Linear Position Transmitter
HLT 2500-L2

Magnetostrictive | **For external mount** | **Resolution 1 µm**

CANopen

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 CANopen version, the measured value is digitised and made available to the CAN field bus system via the CANopen protocol. The instrument parameters can be viewed and configured by the user via the CANopen object directory using standard CAN software.

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

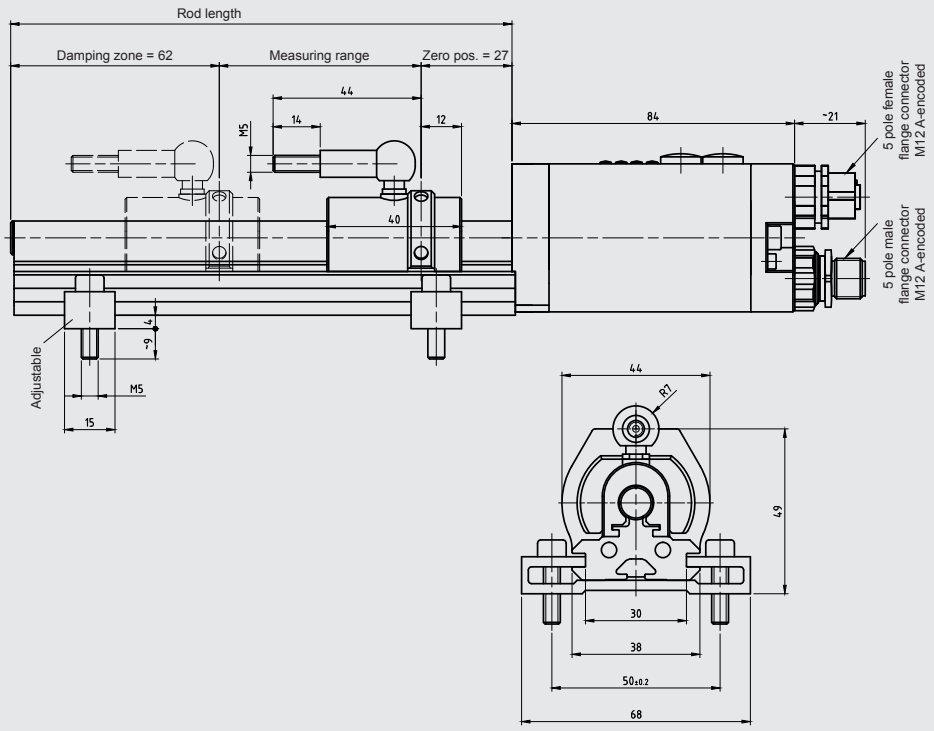
Technical data:

Input data	
Measuring ranges	50 .. 4000 mm
Model	Profile, with top magnet guidance joint
Housing	Measuring body: Aluminium
Output data	
Output signal	CANopen
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 CANopen	
CANopen	EN 50325-4
Bus connection	ISO 11898-1, ISO 11898-2
CAN Specification 2.0 A	11-bit identifier
Device profile for encoder	CiA DS406
Layer Setting Services, LSS	CiA DS305
Layer Management Services, LMT	CiA DS205-1, DS205-2
Transmission rate parameter	10, 20, 50, 100, 125, 250, 500, 800, 1000 kbit/s Default: 500 kbit/s
Adjustability	via DIP switch via LS service, LMT service
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 (**F**ull **S**cale) = relative to complete measuring range

[1] With mounted mating connector in corresponding protection class

Dimensions:



Model code:

HLT 2 5 0 0 – L2 – C61 – F11 – XXXX – 000

Design / geometry type
5 = profile

Model
L2 = profile, with top magnet guidance joint

Electrical connection
C61 = female M12x1, 5 pole + male M12x1, 5 pole

Output signal
F11 = CANopen

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

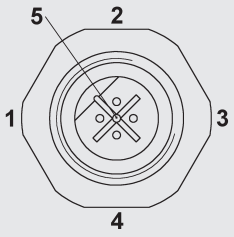
Accessories: (not supplied with instrument)

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.

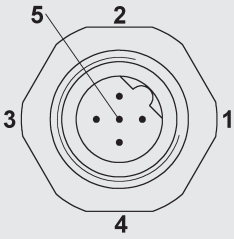
Pin connections:

Female M12x1, 5 pole, A-encoded



Pin	CANopen_OUT	
1	Housing	Shield/housing
2	$+U_B$	Supply +
3	0 V	Supply -
4	CAN_H	Bus line dominant high
5	CAN_L	Bus line dominant low

Male M12x1, 5 pole, A-encoded



Pin	CANopen_IN	
1	Housing	Shield/housing
2	$+U_B$	Supply +
3	0 V	Supply -
4	CAN_H	Bus line dominant high
5	CAN_L	Bus line dominant low

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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