

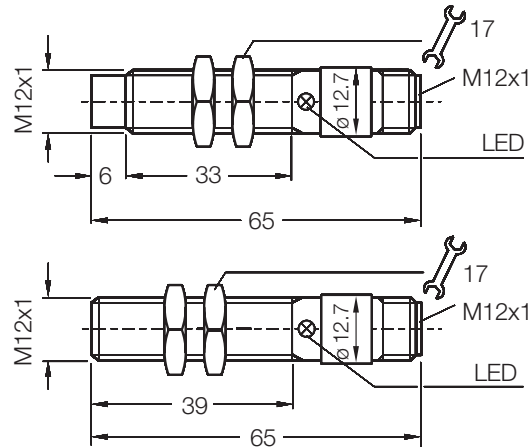


Inductive proximity sensors

IM 12 series, sensing range 2 / 4 mm

DC 4-wire, metal housing

Dimensions in mm



For harsh environment

Features

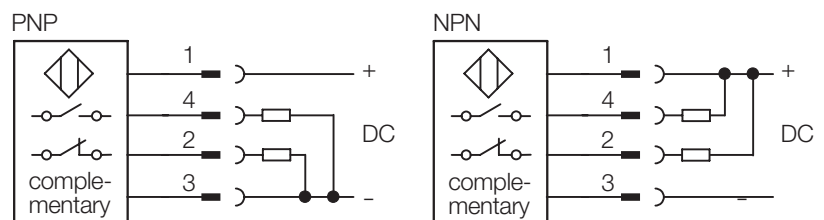


- For harsh environment, resistant to most cutting oils
- Enclosure rating IP 68
- Can be installed flush or non-flush in metal
- PNP or NPN output
- Complementary output function
- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M12 x 1 mm
- Internal enclosure housing in technopolymer
- Connector
- LED status indicator (NO function)

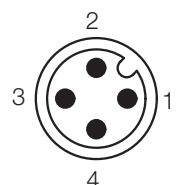
Accessories

Round connectors
Mounting bracket

Connection diagram



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



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	IP 68
Continuous current I_a	≤ 100 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)	$\leq 5\%$ of s_r	Tightening torque	10 Nm
Temperature drift EMC	$\pm 10\%$ of s_r to EN 60 947-5-2		

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	 complementary	2000	Connector M12 x 1 mm	IM12-02BPP-ZC1	7902923
2		NPN	 complementary	2000	Connector M12 x 1 mm	IM12-02BNP-ZC1	7902924
4		PNP	 complementary	2000	Connector M12 x 1 mm	IM12-04NPP-ZC1	7902925
4		NPN	 complementary	2000	Connector M12 x 1 mm	IM12-04NNP-ZC1	7902926