



# TEMPERATURE, RELATIVE HUMIDITY, DEW POINT TRANSMITTERS

## New generation !

- programmable humidity, temperature and dew point transmitters - 4-20mA output
- programmable humidity, temperature and dew point transmitters - 0-10V output



Transmitter T3113, TO213



Transmitter T1110, T3110, TO210



Transmitter T3111

Relative humidity transmitters with 4-20mA output for two-wire connection are available in wall-mount, duct-mount and bar types. Also types with T+RH probe on a cable are available. Transmitter contains a microprocessor based control circuitry in a durable plastic case with a connection terminals and a humidity sensor in a bronze sintered filter. Humidity transmitters are also available with galvanic isolated temperature output 4-20mA and humidity output 4-20mA. Configuration of outputs and output range are user adjustable. Large dual line LCD for simultaneous display of T+RH, or dew point temperature is an advantage. Display is possible to switch off. Computerized design ensures maximum long term stability, temperature compensation of the humidity sensor and fail indication. State-of-the-art capacitive polymer sensor ensures excellent calibration long term stability, inertia against water and condensation. Transmitters are designed for use in non-aggressive environment.

### TECHNICAL PARAMETERS

Relative humidity operating range:	0 to 100%
Accuracy of relative humidity output:	±2.5% relative humidity from 5 to 95% at 23 °C
Accuracy of temperature output:	±0.4 °C from -30 to +100 °C, ±0.4% from reading over +100 °C
Accuracy of temperature output of T4111:	±0.15 °C + 0.1% from adjusted output span (without temperature probe)
Accuracy of dew point temperature output:	±0.5 °C from 30 to 95% RH (calculated from temperature and RH)
Temperature operating range of the case:	-30 to +80 °C
Temperature operating range of the LCD display:	readable to +70 °C, recommended to switch off LCD over +70 °C
Range of temperature compensation of RH sensor:	-30 to +125 °C
Current outputs - two-wire connection:	4-20mA, galvanic isolated with dual-output models
Voltage outputs:	0-10V, outputs are not galvanic isolated - have common ground
Configuration of outputs and output range:	user adjustable from the PC
Filtering ability of sintered bronze sensor cover:	0.025mm
Power:	<b>9-30Vdc</b> current transmitters 4-20mA <b>15-30Vdc</b> voltage transmitters 0-10V, maximum consumption 20mA
Protection of the case with electronics:	IP65 electronics, IP40 sensors



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TRANSMITTERS ARE AVAILABLE IN FOLLOWING MODELS:

TYPE	MEASUR. VALUE	MAXIMUM RANGE OF TEMPERATURE MEASUREMENT	LENGTH	OUTPUT 1 <sup>3)</sup>	OUTPUT 2 <sup>3)</sup>	NOTE
<b>TRANSMITTERS WITH 4-20mA OUTPUT</b>						
T1110	RH	-30 to +80 °C	73mm	0-100%RH <sup>3)</sup>	-	outdoor and indoor use
T3110	RH+T+Tdp <sup>1)</sup>	-30 to +80 °C	73mm	0-100%RH <sup>3)</sup>	-30to+80 °C <sup>3)</sup>	outdoor and indoor use
T3113	RH+T+Tdp <sup>1)</sup>	-30 to +125 °C <sup>2)</sup>	150mm	0-100%RH <sup>3)</sup>	-30to+125 °C <sup>3)</sup>	duct mount
T3117	RH+T+Tdp <sup>1)</sup>	-30 to +125 °C <sup>2)</sup>	700mm	0-100%RH <sup>3)</sup>	-30to+125 °C <sup>3)</sup>	bar type
T3111	RH+T+Tdp <sup>1)</sup>	-30 to +105 °C <sup>2)</sup>	probe cable including cable 1,2,4m	0-100%RH <sup>3)</sup>	-30to+105 °C <sup>3)</sup>	T+RH probe with 1m cable. Cable lengths 2m or 4m available.
T0110	T	-30 to +80 °C	53mm	-30to+80 °C <sup>3)</sup>	-	outdoor and indoor use
T4111	T	-200 to +600 °C	-	-200to+600 °C <sup>3)</sup>	-	transducer for Pt1000 probes, output range adjustable by the user
<b>TRANSMITTERS WITH 0-10V OUTPUT</b>						
T0210	RH+T+Tdp <sup>1)</sup>	-30 to +80 °C	73mm	0-100%RH <sup>3)</sup>	-30to+80 °C <sup>3)</sup>	outdoor and indoor use
T0213	RH+T+Tdp <sup>1)</sup>	-30 to +125 °C <sup>2)</sup>	150mm	0-100%RH <sup>3)</sup>	-30to+125 °C <sup>3)</sup>	duct mount

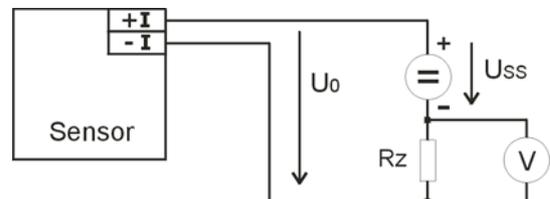
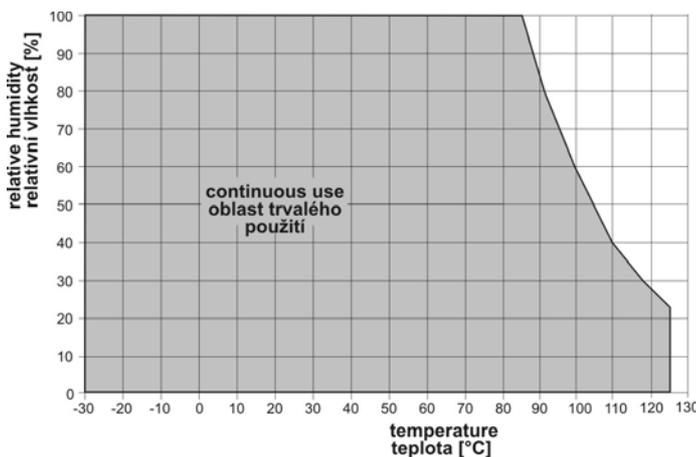
1) Tdp .. dew point temperature

2) Maximum temperature only at the measuring end with sensors. Maximum temperature +105 °C for T3111 with cable probe is allowed also for the cable. Relative humidity at temperature over +85 °C is limited in accordance with the graph. Near plastic case with electronics maximum temperature is +80 °C.

3) Any measured value (T, RH, Tdp) can be assigned to each output of dual output transmitters. Also identical value can be assigned to both outputs (e.g. humidity + humidity). Outputs are adjusted to maximum range from the manufacturer. Output range is user adjustable from the PC by means of the optional cable SPO03 - see photo. Free configuration program for transmitter adjustment is ready to download anytime from [www.cometsystem.cz](http://www.cometsystem.cz). If different adjustment of outputs and output ranges are required, please specify required output values (RH, T, Tdp) and required ranges. Minimum full scale is 30 °C or 30%RH.

**Ordering example:** Transmitter T3110, output 1: RH 10 to 90%, output 2: temperature 0 to 35 °C

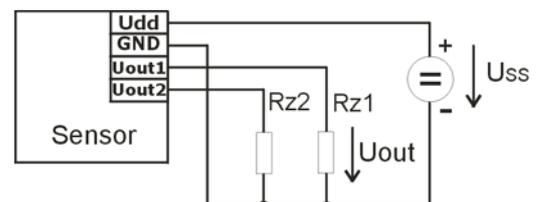
**Ordering example:** Transducer T4111, output: -100 to +30 °C



Typical application wiring of transmitter with 4-20mA output

**Included accessory:** calibration certificate from the manufacturer, instruction manual. Free configuration program for transmitter adjustment is ready to download anytime from [www.cometsystem.cz](http://www.cometsystem.cz)

**Other optional accessory:** see further



Typical application wiring of transmitter with 0-10V output

Transmitters are directly compatible with sixteen channel Comet data acquisition system MS2+, MS3+, MS4+.