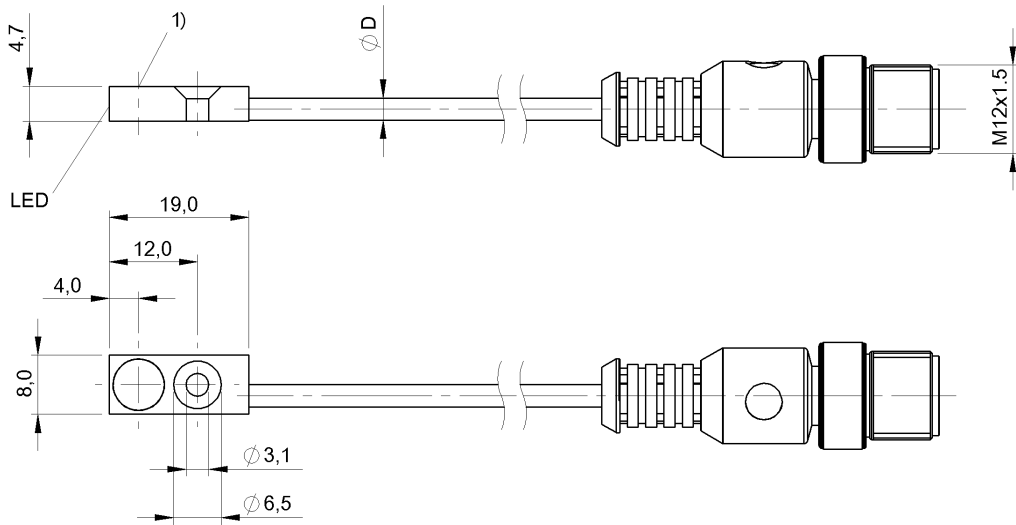


# Inductive Sensors

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 U <sub>e</sub>	0.2 µF
No-load current I <sub>o</sub> max., damped	10 mA
No-load current I <sub>o</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

