

Basic features

Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Inductive sensor

Display/Operation

Function indicator	no
Power indicator	no

Electrical connection

Cable diameter D	3.10 mm
Cable length L	5 m
Conductor cross-section	0.14 mm ²
Connection type	Cable, 5.00 m, PUR
Number of conductors	3
Polarity reversal protected	yes
Protection against device mix-ups	no
Short-circuit protection	no

Electrical data

Load capacitance max. at U _e	1 µF
Min. operating current I _m	0 mA
No-load current I _o max., damped	15 mA
No-load current I _o max., undamped	12 mA
Operating voltage U _b	10...30 VDC
Output resistance R _a	4.7 kOhm + D
Rated insulation voltage U _i	75 V DC
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	2000 Hz
Utilization category	DC -13
Voltage drop static max.	1.5 V

Environmental conditions

Ambient temperature	-25...70 °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	IP67

Functional safety

MTTF (40 °C)	595 a
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Interface

Switching output	PNP normally open (NO)
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Inductive Sensors
BES 516-3005-FO-X-PU-05
Order Code: BES018L

BALLUFF

Material

Housing material	Stainless steel
Material jacket	PUR
Material sensing surface	PBT

Mechanical data

Dimension	Ø 5 x 35.5 mm
Installation	for flush mounting
Mounting length	30.50 mm
Size	M5x0.5
Tightening torque	0.5 Nm

Range/Distance

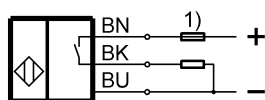
Assured operating distance Sa	0.65 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	0.8 mm
Real switching distance sr	0.8 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

Remarks

For inductive loads of up to 200 mA an external protection circuit is required.
Recommendation: After a short circuit check the device for proper function.
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 (Schematic)



1) For SCP see electrical data