



NRGT 26-2

## Level Transmitter

### NRGT 26-2 in non-standard lengths

#### Description

##### Use as a level control system

The NRGT 26-2 level transmitter can be used to continuously measure the water level in steam boiler and hot-water installations, or in condensate and feedwater tanks. In the calibrated measuring range from 0% to 100%, the level transmitter makes up the linear profile of the 4 – 20 mA current output.

- The level transmitter is installed on the inside of steam boilers, tanks or feed lines of hot-water installations. A protective tube provided on site ensures reliable function.

##### Influence of the monitored fluid

The NRGT 26-2 level transmitter can be used in fluids with different conductivity. However, a conductivity of less than 100  $\mu\text{S}/\text{cm}$  has a major influence on the measured capacitance, which is why it is extremely important to recalibrate the measuring range at the operating point when bringing into service.

To achieve the best possible reproducibility and maintain high-quality measurements (see "Technical data"), the sensor must be installed in a protective tube.

#### Function

##### Transmitter function

The transmitter function is the ability of the electrode to provide a scalable measuring range on the 4 – 20 mA current output interface and to make this available to one or more recipients for analysis.

Level transmitters do not have any controlling or limiting functions.

##### Behaviour in normal operation (no faults)

The display shows the scaled level reading (3 digits + 1 decimal place), e.g. 050.3, and converts the level data into a level-dependent current signal from 4 – 20 mA.

##### Behaviour in the event of faults

The error state or malfunction is permanently shown on the display by an error code, e.g. E.005.

Every time there is a fault, 0 mA is output via the current output.

##### Setting parameters and changing the factory settings

You can set parameters and change factory settings using a rotary knob on the terminal box.

##### Display and signals

The NRGT 26-2 level transmitter features a green 4-digit, 7-segment display for showing readings, status information and error codes. The operating status is indicated by a red and green LED.

#### Technical data

##### Model and mechanical connection

- NRGT 26-2: Thread G $\frac{3}{4}$  A, EN ISO 228-1

##### Nominal pressure rating, admissible service pressure and temperature

- NRGT 26-2: PN 40, 32 bar (abs) at 238°C

##### Materials

- Terminal box: 3.2581 G AISi12, powder-coated
- Cover tube: 1.4301 X5 CrNi 18-10
- Electrode rod insulation: PTFE
- Screw-in body: 1.4571, X6CrNiMoTi17-12-8

##### Max. installed length at 238 °C, all measurements in mm

- See "How to order", table in Fig. 1
- Do **not shorten** the electrode rod.

##### Measurement quality

The information below applies to a fluid conductivity range from 0.5 – 10000  $\mu\text{S}/\text{cm}$  adjusted for temperature based on 25 °C.

- Reading tolerance: +/- 1% of set measuring range at the operating point
- Display resolution for readings: 0.1%
- Resolution for internal processing: 15 bits
- Resolution for 4 – 20 mA output: 15 bits
- Sensitivity (minimum conductivity)
  - ◆ Water  $\geq 0.5 \mu\text{S}/\text{cm}$

##### Supply voltage

- 24 V DC  $\pm 20\%$

##### Power consumption

- Max. 7 W

##### Current input

- Max. 0.3 A

##### Internal fuse

- T2A

##### Safety cutout at excessive temperature

- Cutout occurs when an excessive temperature of 75 °C is measured in the electrode tip

##### Analogue output

- 1 x actual value output 4 – 20 mA, proportional to level, galvanically isolated
- Maximum output load 500  $\Omega$
- M12 connector, 5-pin, A-coded

### Indicators and controls

- 1 x green 4-digit, 7-segment display for showing status information
- 1 x red LED for indicating an error state
- 1 x green LED for indicating an OK state
- 1 x rotary knob IP65 with button for menu navigation and test function

### Protection class

- III Safety Extra Low Voltage (SELV)

### IP rating to EN 60529

- IP 65

### Admissible ambient conditions

- Service temperature: 0 °C - 70 °C
- Storage temperature: - 40 °C - 80 °C
- Transport temperature: - 40 °C - 80 °C
- Air humidity: 10% - 95% (non-condensing)

### Weight (dependent on length of electrode)

- NRGT 26-2 approx. 2.9 kg (with 2100 mm measuring range)

### Admissible installation locations

- Vertical

## Important notes

### Installation

If a level transmitter is installed outside the boiler in a level pot that can be shut off, the connecting pipes must be flushed regularly.

If the steam pipe is  $\geq 40$  mm and the water pipe is  $\geq 100$  mm, installation is regarded as internal. In this case, monitoring of flushing processes is not required.

### Electrical connection

Use a shielded, multi-core control cable with a minimum conductor size of 0.5 mm<sup>2</sup>, e.g. LiYCY 5 x 0.5 mm<sup>2</sup>.

Pre-wired control cables (with connector and coupling) are available as accessories in various lengths.

The NRGT 26-2 level transmitter is supplied with 24 V DC.

A safety power supply unit that delivers a Safety Extra Low Voltage (SELV) and is isolated from connected loads must be used to supply the equipment with 24 V DC.

### Connecting the actual value output (4 – 20 mA)

Please note the maximum output load of 500  $\Omega$ .

Maximum cable length = 100 m.

### How to order:

## Level transmitter 26-2

### Type:

- NRGT 26-2

A = installed length (mm) B = measuring range (mm)		Material no.:
A	B	
2260	2100	441990
2365	2200	441991
2470	2300	441992
2575	2400	441993
2680	2500	441994

Fig. 1

### Additional modules of the NRGT 26-2:

- Level switches: NRS 2-50, NRS 2-51
- Level controllers: NRR 2-50, NRR 2-52, NRR 2-53 with URB 55
- Pump control system: NRSP 2-51, NRSP 2-52
- Universal controller: KS 92-1
- Power supply unit: SITOP PSU100C 24V/0.6A

