



1) Sensing surface



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



**Basic features**

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

**Display/Operation**

Function indicator	yes
Power indicator	no

**Electrical connection**

Cable diameter D	2.40 mm
Cable length L	0.3 m
Connection	M8x1-Male, 3-pin
Connection type	Cable with connector, 0.30 m, PUR
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 Im	0 mA
No-load current Io max., damped	5 mA
No-load current Io max., undamped	2 mA
Operating voltage Ub	10...30 VDC
Output resistance Ra	Open drain
Rated insulation voltage Ui	75 V DC
Rated operating current Ie	100 mA
Rated operating voltage Ue DC	24 V
Rated short circuit current	100 A
Ready delay tv max.	25 ms
Residual current Ir max.	10 µA
Ripple max. (% of Ue)	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 gn, 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

**Functional safety**

MTTF (40 °C)	305 a
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Inductive Sensors  
**BES G03EC-NSC10B-EP00,3-GS49**  
Order Code: BES040C

**BALLUFF**

**Material**

Housing material	Stainless steel
Material jacket	PUR
Material sensing surface	PBT

**Mechanical data**

Dimension	Ø 3 x 22 mm
Installation	for flush mounting
Size	D3.0

**Output/Interface**

Switching output	NPN normally open (NO)
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**Range/Distance**

Assured operating distance Sa	0.8 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	1 mm
Real switching distance sr	1 mm
Repeat accuracy max. (% of Sr)	5.0 %
Switching distance marking	■ ■
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

**Remarks**

EMC: Surge resistance  
External protection circuit is required. Document 825345, Section 2.  
The sensor is functional again after the overload has been eliminated.  
The temperature drift can be below -15°C and above +60°C, up to 15% of Sr.  
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**

