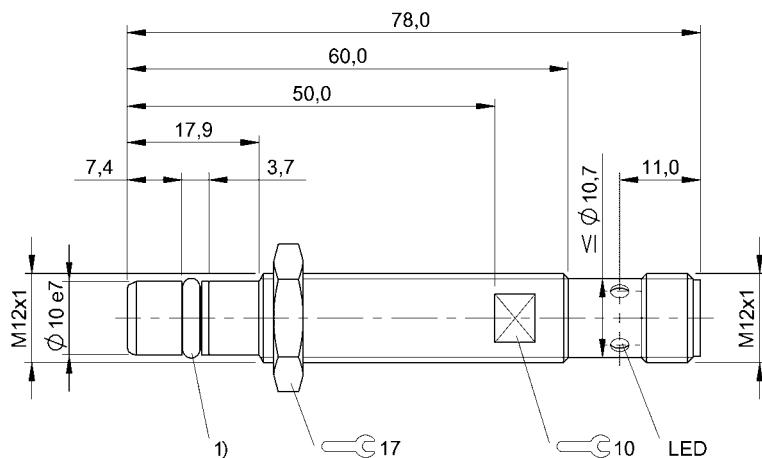


## Inductive Sensors

BES M12EL-PSC15B-S04G-HM01

Order Code: BHS006C

**BALLUFF**

1) O-Ring with thrust ring

**Basic features**

Additional features	Load sensing/adjustment aid for installation/monitor output
Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2

**Display/Operation**

Function indicator	yes
Power indicator	no

**Electrical connection**

Connection	M12x1-Male, 4-pin, A-coded
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

**Electrical data**

Load capacitance max. at Ue	0.5 µF
Min. operating current I <sub>m</sub>	3 mA
No-load current I <sub>o</sub> max., damped	9 mA
No-load current I <sub>o</sub> max., undamped	7 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>	200 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Rated short circuit current	100 A
Ready delay t <sub>v</sub> max.	10 ms
Residual current I <sub>r</sub> max.	80 µA
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	300 Hz
Utilization category	DC-13
Voltage drop static max.	3.7 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	IP68

**Functional safety**

MTTF (40 °C)	330 a
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**Interface**

Switching output PNP normally open (NO)

**Material**

Gasket, material	NBR 70
Housing material	1.4104 stainless steel
Material sensing surface	EP
Support ring material	PTFE

**Mechanical data**

Dimension	Ø 12 x 78 mm
Installation	for flush mounting
Mounting length	32.00 mm
Mounting part	M12x1
Pressure rating max.	500 bar
Pressure rating, note	oil pressure rated
Sealing ring, size	5.3 x 2.4 mm
Size	M12x1
Tightening torque	25 Nm ±10 %

**Range/Distance**

Assured operating distance Sa	1.2 mm
Hysteresis H max. (% of Sr)	20.0 %
Rated operating distance Sn	1.5 mm
Real switching distance sr	1.5 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

**Remarks**

The sensor is functional again after the overload has been eliminated.

Load detection: System limited to 200 Hz. If the sensor is damped, at least 3 mA must flow through the output (pin 4). Otherwise a fault is detected.

Adjusting aid for installation: LED flashes when in range between Sr and Sa.

Monitor output: High level when the sensor is functional. The load capacity is 50 mA. (Ud ≤ 4.5 V)

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**