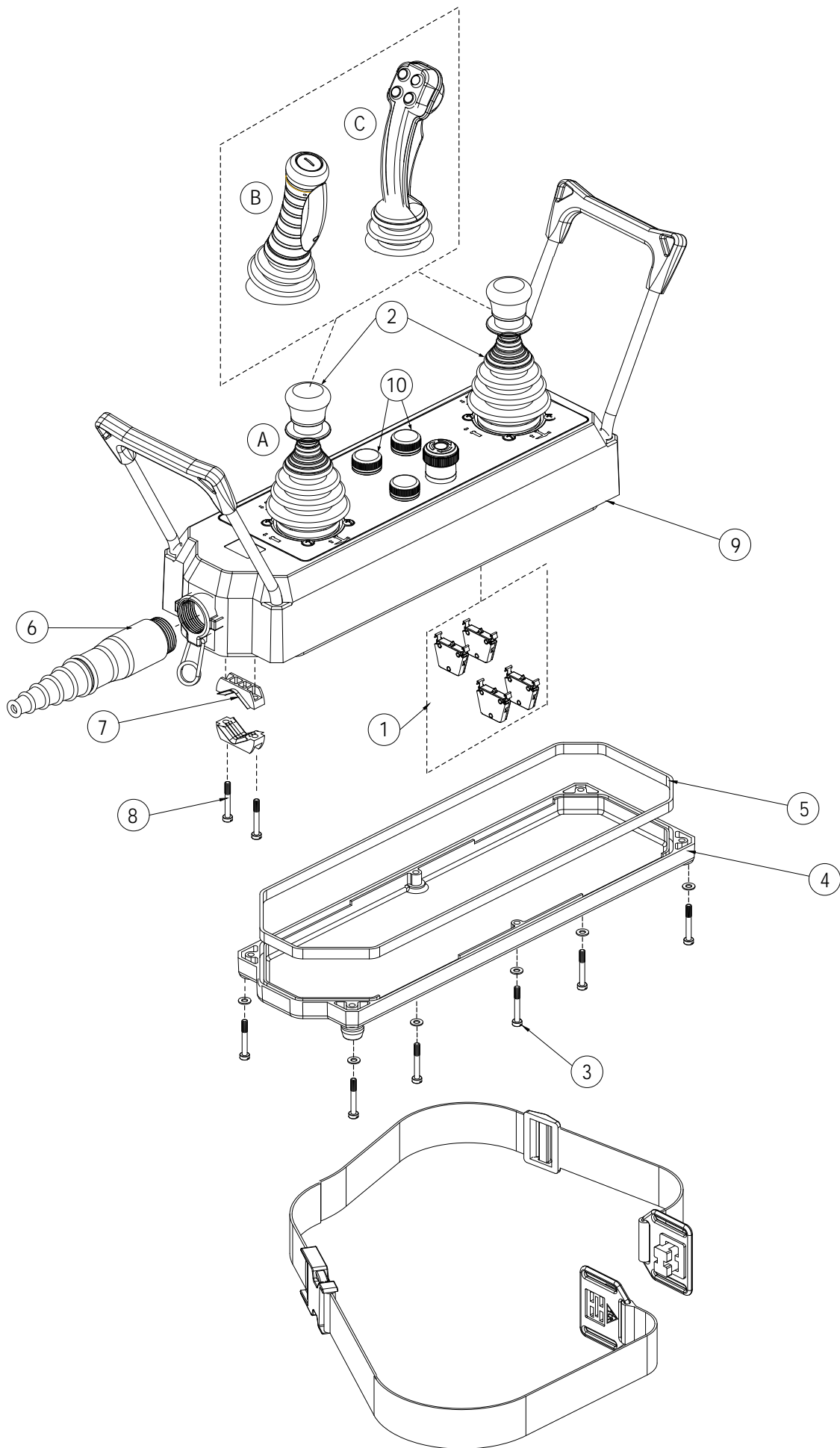
- Unscrew the screws (03) on the bottom of the cover (04) to open the joystick station
- Cut the variable cross-section rubber cable sleeve (06) and insert the multi-pole cable so as to guarantee adequate interference and prevent penetration of water and/or dust
- Fasten the multi-pole cable to the sleeve (06) using a clamp (not supplied)
- Strip the multi-pole cable for a length sufficient for electrical connection with the switches (01)
- Fasten the multi-pole cable with the cable clamps (07) and screws (08) so as to prevent any possible external traction on the connections
- Connect the wires to the switches (01) in accordance with the contact diagram shown on the switches
- Refer to the "Romeo" instructions enclosed for joystick wiring.
- Close the joystick station paying attention to the correct positioning of the rubber (05) assembled in the cover (04)

### Operations of routine maintenance

- Check the correct tightening of the screws (03) on the enclosure (04, 09)
- Check the correct tightening of the screws on the switch terminals (01)
- Check the wiring conditions (in particular where wires clamp into the switch)
- Check the conditions of the rubber (05) assembled in the cover (04) of the joystick station and of the button rubbers (10)
- Check the conditions of the plastic enclosure of the joystick station (04, 09)
- Refer to the "Romeo" instructions enclosed for maintenance of the joysticks (02) assembled on the joystick station.

In case any component of the joystick 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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