

1) see remarks



### Basic features

Approval/Conformity	CE EAC WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Magnetic field sensor

### Display/Operation

Function indicator	yes
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### Electrical connection

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 $\mu$ F
No-load current $I_o$ max., undamped	10 mA
Operating voltage $U_b$	10...30 VDC
Output resistance $R_a$	open source
Rated insulation voltage $U_i$	75 V DC
Rated operating current $I_e$	200 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 $\mu$ A
Ripple max. (% of $U_e$ )	15 %
Switching frequency	10000 Hz
Turn-off delay $t_{off}$ max.	0.05 ms
Turn-on delay $t_{on}$ max.	0.05 ms
Utilization category	DC -13
Voltage drop static max.	2 V

### Environmental conditions

Ambient temperature	-25...70 °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	2A (4 kV)
Emission	Group 1, Class B
IP rating	IP67

Magnetic Sensors  
**BMF 12M-PS-C-2-S4**  
Order Code: **BMF00C7**

**BALLUFF**

**Functional safety**

MTTF (40 °C) 1014 a

**Interface**

Switching output PNP normally open (NO)

**Material**

Housing material Brass  
Material sensing surface PA 12

**Mechanical data**

Dimension Ø 12 x 50 mm  
Size M12x1  
Tightening torque 15 Nm

**Range/Distance**

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

**Remarks**

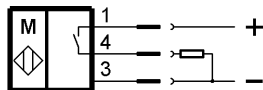
1) The marking lines on the sensing surface can be used to align the sensor in the magnetic field.  
The switching distance depends on the magnet used. Switching distances of >20 mm can be achieved.  
The sensor is functional again after the overload has been eliminated.  
For more information about 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.

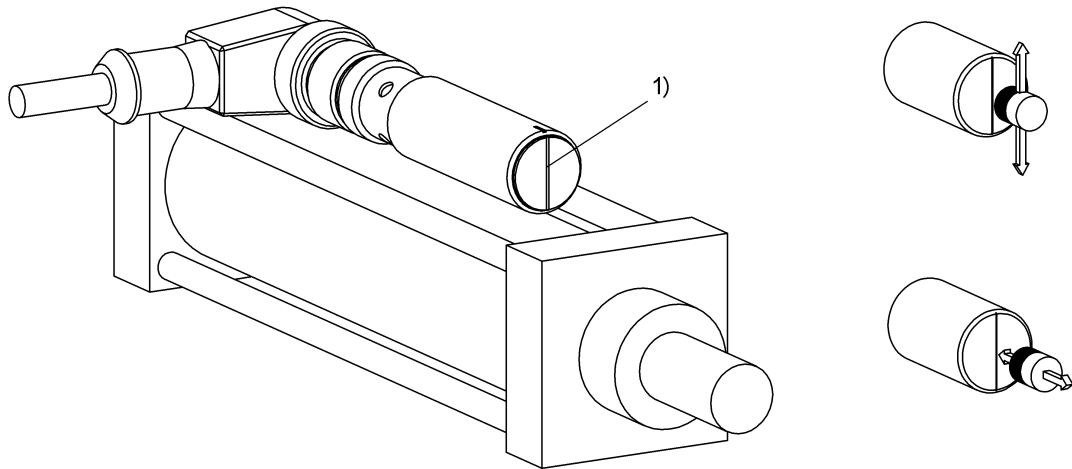
**Connector Drawings**



**Wiring Diagrams**



## Help Views



1) see remarks