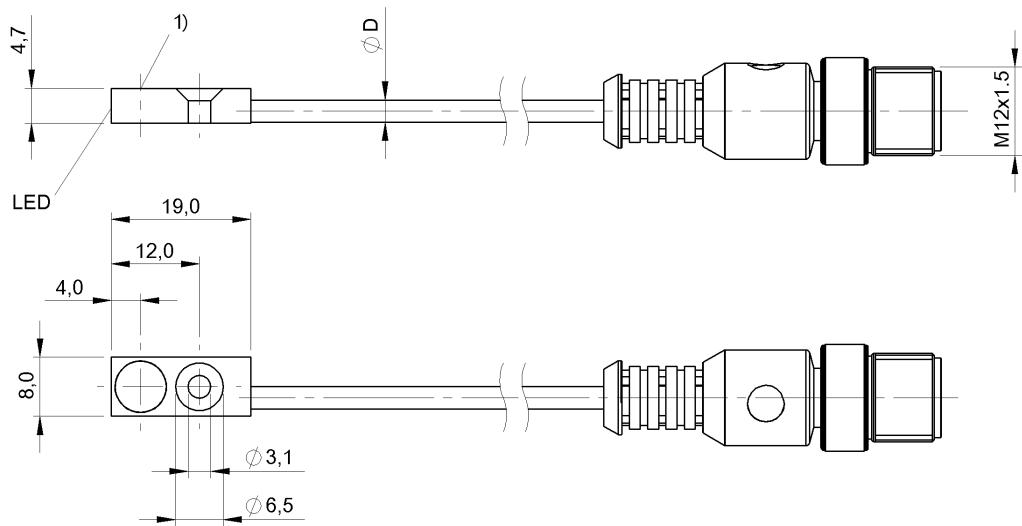


## Inductive Sensors

BES R12EC-PSC20B-ES00,3-GS04-106

Order Code: BES05MC

**BALLUFF****Basic features**

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

**Display/Operation**

Function indicator	yes
Power indicator	no

**Electrical connection**

Cable diameter D	3.2 mm
Cable length L	0.3 m
Conductor cross-section	0.15 mm <sup>2</sup>
Connection	M12x1-Male, 3-pin, A-coded
Connection type	Cable with connector, 0.30 m, Silicone
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

**Electrical data**

Load capacitance max. at Ue	0.2 µF
No-load current I <sub>0</sub> max., damped	10 mA
No-load current I <sub>0</sub> max., undamped	3 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	Open collector
Rated insulation voltage U <sub>i</sub>	75 V DC
Rated operating current I <sub>e</sub>	100 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Rated short circuit current	100 A
Residual current I <sub>r</sub> max.	50 µA
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	5000 Hz
Utilization category	DC -12
Voltage drop static max.	2.5 V

**Environmental conditions**

Ambient temperature	-25...70 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g <sub>n</sub> , 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP65

**Functional safety**

MTTF (40 °C)	305 a
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**Interface**

Switching output	PNP normally open (NO)
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**Material**

Housing material	Stainless steel
Material jacket	Silicone
Material sensing surface	Ceramic

**Mechanical data**

Dimension	19 x 8 x 4.7 mm
Installation	for flush mounting
Size	16x8x4.7

**Range/Distance**

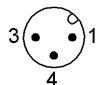
Assured operating distance Sa	1.6 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	2 mm
Real switching distance sr	2 mm
Repeat accuracy max. (% of Sr)	1.0 %
Switching distance marking	■■
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

**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**