



1) Sensing surface



Basic features

Application	larger actuators Welding area
Approval/Conformity	cULus CE WEEE
Basic standard	IEC 60947-5-2
Not incl. in scope of delivery	Mounting bracket, e.g. BMF 305-HW-25
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 μ F
Magnetic field frequency, interference field	50...60 Hz
Magnetic field strength, interference field	200 kA/m
No-load current I_o max., undamped	20 mA
Operating voltage U_b	10...30 VDC
Output resistance R_a	3.0 kOhm + D + LED
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	10 Hz
Turn-off delay t_{off} max.	50 ms
Turn-on delay t_{on} max.	50 ms
Utilization category	DC -13
Voltage drop static max.	4 V

Magnetic Sensors
BMF 305M-PS-W-2-S4
Order Code: BMF0067

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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 field immune	weld-immune (AC)

Interface

Switching output	PNP normally open (NO)
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Remarks

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.

Material

Housing material	Aluminium
Material sensing surface	PU

Mechanical data

Dimension	33.5 x 5 x 33.5 mm
Mounting part	Mounting bracket BMF 305-HW*

Range/Distance

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



Wiring Diagrams (Schematic)

