



Basic features

Application	Object detection
Approval/Conformity	CE cULus WEEE UKCA
Basic standard	IEC 60947-5-2
Scope of delivery	2x nut M12x1

Display/Operation

Function indicator	yes
Power indicator	yes

Electrical connection

Connection	M12x1-Male, 3-pin, A-coded
Electrical version	3-wire
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at Ue	1 μ F
Min. operating current I _m	0 mA
No-load current I _o max., damped	8.5 mA
No-load current I _o max., undamped	5 mA
Operating voltage U _b	10...30 VDC
Output resistance R _a	Open drain
Rated insulation voltage U _i	75 V DC
Rated operating current I _e	100 mA
Rated operating voltage U _e DC	24 V
Rated short circuit current	100 A
Ready delay t _v max.	50 ms
Ripple max. (% of U _e)	15 %
Switching frequency	350 Hz
Utilization category	DC -13
Voltage drop static max.	1.3 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	IP67

Functional safety

MTTF (40 °C)	1410 a
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Interface

Switching output	PNP normally open (NO)
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Inductive Sensors
BES M12ZI-PSC40B-S04G
Order Code: BES060U

BALLUFF

Material

Housing material	Die-cast zinc, nickel-plated PC
Material sensing surface	PBT

Mechanical data

Dimension	Ø 12 x 65 mm
Installation	for flush mounting
Size	M12x1
Tightening torque max.	6 Nm

Range/Distance

Assured operating distance Sa	3.2 mm
Hysteresis H max. (% of Sr)	15 %
Rated operating distance Sn	4 mm
Repeat accuracy max. (% of Sr)	5 %
Switching distance marking	■ ■
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	10 %

Remarks

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

Find the installation instructions for inductive sensors in the download area of the sensor on the homepage.

The given values are typical values and might differ at the operational limits of the sensor (temperature < -10°C) and under application specific conditions.

Status LED:

Off: No supply voltage or sensor defective

Green: Sensor ready, supply voltage applied

Yellow: Target detected

Red: Error detected: short circuit

undervoltage < 5-8 VDC

overtemperature or overload

Error condition is only displayed in damped state

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

