

Inductive proximity sensors

IM 08 series, sensing range 1.5 / 2.5 mm

DC 3-wire, metal housing

Dimensions in mm



Standard series

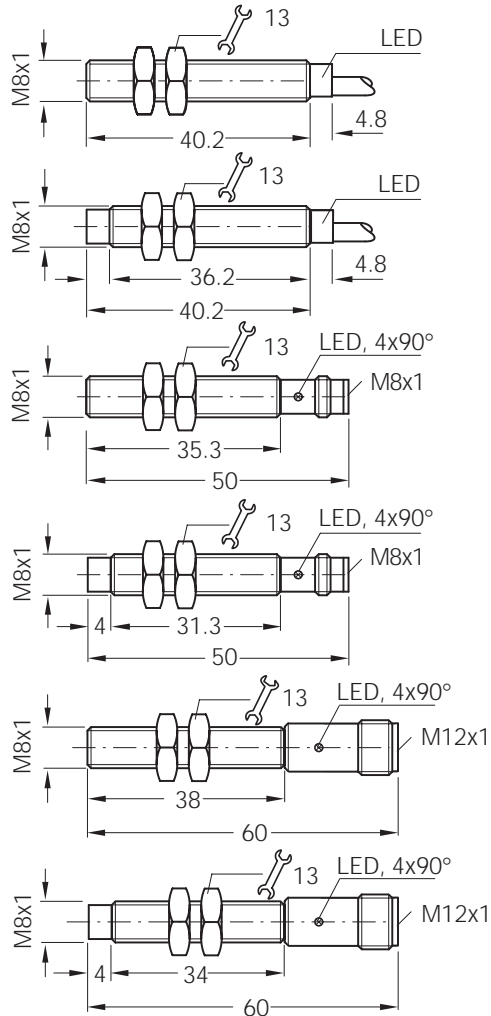
Features



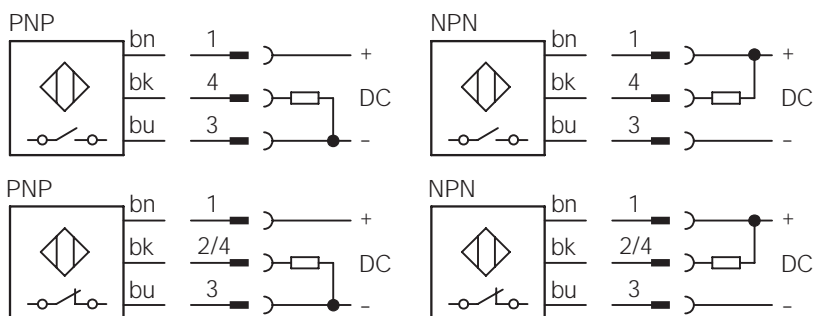
- ▶ Can be installed flush or non-flush in metal
- ▶ PNP or NPN output
- ▶ Normally open/ normally closed function
- ▶ High switching frequency
- ▶ Short-circuit protection (pulsed)
- ▶ Robust brass housing, nickel-plated with fine thread M8 x 1 mm
- ▶ Cable or connector
- ▶ Enclosure rating IP 67
- ▶ LED status indicator

Accessories

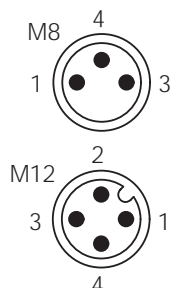
Round connectors



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	4 Nm
Temperature drift	$\pm 10\%$ of s_r	Connection cable	PVC, 3 x 0.14 mm ²
EMC	to EN 60 947-5-2		

Selection table

Sensing range s_r mm	Installation in metal	Switching output	Output function	Switching frequency f in Hz	Connection	Type	Order number
1.5		PNP		3000	Cable 2 m	IM08-1B5PS-ZW1	6020215
1.5		NPN		3000	Cable 2 m	IM08-1B5NS-ZW1	6020216
1.5		PNP		3000	Cable 2 m	IM08-1B5PO-ZW1	6020217
1.5		NPN		3000	Cable 2 m	IM08-1B5NO-ZW1	6020218
1.5		PNP		3000	Connector M8 x 1 mm	IM08-1B5PS-ZT1	6020219
1.5		NPN		3000	Connector M8 x 1 mm	IM08-1B5NS-ZT1	6020220
1.5		PNP		3000	Connector M8 x 1 mm	IM08-1B5PO-ZT1	6020221
1.5		PNP		3000	Connector M12 x 1 mm	IM08-1B5PS-ZC1	6020223
1.5		NPN		3000	Connector M12 x 1 mm	IM08-1B5NS-ZC1	6020224
2.5		PNP		2500	Cable 2 m	IM08-2N5PS-ZW1	6020227
2.5		NPN		2500	Cable 2 m	IM08-2N5NS-ZW1	6020228
2.5		PNP		2500	Connector M8 x 1 mm	IM08-2N5PS-ZT1	6020231
2.5		NPN		2500	Connector M8 x 1 mm	IM08-2N5NS-ZT1	6020232
2.5		PNP		2500	Connector M12 x 1 mm	IM08-2N5PS-ZC1	6020235
2.5		NPN		2500	Connector M12 x 1 mm	IM08-2N5NS-ZC1	6020236

Inductive proximity sensors

IM 08 series, sensing range 1.5 mm

DC 3-wire, metal housing

Dimensions in mm



Miniature series

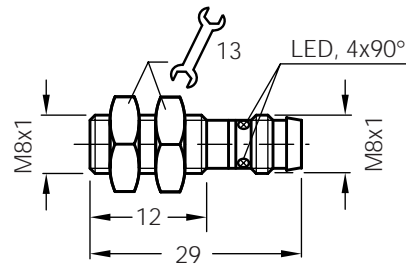
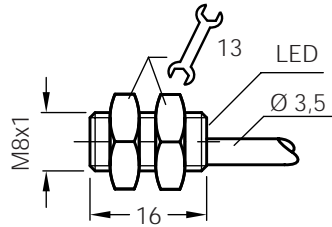
Features



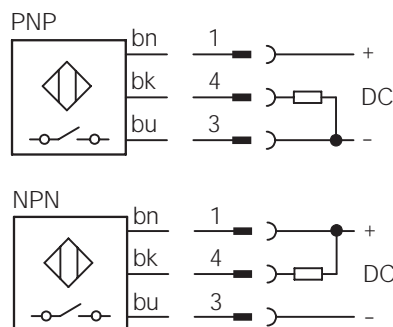
- ▶ Can be installed flush
- ▶ PNP or NPN output
- ▶ Normally open function
- ▶ High switching frequency
- ▶ Short-circuit protection (pulsed)
- ▶ Robust brass housing, nickel-plated with fine thread M8 x 1 mm
- ▶ Cable or Connector
- ▶ Enclosure rating IP 67
- ▶ LED status indicator

Accessories

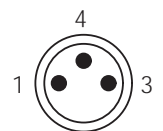
Round connectors



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	Short-circuit protection (pulsed)	yes
Ripple U_{pp}	$\leq 20\%$ of U_b	Reverse polarity protection	yes
Voltage drop U_d (at $I_a = 200$ mA)	≤ 2.0 V max.	Power-up pulse suppression	yes
Power consumption (without load)	≤ 10 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	≤ 10 ms	Ambient temperature T_a	- 25 ... + 70 °C
Hysteresis H	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	4 Nm
Temperature drift	$\pm 10\%$ of s_r	Connection cable	PVC, 3 x 0.14 mm ²
EMC	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
1.5		PNP		5000	Cable 2 m	IM08-1B5PS-ZWK	6020111
1.5		NPN		5000	Cable 2 m	IM08-1B5NS-ZWK	6020173
1.5		PNP		5000	Connector M8 x 1 mm	IM08-1B5PS-ZTK	6020112
1.5		NPN		5000	Connector M8 x 1 mm	IM08-1B5NS-ZTK	6020176

Normally closed function available on request



Advanced series

Inductive proximity sensors

IM 08 series, sensing range 2 / 4 mm

DC 3-wire, metal housing

Dimensions in mm

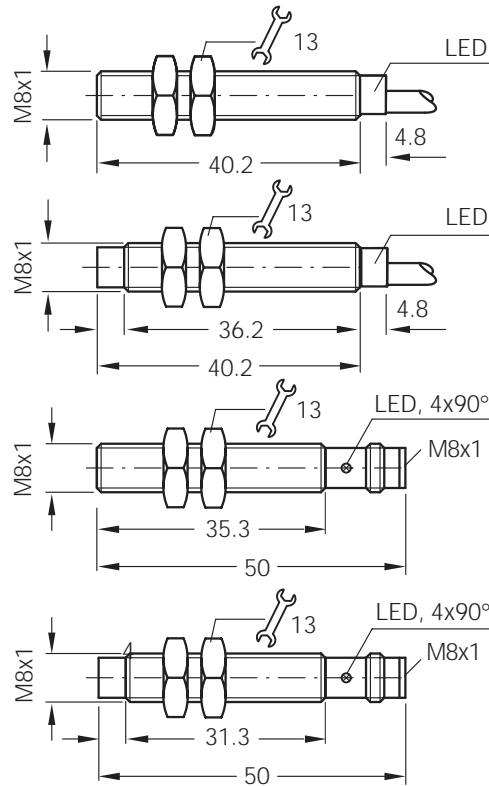
Features



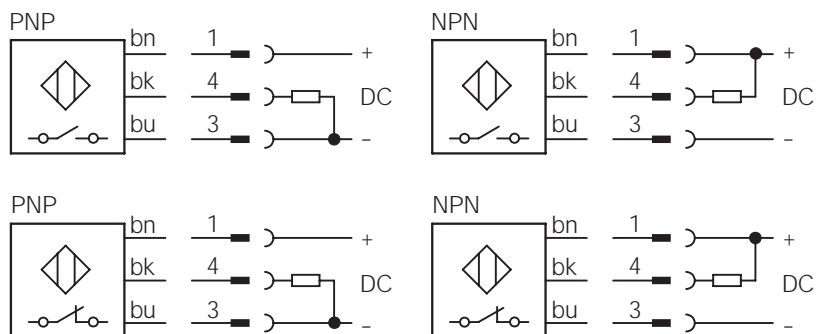
- ▶ Enhanced sensing range
- ▶ Can be installed flush or non-flush in metal
- ▶ PNP or NPN output
- ▶ Normally open/ normally closed function
- ▶ High switching frequency
- ▶ Short-circuit protection (pulsed)
- ▶ Robust brass housing, nickel-plated with fine thread M8 x 1 mm
- ▶ Cable or connector
- ▶ Enclosure rating IP 67
- ▶ LED status indicator

Accessories

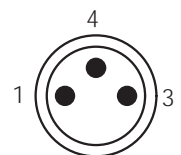
Round connectors



Connection diagram



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



Electrical and mechanical data

Operating voltage U_b	10 ... 30 V DC	Short-circuit protection (pulsed)	yes
Ripple U_{pp}	$\leq 10\%$ of U_b	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% - 15% of s_r	Housing material	Brass, nickel-plated, plastic
Repeatability R (U_b and T_a constant)	$\leq 5\%$ of s_r	Tightening torque	4 Nm
Temperature drift	$\pm 10\%$ of s_r	Connection cable	PVC, 3 x 0.14 mm ²
EMC	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		3000	Cable 2 m	IM08-02BPS-ZW1	7900001
2		NPN		3000	Cable 2 m	IM08-02BNS-ZW1	7900002
2		PNP		3000	Cable 2 m	IM08-02BPO-ZW1	7900003
2		PNP		3000	Connector M8 x 1 mm	IM08-02BPS-ZT1	7900005
2		NPN		3000	Connector M8 x 1 mm	IM08-02BNS-ZT1	7900006
2		PNP		3000	Connector M8 x 1 mm	IM08-02BPO-ZT1	7900007
2		NPN		3000	Connector M8 x 1 mm	IM08-02BNO-ZT1	7900008
4		PNP		3000	Cable 2 m	IM08-04NPS-ZW1	7900009
4		NPN		3000	Cable 2 m	IM08-04NNS-ZW1	7900010
4		PNP		3000	Cable 2 m	IM08-04NPO-ZW1	7900011
4		PNP		3000	Connector M8 x 1 mm	IM08-04NPS-ZT1	7900013
4		NPN		3000	Connector M8 x 1 mm	IM08-04NNS-ZT1	7900014
4		PNP		3000	Connector M8 x 1 mm	IM08-04NPO-ZT1	7900015
4		NPN		3000	Connector M8 x 1 mm	IM08-04NNO-ZT1	7900016

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