



1) Sensing surface



**Basic features**

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

**Display/Operation**

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

<b>Cable</b>	PUR, 5 m
<b>Cable diameter D</b>	2.50 mm
<b>Conductor cross-section</b>	0.10 mm <sup>2</sup>
<b>Number of conductors</b>	3
<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>Load capacitance max. at Ue</b>	1 µF
<b>No-load current I<sub>o</sub> max., undamped</b>	5 mA
<b>Operating voltage U<sub>b</sub></b>	10...30 VDC
<b>Output resistance R<sub>a</sub></b>	Open drain
<b>Rated insulation voltage U<sub>i</sub></b>	75 V DC
<b>Rated operating current I<sub>e</sub></b>	100 mA
<b>Rated operating voltage U<sub>e</sub> DC</b>	24 V
<b>Rated short circuit current</b>	100 A
<b>Rated switch field strength H<sub>n</sub></b>	1.2 kA/m
<b>Residual current I<sub>r</sub> max.</b>	80 µA
<b>Ripple max. (% of U<sub>e</sub>)</b>	15 %
<b>Switching frequency</b>	7000 Hz
<b>Turn-off delay t<sub>off</sub> max.</b>	0.07 ms
<b>Turn-on delay t<sub>on</sub> max.</b>	0.07 ms
<b>Utilization category</b>	DC -13
<b>Voltage drop static max.</b>	2.5 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 g <sub>n</sub> , 11 ms
<b>EN 60068-2-6, Vibration</b>	55 Hz, amplitude 1 mm, 3x30 min
<b>ESD</b>	3A(8KV)
<b>Emission</b>	Group 1, Class B
<b>IP rating</b>	IP67

Magnetic Sensors  
**BMF 214K-PS-C-2A-PU-05**  
Order Code: **BMF00E3**

**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

SMC

Bimba

Schunk

Tightening torque 0.03 Nm

**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.

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**

