



1) Sensing surface



### Basic features

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

### Display/Operation

Function indicator	yes
Power indicator	yes

### Electrical connection

Connection	M12x1-Male, 4-pin, A-coded
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

### Electrical data

Load capacitance max. at $U_e$	0.5 $\mu$ F
Min. operating current $I_m$	0 mA
No-load current $I_o$ max., damped	15 mA
No-load current $I_o$ max., undamped	12 mA
Operating voltage $U_b$	10...55 VDC
Output resistance $R_a$	33.0 kOhm + D/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.	150 ms
Residual current $I_r$ max.	20 $\mu$ A
Ripple max. (% of $U_e$ )	10 %
Switching frequency	50 Hz
Utilization category	DC -13
Voltage drop static max.	2.5 V

Inductive Sensors  
**BES Q80KA-PAH50F-S04Q**  
**Order Code: BES0226**



**Environmental conditions**

Ambient temperature	-25...70 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g <sub>n</sub> , 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

**Functional safety**

MTTF (40 °C)	785 a
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**Interface**

Switching output	PNP normally open/normally closed (NO/NC)
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**Material**

Housing material	PBT, GF30
Material sensing surface	PBT, GF30

**Mechanical data**

Dimension	106 x 80 x 40 mm
Installation	non-flush
Size	80x80
Tightening torque	3 Nm

**Range/Distance**

Assured operating distance Sa	40 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	50 mm
Real switching distance sr	50 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

**Remarks**

LED 1: Function  
 LED 2: Operating voltage  
 The sensor is functional again after the overload has been eliminated.  
 Not for flush mounting: See installation instructions for inductive sensors with extended range 939228.  
 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**

