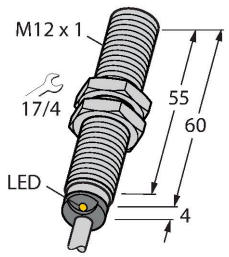
BIM-EM12E-AP4X 7M
Magnetic Field Sensor – Magnetic-inductive Proximity Sensor



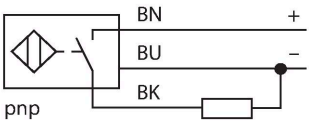
Technical data

Type	BIM-EM12E-AP4X 7M
ID	1579919
General data	
Rated switching distance	90 mm
	In conjunction with magnet DMR31-15-5
Repeat accuracy	≤ 0.3 % of full scale
Hysteresis	1…10 %
Electrical data	
Operating voltage U_B	10…65 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_e	≤ 200 mA
No-load current	≤ 15 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_e	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
Switching frequency	1 kHz
Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	64 mm
Housing material	Stainless steel, 1.4301 (AISI 304)
Active area material	Plastic, PBT-GF30

Features

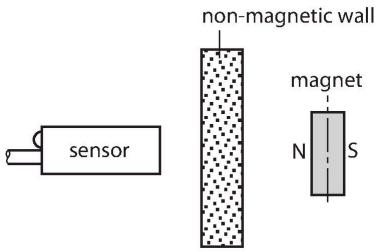
- Threaded barrel, M12 x 1
- Stainless steel, 1.4301
- Rated operating distance 90 mm with DMR31-15-5 magnet
- DC 3-wire, 10…65 VDC
- NO contact, PNP output
- Cable connection

Wiring diagram



Functional principle

Magnetic inductive proximity sensors are actuated by magnetic fields and are thus capable of detecting permanent magnets through non-ferromagnetic materials (e.g. wood, plastic, non-ferrous metals, aluminium, stainless steel).
Thus it is possible to achieve large switching distances even with smaller housing styles.
In combination with the actuation magnet DMR31-15-5 TURCK sensors feature a relatively high switching distance. Thus there are multiple detection possibilities, particularly if the mounting space is limited or other difficult sensing conditions prevail.



BIM-EM12E-AP4X 7M| 02/21/2025 14-44 | technical changes reserved

Technical data

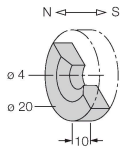
End cap	Plastic, EPTR
Max. tightening torque of housing nut	10 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY, PVC, 7 m
Core cross-section	3 x 0.34 mm²
Environmental conditions	
Ambient temperature	-25…+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description	
Diameter active area B	Ø 12 mm

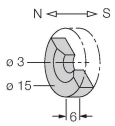
Accessories

DMR20-10-4 6900214



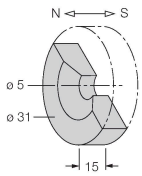
Actuation magnet; Ø 20 mm (Ø 4 mm), h: 10 mm; attainable switching distance 59 mm on BIM-(E)M12 magnetic field sensors or 50 mm on BIM-EG08 magnetic field sensors; for Q25L linear position sensors: recommended distance between the sensor and magnet: 3…4 mm

DMR15-6-3 6900216



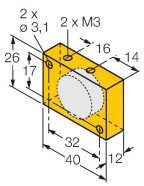
Actuation magnet, Ø 15 mm (Ø 3 mm), h: 6 mm; attainable switching distance 36 mm on BIM-(E)M12 magnetic field sensors or 32 mm on BIM-EG08 magnetic field sensors; for Q25L linear position sensors: recommended distance between the sensor and magnet: 3…4 mm

DMR31-15-5 6900215



Actuation magnet, Ø 31 mm (Ø 5 mm), h: 15 mm; attainable switching distance 90 mm on BIM-(E)M12 magnetic field sensors or 78 mm on BIM-EG08 magnetic field sensors; for Q25L linear position sensors: recommended distance between the sensor and magnet: 3…5 mm

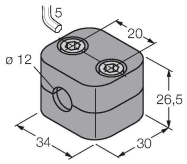
DM-Q12 6900367



Actuator, rectangular, plastic, attainable switching distance 58 mm on BIM-(E)M12 magnetic field sensors or 49 mm on BIM-EG08 magnetic field sensors; for Q25L linear position sensors: recommended distance between the sensor and magnet: 3…5 mm

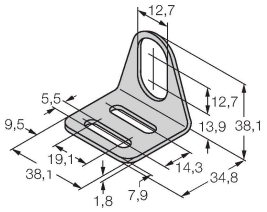
BIM-EM12E-AP4X 7M| 02/21/2025 14-44 | technical changes reserved

BSS-12	6901321



Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene

MW12	6945003



Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)