JULIET-PK
Joystick station

Handy and compact joystick station.
Juliet PK is a user-friendly, ergonomic product, whose size and shape are the result of careful analysis of the aspects linked to daily use in modern industrial environments.

FEATURES

- Designed for Juliet joysticks.
- Designed to facilitate maintenance, reducing down time and costs.
- Aluminium protection against accidental operation in case of impact.
- The emergency stop mushroom pushbutton complies with standard EN 418 and is positioned in the middle for intuitive operation in case of danger.
- Positive opening NC contacts for safety functions.
- Mechanical life of switches: 1 million operations.
- IP protection degree: Juliet PK is classified IP65.
- 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.
- Switches with 1NC or 1NO contacts
- The variable length strap, for waist or shoulder wear, features a quick fastening system.
- Available with customized labels and enclosures with different size holes.

CERTIFICATIONS

- CE marking and EAC certification.

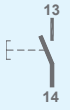
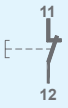
CERTIFICATIONS

Conformity to Community Directives	2006/95/CE Low Voltage Directive
	2006/42/CE Machinery Directive
Conformity to CE 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, functional
Markings and homologations	CE EAC

GENERAL TECHNICAL SPECIFICATIONS

Ambient temperature	Storage -40°C/+70°C
	Operational -25°C/+70°C
IP protection degree	IP 65
Insulation category	Class II
Cable entry	Cable sleeve (Ø 14÷26 mm)
Operating positions	Any position
Weight	~1.5 kg

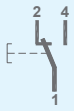
TECHNICAL SPECIFICATIONS OF THE MICROSWITCHES

Code	PRSL1000PI	PRSL1001PI
Utilisation category	AC 15	
Rated operational current	3 A	
Rated operational voltage	250 Vac	
Rated thermal current	10 A	
Rated insulation voltage	500 Vac	
Mechanical life	$1x10^6$ operations	
Connections	Screw-type terminals	
Wires	1x2.5 mm^2, 2x1.5 mm^2 (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 break, slow action	Double break, slow action
Contacts	1NO	1NC (All NC contacts are of the positive opening operation type ⊖)
Scheme		
Markings and homologations	CE cULus EAC	

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 mm^2, 2x1.5 mm^2
Tightening torque	0.6 Nm
Markings and homologations	CE

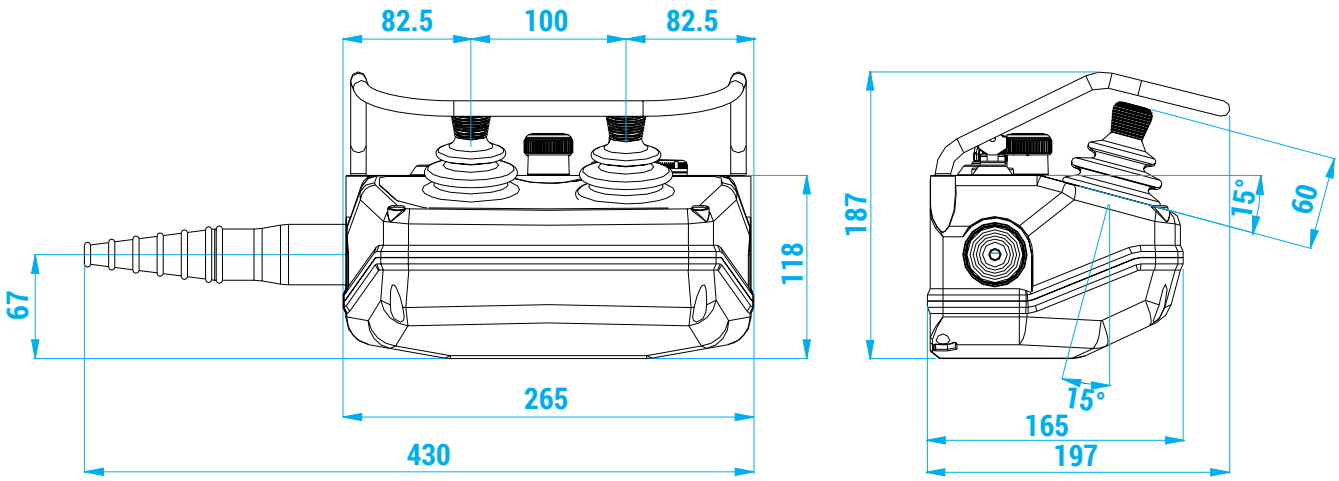
TECHNICAL SPECIFICATIONS OF THE MICROSWITCHES (JOYSTICK)

Code	PRVV0804PE
Utilisation category	AC 15
Rated operational current	2 A
Rated operational voltage	48 Vac
Rated thermal current	8 A
Rated insulation voltage	60 Vac
Mechanical life	0.5x10^6 operations
Connections	Screw-type terminals
Wires	0.14 mm^2 - 1.5 mm^2
Tightening torque	0.22 Nm - 0.25 Nm
Microswitch type	Single break
Contacts	1NO+1NC change-over contacts (All NC contacts are of the positive opening operation type ⊖)
Scheme	
Markings and homologations	CE

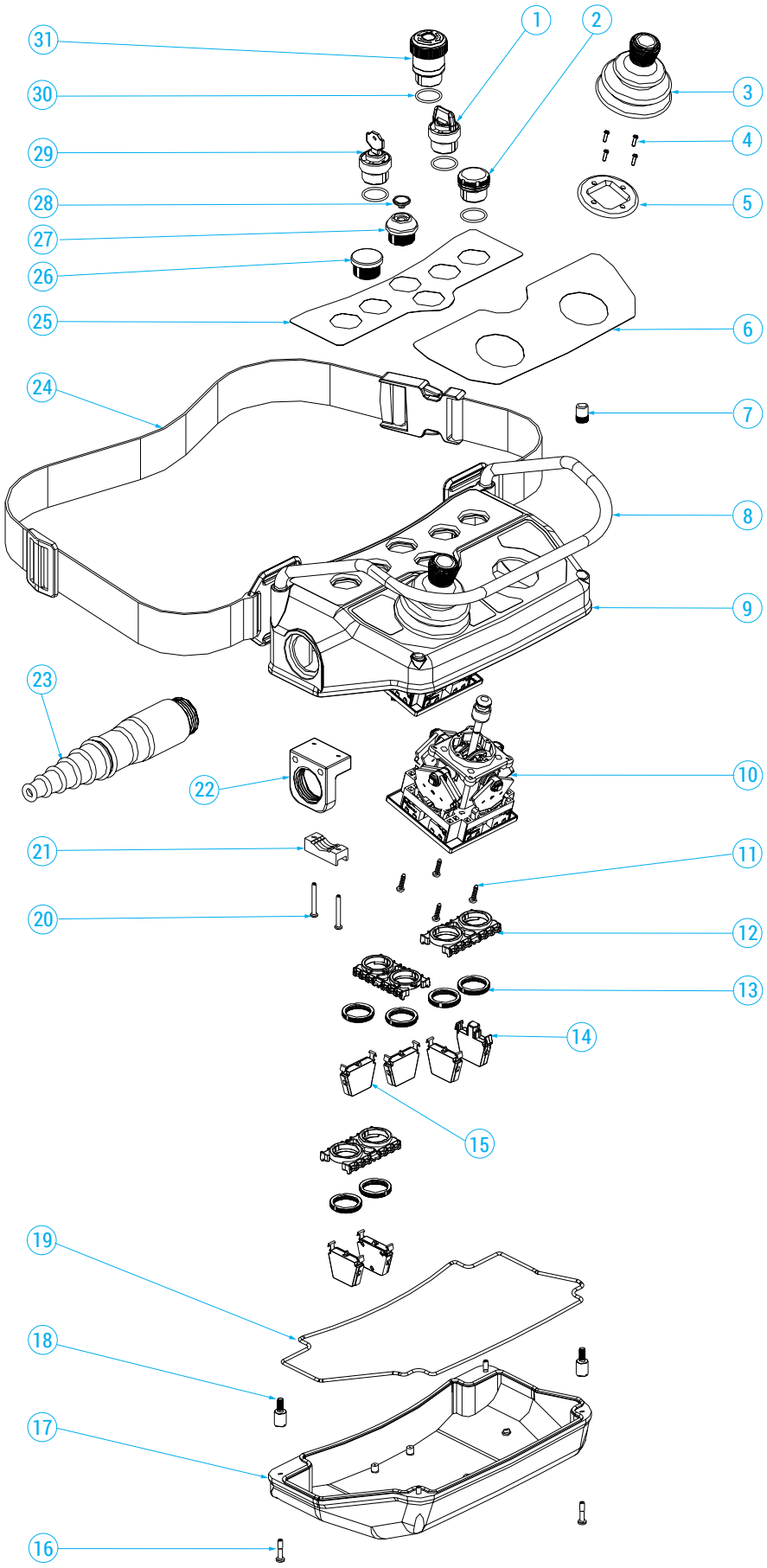
TECHNICAL SPECIFICATIONS OF THE POTENTIOMETERS (JOYSTICK)

Code	PRVV9021PE	PRVV9026PE
Ohmic value	5 kΩ	10 kΩ
Connections	4 turrets	
Indipendent linearity (over AEA -3°)	≤ ±1%	
Life time	5x10^6 movements	
Operational ambient temperature	-55 °C/+125 °C	
Mechanical angle	360° continuous	
Actual Electrical Angle (AEA)	340°±5°	
Ohmic value tolerance	Max ±20% at 20°C	
Dissipation	0.3 W	

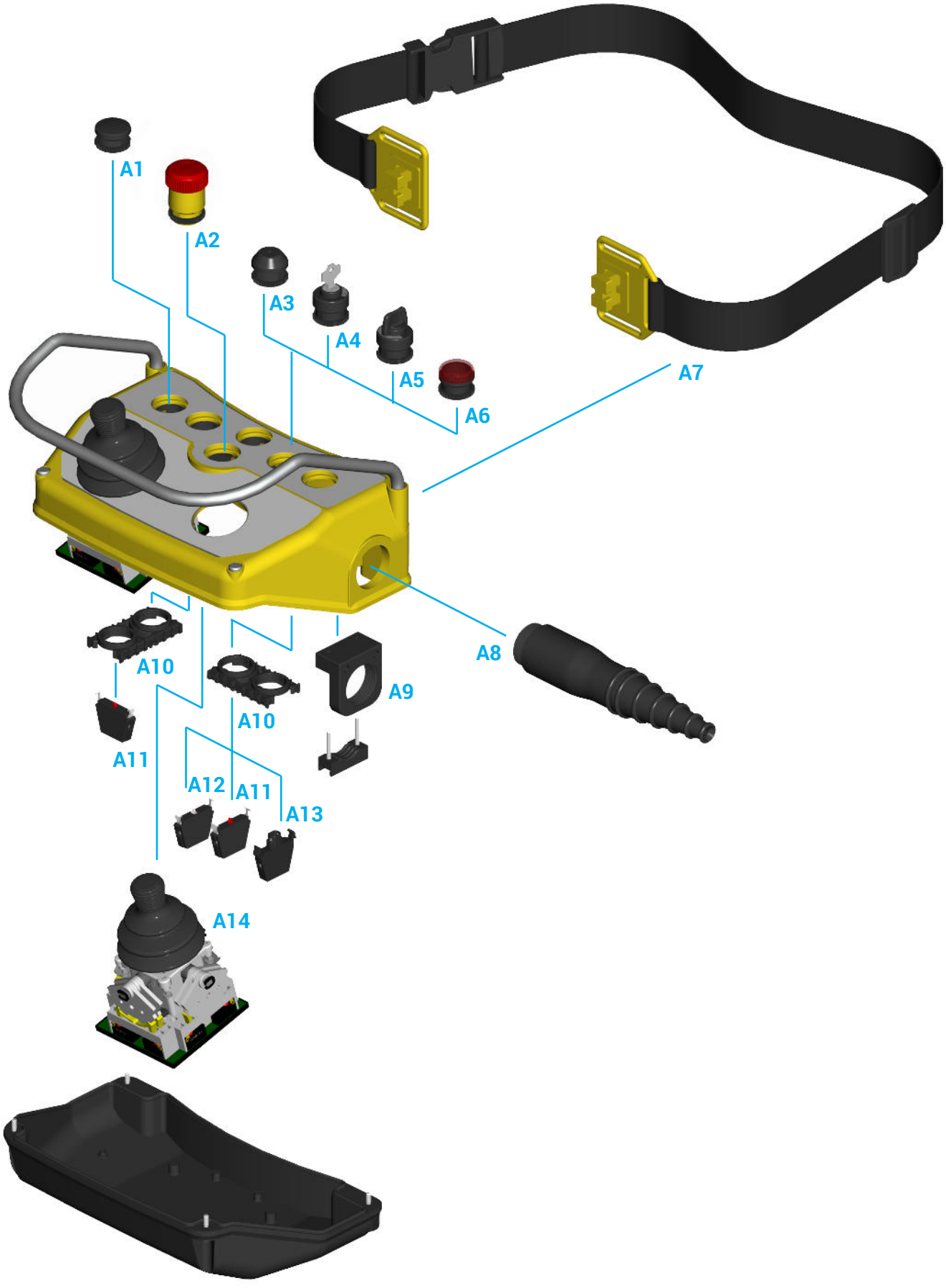
OVERALL DIMENSIONS (mm)



EXPLODED DRAWING



ASSEMBLY DRAWING



COMPONENTS

Switches

Ref.	Drawing	Description	Scheme	Code
A11		1NC single switch		PRSL1001PI
A12		1NO single switch		PRSL1000PI
A13		Lamp holder	-	PRSL1004PI

Actuators

Ref.	Drawing	Description	Code
A1		Blanking plug	PRSL1023PI
A3		Pushbutton	PRTS000001

Pilot lights

Ref.	Drawing	Color	Code
A6		Red	PRSL1012PI
		Yellow	PRSL1013PI
		Green	PRSL1014PI

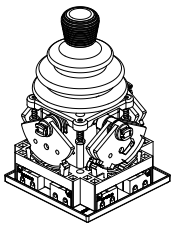
Mushroom pushbuttons

Ref.	Drawing	Description	Code
A2		Latched mushroom pushbutton for emergency stop	PRSL1009PI

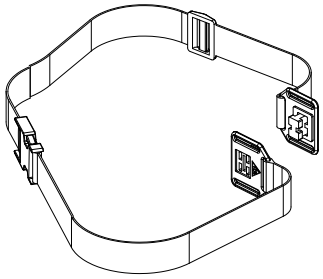
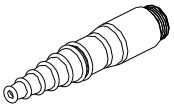
Selector switches

Ref.	Drawing	Positions	Spring return	Maintained positions	Pull-out position	Code
A4		0/1		X	0	PRSL1017PI
		0/1	X		0	PRSL1024PI
A5		0/1	X			PRSL1015PI
		0/1		X		PRSL1016PI
		1/0/2	X			PRSL1026PI
		1/0/2		X		PRSL1027PI

Joysticks

Ref.	Drawing	Description	Code
A14		Joystick Juliet	PF34_ _ _ _ _ _ _ _ _ _ Refer to joystick Juliet documentation

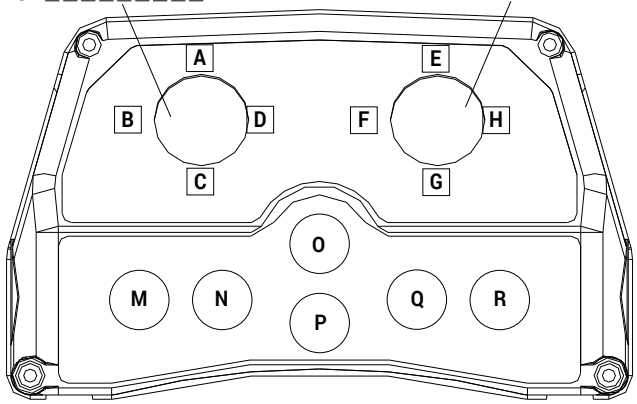
Accessories

Ref.	Drawing	Description	Code
A7		Waist strap	PRSL0160PE
		Shoulder strap	PRSL0161PE
A8		Cable sleeve	PRSL0145PE
A9		Cable sleeve holder	PRSL9207PI
A10		Holding plate for 3+3 switches	PRSL8736PI

JULIET-PK - REQUEST FORM FOR JOYSTICK STATION

Left joystick
PF34_____

Right joystick
PF34_____



Control elements and switches

	Actuators	Switches		
M	_____	_____	_____	_____
N	_____	_____	_____	_____
O	_____	_____	_____	_____
P	_____	_____	_____	_____
Q	_____	_____	_____	_____
R	_____	_____	_____	_____

Joystick label

	Text
A	_____
B	_____
C	_____
D	_____
E	_____
F	_____
G	_____
H	_____

Control element label

	Symbol	Label color	Text
M	_____	_____	_____
N	_____	_____	_____
O	_____	_____	_____
P	_____	_____	_____
Q	_____	_____	_____
R	_____	_____	_____

Control elements

1	PRSL1009PI	Emergency stop mushroom pushbutton
2	PRTS000001	Single pushbutton
3	PRSL1023PI	Blanking plug
4	PRSL1012PI	Red pilot light
5	PRSL1013PI	Yellow pilot light
6	PRSL1014PI	Green pilot light
7	PRSL1015PI	Selector switch 0/1 spring return
8	PRSL1016PI	Selector switch 0/1 maintained positions
9	PRSL1026PI	Selector switch 1/0/2 spring return
10	PRSL1027PI	Selector switch 1/0/2 maintained positions
11	PRSL1017PI	Key selector switch 0/1 maintained positions
12	PRSL1024PI	Key selector switch 0/1 spring return

Switches

20	PRSL1000PI	1NO
21	PRSL1001PI	1NC
22	PRSL1004PI	Lamp holder

Symbols and colors of control element label

30 GREEN
31 GREEN
32 YELLOW
33 RED
34 YELLOW
40 GREEN
41 YELLOW
42 RED
43 BLACK
44 WHITE

Position of cable sleeve

☐ Right

☐ Left

Instructions

- Write the code number of the left and right Juliet joysticks required.
- Write the number or the code corresponding to the control elements and switches (max 3) required in each position. ATTENTION: mushroom pushbutton PRSL1009PI can be placed only in the O 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.

USE AND MAINTENANCE INSTRUCTIONS

The Juliet-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 Juliet-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 a potentially explosive atmosphere, in the presence of corrosive agents or high percentage of sodium chloride (saline mist). Contact with oil, acids and solvents may damage the equipment; avoid using them for cleaning.

The switches (14, 15)* are designed for the auxiliary control of contacts or electromagnetic charges in general (utilisation category AC-15 in accordance with EN 60947-5-1). Do not connect more than one phase for each switch (14, 15). Do not oil or grease the control elements (1, 2, 10, 27, 29, 31) or the switches (14, 15).

The Juliet-PK joystick station should be installed by competent, trained personnel. The electric wiring must be done in a workmanlike manner in compliance with the regulations in force.

Before performing installation and maintenance of the joystick station, disconnect the machine from the power mains.

Operations for correct installation of the joystick station
- Open the joystick station by unscrewing the bottom cover (17).
- Cut the rubber cable sleeve with variable cross-section (23) 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 (23) using a cable tie (not supplied).
- Strip the multi-pole cable for a length sufficient for electrical connection with the switches (14, 15).
- Tape the initial stripped part of the cable.
- Fasten the special wire clamps to the multi-pole cable so as to prevent the possibility of external traction on the connections.
- Connect the wires to the switches (14, 15) in accordance with the contact diagram shown on the switches (tighten the terminal screws with a torque of 0.6 Nm; insertability of wires into the terminals 1x2,5 mm^2 - 2x1,5mm^2) (UL - (c)UL: use 60 or 75°C copper (CU) conductor).
- Close the control unit with attention to correct positioning of the rubber (19) assembled in the enclosure (9).

Operations of routine maintenance
- Check the correct tightening of the screws (16) on the enclosure (9, 17).
- Check the correct tightening of the screws on the switch terminals (14, 15).
- Check the conditions of the wiring (in particular in the points where they are fastened/tightened on the switches).
- Check the conditions of the rubber (19) assembled in the joystick station enclosure (17), the rubber on the controllers and cable sleeve (24).
- Check the conditions of the plastic enclosure of the joystick station (9, 17).

Any change to parts of the joystick station will invalidate the rating plate data and identification of the device, and render the warranty null and void. In case of replacement of any part, use only original replacements.

TER is not liable for damages caused by improper use of the device and installation which is not made correctly.

* Please refer to the exploded drawing in the catalogue.