

### Basic features

Approval/Conformity	CE cULus EAC WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Inductive sensor

### Display/Operation

Function indicator	yes
Power indicator	no

### Electrical connection

Connection	M8x1-Male, 3-pin
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 <sub>m</sub>	0 mA
No-load current I <sub>o</sub> max., damped	12 mA
No-load current I <sub>o</sub> max., undamped	10 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	47.0 kΩ
Rated insulation voltage U <sub>i</sub>	75 V DC
Rated operating current I <sub>e</sub>	200 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Rated short circuit current	100 A
Ready delay t <sub>v</sub> max.	50 ms
Residual current I <sub>r</sub> max.	100 µA
Ripple max. (% of U <sub>e</sub> )	20 %
Switching frequency	500 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 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)	945 a
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### Interface

Switching output	PNP normally open (NO)
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## Material

Housing material	Brass, Chrome-plated
Material sensing surface	PBT

## Mechanical data

Dimension	Ø 8 x 60 mm
Installation	non-flush
Mounting length	41.00 mm
Size	M8x1
Tightening torque	4 Nm

## Range/Distance

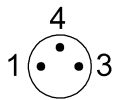
Assured operating distance Sa	4.8 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	6 mm
Real switching distance sr	6 mm
Repeat accuracy max. (% of Sr)	5.0 %
Switching distance marking	■■■
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

## Remarks

With connector, e.g. BKS-S 49-... total length = switch length +12 mm.  
 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 (Schematic)

