



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
Principle of operation	Inductive sensor

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 μ F
Min. operating current Im	3 mA
No-load current Io max., damped	9 mA
No-load current Io max., undamped	7 mA
Operating voltage Ub	10...30 VDC
Output resistance Ra	Open collector
Rated insulation voltage UI	75 V DC
Rated operating current Ie	200 mA
Rated operating voltage Ue DC	24 V
Rated short circuit current	100 A
Ready delay tv max.	10 ms
Residual current Ir max.	80 μ A
Ripple max. (% of Ue)	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 _n , 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP68

Functional safety

MTTF (40 °C) 330 a

Inductive Sensors
BES M12EL-PSC15B-S04G-HM01
Order Code: BHS006C

BALLUFF

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 $\varnothing 12 \times 78$ 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 5.3×2.4 mm
Size M12x1
Tightening torque $25 \text{ Nm} \pm 10 \%$

Range/Distance

Assured operating distance S_a 1.2 mm
Hysteresis H max. (% of S_r) 20.0 %
Rated operating distance S_n 1.5 mm
Real switching distance s_r 1.5 mm
Repeat accuracy max. (% of S_r) 5.0 %
Temperature drift max. (% of S_r) 10 %
Tolerance S_r $\pm 10 \%$

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 S_r and S_a .
Monitor output: High level when the sensor is functional. The load capacity is 50 mA. ($U_d \leq 4.5 \text{ V}$)
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 (Schematic)

