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 Астана +7(7172)727-132  
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Единый адрес для всех регионов: [hcd@nt-rt.ru](mailto:hcd@nt-rt.ru) || [www.hydac.nt-rt.ru](http://www.hydac.nt-rt.ru)

## Electronic Level Transmitter HNT 1000

### Description:

The level transmitter HNT 1000 is a float-based sensor for highly accurate analogue recording of fluid levels.

The sensor is available in probe lengths from 250 to 2500 mm. HYDAC offers the HNT 1000 in a pressure-resistant stainless steel housing for in-tank installation.

Depending on the application, a variety of different floats are available, e.g. stainless steel for aggressive media or plastic.

The output signals enable connection to all HYDAC ELECTRONIC GMBH measurement and control devices as well as connection to standard evaluation systems (e.g. PLC controls).

### Special features:

- Probe lengths from 200 to 2500 mm
- Process connection: G3/4 A threaded connection
- High degree of accuracy
- Very robust housing
- Highly resistant to shock and vibration
- Excellent EMC characteristics
- Various float variants available



### Technical data:

Input data	
Sensor type	magnetostrictive
Measuring ranges	178; 208; 298; 338; 448; 658 mm
Probe length <sup>1)</sup>	250; 280; 370; 410; 520; 730 mm
Max. speed of change in fluid level	No orientation restrictions
Output data	
Output signal	4 .. 20 mA load ≤ 500 Ω 0 .. 10 V load ≥ 1 kΩ
Accuracy to DIN 16086 <sup>2)</sup>	≤ ± 1 % FS
Non-linearity at max. setting to DIN 16086	≤ ± 1 % FS
Repeatability	≤ ± 1 % FS
Hysteresis	≤ ± 1 % FS
Rise time	≤ 30 ms
Environmental conditions	
Max. tank pressure	3 bar (short-term 10 bar, t < 1 min)
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 to DIN EN 60068-2-6	7.5 mm (5 .. 8.2 Hz) 2.0 g (8.2 .. 150 Hz)
Shock resistance to DIN EN 60068-2-27	20 g (11ms)
Protection class to IEC 60529	IP67
Other data	
Supply voltage (U <sub>B</sub> )	9 .. 36 V DC
Current consumption (without output)	≤ 100 mA
Residual ripple of supply voltage	≤ 250 mV
Fluids	Hydraulic oils, cooling lubricants
Parts in contact with medium	Stainless steel (1.4301 / 1.4571)
Float	PP (polypropylene); 0.6 kg/dm <sup>3</sup>
Weight (dependent on probe and cable lengths)	~ 1000 g

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

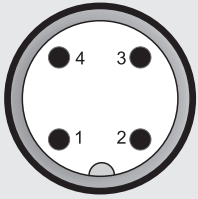
**FS (Full Scale)** = relative to complete measuring range

<sup>1)</sup> Other probe lengths on request

<sup>2)</sup> Specified for calm, non-turbulent fluid

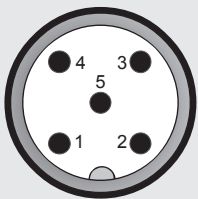
## Pin connections:

M12x1, 4 pole



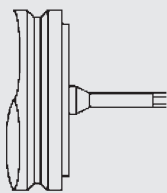
Pin	HNT 1226
1	+U <sub>B</sub>
2	n.c.
3	0 V
4	Signal

M12x1, 5 pole



Pin	HNT 1228
1	+U <sub>B</sub>
2	n.c.
3	0 V
4	Signal
5	n.c.

Cable outlet



Core	HNT 1221
brown	+U <sub>B</sub>
white	0 V
green	Signal
yellow	n.c.

## Model code:

HNT 1 2 2 X - X - XXXX - 000

### Temperature sensor

2 = Without temperature sensor

### Mechanical connection

2 = G 3/4 A DIN 3852 (male)

### Electrical connection

1 = Flying lead, 2 m

6 = Male M12x1, 4 pole

8 = Male M12x1, 5 pole

### Output

B = 0 .. 10 V, 3 conductor

C = 4 .. 20 mA, 3 conductor

### Probe length (physical) in mm

0250; 0280; 0370; 0410; 0520; 0730

### Modification number

000 = Standard

### Notes:

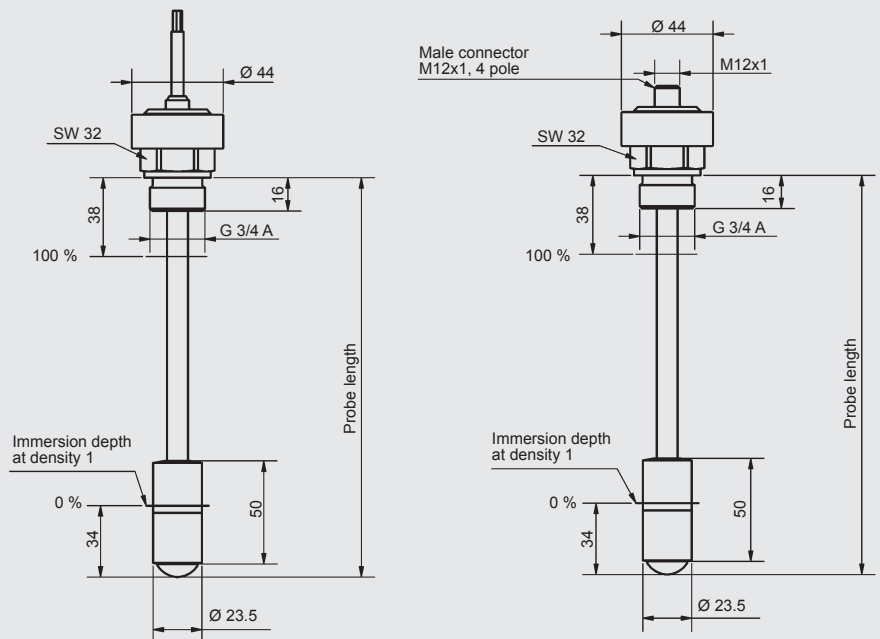
Special models on request.

On instruments with a different modification number, please read the label or the technical amendment details supplied with the instrument.

### Accessories:

Appropriate accessories, such as electrical female connectors, can be found in the Accessories section of the Electronics brochure.

## Dimensions:



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