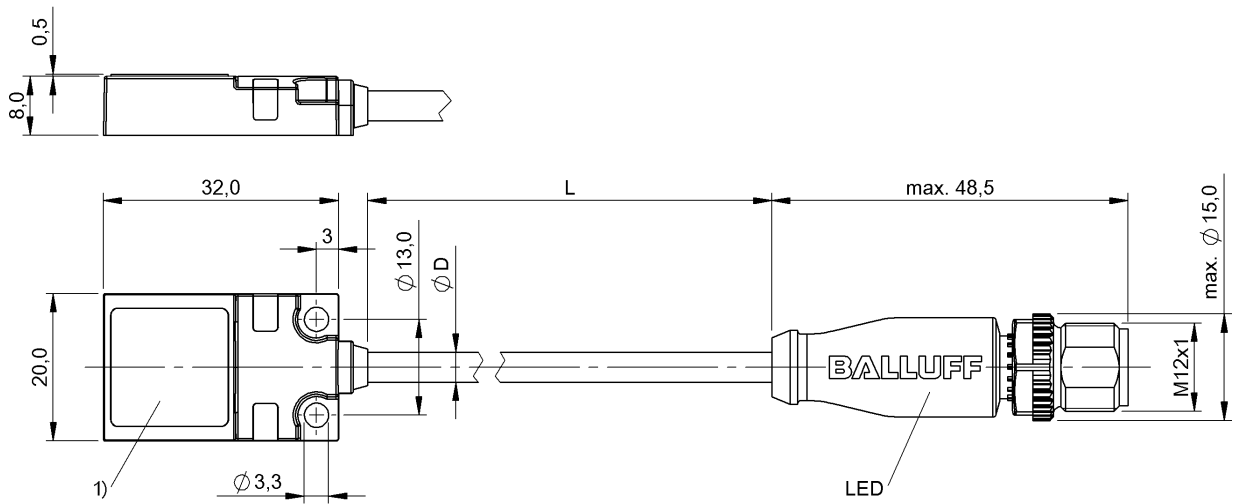


Inductive Sensors  
**BES R01ZC-PSC50B-BS00,3-GS04-W52**  
**Order Code: BES05K5**

**BALLUFF**



1) Sensing surface



**Basic features**

<b>Additional features</b>	Housing resistant to weld spatter
<b>Approval/Conformity</b>	CE UKCA cULus WEEE
<b>Basic standard</b>	IEC 60947-5-2

**Display/Operation**

<b>Function indicator</b>	yes
<b>Power indicator</b>	yes

**Electrical connection**

<b>Cable diameter D</b>	4.20 mm
<b>Cable length L</b>	0.3 m
<b>Connection</b>	M12x1-Male, 3-pin, A-coded
<b>Connection type</b>	Cable with connector, 0.30 m, Silicone
<b>Polarity reversal protected</b>	yes
<b>Protection against device mix-ups</b>	yes
<b>Short-circuit protection</b>	yes

**Electrical data**

<b>Load capacitance max. at Ue</b>	1 µF
<b>Min. operating current Im</b>	0 mA
<b>No-load current Io max., damped</b>	15 mA
<b>No-load current Io max., undamped</b>	15 mA
<b>Operating voltage Ub</b>	10...30 VDC
<b>Output resistance Ra</b>	33.0 kOhm + D
<b>Rated insulation voltage Ui</b>	75 V DC
<b>Rated operating current Ie</b>	200 mA
<b>Rated operating voltage Ue DC</b>	24 V
<b>Rated short circuit current</b>	100 A
<b>Ready delay tv max.</b>	20 ms
<b>Residual current Ir max.</b>	80 µA
<b>Ripple max. (% of Ue)</b>	10 %
<b>Switching frequency</b>	100 Hz
<b>Utilization category</b>	DC -13
<b>Voltage drop static max.</b>	2.5 V

**Environmental conditions**

<b>Ambient temperature</b>	-25...70 °C
<b>Contamination scale</b>	3
<b>EN 60068-2-27, Shock</b>	Half-sinus, 30 gn, 11 ms
<b>EN 60068-2-6, Vibration</b>	55 Hz, amplitude 1 mm, 3x30 min
<b>IP rating</b>	IP67
<b>Magnetic field immune</b>	magnetic field immune (AC/DC)

**Functional safety**

<b>MTTF (40 °C)</b>	880 a
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**Interface**

Switching output                      PNP normally open (NO)

**Material**

Housing material                      Zinc, Die casting  
 Material jacket                        Silicone  
 Material sensing surface              Fortron 6165 A6

**Range/Distance**

Assured operating distance Sa        4.0 mm  
 Hysteresis H max. (% of Sr)        15.0 %  
 Rated operating distance Sn         5 mm  
 Real switching distance sr            5 mm  
 Repeat accuracy max. (% of Sr)     5.0 %  
 Temperature drift max. (% of Sr)   10 %  
 Tolerance Sr                             ±10 %

**Mechanical data**

Dimension                                32 x 20 x 8 mm  
 Installation                              for flush mounting  
 Size                                        32x20x8

**Remarks**

LED yellow: Function  
 LED green: Power  
 The sensor is functional again after the overload has been eliminated.  
 Additional cable marking with blue shrink tube on connector end.  
 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**

