



IND. CONT. EQ.  
 81U2  
 Class 2 Type 1



### Basic features

<b>Additional features</b>	Factor 1 Extended temperature range Housing resistant to weld spatter
<b>Approval/Conformity</b>	CE EAC cULus WEEE
<b>Basic standard</b>	IEC 60947-5-2
<b>Scope of delivery</b>	2x nut M18x1
<b>Trademark</b>	Factor 1

### Display/Operation

<b>Function indicator</b>	yes
<b>Power indicator</b>	no

### Electrical connection

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

### Electrical data

<b>Load capacitance max. at Ue</b>	1 µF
<b>Magnetic field strength, interference field</b>	100 kA/m
<b>Min. operating current I<sub>m</sub></b>	0 mA
<b>No-load current I<sub>o</sub> max., damped</b>	30 mA
<b>No-load current I<sub>o</sub> max., undamped</b>	25 mA
<b>Operating voltage U<sub>b</sub></b>	10...30 VDC
<b>Output resistance R<sub>a</sub></b>	100.0 kOhm
<b>Protection class</b>	II
<b>Rated operating current I<sub>e</sub></b>	200 mA
<b>Rated operating voltage U<sub>e</sub> DC</b>	24 V
<b>Rated short circuit current</b>	100 A
<b>Ready delay t<sub>v</sub> max.</b>	10 ms
<b>Ripple max. (% of U<sub>e</sub>)</b>	15 %
<b>Switching frequency</b>	2000 Hz
<b>Utilization category</b>	DC -13
<b>Voltage drop static max.</b>	2 V

### Environmental conditions

<b>Ambient temperature</b>	-40...85 °C
<b>Contamination scale</b>	3
<b>EN 60068-2-27, Shock</b>	Half-sinus, 30 gn, 11 ms
<b>EN 60068-2-6, Vibration</b>	55 Hz, amplitude 1 mm, 3x30 min
<b>Magnetic field immune</b>	magnetic field immune (AC/DC)
<b>Protection degree</b>	IP68, IP67 according to BWN Pr 20

### Functional safety

<b>MTTF (40 °C)</b>	240 a
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Inductive Sensors  
**BES M18MI-PSC12E-S04G-W08**  
**Order Code: BES05AM**



**Material**

Housing material	Brass, PTFE coated
Housing material, surface protection	PTFE coated
Material sensing surface	PBT
Surface protection	PTFE coated

**Mechanical data**

Dimension	Ø 18 x 76 mm
Installation	non-flush
Size	M18x1
Tightening torque	15 Nm

**Output/Interface**

Switching output	PNP normally open (NO)
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**Range/Distance**

Assured operating distance Sa	9.7 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	12 mm
Real switching distance sr	12 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**

