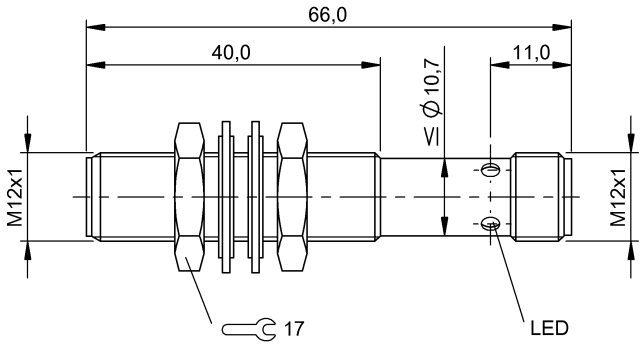
Inductive Sensors

BES M12EL-PSC20B-S04G-M01
Order Code: BES01PP



Basic features

Additional features	Function monitoring
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 µF
Min. operating current Im	3 mA
No-load current Io max., damped	8 mA
No-load current Io max., undamped	6 mA
Operating voltage Ub	10...30 VDC
Output resistance Ra	Open collector
Protection class	II
Rated insulation voltage Ui	250 V AC
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 µA
Ripple max. (% of Ue)	15 %
Switching frequency	800 Hz
Utilization category	DC -13
Voltage drop static max.	3.5 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

Interface

Switching output	PNP normally open (NO)

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Material

Housing material	1.4305 stainless steel
Material sensing surface	LCP

Mechanical data

Dimension	Ø 12 x 66 mm
Installation	for flush mounting
Mounting length	40.00 mm
Size	M12x1
Tightening torque	20 Nm

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)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

Remarks

Monitor output: High level when the sensor is functional. The load capacity is 50 mA.
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.
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 (Schematic)

