Data sheet

MM12-60APS-ZUK

MME

MAGNETIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	part no.
MM12-60APS-ZUK	1040069

Included in delivery: BEF-MU-M12 (1)

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

Detailed technical data

Features

Housing	Metric
Housing	Short-body
Thread size	M12 x 1
Diameter	Ø 12 mm
Sensing range S_n	0 mm ... 60 mm [1]
Safe sensing range S_a	48.6 mm
Magnetic sensitivity	1 mT
Switching frequency	1,000 Hz
Connection type	Cable, 3-wire, 2 m
Switching output	PNP
Switching output detail	PNP
Output function	NO
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
Ripple	≤ 10 % [1]

[1] Of V_S.
[2] At I_a max.
[3] Without load.
[4] Von Sr (VS und Ta constant).
[5] Pulsed.

Voltage drop	≤ 2 V [2]
Current consumption	10 mA [3]
Time delay before availability	≤ 20 ms
Hysteresis	1 % ... 10 %
Reproducibility	≤ 1 % [4]
Temperature drift (of S_r)	± 10 %
EMC	According to EN 60947-5-2
Continuous current I_a	≤ 200 mA
Cable material	PUR
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	Metal, Nickel-plated brass
Housing length	48 mm
Thread length	28 mm
Tightening torque, max.	15 Nm

[1] Of V_S.
[2] At I_a max.
[3] Without load.
[4] Von Sr (VS und Ta 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	✓

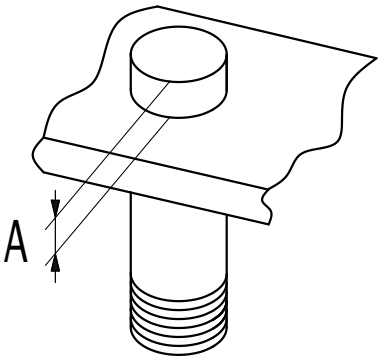
Classifications

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

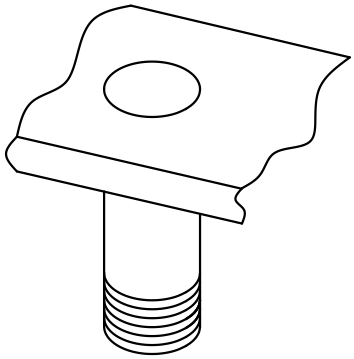
ECLASS 9.0	27270104
ECLASS 10.0	27270104
ECLASS 11.0	27270104
ECLASS 12.0	27274301
ETIM 5.0	EC002544
ETIM 6.0	EC002544
ETIM 7.0	EC002544
ETIM 8.0	EC002544
UNSPSC 16.0901	39122230

Installation note

installation in magnetizable material

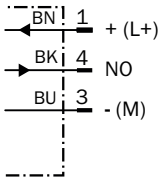


installation in non-magnetizable material

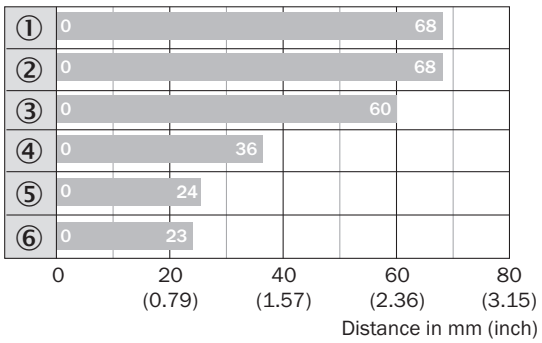


Ø	A (mm)	M (Nm)
M12	10	< 15

Connection diagram Cd-002



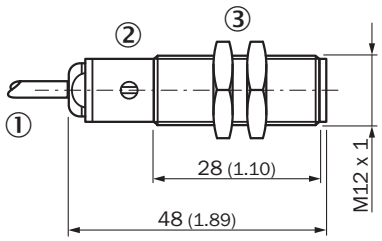
Sensing range



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 MM12, cable, 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			
	• **Description:** Clamping block for round sensors M12, without fixed stop • **Material:** Plastic • **Details:** Plastic (PA12), glass-fiber reinforced • **Items supplied:** Mounting hardware included	BEF-KH-M12	2051479
	• **Description:** Clamping block for round sensors M12, with fixed stop • **Material:** Plastic • **Details:** Plastic (PA12), glass-fiber reinforced • **Items supplied:** Mounting hardware included	BEF-KHF-M12	2051480
	• **Description:** Mounting bracket for M12 sensors • **Material:** Steel • **Details:** Steel, zinc coated • **Items supplied:** Without mounting hardware	BEF-WN-M12	5308447
	• **Description:** Mounting plate for M12 sensors • **Material:** Steel • **Details:** Steel, zinc coated • **Items supplied:** Without mounting hardware	BEF-WG-M12	5321869

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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