



Basic features

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

Display/Operation

Function indicator	yes
Power indicator	no

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

Load capacitance max. at U_e	0.5 μ F
Min. operating current I_m	0 mA
No-load current I_o max., damped	18 mA
No-load current I_o max., undamped	12 mA
Operating voltage U_b	10...30 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.	40 ms
Residual current I_r max.	10 μ A
Ripple max. (% of U_e)	15 %
Switching frequency	2500 Hz
Utilization category	DC -13
Voltage drop static max.	2.5 V

Environmental conditions

Ambient temperature	-40...85 °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
IP rating	IP68

Functional safety

MTTF (40 °C)	720 a
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Inductive Sensors
BES 516-131-S4-C
Order Code: **BES0178**

BALLUFF

Interface

Switching output PNP normally open/normally closed (NO/NC)

Material

Housing material Stainless steel
Material sensing surface PBT

Mechanical data

Dimension Ø 12 x 70 mm
Installation non-flush
Size M12x1
Tightening torque 20 Nm

Range/Distance

Assured operating distance Sa 3.2 mm
Hysteresis H max. (% of Sr) 15.0 %
Rated operating distance Sn 4 mm
Real switching distance sr 4 mm
Repeat accuracy max. (% of Sr) 5.0 %
Temperature drift max. (% of Sr) 10 %
Tolerance Sr ±10 %

Remarks

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.

Connector Drawings



Wiring Diagrams

