



1) Sensing surface



IND. CONT. EQ.
 81U2
 Class 2 Type 1



Basic features

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

Display/Operation

Function indicator	no
Power indicator	no

Electrical connection

Cable diameter D	2.40 mm
Cable length L	2 m
Conductor cross-section	0.10 mm ²
Connection type	Cable, 2.00 m, PUR
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	0.15 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	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.	25 ms
Residual current I _r max.	10 µA
Ripple max. (% of U _e)	10 %
Switching frequency	3500 Hz
Utilization category	DC -13
Voltage drop static max.	2 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)	305 a
--------------	-------

Inductive Sensors
BES M04EC-PSD06B-BP02
Order Code: BES01P0

BALLUFF

Material

Housing material	Stainless steel
Material jacket	PUR
Material sensing surface	PBT

Mechanical data

Dimension	Ø 4 x 22 mm
Installation	for flush mounting
Size	M4x0.5
Tightening torque	0.8 Nm

Output/Interface

Switching output	PNP normally open (NO)
------------------	------------------------

Range/Distance

Assured operating distance Sa	0.48 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	0.6 mm
Real switching distance sr	0.6 mm
Repeat accuracy max. (% of Sr)	5.0 %
Switching distance marking	■ ■
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

Remarks

The temperature drift can be below -15°C and above +60°C, up to 15% of Sr.

EMC: Surge resistance

External protection circuit is required. Document 825345, Section 2.

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

