INTERIOR TEMPERATURE, HUMIDITY, PRESSURE TRANSMITTERS with serial RS485, RS232 output

temperature*barometric pressure*relative humidity*dew point temperature*
absolute humidity*specific humidity*mixing ratio*specific enthalpy

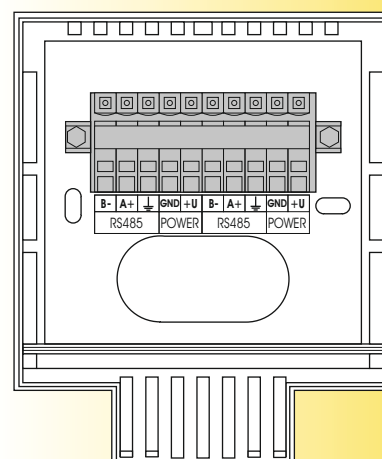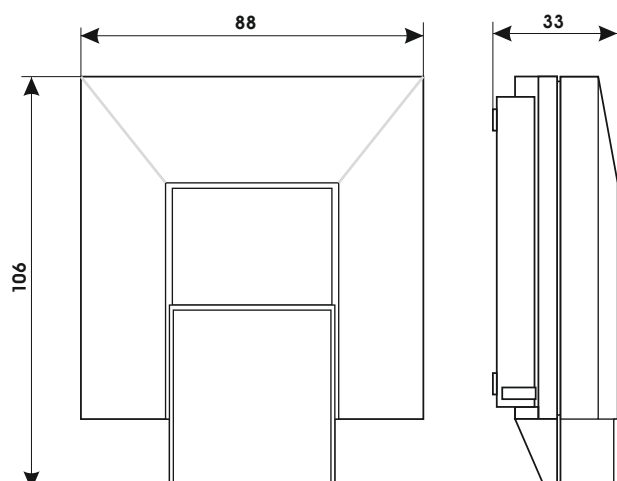**APPLICATIONS** - measuring of temperature, humidity and pressure at:

- residential and official buildings
- building energy management and **HVAC systems**
- pharmaceutical industry
- museums, archives, galleries
- wireless data acquisition via GSM

Temperature, humidity, barometric pressure transmitters are specially designed for use in exacting interiors in building energy management and HVAC systems. Are designed for easy installation on ordinary KU68 wiring boxes for household switches and sockets.
Large dual line LCD for display of temperature, humidity, barometric pressure or other computed value is an advantage. Display is possible to switch off. Computerized design ensures temperature compensation of the humidity and pressure sensors and fail indication.
Measured value is converted to digital serial output with the RS485 or RS232 link parameters. The RS485 transmitter circuitry is **galvanically isolated** from power circuitry to prevent collision in RS485 network. The transmitter works with ModBus RTU communication protocol or with Advantech ADAM compatible protocol.
Serial link enables to read actual readings and modify transmitter configuration.
Wireless data acquisition system via GSM can be built easily with Comet software package Database Sensor Monitor.

TECHNICAL PARAMETERS	
Operating temperature range:	0 to +50˚C
Accuracy and range of temperature measurement:	±0.5˚C from 0 to +50˚C, switchable to degrees Fahrenheit
Measuring range of relative humidity:	5 to 95%RH
Accuracy of relative humidity measurement:	±2.5% RH from 5 to 60%RH, ±3.0% RH from 60 to 95%RH at 23˚C
Accuracy and range of dew point temperature:	±1.6˚C at ambient temperature < 25˚C and RH>30%, range -60 to +80˚C
Accuracy and range of absolute humidity:	±3g/m^3 at ambient temperature T < 40˚C, range 0 to 400 g/m^3
Accuracy and range of specific humidity:	±2g/kg at ambient temperature T < 35˚C, range 0 to 550 g/kg
Accuracy and range of mixing ratio:	±2.2g/kg at ambient temperature T < 35˚C, range 0 to 995 g/kg
Accuracy and range of specific enthalpy:	± 3.5kJ/kg at ambient temperature T < 25˚C, range 0 to 995 kJ/kg
Accuracy and range of barometric pressure:	± 1,3hPa at 23˚C, range: 600 to 1100 hPa
Communication protocols:	ModBus RTU, ADAM Advantech, HW group
Communication speed:	110 to 115200 Bd
Power:	9-30Vdc, consumption with RS485 approximately 0,5W, with RS232 6mA
Dimensions (W x H x D):	88 x 106 x 33mm
Protection:	IP20
Material of the case:	ABS, white
Warranty:	two years

Interior sensors

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TRANSMITTERS WITH RS485 OUTPUT
- communication circuitry is GALVANICALLY ISOLATED from power circuitry to prevent collision in RS485 network

TYPE	MEASURED VALUE	DESCRIPTION
T0418	temperature	**Air temperature transmitter.** Display reading and temperature output is user selectable in degrees Celsius or Fahrenheit.
T3418	temperature humidity	**Air temperature and humidity transmitter.** Measured temperature and relative humidity are converted to other humidity interpretation - dew point temperature, absolute humidity, specific humidity, mixing ratio or specific enthalpy.
T7418	temperature humidity atmospheric pressure	**Air temperature, humidity, pressure transmitter.** Measured temperature and relative humidity are converted to other humidity interpretation - dew point temperature, absolute humidity, specific humidity, mixing ratio or specific enthalpy. Display reading and pressure output is user selectable in these units: hPa, kPa, mbar, mmHg, inHg, inH_2O, PSI, oz/in^2 Barometer enables to measure sea level pressure by setting of correction to altitude above sea level.

TRANSMITTERS WITH RS232 OUTPUT
- communication circuitry is GALVANICALLY CONNECTED to power circuitry

TYPE	MEASURED VALUE	DESCRIPTION
T0318	temperature	**Air temperature transmitter.** Display reading and temperature output is user selectable in degrees Celsius or Fahrenheit.
T3318	temperature humidity	**Air temperature and humidity transmitter.** Measured temperature and relative humidity are converted to other humidity interpretation - dew point temperature, absolute humidity, specific humidity, mixing ratio or specific enthalpy.
T7318	temperature humidity atmospheric pressure	**Air temperature, humidity, pressure transmitter.** Measured temperature and relative humidity are converted to other humidity interpretation - dew point temperature, absolute humidity, specific humidity, mixing ratio or specific enthalpy. Display reading and pressure output is user selectable in these units: hPa, kPa, mbar, mmHg, inHg, inH_2O, PSI, oz/in^2 Barometer enables to measure sea level pressure by setting of correction to altitude above sea level.

Included accessory:

Traceable calibration certificate from the manufacturer, instruction manual. Calibration certificate with declared metrological traceability of etalons is based on requirements of EN ISO/IEC 17025 standard.

Free program TSensor for configuring of the transmitter is ready to be downloaded from www.cometsystem.cz.

Free program SensorReader for logging values from one thermometer to a PC disk file is ready to download. Recorded values in CSV format are easy to process in e.g. Excel.

For acquiring values from several transmitters, third party software is possible to use. Tested functionality is with programs LabVIEW from National Instruments, TIRS.NET, ControlWeb, EasyView.

Optional accessory:

Transmitters Tx418 with RS485 output are directly compatible with sixteen channel Comet data logger MS.