



1) Pressure resistant area



Basic features

Additional features	Housing resistant to weld spatter
Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Inductive sensor

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	1.0 μ F
Min. operating current I_m	0 mA
No-load current I_o max., damped	6 mA
No-load current I_o max., undamped	2 mA
Operating voltage U_b	10...30 VDC
Output resistance R_a	100.0 kOhm
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.	23 ms
Residual current I_r max.	10 μ A
Ripple max. (% of U_e)	10 %
Switching frequency	350 Hz
Utilization category	DC -13
Voltage drop static max.	2.0 V

Environmental conditions

Ambient temperature	-25...70 °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	IP67

Functional safety

MTTF (40 °C)	770 a
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Interface

Switching output PNP normally open (NO)

Material

Housing material Stainless steel, PTFE coated
 Material sensing surface Stainless steel

Mechanical data

Dimension Ø 18 x 65 mm
 Installation for flush mounting
 Mounting length 49.00 mm
 Pressure rating max. 40 bar
 Pressure rating, note Pressure-resistant
 Size M18x1
 Tightening torque 25 Nm ±10 %

Range/Distance

Assured operating distance Sa 5.2 mm
 Hysteresis H max. (% of Sr) 20.0 %
 Rated operating distance Sn 7.2 mm
 Real switching distance sr 7.2 mm
 Repeat accuracy max. (% of Sr) 5.0 %
 Switching distance marking ■■
 Temperature drift max. (% of Sr) 20 %
 Tolerance Sr ±10 %

Remarks

With connector, e.g. BKS-S 20-... total length = switch length +18 mm.

When installing in non-ferromagnetic metals, the distance x must be considered. This dimension x is described in the document "BES 2SN STEELFACE". Since the nuts supplied are made of non-ferromagnetic metal, the specified dimension x also applies here. Mounting, where the nuts are close to the active surface, is not intended.

The sensor is functional again after the overload has been eliminated.

Optical irregularities on the coating have no effect on function.

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)

