

HERCULES-PK

Joystick station



Sturdy and reliable joystick station, suitable for industrial environments and harsh conditions. Materials, technical solutions and sizing of critical components are studied to guarantee mechanical resistance and long life.

FEATURES

- Designed for Hercules joysticks.
- Carry-on straps and aluminum handles ensure greater ease of use.
- The emergency stop mushroom pushbutton complies with standard ISO 13850 and it is positioned in the middle for intuitive operation in case of danger.
- Mechanical life of switches: 1 million operations.
- IP protection degree: Hercules-PK is classified min. IP 43 – max. IP 65, 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 holes.

CERTIFICATIONS

- CE marking.

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

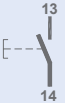
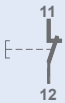
CERTIFICATIONS

Conformity to Community Directives	2014/35/UE 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
Markings and homologations	ISO 13850 Safety of machinery - Emergency stop - Principles for design
	CE

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

TECHNICAL SPECIFICATIONS OF THE SWITCHES





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	
Switch type	Double break, slow action	Double break, slow action
Contacts	1NO	1NC
Scheme		
Markings and homologations	CE cULus	

Code	PRSL1002PI	PRSL1003PI
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	
Switch type	Double switch, 1 speed	Double switch, 2 speeds
Contacts	2NO+common	3NO+common
Scheme		
Markings and homologations	CE cUL _{US}	

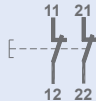
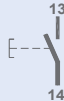
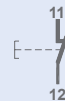



TECHNICAL SPECIFICATIONS OF THE LAMP HOLDERS

Code	PRSL1004PI
Maximum voltage	125 V
Maximum power	2.6 W
Lamp type (not supplied)	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 SWITCHES (HERCULES-S JOYSTICK)

Code	PRVV0804PE
Utilisation category	AC 15
Operating electrical usages	Inductive load 48 Vac/1 A 125 Vac/1 A 250 Vac/0.5 A 30 Vdc/1 A
	Resistive load 48 Vac/2 A 125 Vac/3 A 250 Vac/2 A 30 Vdc/3 A
Rated thermal current	8 A
Rated insulation voltage	1000 Vac
Mechanical life	5x10 ⁶ operations
Connections	Screw-type terminals
Wires	0.2 mm ² - 2.5 mm ²
Tightening torque	0.5 Nm - 0.6 Nm
Switch type	Single break
Contacts	1NC
Scheme	
Markings and homologations	  

TECHNICAL SPECIFICATIONS OF THE SWITCHES (HERCULES-CK JOYSTICK)

Code	PRSL0190XX	PRSL0191XX	PRSL1000PI	PRSL1001PI
Use	Hercules-CK		"Dead - man" safety device	
Utilisation category	AC 15			
Rated operational current	3 A			
Rated operational voltage	250 Vac			
Rated thermal current	10 A			
Rated insulation voltage	300 Vac		500 Vac	
Connections	Screw-type terminals			
Wires	2x0.5mm ² - 2x1.5 mm ² - 1x2.5 mm ² (UL - (c)UL: use 60°C or 75°C copper (CU) conductor and wire 14-22 AWG)		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	0.5 Nm		0.6 Nm	
Switch type	Double break, slow action			
Contacts	1NC + 1NC		1NO	1NC
Scheme				
Markings and homologations			 	

TECHNICAL SPECIFICATIONS OF THE PUSHBUTTONS (HERCULES JOYSTICK)

Code	PRVV5019PE	PRVV5020PE	PRVV5080PE
Colour	Green	Black	Green
Contact rated current	Resistive load 32 Vac/400 mA Resistive load 50 Vdc/100 mA Resistive load 125 Vac/125 mA		Resistive load 28 Vdc/5 A Resistive load 125 Vac/125 mA
Contact resistance	50 mΩ		-
Mechanical life	1x10 ⁶ operations		1x10 ⁶ operations
Contacts	1NO		1NO
Markings and homologations	CE		CE

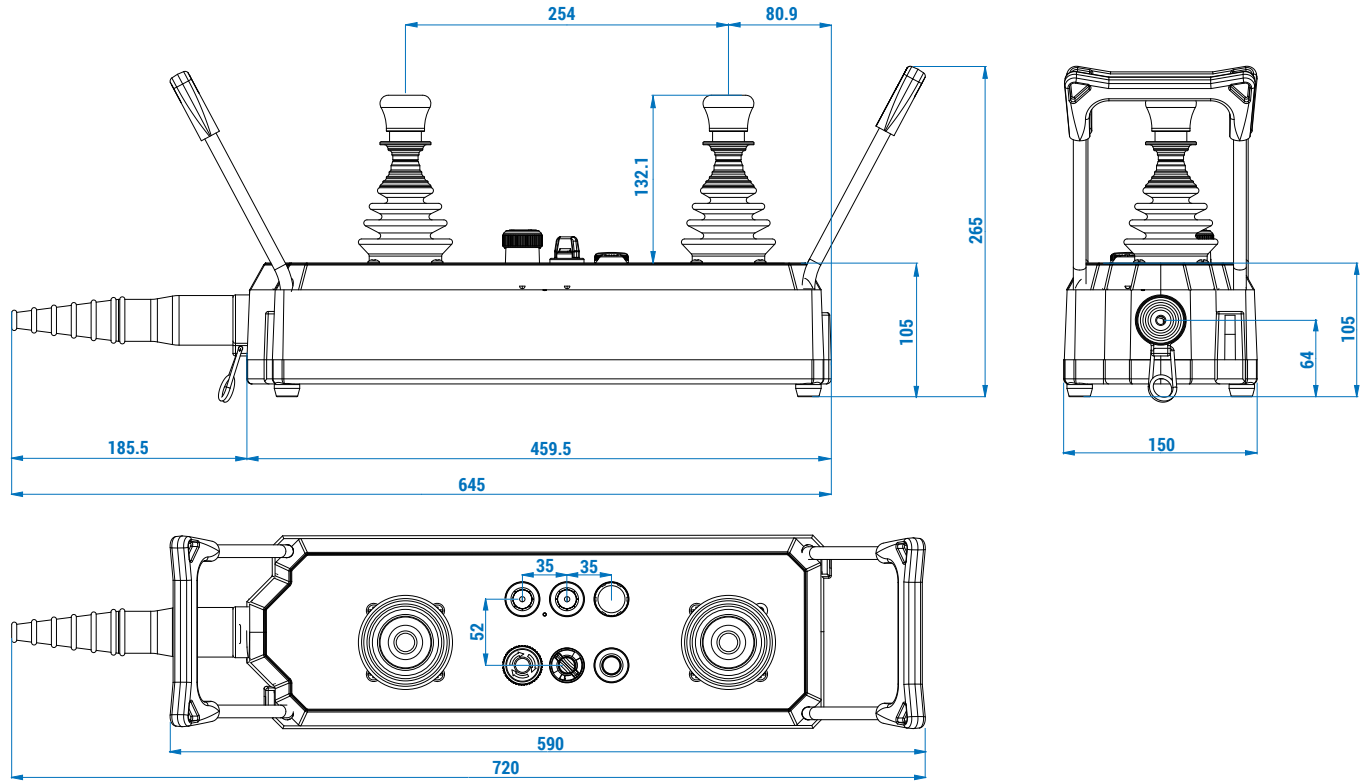
TECHNICAL SPECIFICATIONS OF THE POTENTIOMETERS (HERCULES JOYSTICK)

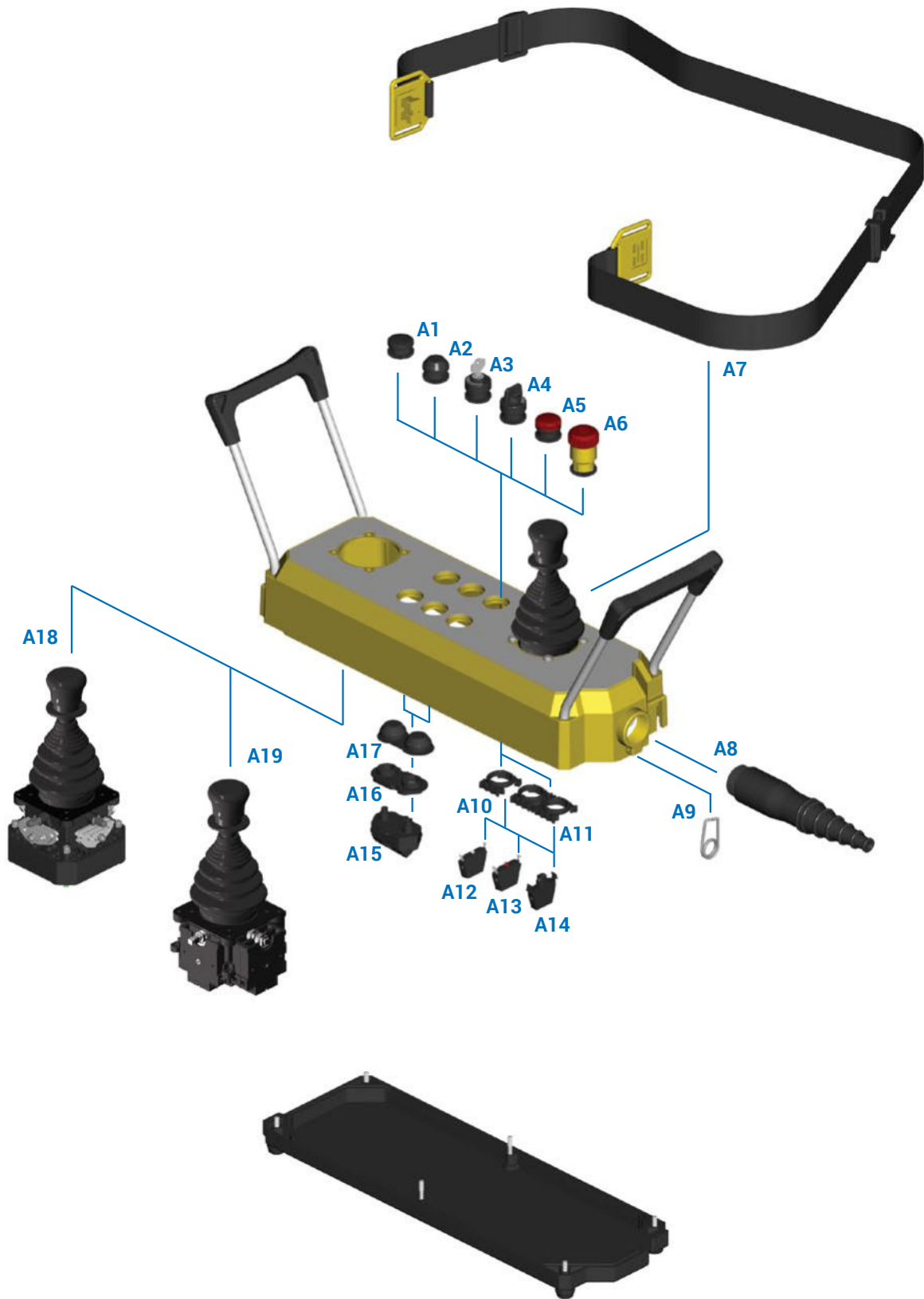
Code	PRVV9020PE	PRVV9025PE	PRVV9035PE
Ohmic value	4.7 kΩ	10 kΩ	2.2 kΩ
Independent linearity (ref. AEA -3°)	±0.25%		
Life time	3x10 ⁶ movements		
Operational ambient temperature	-55°C/+125°C		
Mechanical angle	360° continuous		
Actual Electrical Angle (AEA)	355°±5°		
Ohmic value tolerance	±5%		
Temperature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

TECHNICAL SPECIFICATIONS OF THE ANALOG ENCODERS EGON 36-AL (HERCULES JOYSTICK)

Power supply	12...30 Vdc
Analog output	Current 4...20 mA
	Voltage 1...5 V
	Voltage 2...10 V
Consumption	35 mA simple version
	55 mA redundant version
Single-turn resolution	12 bit (4096 points for revolution)
Protection against input/output over-current	Yes
Protection against input/output over-voltage	Yes
Accuracy	± 0.5%
Linearity	± 0.25%
Redundancy	2 complementary outputs (analogue)

OVERALL DIMENSIONS (mm)







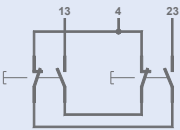
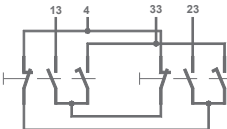








Refer to the following tables for descriptions of components: "Switches", "Actuators", "Pilot lights", "Selector switches", "Mushroom pushbuttons", "Joysticks" and "Accessories".

COMPONENTS


Switches

Ref.	Drawing	Description	Scheme	Code
A12		1NO switch		PRSL1000PI
A13		1NC switch		PRSL1001PI
A14		Lamp holder (without bulb)	-	PRSL1004PI
A15		Double switch, 1 speed, 2NO+common		PRSL1002PI
		Double switch, 2 speeds, 3NO+common		PRSL1003PI



Actuators

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


Pilot lights

Ref.	Drawing	Colour	Code
A5		Red	PRSL1012PI
		Yellow	PRSL1013PI
		Green	PRSL1014PI

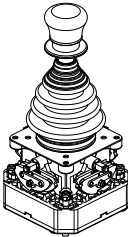
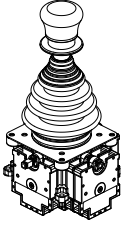
Selector switches

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

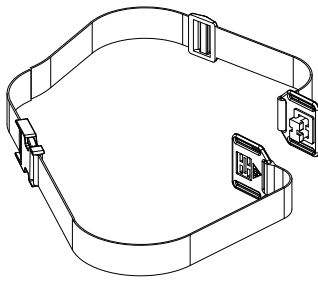
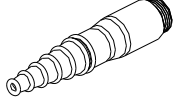



Mushroom pushbuttons

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

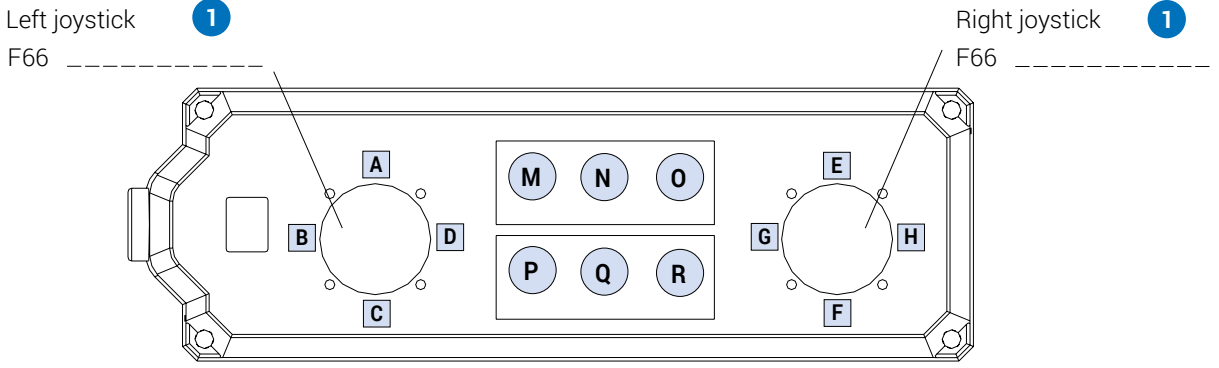
Joysticks

Ref.	Drawing	Description	Code
A18		Hercules-S joystick	F66 Refer to joystick Hercules documentation
A19		Hercules-CK joystick	F66 Refer to joystick Hercules documentation

Accessories

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

HERCULES-PK - REQUEST FORM FOR JOYSTICK STATION



Instructions

- Joysticks:** write the code number of the left and right Juliet joysticks required.
- Control elements and switches:** enter the numbers corresponding to the control elements (1 to 13) and to the switches (max. 3) (20 to 24) required in each position (M to R), according to the legends.
- Position of cable sleeve:** tick the appropriate box to show the position required for the cable sleeve.
- Joystick label:** for each position of the joysticks (A to H) write the text required on the label.
- Control element label:** for each control element (M to R) write the symbol, colour and text required on the label. Refer to the legend for standard symbols and colours.

Control elements and switches

Control element	Switches
M	_____
N	_____
O	_____
P	_____
Q	_____
R	_____

Position of cable sleeve

Left Right

Joystick label

Text

A _____

B _____

C _____

D _____

E _____

F _____

G _____

H _____

Control element label

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

- Legend - Control elements**
- 1 PRSL1009PI Mushroom pushbutton
 - 2 PRTS000001 Single pushbutton
 - 3 PRTD000001 Double pushbutton
 - 4 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
 - 9 PRSL1029PI Selector switch 0/1 maintained pos.
 - 10 PRSL1026PI Selector switch 1/0/2 spring return
 - 10 PRSL1027PI Selector switch 1/0/2 maintained pos.
 - 12 PRSL1046PI Key selector switch 0/1 maintained pos.
 - 13 PRSL1024PI Key selector switch 0/1 spring return

- Legend - Switches**
- | Single switches | Double switches |
|------------------------------------------|------------------------|
| 20 PRSL1000PI 1NO | 23 PRSL1002PI 1 speed |
| 21 PRSL1001PI 1NC | 24 PRSL1003PI 2 speeds |
| 22 PRSL1004PI Lamp holder (without bulb) | |

- Legend - Standard symbols and colours for control element label**
- | | | | | |
|----------|-----------|-----------|----------|-----------|
| 30 GREEN | 31 GREEN | 32 YELLOW | 33 RED | 34 YELLOW |
| 40 GREEN | 41 YELLOW | 42 RED | 43 BLACK | 44 WHITE |