

THUMB JOYSTICK MJ-T11

The MJ-T11 is a small 2-axis, redundant industrial joysticks in Hall technology.

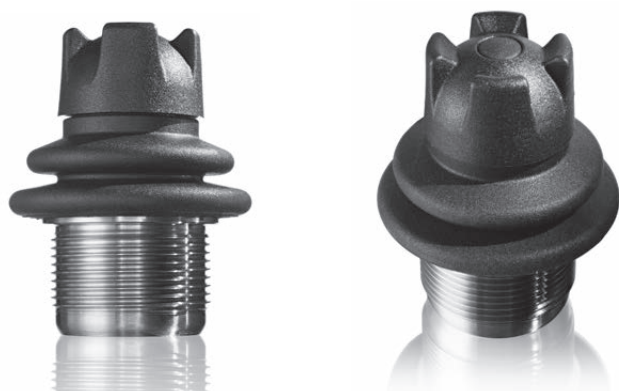
Different limiters are available.

Advantages

- Contactless Hall technology
- Redundant output signal

Application examples

- Control element in hand joysticks
- Control element in armrests
- Radio remote controls
- Wheel chairs
- Off-highway vehicles



Electrical data

Sensor technology	Hall-effect
Supply voltage	3.3 to 5 VDC
Tolerance center position	±5 % FSO
Interface	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

Cable, approx. 200 mm
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

Axes	1 or 2
Dimensions	See drawings
Weight	26 g
Operating force	3 N ± 0,5 N
Max. vertical load	< 200 N
Max. tilt load	< 150 N
Deflection angle	±25,5°
Centering	Single spring
Mounting	M20 with lock nut Screwed from below
Mechanical option	Spring return to center
Limiter	Round Round, soft guided feel Cross gate Single axis in X or Y
Lifetime	5 million cycles

Material

Housing	Stainless steel
Rubber boot	Neoprene
Handle	Plastic

Handle design

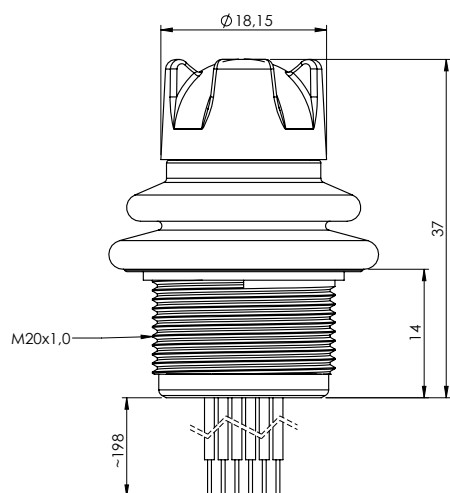
Rubber boot	See drawings
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Handle function

None

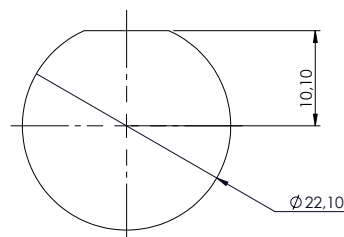
THUMB JOYSTICK MJ-T11

Drawings



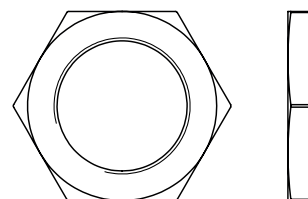
Mounting

Cutout



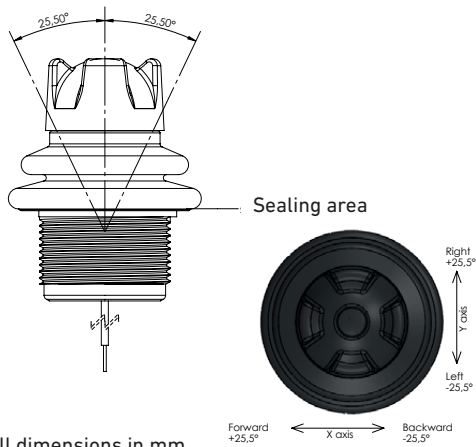
The mounting plate must not be thinner than 1.5 mm.

Fixing nut (included)



M20 x 1.0 SW24
Thickness 3.3 mm

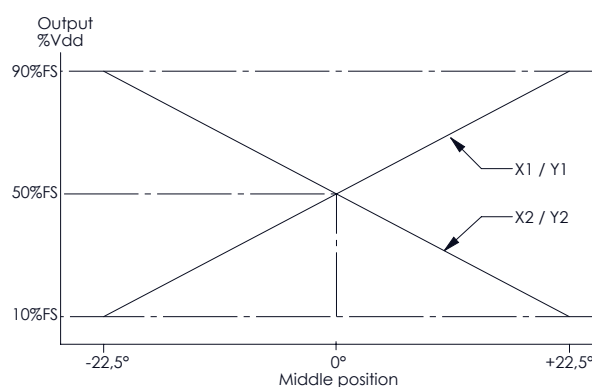
Deflection



Electrical connection

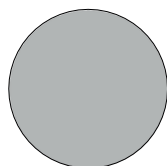
Out Y1	yellow
Out Y2	brown
Out X1	blue
Out X2	white
+V	red
GND	black

Output signal

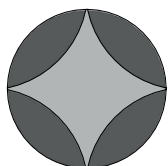


All dimensions in mm

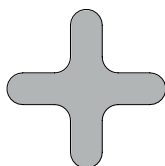
Limiter



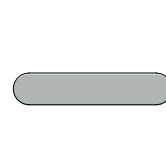
Round



Round, soft guided feel



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-Achse X		Y-Achse Y		Z-Achse Z0 00 A00				
Sensor technology									
0 None	0		0						
H Hall	H		H						
Interface									
00 None	00		00						
16 Hall ratiometric 0.5 - 4.5 V	16		16						
17 Hall ratiometric 0.5 - 4.5 V, redundant	17		17						
18 Hall ratiometric 0.5 - 4.5 V, reverse redundant	18		18						
19 SPI	19		19						
24 PWM	24		24						
99 Custom	99		99						
Mechanical Option									
A00 None		A00		A00					
A01 Spring return to center		A01		A01					
A99 Custom		A99		A99					
Limiter									
B00 None						B00			
B03 Round						B03			
B04 Round, soft guided feel						B04			
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		
C03 Cable							C03		
C99 Custom							C99		
Handle design									
D02 MJ-T11 shape A								D02	
D99 Custom								D99	
Handle function									
E00 None									E00
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-T11: MJ-T11_XH16_A01_YH16_A01_Z000_A00_B04_C03_D02_E00

XH16_A01: X-axis hall ratiometric, spring return to center

YH16_A01: Y-axis hall ratiometric, spring return to center

Z000_A00: No Z-axis

B04_C03_D02_E00: Round limiter, soft guided feel, cable, MJ-T11 shape A, no handle function