

1) Sensing surface



Basic features

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

Display/Operation

Function indicator	yes
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Electrical connection

Cable	PUR, 0.5 m
Cable diameter D	2.90 mm
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 μ F
No-load current I_o max., undamped	10 mA
Operating voltage U_b	10...30 VDC
Output resistance R_a	Open drain
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 μ 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.	3.1 V

Environmental conditions

Ambient temperature	-25...85 °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	4B(15kV)
IP rating	IP67

Magnetic Sensors
BMF 305K-PS-C-2-S4-00,5
Order Code: BMF0059

BALLUFF

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.

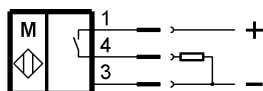
For more information about MTTF and B10d see MTTF / B10d Certificate

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

