

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 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: Hercules-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.

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

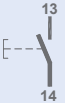
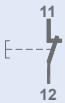
CERTIFICATIONS

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	EN 418 Safety of machinery - Emergency stop equipment, functional
	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 EAC	

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 cULus EAC	

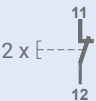
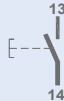
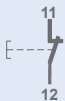




TECHNICAL SPECIFICATIONS OF THE LAMP HOLDERS

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 BUTTONS (HERCULES JOYSTICK)

Code	PRVV5019PE	PRVV5020PE	PRVV5080PE
Color	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

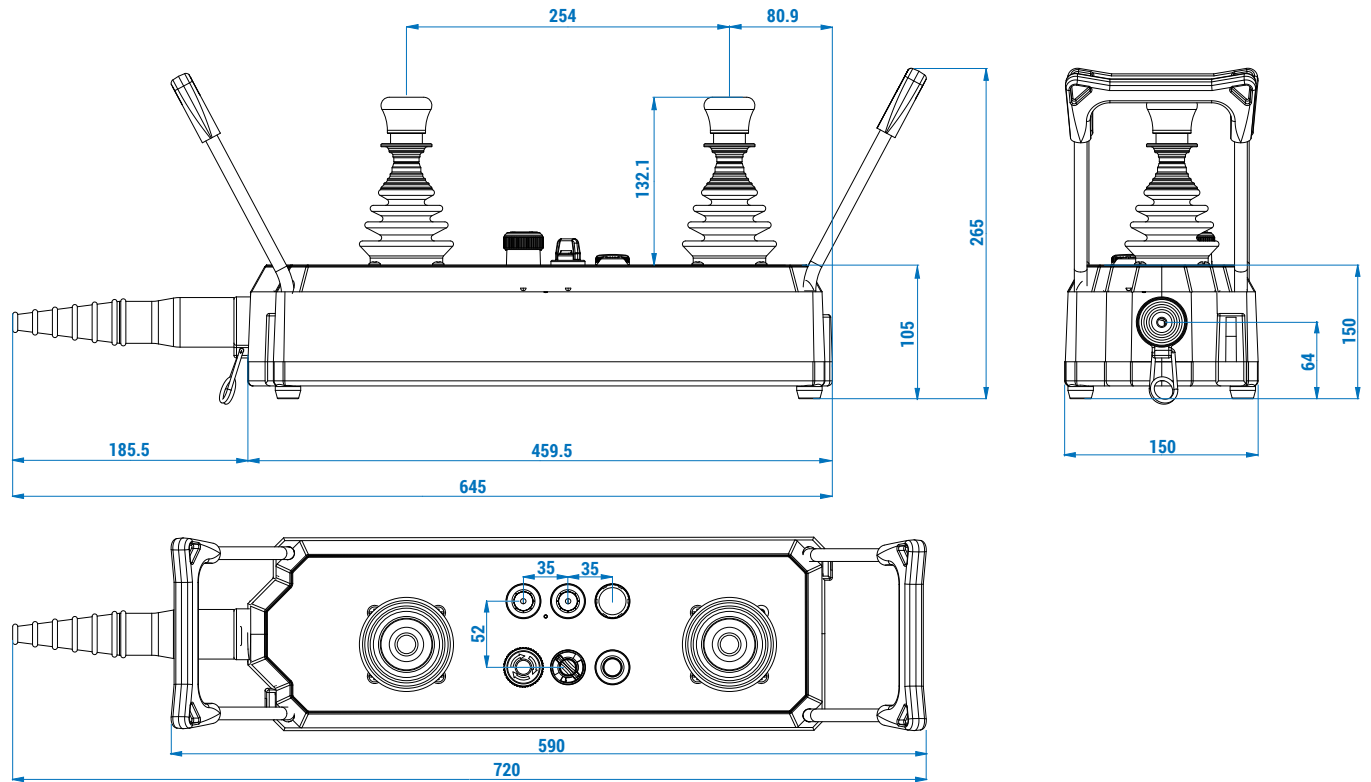
TECHNICAL SPECIFICATIONS OF THE POTENTIOMETERS (HERCULES JOYSTICK)

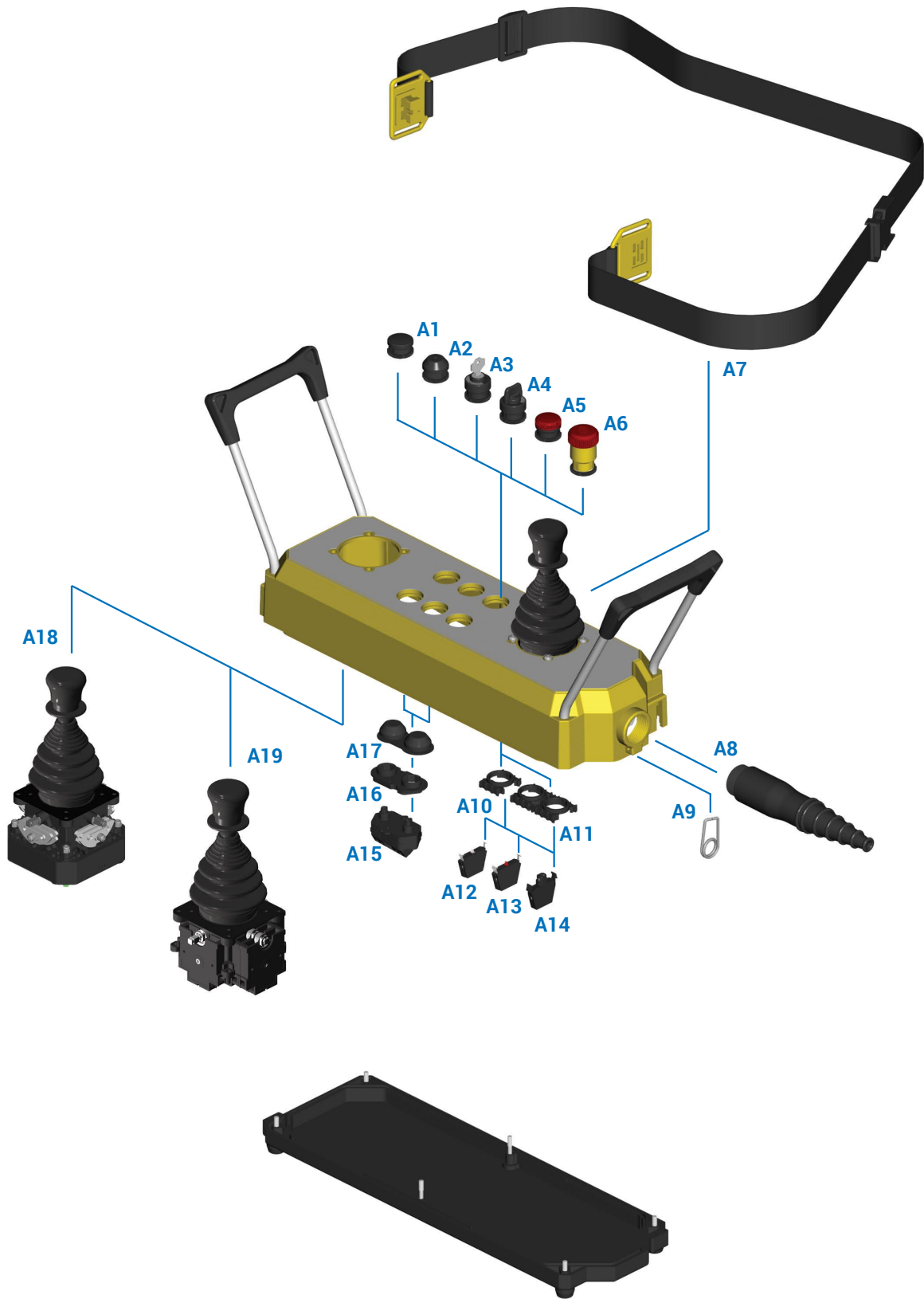
Code	PRVV9020PE	PRVV9025PE	PRVV9035PE
Ohmic value	4.7 kΩ	10 kΩ	2.2 kΩ
Independent linearity (over AEA -3°)	±0.25%		
Life time	3x10 ⁶ movements		
Operational ambient temperature	-55°C/+125°C		
Mechanical angle	360° continuous		
Actual Electrical Angle (AEA)	355°±5°		
Ohmic value tolerance	±5%		
Temperature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

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

Power supply	9 ÷ 30 Vdc
Output	Analogue current output 4 - 20 mA
	Analogue voltage output 1 ÷ 5 Vdc
	Analogue voltage output 2 ÷ 10 Vdc
Power consumption	35 mA
Single turn resolution	12 bit (4096 points per revolution)
Input over-current protection	Yes
Input and output over-voltage protection	Yes
Accuracy	+/- 0,35°
Linearity	+/- 0,25°
Redundancy	2 offset analogue outputs

OVERALL DIMENSIONS (mm)







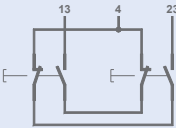
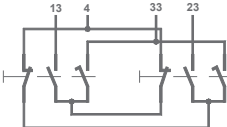








Refer to the following tables for descriptions of components: "Switches", "Actuators", "Pilot lights", "Selector switches", "Mushroom pushbuttons", "Joysticks" and "Accessories".

COMPONENTS


Switches

Ref.	Drawing	Description	Scheme	Code
A12		1NO switch		PRSL1000PI
A13		1NC switch		PRSL1001PI
A14		Lamp holder (without bulb)	-	PRSL1004PI
A15		1 speed, 2NO+common double switch		PRSL1002PI
		2 speeds, 3NO+common double switch		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	Color	Code
A5		Red	PRSL1012PI
		Yellow	PRSL1013PI
		Green	PRSL1014PI

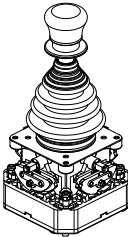
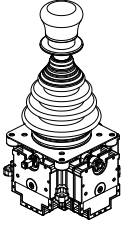
Selector switches

Ref.	Drawing	Positions	Spring return	Maintained positions	Pull-out position	Code
A3		0/1		X	0	PRSL1017PI
		0/1	X		0	PRSL1024PI
A4		0/1	X			PRSL1015PI
		0/1		X		PRSL1016PI
		1/0/2	X			PRSL1026PI
		1/0/2		X		PRSL1027PI

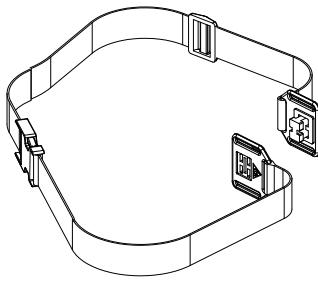
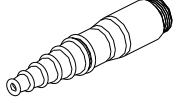



Mushroom pushbuttons

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

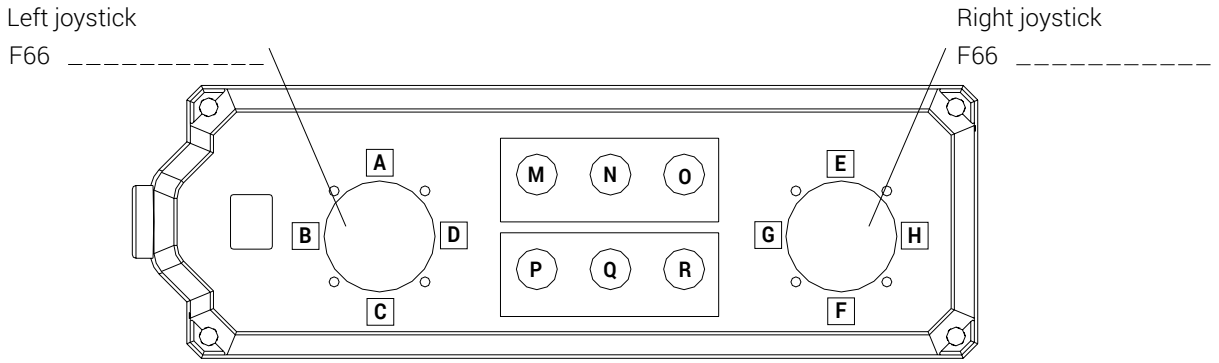
Joysticks

Ref.	Drawing	Description	Code
A18		Hercules-S joystick, all versions available	F66_----- Refer to joystick Hercules documentation
A19		Hercules-CK joystick, all versions available	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



Control elements and switches

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

Joystick label

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

Control elements label

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

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 PRSL1015PI Selector switch 0/1 spring return
- ⑨ PRSL1016PI 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 PRSL1017PI Key selector switch 0/1 maintained positions
- ⑬ PRSL1024PI Key selector switch 0/1 spring return

Single switches

- ⑳ PRSL1000PI 1NO
- ㉑ PRSL1001PI 1NC
- ㉒ PRSL1004PI Lamp holder (without bulb)

Double switches

- ㉓ PRSL1002PI 1 speed
- ㉔ PRSL1003PI 2 speeds

Symbols and colors of control element label

⑳ GREEN	㉑ GREEN	㉒ YELLOW	㉓ RED
㉔ YELLOW			
④① GREEN	④② YELLOW	④③ RED	④④ BLACK
④⑤ WHITE			

Position of cable sleeve

- Right
- Left

Instructions

- Write the code number of the left and right Hercules 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.