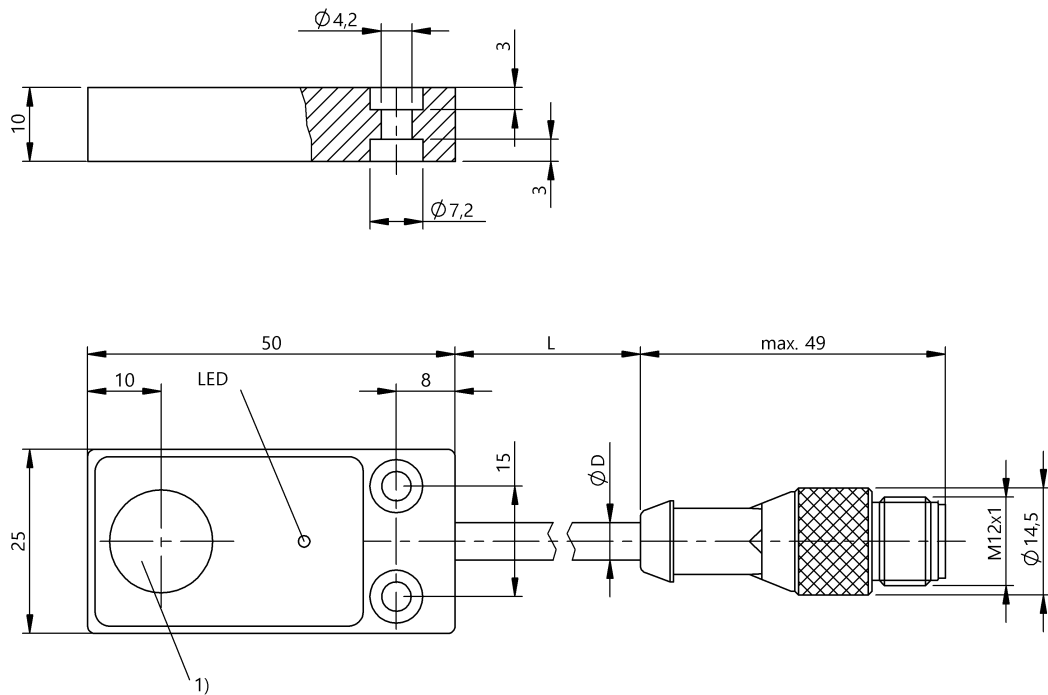




1) Sensing surface



Basic features

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

Display/Operation

Function indicator	yes
Power indicator	no

Electrical connection

Cable diameter D	5.10 mm
Cable length L	0.2 m
Connection	M12x1-Male, 4-pin, A-coded
Connection type	Cable with connector, 0.20 m, PUR
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 Im	0 mA
No-load current Io max., damped	32 mA
No-load current Io max., undamped	15 mA
Operating voltage Ub	10...30 VDC
Output resistance Ra	2.2 kOhm + D + LED/4.7 kOhm + LED
Rated insulation voltage Ui	75 V DC
Rated operating current Ie	200 mA
Rated operating voltage Ue DC	24 V
Rated short circuit current	100 A
Ready delay tv max.	50 ms
Residual current Ir max.	80 µA
Ripple max. (% of Ue)	15 %
Switching frequency	500 Hz
Utilization category	DC -13
Voltage drop static max.	2.5 V

Inductive Sensors
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Order Code: BES0153

BALLUFF

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)	1015 a
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Interface

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

Housing material	Aluminium
Material jacket	PUR
Material sensing surface	PBT

Mechanical data

Dimension	50 x 25 x 10 mm
Installation	for flush mounting
Size	50x25x10

Range/Distance

Assured operating distance S _a	4 mm
Hysteresis H max. (% of S _r)	15.0 %
Rated operating distance S _n	5 mm
Real switching distance s _r	5 mm
Repeat accuracy max. (% of S _r)	5.0 %
Temperature drift max. (% of S _r)	10 %
Tolerance S _r	±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 (Schematic)

