



# COMET T5640 Transmitters Web Sensors Power Over Ethernet User Manual

[Home](#) » [COMET](#) » COMET T5640 Transmitters Web Sensors Power Over Ethernet User Manual 

COMET T5640 Transmitters Web Sensors Power Over Ethernet



## Contents

- [1 PRODUCT DESCRIPTION](#)
- [2 INSTALLATION AND OPERATION](#)
- [3 DEVICE SETUP](#)
- [4 SAFETY INSTRUCTIONS](#)
- [5 Technical Specifications](#)
- [6 CUSTOMER SUPPORT](#)
- [7 Documents / Resources](#)
- [7.1 References](#)

## PRODUCT DESCRIPTION

Transmitters Web Sensor Tx64x with Ethernet connection are designed to measure concentration of CO<sub>2</sub> in the air and to measure temperature and relative humidity of air. Devices can be powered from power supply adapter or by using power over Ethernet – PoE.

The CO<sub>2</sub> concentration is measured using the dual wavelength NDIR sensor with the multipoint calibration. This principle compensates aging of the sensing elements and offers maintenance free operation and outstanding long term stability.

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, XML and JSON. The instrument may send also a warning message if the measured value exceeds adjusted limit. The possible ways to sending messages: sending e-mails up to 3 e-mail addresses, sending SNMP traps up to 3 configurable IP addresses, sending messages to Syslog server. The alarm states are also displayed on the web page.

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
T5640	CO2	ambient air	Wall
T5641	CO2	with probe on a cable	Wall
T6640	T + RH + CO2 + CV	ambient air	wall
T6641	T + RH + CO2 + CV	with probes on a cable	wall

\* models marked TxxxxZ are custom – specified devices

T...temperature, RH...relative humidity, CO2...concentration of CO2 in air, 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. The external probe place in a measured environment. 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. 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 and according to the "Electrical wiring" (see next page) 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 CO2 concentration measurement error occurred

**Err 0, Err 3, Err 4** – it is a serious error, please contact distributor of the device (for devices with an external probe CO2G 10 the Err 4 indicates that the probe is not connected)

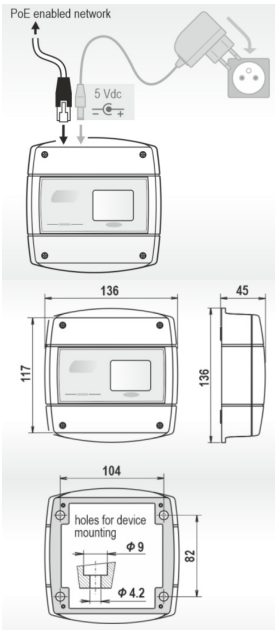

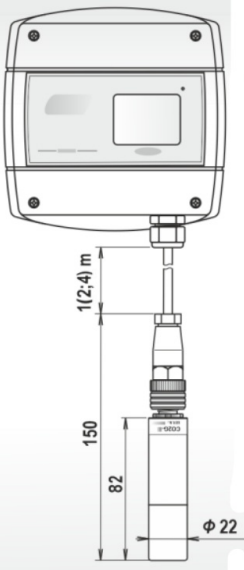
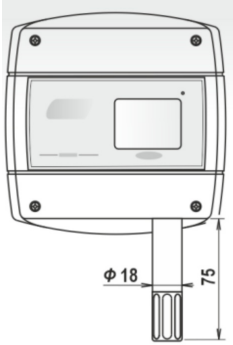
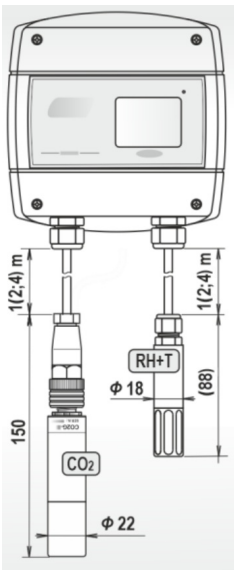
## SAFETY INSTRUCTIONS



- Humidity and temperature sensors cannot 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.
- If it is necessary connect the device to the Internet, properly configured firewall must be used.
- The device should not be used for applications, where malfunction could cause to injury or damage to property.
- 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 in the "Download" section for a particular device at [www.cometsystem.com](http://www.cometsystem.com)

## Technical Specifications

Web Sensor device type	<b>T5640</b>	T5641	<b>T6640</b>	<b>T6641</b>
Supply voltage (coaxial connector 5.1×2.1mm)	5.0 to 6.1 Vdc	5.0 Vdc	5.0 to 6.1 Vdc	5.0 Vdc
Power over Ethernet	according to IEEE 802.3af, PD Class O (max. 15.4W), voltage from 36Vdc to 57Vdc			
Power consumption	approximately 1W continuously, max. 4W for 50 ms with 15 s period			
Temperature measuring range	—	—	-20 to +60°C	-30 to + 105°C
Accuracy of temperature measurement	—	—	± 0.6°C	± 0.6°C
Relative humidity (RH) measuring range	—	—	0 to 100 %RH	0 to 100 %RH
Accuracy of humidity measurement from 5 to 95 %RH at 23°C	—	—	± 2.5 %RH	±2.5%RH
CO2 concentration measuring range	0 to 2000 ppm	0 to 10 000 ppm	0 to 2000 ppm	0 to 10 000 ppm
Accuracy of CO2 concentration measurement at 25°C and 1013 hPa	±(50ppm+2% of measured value)	±(100ppm+5% of measured value)	±(50ppm+2% of measured value)	± (100ppm+5% of measured value)
Recommended calibration interval of the device ...	5 years	5 years	1 year	1 year

Protection class – the case with electronics / the CO2 probe / the RH+ T probe/ the measuring end of stem	IP30/ – / – / –	IP30 / IP65 / – / –	IP30 / – / – / IP40	IP30 / IP65 / 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
Temperature operating range of the CO2 probe (with fixed cable)	–	-25 to +60 °C	–	-25 to +60°C
Temperature operating range of the measuring end of stem	–	–	-20 to +60°C	–
Temperature operating range of the RH+ T probe	–	–	–	-30 to +105°C
Atmospheric pressure operating range	850 to 1100 hPa	850 to 1100 hPa	850 to 1100 hPa	850 to 1100 hPa
Humidity operating range (no condensation)	0 to 95%RH	0 to 100%RH	0 to 95%RH	0 to 100%RH
Mounting position	sensor cover downwards	any position ....	sensor cover downwards	any position ....
Storage temperature range and storage relative humidity range	same as the operating range	same as the operating range	same as the operating range	same as the operating range
Electromagnetic compatibility according to	EN 61326-1 EN55011	EN 61326-1 EN55011	EN 61326-1 EN55011	EN 61326-1 EN55011
Weight	300g	380 (420, 500) g	320g	470 (540, 680) g
Dimensions [mm]				
				

- The relative humidity measuring range is limited at temperatures above 85°C, see manuals for devices.
- LED indication (preset by manufacturer): green (0 to 1000 ppm), yellow (1000 to 1200 ppm), red (1200 to 2000/10000 ppm)
- Recommended calibration intervals: relative humidity – 1 year, temperature -2 years, CO2 concentration -5 years
- if it can lead to long term condensation of water, it is necessary to use the RH+ T probe at position with sensor cover downwards

## CUSTOMER SUPPORT

COMET SYSTEM, s.r.o., Bezrucova 2901 Specifications are subject to change without notice.  
756 61 Roznov pod Radhostem, Czech Republic  
ie-snc-n-tx64x-03



## Documents / Resources

	<p><b><a href="#">COMET T5640 Transmitters Web Sensors Power Over Ethernet</a> [pdf] User Manual</b> T5640 Transmitters Web Sensors Power Over Ethernet, Transmitters Web Sensors Power Over Ethernet, Web Sensors Power Over Ethernet, Sensors Power Over Ethernet, Power Over Ethernet, Over Ethernet, Ethernet</p>
--	---

## References

- [User Manual](#)

### Manuals+, Privacy Policy

This website is an independent publication and is neither affiliated with nor endorsed by any of the trademark owners. The "Bluetooth®" word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. The "Wi-Fi®" word mark and logos are registered trademarks owned by the Wi-Fi Alliance. Any use of these marks on this website does not imply any affiliation with or endorsement.