



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



**Basic features**

<b>Approval/Conformity</b>	CE CSA IECEX EAC WEEE
<b>Ex marking</b>	ATEX: II 3 G Ex nA IIC T4 Gc II 2 D Ex tb IIIC T135°C Db IP6x -40°C ≤ Ta ≤ +60°C EAC: 2Ex nA IIC T4 Gc X Ex tb IIIC T135 °C Db X -40 °C ≤ Ta ≤ +60 °C IECEX: Ex nA IIC T4 Gc Ex tb IIIC T135°C Db IP6x -40°C ≤ Ta ≤ +60°C NEC: NI: Class I, Division 2, Groups ABCD Class II, Division 2, Groups EFG T4 CAN: Class I, Zone 2, Ex nA IIC T4 Ex tb IIIC T135°C USA: Class I, Zone 2, AEx nA IIC Gc T4 AEx tb IIIC Db T135°C -40°C ≤ Ta ≤ +60°C
<b>Magnets, number max.</b>	1
<b>With float magnet</b>	no

**Electrical connection**

<b>Bending radius min., fixed cable</b>	5 x D
<b>Cable diameter D</b>	6.4...7 mm
<b>Cable length L</b>	5 m
<b>Connection</b>	Cable, 5.00 m, PUR
<b>Connection version</b>	axial
<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>	150 mA
<b>Error signal Ia rising</b>	3.6 mA
<b>Galvanic isolation</b>	no
<b>Inrush current</b>	≤ 500 mA/10 ms
<b>Operating voltage Ub</b>	20...28 VDC
<b>Output signal adjustable</b>	with calibration aid 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-E100-M0075-B-NEX-KA05**  
**Order Code: BTL0PZZ**



**Environmental conditions**

Ambient temperature	-40...60 °C
Cable temperature, fixed routing	-40...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
Protection degree	IP68
Relative humidity	≤ 90 %, non-condensing
Storage temperature	-40...70 °C
Surface temperature max.	135 °C
Temperature coefficient typ.	≤ 30 ppm/K at 50% of nominal stroke 500mm

**Functional safety**

MTTF (40 °C)	58 a
--------------	------

**Material**

Cable flame-resistant	IEC 60332-1
Cable jacket, material	PUR
Cover material	Aluminum, Die-cast, nickel plated
Housing material	Aluminum, Anodized
Housing material, surface protection	Anodized
Material flange	Stainless steel (1.3960)
O-ring material	Fluoroelastomer
Plug material	Stainless steel (1.4571)
Protection tube material	Stainless steel (1.4571)

**Mechanical data**

Installation length from contact surface	165 mm
Mounting	Threaded flange M18x1.5
Null point	30.0 mm
Pressure rating max.	600 bar
Protection tube diameter	10.2 mm
Tightening torque max.	100 Nm

**Output/Interface**

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

**Range/Distance**

Measuring length	75 mm
Non-linearity max.	±50 µm
Repeat accuracy	± 5 µm
Sampling frequency max.	1000 Hz

**Wiring Diagrams**

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