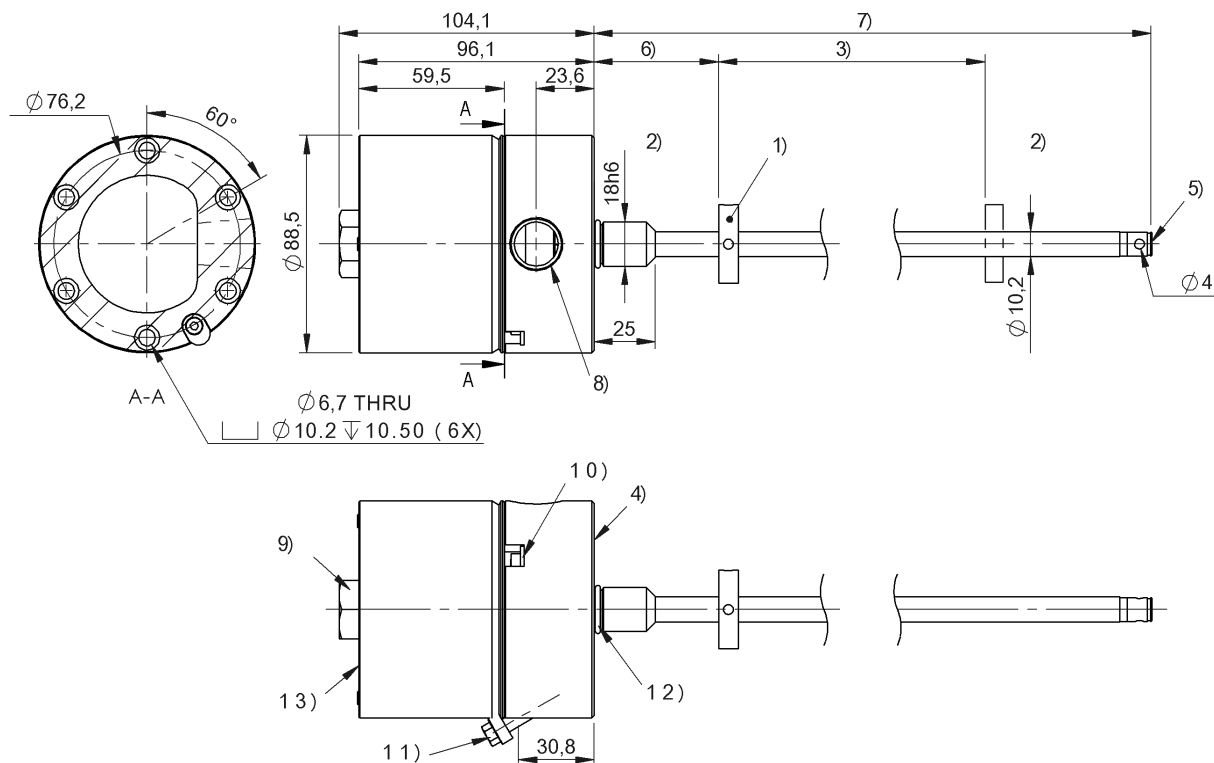




1) not included in scope of delivery, 2) Non-usable area, 3) Nominal length = Measuring length, 4) Mounting surface, 5) Internal threads M4x4/6 deep, 6) Null point, 7) Installation length, 8) 1/2" - 14 NPT (cable entry), 9) 15/16" or 24 mm wrench, 10) External Housing GND, 11) Cover fastening screw, 12) O-ring, 13) Part label, metal



Basic features

Approval/Conformity

CE
CSA
EAC
IECEx
WEEE

Ex marking

ATEX: II 1/2GD Ex d IIC T6 Ga/Gb
Ex t IIIC T85 °C Da IP68 -50 °C ≤ Ta ≤ +65 °C
II 1/2GD Ex d IIC T5 Ga/Gb Ex t
IIIC T100 °C Da IP68 -50 °C ≤ Ta ≤ +80 °C
EAC: 1 Ex d IIC T6 Ga/Gb X Ex ta
IIIC T85 °C Da X -20 °C ≤ Ta ≤ +65 °C
1 Ex d IIC T5 Ga/Gb X Ex ta IIIC
T100 °C Da X -20 °C ≤ Ta ≤ +80 °C
IECEx: Ex d IIC T6 Ga/Gb Ex t IIIC
T85 °C Da IP68 Tamb -50 °C to +65 °C
Ex d IIC T5 Ga/Gb Ex t IIIC T100 °C

Magnets, number max.

Da IP68 Tamb -50 °C to +80 °C
NEC: Class I, Division 1, Groups ABCD
Class II, Division 1, Groups EFG
Class III
Enclosure Type 4X/6P
Class I, Zone 1, AEx d IIC T* Ga/Gb
Ex d IIC T* Gb
IP68-50 °C to +65 °C (T6) or -50 °C to +80 °C (T5)
1

Electrical connection

Connection

Clamping terminal, 7-pin

Connection version

radial

Polarity reversal protected

Ub up to 28 V

Magnetostrictive Sensors
BTL5-E57-M0381-J-DEXC-TA12
Order Code: BTL090E

BALLUFF

Electrical data

Current consumption max. at 24 V DC	150 mA
Error signal I _a falling	3.6 mA
Galvanic isolation	no
Inrush current	≤ 3 A/0.5 ms
Operating voltage U _b	10...30 VDC
Overvoltage protection	U _b up to 28 V
Voltage-proof up to (GND to housing)	500 V DC

Environmental conditions

Ambient temperature	-40...80 °C
EN 55016-2-3, Radiation	For industrial and residential use
EN 60068-2-27, Continuous shock	100 g, 2 ms
EN 60068-2-27, Shock	100 g, 6 ms
EN 60068-2-6, Vibration	12 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	-50...100 °C
Temperature coefficient typ.	≤ 35 ppm/K at 50% of nominal stroke 500mm

Interface

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

Material

Housing material	Stainless steel (1.4404)
Material flange	Stainless steel (1.4404)
O-ring material	FKM
Protection tube material	Stainless steel (1.4571)

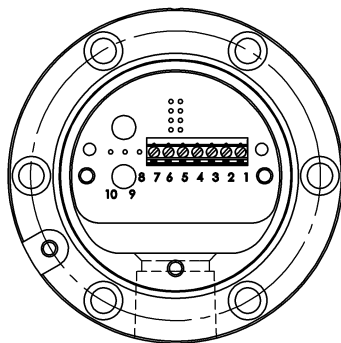
Mechanical data

Housing diameter	88.00 mm
Installation length from contact surface	509 mm
Mounting part	Flange Ø18h6 plus holes
Null point	50.8 mm
Pressure rating max.	600 bar
Protection tube diameter	10.2 mm
Tightening torque	3.5 Nm

Range/Distance

Non-linearity max.	±100 µm
Repeat accuracy	≤ ± 0.66 µA
Repeatability	≤5 µm
Resolution	≤ 0.66 µA
Sampling rate, length-dependent	1 kHz, standard

Connector Drawings



Wiring Diagrams (Schematic)

PIN	
1	4...20mA
2	GND Output
3	NC
4	GND
5	10...30 V DC
6	NC
7	NC