



Magnetostrictive Sensors  
**BTL7-S502B-M0275-B8-SA360-KA00,09-  
 ZA10**  
 Order Code: BTL175Y



**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, with connector
IP rating IEC 60529 (connector)	IP67 with connector
Relative humidity	≤ 90 %, non-condensing
Storage temperature	-40...100 °C
Temperature coefficient typ.	≤ 15 ppm/K at 50% of nominal stroke 500mm

**Functional safety**

MTTF (40 °C)	102 a
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**Interface**

Bits, number	24 Bit
Count direction	rising
Interface	SSI
Interface coding	Binary

**Material**

Cable flame-resistant	IEC 60332-1
Cable jacket, material	PUR
Connector housing, material	Nickel-plated brass
Cover material	Aluminium, Die-cast, nickel plated
Housing material	Aluminium, Anodized
Housing material, surface protection	Anodized
Material flange	1.3960 stainless steel
O-ring material	FKM
Plug material	1.4571 stainless steel
Protection tube material	1.4571 stainless steel
Square flange material	Nickel-plated brass

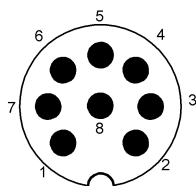
**Mechanical data**

Installation length from contact surface	365 mm
Mounting part	Threaded flange M18x1.5
Null point	30.0 mm
Pressure rating max.	250 bar
Protection tube diameter	8.0 mm
Special installation specification	in grounded metal housing
Tightening torque max.	100 Nm

**Range/Distance**

Measuring length	275 mm
Non-linearity max.	±30 µm
Repeat accuracy	≤ ± 5 µm (typical ± 2.5 µm)
Reproducibility	≤22 µm
Resolution, position	5 µm
Sampling frequency max.	3458 Hz

**Connector Drawings**



## Wiring Diagrams

PIN	
1	+Clk
2	+Data
3	-Clk
4	NC
5	-Data
6	GND
7	10...30 V DC
8	NC