



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 Ue	1 µF
Min. operating current I _m	0 mA
No-load current I _o max., damped	20 mA
No-load current I _o max., undamped	12 mA
Operating voltage U _b	10...55 VDC
Output resistance R _a	33.0 kOhm + D/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.	10 ms
Residual current I _r max.	80 µA
Ripple max. (% of U _e)	15 %
Switching frequency	50 Hz
Utilization category	DC -13
Voltage drop static max.	2.5 V

Inductive Sensors
BES 517-139-M4-H
Order Code: BES023P

BALLUFF

Environmental conditions

Ambient temperature	-15...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)	455 a
--------------	-------

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	for flush mounting
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	32 mm
Hysteresis H max. (% of Sr)	20.0 %
Rated operating distance Sn	40 mm
Real switching distance sr	40 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
Installation cut-out for flush mount in steel: 80 x 80 mm.
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

