



### Basic features

Additional features	Factor 1 Weld immune
Approval/Conformity	CE cULus EAC 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 $U_e$	1 $\mu$ F
Magnetic field strength, interference field	100 kA/m
Min. operating current $I_m$	0 mA
No-load current $I_o$ max., damped	33 mA
No-load current $I_o$ max., undamped	25 mA
Operating voltage $U_b$	10...30 VDC
Output resistance $R_a$	33.0 kOhm + D
Rated insulation voltage $U_i$	75 V DC
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
Ripple max. (% of $U_e$ )	15 %
Switching frequency	80 Hz
Utilization category	DC -13
Voltage drop static max.	2 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
Magnetic field immune	magnetic field immune (AC/DC)
Protection degree	IP67

### Functional safety

MTTF (40 °C)	260 a
--------------	-------

Inductive Sensors  
**BES M12EI-PSC40A-S04G-S**  
 Order Code: BES04Z5



**Material**

Housing material	Stainless steel
Material sensing surface	Stainless steel

**Mechanical data**

Dimension	Ø 12 x 65 mm
Installation	for flush mounting
Size	M12x1
Tightening torque	20 Nm

**Output/Interface**

Switching output	PNP normally open (NO)
------------------	------------------------

**Range/Distance**

Assured operating distance Sa	3 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	4 mm
Real switching distance sr	4 mm
Repeat accuracy max. (% of Sr)	5.0 %
Switching distance marking	■ ■
Temperature drift max. (% of Sr)	15 %
Tolerance Sr	±10 %

**Remarks**

Installation notice: flush in Al or non-ferrous metal  $Sr = 0.7 \times Sn$   
 The sensor is functional again after the overload has been eliminated.  
 Installation permitted only in clamp without positive stop.  
 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**

