

1) Position sensor element, 2) see remarks, 3) see remarks, 4) see remarks



Basic features

Application	Pneumatic cylinder with T-slot. For dimensions, see sketch in product view. Welding area
Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Magnetic field sensor
Scope of delivery	Position sensor Protective cover Cable clip for T-slot Short guide

Electrical data

Assured switching field strength H_a	5.2 kA/m
Interference suppression time	600 ms
Load capacitance max. at U_e	1.5 μ F
No-load current I_o max., undamped	18 mA
Operating voltage U_b	10...30 VDC
Output resistance R_a	Open drain
Rated insulation voltage U_i	75 V DC
Rated operating current I_e	50 mA
Rated operating voltage U_e DC	24 V
Rated short circuit current	100 A
Rated switch field strength H_n	4.8 kA/m
Residual current I_r max.	10 μ A
Utilization category	DC -13

Display/Operation

Function indicator	Active, LED yellow Error, LED red
Power indicator	External Power - LED green

Electrical connection

Cable	Silicone welding spark resistant black, 2 m
Cable diameter D	3.2 mm
Conductor cross-section	0.15 mm ²
Number of conductors	3
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Environmental conditions

Ambient temperature	0...80 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g_n , 11 ms, 3x6 Half-sinus, 100 g_n , 2 ms, 3x8000
EN 60068-2-6, Vibration	55 Hz, amplitude 2 mm, 3x30 min 10...2000 Hz, amplitude 2 mm pp, 30 g_n , 120 sweeps
ESD	2A (4 kV)
Emission	Group 1, Class A
IP rating	IP67

Functional safety

MTTF (40 °C)	420 a
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Magnetic Sensors
BMF 415KW-HAPS-W-5-S0-02
Order Code: **BMF00N3**

BALLUFF

Interface

Switching output PNP normally open (NO)

Material

Housing material PA 12
Material jacket Silicone, welding spark resistant
Material sensing surface PA 12

Mechanical data

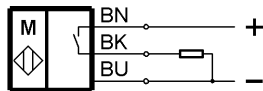
Dimension 5 x 6.4 x 34 mm
Mounting part can be installed in T-slot from above
Size T-slot

Remarks

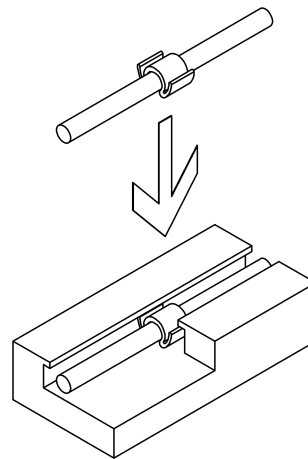
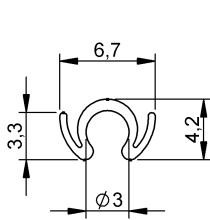
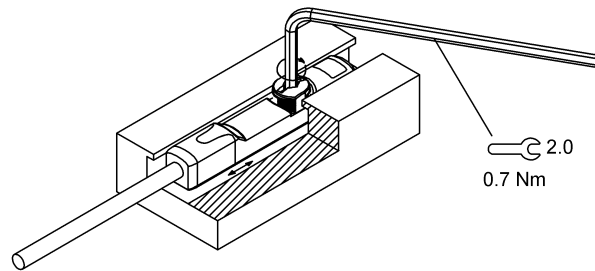
Damping magnet axially magnetized
Effective operating current I_e with thermally coupled installation in metal.
Suitable for use in AC interference magnetic fields up to 140 mT / 110 kA/m with frequencies between 45 - 65 Hz
Suitable for use in MFDC interference magnetic fields up to 140 mT / 110 kA/m
For more information about MTTF and B10d see MTTF / B10d Certificate

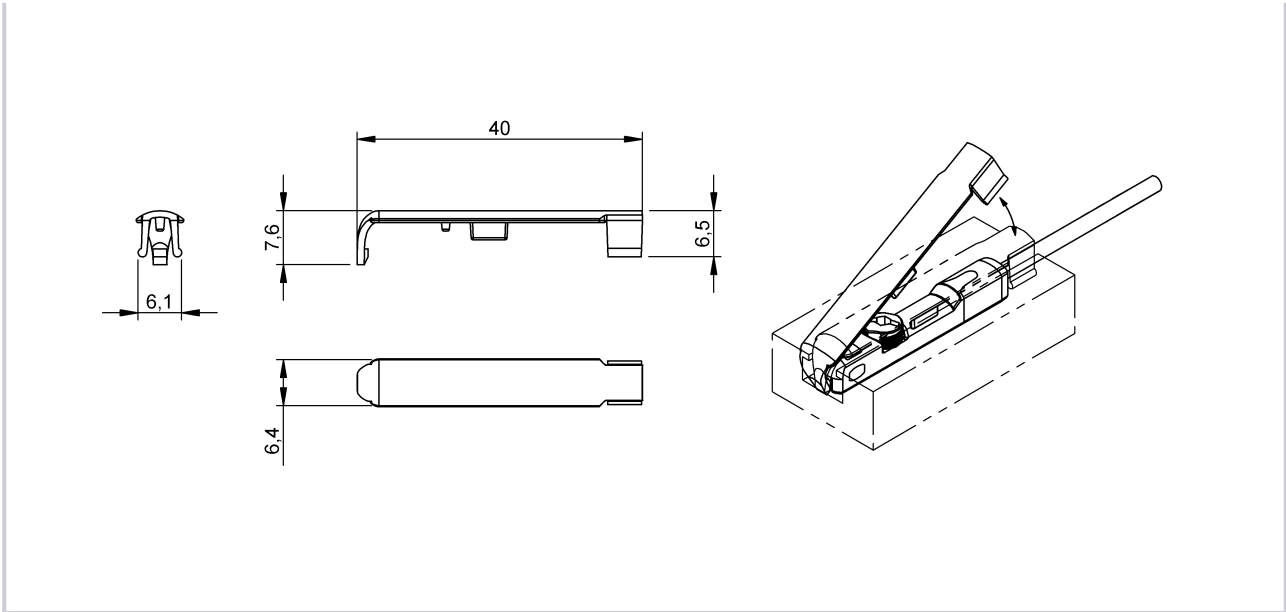
Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

Wiring Diagrams



Help Views





Warning Symbols

