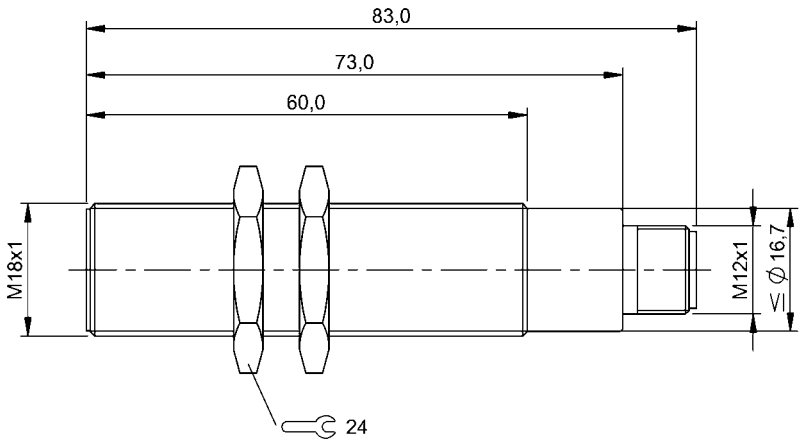
Inductive Sensors

BES 516-105-SA5
Order Code: BES02H6



Basic features

Approval/Conformity	CE UKCA WEEE
Base type deviation	Ta ...120 °C
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	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
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 g_n, 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

Functional safety

MTTF (40 °C)	1255 a

Interface

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

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Material

Housing material	Brass, nickel-plated
Material sensing surface	PBT

Mechanical data

Dimension	Ø 18 x 83 mm
Installation	for flush mounting
Mounting length	60.00 mm
Size	M18x1
Tightening torque	25 Nm

Range/Distance

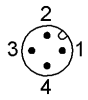
Assured operating distance Sa	4 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	5 mm
Real switching distance sr	5 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

Remarks

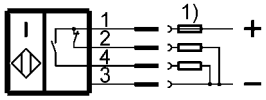
Ta ≥ 70 °C... ≤ 120 °C: Ie ≤ 150 mA.
Recommendation: After a short circuit check the device for proper function.
For more information about MTTF and B10d see MTTF / B10d Certificate

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.

Connector Drawings



Wiring Diagrams



1) For SCP see electrical data