

1) Sensing surface



**Basic features**

<b>Approval/Conformity</b>	CE UKCA cULus WEEE
<b>Basic standard</b>	IEC 60947-5-2
<b>Not incl. in scope of delivery</b>	Mounting bracket, e.g. BMF 305-HW-17
<b>Principle of operation</b>	Magnetic field sensor

**Display/Operation**

<b>Function indicator</b>	yes
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**Electrical connection**

<b>Cable</b>	PUR, 3 m
<b>Cable diameter D</b>	2.90 mm
<b>Connection</b>	M12x1-Male, 4-pin, A-coded
<b>Polarity reversal protected</b>	yes
<b>Protection against device mix-ups</b>	yes
<b>Short-circuit protection</b>	yes

**Electrical data**

<b>Assured switching field strength Ha</b>	2 kA/m
<b>Hysteresis H max. (% of Hn)</b>	45 %
<b>Load capacitance max. at Ue</b>	1 µF
<b>No-load current Io max., undamped</b>	10 mA
<b>Operating voltage Ub</b>	10...30 VDC
<b>Output resistance Ra</b>	Open drain
<b>Rated insulation voltage Ui</b>	75 V DC
<b>Rated operating current Ie</b>	200 mA
<b>Rated operating voltage Ue DC</b>	24 V
<b>Rated short circuit current</b>	100 A
<b>Rated switch field strength Hn</b>	1.2 kA/m
<b>Residual current Ir max.</b>	80 µA
<b>Ripple max. (% of Ue)</b>	15 %
<b>Switching frequency</b>	10000 Hz
<b>Turn-off delay toff max.</b>	0.05 ms
<b>Turn-on delay ton max.</b>	0.05 ms
<b>Utilization category</b>	DC -13
<b>Voltage drop static max.</b>	3.1 V

**Environmental conditions**

<b>Ambient temperature</b>	-25...85 °C
<b>Contamination scale</b>	3
<b>EN 60068-2-27, Shock</b>	Half-sinus, 30 gn, 11 ms
<b>EN 60068-2-6, Vibration</b>	55 Hz, amplitude 1 mm, 3x30 min
<b>ESD</b>	4A(15kV)
<b>IP rating</b>	IP67

Magnetic Sensors  
**BMF 305K-PS-C-2-S4-03**  
Order Code: **BMF005E**



**Functional safety**

MTTF (40 °C) 330 a

**Interface**

Switching output PNP normally open (NO)

**Material**

Housing material LCP  
Material jacket PUR  
Material sensing surface PU

**Mechanical data**

Dimension 33.5 x 5 x 10.5 mm

**Range/Distance**

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

**Remarks**

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.

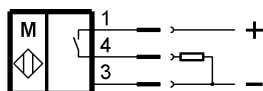
For more information about MTTF and B10d see MTTF / B10d Certificate

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**



## Technical Drawings

