

ANALOGUE 1-, 2- AND 3-AXIS INDUSTRIAL JOYSTICK MJ-3K CP



The MJ-3K joystick series offers compact and robust industrial joysticks which can be supplied with conductive-plastic potentiometer sensor elements in analogue versions as well as with galvanized isolated direction contacts. The joysticks are available with 1, 2 or 3 axes for applications such as the safety radio remote control of machinery and systems or for mobile hydraulic applications.

FEATURES

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

APPLICATIONS

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

OPTIONS

- Grip length 55
- Grip length 65



ELECTRICAL SPECIFICATIONS

Resistance value	5 k Ω *
Resistance tolerance	\pm 20%
Deflection angle, el.	$> \pm$ 26° *
Independent linearity	\pm 2%
Zero position switch per axis	$< \pm$ 3° open
Load capacity/axis	0,2 W at 40°C
Operating voltage (VCC)	Max. 30 VDC
Contact current	$< 10 \mu$ A
Max. contact current	1 mA in case of malfunction
Insulation resistance	1 G Ω at 500 VDC
Dielectric strength	2000 V

MECHANICAL SPECIFICATIONS

Service life	5 million cycles
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Specifications are subject to change without notice.
* Other values on request.

Deflection angle, mech.	\pm 26°
Operating force	5 N typically
Gate shape	Square, soft cross guide
Wiper zero position	\pm 1°
Impact strength	100 N
User control	Handle with Gaiter

AMBIENT CONDITIONS

Storage temperature	-40°C ... +85°C
Operating temperature	-25°C ... +70°C
Protection class	IP 65

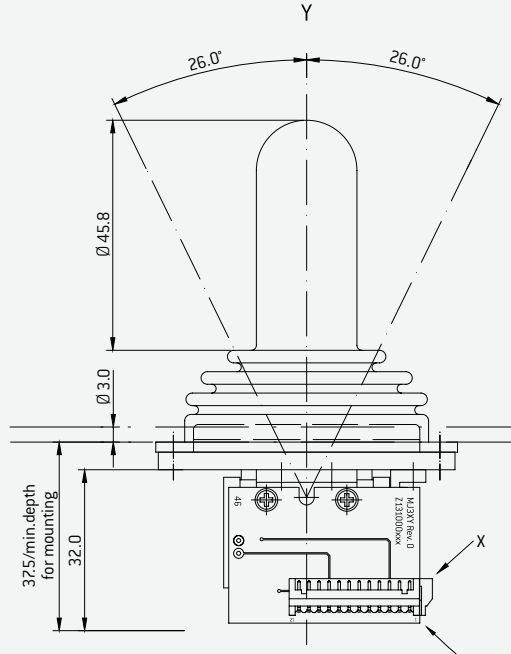
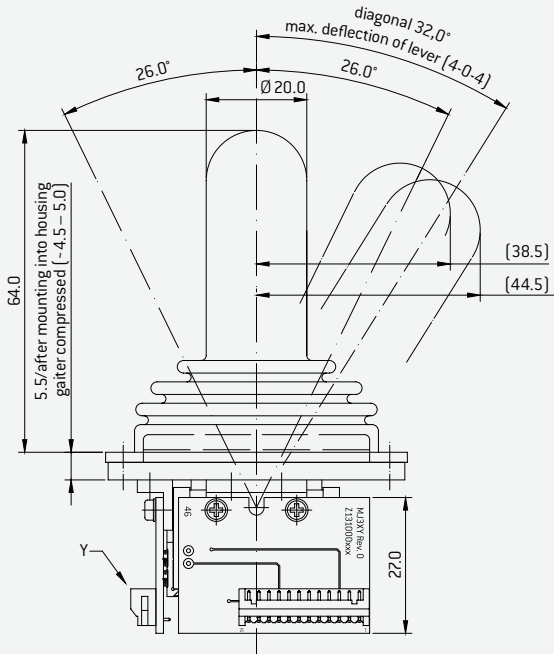
MATERIALS

Base	Aluminium
Bearing	Stainless steel/plastic
Electrical connection	12-pin Hirose plug, 6-pin Dubox plug
Mounting	Screws M3

MJ-3K CP (CONDUCTIVE PLASTIC) ANALOGUE

Type	MJ-3K 55 CP X:0 Y:5K MC 1-0-1 Hirose 12-pin	Type	MJ-3K 65 CP XY:2.5k 1-0-1 Dubox 6-pin
Item number	E060200038	Item number	E060200466 [2-axis]
Type	MJ-3K 55 CP XY:5K MC 1-0-1 Hirose 12-pin	Type	MJ-3K 65 CP XY:5K MC 1-0-1 Hirose 12-pin
Item number	E060200037	Item number	E060200444 [2-axis]
Type	MJ-3K 55 CP X:0 Y:2.5K 1-0-1 Dubox 6-pin	Type	Hirose 12-pin (ws) LiYv 0.14mm ² 500mm
Item number	E060200487 [1-axis]	Item number	Z301000512
Type	MJ-3K 55 CP XY:2.5k 1-0-1 Dubox 6-pin	Connection cable	Dubox 6-pin LiYv 0.14mm ² 500mm
Item number	E060200465 [2-axis]	Item number	Z301000500

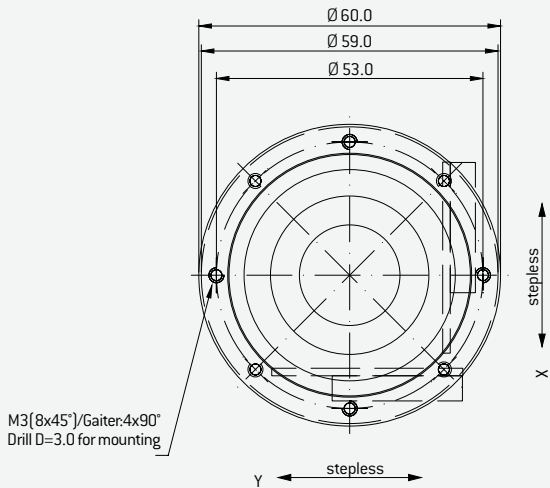
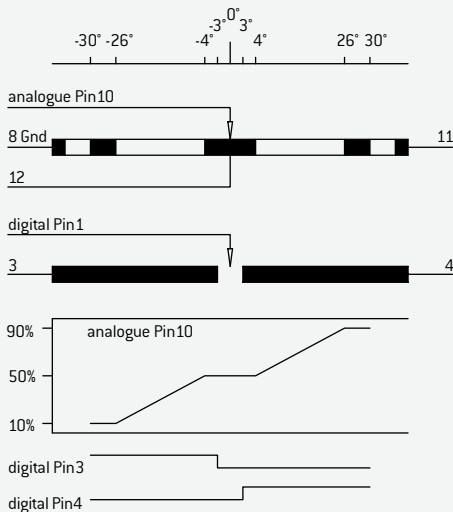
DRAWINGS FOR MJ-3K CP 65



Assembly into Housing from Inside / Screw Head outside of housing
 If thickness of mounting panel is 3mm:
 Use Screw M3x10mm / Center Hole D=49.0

Male Connector HIROSE
 No.: 543-0041-7-01
 pitch: 2.0/12-pole (black)

CONNECTOR PIN ASSIGNMENT / DIAGRAM



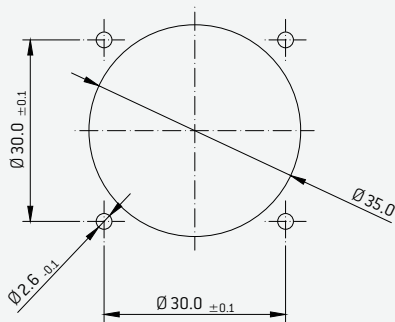
Connect. Resistance 5 kOhm $\pm 20\%$
 Analogue band 10% – 90% $U_{total} \pm 3\%$
 Medium Voltage 50% $U_{total} \pm 2,5\%$
 Linearity = $\pm 2\%$
 Contact Resistance Switch < 1 kOhm
 Life CP/PCB > 5 Mio Cycles

MOUNTING HOLES FOR MJ-2K AND MJ-3K



Mounting, Technology and Options

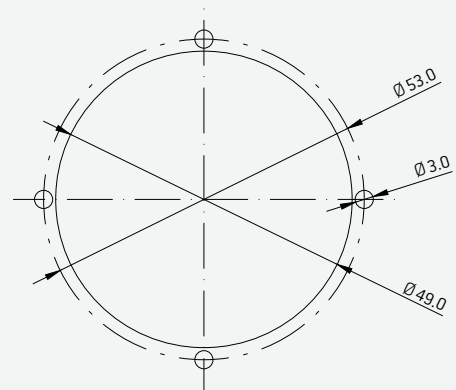
MOUNTING HOLE MJ-2K OM



Dimension Tolerance
DIN ISO 2768-m

If thickness of mounting panel/housing is 3mm thickness, following screw is to be used: Mounting Screw Type for example: M2,5x16 DIN7985 (4x) /H/Z/TX
Material: Steel galvanized/A2 (stainless). Length of screw has to be changed accordingly to mounting panel/housing thickness, to avoid damages to the gaiter!

MOUNTING HOLE MJ-3K



Dimension Tolerance
DIN ISO 2768-m

If thickness of mounting panel/housing is 3mm thickness, following screw is to be used: Mounting Screw Type for example: M3x10 DIN7985 (4x) /H/Z/TX
Material: Steel galvanized/A2 (stainless). Length of screw has to be changed accordingly to mounting panel/housing thickness.

KEY TECHNOLOGY / OPTIONS	SHORT FORM
Technology	
Conductive plastic	CP
Membrane sensor	MTP
Hall-Effect	Hall
Options	
Square platform	MJ-2K
Circular platform	MJ-3K
Grip height 55 (only MJ-3K)	55
Grip height 65 (only MJ-3K)	65
Center tap	MC
Dead man switch outside	DS series IB
Dead man switch (microswitch-inside)	DS
Cross gate	CG
Gaiter assembled from "outside" with respective mounting ring; IP 66	OM
Brake stepless – Put and Stay	BRS
Brake respective step – max. 2-0-2	BR 2-0-2
Circular deflection: 19,5°	3C
Soft control	SC
No guiding	NG