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DATA SHEET

# TENA LL

Produal

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# TENA LL FAST RESPONSE IMMERSION TRANSMITTER / CONTROLLER

TENA LL 2-wire temperature transmitter is designed for hot water temperature control applications. Transmitter information can be used to control other device in the HVAC system.

Temperature is measured by a Pt1000 sensor element. The sensor element resistance information is converted into a 4…20 mA signal. The temperature range can be chosen at the commissioning.

TENA LL settings can be changed by using the ML-SER tool. One point field calibration of the transmitter can be executed and the temperature output can be changed to the controller function.

TENA LL transmitter can be equipped with a 3.5-digit liquid crystal display option TE-N V2. The display resolution is 0.1 °C.

Housing is made of heat resistant plastics. The bayonet cover and the terminal blocks tilted to 45° make an easy installation. The material of the stem is stainless steel for prolonged life. Sensor is installed to the water pipe by means of the R1/2" threads.

There are also available 50 mm and 210 mm immersion length transmitter versions for alternative installations.

## Range selection

| 0…+50 °C | *0…+100 °C | -50…+50 °C | -50…+150 °C |
|---|---|---|---|
| S1 S2 | S1 S2 | S1 S2 | S1 S2 |

* = factory setting

## Output signal

| 0…+50 | 0…+100 | -50…+50 | -50…+150 | Signal |
|---|---|---|---|---|
| 0 °C | 0 °C | -50 °C | -50 °C | 4 mA |
| 25 °C | 50 °C | 0 °C | 50 °C | 12 mA |
| 50 °C | 100 °C | 50 °C | 150 °C | 20 mA |



**Technical data:**

| | |
|---|---|
| supply voltage | 15…35 Vdc |
| sensor | Pt1000 EN 60751/B |
| output | 4…20 mA (temperature / controller) |
| temperature range | selectable |
| connection | R ½" thread |
| stem | Ø 4 mm x 85 mm, material AISI316 |
| housing | plastics (< 120 °C) |
| protection class | IP54, cable entry or stem down |
| cable entry | M16 |
| pressure rating | PN16 |
| accuracy | ± 0.5 °C (at 50 °C) |
| ambient temperature | 0…+60 °C |
| transmitter type | 2-wire |
| time constant | 2.5 s |

**Wiring:**

1 +( -) temperature signal or controller 4…20 mA
2 - (+) temperature signal or controller 4…20 mA
NOTE: The electrical wiring is polarity free.

**Ordering guide:**

| Model | Product number | Description |
|---|---|---|
| TENA LL | 1177050 | fast response temperature transmitter |
| TENA LL-50 | 1177051 | fast response temperature transmitter, length 50 mm |
| TENA LL-210 | 1177053 | fast response temperature transmitter, length 210 mm |
| TE-N V2 | 1170250 | display module (cover) |
| ML-SER | 1139010 | transmitter commissioning tool |

Products fulfill the requirements of directive 2004/108/EC and are in accordance with the standards EN61000-6-3: 2001 (Emission) and EN61000-6-2: 2001 (Immunity).


Information is subject to change without prior notice.