



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.

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

