



## Linear Position Transmitter HLT 2150-R1

Magnetostrictive

For partial integration

Resolution 0.1 mm



CANopen

### 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 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 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	CANopen
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
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Shock resistance acc. to DIN EN 60068-2-27 (11 ms)	≤ 50 g
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Protection class acc. to DIN EN 60529 <sup>1)</sup>	IP 67
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Installation position	No restrictions
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#### Protocol data for CANopen

Communication profile	CiA DS 301 V4.2
NMT-Services	CiA DSP 302 V4.1
Layer setting services and protocol	CiA DSP 305 V2.2
Encoder Device Profile	CiA DS 406 V3.2
Baud rates	10 kbit/s .. 1 Mbit/s acc. to DS305 V2.2
Transmission services - PDO - Transfer	Measured value as 32 bit and float synchronous, asynchronous, cyclical
Node ID/ baud rate	Adjustable via LSS

#### Other data

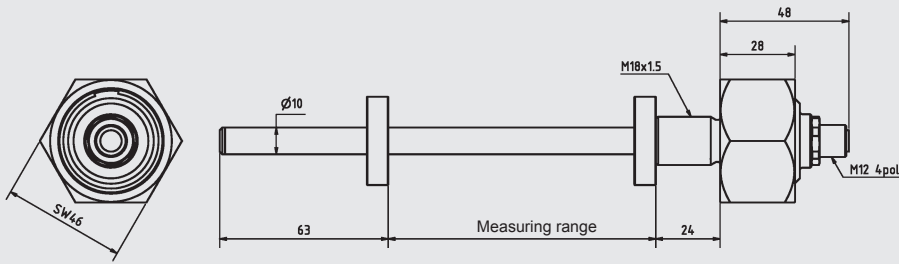
Supply voltage	12 .. 30 V DC
Residual ripple of supply voltage	≤ 250 mV <sub>pp</sub>
Current consumption without output	< 100 mA
Weight	Depending on length: 50 mm: ~ 400 g 2500 mm: ~ 1100 g

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

**FS (Full Scale)** = relative to complete measuring range

<sup>1)</sup> With mounted mating connector in corresponding protection class

## Dimensions:



## Model code:

**HLT 2 1 5 0 - R1 - 008 - F11 - XXXX - 000**

### Design / geometry type

1 = rod

### Model

R1 = rod with M18x1.5 screw-in flange

### Electrical connection

008 = male M12x1, 5 pole

### Output signal

F11 = CANopen

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

Example

0150 = 150 mm

### Modification

000 = standard

### Notes:

The position magnet must be ordered separately.

### Scope of delivery:

- HLT 2150
- Operating manual

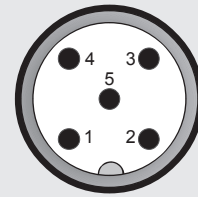
### Accessories available: (not supplied with instrument)

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, 5 pole



Pin	Signal	Description
1	n.c.	
2	+U <sub>B</sub>	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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