



Linear Position Transmitter HLT 2500-L2

Magnetostrictive

For external mount

Resolution 1 µm



Profibus

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 Profibus version, the measured value is digitised and made available to the field bus system via the Profibus 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:

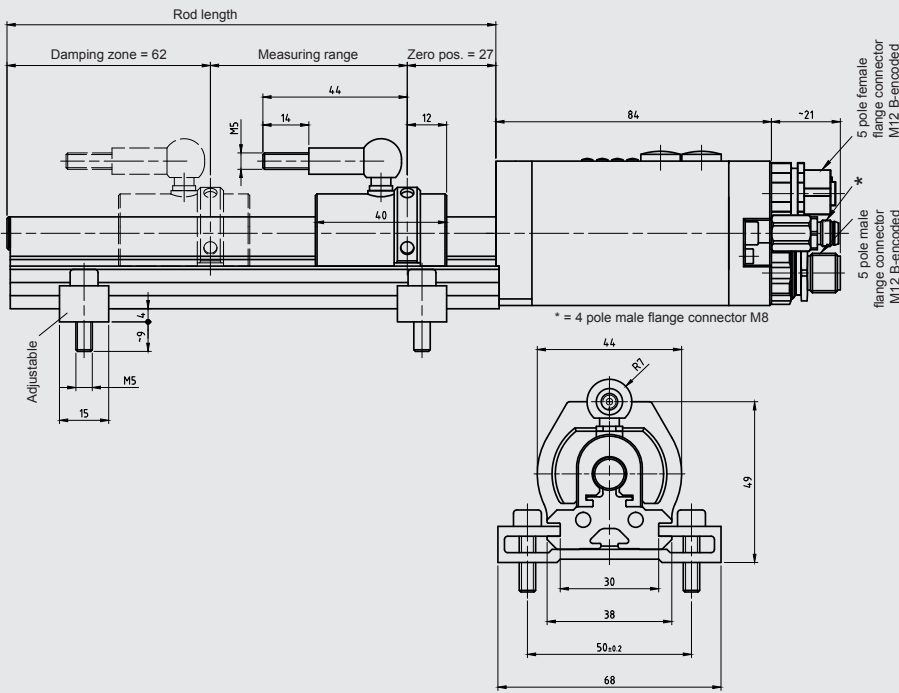
Input data	
Measuring ranges	50 .. 4000 mm
Model	Profile, with top magnet guidance joint
Housing	Measuring body: Aluminium
Output data	
Output signal	Profibus
Resolution	0.001 mm
Non-linearity	± 0.1 mm (measuring range ≤ 1500 mm) ± 0.15 mm (measuring range > 1500 mm)
Hysteresis	0.02 mm (measuring range ≤ 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: ≤ 1.0 m: 1.0 ms ≤ 1.5 m: 1.5 ms ≤ 2.0 m: 2.0 ms ≤ 2.5 m: 2.5 ms > 2.5 m: 3.0 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 Profibus	
Profibus DP V0	IEC 61158, IEC 61784
PNO encoder profile	Class 1 and 2
Transmission rate parameter	9.6 .. 12000 kbit/s
Other data	
Supply voltage	24 V DC -20 .. +10 %
Residual ripple of supply voltage	≤ 250 mV _{PP}
Current consumption without output	< 150 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:



Model code:

HLT 2 5 0 0 - L2 - P61 - F41 - XXXX - 000

Design / geometry type

5 = profile

Model

L2 = profile, with top magnet guidance joint

Electrical connection

P61 = female M12x1, 5 pole + male M12x1, 5 pole + male M8, 4 pole

Output signal

F41 = Profibus

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

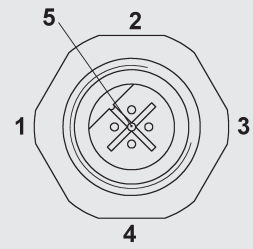
ZBL MU38-20 position magnet part no.: 6084455

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.

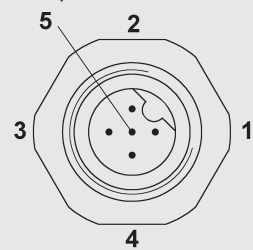
Pin connections:

Female M12x1, 5 pole, B-encoded



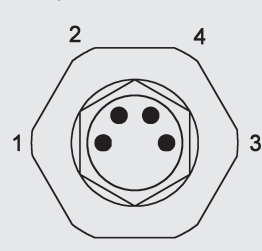
Pin	Profibus_OUT
1	VP, +5 V DC
2	Profibus, Data A
3	0 V
4	Profibus, Data B
5	n.c.
screw connection	Shield/housing

Male M12x1, 5 pole, B-encoded



Pin	Profibus_IN
1	n.c.
2	Profibus, Data A
3	n.c.
4	Profibus, Data B
5	n.c.
screw connection	Shield/housing

Male M8x1, 4 pole



Pin	Profibus_IN
1	+U _B
2	n.c.
3	0 V
4	n.c.

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.

HYDAC ELECTRONIC GMBH

Hauptstraße 27, 66128 Saarbrücken

Germany

Telephone +49 (0)6897 509-01

Fax +49 (0)6897 509-1726

E-mail: electronic@hydac.com

Internet: www.hydac.com