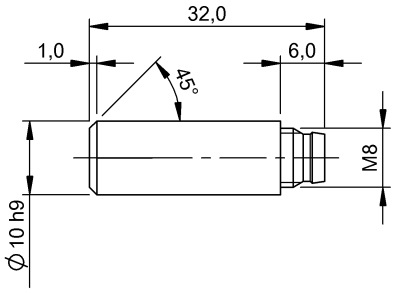
Magnetic Sensors

BMF 10E-PS-D-2-SA1-S49
Order Code: BMF001Z



IND. CONT. EQ.
81U2
Class 2 Type 1

Basic features

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

Display/Operation

Function indicator	no

Electrical connection

Connection 1	M8x1-Male, 3-pin
Connection 2	3-pin
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Assured switching field strength Ha	2 kA/m
Hysteresis H max. (% of Hn)	45 %
Load capacitance max. at Ue	1 µF
No-load current Io max., undamped	10 mA
Operating voltage Ub	10...30 VDC
Output resistance Ra	Open drain
Rated insulation voltage Ui	75 V DC
Rated operating current Ie	200 mA
Rated operating voltage Ue DC	24 V
Rated short circuit current	100 A
Rated switch field strength Hn	1.2 kA/m
Residual current Ir max.	80 µA
Ripple max. (% of Ue)	15 %
Switching frequency	10000 Hz
Turn-off delay toff max.	0.05 ms
Turn-on delay ton max.	0.05 ms
Utilization category	DC -13
Voltage drop static max.	3.1 V

Environmental conditions

Ambient temperature	-40...85 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
ESD	4A(8KV)
Emission	Group 1, Class A
Protection degree	IP69K

Functional safety

MTTF (40 °C)	330 a

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Material

Housing material	Stainless steel (1.4571)
Material sensing surface	Stainless steel (1.4571)

Mechanical data

Dimension	Ø 10 x 32 mm
Size	D10.0

Output/Interface

Switching output	PNP normally open (NO)

Range/Distance

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

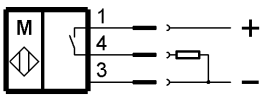
Remarks

The sensor is functional again after the overload has been eliminated.
The switching distance depends on the magnet used. Switching distances of 20 mm can be achieved.
EMC: External protection circuit required, see instruction for EMC protection circuit 825345.
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