



1) O-Ring with thrust ring



**Basic features**

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

**Display/Operation**

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

**Electrical connection**

<b>Connection</b>	M12x1-Male, 4-pin, A-coded
<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>	0.5 µF
<b>Min. operating current Im</b>	0 mA
<b>No-load current Io max., damped</b>	13 mA
<b>No-load current Io max., undamped</b>	11 mA
<b>Operating voltage Ub</b>	10...30 VDC
<b>Output resistance Ra</b>	33.0 kOhm + D
<b>Rated insulation voltage Ui</b>	75 V DC
<b>Rated operating current Ie</b>	200 mA
<b>Rated operating voltage Ue DC</b>	24 V
<b>Rated short circuit current</b>	100 A
<b>Ready delay tv max.</b>	10 ms
<b>Residual current Ir max.</b>	10 µA
<b>Ripple max. (% of Ue)</b>	15 %
<b>Switching frequency</b>	1000 Hz
<b>Utilization category</b>	DC -13
<b>Voltage drop static max.</b>	1.5 V

**Environmental conditions**

<b>Ambient temperature</b>	-25...80 °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>IP rating</b>	IP68

**Functional safety**

<b>MTTF (40 °C)</b>	720 a
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Inductive Sensors  
**BES 516-100-S46-S4-D**  
Order Code: BHS0002



### Interface

Switching output	PNP normally open/normally closed (NO/NC)
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### Material

Housing material	1.4104 stainless steel
Material sensing surface	EP
Support ring material	PTFE

### Mechanical data

Dimension	Ø 12 x 78 mm
Installation	for flush mounting
Mounting part	M12x1
Pressure rating max.	500 bar
Pressure rating, note	oil pressure rated
Sealing ring, size	5.85 x 2.4 mm
Size	M12x1
Tightening torque	15 Nm ±10 %

### Range/Distance

Assured operating distance Sa	1.2 mm
Hysteresis H max. (% of Sr)	9.0 %
Rated operating distance Sn	1.5 mm
Real switching distance sr	1.5 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

### Remarks

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

