

Basic features

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

Display/Operation

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

Electrical connection

| | |
|------------------------------------------|----------------------------|
| Cable | PUR, 0.30 m |
| Cable diameter D | 2.50 mm |
| Connection | M12x1-Male, 4-pin, A-coded |
| Polarity reversal protected | yes |
| Protection against device mix-ups | yes |
| Short-circuit protection | yes |

Electrical data

| | |
|---------------------------------------------------------------|-------------|
| Assured switching field strength H_a | 2 kA/m |
| Hysteresis H max. (% of H_n) | 45 % |
| Load capacitance max. at U_e | 1 μ F |
| 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 μ A |
| 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 | 2B (4kV) 4A(15kV) |
| IP rating | IP67 |

Magnetic Sensors
BMF 273K-PS-C-2A-SA2-S4-00,3
Order Code: BMF002N



Functional safety

MTTF (40 °C) 520 a

Material

Housing material PBT
Material jacket PUR
Material sensing surface PBT

Mechanical data

Dimension 25.7 x 2.85 x 3.95 mm
Tightening torque 0.2 Nm

Output/Interface

Switching output PNP normally open (NO)

Range/Distance

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

Remarks

Max. pull force on cable 10 N.

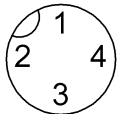
EMC: Surge resistance

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

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

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

