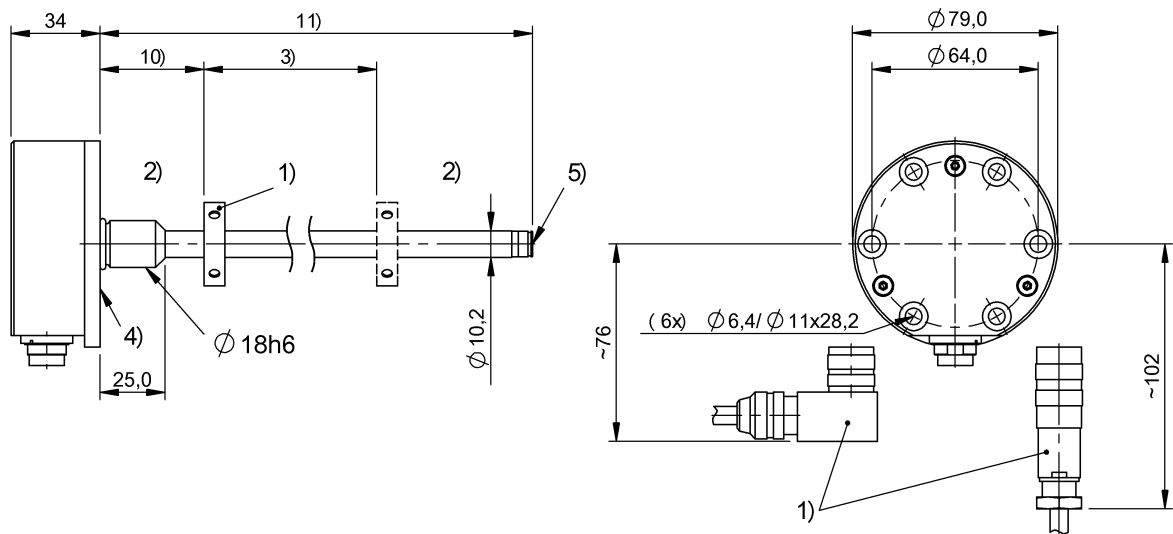


Magnetostrictive Sensors
BTL7-E500-M0100-K-SR32
 Order Code: BTL161P

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 UKCA cULus WEEE
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	3.6 mA
Error signal Ua falling	~-0.25 V
Error signal Ua rising	~-0.25 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
IP rating	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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Interface

Analog output	Analog, current 4...20 mA
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Material

Housing material	1.4305 stainless steel
Material flange	1.4404 stainless steel
	1.4429 stainless steel
	1.4435 stainless steel
	1.4571 stainless steel
O-ring material	FKM
Protection tube material	1.4571 stainless steel

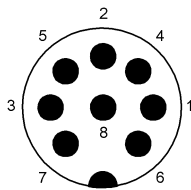
Mechanical data

Housing diameter	79 mm
Installation length from contact surface	200 mm
Mounting part	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

Range/Distance

Measuring length	100 mm
Non-linearity max.	±50 µm
Repeat accuracy	± 10 µm
Sampling frequency max.	4000 Hz

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