



Linear Position Transmitter HLT 2150-R1

Magnetostrictive

For partial integration

Resolution 0.1 mm

Synchronous serial interface



Description:

The HLT 2150 is a linear position transmitter which, due to its compact design, was developed in particular for use in applications where space is very limited. A wide range of accessories such as magnets is available for individual adaptation to the particular application.

The HLT 2150 is suited for measuring ranges up to 2.5 m.

In the version with synchronous serial interface, the measured value is made available via synchronous and symmetrical clock and data signals.

The main fields of application for the HLT 2150 are, for example, general positioning tasks in mechanical engineering and in mobile and stationary hydraulics, as a partially integrated solution in hydraulic cylinders.

Technical data:

Input data

| | |
|--------------------------------|---|
| Measuring ranges | 50 .. 2500 mm |
| Model | Rod with M18x1.5 screw-in flange acc. to ISO 6149 Operating pressure: ≤ 450 bar Peak pressure acc. to DIN EN ISO 19879: 630 bar |
| Tightening torque, recommended | 50 Nm |
| Material | Rod: Stainless steel 1.4571 Housing: Stainless steel 1.4301 |

Output data

| | |
|-------------------------|---------------------|
| Output signal | SSI |
| Resolution | 0.1 mm |
| Non-linearity | ≤ ± 0.02 % FS |
| Hysteresis | ≤ ± 0.1 mm |
| Repeatability | ≤ ± 0.1 mm |
| Temperature coefficient | ≤ ± 0.003 % FS / °C |
| Sampling rate | 2 ms |

Environmental conditions

| | |
|--|--------------------------|
| Operating temperature range | -40 .. +85 °C |
| Storage temperature range | -40 .. +100 °C |
| Fluid temperature range | -40 .. +120 °C |
| CE mark | EN 61000-6-1 / 2 / 3 / 4 |
| Vibration resistance acc. to DIN EN 60068-2-6 at 10 .. 500 Hz at 5 kHz | ≤ 20 g ≤ 15 g |
| Shock resistance acc. to DIN EN 60068-2-27 (11 ms) | ≤ 50 g |
| Protection class acc. to DIN EN 60529 ¹⁾ | IP 67 |
| Installation position | No restrictions |

Relevant data for SSI

| | |
|-----------------------|----------------|
| SSI clock input | Optocoupler |
| SSI data output | RS 422, 2-wire |
| SSI clock frequency | 95 .. 1000 kHz |
| SSI monotime, typical | 20 μs |

Other data

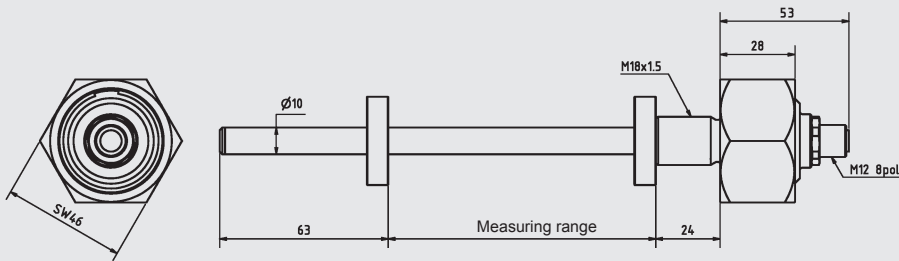
| | |
|------------------------------------|---|
| Supply voltage | 12 .. 30 V DC |
| Residual ripple of supply voltage | ≤ 250 mV _{pp} |
| Current consumption without output | < 100 mA |
| Weight | Depending on length: 50 mm: ~ 400 g 2500 mm: ~ 1100 g |

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 1 5 0 - R1 - 00P - S16 - XXXX - XXX - XXX - 000

Design / geometry type

1 = rod

Model

R1 = rod with
M18x1.5 screw-in flange

Electrical connection

00P = male M12x1, 8 pole

Output signal

S16 = SSI

Measuring range in mm (50 ... 2500 mm)

Example

0150 = 150 mm

Code

B24 = binary code 24 bit
B25 = binary code 25 bit
G24 = Gray code 24 bit
G25 = Gray code 25 bit

System resolution

100 = 100 µm
200 = 200 µm
300 = 300 µm

Modification

000 = standard

Notes:

The position magnet must be ordered separately.

Scope of delivery:

- HLT 2150
- Operating manual

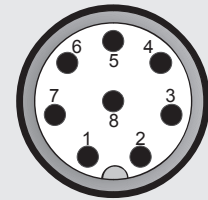
Accessories available: (not supplied with instrument)

| | | |
|-------------------|-----------------|-------------------|
| ZBL MR17.4 | position magnet | part no.: 6119372 |
| ZBL MR22 | position magnet | part no.: 6084453 |
| ZBL MR33 | position magnet | part no.: 6084207 |
| ZBL MV63 | position magnet | part no.: 6084454 |
| Intermediate ring | AD33xID13.5x5 | part no.: 3887829 |

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

Pin connections:

M12x1, 8 pole



| Pin | Signal | Description |
|-----|-------------------|----------------|
| 1 | Ground IN | Ground |
| 2 | Supply Voltage IN | Supply voltage |
| 3 | SSI_Clock-_IN | Clock input - |
| 4 | SSI_Clock+_IN | Clock input + |
| 5 | SSI_DATA-_OUT | Data output - |
| 6 | SSI_DATA+_OUT | Data output + |
| 7 | not connected | |
| 8 | not connected | |

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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