

ANALOGUE 3-AXIS INDUSTRIAL JOYSTICK MJ-2K 0M



The 3-axis version of the MJ-2K series joystick with IP66 protection stands out through its high-precision zero return. A special lamellar gaiter seal provides the required operating reliability even in harsh environments. Analogue sensors enable high-precision control at low power consumption. Galvanized isolated directional contacts provide reliable operation on construction sites, in robotics, in mechanical and systems engineering, for construction equipment and even boats.

FEATURES

- Long service life
- Robust design
- Compact
- Conductive plastic technology

APPLICATIONS

- Aerial work platforms
- Radio remote controls
- Forklift trucks
- Hydraulics
- Robotics
- Microscopy



ELECTRICAL SPECIFICATIONS

Resistance value	5k Ω *
Resistance tolerance	\pm 20%
Deflection angle, el.	XY: $> \pm 19.5^\circ$; Z: $> \pm 37^\circ$ *
Independent linearity	\pm 2%
Zero position switch per axis	XY: $< \pm 3^\circ$ open; Z: $< \pm 4^\circ$ open
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
Insulation resistance	10 G Ω at 500 VDC
Dielectric strength	2000 V

MECHANICAL SPECIFICATIONS

Service life	XY: 5 million cycles, Z: 3 million cycles
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Specifications are subject to change without notice.
* Other values on request.

Deflection angle, mech.	See drawing
Operating force	XY: 5 N typically
Gate shape	Square, soft cross guide
Wiper zero position	$\pm 1^\circ$
Impact strength	XY: 150 N / Z: 1.5 Nm
User control	Handle with Gaiter
Mounting	Outside mounting (OM)

AMBIENT CONDITIONS

Storage temperature	$-40^\circ\text{C} \dots +85^\circ\text{C}$
Operating temperature	$-25^\circ\text{C} \dots +70^\circ\text{C}$
Protection class	IP 66

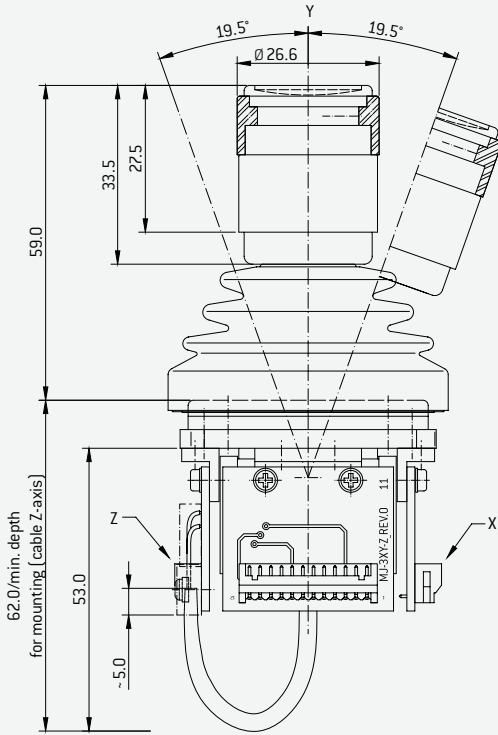
MATERIALS

Base	Aluminium
Bearing	Stainless steel/plastic
Electrical connection	12-pin Hirose plug
Mounting	M2.5x16 with 3mm mounting plate, mounting ring. Select screw length to match plate thickness.

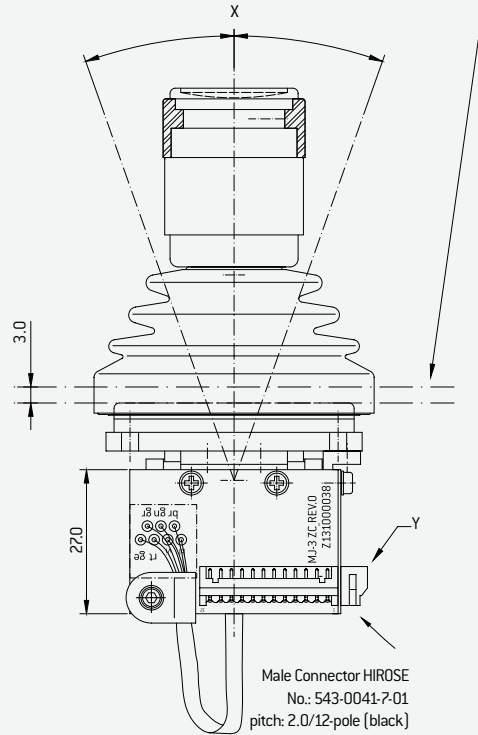
MJ-2K CP (CONDUCTIVE PLASTIC) ANALOGUE 0M

Type Item number	MJ-2K X:0 Y:5k MC 1-0-1 0M Hirose 12-pin E060200412	Type Item number	MJ-2K XYZ: 5k MC 1-0-1 0M Hirose 12-pin E060200380
Type Item number	MJ-2K XY: 5k MC 1-0-1 0M Hirose 12-pin E060200394	Connection cable Item number	MJ-2K Hirose 12-pin (ws) LiYv 0.14mm_500mm Z301000512
Type Item number	MJ-2K XY:5k MC1-0-1 DS series 1B 0M Hirose 12-pin E060200395		

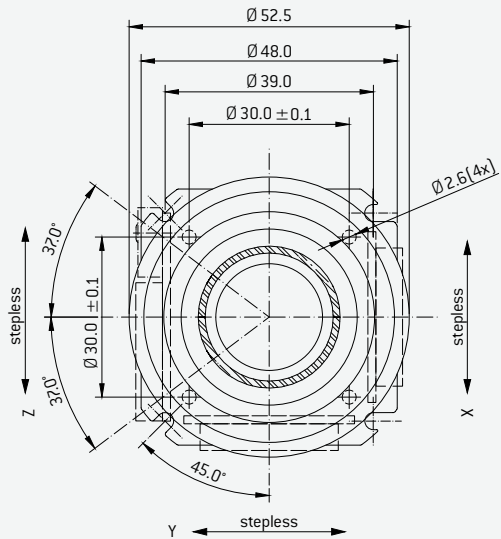
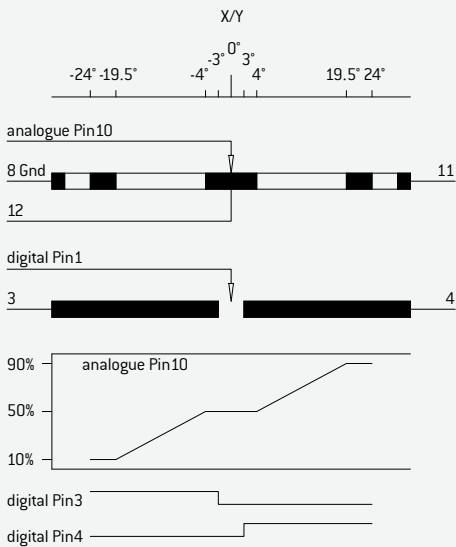
DRAWINGS FOR MJ-2K CP XYZ OM



Assembly of Gaiter together with Mounting Ring
 MJ-2K 4xM2,5/30x30 MLX-Art.-No.: Z404000023
 If thickness of mounting panel is 3mm: Use Screw M2,5x16mm / Center Hole D=35.0



CONNECTOR PIN ASSIGNMENT / DIAGRAM



Connect. Resistance 5 kOhm ± 20%
 Analogue band 10% – 90% Utotal ± 3%
 Medium Voltage 50% Utotal ± 2,5%
 Linearity = ± 2%
 Contact Resistance Switch < 1 kOhm
 Life CP/PCB > 5 Mio Cycles

