

Inductive proximity sensors IM 12 series, sensing range 4/8 mm DC 3-wire, metal housing

Dimensions in mm

IM 12

Advanced short series

Features

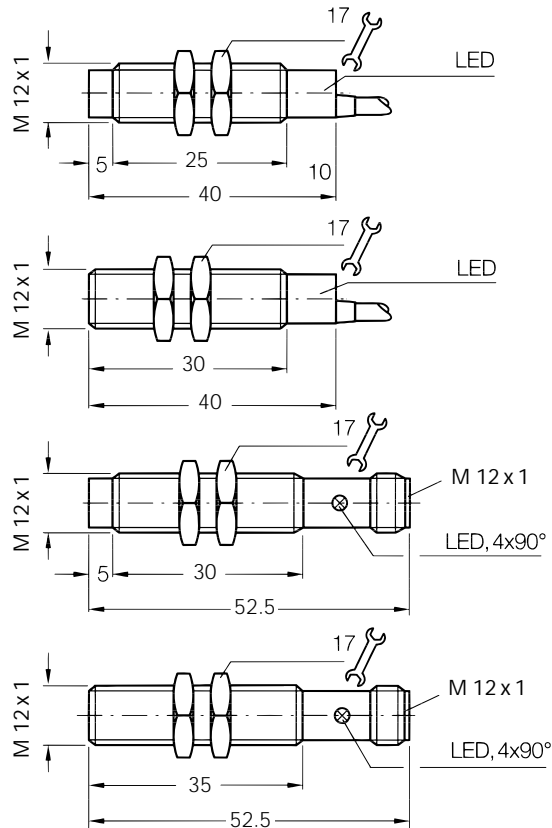


- ▶ Enhanced sensing range
- ▶ Can be installed flush or non-flush in metal
- ▶ PNP or NPN output
- ▶ Normally open/ normally closed
- ▶ High switching frequency
- ▶ Short-circuit protection (pulsed)
- ▶ Robust brass housing, nickel-plated with fine thread M 12 x 1 mm
- ▶ Cable or connector
- ▶ Enclosure rating IP 67
- ▶ LED status indicator (for 4 x 90° connectors)

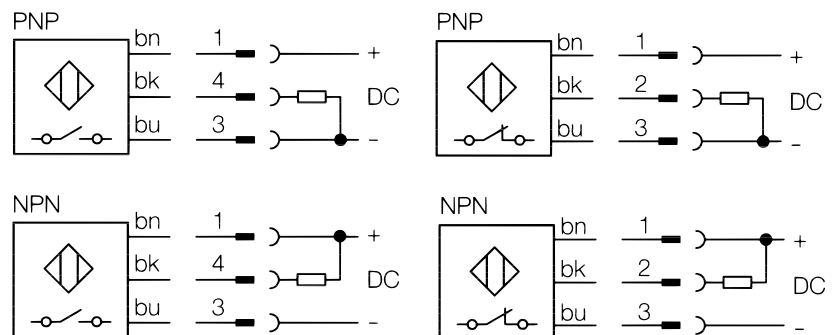


Accessories

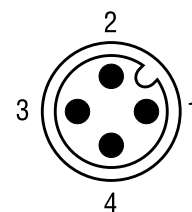
- ▶ Round connectors
- ▶ Mounting bracket



Connection diagram



Wire colour	Contact	Assignment
bn brown	1	+ V DC
bk black	4/2	NO/NC
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 (at I_a max.)	≤ 1.5 V	Reverse polarity protection	yes
Power consumption (without load)	≤ 10 mA	Power-up pulse protection	yes
Continuous current I_a	≤ 300 mA	Enclosure rating to DIN 40050	IP 67
Time delay before availability t_v	≤ 100 ms	Shock and vibration stress	30 g, 11 ms 10 to 55 Hz, 1 mm
Hysteresis H	1% – 15% of s_r	Ambient temperature T_a	– 25 ... + 75 °C
Repeatability R (U_b and T_a constant)	$\leq 5\%$ 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	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
4		PNP		2000	Cable 2 m	IM 12-04BPS-ZWK	6 025 682
4		NPN		2000	Cable 2 m	IM 12-04BNS-ZWK	6 025 683
4		PNP		2000	Connector M 12 x 1 mm	IM 12-04BPS-ZCK	6 025 679
4		NPN		2000	Connector M 12 x 1 mm	IM 12-04BNS-ZCK	6 025 681
4		PNP		2000	Connector M 12 x 1 mm	IM 12-04BPO-ZCK	6 025 680
4		NPN		2000	Connector M 12 x 1 mm	IM 12-04BNO-ZCK	6 025 859
8		PNP		2000	Cable 2 m	IM 12-08NPS-ZWK	6 025 684
8		NPN		2000	Cable 2 m	IM 12-08NNS-ZWK	6 025 685
8		PNP		2000	Connector M 12 x 1 mm	IM 12-08NPS-ZCK	6 025 686
8		NPN		2000	Connector M 12 x 1 mm	IM 12-08NNS-ZCK	6 025 687
8		PNP		2000	Connector M 12 x 1 mm	IM 12-08NPO-ZCK	6 025 688
8		NPN		2000	Connector M 12 x 1 mm	IM 12-08NNO-ZCK	6 025 860

SICK

Great Britain
Erwin Sick Ltd.
Waldkirch House
39 Hedley Road, St. Albans
Hertfordshire AL 1 5BN
Phone +44 17 27-83 11 21
Fax +44 17 27-85 67 67
info@sick.co.uk

USA
SICK, Inc.
6900 West 110th Street
Bloomington, MN 55438
Phone +1 (952) 9 41-67 80
Fax +1 (952) 9 41-92 87
WATS: 1-800-325-7425
info@sickusa.com

Australia
Erwin Sick Optic-Electronic
Pty. Ltd. Head Office, P.O. Box 214
899 Heidelberg Road
Ivanhoe, Vic. 3079, Australia
Phone +61 39 49 74 10 0
(0 08) 33 48 02 - toll free
Fax +61 39 49 71 18 7
sales@sick.com.au