FINGER JOYSTICK MJ-F15

The MJ-F15 is a compact, redundant industrial joystick based on Hall technology.

It is available in various limiters.

Advantages
– Compact design
– Contactless Hall technology
– Redundant output signal

Application examples
– Radio remote controls
– Industrial trucks
– Measuring machines
– Agricultural and forestry machinery
– Marine
– Medical technology



Electrical data	
Sensor technology	Hall-effect
Supply voltage	3.3 to 5 VDC
Tolerance center position	±2 % FSO
Interfaces	0.5 – 4.5 V ratiometric at 5 VDC Redundant or reverse redundant SPI PWM
Resolution	12 bit
Supply current	Typ. 8 mA, max. 16 mA

Electrical connection	
	Molex iGrid 501645 10 pole Cable Others on request

Environmental data	
Operating temperature	-20° C up to +85° C
Storage temperature	-40° C up to +85° C
Protection level acc. to IEC 60529	IP 67 above sealing
EMC Immunity acc. to	EN IEC 61000-6-2
EMC Emission acc. to	EN IEC 61000-6-4

Mechanical data	
Number of axes	1, 2 or 3
Dimensions	See drawings
Weight	approx. 80 g
Operating force	5 N ± 1.5 N
Max. vertical load	< 500 N
Max. tilt load	< 200 N
Deflection angle	±19°
Center position	Spring
Mounting	Screwed from below or above
Mechanical option	Spring return to center
Limiter	Square Square, soft guided feel Cross gate Single axis in X or Y
Lifetime	10 million cycles

Material	
Rubber boot	Neopren

Handle design	
	Handle with rubber boot, closed

Handle function	
	None Push button / Deadman switch internal

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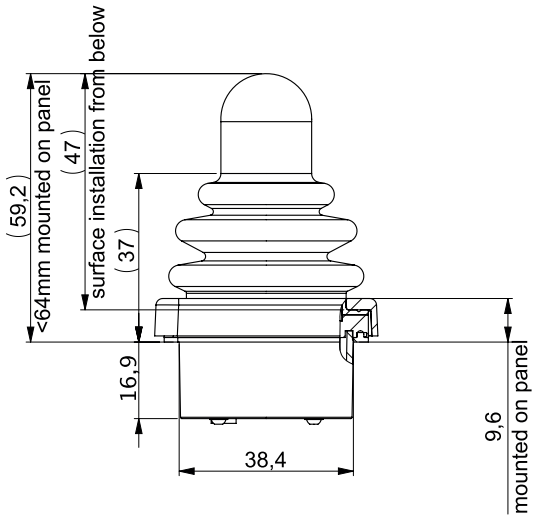
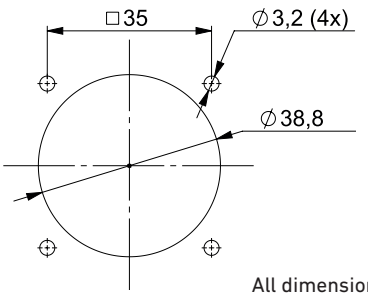
Dimensions

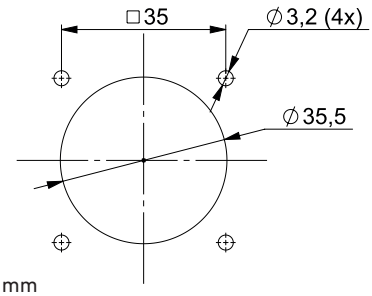


Mounting

Mounting from above

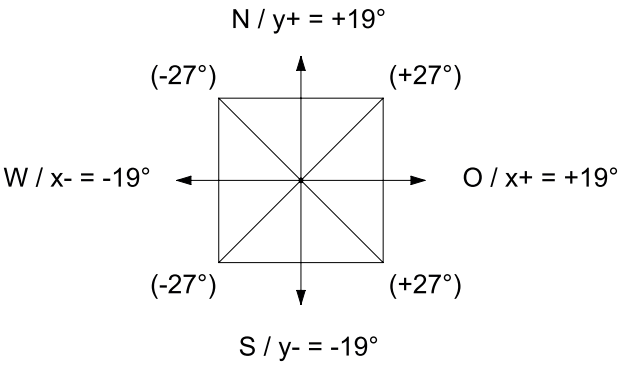


Mounting from below

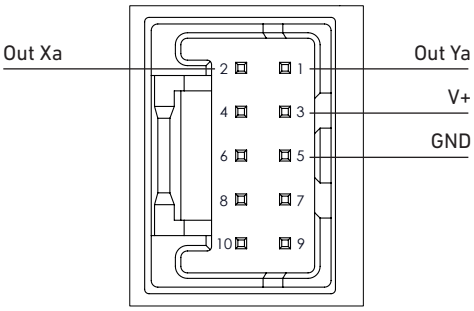


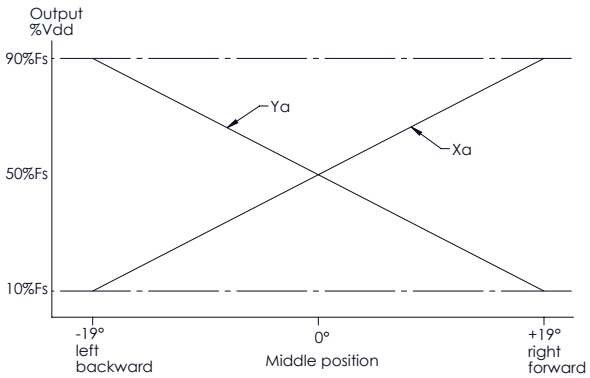
All dimensions in mm

Deflection



Electrical connection

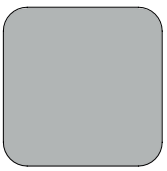




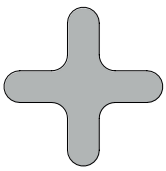
Limiter



Square,
soft guided feel



Square



Cross gate



Single axis,
Y locked, X active



Single axis,
X locked, Y active

Metallux cannot picture the customer's operating and application conditions and the customer's existing environmental influences.
We therefore recommend that you carry out your own investigations into the planned use of the products under the actual operating conditions.

We continuously improve our products and also update our data sheets regularly. In this respect, there may be changes in the specification.
These changes will apply to orders received by us from the time of the update, unless otherwise agreed.

Our products comply with Directive 2011/65/EU (RoHS) including Directive 2015/863/EU and Regulation (EC) No. 1907/2006 (REACH).

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Product codes for orders

		X-axis	Y-axis	Z-axis
		X_	Y_	Z_
Sensor technology				
0	None	**0**	**0**	**0**
H	Hall	**H**	**H**	**H**
Interface				
00	None	**00**	**00**	**00**
16	Hall ratiometric 0.5 - 4.5 V	**16**	**16**	**16**
17	Hall ratiometric 0.5 - 4.5 V, redundant	**17**	**17**	**17**
18	Hall ratiometric 0.5 - 4.5 V, reverse redundant	**18**	**18**	**18**
19	SPI	**19**	**19**	**19**
24	PWM	**24**	**24**	**24**
99	Custom	**99**	**99**	**99**
Mechanical option				
A00	None	**A00**	**A00**	**A00**
A01	Spring return to center	**A01**	**A01**	**A01**
A99	Custom	**A99**	**A99**	**A99**
Limiter				
B00	None			**B00**
B01	Square, soft guided feel			**B01**
B02	Square			**B02**
B05	Cross gate			**B05**
B07	Single axis, Y locked, X active			**B07**
B08	Single axis, X locked, Y active			**B08**
B99	Custom			**B99**
Electrical connection				
C00	None			**C00**
C02	Connector			**C02**
C03	Cable			**C03**
C04	Cable with connector			**C04**
C99	Custom			**C99**
Handle design				
D07	Handle with rubber boot, closed			**D07**
D99	Custom			**D99**
Handle function				
E00	None			**E00**
E01	Push button / Deadman swith, internal			**E01**
E99	Custom			**E99**

Explanation of Product Codes
Each product code begins with the model name. After that, for each axis, the sensor technology, the interface, and the mechanical option are specified. This is followed by the limiter, the electrical connection, the handle design, and the handle function.

Example for the Product Code of a typical MJ-F15: MJ-F15_XH18_A01_YH18_A01_ZH18_A01_B02_C03_D07_E01
XH18_A01: X-axis Hall ratiometric 0.5 - 4.5 V reverse redundant, spring return to center
YH18_A01: Y-axis Hall ratiometric 0.5 - 4.5 V reverse redundant, spring return to center
ZH18_A01: Z-axis Hall ratiometric 0.5 - 4.5 V reverse redundant, spring return to center
B02_C03_D07_E01: Square limiter, soft guided feel, Cable, Handle with rubber boot closed, Push-button / Deadman swith internal