

HERCULES

Joystick



New joystick, completely renewed and specifically designed for harsh environments and conditions. Materials, technical solutions and sizing of critical components guarantee reliability and sturdiness, mechanical resistance and long life, while special attention is paid to design, ergonomics, operation accuracy and sensitivity.

FEATURES

- Fiberglass nylon structural components and steel levers ensure maximum resistance.
- Mechanical life of switches: up to 10 million operations.
- IP protection degree: Hercules is classified IP00 or IP65, when housed in a specific enclosure.
- Extreme temperature resistance: -25°C to +70°C.

OPTIONS

- Available with up to 5 speeds for each direction.
- Stepped or linear operations with spring return.
- Cross or 360° movement.
- 3 different versions: with free movement, with "dead man" safety device (with mechanical interlock with or without NO/NC contact), or with NO pushbutton to be used as electrical interlock.
- 4 different handles, also available with pushbuttons and selector switches.
- Available with potentiometers.

- Available with Egon 36-AL single or redundant analog encoders with current or voltage output.

HERCULES-S

- Hercules-S is equipped with boards with 8 or 12 switches with 1NC contacts and switch for electrical interlock.

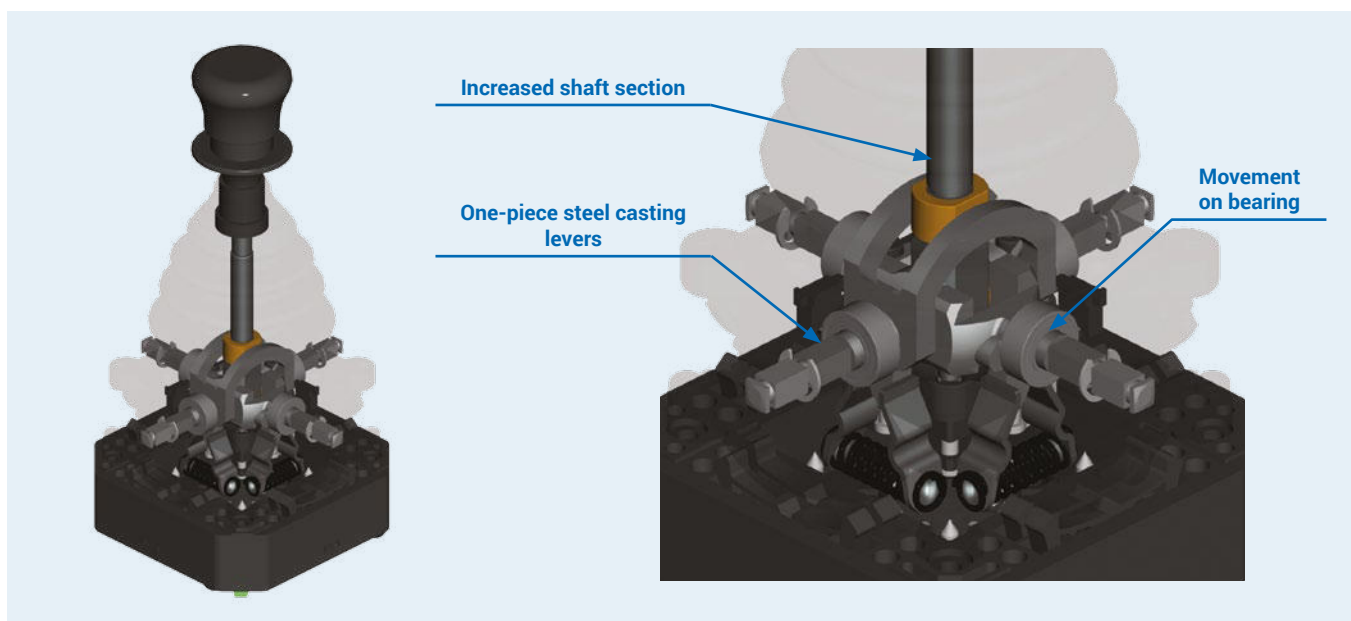
HERCULES-CK

- Hercules-CK is a joystick specially designed for controlling industrial handling machines and it features switches with electrical capacity of 3A / 250 Vac.

CERTIFICATIONS

- CE marking.

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



POSSIBLE ASSEMBLIES



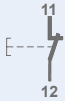
CERTIFICATIONS

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
Markings and homologations	CE

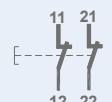
GENERAL TECHNICAL SPECIFICATIONS

Ambient temperature	Storage -40°C/+70°C
	Operational -25°C/+70°C
IP protection degree	IP 00 (IP 65 max. when housed in a specific enclosure)
Insulation category	Class I
Operating positions	Any position
Mechanical life	5x10 ⁶ operations

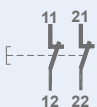
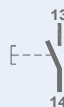
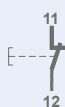
HERCULES-S - TECHNICAL SPECIFICATIONS OF THE SWITCHES

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	   

HERCULES-CK - TECHNICAL SPECIFICATIONS OF THE SWITCHES

Code	PRSL0190XX
Use	Hercules-CK
Utilisation category	AC 15
Rated operational current	3 A
Rated operational voltage	250 Vac
Rated thermal current	10 A
Rated insulation voltage	300 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)
Tightening torque	0.5 Nm
Switch type	Double break, slow action
Contacts	1NC + 1NC*
Scheme	
Markings and homologations	

* The switches PRSL0190XX are NC but works as NO when mounted on the base of joysticks. It's the movement of the cam of the handle which closes the contact.

Code	PRSL0191XX	PRSL1000PI	PRSL1001PI
Use	“Dead man” safety device (Switches suitable only for pushbutton)		
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	CE	CE	cUL _{us}

TECHNICAL SPECIFICATIONS OF THE PUSHBUTTONS

Code	PRVV5019PE	PRVV5020PE	PRVV5080PE
Colour	Green	Black	Green
Contact current rating	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

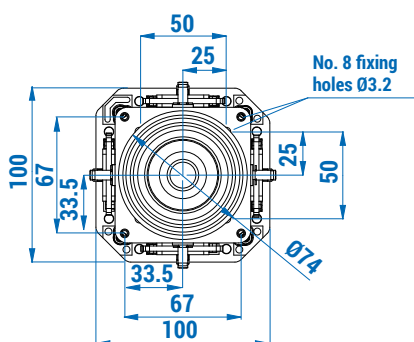
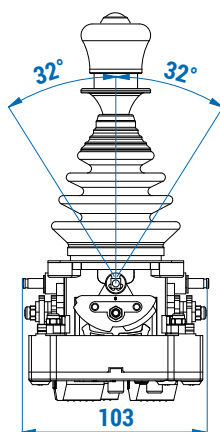
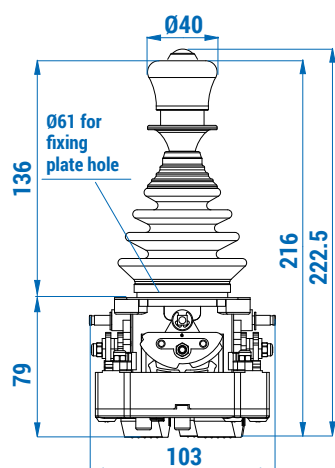
Code	PRVV9020PE	PRVV9025PE	PRVV9035PE
Ohmic value	4,7 kΩ	10 kΩ	2,2 kΩ
Independent linearity (ref. AEA -3°)	±0.25%		
Life time	3x10 ⁶ movements		
Operational ambient temperature	-55°C/+125°C		
Mechanical angle	360° continuous		
Actual Electrical Angle (AEA)	355°±5°		
Ohmic value tolerance	±5%		
Temperature drift	< 50 PPM/°C		
Power rating	Max. 4 W		

TECHNICAL SPECIFICATIONS OF THE ANALOG ENCODERS EGON 36-AL

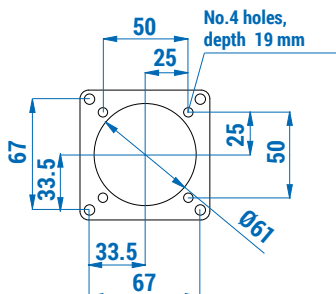
Power supply	12...30 Vdc
	Current 4...20 mA
Analog output	Voltage 1...5 V
	Voltage 2...10 V
Consumption	35 mA simple version
	55 mA redundant version
Single-turn resolution	12 bit (4096 points for revolution)
Protection against input/output over-current	Yes
Protection against input/output over-voltage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

HERCULES-S - OVERALL DIMENSIONS (mm)

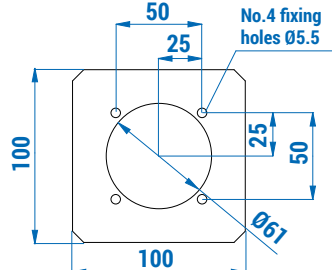
With knob



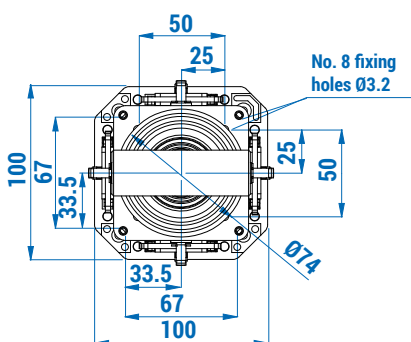
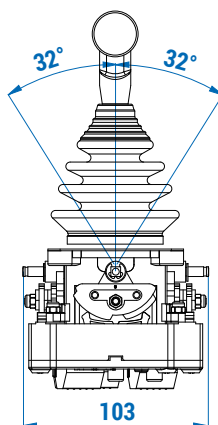
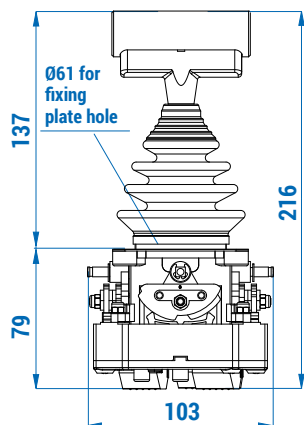
No. 8 fixing holes Ø3.2



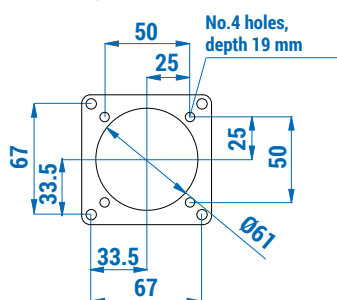
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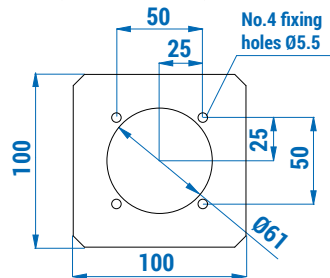
With T handle



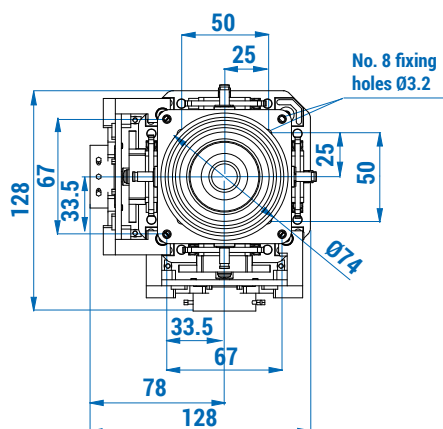
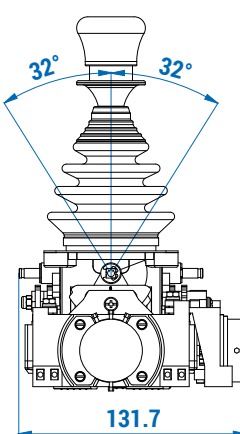
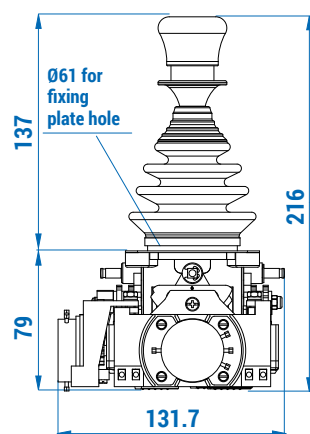
No. 8 fixing holes Ø3.2



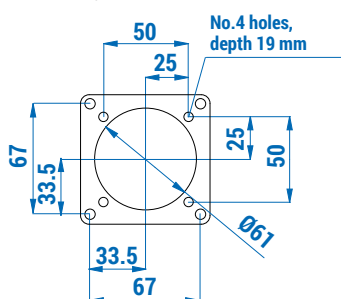
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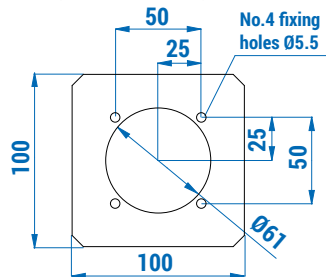
With potentiometer

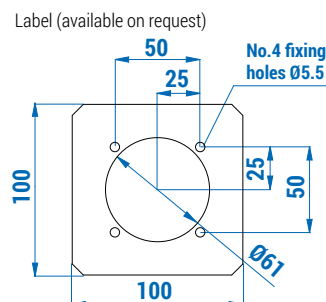
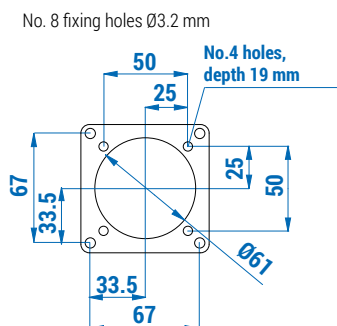
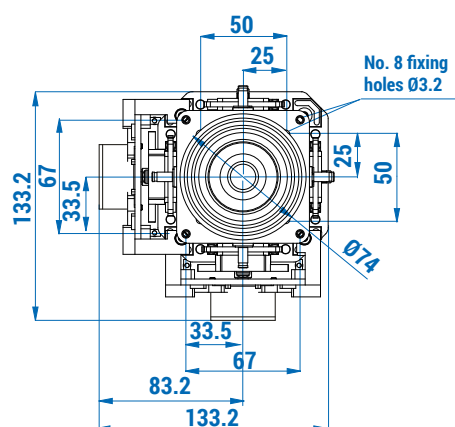
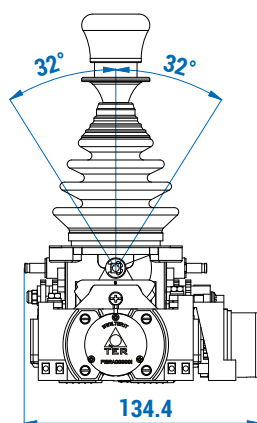
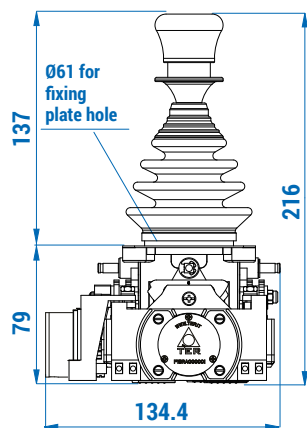


No. 8 fixing holes Ø3.2 mm

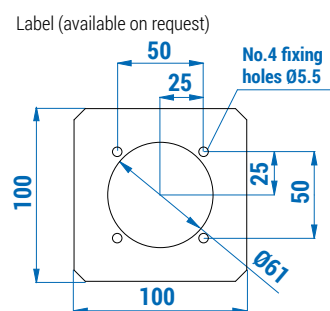
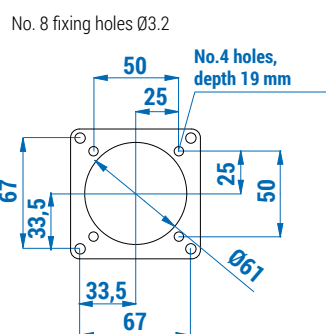
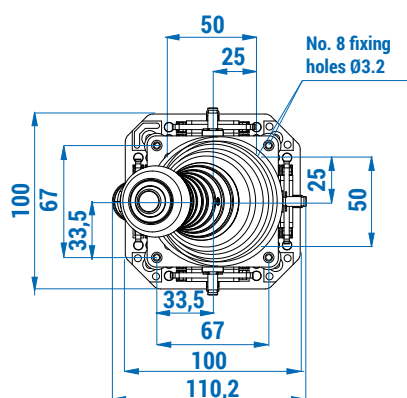
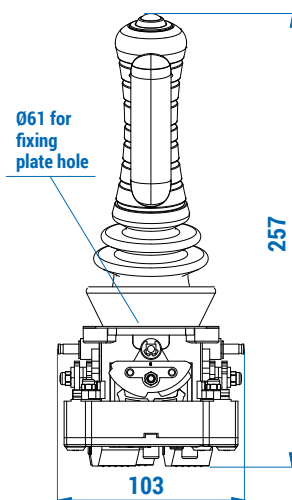
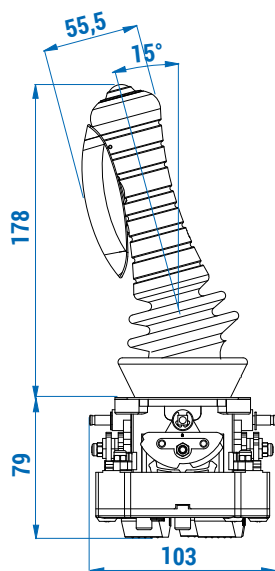


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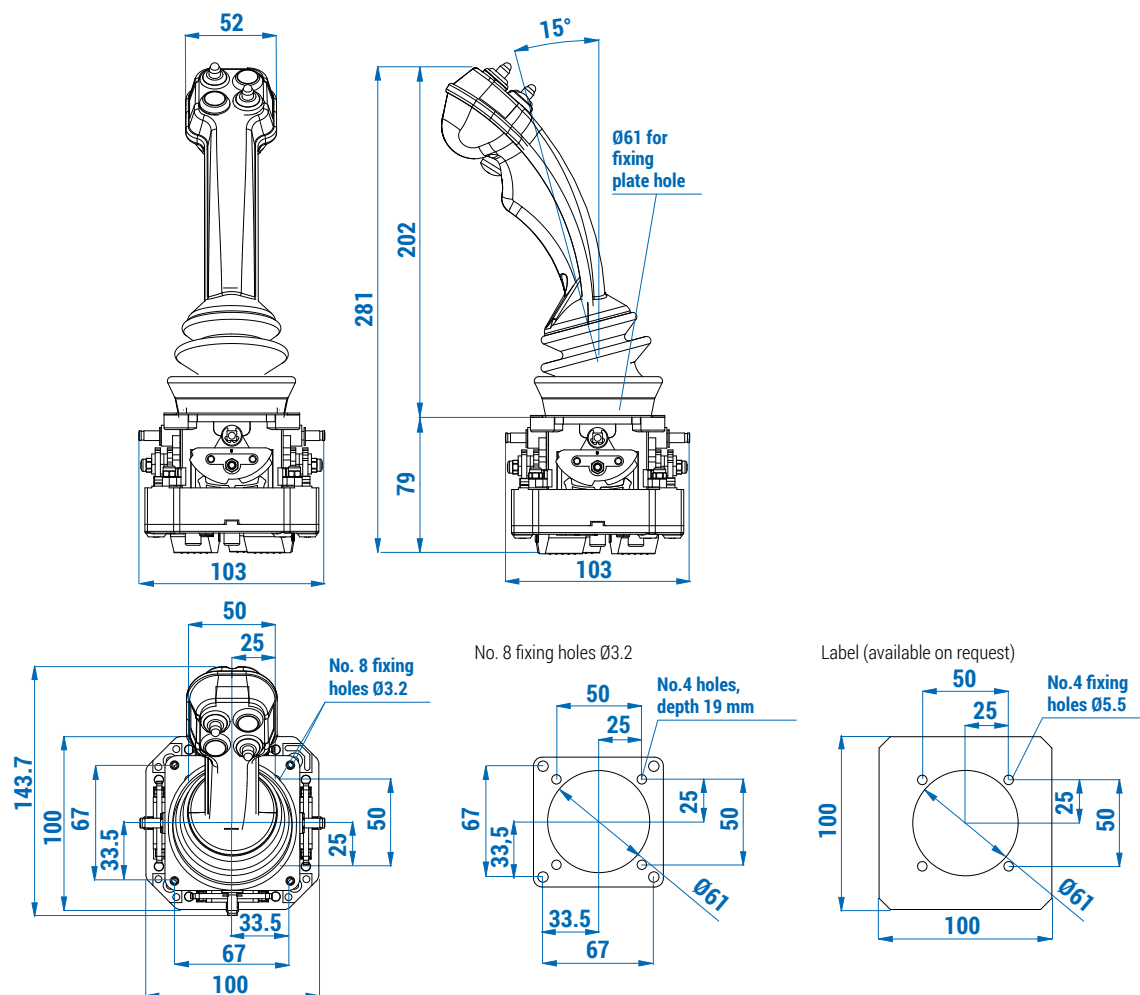




With simple handle



With ergonomic handle

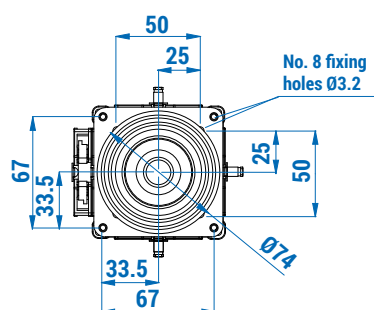
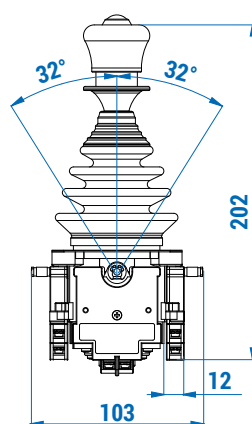
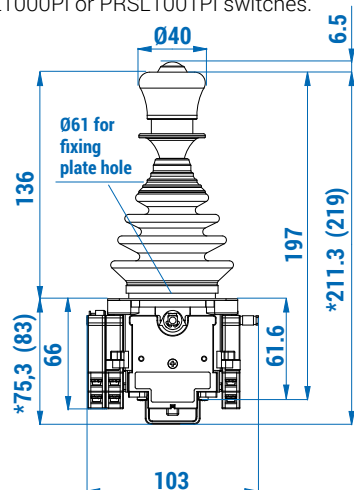


HERCULES-CK - OVERALL DIMENSIONS (mm)

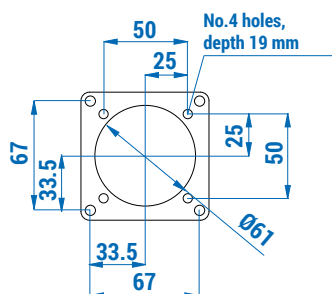
With knob

* with PRSL0191XX switches

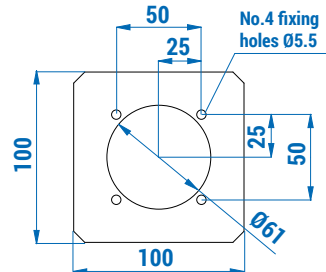
() with PRSL1000PI or PRSL1001PI switches.



No. 8 fixing holes Ø3.2



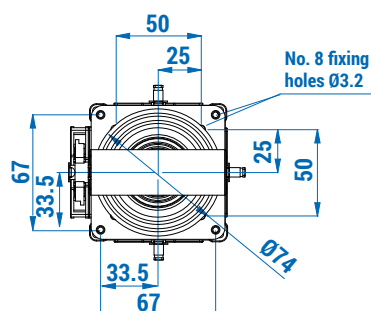
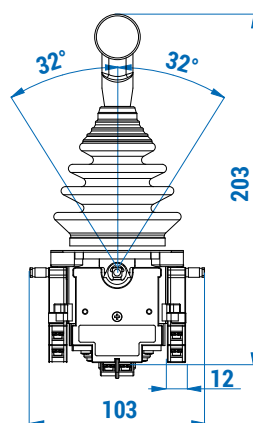
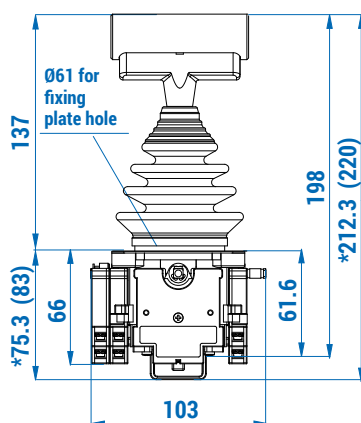
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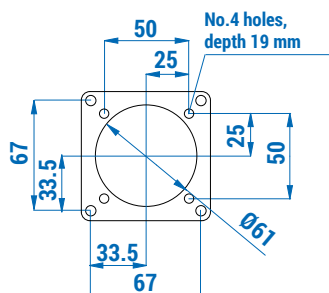
With T handle

* with PRSL0191XX switches

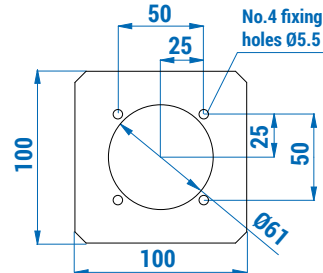
() with PRSL1000PI or PRSL1001PI switches.



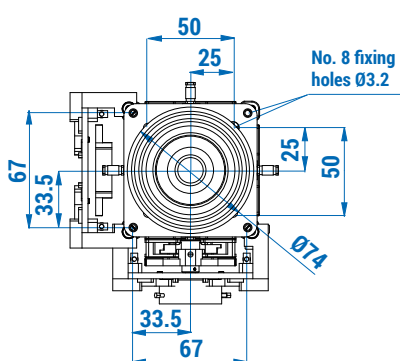
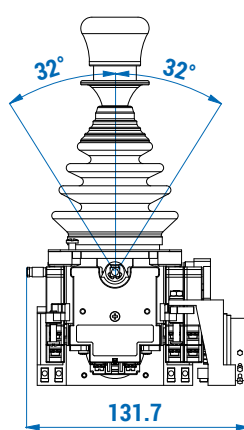
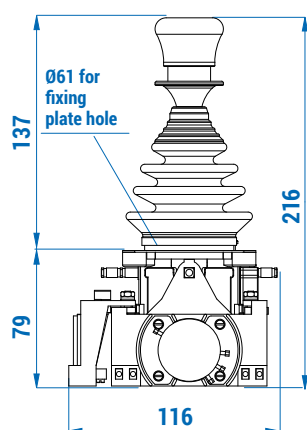
No. 8 fixing holes Ø3.2



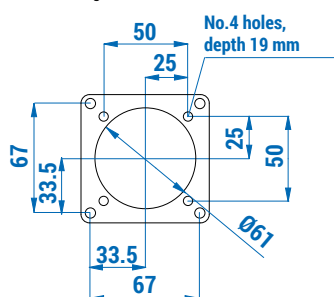
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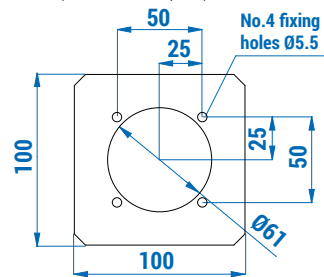
With potentiometer



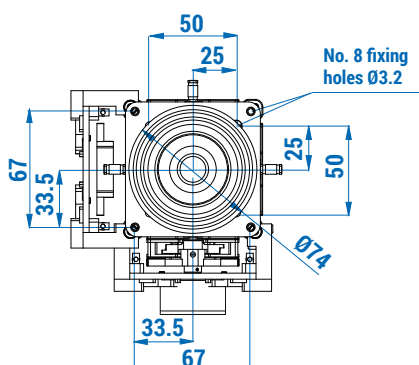
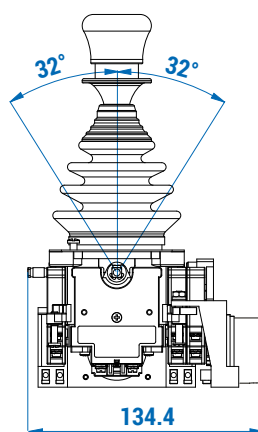
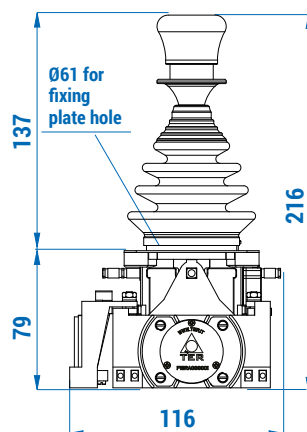
No. 8 fixing holes Ø3.2



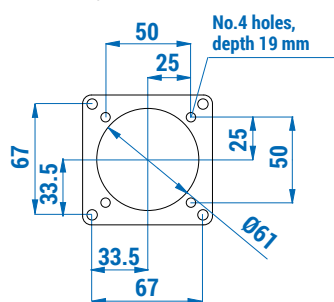
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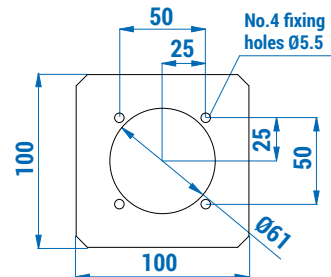
With encoder Egon 36-AL



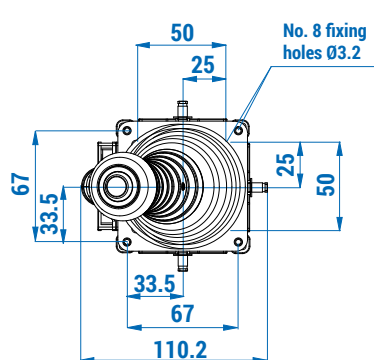
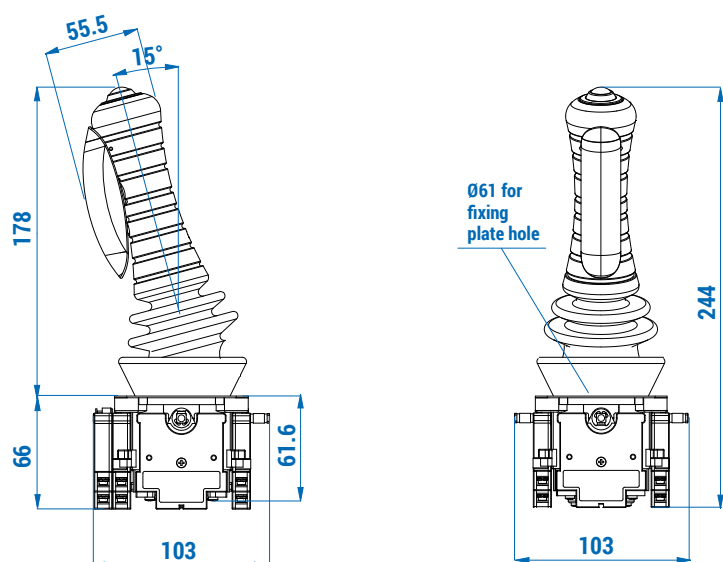
No. 8 fixing holes Ø3.2



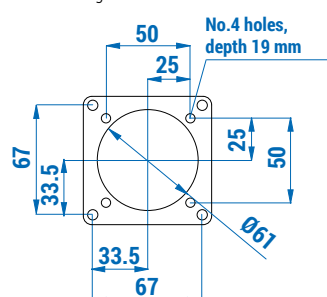
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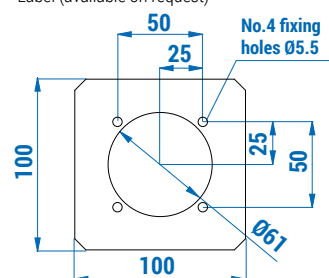
With simple handle



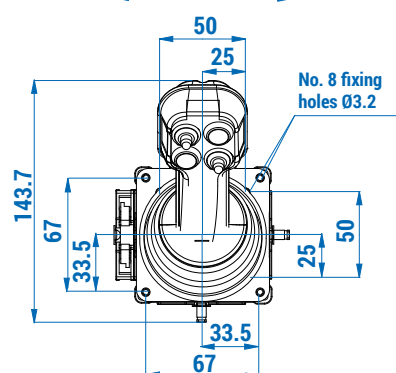
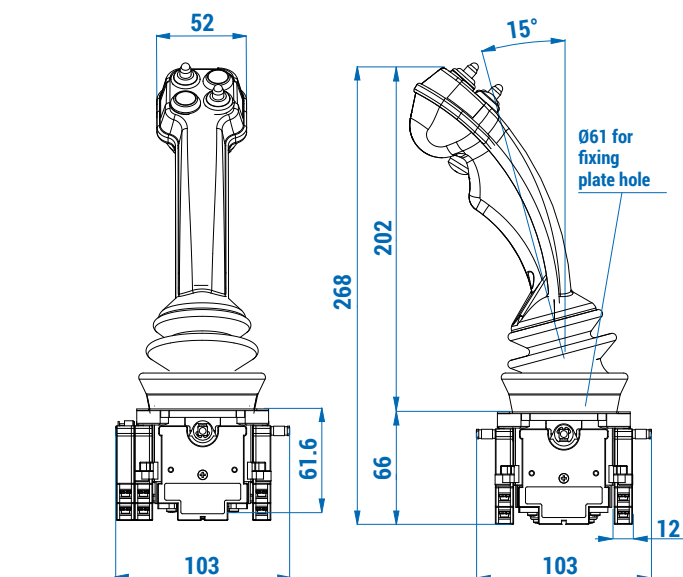
No. 8 fixing holes Ø3.2



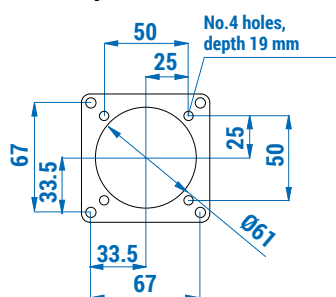
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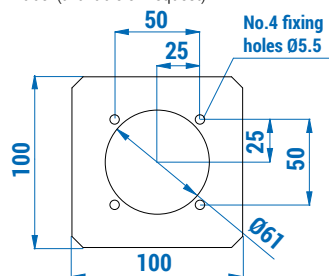
With ergonomic handle



No. 8 fixing holes Ø3.2



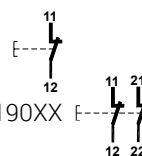
Label (available on request)



STANDARD JOYSTICKS

All standard joysticks feature spring return stepped movements.

Hercules-S joysticks are equipped with 1NC switches PRVV0804PE



Hercules-CK joysticks are equipped with 1NC+1NC switches PRSL0190XX



Grip type	Positions	Direction of movement		Hercules-S code		Hercules-CK code	
		360°	Cross	Free movement	Mechanical interlock + NC/NO contact	Free movement	Mechanical interlock
Knob (IP 65 when housed in a specific enclosure)	1-0		X	F661CC01100001	F661AC01100001	F662CC01100003	F662AC01100005
	1-1	X		F661CL011111001	F661AL011111001	F662CL011111001	F662AL011111002
	2-0		X	F661CC02200001	F661AC02200001	F662CC02200001	F662AC02200001
	2-2	X		F661CL02222001	F661AL02222001	F662CL02222002	F662AL02222005
	3-0		X	F661CC03300001	F661AC03300001	F662CL03300001	F662AC03300005
	3-1	X		F661CL033111001	F661AL033111001	F662CL033111001	F662AL033111002
	3-2	X		F661CL03322001	F661AL03322001	F662CL03322001	F662AL03322001
	3-3	X		F661CL03333001	F661AL03333001	F662CL03333001	F662AL03333001
	4-0		X	F661CC04400001	F661AC04400001	F662CC04400010	F662AC04400004
	4-1	X		F661CL044111001	F661AL044111001	F662CL044111001	F662AL044111001
	4-2	X		F661CL04422001	F661AL04422001	F662CL04422001	F662AL04422002
	4-3	X		F661CL04433001	F661AL04433001	F662CL04433001	F662AL04433001
	4-4	X		F661CL04444001	F661AL04444001	F662CL04444001	F662AL04444001
	5-0		X	F661CC05500001	F661AC05500001	F662CC05500007	F662AC05500009
	5-1	X		F661CL055111001	F661AL055111001	F662CL055111001	F662AL055111001
	5-2	X		F661CL05522001	F661AL05522001	F662CL05522001	F662AL05522003
	5-3	X		F661CL05533001	F661AL05533001	F662CL05533001	F662AL05533002
	5-4	X		F661CL05544001	F661AL05544001	F662CL05544001	F662AL05544001
	5-5	X		F661CL05555001	F661AL05555001	F662CL05555001	F662AL05555004



Grip type	Positions	Direction of movement		Hercules-S code	Hercules-CK code
		360°	Cross	1NO button	1NO button

Knob with pushbutton
(IP 65 when housed in a specific enclosure)

4-4

X

F661BC04444003

F662BC04444002



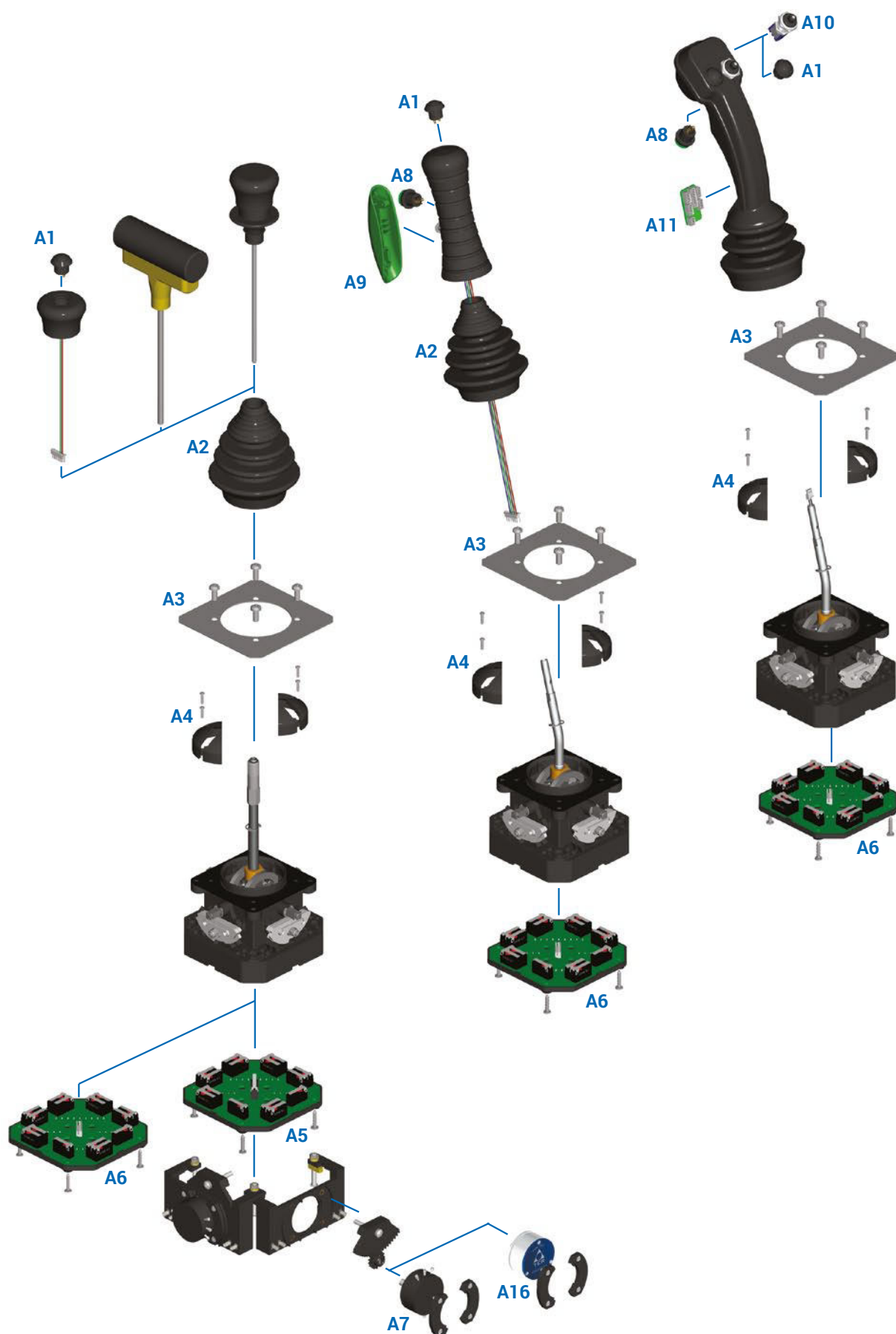
Grip type	Positions	Direction of movement		Hercules-S code	Hercules-CK code
		360°	Cross	Free movement	Free movement
T handle (IP 65 when housed in a specific enclosure)	2-0		X	F661MC02200001	F662MC02200001
	3-3	X		F661ML03333001	F662ML03333002
	4-4	X		F661ML04444001	F662ML04444001
	5-1	X		F661ML055111001	F662ML055111001
	5-5	X		F661ML05555001	F662ML05555001



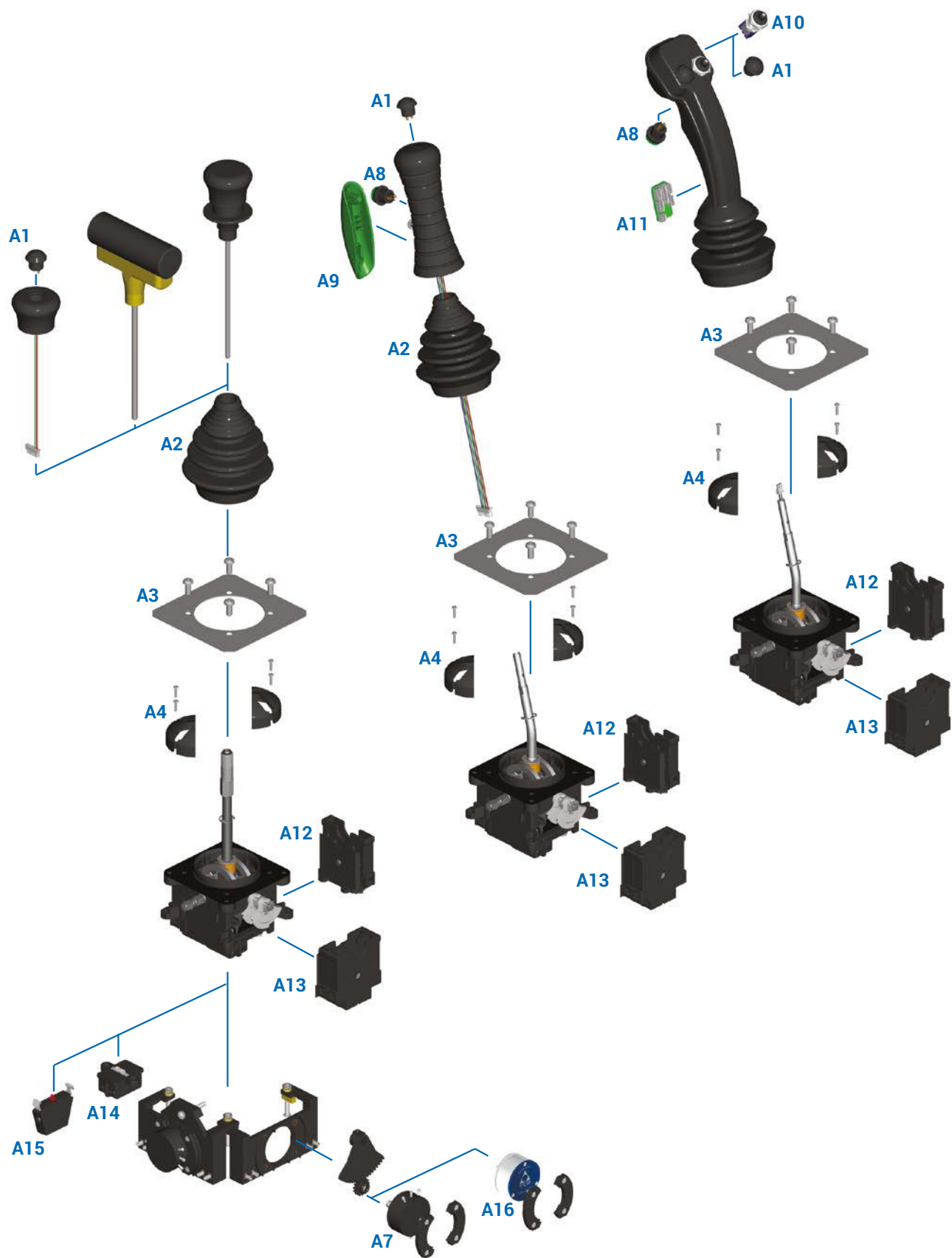
Grip type	Positions	Direction of movement		Hercules-S code		Hercules-CK code	
		360°	Cross	Free movement	1NO button (for use as electrical interlock)	Free movement	1NO button (for use as electrical interlock)
Simple handle (IP 44 when housed in a specific enclosure)	1-0		X	F661GC01100001	F661EC01100001	/	/
	1-1	X		F661GL011111001	F661EL011111001	/	/
	2-0		X	F661GC02200001	F661EC02200001	F662GC02200001	F662EC02200001
	2-2	X		F661GL02222001	F661EL02222001	/	/
	3-0		X	F661GC03300001	F661EC03300001	/	/
	3-1	X		F661GL03311001	F661EL03311001	/	/
	3-2	X		F661GL03322001	F661EL03322001	/	/
	3-3	X		F661GL03333001	F661EL03333001	F662GL03333001	F662EL03333001
	4-0		X	F661GC04400001	F661EC04400001	/	/
	4-1	X		F661GL04411001	F661EL04411001	/	/
	4-2	X		F661GL04422001	F661EL04422001	/	/
	4-3	X		F661GL04433001	F661EL04433001	/	/
	4-4	X		F661GL04444001	F661EL04444001	F662GL04444001	F662EL04444001
	5-0		X	F661GC05500001	F661EC05500001	/	/
	5-1	X		F661GL05511001	F661EL05511001	F662GL05511001	F662EL05511001
	5-2	X		F661GL05522001	F661EL05522001	/	/
	5-3	X		F661GL05533001	F661EL05533001	/	/
	5-4	X		F661GL05544001	F661EL05544001	/	/
	5-5	X		F661GL05555001	F661EL05555001	F662GL05555001	F662EL05555001
Ergonomic handle (IP 43 when housed in a specific enclosure)	1-0		X	F661LC01100001	F661LC01100002	/	/
	1-1	X		F661LL011111001	F661LL011111002	/	/
	2-0		X	F661LC02200001	F661LC02200002	F662LC02200001	F662LC02200002
	2-2	X		F661LL02222001	F661LL02222002	/	/
	3-0		X	F661LC03300001	F661LC03300002	/	/
	3-1	X		F661LL03311001	F661LL03311002	/	/
	3-2	X		F661LL03322001	F661LL03322002	/	/
	3-3	X		F661LL03333008	F661LL03333009	F662LL03333002	F662LL03333003
	4-0		X	F661LC04400001	F661LC04400002	/	/
	4-1	X		F661LL04411001	F661LL04411002	/	/
	4-2	X		F661LL04422001	F661LL04422002	/	/
	4-3	X		F661LL04433001	F661LL04433002	/	/
	4-4	X		F661LL04444001	F661LL04444002	F662LL04444002	F662LL04444001
	5-0		X	F661LC05500001	F661LC05500002	/	/
	5-1	X		F661LL05511004	F661LL05511005	F662LL05511002	F662LL05511003
	5-2	X		F661LL05522001	F661LL05522002	/	/
	5-3	X		F661LL05533001	F661LL05533002	/	/
	5-4	X		F661LL05544002	F661LL05544001	/	/
	5-5	X		F661LL05555001	F661LL05555002	F662LL05555002	F662LL05555003



HERCULES-S - ASSEMBLY DRAWING



Refer to the following tables for descriptions of components: "Pushbuttons", "Switch boards", "Potentiometers and encoders", "Selector switches", "Lever guides" and "Accessories".



Refer to the following tables for descriptions of components: "Switches", "Pushbuttons", "Switch boards", "Potentiometers and encoders", "Selector switches", "Lever guides" and "Accessories".

COMPONENTS

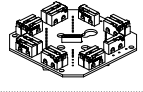
Switches

Ref.	Drawing	Description	Scheme	Code
A12		N. 1 switch PRSL0190XX 1NC+1NC with holding plate, nut and screw.		PRSL4540PI
A13		N. 2 switches PRSL0190XX 1NC+1NC with holding plate, nut and screw.	2 x 	PRSL4541PI
A14		1NC + 1NC switch		PRSL0191XX
A15		1 NO switch		PRSL1000PI
		1 NC switch		PRSL1001PI

Pushbuttons

Ref.	Drawing	Description	Code
A1		Green 1NO pushbutton	PRVV5019PE
		Black 1NO pushbutton	PRVV5020PE
A8		Green 1NO pushbutton	PRVV5080PE
A9		Trigger pushbutton	PRSL7595PI

Switch boards

Ref.	Drawing	Description	Code
A5		Board with 12 switches + electrical interlock - 5 speeds	93625
		Board with 8 switches + electrical interlock - 3 speeds	93621
A6		Board with 12 switches - 5 speeds	93626
A11		Board for ergonomic handle	93624

Potentiometers and encoders

Ref.	Drawing	Description	Code
A7		Potentiometer 2,2 kΩ	PRVV9035PE
		Potentiometer 4,7 kΩ	PRVV9020PE
		Potentiometer 10 kΩ	PRVV9025PE
A16		Single analog encoder Egon 36-AL	F19SA000001
		Redundant analog encoder Egon 36-AL	F19RA000001

Selector switches

Ref.	Drawing	Description	Code
A10		Selector switch 2 maintained pos. ON-ON, 2 contacts + 1 common	PRVV0830PE
		Selector switch 3 maintained pos. ON-OFF-ON, 2 contacts + 1 common	PRVV0831PE
		Selector switch 2 spring return pos. ON-MOM, 2 contacts + 1 common	PRVV0832PE
		Selector switch 3 pos. MOM-OFF-MOM, 2 contacts + 1 common	PRVV0833PE
		Selector switch 3 pos.ON-OFF-MOM, 2 contacts + 1 common	PRVV0834PE
		Selector switch 2 maintained pos. ON-OFF, 1 contact + 1 common	PRVV0840PE
		Selector switch 2 pos. MOM-OFF, 1 contact + 1 common	PRVV0842PE

Lever guides - Hercules 3 speeds

Other lever guides available on request.

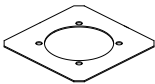
Ref.	Drawing	Description	Code
A4		Cross lever guide 3/3	PRHC5555PE
		Cross lever guide 2/2	PRHC3333PE
		Cross lever guide 1/1	PRHC1111PE

Lever guides - Hercules 5 speeds

Other lever guides available on request.

Ref.	Drawing	Description	Code
A4		Cross lever guide 5/5	PRHC5555PE
		Cross lever guide 4/4	PRHC4444PE
		Cross lever guide 3/3	PRHC3333PE
		Cross lever guide 2/2	PRHC2222PE
		Cross lever guide 1/1	PRHC1111PE

Accessories

Ref.	Drawing	Description	Code
A2		Bellows	PRGU6050PE
A3		Blank label	PRTA0150PE
		Lifting-Traverse label	PRTA0151PE
		Trolley-Rotation label	PRTA0152PE

HERCULES-S - REQUEST FORM FOR NON STANDARD JOYSTICK

Grip

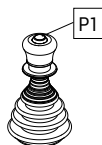
Choose only one of the following options

Knob (IP 65 when housed in a specific enclosure)

☐ Knob without mechanical interlock

☐ Knob without mechanical interlock with P1 1NO pushbutton
Colour of pushbutton
☐ black ☐ green

☐ Knob with mechanical interlock + NC/NO contact



T handle (IP 65 when housed in a specific enclosure)

☐ T handle without mechanical interlock

☐ T handle with mechanical interlock + NC/NO contact

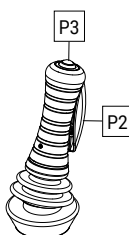


Simple handle (IP 44 when housed in a specific enclosure)

☐ Simple handle without mechanical interlock

☐ Simple handle without mechanical interlock with P2 1NO pushbutton

☐ Simple handle without mechanical interlock with P2 1NO pushbutton + P3 1NO pushbutton
Colour of P3 pushbutton
☐ black ☐ green



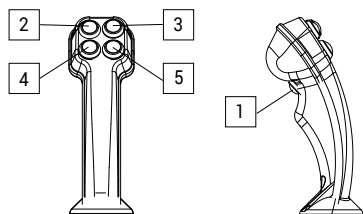
Ergonomic handle (IP 43 when housed in a specific enclosure)

☐ Ergonomic handle without mechanical interlock



1NO pushbuttons can be used as electrical interlock.

Actuators for ergonomic handle



Actuator* and label text

Pos.

1 Yes No PRVV5080PE Green pushbutton
1NO contact + 1 common**

Type	Text
2 ☐	
3 ☐	
4 ☐	
5 ☐	

Movement

☐ Stepped - spring return

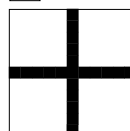
☐ Linear - spring return

Lever guide

Standard lever guides

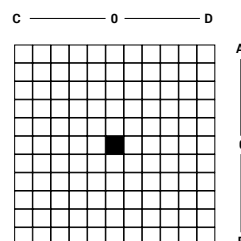


5 steps directions A-B
5 steps directions C-D
360° movement



5 steps directions A-B
5 steps directions C-D
Cross movement

☐ Customized lever guide



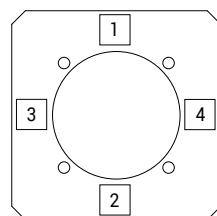
Joystick label

☐ Blank label

☐ Lifting-Traversal symbols

☐ Trolley-Rotation symbols

☐ Customized label



Pos. Text

1

2

3

4

Actuators for positions 2-3-4-5

- A PRVV5019PE Green pushbutton 1NO contact + 1 common
- B PRVV5020PE Black pushbutton 1NO contact + 1 common
- C PRVV0840PE Selector switch 2 maintained pos. ON-OFF, 1 contact + 1 common
- D PRVV0842PE Selector switch 2 pos. MOM-OFF, 1 contact + 1 common
- E PRVV0830PE Selector switch 2 maintained pos. ON-ON, 2 contacts + 1 common
- F PRVV0832PE Selector switch 2 spring return pos. ON-MOM, 2 contacts + 1 common

Actuators for positions 2-3

- G PRVV0831PE Selector switch 3 maintained pos. ON-OFF-ON, 2 contacts + 1 common
- H PRVV0833PE Selector switch 3 pos. MOM-OFF-MOM, 2 contacts + 1 common
- I PRVV0834PE Selector switch 3 pos. ON-OFF-MOM, 2 contacts + 1 common

* Maximum 5 contacts + 1 common available.
Ex.: 1NO contact in position 1 + 4 buttons A type.
1NO contact in position 1 + 4 selectors C type.
1NO contact in position 1 + 2 selectors G type.

** In case of use of the electrical interlock function, connect it to the actuator in Position 1.

Contact scheme for Hercules-S with up to 3 speeds/positions

☐ Standard version 3 - 3 speeds/positions

		Contact number					
		1	2	3	4		
Speed / Position	Direction	A	3				
		2					
		1					
		0					
		1					
		2					
		B	3				

		Speed / Position						
		Direction						
		C				D		
Contact number		3	2	1	0	1	2	3
	6							
	7							
	8							
	9							

☐ Customized version

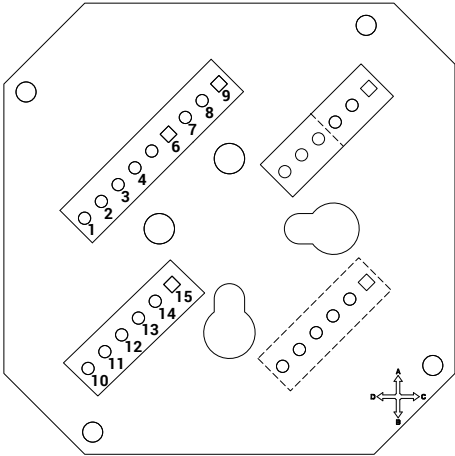
		Contact number																
		1	2	3	4	10	11	12										
Speed / Position	Direction	Speed / Position																
		Direction																
		C ← → D																
		3	2	1	0	1	2	3										
		6																
	Direction	7																
		8																
		9																
		13																
		14																
15																		

Optional contacts only for Hercules with one or more pushbuttons

		Speed / Position								
		Direction								
		C ← → D								
		3	2	1	0	1	2	3		
		6								
		7								
Contact number	8									
	9									
	13									
	14									
	15									

Optional contacts only for Hercules with one or more pushbuttons

Instructions
If a customer has a contact and C-D, the contact movement is



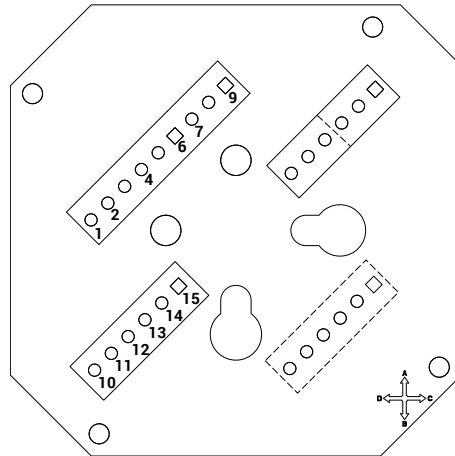
Instructions
If a customized version is required, fill in the contact diagram for the two directions A-B and C-D. Blacken the boxes corresponding to the contacts that must be associated with the movement of the joystick.

Contact scheme for Hercules-S with up to 5 speeds/positions

☐ Standard version 5 - 5 speeds/positions

		Contact number							
		1	2	4	10	11	12		
Speed / Position	Direction	A	5						
		4							
		3							
		2							
		1							
		0							
		1							
		2							
		3							
		B	4						
5									

		Speed / Position										
		Direction										
		C ← → D										
		5	4	3	2	1	0	1	2	3	4	5
Contact number	6											
	7											
	9											
	13											
	14											
	15											



Instructions
If a customized version is required, fill in the contact diagram for the two directions A-B and C-D. Blacken the boxes corresponding to the contacts that must be associated with the movement of the joystick.

☐ Customized version

		Contact number						
		1	2	4	10	11	12	
Speed / Position	Direction A B	5						
		4						
		3						
		2						
		1						
		0						
		1						
		2						
		3						
		4						
5								

		Speed / Position										
		Direction										
		C ← → D										
Contact number	5	4	3	2	1	0	1	2	3	4	5	
	6											
	7											
	9											
	13											
	14											
	15											

HERCULES-CK - REQUEST FORM FOR NON STANDARD JOYSTICK

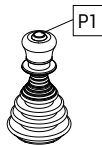
Grip

Choose only one of the following options
Knob (IP 65 when housed in a specific enclosure)

☐ Knob without mechanical interlock

☐ Knob without mechanical interlock with P1 1NO pushbutton
 Colour of pushbutton
☐ black ☐ green

☐ Knob with mechanical interlock + NC/NO contact



T handle (IP 65 when housed in a specific enclosure)

☐ T handle without mechanical interlock

☐ T handle with mechanical interlock + NC/NO contact

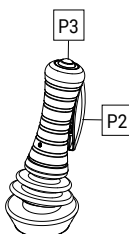


Simple handle (IP 44 when housed in a specific enclosure)

☐ Simple handle without mechanical interlock

☐ Simple handle without mechanical interlock with P2 1NO pushbutton

☐ Simple handle without mechanical interlock with P2 1NO pushbutton + P3 1NO pushbutton
 Colour of P3 pushbutton
☐ black ☐ green



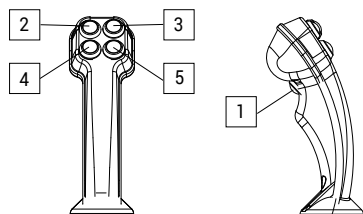
Ergonomic handle (IP 43 when housed in a specific enclosure)

☐ Ergonomic handle without mechanical interlock



1NO pushbuttons can be used as electrical interlock.

Actuators for ergonomic handle



Actuator* and label text

Pos.

☐ 1 ☐ Yes ☐ No PRVV5080PE Green pushbutton 1NO contact + 1 common**

Type	Text
☐ 2	
☐ 3	
☐ 4	
☐ 5	

Movement

☐ Stepped - spring return

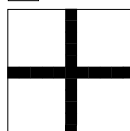
☐ Linear - spring return

Lever guide

Standard lever guides

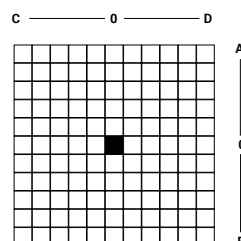


5 steps directions A-B
 5 steps directions C-D
 360° movement



5 steps directions A-B
 5 steps directions C-D
 Cross movement

☐ Customized lever guide



Joystick label

☐ Blank label

☐ Lifting-Traversal symbols

☐ Trolley-Rotation symbols

☐ Customized label

Pos.	Text
1	
2	
3	
4	

Actuators for positions 2-3-4-5

- ☐ A PRVV5019PE Green pushbutton 1NO contact + 1 common
- ☐ B PRVV5020PE Black pushbutton 1NO contact + 1 common
- ☐ C PRVV0840PE Selector switch 2 maintained pos. ON-OFF, 1 contact + 1 common
- ☐ D PRVV0842PE Selector switch 2 pos. MOM-OFF, 1 contact + 1 common
- ☐ E PRVV0830PE Selector switch 2 maintained pos. ON-ON, 2 contacts + 1 common
- ☐ F PRVV0832PE Selector switch 2 spring return pos. ON-MOM, 2 contacts + 1 common

Actuators for positions 2-3

- ☐ G PRVV0831PE Selector switch 3 maintained pos. ON-OFF-ON, 2 contacts + 1 common
- ☐ H PRVV0833PE Selector switch 3 pos. MOM-OFF-MOM, 2 contacts + 1 common
- ☐ I PRVV0834PE Selector switch 3 pos. ON-OFF-MOM, 2 contacts + 1 common

* Maximum 5 contacts + 1 common available.
 Ex.: 1NO contact in position 1 + 4 buttons A type.
 1NO contact in position 1 + 4 selectors C type.
 1NO contact in position 1 + 2 selectors G type.

** In case of use of the electrical interlock function, connect it to the actuator in Position 1.

Switches for mechanical interlock (when required)*

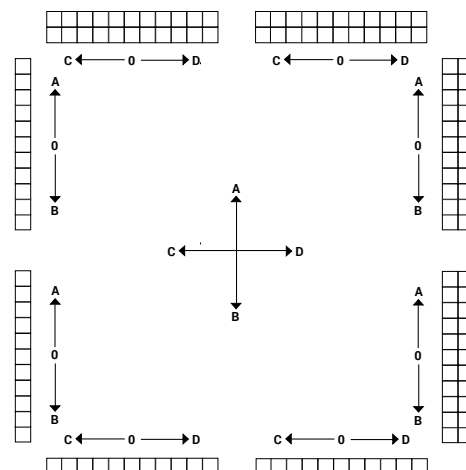
- ☐ 1 switch PRSL0191XX with 1NC+1NC contacts.
- ☐ 1 switch PRSL1000PI with 1NO contact.
- ☐ 1 switch PRSL1000PI with 1NO contact + 1 switch PRSL1000PI with 1NO contact.
- ☐ 1 switch PRSL1001PI with 1NC contact.
- ☐ 1 switch PRSL1001PI with 1NC contact + 1 switch PRSL1001PI with 1NC contact.
- ☐ 1 switch PRSL1000PI with 1NO contact + 1 switch PRSL1001PI with 1NC contact.

* Attention: the switches must be added only to the grip version equipped with the knob for mechanical interlock.

Contact diagram for Hercules-CK**Instructions**

Fill in the contact diagram blackening the boxes corresponding to the positions where the cams close the contacts (each bar of 11 boxes corresponds to a switch; the central box corresponds to the zero position of the joystick). In the example, the contact is closed in positions 1-2-3 to the left and 3-4 to the right.

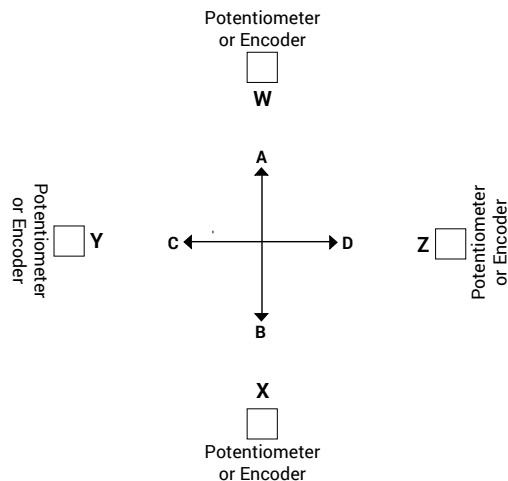
5	4	3	2	1	0	1	2	3	4	5

**Potentiometers and Encoders****Potentiometer**

- ☐ 1 PRVV9035PE 2,2 kΩ
- ☐ 2 PRVV9020PE 4,7 kΩ
- ☐ 3 PRVV9025PE 10 kΩ
- ☐ 4 Pre-set only

Instructions

Potentiometers: write the number corresponding to the potentiometer or to the pre-set required in the desired position in the scheme to the left.

**Encoders Egon 36-AL**

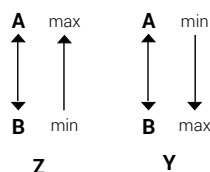
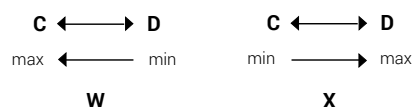
- ☐ 5 F19SA000001 single
- ☐ 6 F19RA000001 redundant

Analog output

- ☐ Current output 4-20 mA
- ☐ Voltage output 1 ÷ 5 Vdc
- ☐ Voltage output 2 ÷ 10 Vdc

Instructions

Encoders: write the number corresponding to the encoder required in the desired position in the scheme to the left and tick the box corresponding to the type of analog output required.

Direction of signal increase / decrease**Lever direction A - B****Lever direction C - D****Standard positions**

The signal increases in positions W and Z and decreases in positions X and Y.