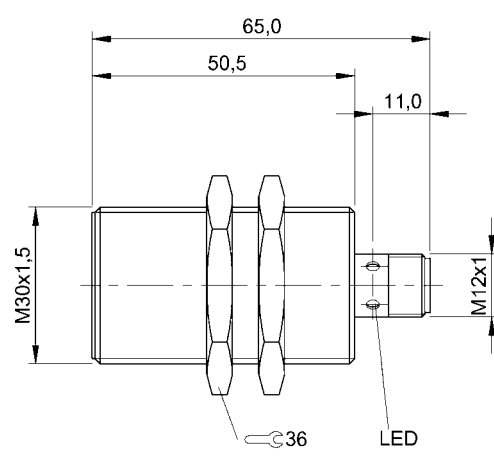


Inductive Sensors
BES M30ML-PSC10A-S04G-W01
Order Code: BES02KN



Basic features

Additional features	Factor 1 Weld immune
Approval/Conformity	CE cULus WEEE UKCA
Base type deviation	Ceramic coating
Basic standard	IEC 60947-5-2
Trademark	Factor 1

Display/Operation

Function indicator	yes
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	1 μ F
Magnetic field strength, interference field	100 kA/m
Min. operating current Im	0 mA
No-load current Io max., damped	17 mA
No-load current Io max., undamped	10 mA
Operating voltage Ub	10...30 VDC
Output resistance Ra	33.0 kOhm
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 μ A
Ripple max. (% of Ue)	15 %
Switching frequency	600 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)

Interface

Switching output	PNP normally open (NO)
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Inductive Sensors
BES M30ML-PSC10A-S04G-W01
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BALLUFF

Material

Housing material	Brass, PTFE coated
Material sensing surface	ceramic coated

Mechanical data

Dimension	Ø 30 x 65 mm
Installation	for flush mounting
Mounting length	50.50 mm
Size	M30x1.5
Tightening torque	30 Nm

Range/Distance

Assured operating distance Sa	7.9 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	10 mm
Real switching distance sr	10 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

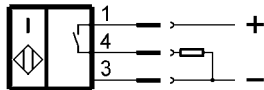
Remarks

The sensor is functional again after the overload has been eliminated.
Sn: reduced by the coating thickness of 0.2 mm.

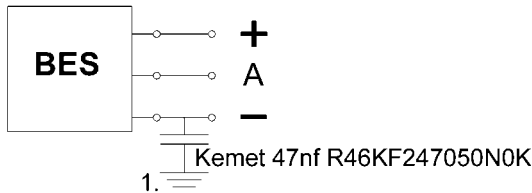
Connector Drawings



Wiring Diagrams



Installation remarks



1) Machine GND

Distance c	$\geq 2 \times d1$
Distance b (Ferrous)	$\geq 0 \text{ mm}$
Distance b (non-ferrous)	$\geq 0 \text{ mm}$
Distance f	$\geq 3 \times S_n$
Distance a	$\geq 3 \times d1$