

IM 18 Advanced

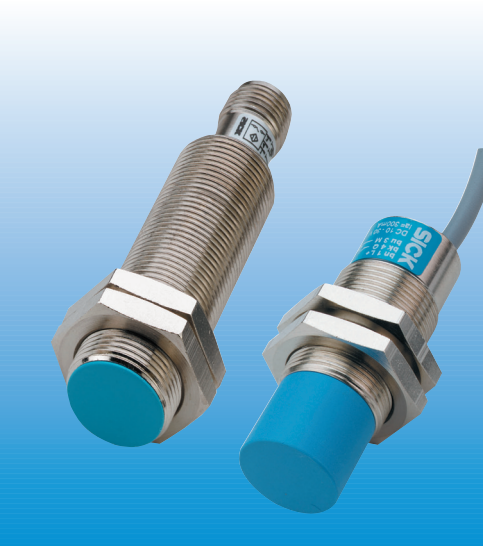
Inductive Proximity Sensors



Highlights

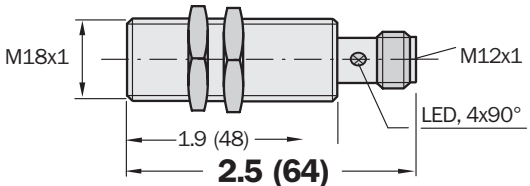
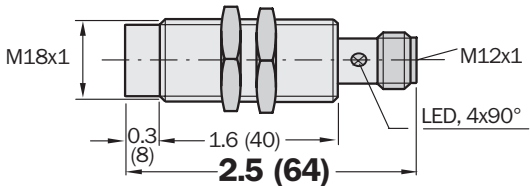
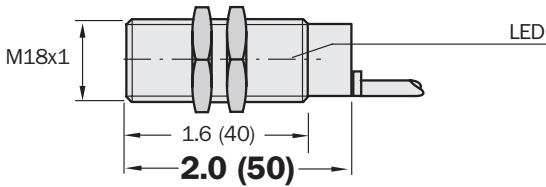
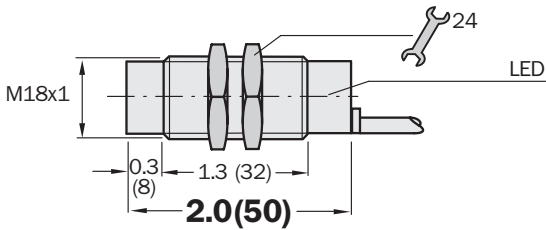
- Enhanced sensing range
- Short circuit protection (pulsed)
- Shielded or unshielded
- Robust brass housing, nickel-plated with fine thread M18 x 1 mm
- PNP or NPN output
- Cable and connector
- High switching frequency
- LED status indicator
- Normally open/normally closed function

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Dimensional Drawing

dimensions in inches (mm)



Accessories	page
Cables and connectors	909
Mounting brackets	925, 926

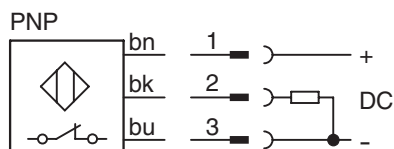
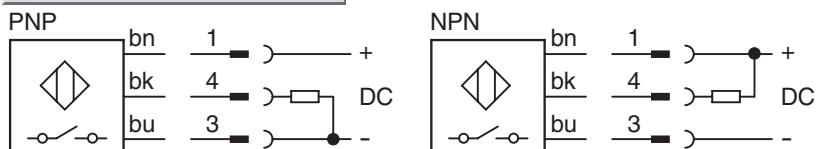
Electrical and Mechanical Data

Operating voltage U_b	10...30 V DC
Ripple U_{pp}	$\leq 10\%$ of U_b
Voltage drop U_b	≤ 1 V at I_a max.
Power consumption (without load)	≤ 10 mA
Continuous current I_a	≤ 400 mA
Time delay before availability t_v	≤ 100 ms
Hysteresis H	2% - 15% of s_r
Repeatability R (U_b and T_a constant)	$\leq 5\%$ of s_r
Temperature drift	$\pm 10\%$ of s_r
EMC	to EN 60 947-5-2
Wire-break protection	Yes
Short circuit protection (pulsed)	Yes
Reverse polarity protection	Yes
Power-up pulse suppression	Yes
Enclosure rating to DIN 40050	IP 67
Shock and vibration stress	30 g, 11 ms, 10 to 55 Hz, 1 mm
Ambient temperature T_a	-13...158°F (-25...70°C)
Housing material	Brass, nickel-plated, plastic
Tightening torque	30 Nm
Connection cable	PVC, 3 x 0.25 mm ²

Selection Table

Sensing range S_n in mm	Installation in metal	Switching output	Output function	Switching frequency f in Hz	Connection type	Type	Part no.
8		PNP		300	Cable 2 m	IM18-08BPS-ZW1	7 900 081
8		NPN		300	Cable 2 m	IM18-08BNS-ZW1	7 900 082
8		PNP		300	Cable 2 m	IM18-08BPO-ZW1	7 900 083
8		PNP		300	Connector M12 x 1 mm	IM18-08BPS-ZC1	7 900 085
8		NPN		300	Connector M12 x 1 mm	IM18-08BNS-ZC1	7 900 086
8		PNP		300	Connector M12 x 1 mm	IM18-08BPO-ZC1	7 900 087
12		PNP		300	Cable 2 m	IM18-12NPS-ZW1	7 900 093
12		NPN		300	Cable 2 m	IM18-12NNS-ZW1	7 900 094
12		PNP		300	Cable 2 m	IM18-12NPO-ZW1	7 900 095
12		PNP		300	Connector M12 x 1 mm	IM18-12NPS-ZC1	7 900 097
12		NPN		300	Connector M12 x 1 mm	IM18-12NNS-ZC1	7 900 098
12		PNP		300	Connector M12 x 1 mm	IM18-12NPO-ZC1	7 900 099

Connection Diagram



Wire color	Contact	Assignment
bn	1	+ V DC
bk	2/4	NO/NC
bu	3	- V DC

