



1) Sensing surface



Basic features

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|-------------------------------|---|
| Application | Optimized response path especially suited for short-stroke cylinders. |
| Approval/Conformity | CE UKCA cULus WEEE |
| Basic standard | IEC 60947-5-2 |
| Principle of operation | Magnetic field sensor |

Display/Operation

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|---------------------------|-----|
| Function indicator | yes |
|---------------------------|-----|

Electrical connection

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|--|-------------------------------|
| Cable | PUR with silicone tube, 0.3 m |
| Cable diameter D | 4.00 mm |
| Connection | M8x1-Male, 3-pin |
| Polarity reversal protected | yes |
| Protection against device mix-ups | yes |
| Short-circuit protection | yes |

Electrical data

| | |
|--|-------------|
| Assured switching field strength Ha | 2 kA/m |
| Load capacitance max. at Ue | 1 µF |
| No-load current Io max., undamped | 5 mA |
| Operating voltage Ub | 10...30 VDC |
| Output resistance Ra | Open drain |
| Rated insulation voltage Ui | 75 V DC |
| Rated operating current Ie | 100 mA |
| Rated operating voltage Ue DC | 24 V |
| Rated short circuit current | 100 A |
| Rated switch field strength Hn | 1.2 kA/m |
| Residual current Ir max. | 80 µA |
| Ripple max. (% of Ue) | 15 % |
| Switching frequency | 7000 Hz |
| Turn-off delay toff max. | 0.07 ms |
| Turn-on delay ton max. | 0.07 ms |
| Utilization category | DC -13 |
| Voltage drop static max. | 2.5 V |

Environmental conditions

| | |
|--------------------------------|---------------------------------|
| Ambient temperature | -25...85 °C |
| Contamination scale | 3 |
| EN 60068-2-27, Shock | Half-sinus, 30 gn, 11 ms |
| EN 60068-2-6, Vibration | 55 Hz, amplitude 1 mm, 3x30 min |
| ESD | 3A(8KV) |
| Emission | Group 1, Class B |
| IP rating | IP67 |

Magnetic Sensors
BMF 214K-PS-C-2A-SA93-S49-00,3
Order Code: **BMF00M4**

BALLUFF

Functional safety

MTTF (40 °C) 520 a

Interface

Switching output PNP normally open (NO)

Material

Housing material PA 12
Material jacket PUR, with silicone tube

Mechanical data

Dimension 16.8 x 2.9 x 4.5 mm
Tightening torque 0.03 Nm

Range/Distance

Temp. drift max. (% of Hn) 0.3 %

Remarks

EMC: Surge resistance

External protection circuit is required. Document 825345, Section 2.

Max. pull force on cable 10 N.

The sensor is functional again after the overload has been eliminated.

UL-MARKINGS: - For use in NFPA 79 Applications only - Adapters providing field wiring means are available from the manufacturer. Refer to manufacturers information.

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.

Connector Drawings



Wiring Diagrams

