

MM 18 Advanced

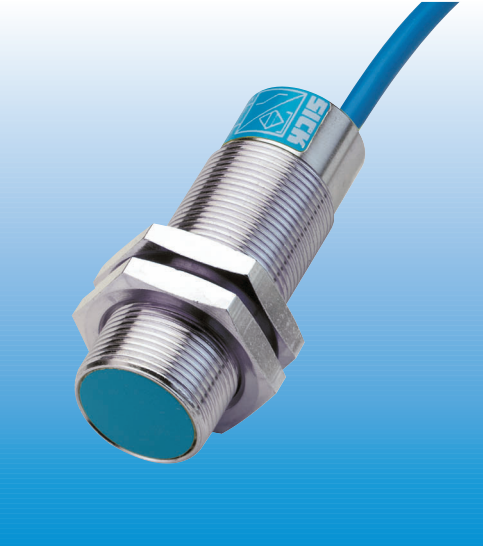
Magnetic Proximity Sensors



Highlights

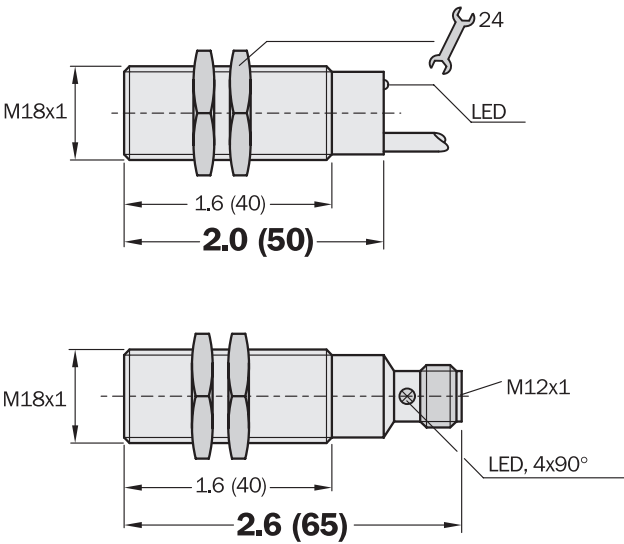
- Sensing range up to 70 mm
- PNP output
- High switching frequency
- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M18 x 1 mm
- Cable or connector
- Enclosure rating IP 67
- LED status indicator

MM 18 Advanced



Dimensional Drawing

dimensions in inches (mm)



Accessories	page
Cables and connectors	909
Mounting brackets	925, 926
Magnets	978, 979

Electrical and Mechanical Data

Operating voltage U_b	10...30 V DC
Ripple U_{pp}	$\leq 10\%$ of U_b
Voltage drop U_b	≤ 2 V with I_a max.
Power consumption (without load)	≤ 10 mA
Continuous current I_a	≤ 300 mA
Time delay before availability t_v	≤ 2 ms
Hysteresis H	1% - 10% of s_r
Repeatability R (U_b and T_a constant)	$\leq 1\%$ 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...167°F (-25...75°C)
Housing material	Brass, nickel-plated, plastic
Tightening torque	25 Nm
Connection cable	PUR-PVC, 3 x 0.25 mm ²

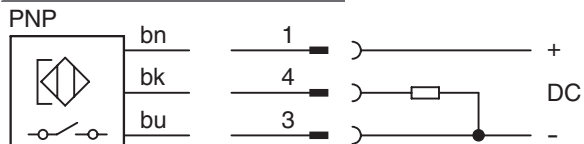
Selection Table

Sensing range s_n in (mm)	Magnetic alignment	Switching output	Output function	Switching frequency f in Hz	Connection type	Type	Part no.
2.8 (70)	Axial	PNP		5000	Cable 2 m	MM18-70APS-ZU0	7 900 272
2.8 (70)	Axial	PNP		5000	Connector M12 x 1 mm	MM18-70APS-ZC0	7 900 274

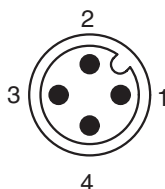
Sensing Ranges

Magnet type	Sensing Range s_n Any installation type (flush or non-flush) in a non-magnetizable material	Sensing Range s_n Flush installation in a magnetizable material (e.g. iron)
M 1.0	0.9 in (24 mm)	0.6 in (16 mm)
M 2.0	1.0 in (25 mm)	0.7 in (17 mm)
M 3.0	1.5 in (38 mm)	1.3 in (32 mm)
M 4.0	2.8 in (70 mm)	2.2 in (55 mm)
M 5.0/5.1	3.3 in (85 mm)	2.4 in (60 mm)

Connection Diagram



Wire color	Contact	Assignment
bn brown	1	+ V DC
bk black	4	NO
bu blue	3	- V DC
	2	free



MM 18 NAMUR

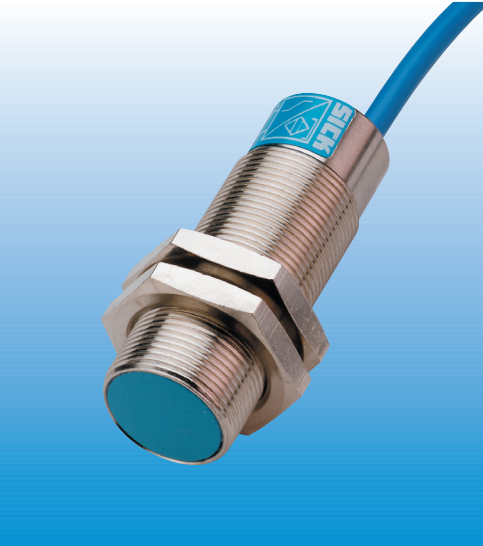
Magnetic Proximity Sensors



Highlights

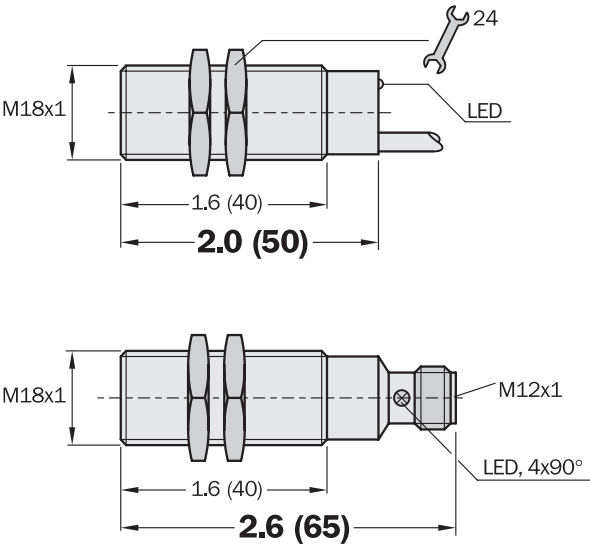
- Sensing range up to 60 mm
- High switching frequency
- NAMUR to EN 50 227
- Shielded or unshielded
- LED status indicator
- Robust brass housing, nickel-plated with fine thread M12 x 1 mm
- Cable or connector
- Enclosure rating IP 67

MM 18 NAMUR



Dimensional Drawing

dimensions in inches (mm)



Accessories	page
Cables and connectors	909
Mounting brackets	925, 926
Magnets	978, 979
Power supply	966

Electrical and Mechanical Data

Operating voltage U_b	5...25 V DC
Rated voltage U_n	8.2 V DC
Ripple U_{pp}	$\leq 5\%$ of U_b
Power consumption, attenuated	≥ 2.5 mA
Power consumption, unattenuated	≤ 1.0 mA
Internal capacitance	≤ 15 nF
Internal inductance	≤ 25 μ H
Cable resistance	≤ 50 W
Time delay before availability t_v	≤ 2 ms
Hysteresis H	1% - 10% of s_r
Repeatability R (U_b and T_a constant)	$\leq 1\%$ of s_r
Temperature drift	$\pm 10\%$ of s_r
EMC	to EN 60 947-5-2
Short circuit protection (pulsed)	Yes
Reverse polarity protection	Yes
Enclosure rating to EN 60529	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	25 Nm
Connection cable	PVC, 2 x 0.34 mm ²
Max. data for connecting isolating unit EN 2 EX or other approved isolating amplifier:	
Short circuit current I_k max	30 mA
No load voltage U_o	16 V
Power loss P_{max}	75 mW

Selection Table

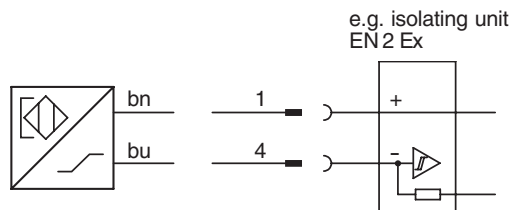
Sensing range S_n^* in (mm)	Magnetic alignment	Version	Output function	Switching frequency f in Hz	Connection type	Type	Part no.
2.8 (70)	Axial	NAMUR		5000	Cable 2 m	MM18-70A-N-ZW0	7 900 288
2.8 (70)	Axial	NAMUR		5000	Connector M12 x 1 mm	MM18-70A-N-ZC0	7 900 289

* Sensing range S_n based on installation in non-magnetizable material using magnet M 4.0.

Sensing Ranges

Magnet type	Sensing Range s_n Any installation type (flush or non-flush) in a non-magnetizable material	Sensing Range s_n Flush installation in a magnetizable material (e.g. iron)M
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Connection Diagram



Wire color	Contact	Assignment
bn brown	1	+ V DC
bu blue	4	- V DC
	3	free
	2	free

