

Industrial Joystick Analog 1- and 2-axis Controller

MJ-2K CP OM



Features

- excellent lifetime
- robust design
- compact
- conductive plastic

Applications

- platform lifts
- remote controls
- forklift trucks
- hydraulic
- measuring machines
- medicine technology
- microscopy

Metallux AG
Robert-Bosch-Str. 29
D-71397 Leutenbach - Germany
Tel: +49 (0) 7195/5980-0
Fax: +49 (0) 7195/5980-300
<http://www.metallux.de>
info@metallux.de

Industrial Joystick Analog

1- and 2-axis Controller

MJ-2K CP OM



metallux.de

technology matters

Electrical Characteristics

Resistance range/axis	5 k Ω *)
Resistance tolerance	\pm 20 %
Electrical angle	$> \pm 25^\circ$ *)
Independent linearity	\pm 2%
Centre detect switch/axis	$< \pm 3^\circ$ open
Power rating/axis	0,2 W at 40°
Operating voltage (VCC)	Max. 30 V _{DC}
Wiper current	$< 10 \mu$ A
Max. wiper current	1 mA in failure mode
Insulation resistance	1 G Ω at 500 V _{DC}
Dielectric withstanding voltage	2000 V

Mechanical Characteristics

Life time	> 5 Mio. Cycles
Displacement angle	$> \pm 26^\circ$
Seal condition	IP66
Operating force	5 N typical *)
Coulisse	quadrate. *)
Mid. position wiper	$\pm 1,5^\circ$
Impact force	100 N

Environmental Characteristics

Storage temperature	- 40°C ... + 85°C *)
Operating temperature	- 25°C ... + 70°C *)
Climatic class	25/085/56
Vibration	10 G
Shock	50 G

Material

Housing	aluminium
Bearing	stainless steel/plastic
Electrical connections	Hirose connector 12-poles
Mounting	screws M 2,5, assembly ring

Specifications subject to change without notice

*) Other values on request

Industrial Joystick Analog

1- and 2-axis Controller

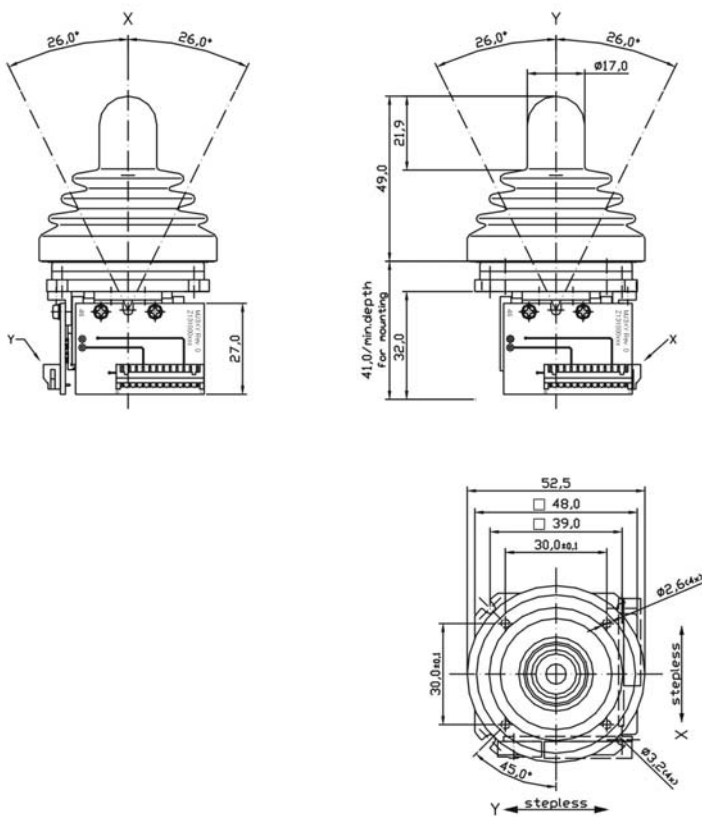
MJ-2K CP OM



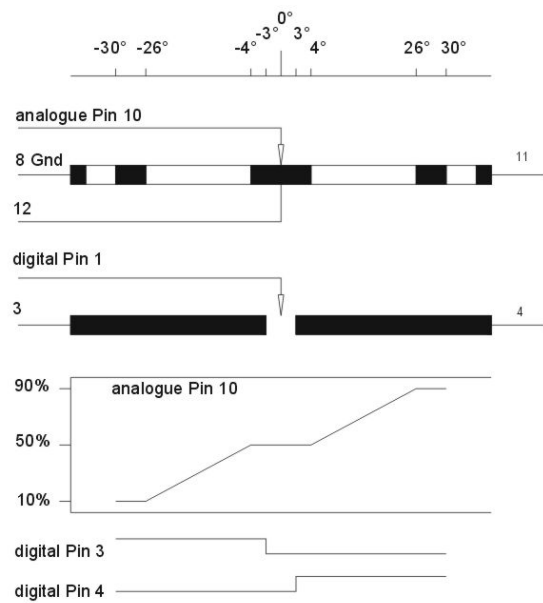
metallux.de

technology matters

Drawing MJ-2K CP XY OM



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

Industrial Joystick Analog 1- and 2-axis Controller

MJ-2K CP OM

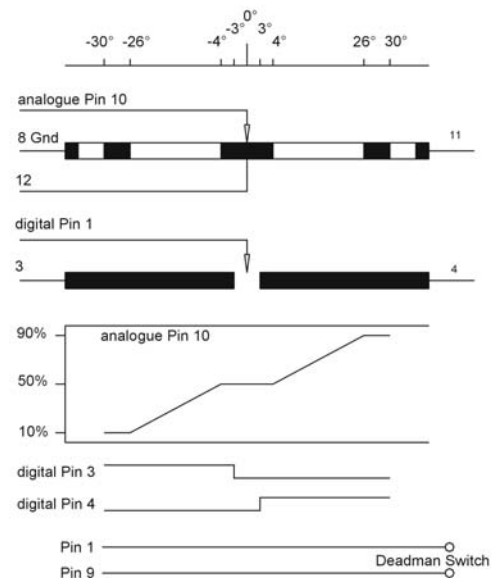
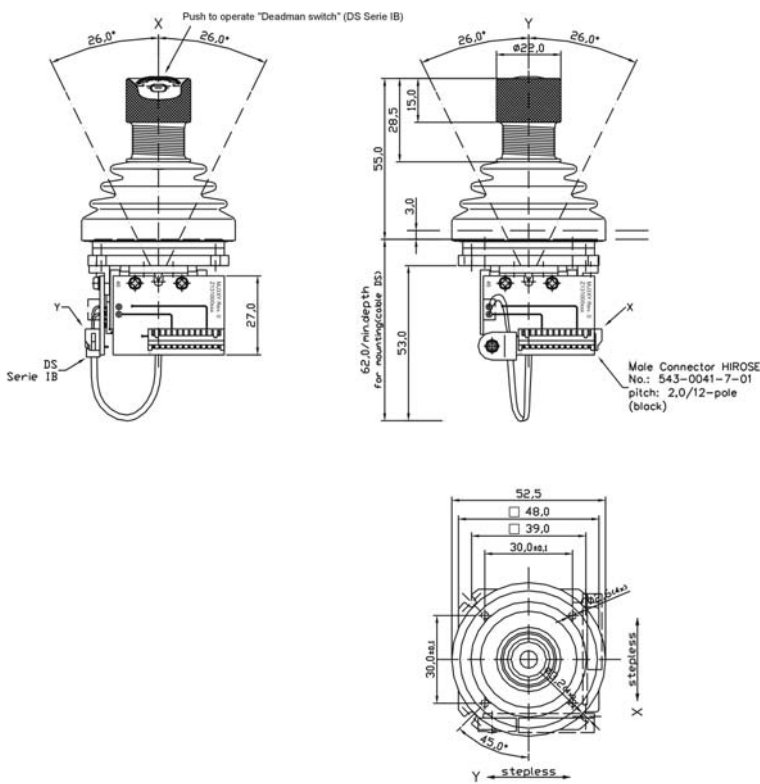


metallux.de

technology matters

Drawing MJ-2K CP OM Push button DS Serie IB

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

Industrial Joystick Analog 3-axis Controller

MJ-2K CP OM



Features

- excellent lifetime
- robust design
- small design
- conductive plastic

Applications

- platform lifts
- remote controls
- forklift trucks
- hydraulic
- robotic
- microscopy

Metallux AG
Robert-Bosch-Str. 29
D-71397 Leutenbach - Germany
Tel: +49 (0) 7195/5980-0
Fax: +49 (0) 7195/5980-300
<http://www.metallux.de>
info@metallux.de

Industrial Joystick Analog 3-axis Controller

MJ-2K CP OM



metallux.de

technology matters

Electrical Characteristics

Resistance range/axis	5 k Ω *)
Resistance tolerance	± 20 %
Electrical angle	XY: $> \pm 18,5^\circ$; Z: $> \pm 36^\circ$ *)
Independent linearity	± 2 %
Centre detect switch/axis	XY: $< \pm 3^\circ$ open ; Z: $< \pm 4^\circ$ open
Power rating/axis	0,2 W at 40°
Operating voltage (VCC)	Max. 30 V _{DC}
Wiper current	$< 10 \mu\text{A}$
Max. wiper current	1 mA in failure mode
Insulation resistance	1 G Ω at 500 V _{DC}
Dielectric withstanding voltage	2000 V

Mechanical Characteristics

Life time	XY: > 5 Mio. cycles ; Z: > 2 Mio. cycles
Displacement angel	XY: $> \pm 19,5^\circ$ Z: $> \pm 37^\circ$
Seal condition	IP66
Operating force	XY: 5 N typ. ; Z: operating torque 0,11 Nm *)
Coulisse	Quadrate *)
Mid. position wiper	$\pm 1,5^\circ$
Impact force	XY: 100 N ; Z: 1 Nm

Environmental Characteristics

Storage temperature	- 40°C ... + 85°C *)
Operating temperature	- 25°C ... + 70°C *)
Climatic class	25/085/56
Vibration	10 G
Shock	50 G

Material

Housing	aluminium
Bearing	stainless steel/plastic
Electrical connection	Hirose connector, 12-poles
Mounting	screws M 2,5 ; assembly ring

Specifications subject to change without notice

*) Other values on request

Industrial Joystick Analog 3-axis Controller

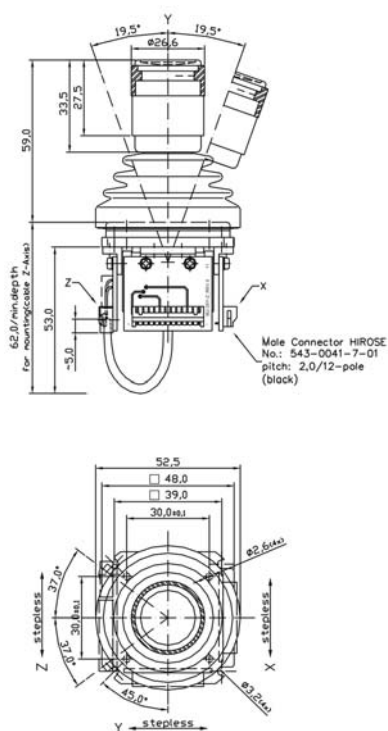
MJ-2K CP OM



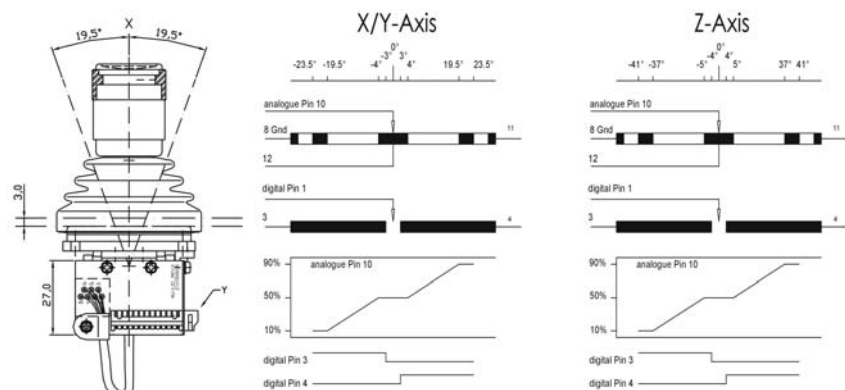
metallux.de

technology matters

Drawing MJ-2K CP XY OM



Connector pin assignment/Diagram



Connect. Resistance 5 kOhm $\pm 20\%$
 Analogue band 10% - 90% Utotal $\pm 3\%$
 Medium Voltage 50% Uttotal $\pm 2.5\%$
 Linearity = $\pm 2\%$
 Contact Resistance Switch < 1 kOhm
 Life CP/PCB > 5 Mio Cycles

Bestellbezeichnung

Type	Elec. Output	Options
M J - 2 K C P	X Y Z	C G O M
Joystick MJ-2K CP	X - 5K MC 1-0-1 Y - 5K MC 1-0-1 Z - 5K MC 1-0-1	Standard: CG - Crossgate Customised: Other resistance values Redundant version Modified operating element Cable connector Mounting plate Digital version Solder connection