

HAND JOYSTICK MJ-H11 BASE

MJ-H11 is the perfect base for a midsize joystick. It is as compact as a finger joystick and as stable as a hand joystick. Its installation depth is minimal. Modern, low-wear Hall sensor technology ensures a long service life.

A customized handle can be mounted on this base, making it flexible for a wide variety of applications.

Advantages

- Hall technology
- Compact and robust design
- Low installation depth

Application examples

- Industrial trucks, forklifts and aerial work platforms
- Agricultural, forest and construction machinery
- Municipal vehicles
- Cranes, excavators



Electrical data Hall-effect

Sensor technology	Hall-effect
Supply voltage	3.3 to 5 VDC
Tolerance center position	±2 % 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 data CAN bus

Sensor technology	Hall-effect
Supply voltage	8 to 32 VDC
Tolerance center position	±2 % FSO
Interface	CANopen SAE J1939
Resolution Output Signal X-Y	min. 8 bit, max. 12 bit
Supply current	30 – 60 mA
Baudrate	250, 500, 1000 kbit/s
Digital I/O	7
Analog inputs	2

The wide range of possible configurations and communication protocols/mapping cannot be fully represented here. Please contact us with your specific requirements.

Mechanical data

Number of axes	Multiaxial
Dimensions	See drawings
Weight	approx. 130 g
Operating force	5.5 N ±1.5 N
Max. vertical load	< 650 N
Max. tilt load	< 350 N
Deflection angle	±20°
Mounting	Screwed from below or above
Mechanical option	Spring return to center
Limiter	Square Square, soft guided feel Round Round, soft guided feel Cross gate Single axis
Lifetime	> 10 million cycles

Environmental data

Operating temperature	-25° 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

Electrical connection

Cable
Others on request

Handle design

None

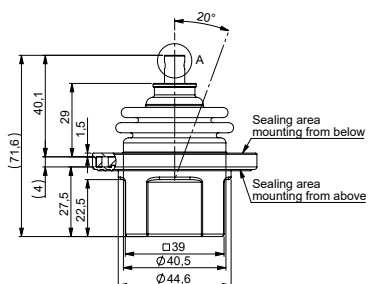
Handle function

None

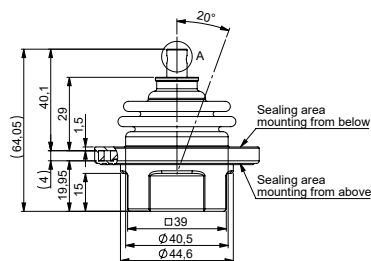
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Dimensions

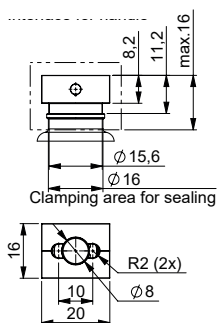
CAN



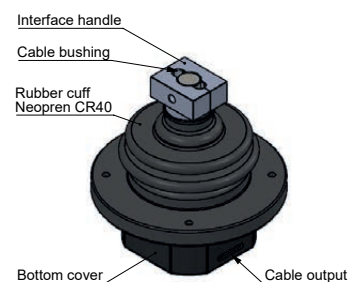
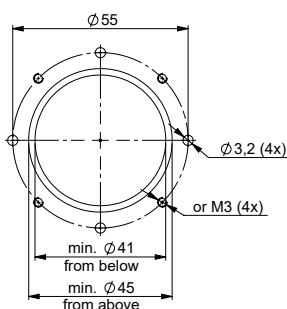
Analog



Interface for handle

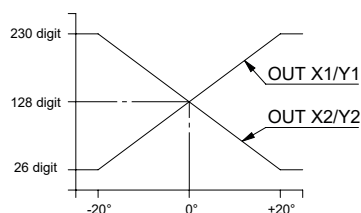


Mounting

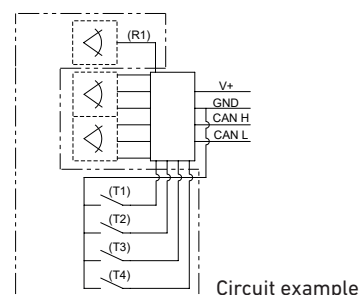


Electrical connection/Circuit diagram

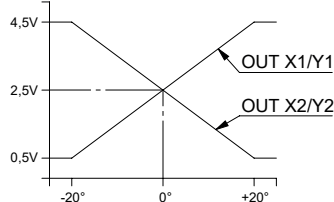
CAN



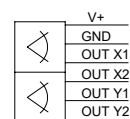
Output Cable	Function
BN	+8-32V
WT	GND
YE	CAN H
GN	CAN L



Analog



Electrical wiring	
Out 11	Y1
Out 21	Y2
Out 12	X1
Out 22	X2
+V	
GND	



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_			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					
20 CANOpen	20			20					
21 SAE J1939	21			21					
24 PWM	24			24					
99 Custom	99			99					
Mechanical option									
A00 None		A00			A00				
A01 Spring return to center		A01			A01				
A02 Spring return to center, reduced operating force		A02			A02				
A99 Custom		A99			A99				
Limiter									
B00 None							B00		
B01 Square							B01		
B02 Square, soft guided feel							B02		
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									
D00 No handle, only base								D00	
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-H11: MJ-H11_XH18_A01_YH18_A01_Z000_A00_B02_C03_D00_E00

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

Z000_A00: No Z-axis

B02_C03_D00_E00: Square limiter, soft guided feel, Cable, no handle, no handle function