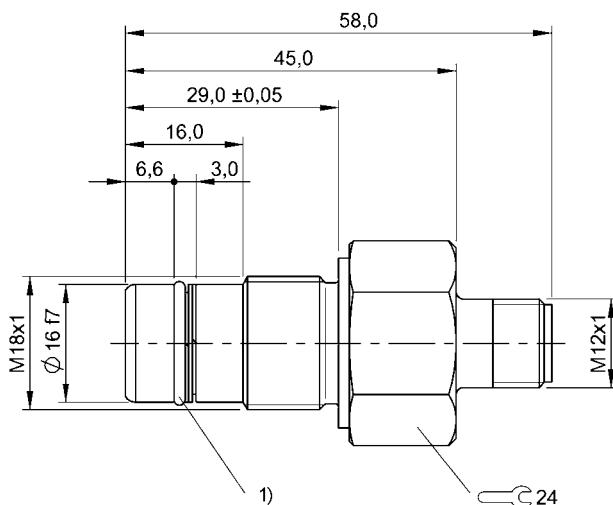


Inductive Sensors  
BES 516-300-S190-S4  
Order Code: BHS0026

**BALLUFF**



1) O-Ring with thrust ring



#### Basic features

Approval/Conformity	CE UKCA WEEE
Basic standard	IEC 60947-5-2

#### Display/Operation

Function indicator	no
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 Ue	1 µF
Min. operating current I <sub>m</sub>	0 mA
No-load current I <sub>o</sub> max., damped	25 mA
No-load current I <sub>o</sub> max., undamped	12 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	2.0 kOhm + D
Rated insulation voltage U <sub>i</sub>	75 V DC
Rated operating current I <sub>e</sub>	130 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Rated short circuit current	100 A
Ready delay t <sub>v</sub> max.	10 ms
Residual current I <sub>r</sub> max.	80 µA
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	400 Hz
Utilization category	DC-13
Voltage drop static max.	3.5 V

#### Environmental conditions

Ambient temperature	-25...80 °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	IP68

#### Functional safety

MTTF (40 °C)	1620 a
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#### Interface

Switching output PNP normally open (NO)

#### Material

Gasket, material	NBR 60-80
Housing material	Stainless steel
Material sensing surface	PEEK
Support ring material	PTFE

#### Mechanical data

Dimension	Ø 18 x 58 mm
Installation	for flush mounting
Mounting length	13.00 mm
Mounting part	M18x1
Pressure rating max.	500 bar
Pressure rating, note	oil pressure rated
Sealing ring, size	13 x 1.5 mm
Size	M18x1
Tightening torque	40 Nm ±10 %

#### Range/Distance

Assured operating distance Sa	2.1 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	3 mm
Real switching distance sr	3 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	-20 %

#### Remarks

Installation Guide 836665

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

