

1) not included in scope of delivery, 2) Non-usable area, 3) Nominal length = Measuring length, 10) Null point, 11) Installation length



Basic features

Approval/Conformity	CE cULus EAC WEEE
Magnets, number (factory setting)	1
Magnets, number max.	1

Electrical connection

Connection	Connector, M12x1, 4-pin
Connection version	axial
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	150 mA
Galvanic isolation	no
Inrush current	≤ 3 A/0.5 ms
Operating voltage Ub	18...30 VDC
Output signal adjustable	no
Output value	Position in μm
Overvoltage protection	Ub up to 36 V
PD cycle min., 1.0 master	4 ms
PD cycle min., 1.1 master	1 ms
Switch-on delay max.	300 ms
Voltage-proof up to (GND to housing)	500 V DC

Environmental conditions

Ambient temperature	-25...70 °C
EN 55016-2-3, Radiation	For industrial and residential use
EN 60068-2-27, Continuous shock	50 g, 2 ms
EN 60068-2-27, Shock	50 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	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)	116 a
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IO-Link

IO-Link Profile IDs	0x0001 SSP0
IO-Link function classes	0x8000 Device Identification 0x8002 Process Data Variables
Supported IO-Link Profiles	Legacy Smart Sensor Profile

Magnetostrictive Sensors
BTL6-U110-M1250-PF-S4
Order Code: BTL1NJH

BALLUFF

Material

Cover material	Zinc, Die casting
Housing material	Aluminum, Anodized
Housing material, surface protection	Anodized

Mechanical data

Installation length	1396 mm
Mounting	Mounting clamps
Null point	73.0 mm

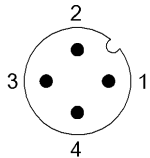
Output/Interface

Cycle time min.	1 ms
Data format	32-bit signed
IO-Link version	1.1
Interface	IO-Link 1.1
Process data, device – master	4 bytes
Process data, master – device	0 bytes

Range/Distance

Measuring length	1250 mm
Non-linearity max.	±0.04 %FS
Repeat accuracy	≤ 30 µm
Resolution	≤ 5 µm
Sampling frequency max.	1000 Hz

Connector Drawings



Wiring Diagrams

Pin	
1	L+ (18...30V)
2	n.c.
3	L- (GND)
4	C/Q (communication line)