



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	yes
Power indicator	no

### Electrical connection

Connection	M8x1-Male, 3-pin
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

### Electrical data

Load capacitance max. at $U_e$	1 $\mu$ F
No-load current $I_o$ max., damped	11 mA
No-load current $I_o$ max., undamped	7 mA
Operating voltage $U_b$	10...30 VDC
Output resistance $R_a$	100.0 kOhm
Protection class	II
Rated insulation voltage $U_i$	75 V DC
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.	40 ms
Residual current $I_r$ max.	10 $\mu$ A
Ripple max. (% of $U_e$ )	10 %
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 gn, 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
Protection degree	IP68

### Functional safety

MTTF (40 °C)	584 a
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Inductive Sensors  
**BES M08MI-PSC30B-S49G**  
Order Code: BES054N

**BALLUFF**

**Material**

Housing material	Brass
Material sensing surface	PBT
Surface protection	Nickel-free coated

**Mechanical data**

Dimension	Ø 8 x 60 mm
Installation	for flush mounting
Size	M8x1
Tightening torque	3 Nm

**Output/Interface**

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

Assured operating distance Sa	2.4 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	3 mm
Real switching distance sr	3 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**

