



1) Sensing surface



**Basic features**

<b>Application</b>	Optimized response path especially suited for short-stroke cylinders.
<b>Approval/Conformity</b>	CE 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, 0.5 m
<b>Cable diameter D</b>	2.50 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>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 gn, 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>Protection degree</b>	IP67

Magnetic Sensors  
**BMF 214K-PS-C-2A-SA2-S49-00,5**  
Order Code: BMF00A3

**BALLUFF**

**Functional safety**

MTTF (40 °C) 520 a

**Material**

Housing material PA 12  
Material jacket PUR

**Mechanical data**

Dimension 16.8 x 2.9 x 4.5 mm  
Mounting C-slot  
SMC  
Bimba  
Schunk  
Tightening torque 0.03 Nm

**Output/Interface**

Switching output PNP normally open (NO)

**Range/Distance**

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

**Remarks**

EMC: Surge resistance  
External protection circuit is required. Document 825345, Section 2.  
Max. pull force on cable 10 N.  
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**

