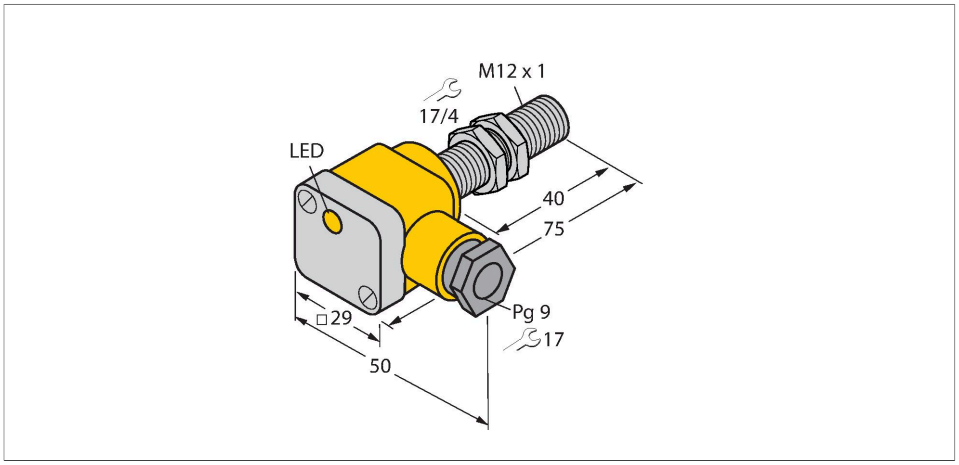
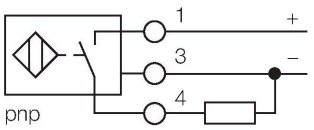
BIM-G12SK-AP4X/S235
Magnetic Field Sensor – Magnetic-inductive Proximity Sensor



Features

- Threaded barrel, M12 x 1
- Chrome-plated brass
- Rated operating distance 90 mm with DMR31-15-5 magnet
- DC 3-wire, 10…65 VDC
- NO contact, PNP output
- Terminal chamber

Wiring diagram

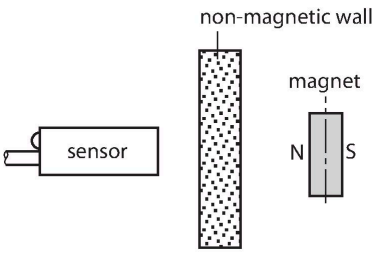


Technical data

Type	BIM-G12SK-AP4X/S235
ID	1579903
Special version	S235 Corresponds to:Special calibration (increased sensitivity)
General data	
Rated switching distance	90 mm
Repeat accuracy	≤ 0.3 % of full scale
Repeatability	≤ ± 0.1 mm
Temperature drift	≤ ±15 %
Temperature drift	≤ 0.1 mm
Hysteresis	1…10 %
Hysteresis	≤ 1 mm
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

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 of the series M12 feature a nominal switching distance of 90 mm.
Thus there are multiple detection possibilities, particularly if mounting space is limited or other difficult sensing conditions prevail.



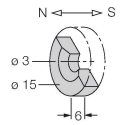
Technical data

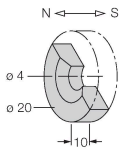
Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	75 mm
Housing material	Metal, CuZn, Chrome-plated
Terminal chamber cover material	plastic, Ultem
Terminal chamber housing material	plastic, PA12-GF30
Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	10 Nm
Electrical connection	Terminal chamber
Clamping ability	≤ 2.5 mm²
Cable external diameter	4.5…8 mm
Environmental conditions	
Ambient temperature	-25…+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Red
Included in delivery	cable gland; 2x plastic seals

Mounting instructions

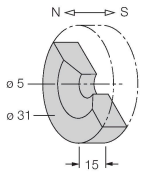
Mounting instructions/Description	
Diameter active area B	Ø 12 mm

Accessories

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

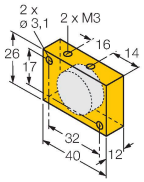
DMR20-10-4	6900214
	Actuation magnet; Ø 20 mm (Ø 4 mm), h: 10 mm; attainable switching distance 59 mm on BIM-(E)M12 magnetic field sensors or 50 mm on BIM-EG08 magnetic field sensors; for Q25L linear position sensors: recommended distance between the sensor and magnet: 3…4 mm

DMR31-15-5	6900215



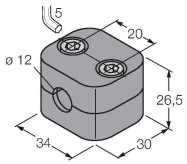
Actuation magnet, Ø 31 mm (Ø 5 mm), h: 15 mm; attainable switching distance 90 mm on BIM-(E)M12 magnetic field sensors or 78 mm on BIM-EG08 magnetic field sensors; for Q25L linear position sensors: recommended distance between the sensor and magnet: 3…5 mm

DM-Q12	6900367



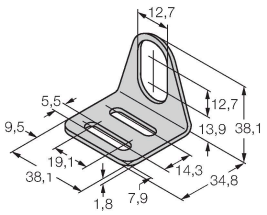
Actuator, rectangular, plastic, attainable switching distance 58 mm on BIM-(E)M12 magnetic field sensors or 49 mm on BIM-EG08 magnetic field sensors; for Q25L linear position sensors: recommended distance between the sensor and magnet: 3…5 mm

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)