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DATA SHEET

MM12-90APS-ZC0

MME
Magnetic sensors

SICK Sensor Intelligence



Illustration may differ

MAGNETIC SENSORS

MM12-90APS-ZC0

ORDERING INFORMATION

Type	part no.
MM12-90APS-ZC0	1029950

Further device versions and accessories at www.sick.com/MME

DETAILED TECHNICAL DATA

FEATURES

Housing	Metric
Housing	Advanced
Thread size	M12 x 1
Diameter	Ø 12 mm
Sensing range S_n	5 mm ... 90 mm [1]
Safe sensing range S_a	72.9 mm
Magnetic sensitivity	0.6 mT
Switching frequency	1,000 Hz
Connection type	Male connector M12, 4-pin
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]
Voltage drop	≤ 2.2 V [2]
Current consumption	10 mA [3]
Time delay before availability	≤ 30 ms
Hysteresis	≤ 25 %
Reproducibility	≤ 1 % [4]
Temperature drift (of S_r)	± 10 %
EMC	According to EN 60947-5-2
Continuous current I_a	≤ 200 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	–40 °C ... +75 °C [6]
Housing material	Nickel-plated brass
Housing length	62.5 mm
Thread length	40 mm
Tightening torque, max.	≤ 7 Nm

[1] Of V_S.

[2] At I_a max.

[3] Without load.

[4] Von Sr (VS und Ta constant).

[5] Pulsed.

[6] Temperature changes below –25 °C reduce the service life of the sensor.

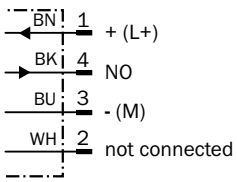
SAFETY-RELATED PARAMETERS

$MTTF_D$	2,519 years
DC_{avg}	0 %

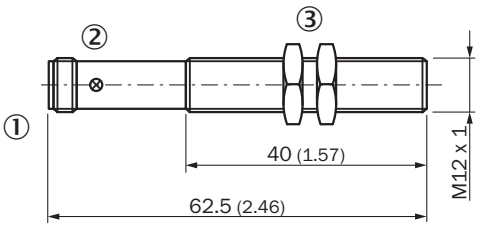
CERTIFICATES

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

CONNECTION DIAGRAM CD-011



DIMENSIONAL DRAWING MM12, CONNECTOR, STANDARD HOUSING



Dimensions in mm (inch)
① Connection
② Display LED
③ Fastening nuts (2x); width across 17, metal

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1029950

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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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