



1) Sensing surface



Basic features

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

Display/Operation

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

Electrical connection

| | |
|--|----------------------|
| Cable | PUR, 2 m |
| Cable diameter D | 2.50 mm |
| Conductor cross-section | 0.10 mm ² |
| Number of conductors | 3 |
| 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 I_o max., undamped | 5 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 | 100 mA |
| Rated operating voltage U_e DC | 24 V |
| Rated short circuit current | 100 A |
| Rated switch field strength H_n | 1.2 kA/m |
| Residual current I_r max. | 80 µA |
| Ripple max. (% of U_e) | 15 % |
| Switching frequency | 7000 Hz |
| Turn-off delay t_{off} max. | 0.07 ms |
| Turn-on delay t_{on} 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 g _n , 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 204K-PS-C-2A-PU-02
Order Code: **BMF0001**

BALLUFF

Functional safety

MTTF (40 °C) 520 a

Interface

Switching output PNP normally open (NO)

Material

Housing material PA 12

Material jacket PUR

Mechanical data

Dimension 16.8 x 2.9 x 4.5 mm

Mounting part C-slot
Sommer
Festo slot 10

Tightening torque 0.03 Nm

Range/Distance

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

Remarks

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

EMC: Surge resistance

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

Max. pull force on cable 10 N.

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.

Wiring Diagrams

