

## PRODUCT DESCRIPTION

Transmitters and transducers Web Sensor Tx6xx with Ethernet connection are designed to measure temperature, relative humidity and barometric pressure of air in non-aggressive environment. Devices can be powered from external power supply adapter or by using power over Ethernet - PoE.

**Relative humidity transmitters** allows to determine other calculated humidity variables like dew point temperature, absolute humidity, specific humidity, mixing ratio and specific enthalpy.

**Measured and calculated values** are displayed on a two-line LCD display or can be read and then processed via Ethernet interface. The following formats of Ethernet communication are supported: www pages with user-design possibility, Modbus TCP protocol, SNMPv1 protocol, SOAP protocol and XML. The instrument may send also a warning message if the measured value exceeds adjusted limit. The messages can be sent up to 3 e-mail addresses or to Syslog server and can be sent by SNMP Trap too. The alarm states are also displayed on the websites.

The device setup can be made by the *TSensor* software (see [www.cometsystem.com](http://www.cometsystem.com)) or using the www interface.

type *	measured values	version	mounting
<b>T0610</b>	T	ambient air	wall
<b>T3610</b>	T + RH + CV	ambient air	wall
<b>T3611</b>	T + RH + CV	probe on a cable	wall
<b>T4611</b>	T	external probe Pt1000/3850 ppm	wall
<b>T7610</b>	T + RH + P + CV	ambient air	wall
<b>T7611</b>	T + RH + P + CV	probe on a cable	wall
<b>T7613D</b>	T + RH + P + CV	the steel stem of length 150 mm	radiation shield COMETEO

\* models marked TxxxZ are custom - specified devices

T...temperature, RH...relative humidity, P...barometric pressure, CV...computed values

## INSTALLATION AND OPERATION

The mounting holes and connection terminals are accessible after unscrewing four screws in the corners of case and removing the lid. Devices have to be mounted on a flat surface to prevent their deformation. Pay attention to the location of the device and probe. Incorrect choice of working position could adversely affect accuracy and long-term stability of measured value.

For the probe connection (T4611) it is recommended to use shielded cable with a length up to 10 m (external diameter 4 to 6.5mm). The cable shielding is connected to proper terminal device only (do not connect it to other circuitry and do not ground it). All cables should be located as far as possible from potential interference sources.

Devices don't require special maintenance. We recommend you periodic calibration for measurement accuracy validation.

## DEVICE SETUP

For network device connection it is necessary to know new suitable IP address. The device can obtain this address automatically from a DHCP server or you can use the static IP address, which you can get from your network administrator. Install the latest version of *TSensor* software to your PC, connect the Ethernet cable and the power supply adapter. Then you run *TSensor* program, set the new IP address, configure the device in accordance with your requirements and finally store the settings. The device setup can be made by the web interface too (see manual for devices at [www.cometsystem.com](http://www.cometsystem.com)).

The default IP address of each device is set to **192.168.1.213**.

## ERROR STATES

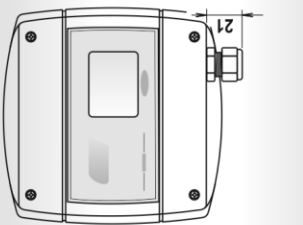
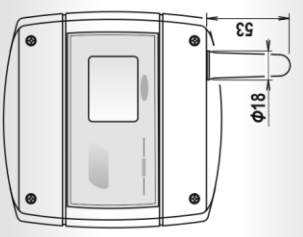
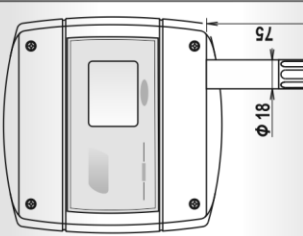
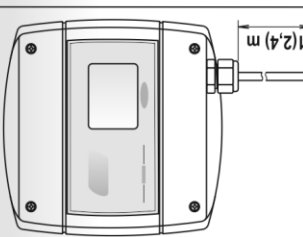
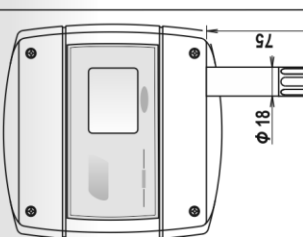
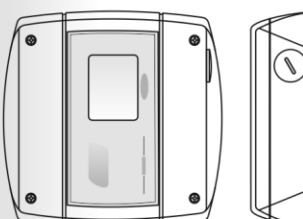
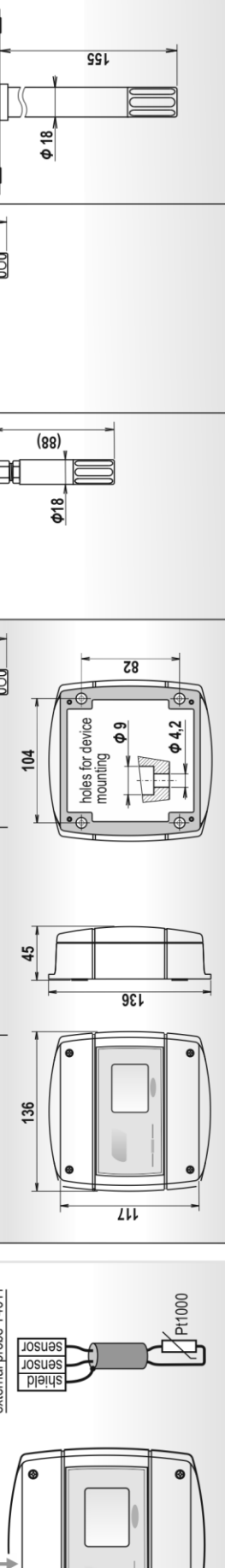
Device continuously checks its state during operation and if an error appears, it is displayed relevant code: **Err 1** – measured or calculated value is over the upper limit, **Err 2** – measured or calculated value is below the lower limit or pressure measurement error occurred, **Err 0**, **Err 3** a **Err 4** – it is a serious error, please contact distributor of the device.

## SAFETY INSTRUCTIONS



- Humidity and temperature sensors can not be operate and store without a filter cap.
- Temperature and humidity sensors have not to be exposed to direct contact with water and other liquids.
- It is not recommended to use the humidity transmitters for long time under condensation conditions.
- Take care when unscrewing the filter cap as the sensor element could be damaged.
- Use only the power adapter according to technical specifications and approved according to relevant standards.
- Don't connect or disconnect devices while power supply voltage is on.
- Installation, electrical connection and commissioning should be performed by qualified personnel only.
- Devices contain electronic components, it needs to liquidate them according to currently valid conditions.
- **To supplement the information** provided in this data sheet, use the manuals and other documentations which are available at [www.cometsystem.com](http://www.cometsystem.com).

## Technical specifications

Web Sensor device type	T4611	T0610	T3610	T3611, T7611	T7610	T7610D
Supply voltage (coaxial connector 5.1x2.1mm)		4.9 to 6.1 Vdc				
Power over Ethernet		according to IEEE 802.3af, PD Class 0 (max. 15.4W), voltage from 36V to 57Vdc				
Power consumption		approximately 1W				
Temperature measuring range	-200 to 600°C	-20 to +60°C	-20 to +60°C	-30 to 105 °C	-20 to 60 °C	-30 to 105 °C
Accuracy of temperature measurement	±0.2°C (without probe)	± 0.6°C	± 0.6°C	± 0.4°C	± 0.6°C	± 0.6°C
Relative humidity (RH) measuring range *	—	0 to 100 %RH	0 to 100 %RH	0 to 100 %RH	0 to 100 %RH	0 to 100 %RH
Accuracy of humidity measurement at 23°C	—	± 2.5 %RH	± 2.5 %RH	± 2.5 %RH	± 2.5 %RH	± 2.5 %RH
Barometric pressure measuring range	—	—	—	600 to 1100 hPa (T7611 only)	600 to 1100 hPa	600 to 1100 hPa
Accuracy of barometric pressure measurement at 23°C	—	—	—	±1.3hPa (T7611 only)	±1.3hPa	±1.3hPa
Other calculated humidity variables	—	—	yes	yes	yes	yes
Recommended calibration interval of the device **	2 years	2 years	1 year	1 year	1 year	1 year
Protection class of the case with electronics	IP30	IP30	IP30	IP30	IP30	IP30
Protection class of the RH+T probe and measuring end of stem	—	—	IP40	IP40	IP40	IP40
Temperature operating range of the case with electronics	-20 to +60°C	-20 to +60°C	-20 to +60°C	-20 to +60°C	-20 to +60°C	-20 to +60°C
Temperature operating range of the measuring end of stem	—	—	-30 to +80°C	—	-30 to +80°C	—
Temperature operating range (no condensation)	0 to 100%RH	0 to 100%RH	0 to 100%RH	-30 to +105°C	-30 to +105°C	-30 to +105°C
Humidity operating range (no condensation)	any position	sensor cover downwards	sensor cover downwards	any position ***	sensor cover downwards	any position ***
Mounting position	-30 to +80°C	-30 to +80°C	-30 to +80°C	-30 to +80°C	-30 až +80°C	-30 to +80°C
Storage temperature range (0 to 100%RH, no condensation)	EN 61326-1 EN 55011	EN 61326-1 EN 55011	EN 61326-1 EN 55011	EN 61326-1 EN 55011	EN 61326-1 EN 55011	EN 61326-1 EN 55011
Electromagnetic compatibility according to	310 g	310 g	320 g	380 (420, 500) g	320 g	400 g
Weight						
Dimensions [mm]						
Electrical wiring						

\* The relative humidity measuring range is limited at temperatures above 85°C, see manuals for devices.

\*\* Recommended calibration intervals: relative humidity - 1 year, temperature - 2 years, pressure - 1 year

\*\*\* if it can lead to long term condensation of water, it is necessary to use the probe at position with sensor cover downwards