

MW100180

LINEAR AND ANGULAR MEASUREMENT • MAGNETIC

For length measurement, rotational speed or angle measurement, magnetic measuring systems are used. These systems operate in a way that the sensor moves without contact over a flexible magnetic tape, or it is situated above the rotating magnetized measuring wheel. The magnetic tape is applied to a 0.3mm thick steel strip and is located on the circumference of the various measuring wheels. The magnetization is carried out with defined pole pitches. By scanning of the magnetic poles an analog signal is generated, which is converted into digital square wave signals that can be processed by a downstream electronics and, if necessary, be displayed. The sensor detects the pitch of the strip and converts the information into a high-resolution path or rotation information. To read out the magnetic lines no direct contact is required. Magnetic sensors are insensitive to dirt, oils and moisture and relatively stable at shock and vibration. For users, this opens up a wide field of applications, e.g. for plants and systems in the timber industry, at linear axes, in outdoor areas or with machine tools.



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MECHANICAL DATA

| | |
|------------------------------------|--------------------|
| Ambient temperature (MAX) | 70 °C |
| Ambient temperature (MIN) | -10 °C |
| Cable length | 2 m |
| Degree of protection (IP) | IP67 |
| Housing material | Plastic |
| Length | 25 mm |
| Material of cable sheath | PUR (Polyurethane) |
| Max. traverse speed | 15 m/s |
| Sensor height | 37 mm |
| Sensor length | 25 mm |
| Sensor width | 10 mm |
| Shock resistance, acceleration | 50 g |
| Shock resistance, pulse time | 11 ms |
| Storage temperature | 80 °C |
| Storage temperature | -30 °C |
| Vibration resistance, acceleration | 10 g |
| Vibration resistance, frequency | 50 Hz |

ELECTRICAL DATA

| | |
|-------------------------------|--------|
| Large sensing range | Yes |
| No-load current | 50 mA |
| Number of pins | 4 |
| Rated operating voltage (MAX) | 24 V |
| Rated operating voltage (MIN) | 24 V |
| Resolution | 250 µm |
| Reverse polarity protection | Yes |
| Sensing range (MAX) | 20 mm |

