



1) Sensing surface



Basic features

Application	miniaturized actuators
Approval/Conformity	cULus CE UKCA WEEE
Basic standard	IEC 60947-5-2
Not incl. in scope of delivery	Mounting bracket, e.g. BMF 303-HW-28
Principle of operation	Magnetic field sensor

Display/Operation

Function indicator	yes
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Electrical connection

Cable	PUR, 2 m
Cable diameter D	2.50 mm
Conductor cross-section	0.10 mm ²
Number of conductors	3
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	3.5 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	100 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.	10 μ A
Ripple max. (% of U_e)	15 %
Switching frequency	30000 Hz
Turn-off delay t_{off} max.	0.02 ms
Turn-on delay t_{on} max.	0.02 ms
Utilization category	DC -13
Voltage drop static max.	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	2A (4 kV)
Emission	Group 1, Class B
IP rating	IP67

Magnetic Sensors
BMF 303K-PS-C-2A-PU-02
Order Code: BMF003U

BALLUFF

Functional safety

MTTF (40 °C) 744 a

Interface

Switching output PNP normally open (NO)

Material

Housing material LCP
Material jacket PUR
Material sensing surface LCP

Mechanical data

Dimension 25.5 x 3 x 4.5 mm
Mounting part Mounting bracket BMF 303-HW*

Remarks

Max. pull force on cable 10 N.
The sensor is functional again after the overload has been eliminated.
Switching frequency $f_{max.}$: Measured at 50 % duty cycle and 20 % I_e
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

