



1) Sensing surface, 2) Metal plate



**Basic features**

Additional features	Factor 1
Approval/Conformity	cULus CE UKCA WEEE
Basic standard	IEC 60947-5-2
Trademark	Factor 1

**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 Ue	1 µF
Magnetic field strength, interference field	100 kA/m
Min. operating current Im	0 mA
No-load current Io max., damped	20 mA
No-load current Io max., undamped	15 mA
Operating voltage Ub	10...30 VDC
Output resistance Ra	33.0 kOhm + D
Protection class	II
Rated insulation voltage Ui	250 V AC
Rated operating current Ie	200 mA
Rated operating voltage Ue DC	24 V
Rated short circuit current	100 A
Ready delay tv max.	30 ms
Residual current Ir max.	80 µA
Ripple max. (% of Ue)	15 %
Switching frequency	1000 Hz
Utilization category	DC -13
Voltage drop static max.	2.5 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
IP rating	IP67
Magnetic field immune	magnetic field immune (AC/DC)

Inductive Sensors  
**BES Q40KGU-PAC25Z-S04G-011**  
Order Code: **BES0224**



### Functional safety

MTTF (40 °C) 455 a

### Interface

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

### Material

Housing material PBT  
Material sensing surface PBT

### Mechanical data

Dimension 40 x 40 x 62 mm  
Installation Flush on one side  
Size 40x40

### Range/Distance

Assured operating distance Sa 2.3 mm  
Hysteresis H max. (% of Sr) 15.0 %  
Rated operating distance Sn 25 mm  
Real switching distance sr 25 mm  
Repeat accuracy max. (% of Sr) 5.0 %  
Temperature drift max. (% of Sr) 10 %  
Tolerance Sr  $\pm 10$  %

### Remarks

LED 1: Function

LED 2: Operating voltage

The sensor is functional again after the overload has been eliminated.

Installed non-flush. For installation conditions see Instruction 939225.

Switching distance and tolerance data apply to the sensing surface location shown.

Installation: The sensor front edge must protrude at least 10 mm over metallic installation materials.

Sensor does not respond to loose aluminum chips on the sensing surface.

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

