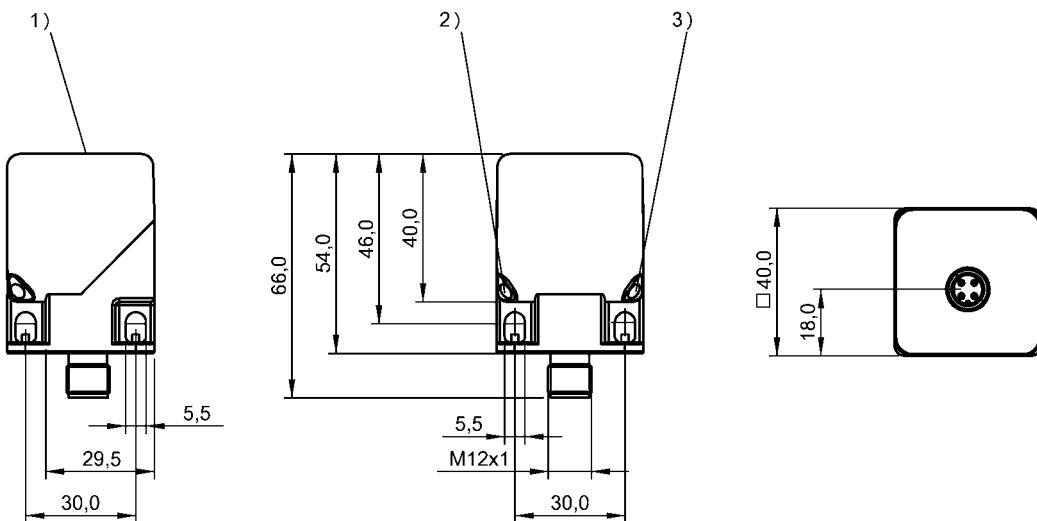


Inductive Sensors

BES Q40KFU-PSC20A-S04G-012

Order Code: BES0305

BALLUFF

1) Sensing surface, 2) LED yellow, 3) LED green



Basic features

Additional features	Factor 1
Approval/Conformity	CE
	cULus
	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	0.15 μ F
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	20 mA
Operating voltage U_b	10...36 VDC
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.	20 ms
Residual current I_r max.	100 μ A
Switching frequency	200 Hz
Utilization category	DC-12
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)

Functional safety

MTTF (40 °C)	1165 a
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Interface

Switching output PNP normally open (NO)

Material

Housing material PA
Material sensing surface PA/Teflon

Mechanical data

Dimension 40 x 40 x 66 mm
Installation for flush mounting
Size 40x40

Range/Distance

Assured operating distance Sa	16.2 mm
Hysteresis H max. (% of Sr)	20.0 %
Rated operating distance Sn	20 mm
Real switching distance sr	20 mm
Repeat accuracy max. (% of Sr)	3.0 %
Switching distance marking	■■
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

Remarks

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

LED yellow: Function

LED green: Power

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

M12 connector

rotation, locking latch

Sensing surface can be set in 5 positions

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

