



Basic features

Additional features	Factor 1 Extended temperature range Housing resistant to weld spatter weld-immune (magnetic field 100kA/m)
Approval/Conformity	CE UKCA WEEE
Basic standard	IEC 60947-5-2
Scope of delivery	2x nut M12x1 Toothed washer D13 (2x)
Trademark	Factor 1

Display/Operation

Function indicator	yes
Power indicator	no

Electrical connection

Connection	M12x1-Male, 3-pin, A-coded
Electrical version	3-wire
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at Ue	1 µF
Min. operating current I_m	0 mA
No-load current I_o max., damped	27 mA
No-load current I_o max., undamped	20 mA
Operating voltage U_b	10...30 VDC
Output resistance R_a	100.0 kOhm
Protection class	II
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.	50 ms
Ripple max. (% of U_e)	10 %
Switching frequency	2000 Hz
Utilization category	DC -13
Voltage drop static max.	1.5 V

Environmental conditions

Ambient temperature	-40...85 °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	IP68, according to BWN Pr 20
Magnetic field immune	magnetic field immune (AC/DC)

Functional safety

MTTF (40 °C)	365 a
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Interface

Switching output	PNP normally open (NO)
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Inductive Sensors
BES M12MI-PSC80E-S04G-W08
Order Code: BES05KW



Material

Housing material	Brass, PTFE coated
Material sensing surface	PBT

Mechanical data

Dimension	Ø 12 x 65 mm
Installation	non-flush
Size	M12x1
Tightening torque	12 Nm

Range/Distance

Assured operating distance Sa	6.4 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	8 mm
Real switching distance sr	8 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

