

INTERIOR TEMPERATURE, HUMIDITY, ATMOSPHERIC PRESSURE TRANSMITTERS

with analog 4-20mA, 0-10V 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

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. Transmitters are designed for use in non-aggressive environment.



COMMON TECHNICAL PARAMETERS	
Operating temperature range:	0 to +50 °C
Range of measured values:	user adjustable from the PC
Power of transmitters with 4-20mA output:	9-30Vdc
Power of transmitters with 0-10V output:	15-30Vdc , maximum consumption 20mA
Dimensions (W x H x D):	88 x 106 x 33mm
Protection:	IP20
Material of the case:	ABS, white
Warranty:	two years

TRANSMITTERS WITH CURRENT OUTPUT 4-20mA:

TYPE	MEASURED VALUE	OUTPUT 1	OUTPUT 2	DESCRIPTION
T0118	temperature	0-50 °C	-	Output: 4 to 20mA / 0 to +50 °C. Accuracy $\pm 0,5$ °C Display reading and temperature output are user selectable in degrees Celsius or Fahrenheit.
T2118	barometric pressure	800-1100hPa	-	Maximum pressure range: 600 to 1100hPa. Accuracy: $\pm(1,3hPa+0.06\%$ from adjusted output span) at 23 °C from 800 to 1100hPa. Display reading and pressure output is user selectable in these units: hPa, kPa, mbar, mmHg, inHg, inH ₂ O, PSI, oz/in ²
T3118	temperature humidity	0-50 °C	0-100%RH	Output 1: 4 to 20mA / 0 to +50 °C Output 2: 4 to 20mA / 0 to 100%RH Both outputs are galvanically isolated. Output values and range are user adjustable. Display reading and temperature output are user selectable in degrees Celsius or Fahrenheit. Measured relative humidity and temperature are also converted to other humidity interpretation - dew point temperature, absolute humidity, specific humidity, mixing ratio or specific enthalpy.

TRANSMITTERS WITH VOLTAGE OUTPUT 0-10V:

TYPE	MEASURED VALUE	OUTPUT 1	OUTPUT 2	DESCRIPTION
T0218	temperature	0-50 °C	-	Output: 0 to 10V / 0 to +50 °C. Accuracy $\pm 0,5$ °C Display reading and temperature output are user selectable in degrees Celsius or Fahrenheit.
T2218	barometric pressure	800-1100hPa	-	Maximum pressure range: 600 to 1100hPa. Accuracy: $\pm(1,3hPa+0.06\%$ from adjusted output span) at 23 °C from 800 to 1100hPa. Display reading and pressure output is user selectable in these units: hPa, kPa, mbar, mmHg, inHg, inH ₂ O, PSI, oz/in ²
T3218	temperature humidity	0-50 °C	0-100%RH	Output 1: 0 to 10V / 0 to +50 °C Output 2: 0 to 10V / 0 to 100%RH Both outputs are not galvanically isolated, have common ground. Output values and range are user adjustable. Display reading and temperature output are user selectable in degrees Celsius or Fahrenheit. Measured relative humidity and temperature are also converted to other humidity interpretation - dew point temperature, absolute humidity, specific humidity, mixing ratio or specific enthalpy.

Interior sensors

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

TECHNICAL PARAMETERS OF TRANSMITTERS T3118, T3218	
Measuring range of relative humidity:	5 to 95%
Accuracy of relative humidity measurement:	$\pm 2.5\%$ RH from 5 to 60%RH, $\pm 3.0\%$ RH from 60 to 95%RH at 23 °C
Accuracy and range of temperature measurement:	± 0.5 °C from 0 to +50 °C, switchable to degrees Fahrenheit
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:	± 3 g/m ³ at ambient temperature T < 40 °C, range 0 to 400 g/m ³
Accuracy and range of specific humidity:	± 2 g/kg at ambient temperature T < 35 °C, range 0 to 550 g/kg
Accuracy and range of mixing ratio:	± 2.2 g/kg at ambient temperature T < 35 °C, range 0 to 995 g/kg
Accuracy and range of specific enthalpy:	± 3.5 kJ/kg at ambient temperature T < 25 °C, range 0 to 995 kJ/kg

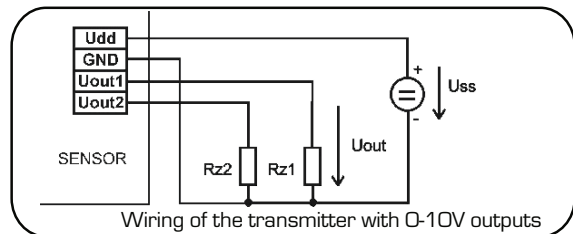
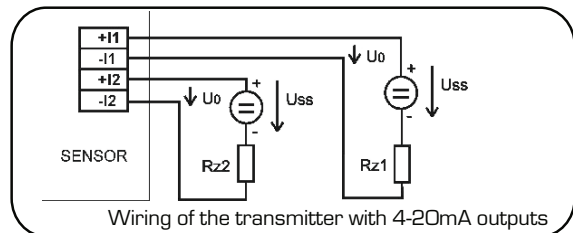
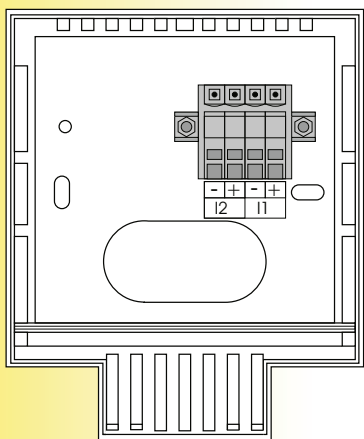
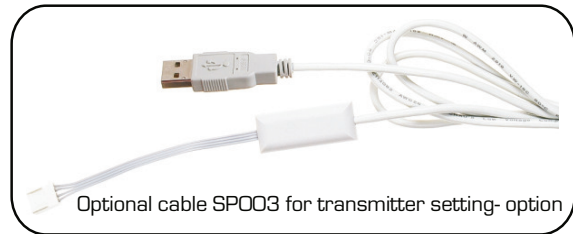
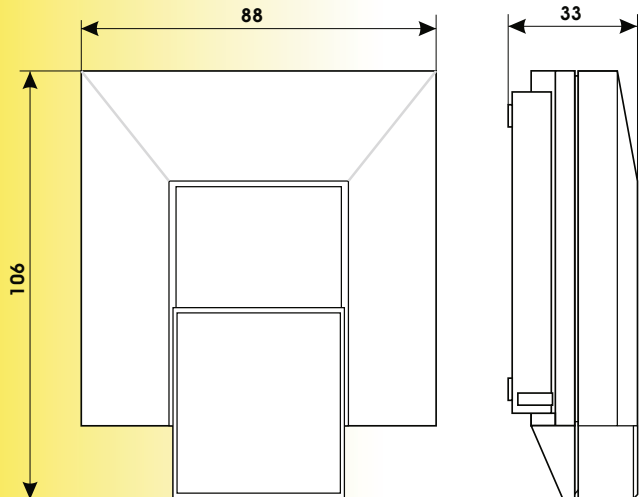
Any measured value - temperature, relative humidity, dew point temperature, absolute humidity, specific humidity, mixing ratio or specific enthalpy can be assigned to any of the two outputs of T3118 or T3218 transmitter. Also identical value can be assigned to both outputs. Outputs are adjusted to maximum range from the manufacturer (0 to 50 °C, 0 to 100%RH). Output range is user adjustable from the PC by means of the optional cable SPO03 - see below.

Free configuration program TSensor for transmitter adjustment is ready to download anytime.

If different adjustment of outputs and output ranges are required, please specify required output values (RH, T, Tdp, ...) and required ranges.

Barometer T2118 or T2218 enables to measure sea level pressure by setting of correction to altitude above sea level.

Ordering example: Transmitter T3118, output 1: RH 10 to 90%, output 2: temperature 0 to 35 °C



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.

Transmitters are directly compatible with sixteen channel Comet data acquisition system MSx.