

LINEAR 1-AXIS INDUSTRIAL JOYSTICK MJ-1L



The linear joystick of the MJ-1L type series is the robust light-weight of the MJ-xx joystick series. One of its feature characteristics is space-saving in the customer's housing. The installation space and extra functions, combined with a compact housing are excellent arguments to choose the MJ-1L. Less weight, easier controls of operations are huge advantages for end users. The robust design (also available with additional protective cover) guarantees a long service life.

CHARACTERISTICS

- Ultra light
- Robust design
- Compact
- Minimal installation dimensions
- Long service life
- Conductive plastic technology

APPLICATIONS

- Aerial work platforms
- Radio remote controls
- Forklift trucks
- Mobile hydraulics
- Steering of boats

OPTION

- Protective cover



ELECTRICAL SPECIFICATIONS

Resistance value	5 kohm $\pm 20\%$ (2 x 2.5 K $\pm 20\%$)
Linearity	$\pm 2\%$
Deflection angle, el.	$> \pm 28^\circ$ *
Load capacity/axis	0.2 W at 40° C
Operating voltage (VCC)	Max. 30 VDC
Contact current	$< 10 \mu\text{A}$
Max. contact current	1 mA in case of malfunction
Contact resistance (CRV)	$< 400 \text{ ohm}$ (switch level)
Insulation resistance	1 G Ω at 500 V
Dielectric strength	2,000 V
Output signal	10 – 90 % ($\pm 1\%$) of VCC 0 – 100 % ($\pm 1\%$) of VCC 2 x 2.5 k 10 – 90 % reverse redundant
Neutral position	$\pm 2.5^\circ$ (50 % $\pm 0.5\%$ of VCC measured load-free)

MECHANICAL SPECIFICATIONS

Service life	5 million cycles
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Deflection angle, mech.	$\pm 30^\circ$
Operating force	4 N typically *
Impact strength	Max. 180 N
Weight	About 35 g

AMBIENT CONDITIONS

Storage temperature	-40° C – +85° C
Operating temperature	-25° C – +70° C
Protection class	IP 66

MATERIALS

Base	Plastics
Bearing	Plastics
Electrical connection	7-pin Molex

DEFINITIONS

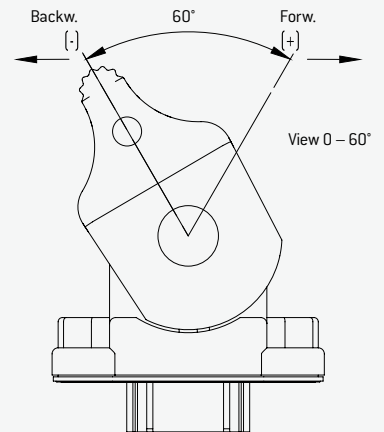
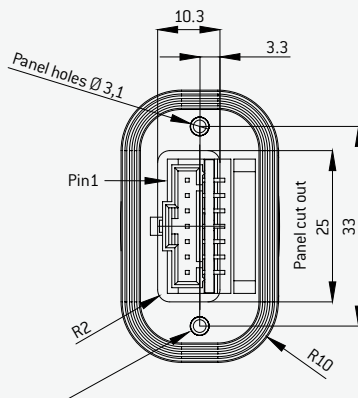
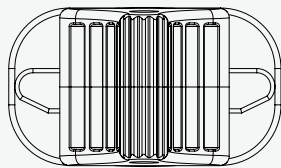
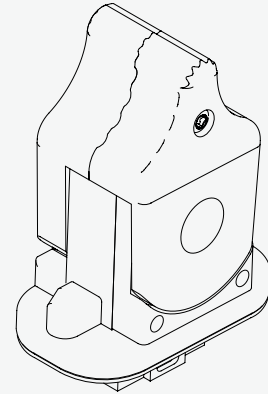
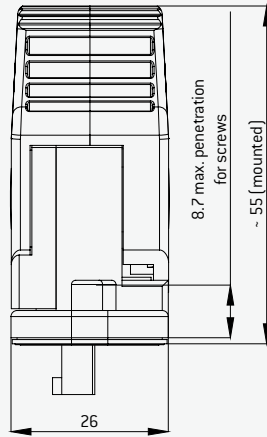
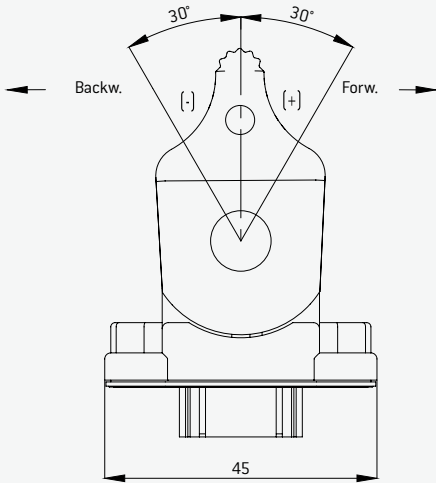
BRS-0	Stepless brake, detent in the zero position
BRS	Stepless brake
0 – 60°	-30° = zero position

Specifications are subject to change without notice. | * Other values on request.

MJ-1L

Type Item number	MJ-1L 5K MC 1-0-1 10 – 90 % Molex 7-pin E060200030 (1-axis)	Type Item number	MJ-1L BRS-0 5k MC 1-0-1 0 – 100 % Molex 7-pin E060201130 (1-axis)
Type Item number	MJ-1L 5K MC 1-0-1 0 – 100 % Molex 7-pin E060200130 (1-axis)	Type Item number	MJ-1L BRS 5K MC 1-0-1 10 – 90 % Molex 7-pin E060202030 (1-axis)
Type Item number	MJ-1L 2x2.5K 10 – 90 % reverse redundant Molex 7-pin E060200231 (1-axis)	Type Item number	MJ-1L BRS 5K MC 1-0-1 0 – 100 % Molex 7-pin E060202130 (1-axis)
Type Item number	MJ-1L BRS-0 5K MC 1-0-1 10 – 90 % Molex 7-pin E060201030 (1-axis)	Type Item number	MJ-1L 0 – 60° 2x2.5K 10 – 90 % reverse redundant Molex 7-pin E060203231 (1-axis)
		Connection cable Item number	Molex 7-pin LiYv 0.14mm ² 500mm Z301000507

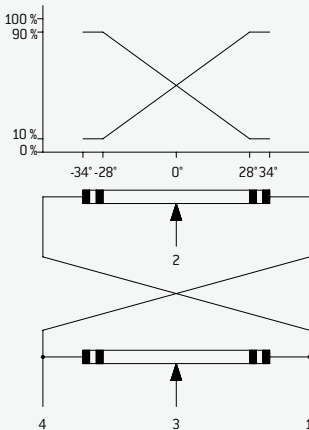
DRAWINGS FOR MJ-1L



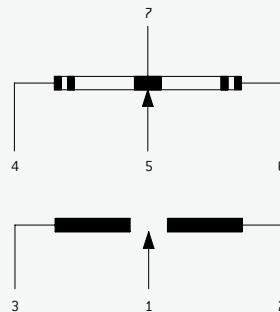
Mounting: 2 x screws for plastic
K30x_Z1 A2 [supplied]
Drive mode: PH1/Z1 ~0.7 Nm
Plate thickness up to 3.50 mm: K30 x 10
Z408000031
Plate thickness from 4.0 – 6.0 mm: K30 x 12
Z408000018

Connector:
Male header Molex 70553-0111
Connector latching: 7pol. Molex
Cable 500 mm ws/white LiYv 0.14 mm² VDE0812
[order separately: Z30100050?]

CONNECTOR PIN ASSIGNMENT/DIAGRAM



Potentiometer:
Resistance value: 2.5 kOhm ± 20 %
Output signal reverse redundant
10 – 90 % of supplied voltage
Pin 1: Voltage supply
Pin 2: Output voltage signal
Pin 3: Output voltage signal
Pin 4: Voltage supply



Potentiometer:
Resistance value: 5 kOhm ± 20 %
Output signal:
10 – 90 % ± 1 % of supplied voltage

Pin 1: Common terminal-switches
Pin 2: N/O switch lever forward (+)
Pin 3: N/O switch lever backward (-)
Pin 4: Negat. or zero volt. supply
Pin 5: Output voltage signal
Pin 6: Positive voltage supply
Pin 7: Center tap

ACCESSORIES

Type	Neoprene protective cover MJ-1L	Type	Locking connector, 7-pin Molex
Item number	Z405000018 (not applicable for BRS/BRS-0/0 – 60°)	Item number	500mm, white LiYv 0.14mm²_VDE 0812
Type	Neoprene protective cover MJ-1L SC (Soft Control)		Z30100050?
Item number	Z405000023 (not applicable for BRS/BRS-0/0 – 60°)		