



# TTUA

Humidity and temperature transmitter  
for room mounting

Wall mounted room transmitters for measuring humidity and temperature in indoor environments.

- Output signal 0...10 V or Modbus
- With or without display
- Good long-term stability
- Humidity range 0...100 RH%
- Temperature range 0...50°C

## Function

The sensor is mounted in the cover-part of the casing. The cover is easy to detach from the back by means of snap-in grips and detachable terminals which makes mounting easy. Furthermore, no cables have to be disconnected, simplifying service and replacement.

### TEMPERATURE

The transmitter has a built in temperature sensor, which gives output signal 0...10 V and has a temperature range of 0...50 °C. In the versions ... -M the output will result in a Modbus signal.

### RELATIVE HUMIDITY

The transmitters have a capacitive thin-film element which gives a signal that is proportional to the relative humidity. The measuring signal is converted by the built-in electronics to output signal 0...10 V (corresponding to 0...100 % RH). The sensor element has rapid response to changes in humidity, and excellent long-term stability. The element also has good durability in contaminated environments.

### SUPPLY VOLTAGE

The transmitter uses a supply voltage of max. 24 V AC  $\pm 10\%$  / 15...35 V DC.

## Appearance

The transmitter comes in a discreet white housing. The version ...-D has a LCD display showing temperature and humidity in an alternating series.

## Installation

The transmitter should be mounted in a location with good air circulation where it can be expected to give a representative reading. It can be mounted on a wall box or directly on the wall.

### MAIN OFFICE BRESSANONE

I-39042 Bressanone (BZ)  
via Julius-Durst-Str. 70  
VAT No. IT02748450216

tel: +39 0472 830626  
fax: +39 0472 831840  
www.industrietechnik.it

TTUA

## Technical data

|                            |                                   |
|----------------------------|-----------------------------------|
| Supply voltage             | 24 V AC $\pm$ 10 % / 15...35 V DC |
| Power consumption          | < 1 W                             |
| Transformer power          | $\geq$ 2 VA                       |
| Working range, temperature | 0...50 °C                         |
| Working range, humidity    | 0...100 % RH                      |
| Ambient temperature        | 0...50 °C                         |
| Ambient humidity           | 10...90 % RH (non-condensing)     |
| Accuracy, humidity         | $\pm$ 3 % RH at 20 °C             |
| Protection class           | IP30                              |
| Isolation class            | III                               |

## Models

| Article          | Description                    | Display | Output signal       | Accuracy, temperature |
|------------------|--------------------------------|---------|---------------------|-----------------------|
| TTUA             | RH + °C                        | -       | 0...10 V + 0...10 V | $\pm$ 0.4 °C          |
| TTUA-PT100       | RH + PT100, 100 Ohm (0 °C)     | -       | 0...10 V + ohm      | $\pm$ 0.3 °C          |
| TTUA-PT1000      | RH + PT1000, 1000 Ohm (0 °C)   | -       | 0...10 V + ohm      | $\pm$ 0.3 °C          |
| TTUA-NTC1.8      | RH + NTC 1.8, 1800 Ohm / 25 °C | -       | 0...10 V + ohm      | $\pm$ 0.5 °C          |
| TTUA-NTC2.2      | RH + NTC 2.2, 2252 Ohm / 25 °C | -       | 0...10 V + ohm      | $\pm$ 0.2 °C          |
| TTUA-NTC10-01    | RH + NTC 10, 10 kOhm / 25 °C   | -       | 0...10 V + ohm      | $\pm$ 0.2 °C          |
| TTUA-NTC10-02    | RH + NTC 10, 10 kOhm / 25 °C   | -       | 0...10 V + ohm      | $\pm$ 0.3 °C          |
| TTUA-NTC10-03    | RH + NTC 10, 10 kOhm / 25 °C   | -       | 0...10 V + ohm      | $\pm$ 0.25 °C         |
| TTUA-NTC20       | RH + NTC 20, 20 kOhm / 25 °C   | -       | 0...10 V + ohm      | $\pm$ 0.2 °C          |
| TTUA-NI1000-01   | RH + Ni1000, 1000 Ohm / 0 °C   | -       | 0...10 V + ohm      | $\pm$ 0.5 °C          |
| TTUA-NI1000-02   | RH + Ni1000, 1000 Ohm / 0 °C   | -       | 0...10 V + ohm      | $\pm$ 0.5 °C          |
| TTUA-M           | RH + °C                        | -       | Modbus              | $\pm$ 0.2 °C          |
| TTUA-D           | RH + °C                        | x       | 0...10 V + 0...10 V | $\pm$ 0.4 °C          |
| TTUA-D-PT100     | RH + PT100, 100 Ohm (0 °C)     | x       | 0...10 V + ohm      | $\pm$ 0.3 °C          |
| TTUA-D-PT1000    | RH + PT1000, 1000 Ohm (0 °C)   | x       | 0...10 V + ohm      | $\pm$ 0.3 °C          |
| TTUA-D-NTC1.8    | RH + NTC 1.8, 1800 Ohm / 25 °C | x       | 0...10 V + ohm      | $\pm$ 0.5 °C          |
| TTUA-D-NTC2.2    | RH + NTC 2.2, 2252 Ohm / 25 °C | x       | 0...10 V + ohm      | $\pm$ 0.2 °C          |
| TTUA-D-NTC10-01  | RH + NTC 10, 10 kOhm / 25 °C   | x       | 0...10 V + ohm      | $\pm$ 0.2 °C          |
| TTUA-D-NTC10-02  | RH + NTC 10, 10 kOhm / 25 °C   | x       | 0...10 V + ohm      | $\pm$ 0.3 °C          |
| TTUA-D-NTC10-03  | RH + NTC 10, 10 kOhm / 25 °C   | x       | 0...10 V + ohm      | $\pm$ 0.25 °C         |
| TTUA-D-NTC20     | RH + NTC 20, 20 kOhm / 25 °C   | x       | 0...10 V + ohm      | $\pm$ 0.2 °C          |
| TTUA-D-NI1000-01 | RH + Ni1000, 1000 Ohm / 0 °C   | x       | 0...10 V + ohm      | $\pm$ 0.5 °C          |
| TTUA-D-NI1000-02 | RH + Ni1000, 1000 Ohm / 0 °C   | x       | 0...10 V + ohm      | $\pm$ 0.5 °C          |
| TTUA-D-M         | RH + °C                        | x       | Modbus              | $\pm$ 0.2 °C          |

## CE

**Low Voltage Directive (LVD) standards:** This product conforms to the requirements of the European Low Voltage Directive (LVD) 2014/35/EU through product standards EN 60730-1/A16

**EMC emissions & immunity standards:** This product conforms to the requirements of the EMC Directive 2014/30/EU through product standards EN 61000-6-1 and 61000-6-3.

**RoHS:** This product conforms to the Directive 2011/65/EU of the European Parliament and of the Council through standard 50581:2012.

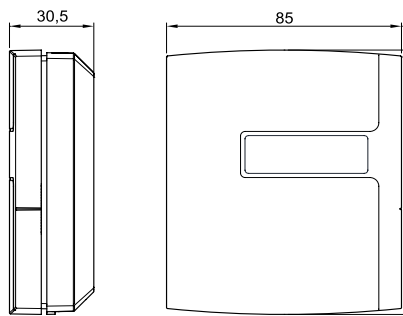
### MAIN OFFICE BRESSANONE

I-39042 Bressanone (BZ)  
via Julius-Durst-Str. 70  
VAT No. IT02748450216

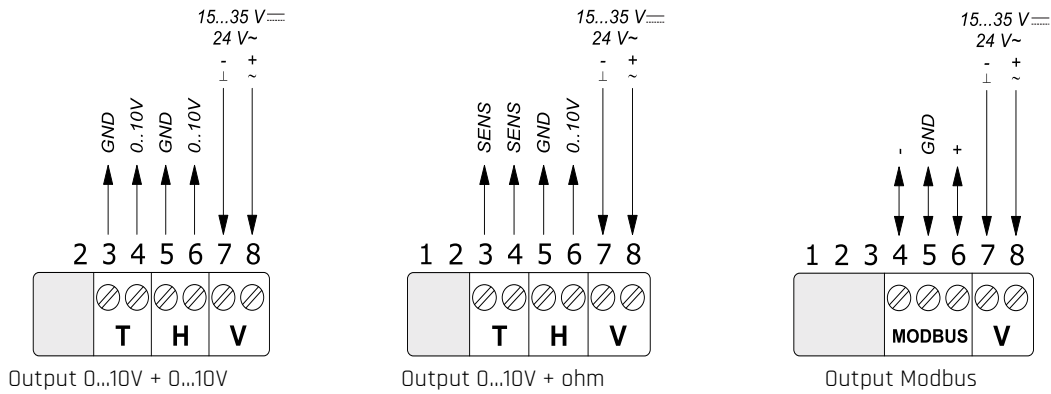
tel: +39 0472 830626  
fax: +39 0472 831840  
www.industrietechnik.it

TTUA

Dimensions



Wiring



Product documentation

| Document         | Description                                    |
|------------------|------------------------------------------------|
| Instruction TTUA | Instruction for installation and commissioning |

The product documentation can be downloaded from [www.industrietechnik.it](http://www.industrietechnik.it)

MAIN OFFICE BRESSANONE

I-39042 Bressanone (BZ)  
via Julius-Durst-Str. 70  
VAT No. IT02748450216

tel: +39 0472 830626  
fax: +39 0472 831840  
[www.industrietechnik.it](http://www.industrietechnik.it)

TTUA