

MZR4E180

MAGNETIC SENSORS • SENSORS FOR PNEUMATIC CYLINDERS

For many tasks in the field of automation technology, it is necessary to recognize the motional processes in pneumatic and hydraulic cylinders and to detect the position of the piston with precision. For this, magnetic cylinder sensors are used.



MECHANICAL DATA

Ambient temperature (MAX)	70 °C
Ambient temperature (MIN)	-25 °C
Cable length	0.05 m
Degree of protection (IP)	IP67
Housing design	Cylinder plain
Housing material	Stainless steel 1.4305
Increased ambient temperatures > 80°C	No
Material of cable sheath	PUR (Polyurethane)
Metal housing	Yes
Mounting access, cylinder groove	Lateral
Number of wires	3
Sensor diameter	4 mm
Sensor length	20.5 mm
Sensor surface position	Border area of the device
Strong vibration / motion	Yes
Type of rounded groove	4.1mm rounded groove
Version	4.1mm rounded groove
Wire cross section	0.14 mm ²

ELECTRICAL DATA

Cross/short circuit identification possible	Yes
Hysteresis	1 mm
Low sensitivity	No
Low switching hysteresis	Yes
Magnetic sensitivity	2.8 mT
Max. output current	150 mA
No-load current	10 mA
Number of pins	3
Number of switching outputs	1
Operating voltage (MAX)	30 V
Operating voltage (MIN)	10 V

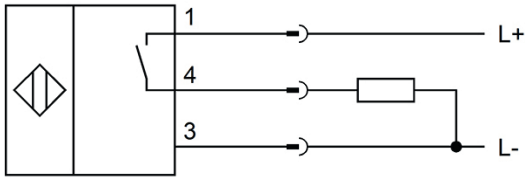
ELECTRICAL DATA

Reed contact	No
Relative repeat accuracy	0.1 mm
Reverse polarity protection	Yes
Sensor surface (active)	Middle area
Setting via teach-in	No
Short-circuit-proof	Yes
Suitable for safety functions	No
Switching frequency	1000 Hz
Two switching points	No
Type of electrical connection	Cable connector M8
Type of switching function	Normally open contact
Type of switching output	PNP
Voltage drop	2 V
Voltage type	DC
With LED display	Yes
With monitoring function of downstream devices	No

OTHER DATA

Cylinder manufacturer	SMC
Cylinder sensors	Yes
Cylinder version	With C-groove (round groove)
Harsh environmental conditions	Yes
Metallic sensor surface	No
Oil and cooling lubricants	Yes
Short travel path	No

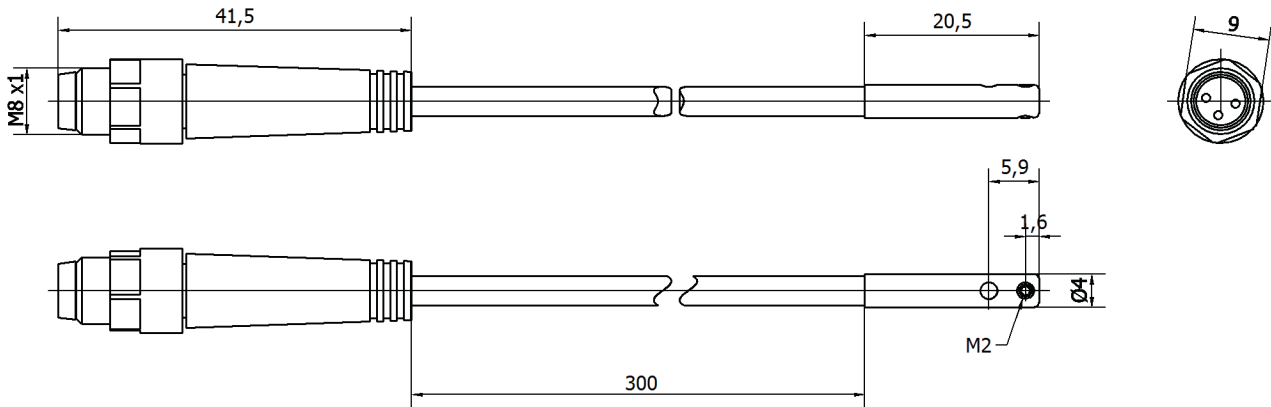
CONNECTION



Colors: 1 = BN (brown), 3 = BU (blue), 4 = BK (black)

Functions: 1 = L+, 3 = L-, 4 = PNP NO

DIMENSIONAL DRAWING



INSTALLATION



Mounting / Installation may only be carried out by a qualified electrician!

DISPOSAL



SAFETY WARNINGS

Before initial operation, please make sure to follow all safety instructions that may be provided in the product information!

Never use these devices in applications where the safety of a person depends on their functionality.