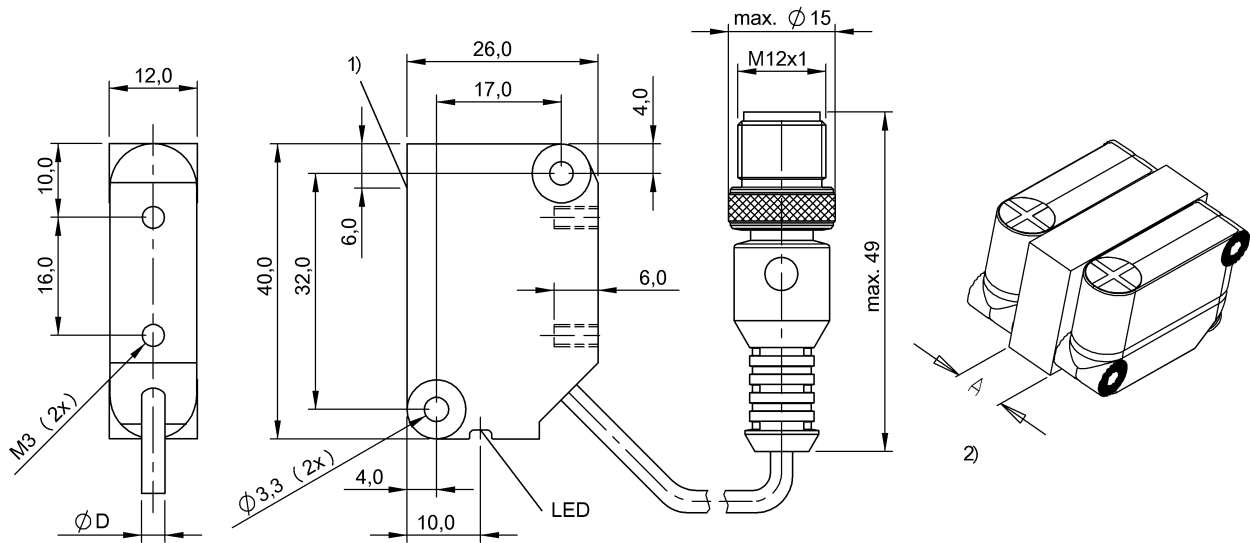


Inductive Sensors  
**BES R05KB-PSC40B-EP00,3-GS04**  
**Order Code: BES01Z8**

**BALLUFF**



1) Sensing surface  $\varnothing 8$ , 2) see remarks



**Basic features**

<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>	no

**Electrical connection**

<b>Cable diameter D</b>	4.70 mm
<b>Cable length L</b>	0.3 m
<b>Connection</b>	M12x1-Male, 4-pin, A-coded
<b>Connection type</b>	Cable with connector, 0.30 m, PUR
<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 $\mu$ F
<b>Min. operating current I<sub>m</sub></b>	0 mA
<b>No-load current I<sub>o</sub> max., damped</b>	9 mA
<b>No-load current I<sub>o</sub> max., undamped</b>	4 mA
<b>Operating voltage U<sub>b</sub></b>	10...30 VDC
<b>Output resistance R<sub>a</sub></b>	33.0 kOhm + D
<b>Protection class</b>	II
<b>Rated insulation voltage U<sub>i</sub></b>	250 V AC
<b>Rated operating current I<sub>e</sub></b>	200 mA
<b>Rated operating voltage U<sub>e</sub> DC</b>	24 V
<b>Rated short circuit current</b>	100 A
<b>Ready delay t<sub>v</sub> max.</b>	10 ms
<b>Residual current I<sub>r</sub> max.</b>	80 $\mu$ A
<b>Ripple max. (% of U<sub>e</sub>)</b>	15 %
<b>Switching frequency</b>	400 Hz
<b>Utilization category</b>	DC -13

**Environmental conditions**

<b>Ambient temperature</b>	-25...70 °C
<b>Contamination scale</b>	3
<b>EN 60068-2-27, Shock</b>	Half-sinus, 30 g <sub>n</sub> , 11 ms
<b>EN 60068-2-6, Vibration</b>	55 Hz, amplitude 1 mm, 3x30 min
<b>IP rating</b>	IP67

**Interface**

<b>Switching output</b>	PNP normally open (NO)
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# BALLUFF

## Material

Housing material	PA 12
Material jacket	PUR
Material sensing surface	PA 12

## Mechanical data

Dimension	40 x 12 x 26 mm
Installation	for flush mounting
Size	40x12x26
Tightening torque	0.25 Nm

## Range/Distance

Assured operating distance Sa	3.2 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	4 mm
Real switching distance sr	4 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

## Remarks

2) Distance A: with air or non-metallic materials = min. 17 mm  
with metal = min. 12 mm.  
The sensor is functional again after the overload has been eliminated.

## Connector Drawings



## Wiring Diagrams

