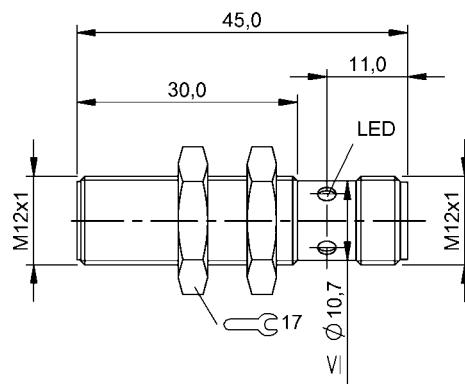


Inductive Sensors

BES M12EE-PSC40B-S04G-L01

Order Code: BES0433

**BALLUFF****CE ECOLAB®****UKCA****Basic features**

Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
Trademark	Proxinox®

**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 $\mu$ F
Min. operating current I <sub>m</sub>	0 mA
No-load current I <sub>o</sub> max., damped	10 mA
No-load current I <sub>o</sub> max., undamped	3 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	33.0 kOhm
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.	15 ms
Residual current I <sub>r</sub> max.	50 $\mu$ A
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	2000 Hz
Utilization category	DC -13
Voltage drop static max.	2 V

**Environmental conditions**

Ambient temperature	-25...85 °C
Chemical resistance	6 % H <sub>2</sub> O <sub>2</sub> solution 15 % H <sub>2</sub> O <sub>2</sub> solution 3 % H <sub>2</sub> O <sub>2</sub> solution
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, according to BWN Pr 20
IP rating per DIN 40050	IP69K

**Functional safety**

MTTF (40 °C)	830 a
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Interface

Switching output PNP normally open (NO)

Material

Housing material 1.4404 stainless steel

Material sensing surface LCP

Mechanical data

Dimension Ø 12 x 45 mm

Installation for flush mounting

Mounting length 30.00 mm

Size M12x1

Tightening torque 12 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 %

Switching distance marking ■■

Temperature drift max. (% of Sr) 10 %

Tolerance Sr ±10 %

Remarks

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

