



1) Sensing surface



**Basic features**

<b>Approval/Conformity</b>	CE cULus EAC WEEE
<b>Basic standard</b>	IEC 60947-5-2

**Display/Operation**

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

**Electrical connection**

<b>Polarity reversal protected</b>	yes
<b>Short-circuit protection</b>	yes

**Electrical data**

<b>Min. operating current <math>I_m</math></b>	5 mA
<b>Operating voltage <math>U_b</math></b>	20...250 VAC
<b>Protection class</b>	II
<b>Rated insulation voltage <math>U_i</math></b>	250 V AC
<b>Rated operating current <math>I_e</math></b>	250 mA
<b>Rated operating voltage <math>U_e</math> AC</b>	110 V
<b>Rated short circuit current</b>	100 A
<b>Ready delay <math>t_v</math> max.</b>	200 ms
<b>Residual current <math>I_r</math> max.</b>	1700 $\mu$ A
<b>Switching frequency</b>	10 Hz
<b>Utilization category</b>	AC-140 DC -13
<b>Voltage drop static max.</b>	11 V

Inductive Sensors  
**BES 517-224-M5-E**  
**Order Code: BES024F**



**Environmental conditions**

Ambient temperature	-25...70 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g <sub>n</sub> , 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

**Functional safety**

MTTF (40 °C)	245 a
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**Interface**

Cable fitting, thread size	M20x1.5
Switching output	NO/NC

**Material**

Housing material	PBT
Material sensing surface	PBT

**Mechanical data**

Connection cross-section	2.5 mm <sup>2</sup>
Dimension	40 x 80 x 80 mm
Installation	non-flush
Size	80x80
Tightening torque clamping screw	0.8 Nm

**Range/Distance**

Assured operating distance Sa	4.5 mm
Hysteresis H max. (% of Sr)	20.0 %
Rated operating distance Sn	50 mm
Real switching distance sr	50 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

**Remarks**

Programming of the switching function using internal switch: Position 1: NO (default)  
 Position 2: NC  
 Once the overload has been eliminated, interrupt operating voltage Vs for approx. 2 sec.  
 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.

**Wiring Diagrams**

