



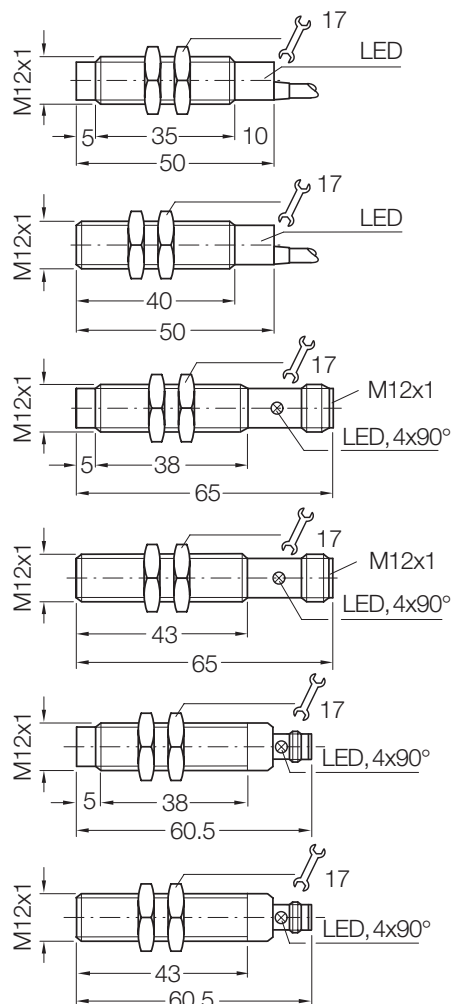
Standard series

Inductive proximity sensors

IM 12 series, sensing range 2 / 4 mm

DC 3-wire, metal housing

Dimensions in mm



Features

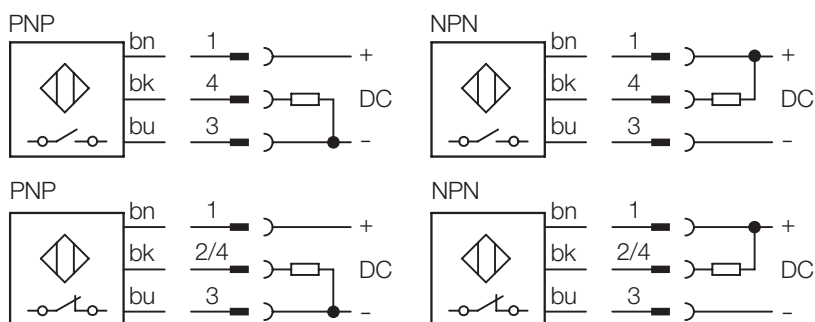


- Can be installed flush or non-flush in metal
- PNP or NPN output
- Normally open/ normally closed function
- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M12 x 1 mm
- Cable or connector
- Enclosure rating IP 67
- LED status indicator
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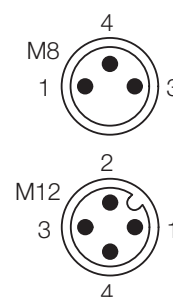
Accessories

Round connectors
Mounting bracket

Connection diagram



Wire colour	Contact M8	Contact M12	Assignment
bn brown	1	1	+ V DC
bk black	4	2/4	NC/NO
bu blue	3	3	- V DC



Electrical and mechanical data

Operating voltage U_b	10 ... 30 V DC	Short-circuit protection (pulsed)	yes
Ripple U_{pp}	$\leq 10\%$	Reverse polarity protection	yes
Voltage drop U_d (at I_a max.)	≤ 1.2 V	Power-up pulse suppression	yes
Power consumption (without load)	≤ 20 mA	Enclosure rating to EN 60529	IP 67
Continuous current I_a	≤ 200 mA	Shock and vibration stress	30 g, 11 ms 10 to 55 Hz, 1 mm
Time delay before availability t_v	≤ 100 ms	Ambient temperature T_a	- 25 ... + 70 °C
Hysteresis H	2% - 10% of s_r	Housing material	Brass, nickel-plated, plastic
Repeatability R (U_b and T_a constant)	$\leq 2\%$ of s_r	Tightening torque	10 Nm
Temperature drift EMC	$\pm 10\%$ of s_r to prEN 60 947-5-2	Connection cable	PVC, 3 x 0.22 mm ²

Selection table

Sensing range s_n mm	Installation in metal	Switching output	Output function	Switching frequency f in Hz	Connection	Type	Order number
2		PNP		2000	Cable 2 m	IM12-02BPS-ZW1	6011963
2		NPN		2000	Cable 2 m	IM12-02BNS-ZW1	6011964
2		PNP		2000	Cable 2 m	IM12-02BPO-ZW1	6011965
2		NPN		2000	Cable 2 m	IM12-02BNO-ZW1	6011966
2		PNP		2000	Connector M8 x 1 mm	IM12-02BPS-ZT1	6011967
2		NPN		2000	Connector M8 x 1 mm	IM12-02BNS-ZT1	6011968
2		PNP		2000	Connector M12 x 1 mm	IM12-02BPS-ZC1	6011971
2		NPN		2000	Connector M12 x 1 mm	IM12-02BNS-ZC1	6011972
2		PNP		2000	Connector M12 x 1 mm	IM12-02BPO-ZC1	6011973
2		NPN		2000	Connector M12 x 1 mm	IM12-02BNO-ZC1	6011974
4		PNP		2000	Cable 2 m	IM12-04NPS-ZW1	6011975
4		NPN		2000	Cable 2 m	IM12-04NNS-ZW1	6011976
4		PNP		2000	Cable 2 m	IM12-04NPO-ZW1	6011977
4		PNP		2000	Connector M8 x 1 mm	IM12-04NPS-ZT1	6011979
4		NPN		2000	Connector M8 x 1 mm	IM12-04NNS-ZT1	6011980
4		PNP		2000	Connector M12 x 1 mm	IM12-04NPS-ZC1	6011983
4		NPN		2000	Connector M12 x 1 mm	IM12-04NNS-ZC1	6011984
4		PNP		2000	Connector M12 x 1 mm	IM12-04NPO-ZC1	6011985