BTL6 -A1- Series - Digital

BTL6-abcd-Mnnnn-f-lm

BTL6
Magnetostrictive linear position sensor Generation 6

a Interface
P = Digital pulse interface

b Operating voltage
1 = 20 … 28 V

c Interface characteristic 1
1 = Digital start/stop interface

d Interface characteristic 2
0 = No communication interface
1 = DPI/IP communication interface

Mnnnn Nominal length (4-position)
M0500 = metric in mm
(M0050…M4012)

f Form factor
A1 = Round profile

l Connection type
S = Connector

m Connection type characteristic 1
115 = M12x1 connector with 8 pins

Basic features

Approval/Conformity	CE UKCA cULus WEEE
Magnets, number max.	nnnn< 90: 1 nnnn = 90 … 154: 2 nnnn = 155 … 219: 3 nnnn > 219: 4

Electrical connection

Polarity reversal protected	Ub up to 36 V

Electrical data

Current consumption max. at 24 V DC	90 mA
Inrush current	≤ 3A / 0.5ms
Operating voltage Ub	20...28 VDC
Output signal adjustable	no
Overvoltage protection	Ub up to 33 V
Voltage-proof up to (GND to housing)	500 V DC

Environmental conditions

Ambient temperature	0...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.	≤ 35 ppm/K at 50% of nominal stroke 500mm

Functional safety

MTTF (40 °C)	135 a

Interface

Interface	Digital pulse

Material

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

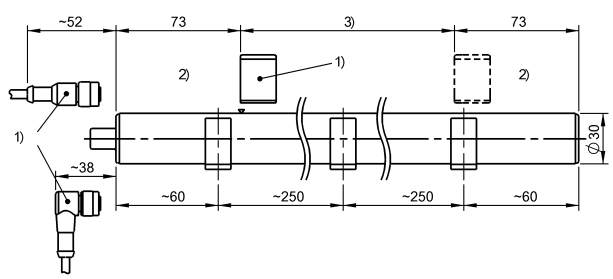
Mechanical data

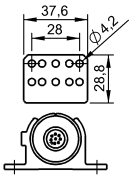
Overall Length	nnnn + 146 mm
Speed detectable max.	10 m/s

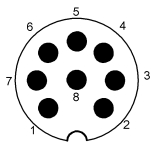
Range/Distance

Linearity deviation	nnnn = 0050...0500: ± 200 µm nnnn > 500: ± 0.04% FS
Measuring length	50...4012 mm
Repeat accuracy	≤ 10 µm
Sampling frequency max.	nnnn = 0050 … 0600: 2000 Hz nnnn = 0601 … 1200: 1000 Hz nnnn = 1201 … 2600: 500 Hz nnnn = 2601 … 4012: 250 Hz

BTL6-P11x-Mxxxx-A1-S115







Pin	
1	INIT
2	START/STOP
3	$\overline{\text{INIT}}$
4	NC
5	$\overline{\text{START/STOP}}$
6	GND
7	+24 V DC
8	NC

1) not included in scope of delivery
2) Non-usable area
3) Nominal length = Measuring length