THUMB JOYSTICK MJ-T10

The MJ-T10 is one of the smallest 2-axis, redundant industrial joysticks in Hall technology.

Different limiters are available.

Its dimensions: total length approx. 25 mm, diameter approx. 18 mm, installation depth approx. 13 mm

Advantages
– Extremely small joystick
– Contactless Hall technology
– Redundant output signal

Application examples
– Control element in hand joysticks
– Control element in armrests
– Radio remote controls
– 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	
Number of axes	1 or 2
Dimensions	See drawings
Weight	15 g
Operating force	1.5 N ± 0.5 N
Max. vertical load	< 100 N
Max. tilt load	< 70 N
Deflection angle	± 22.5°
Centering	Single spring
Mounting	M12 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

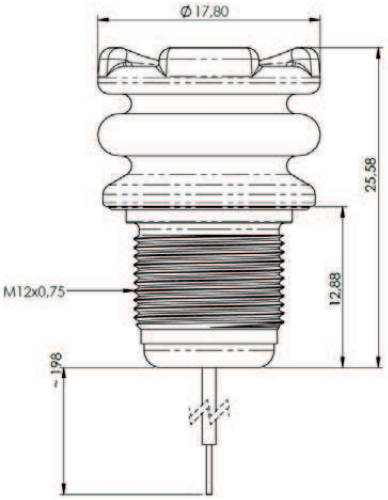
Material	
Housing	Stainless steel
Rubber boot	Neoprene Silicone on request

Handle design	
Rubber boot/handle	See drawings

Handle function	
	None

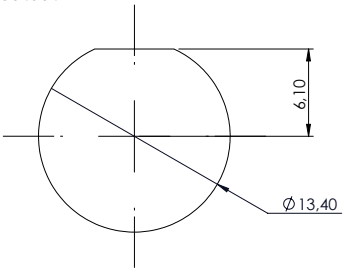
THUMB JOYSTICK MJ-T10

Drawings



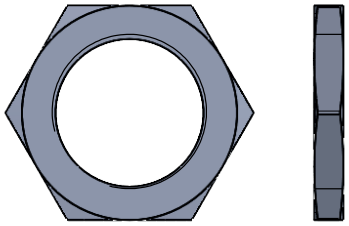
Mounting

Cutout



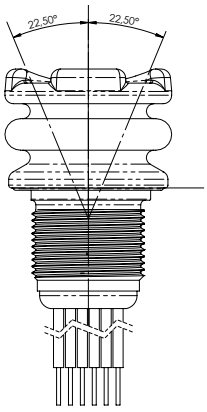
The mounting plate must not be thinner than 1.5 mm.

Fixing nut (included)

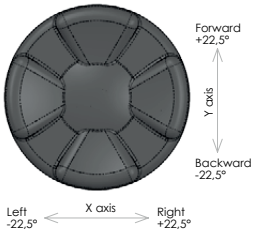


M12 x 0,75 SW 16
Thickness 2.15 mm

Deflection

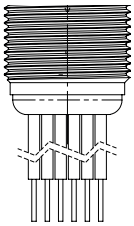


Sealing area



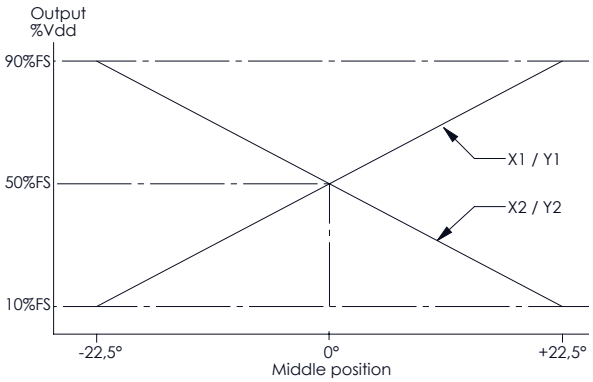
All dimensions in mm

Electrical connection

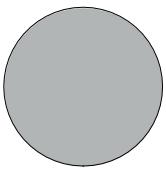


Out Y1	yellow
Out Y2	brown
Out X1	blue
Out X2	white
+V	red
GND	black

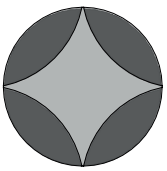
Output signal



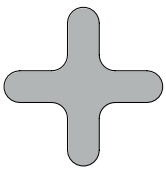
Limiter



Round



Round, soft guided feel



Cross gate



Single axis,
Y locked, X active



Single axis,
X locked, Y active

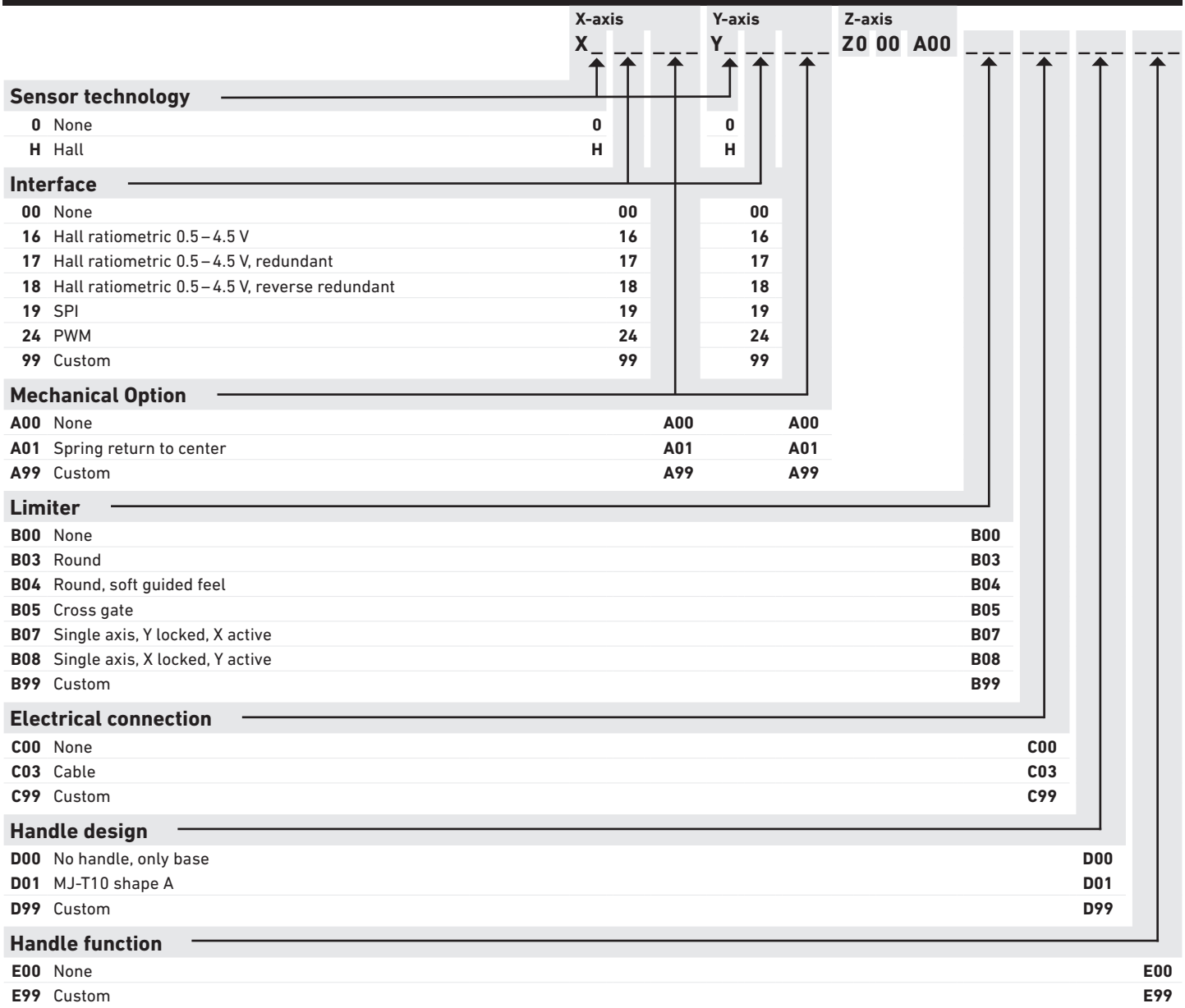
Metallux cannot picture the customer's operating and application conditions and the customer's existing environmental influences.
We therefore recommend that you carry out your own investigations into the planned use of the products under the actual operating conditions.

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



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-T10: MJ-T10_XH16_A01_YH16_A01_Z000_A00_B04_C03_D01_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_D01_E00: Round limiter, soft guided feel, Cable, MJ-T10 shape A, no handle function