



Linear Position Transmitter HLT 2500-F1

Magnetostrictive

For external mount

Resolution 50 µm

Analogue

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 flat profile housing version in aluminium.

The different output signals (analogue current / voltage) enable connection to all HYDAC ELECTRONIC GmbH measurement and control devices as well as standard evaluation systems (e.g. PLC controls)

External set inputs for the analogue start point and end point offer an additional possibility of a customised adjustment.

The HLT 2500-F1 is primarily used in stationary applications, especially when a partially integrated solution in hydraulic cylinders is not possible.

Technical data:

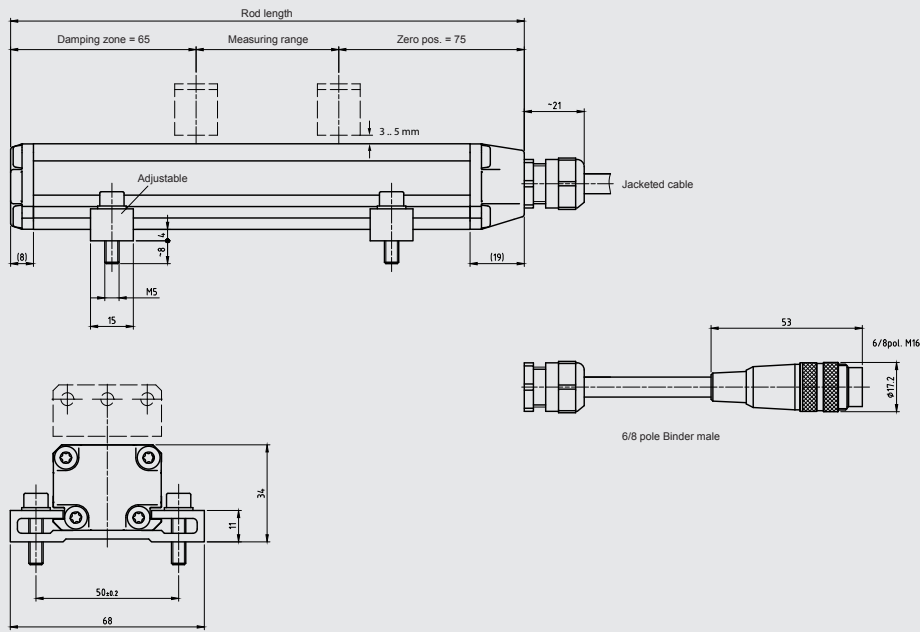
Input data	
Measuring ranges	50 .. 4000 mm
Model	Flat profile, without magnet guidance
Housing	Aluminium
Output data	
Output signal, permitted load resistance	Current: 4 .. 20 mA or 20 .. 4 mA Load resist. 200 .. 500 Ω
	Voltage: 0 .. 10 V or 10 .. 0 V Load resist.: min. 2 kΩ
Resolution	12 bit; ≥ 0.05 mm
Non-linearity	± 0.15 mm (measuring range ≤ 1500 mm)
	± 0.2 mm (measuring range > 1500 mm)
Hysteresis	0.1 mm
Repeatability	≤ 0.05 mm - ≤ 0.5 mm (depends on length)
Temperature coefficient	≤ ± 0.004 % FS / °C
Sampling rate	Depending on length:
	≤ 1 m: 1.0 ms
	≤ 2 m: 2.0 ms
	≤ 3 m: 3.0 ms > 3 m: 3.5 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
Other data	
Supply voltage	24 V DC ± 10 %
Residual ripple of supply voltage	≤ 250 mV _{PP}
Current consumption without output	< 100 mA
Weight	Depending on length:
	100 mm: 450 g 4000 mm: 3900 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 - F1 - XXX - XXX - XXXX - 000

Design / geometry type

5 = profile

Model

F1 = flat profile, without magnet guidance

Electrical connection

K01 = jacketed cable, length 1 m

M06 = male M16, 6 pole

M08 = male M16, 8 pole

Output signal

C01 = analogue 4 .. 20 mA, 3-conductor

C02 = analogue 20 .. 4 mA, 3-conductor

B01 = analogue 0 .. 10 V

B02 = analogue 10 .. 0 V

Measuring range in mm (50 .. 4000 mm)

Example

0150 = 150 mm

Modification

000 = standard

Accessories: (not supplied with instrument)

ZBL MU38-18 position magnet

part no.: 6084456

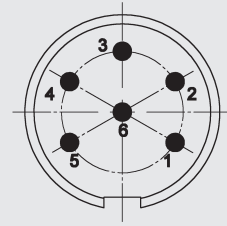
ZBL mounting kit

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:

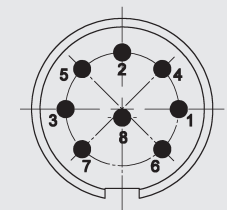
Male M16, 6 pole



Pin

1	Signal
2	0 V (analogue output)
3	Start point
4	End point
5	0 V
6	+U _B

Male M16, 8 pole



Pin

1	n.c.
2	0 V (analogue output)
3	Start point
4	End point
5	Signal
6	0 V
7	+U _B
8	n.c.

Cable outlet

Lead

brown	0 V (analogue output)
green	Start point
yellow	End point
grey	Signal
pink	0 V
blue	+U _B

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