



Level Transmitter HNT 1100

Magnetostrictive

With temperature measurement



Description:

The level transmitter HNT 1100 is a float-based sensor for highly accurate measuring of fluid levels.

The sensor is available with rod lengths from 250 .. 730 mm. Rod lengths of up to 2500 mm are possible.

HYDAC offers the HNT 1100 in a pressure-resistant stainless steel housing for in-tank installation.

The integrated temperature sensor makes it possible for both fill level and temperature to be measured at one single measuring point. Depending on the application, several different floats are available, e.g. stainless steel for aggressive media or plastic.

In the CANopen version, the measured level 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.

Technical data:

Input data							
Measuring ranges	mm	178	208	298	338	448	658
Rod length ¹⁾	mm	250	280	370	410	520	730
Max. speed of change in fluid level	No restrictions						
Mechanical connection	G ¾ A ISO 1179-2						
Tightening torque, recommended	30 Nm						
Parts in contact with fluid	Rod: Stainless steel (1.4301 / 1.4571) Float: PP (polypropylene) 0.6 kg/dm ³ Seal: Seal ring DIN 3869-27-FKM						
Fluids ²⁾	Hydraulic oils, cooling lubricants						
Temperature							
Measuring range ³⁾	-25 .. +100 °C						
Output data							
Output signal	CANopen						
Accuracy ⁴⁾	Level: ≤ ± 1 % FS Temperature: ± 1.5 °C						
Temperature coefficient	≤ ± 0.003 % FS / °C						
Non-linearity	≤ ± 1 % FS						
Repeatability	Level: ≤ ± 1 % FS Temperature: ≤ ± 0.5 °C						
Response time acc. to DIN EN 60751 (temperature probe)	t ₉₀ ~ 100 s						
Environmental conditions							
Ambient temperature range	-40 .. +85 °C						
Storage temperature range	-40 .. +100 °C						
Fluid temperature range ⁵⁾	-40 .. +120 °C / -25 .. +120 °C						
Max. tank pressure	3 bar (short-term 10 bar, t < 1 min)						
CE mark	EN 61000-6-1 / 2 / 3 / 4						
Vibration resistance acc. to DIN EN 60068-2-6	7.5 mm (5 .. 8.2 Hz) / 2.0 g (8.2 .. 150 Hz)						
Shock resistance acc. to DIN EN 60068-2-27 (11 ms)	20 g						
Protection class acc. to DIN EN 60529 ⁶⁾	IP 67						
Protocol data for CANopen:							
Communication profile	CiA DS 301 V4.2						
Device profile	CiA DS 404 V1.3						
Layer setting services and protocol	CiA DSP 305 V2.2						
Baud rates	10 kbit .. 1 Mbit acc. to DS305 V2.2						
Transmission services							
- PDO	Measured value as 16/32 bit, float, status synchronous, asynchronous, cyclical, measured value change						
- Transfer							
Node ID/baud rate	Adjustable via LSS						
Other data							
Supply voltage (U _B)	9 .. 36 V DC						
Residual ripple supply voltage	≤ 250 mV _{SS}						
Current consumption (without output)	≤ 100 mA						
Weight	Depending on length: 425 g (250 mm); 570 g (730 mm)						

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

FS (Full Scale) = relative to complete measuring range

¹⁾ Other rod lengths on request

²⁾ Other fluids on request

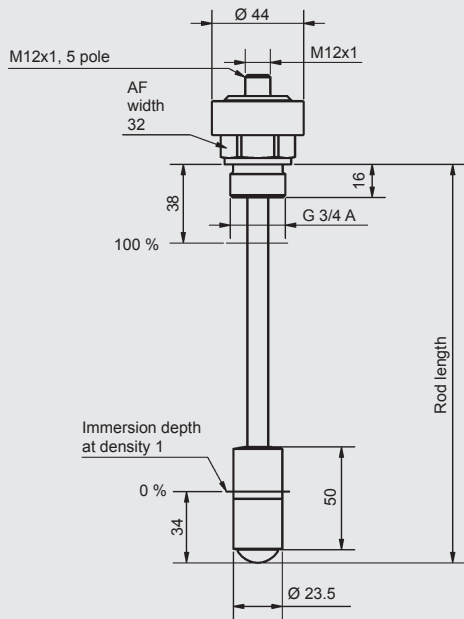
³⁾ Observe ambient temperature range

⁴⁾ Specified at calm, non-turbulent fluid

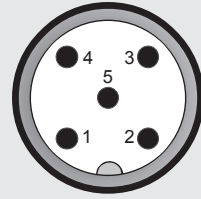
⁵⁾ -25 °C with FKM seal, -40 °C on request

⁶⁾ With mounted mating connector in corresponding protection class

Dimensions:



M12x1, 5 pole



Pin	Signal	Description
1	n.c.	
2	+U _B	Supply +
3	0 V	Supply -
4	CAN_H	bus line dominant high
5	CAN_L	bus line dominant low

Model code:

HNT 1 1 2 8 - F11 - XXXX - 000

Mechanical connection

2 = G 3/4 A ISO 1179-2

Electrical connection

8 = male M12x1, 5 pole

Output signal

F11 = CANopen

Rod length (physical) in mm

0250; 0280; 0370; 0410; 0520; 0730

Modification number

000 = standard

Accessories:

Appropriate accessories, such as mating connectors, can be found in the Accessories brochure.

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