

Data Sheet for Panel Encoders

Optoelectronic Panel Encoder

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Series MHO



- Large premium handwheel
- High quality, solid construction
- Actuating ring / crank made of metal
- Diameter knob 58 mm / housing 80 mm
- Installation depth 27 mm
- Supply voltage 5 V, or 4.5...13.2 V
- 100 mechanical detents
- 25 or 100 pulses per revolution
- NPN transistor output
- Installation on the operation panel by means of 3 x M4 threaded bolts with union nuts
- Electrical connection M3 screw terminals

The handwheel is often the central input medium for setting target values in control panels. The MEGATRON handwheel MHO underlines with its massive construction and the gorgeous haptic the quality of the application in which it is used.

Electrical Data

| | | |
|-----------------------------|--------------------------|---------------------------|
| Output signal | A, B | |
| Number of pulses | 25, 100 pulses per rev. | |
| Output voltage high | VSUP -1 V | |
| Output voltage low | < 0,5 V | |
| Limit frequency | 5 kHz | |
| Supply voltage | 4.5..13.2 V | 5 V ±10% |
| Power consumption (no load) | max. 50 mA | max. 70 mA |
| Output capacity | max. 20 mA | |
| Insulation resistance 1.) | 50 MOhm @ 500 VDC | |
| Output electronics | NPN incl. 2 kOhm Pull-Up | NPN incl. 330 Ohm Pull-Up |
| Switch-on delay | 1 µs | |

Mechanical and Environmental Data, Miscellaneous

| | |
|--|--|
| Mechanical angle of rotation /stroke 1.) | 360° without stop |
| Number of detents per rev. | 100 or 25 pulses per rev. |
| Lifespan 2.) | > 1 mio. revolutions (@200U/min) |
| Bearing | Sleeve bearing |
| Starting Torque / Detent torque | 1.96 Ncm...5.88 Ncm |
| Operating temperature range | -10..+60 °C |
| Storage temperature range | -30..+80 °C |
| Protection grade front side (IEC 60529) Standard | IP52 |
| Vibration (IEC 68-2-6, Test Fc) | 10-55 Hz; 1.5mm 2 h |
| Shock (IEC 68-2-27, Test Ea) | 490 m/s ² , 11 ms X, Y, Z, each 3 times |

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Mechanical and Environmental Data, Miscellaneous

| | |
|--|--------------------------------|
| Housing diameter / length | 80 mm |
| Housing depth | 27 mm |
| Knob diameter | 60 mm (scale 77 mm) |
| Max. radial load | < 19.6 N |
| Max. axial load | < 9.8 N |
| Connection type | Screw terminals |
| Connection position | Axial |
| Mass | app. 200 g |
| Fastening parts included in delivery | None |
| Material shaft | Stainless steel |
| Material housing | Zinc alloy (ZDC2) |
| Material disc | Metal |
| Immunity ESD, human body model (MIL-STD-883, Method 3015.8) | ±4 kV (contact) ±8 kV (air) |

1.) According IEC 60393

2.) Determined by climatic conditions according to IEC 68-1, para. 5.3.1 without load collectives

Order Code

| Description | Selection: standard=black/bold, possible options=grey/cursive | | | | |
|--|---|------------------|-----------------|----------|----------------------------|
| Series | MHO | | | | |
| Resolution in pulses per revolution: <i>Option 25 pulses (100 detents) per revolution</i> Standard: 100 pulses (100 detents) per revolution | | 25 100 | | | |
| Supply voltage: Standard: 4.5..13.2 V (only available in connection with output electronic R1) <i>5 V ±10%</i> (only available in connection with output electronic R2) | | | 413 5 | | |
| Output signal: A+B | | | | B | |
| Output electronics: Standard: NPN, internal pull up resistor 2 kOhm (only available in connection with supply voltage 413 [4.5...13.2 V]) <i>NPN, internal pull up resistor 330 Ohm</i> (only available in connection with option 5 supply voltage 5 V ±10%) | | | | | R1 <i>R2</i> |

Order example MHO

Requirement:

100 pulses per revolution, supply voltage 4,5...13,2 V, 2 channels, output electronic with NPN with internal pull up resistor 2 kOhm

Example for order coder: MHO 100 413 B R1

For higher quantities or on-going demand, additional options are available as described below

For example:

- Other resolutions
- Other amount of detents
- Customer specific detent torque

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Technical Drawing

