



1) Sensing surface



Basic features

Approval/Conformity	CE cULus WEEE
Basic standard	IEC 60947-5-2
Trademark	Global

Display/Operation

Function indicator	yes
Power indicator	no

Electrical connection

Cable diameter D	4.65 mm
Cable length L	2 m
Conductor cross-section	0.34 mm ²
Connection type	Cable, 2.0 m, PVC
Number of conductors	3
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at Ue	1 µF
Min. operating current I_m	0 mA
No-load current I_o max., damped	5 mA
No-load current I_o max., undamped	2 mA
Operating voltage U_b	10...30 VDC
Output resistance R_a	33.0 kOhm + D
Protection class	II
Rated insulation voltage U_i	250 V AC
Rated operating current I_e	200 mA
Rated operating voltage U_e DC	24 V
Rated short circuit current	100 A
Ready delay t_v max.	21 ms
Residual current I_r max.	30 µA
Ripple max. (% of U_e)	15 %
Switching frequency	1200 Hz
Utilization category	DC -13
Voltage drop static max.	1.5 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, according to BWN Pr 20

Functional safety

MTTF (40 °C)	850 a
---------------------	-------

Inductive Sensors
BES M12MD-PSC20B-BV02-003
Order Code: BES04CU

BALLUFF

Interface

Switching output PNP normally open (NO)

Material

Housing material Brass, Nickel-free coated
Material jacket PVC
Material sensing surface PBT

Mechanical data

Dimension Ø 12 x 33 mm
Installation for flush mounting
Size M12x1
Tightening torque 10 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

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.

Wiring Diagrams

