



MM18-70A-N-ZW0

MMN

MAGNETIC SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
MM18-70A-N-ZW0	1102545

Included in delivery: BEF-MU-M18 (1)

Other models and accessories → www.sick.com/MMN

Illustration may differ



Detailed technical data

Features

Housing	Cylindrical thread design
Thread size	M18 x 1
Diameter	Ø 18 mm
Sensing range S_n	5 mm ... 70 mm ¹⁾
Safe sensing range S_a	56.7 mm
Magnetic sensitivity	≤ 0.7 mT
Switching frequency	1,000 Hz
Connection type	Cable, 2-wire, 2 m ²⁾
Switching output	NAMUR
Output characteristic	Control current depending on switching state according to NAMUR EN 60947-5-6
Electrical wiring	DC 2-wire
Magnetic alignment	Axial
Enclosure rating	IP67 ³⁾
Items supplied	Mounting nut, brass, nickel-plated (2x)

¹⁾ Sensing range based on installation in non-magnetic material using Magnet MAG-3010-B (M4.0).

²⁾ Do not bend below 0 °C.

³⁾ According to EN 60529.

Mechanics/electronics

Ripple	≤ 5 % ¹⁾
Time delay before availability	≤ 2 ms
Hysteresis	≤ 25 %
Reproducibility	≤ 1 % ²⁾
Temperature drift (of S_r)	± 10 %
EMC	According to EN 60947-5-2

¹⁾ Of V_S .

²⁾ Von S_r (V_S und T_a constant).

³⁾ For connection to a separately certified intrinsically safe circuit only.

Current consumption, sensor is activated	$\geq 2.3 \text{ mA}$
Current consumption, sensor is not activated	$\leq 1 \text{ mA}$
Cable material	PVC
Conductor size	0.34 mm^2
Cable resistance	$\leq 50 \Omega$
Wire-break protection	✓
Short-circuit protection	✓
Reverse polarity protection	✓
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Ambient operating temperature	$-25 \text{ °C} \dots +70 \text{ °C}$
Housing material	Metal, Nickel-plated brass
Housing length	50 mm
Thread length	40 mm
Tightening torque, max.	$\leq 25 \text{ Nm}$
Type approval certificate	TÜV 19 ATEX 241335
UK type examination certificate	UL22UKEX2385
ATEX marking	EX II 1G Ex ia IIC T6 Ga EX II 1D Ex ia IIIC T ₂₀₀ 85 °C Da Ta: $-25 \text{ °C} \dots +70 \text{ °C}$
Ex area category	1G, 1D
Input voltage U_i max.	$16 \text{ V}^{3)}$
Input power P_i max.	$100 \text{ mW}^{3)}$
Input current I_i max.	$30 \text{ mA}^{3)}$
Internal capacitance C_i max.	$130 \text{ nF}^{3)}$
Internal inductance L_i max.	$10 \mu\text{H}^{3)}$
Nominal voltage	8.2 V DC

¹⁾ Of V_S .

²⁾ Von Sr (VS und Ta constant).

³⁾ For connection to a separately certified intrinsically safe circuit only.

Safety-related parameters

MTTF_D	2,828 years
DC_{avg}	0 %
T_M (mission time)	20 years

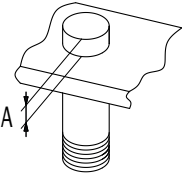
Classifications

eCl@ss 5.0	27270104
eCl@ss 5.1.4	27270104
eCl@ss 6.0	27270104
eCl@ss 6.2	27270104
eCl@ss 7.0	27270104
eCl@ss 8.0	27270104

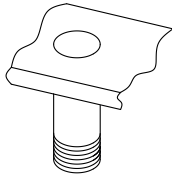
eCl@ss 8.1	27270104
eCl@ss 9.0	27270104
eCl@ss 10.0	27270104
eCl@ss 11.0	27270104
eCl@ss 12.0	27274301
ETIM 5.0	EC002544
ETIM 6.0	EC002544
ETIM 7.0	EC002544
ETIM 8.0	EC002544
UNSPSC 16.0901	39122230

Installation note

installation in
magnetizable material



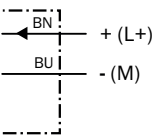
installation in
non-magnetizable material



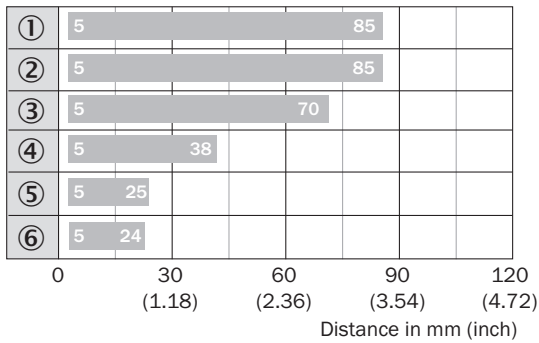
Ø	A (mm)	M (Nm)
M18	15	< 25

Connection diagram

Cd-012



Sensing range diagram

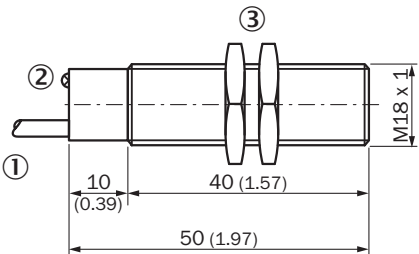


Max. sensing range S_n , flush or non-flush installation, non-magnetizable material

Magnet type	Part no.
① MAG-3315-B (M 5.1)	7902086
② MAG-3015-B (M 5.0)	7901786
③ MAG-3010-B (M 4.0)	7901785
④ MAG-2006-B (M 3.0)	7901784
⑤ MAG-0625-A (M 2.0)	7901783
⑥ MAG-1003-S (M 1.0)	7901782

Dimensional drawing (Dimensions in mm (inch))

MM18 Namur, cable



- ① Connection
- ② Display LED
- ③ Fastening nuts (2x); width across 24, metal

Recommended accessories

Other models and accessories → www.sick.com/MMN

	Brief description	Type	Part no.
Power supply modules			
	NAMUR isolating amplifier, Cable fault detection, Switching outputs: 2 NO relay (1 per channel), Supply voltage: 24 V ... 230 V, Voltage type: AC/DC	EN2-2EX1	6041096

	Brief description	Type	Part no.
	NAMUR isolating amplifier, Cable fault detection, Switching outputs: 2 NO relay (1 per channel), Supply voltage: 19,2 V ... 30 V, Voltage type: DC	EN2-2EX3	6041095
Universal bar clamp systems			
	Plate N06 for universal clamp bracket, M18, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N06	2051612
	Plate N06N for universal clamp bracket, M18, Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp), Universal clamp (5322627), mounting hardware	BEF-KHS-N06N	2051622
	Mounting bar, straight, 200 mm, stainless steel, Stainless steel (1.4571)	BEF-MS12G-NA	4058914
Mounting brackets and plates			
	Mounting plate for M18 sensors, steel, zinc coated, without mounting hardware	BEF-WG-M18	5321870
	Mounting bracket for M18 sensors, steel, zinc coated, without mounting hardware	BEF-WN-M18	5308446
Terminal and alignment brackets			
	Clamping block for round sensors M18, without fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included	BEF-KH-M18	2051481
	Clamping block for round sensors M18, with fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included	BEF-KHF-M18	2051482

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

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