



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 I _m	0 mA
No-load current I _o max., damped	20 mA
No-load current I _o max., undamped	15 mA
Operating voltage U _b	10...30 VDC
Output resistance R _a	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.	30 ms
Residual current I _r max.	80 µA
Ripple max. (% of U _e)	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 g _n , 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**

BALLUFF

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 ±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

