



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 Ue	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	11 mA
Operating voltage U _b	10...30 VDC
Output resistance R _a	33.0 k Ω + 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 gn, 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP68

Functional safety

MTTF (40 °C)	225 a
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General data

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

Material

Housing material	Stainless steel
Material sensing surface	PBT

Mechanical data

Dimension	\varnothing 12 x 70 mm
Installation	non-flush
Size	M12x1
Tightening torque	12 Nm

Output/Interface

Switching output	PNP normally open/normally closed (NO/NC)
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Inductive Sensors
BES 516-131-S4-C
Order Code: BES0178



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 further information about the 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

