



1) Sensing surface



**Basic features**

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

**Display/Operation**

Function indicator	no
Power indicator	no

**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	9 µF
Min. operating current I <sub>m</sub>	0 mA
No-load current I <sub>0</sub> max., damped	5.4 mA
No-load current I <sub>0</sub> max., undamped	2.2 mA
Operating voltage U <sub>b</sub>	10...35 VDC
Rated operating current I <sub>e</sub>	120 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Ready delay t <sub>v</sub> max.	4 ms
Residual current I <sub>r</sub> max.	2 µA
Ripple max. (% of U <sub>e</sub> )	20 %
Switching frequency	100 Hz
Utilization category	DC -13
Voltage drop static max.	1.3 V

**Environmental conditions**

Ambient temperature	0...150 °C
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

Inductive Sensors  
**BES Q40KG-PSD25F-S04G**  
Order Code: BES05N9

# BALLUFF

### Functional safety

MTTF (40 °C) 813 a

### Interface

Switching output PNP normally open (NO)

### Material

Housing material 1.4305 stainless steel  
LCP  
Material sensing surface LCP

### Mechanical data

Dimension 40 x 40 x 70.7 mm  
Installation non-flush  
Size 40x40

### Range/Distance

Assured operating distance Sa 20.2 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) 1.87 %  
Tolerance Sr ±15 %

## Connector Drawings



## Wiring Diagrams

