

Basic features

Additional features	Factor 1 Weld immune
Approval/Conformity	CE UKCA cULus WEEE
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 µF
Magnetic field strength, interference field	100 kA/m
Min. operating current I_m	0 mA
No-load current I_o max., damped	15 mA
No-load current I_o max., undamped	10 mA
Operating voltage U_b	10...30 VDC
Output resistance R_a	33.0 kOhm
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.	15 ms
Residual current I_r max.	80 µA
Ripple max. (% of U_e)	10 %
Switching frequency	2000 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)

Functional safety

MTTF (40 °C)	320 a
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Inductive Sensors
BES M12MF1-PSC30A-S04G-W
Order Code: BES02JZ



Interface

Switching output PNP normally open (NO)

Material

Housing material Brass, PTFE coated
 Material sensing surface LCP/PTFE

Mechanical data

Dimension Ø 12 x 50 mm
 Installation for flush mounting
 Size M12x1
 Tightening torque 10 Nm

Range/Distance

Assured operating distance Sa 2.4 mm
 Hysteresis H max. (% of Sr) 15.0 %
 Rated operating distance Sn 3 mm
 Real switching distance sr 3 mm
 Repeat accuracy max. (% of Sr) 5.0 %
 Switching distance marking ■■
 Temperature drift max. (% of Sr) 10 %
 Tolerance Sr ±10 %

Remarks

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

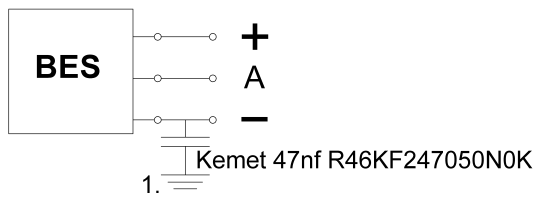
Connector Drawings



Wiring Diagrams



Installation remarks



1) Machine GND

Distance c	$\geq 2 \times d1$
Distance b (Ferrous)	$\geq 1.5 \text{ mm}$
Distance b (non-ferrous)	$\geq 0 \text{ mm}$
Distance f	$\geq 3 \times S_n$
Distance a	$\geq 3 \times d1$