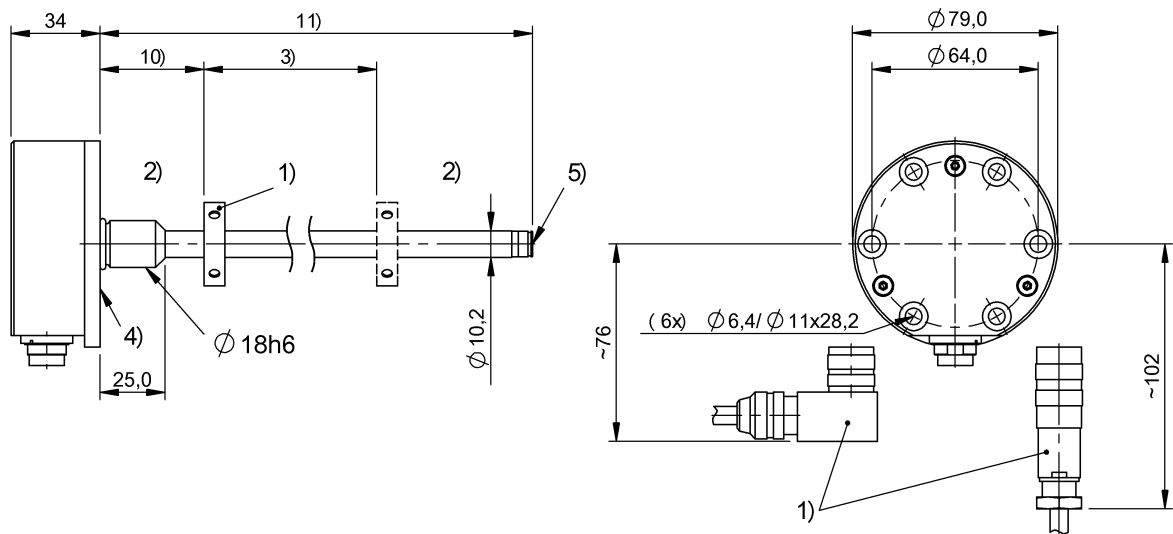


Magnetostrictive Sensors  
**BTL7-E570-M0100-K-SR32**  
 Order Code: BTL156W

**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 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 falling	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 20...4 mA
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**Material**

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

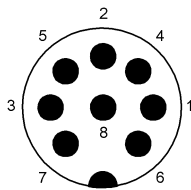
**Mechanical data**

<b>Housing diameter</b>	79 mm
<b>Installation length from contact surface</b>	200 mm
<b>Mounting part</b>	Flange Ø18h6 plus holes
<b>Null point</b>	40.0 mm
<b>Pressure rating max.</b>	600 bar
<b>Protection tube diameter</b>	10.2 mm
<b>Tightening torque</b>	3.5 Nm

**Range/Distance**

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

**Connector Drawings**



**Wiring Diagrams**

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