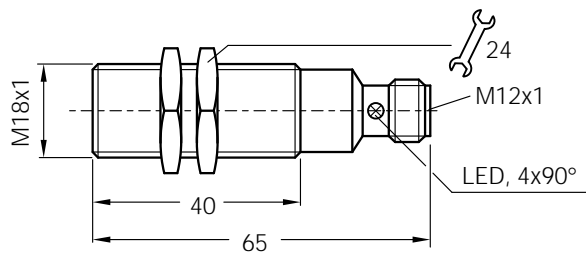
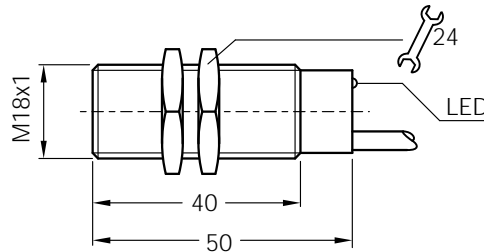


Magnetic proximity sensors

MM 18 sensors, sensing range 70 mm

DC 3-wire, metal housing

Dimensions in mm



Features



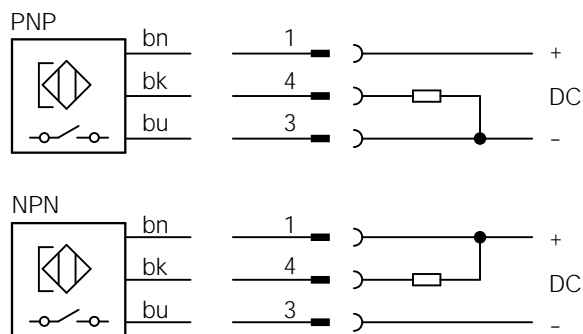
- ▶ Can be installed flush and non-flush in metal
- ▶ Sensing range up to 70 mm
- ▶ PNP or NPN output
- ▶ High switching frequency
- ▶ Short-circuit protection (pulsed)
- ▶ Robust brass housing, nickel-plated with fine thread M18 x 1 mm
- ▶ Cable or connector
- ▶ Enclosure rating IP 67
- ▶ LED status indicator (with 4 x 90° connectors)

Accessories

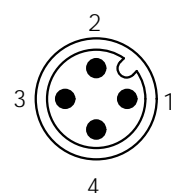
Round connectors

Magnets

Connection diagram



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



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	≤ 1.5 V at I_a max.	Reverse polarity protection	yes
Current consumption (without load)	≤ 10 mA	Power-up pulse suppression	yes
Continuous current I_a	≤ 300 mA	Enclosure rating to DIN 40050	IP 67
Time delay before availability t_v	≤ 2 ms	Shock and vibration stress	30 g, 11 ms 10 to 55 Hz, 1 mm
Hysteresis H	1% - 10% of s_r	Ambient temperature T_a	- 25 ... + 75 °C
Repeatability R (U_b and T_a constant)	$\leq 1\%$ of s_r	Housing material	Brass, nickel-plated, plastic
Temperature drift	$\pm 10\%$ of s_r	Tightening torque	25 Nm
EMC	to EN 60 947-5-2	Connection cable	PUR-PVC, 3 x 0.25 mm ²

Selection table

Sensing range s_n^* mm	Magnetic alignment	Switching output	Output function	Switching frequency f in Hz	Connection	Type	Order number
70	Axial	PNP		5000	Cable 2 m	MM18-70APS-ZU0	7900272
70	Axial	NPN		5000	Cable 2 m	MM18-70ANS-ZU0	7900273
70	Axial	PNP		5000	Connector M12 x 1 mm	MM18-70APS-ZC0	7900274
70	Axial	NPN		5000	Connector M12 x 1 mm	MM18-70ANS-ZC0	7900275

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

Sensing ranges (Typical values)

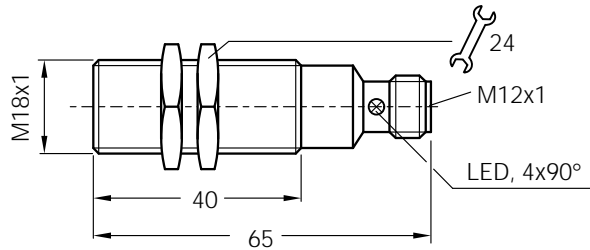
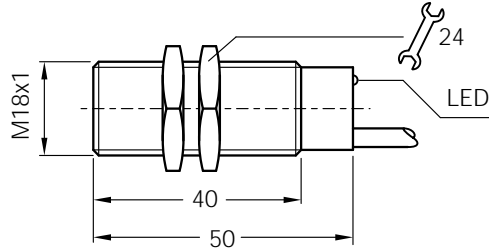
Magnet type	Sensing range s_n Any installation version (flush or non-flush) in non-magnetizable material	Sensing range s_n Flush installation in magnetizable material (e.g. iron)
M 1.0	24 mm	20 mm
M 2.0	25 mm	17 mm
M 3.0	38 mm	32 mm
M 4.0	70 mm	55 mm
M 5.0 / 5.1	85 mm	60 mm

Magnetic proximity sensors

MM 18 series, sensing range 70 mm

NAMUR, metal housing

Dimensions in mm



Features

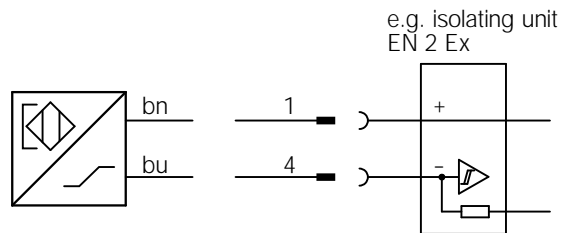


- ▶ Can be installed flush and non-flush in metal
- ▶ Sensing ranges up to 70 mm
- ▶ NAMUR to DIN 19 234
- ▶ High switching frequency
- ▶ Robust brass housing, nickel-plated, with fine thread M18 x 1 mm
- ▶ Cable or connector
- ▶ Enclosure rating IP 67
- ▶ LED status indicator (with 4 x 90° connectors)

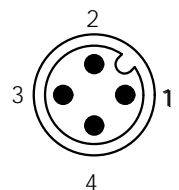
Accessories

Round connectors
Magnets

Connection diagrams





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



Electrical and mechanical data

Operating voltage U_b	5 ... 25 V DC	Short-circuit protected	yes
Rated voltage U_n	8.2 V DC	Reverse polarity protected	yes
Ripple U_{pp}	$\leq 5\%$ of U_b	Enclosure rating to DIN 40050	IP 67
Power consumption, attenuated	≥ 2.5 mA	Shock and vibration stress	30 g, 11 ms 10 to 55 Hz, 1 mm
Power consumption, unattenuated	≤ 1.0 mA	Ambient temperature T_a	- 25 ... + 75 °C
Internal capacitance	≤ 45 nF	Housing material	Brass, nickel-plated, plastic
Internal inductance	≤ 30 μ H	Tightening torque	25 Nm
Cable resistance	≤ 50 Ω	Connection cable	PVC, 2 x 0.34 mm ² , blue
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		

Selection table

Sensing range s_n^* mm	Magnetic alignment	Version	Output function	Switching frequency f in Hz	Connection	Type	Order number
70	Axial	NAMUR		5000	Cable 2 m	MM18-70A-N-ZW0	7900288
70	Axial	NAMUR		5000	Connector M12 x 1 mm	MM18-70A-N-ZC0	7900289

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

Sensing ranges (Typical values)

Magnet type	Sensing range s_n Any installation version (flush or non-flush) in non-magnetizable material	Sensing range s_n Flush installation in magnetizable material (e.g. iron)
M 1.0	24 mm	20 mm
M 2.0	25 mm	17 mm
M 3.0	38 mm	32 mm
M 4.0	70 mm	55 mm
M 5.0 / 5.1	85 mm	60 mm