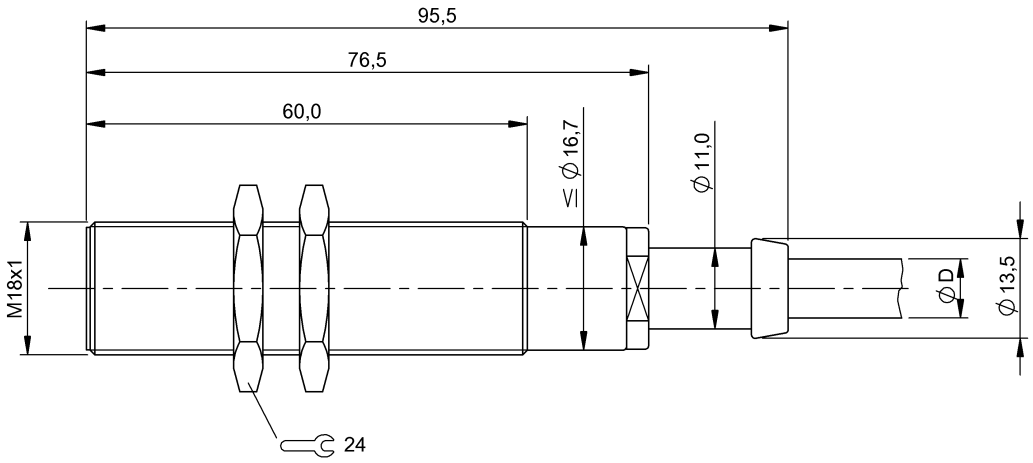
Inductive Sensors

BES 516-105-SA2-05
Order Code: BES02H5



Basic features

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

Display/Operation

Function indicator	no
Power indicator	no

Electrical connection

Cable diameter D	8.00 mm
Cable length L	5 m
Conductor cross-section	0.75 mm²
Connection type	Cable, 5.00 m, Silicone
Number of conductors	4
Polarity reversal protected	yes
Protection against device mix-ups	no
Short-circuit protection	no

Electrical data

Load capacitance max. at Ue	1 µF
Min. operating current Im	0 mA
No-load current Io max., damped	20 mA
No-load current Io max., undamped	20 mA
Operating voltage Ub	10...30 VDC
Output resistance Ra	10.0 kOhm + D/10.0 kOhm + D
Rated insulation voltage Ui	75 V DC
Rated operating current Ie	400 mA
Rated operating voltage Ue DC	24 V
Rated short circuit current	100 A
Ready delay tv max.	10 ms
Residual current Ir max.	100 µA
Ripple max. (% of Ue)	15 %
Switching frequency	500 Hz
Utilization category	DC -13
Voltage drop static max.	1.5 V

Environmental conditions

Ambient temperature	-25...120 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
Protection degree	IP67 at the sensing surface

Functional safety

MTTF (40 °C)	1255 a

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Material

Housing material	Brass, nickel plated
Material jacket	Silicone
Material sensing surface	PBT
Surface protection	nickel plated

Mechanical data

Dimension	Ø 18 x 95.5 mm
Installation	for flush mounting
Size	M18x1
Tightening torque	25 Nm

Output/Interface

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

Range/Distance

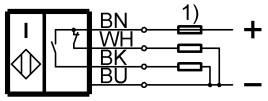
Assured operating distance Sa	4 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	5 mm
Real switching distance sr	5 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

Remarks

Ta ≥ 70 °C… ≤ 120 °C: Ie ≤ 150 mA.
Recommendation: After a short circuit check the device for proper 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.

Wiring Diagrams



1) For SCP see electrical data