

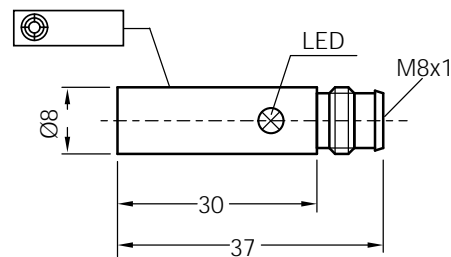
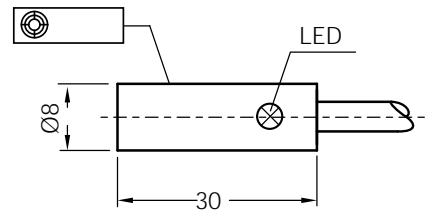


Magnetic cylinder sensors

MZ R1 series

DC 3-wire, for round-body cylinders

Dimensions in mm



Features

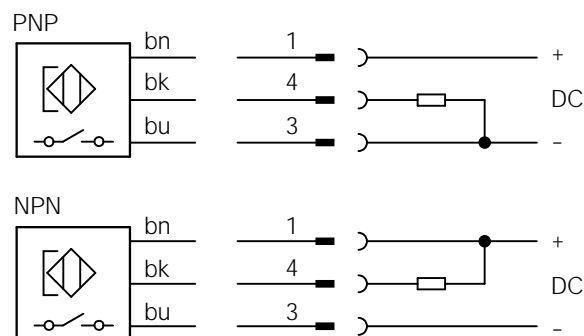


- ▶ Non-contact determination of piston position in pneumatic cylinders
- ▶ Mounting on round-body cylinders Ø 8 ... 63 mm using R1 mounting clamp
- ▶ High response sensitivity ≥ 3 mT
- ▶ Frontal sensing face
- ▶ No secondary switching ranges
- ▶ High repeat accuracy
- ▶ Actuating speed ≤ 5 m/s
- ▶ PNP or NPN output
- ▶ Short-circuit protection (pulsed)
- ▶ Solid aluminium housing
- ▶ Cable or connector
- ▶ Enclosure rating IP 67
- ▶ LED status indicator

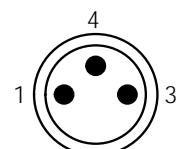
Accessories

- Round connectors
- R1 mounting clamps

Connection diagram



Wire colour	Contact	Assignment
bn	brown	1 + V DC
bk	black	4 NO
bu	blue	3 - V DC



Electrical and mechanical data

Operating voltage U_b	10 ... 30 V DC	Wire-break protection	yes
Ripple U_{pp}	$\leq 10\%$ of U_b	Short-circuit protection (pulsed)	yes
Voltage drop U_d	≤ 1.5 V at I_a max.	Reverse polarity protection	yes
Power consumption (without load)	≤ 10 mA	Power-up pulse suppression	yes
Continuous current I_a	≤ 300 mA	Enclosure rating to DIN 40050	IP 67
Time delay before availability t_v	≤ 2 ms	Shock and vibration stress	30 g, 11 ms 10 to 55 Hz, 1 mm
Hysteresis H	≤ 1.0 mm	Ambient temperature T_a	- 25 ... + 75 °C
Repeatability R (U_b and T_a constant)	≤ 0.1 mm	Housing material	Aluminium, plastic
EMC	to EN 60 947-5-2	Connection cable	PUR-PVC, 3 x 0.25 mm ²

Selection table

Response sensitivity in mT	Sensing face	Switching output	Output function	Switching frequency f in Hz	Connection	Type	Order number
3		PNP		5000	Cable 2 m	MZR1-03VPS-AU0	7900592
3		NPN		5000	Cable 2 m	MZR1-03VNS-AU0	7900593
3		PNP		5000	Connector M8 x 1 mm	MZR1-03VPS-AT0	7900594
3		NPN		5000	Connector M8 x 1 mm	MZR1-03VNS-AT0	7900595

Series is available as reed switch on request.