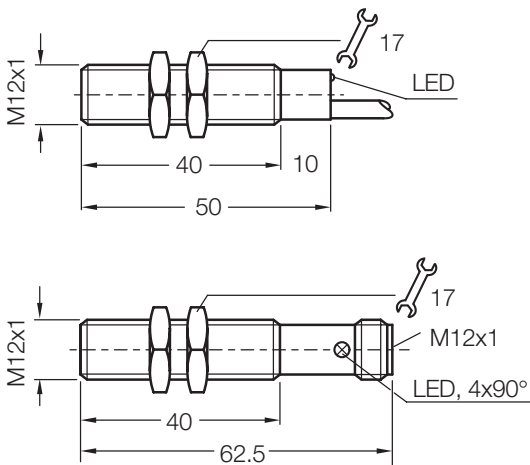


Magnetic proximity sensors

MM 12 series, sensing range 60 mm

DC 3-wire, metal housing

Dimensions in mm



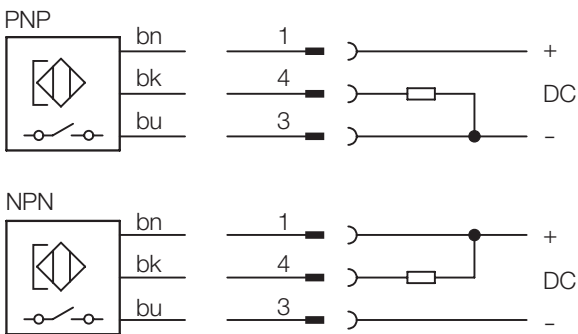
Features CE

- Can be installed flush and non-flush in metal
- Sensing range up to 60 mm
- PNP or NPN output
- High switching frequency
- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M12 x 1 mm
- Cable or connector
- Enclosure rating IP 67
- LED status indicator

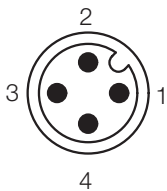
Accessories

Round connectors
Magnets
Mounting bracket

Connection diagram



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



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 (at I_a max.)	≤ 1.5 V	Reverse polarity protection	yes
Power consumption (without load)	≤ 10 mA	Power-up pulse suppression	yes
Continuous current I_a	≤ 300 mA	Enclosure rating to EN 60529	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% - 10% of s_r	Ambient temperature T_a	- 25 ... + 75 °C
Repeatability R (U_b and T_a constant)	$\leq 1\%$ of s_r	Housing material	Brass, nickel-plated, plastic
Temperature drift	$\pm 10\%$ of s_r	Tightening torque	7.0 Nm
EMC	to EN 60 947-5-2	Connection cable	PUR-PVC, 3 x 0.25 mm ²

Selection table

Sensing range s_n^* mm	Magnetic alignment	Switching output	Output function	Switching frequency f in Hz	Connection	Type	Order number
60	Axial	PNP		5000	Cable 2 m	MM12-60APS-ZU0	7900268
60	Axial	PNP		5000	Connector M12 x 1 mm	MM12-60APS-ZC0	7900270

* Sensing range s_n based on installation in non-magnetizable material using magnet MAG-3010-B (M 4.0)

Output NPN on request

Sensing ranges (Typical values)

Magnet type	Sensing range s_n Any sensor installation version (flush or non-flush) in non-magnetizable material	Sensing range s_n Flush sensor installation in magnetizable material (e.g. iron)
MAG-1003-S	23 mm	17 mm
MAG-0625-A	24 mm	14 mm
MAG-2006-B	36 mm	23 mm
MAG-3010-B	60 mm	37 mm
MAG-3015-B MAG-3515-B	68 mm	44 mm