



1) Sensing surface



Basic features

Approval/Conformity	CE
	EAC
	WEEE
Basic standard	IEC 60947-5-2

Display/Operation

Function indicator	yes
Power indicator	yes

Electrical connection

Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at U_e	1 μ F
Min. operating current I_m	0 mA
No-load current I_o max., damped	15 mA
No-load current I_o max., undamped	15 mA
Operating voltage U_b	10...55 VDC
Output resistance R_a	33.0 kOhm + D
Protection class	II
Rated insulation voltage U_i	250 V AC
Rated operating current I_e	200 mA
Rated operating voltage U_e DC	24 V
Rated short circuit current	100 A
Ready delay t_v max.	20 ms
Residual current I_r max.	80 μ A
Ripple max. (% of U_e)	15 %
Switching frequency	100 Hz
Utilization category	DC -13
Voltage drop static max.	2.5 V

Inductive Sensors
BES 517-139-M5-H
Order Code: BES023R

BALLUFF

Environmental conditions

Ambient temperature	-25...70 °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
Protection degree	IP67

Functional safety

MTTF (40 °C)	230 a
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Material

Housing material	PBT
Material sensing surface	PBT

Mechanical data

Connection cross-section	2.5 mm ²
Dimension	80 x 80 x 40 mm
Installation	non-flush
Size	80x80
Tightening torque	4...5 Nm (M20x1.5)
Tightening torque clamping screw	0.8 Nm

Output/Interface

Cable fitting, thread size	M20x1.5
Switching output	PNP normally open/normally closed (NO/NC)

Range/Distance

Assured operating distance Sa	40 mm
Hysteresis H max. (% of Sr)	20.0 %
Rated operating distance Sn	50 mm
Real switching distance sr	50 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

Remarks

LED 1: Function

LED 2: Operating voltage

The sensor is functional again after the overload has been eliminated.

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

