



Linear Position Transmitter HLT 2500-L2

Magnetostrictive

For external mount

Resolution 1 µm



EtherCAT

Description:

The sensor works on the principle of magnetostriction.

This measuring principle determines with high accuracy the position, distance and/or speed and is based on elapsed time measurement.

Utilising this non-contact and wear-free measuring system, HYDAC offers a version in an aluminium profile housing with external measuring slide or with a sliding magnet for positioning by the operator.

In the EtherCAT version, the measured value is digitised and made available to the field bus system via the EtherCAT protocol.

The HLT 2500-L2 is primarily used in stationary applications, especially when a partially integrated solution in hydraulic cylinders is not possible.

Technical data:

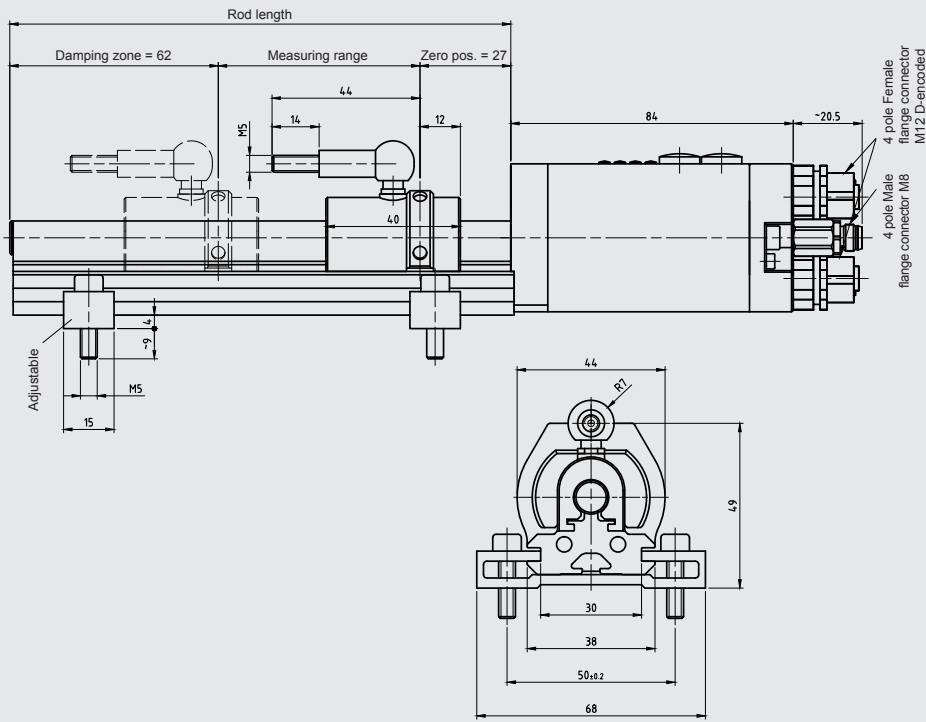
Input data	
Measuring ranges	50 .. 4000 mm
Model	Profile, with top magnet guidance joint
Housing	Measuring body: Aluminium
Output data	
Output signal	EtherCAT
Resolution	0.001 mm
Non-linearity	± 0.1 mm (measuring range ≤ 1500 mm) ± 0.15 mm (measuring range > 1500 mm)
Hysteresis	0.02 mm (measuring range ≤ 1500 mm) 0.1 mm (measuring range > 1500 mm)
Repeatability	≤ 0.005 mm - ≤ 0.05 mm (depends on length)
Temperature coefficient	≤ ± 0.0015 % FS / °C
Sampling rate	Depending on length: ≤ 0.5 m: 0.5 ms ≤ 1.0 m: 1.0 ms ≤ 2.0 m: 1.5 ms > 2.0 m: 2.0 ms
Environmental conditions	
Operating temperature range	0 .. +70 °C; optionally -20 .. +70 °C
Storage temperature range	-30 .. +85 °C
CE mark	EN 61000-6-1 / 2 / 3 / 4
Vibration resistance acc. to DIN EN 60068-2-6 at 50 .. 2000 Hz	≤ 10 g
Shock resistance acc. to DIN EN 60068-2-27 (11 ms / half sine)	≤ 100 g
Protection class acc. to DIN EN 60529 ¹⁾	IP 65
Installation position	No restrictions
Protocol data for EtherCAT	
EtherCAT	IEC 61158-1-6, IEC 61784-2
Physical Layer	Fast Ethernet, ISO/IEC 8802-3
Device profile	CoE, CIA DS-406
Transmission rate parameter	100 Mbit/s
Cycle time	100 .. 20000 µs
Other data	
Supply voltage	24 V DC -20 .. +10 %
Residual ripple of supply voltage	≤ 250 mV _{PP}
Current consumption without output	< 300 mA
Weight	Depending on length: 50 mm: 450 g 4000 mm: 4150 g

Note: Reverse polarity protection of the supply voltage, overvoltage and short circuit protection are provided.

FS (Full Scale) = relative to complete measuring range

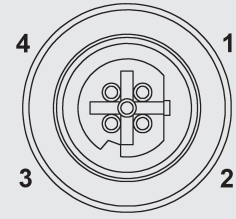
¹⁾ With mounted mating connector in corresponding protection class

Dimensions:



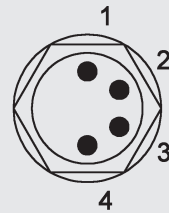
Pin connections:

Female M12x1, 4 pole, D-encoded



Pin	Port IN / Port OUT
1	Transmission data +
2	Receive data +
3	Transmission data -
4	Receive data -

Male M8x1, 4 pole



Pin	Port IN / Port OUT
1	+U _B
2	n.c.
3	0 V
4	n.c.

Model code:

HLT 2 5 0 0 - L2 - E51 - F51 - XXXX - 000

Design / geometry type

5 = profile

Model

L2 = profile, with top magnet guidance joint

Electrical connection

E51 = 2 female M12x1, 4 pole + male M8, 4 pole

Output signal

F51 = EtherCAT

Measuring range in mm (50 .. 4000 mm)

Example

0150 = 150 mm

Modification

000 = standard

Accessories: (supplied with instrument)

ZBL MS35-39 magnet slide part no.: 6105654

Accessories: (not supplied with instrument)

ZBL MV63 position magnet part no.: 6084454

ZBL MU38-20 position magnet part no.: 6084455

ZBL mounting kit part no.: 6105653

More detailed information on accessories as well as on further accessories, such as mating connectors, can be found in the Accessories brochure.

Note:

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

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