



MM18-70APO-ZCK

MME

MAGNETIC SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
MM18-70APO-ZCK	1047255

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

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

Illustration may differ



Detailed technical data

Features

Housing	Metric
Housing	Short-body
Thread size	M18 x 1
Diameter	Ø 18 mm
Sensing range S_n	0 mm ... 70 mm ¹⁾
Safe sensing range S_a	56.7 mm
Magnetic sensitivity	0.7 mT
Switching frequency	5,000 Hz
Connection type	Male connector M12, 4-pin
Switching output	PNP
Switching output detail	PNP
Output function	NC
Electrical wiring	DC 3-wire
Magnetic alignment	Axial
Enclosure rating	IP67 ²⁾
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⁾ According to EN 60529.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
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¹⁾ Of V_S .

²⁾ At I_a max.

³⁾ Without load.

⁴⁾ Von S_r (V_S und T_a constant).

⁵⁾ Pulsed.

Ripple	$\leq 10 \% ^{1)}$
Voltage drop	$\leq 2 V ^{2)}$
Current consumption	10 mA ³⁾
Time delay before availability	$\leq 20 \text{ ms}$
Hysteresis	1 % ... 10 %
Reproducibility	$\leq 1 \% ^{4)}$
Temperature drift (of S_r)	$\pm 10 \%$
EMC	According to EN 60947-5-2
Continuous current I_a	$\leq 200 \text{ mA}$
Reverse polarity protection	Yes
Short-circuit protection	Yes ⁵⁾
Power-up pulse protection	✓
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Ambient operating temperature	-25 °C ... +75 °C
Housing material	Nickel-plated brass
Housing length	50 mm
Thread length	32 mm
Tightening torque, max.	40 Nm

¹⁾ Of V_S.

²⁾ At I_a max.

³⁾ Without load.

⁴⁾ Von S_r (V_S und T_a constant).

⁵⁾ Pulsed.

Safety-related parameters

MTTF_D	1,980 years
DC_{avg}	0%
T_M (mission time)	20 years

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓

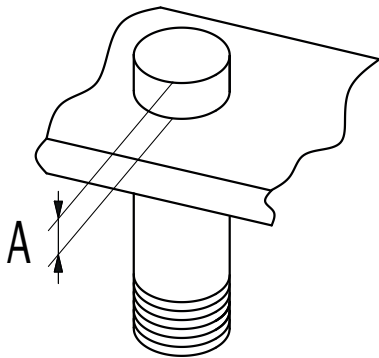
Classifications

ECLASS 5.0	27270104
ECLASS 5.1.4	27270104
ECLASS 6.0	27270104
ECLASS 6.2	27270104
ECLASS 7.0	27270104
ECLASS 8.0	27270104
ECLASS 8.1	27270104

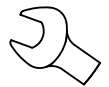
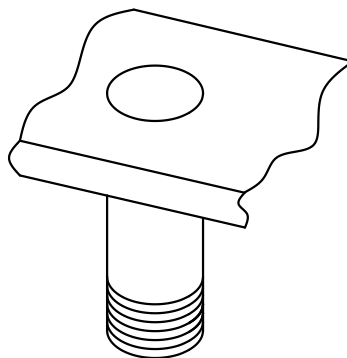
ECLASS 9.0	27270104
ECLASS 10.0	27270104
ECLASS 11.0	27270104
ECLASS 12.0	27274301
ETIM 5.0	EC002544
ETIM 6.0	EC002544
ETIM 7.0	EC002544
ETIM 8.0	EC002544
UNSPSC 16.0901	39122230

Installation note

installation in magnetizable material

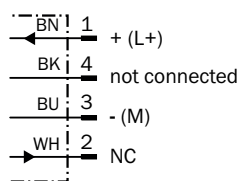


installation in non-magnetizable material

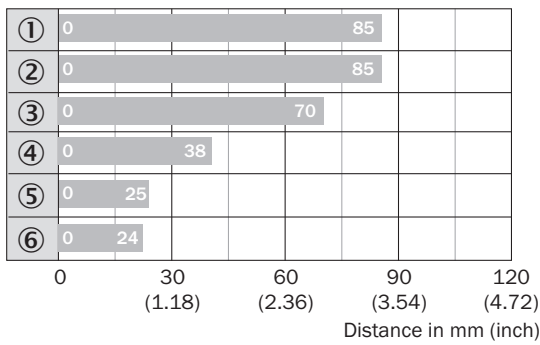


\emptyset	A (mm)	M (Nm)
M18	15	< 40

Connection diagram Cd-008



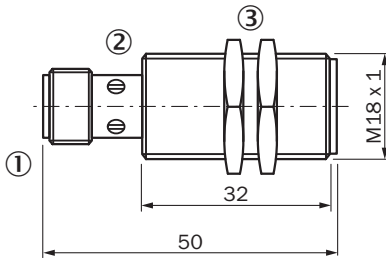
Sensing range



■ 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 MM18, connector, short-body housing







Dimensions in mm (inch)

- ① Connection
- ② Display LED
- ③ Fastening nuts (2x); width across 17, metal

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> Description: Clamping block for round sensors M18, without fixed stop Material: Plastic Details: Plastic (PA12), glass-fiber reinforced Items supplied: Mounting hardware included Suitable for: GR18, MH15V, V180-2, V18, IME18, IMX18, IMA18, IMB18, IM18 	BEF-KH-M18	2051481
	<ul style="list-style-type: none"> Description: Clamping block for round sensors M18, with fixed stop Material: Plastic Details: Plastic (PA12), glass-fiber reinforced Items supplied: Mounting hardware included Suitable for: GR18, MH15V, V180-2, V18 	BEF-KHF-M18	2051482
	<ul style="list-style-type: none"> Description: Mounting bracket for M18 sensors Material: Steel Details: Steel, zinc coated Items supplied: Without mounting hardware Suitable for: GR18, V180-2, V18, W15, Z1, Z2 	BEF-WN-M18	5308446
	<ul style="list-style-type: none"> Description: Mounting plate for M18 sensors Material: Steel Details: Steel, zinc coated Items supplied: Without mounting hardware Suitable for: GR18, V180-2, V18, W15, Z1, Z2 	BEF-WG-M18	5321870

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> Description: Unshielded Connection type head A: Male connector, M12, 4-pin, angled, A-coded Connection systems: Screw-type terminals Permitted cross-section: ≤ 0.75 mm² 	STE-1204-W	6022084
	<ul style="list-style-type: none"> Description: Unshielded Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection systems: Screw-type terminals Permitted cross-section: ≤ 0.75 mm² 	DOS-1204-G	6007302
	<ul style="list-style-type: none"> Description: Unshielded Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection systems: Screw-type terminals Permitted cross-section: ≤ 0.75 mm² 	DOS-1204-W	6007303
	<ul style="list-style-type: none"> Description: Unshielded Connection type head A: Male connector, M12, 4-pin, straight, A-coded Connection systems: Screw-type terminals Permitted cross-section: ≤ 0.75 mm² 	STE-1204-G	6009932
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YF2A14-020VB3XLEAX	2096234
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YF2A14-050VB3XLEAX	2096235
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YG2A14-020VB3XLEAX	2095895
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YG2A14-050VB3XLEAX	2095897
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 4-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YG2A14-C60VB3XLEAX	2145709
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 4-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YG2A14-010VB3XLEAX	2145710
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 4-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YF2A14-C60VB3XLEAX	2145707
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, unshielded Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 4-wire, PVC Application: Uncontaminated zones, Zones with chemicals 	YF2A14-010VB3XLEAX	2145708

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.”

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