

1) Sensing surface



**Basic features**

|                                       |                                      |
|---------------------------------------|--------------------------------------|
| <b>Application</b>                    | larger actuators                     |
| <b>Approval/Conformity</b>            | CE<br>cULus<br>EAC<br>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 |
|---------------------------|-----|

**Electrical connection**

|  |                  |
|--|------------------|
| <b>Cable</b>                             | PUR, 0,3 m       |
| <b>Cable diameter D</b>                  | 2,90 mm          |
| <b>Connection</b>                        | M8x1-Male, 3-pin |
| <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-SA2-S49-00,3**  
Order Code: **BMF005L**



**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  
Mounting part Mounting bracket BMF 305-HW\*

**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.

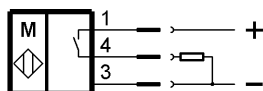
For more information about MTTF and B10d see MTTF / B10d Certificate

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

