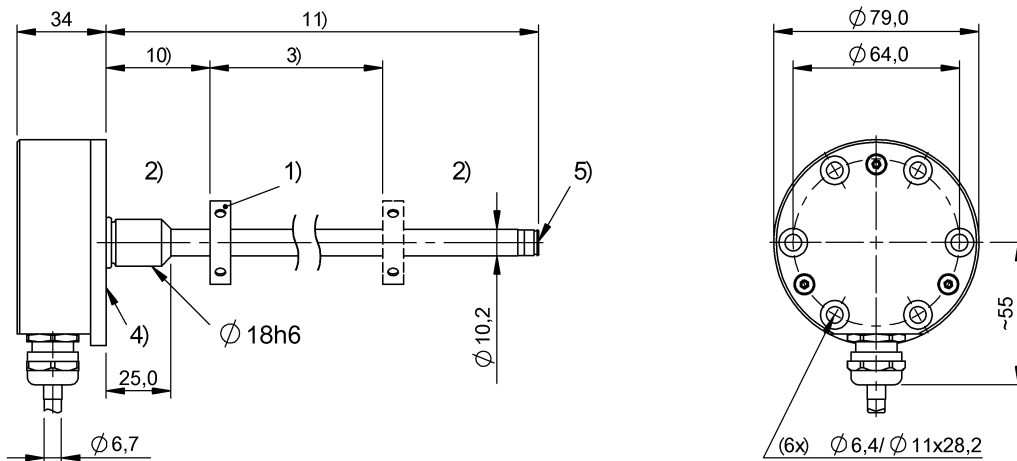


Magnetostrictive Sensors  
**BTL7-E570-M0100-K-SA348-K10**  
**Order Code: BTL1KZN**

**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**

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

**Electrical connection**

<b>Bending radius min., fixed cable</b>	5 x D
<b>Bending radius min., flexible cable</b>	15 x D
<b>Cable diameter D</b>	6.4...7 mm
<b>Cable length L</b>	10 m, drag chain compatible
<b>Connection</b>	Cable, 10.00 m, PUR
<b>Connection version</b>	radial
<b>Polarity reversal protected</b>	Ub up to 36 V
<b>Short-circuit protection</b>	to GND and to 36 V DC

**Electrical data**

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

**Magnetostrictive Sensors**  
**BTL7-E570-M0100-K-SA348-K10**  
**Order Code: BTL1KZN**

**BALLUFF**

**Environmental conditions**

Ambient temperature	-40...85 °C
Cable temperature, fixed routing	-40...90 °C
Cable temperature, flexible routing	-5...90 °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	IP68
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
--------------	------

**Interface**

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

**Material**

Cable flame-resistant	IEC 60332-1
Cable jacket, material	PUR
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

**Wiring Diagrams**

colour	
YE	20...4 mA
GY	0 V
PK	10...0 V
RD	La
GN	0...10 V
BU	GND
BN	+24 V DC
WH	Lb