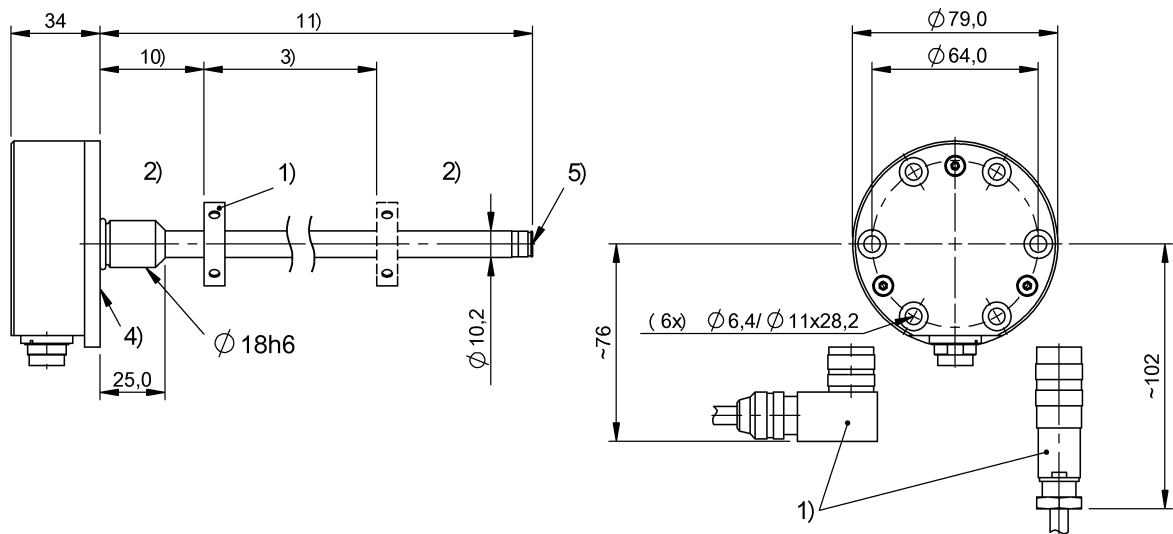


Magnetostrictive Sensors
BTL7-E500-M0275-K-SA348-SR32
 Order Code: BTL15C6

BALLUFF



1) not included in scope of delivery, 2) Non-usable area, 3) Nominal length = Measuring length, 4) Mounting surface, 5) Internal threads M4x4/6 deep, 10) Null point, 11) Installation length



Basic features

Approval/Conformity	CE cULus EAC WEEE
Base type	BTL7-E...-M....-K-SR32
Base type deviation	Error signal 1.8 mA
Magnets, number (factory setting)	1
Magnets, number max.	1

Electrical connection

Connection	Connector, M16x0.75, 8-pin
Connection version	radial
Polarity reversal protected	Ub up to 36 V
Short-circuit protection	to GND and to 36 V DC

Electrical data

Current consumption max. at 24 V DC	120 mA
Error signal Ia rising	1.8 mA
Error signal Ua falling	~ -1.375 V
Error signal Ua rising	~ -1.375 V
Galvanic isolation	no
Inrush current	≤ 500 mA/10 ms
Operating voltage Ub	10...30 VDC
Output signal adjustable	using programming inputs
Overvoltage protection	Ub up to 36 V
Switch-on delay max.	600 ms
Voltage-proof up to (GND to housing)	500 V AC

Environmental conditions

Ambient temperature	-40...85 °C
EN 55016-2-3, Radiation	For industrial and residential use
EN 60068-2-27, Continuous shock	150 g, 2 ms
EN 60068-2-27, Shock	150 g, 6 ms
EN 60068-2-6, Vibration	20 g, 10...2000 Hz
EN 61000-4-2, ESD	Severity Level 3
EN 61000-4-3, RFI	Severity Level 3
EN 61000-4-4, Burst	Severity Level 3
EN 61000-4-5, Surge	Severity Level 2
EN 61000-4-6, High-frequency fields	Severity Level 3
EN 61000-4-8 Magnetic fields	Severity Level 4
Protection degree	IP67 with connector
Relative humidity	≤ 90 %, non-condensing
Storage temperature	-40...100 °C
Temperature coefficient typ.	≤ 30 ppm/K at 50% of nominal stroke 500mm

Functional safety

MTTF (40 °C)	90 a
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Material

Housing material	Stainless steel (1.4305)
Material flange	Stainless steel (1.4404) Stainless steel (1.4429) Stainless steel (1.4435) Stainless steel (1.4571)
O-ring material	Fluoroelastomer
Protection tube material	Stainless steel (1.4571)

Output/Interface

Analog output	Analog, current 4...20 mA
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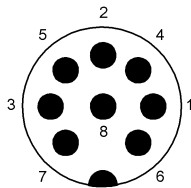
Range/Distance

Measuring length	275 mm
Non-linearity max.	±50 µm
Repeat accuracy	± 10 µm
Sampling frequency max.	4000 Hz

Mechanical data

Housing diameter	79 mm
Installation length from contact surface	375 mm
Mounting	Flange Ø18h6 plus holes
Null point	40.0 mm
Pressure rating max.	600 bar
Protection tube diameter	10.2 mm
Tightening torque	3.5 Nm

Connector Drawings



Wiring Diagrams

Pin	
1	4...20 mA
2	0 V
3	10...0 V
4	La
5	0...10 V
6	GND
7	+24 V DC
8	Lb