



## TEMPERATURE, HUMIDITY, BAROMETRIC PRESSURE TRANSMITTERS with serial RS485, RS232 output

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



- APPLICATIONS
- server rooms
- telecommunication devices
- warehouses
- manufacturers
- museums, archives, galleries
- air-conditioned rooms
- weather stations

Measured temperature, barometric pressure, relative humidity, dew point temperature, absolute humidity, specific humidity, mixing ratio or specific enthalpy is converted to digital serial output with the RS485 or RS232 link parameters. Large dual line LCD for simultaneous display of temperature and relative humidity, or other calculated humidity interpretation is an advantage. Computerized design ensures maximum long term stability and fail indication. The transmitter works with ModBus communication protocol or with Advantech ADAM compatible protocol. Protocol is user selectable in special configuration mode by means of the PC. Serial link enables to read actual readings and modify transmitter configuration. Instrument works always in slave mode, i.e. responds only to master device query. Transmitters have the address space available from 1 to 255. The T4311 RS232 transmitter can be powered directly from the PC port or from external ac/dc adapter.

TECHNICAL PARAMETERS	
Applied temperature sensor:	RTD, Pt1000-3850ppm/°C
Supported temperature units:	degrees Celsius, degrees Fahrenheit
Operating temperature range of the electronics:	-30 to +80 °C, switch OFF the display over +70 °C
Accuracy of temperature measurement:	±0.4 °C
Range of temperature measurement:	0 to 100%
Accuracy of relative humidity measurement:	±2.5%RH from 5 to 95% at 23 °C
Accuracy and range of dew point temperature:	±1.5 °C at ambient temperature < 25 °C and RH>30%, range -60 to +80 °C
Accuracy and range of absolute humidity:	±3g/m <sup>3</sup> at ambient temperature T < 40 °C, range 0 to 400 g/m <sup>3</sup>
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:	±2g/kg at ambient temperature T < 35 °C, range 0 to 995 g/kg
Accuracy and range of specific enthalpy:	± 3kJ/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 1100hPa
Supported pressure units:	hPa, kPa, mbar, mmHg, inHg, inH <sub>2</sub> O, PSI, oz/in <sup>2</sup>
Range of temperature compensation of RH sensor:	-30 to +125 °C
Power:	9 to 30 V DC, consumption approximately 0.5W
Protection - temperature and humidity transmitters:	IP65 electronics with terminals, IP40 humidity sensor
Protection - transmitters measuring pressure:	IP54 electronics with terminals, IP40 humidity sensor
Filtering ability of sensor cover:	0,025mm
Communication protocols:	ModBus, ADAM Advantech
Communication speed:	110 to 115200 Bd
Dimensions of models T3411, T3311, T7410:	88 x 168 x 37
Warranty:	two years



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### Transmitters with RS485 output - circuits GALVANIC ISOLATED from power circuits

TYPE	MEASURED VALUE	MAXIMUM TEMPERATURE AND PRESSURE MEASURING RANGE	STEM LENGTH	DESCRIPTION
T3411	T+H	-30 to +80 °C	75mm	Thermometer-hygrometer - outdoor, indoor use
T3413	T+H	-30 to +125 °C <sup>1)</sup>	150mm	Thermometer-hygrometer - duct mount
T3417	T+H	-30 to +125 °C <sup>1)</sup>	700mm	Thermometer-hygrometer - bar type
T3419	T+H	-30 to +105 °C <sup>1)</sup> probe, cable + 80 °C	probe cable 1,2,4m	Thermometer-hygrometer - T+RH probe with 1 m cable, diameter 18mm. Available also with cable lengths 2m or 4m.
T5410	T+P	-30 to +80 °C	53mm	Thermometer-barometer - outdoor, indoor use
T7410	T+H+P	-30 to +80 °C 600 to 1100hPa	75mm	Thermometer-hygrometer-barometer - outdoor, indoor use
T7411	T+H+P	-30 to +105 °C <sup>1)</sup> 600 to 1100hPa	probe cable 1,2,4m	Thermometer-hygrometer-barometer - T+RH probe with 1 m cable, diameter 18mm. Available also with cable 2m or 4m.
T2414	P	600 to 1100hPa	-	Barometer - outdoor, indoor use

### Transmitters with RS232 output - circuits GALVANIC CONNECTED to power circuits

TYPE	MEASURED VALUE	MAXIMUM TEMPERATURE AND PRESSURE MEASURING RANGE	STEM LENGTH	DESCRIPTION
T3311	T+H	-30 to +80 °C	75mm	Thermometer-hygrometer - outdoor, indoor use
T7310	T+H+P	-30 to +80 °C 600 to 1100hPa	75mm	Thermometer-hygrometer-barometer - outdoor, indoor use
T7311	T+H+P	-30 to +105 °C <sup>1)</sup> 600 to 1100hPa	kabel sondy 1,2,4m	Thermometer-hygrometer-barometer - T+RH probe with 1 m cable, diameter 18mm. Available also with cable 2m or 4m.
T2314	P	600 to 1100hPa	-	Barometer - outdoor, indoor use

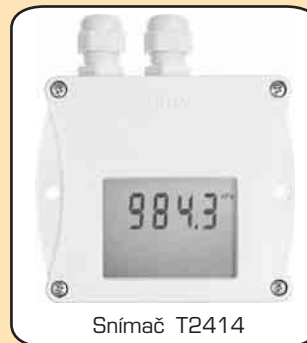
<sup>1)</sup> Maximum temperature only at the measuring end with sensors. Relative humidity at temperature over +85 °C is limited in accordance with the graph. Near plastic case with electronics maximum temperature is +80 °C.

T - temperature  
H - humidity  
P - barometric pressure

#### Included accessory:

Included is a **calibration certificate** from the manufacturer and instruction manual with the complete communication protocol description. Transmitters with the RS232 output have included 1.6 meter cable for communication with RS232 computer port.

#### Included accessory - see further



Transmitters Tx41x configured to ADAM protocol are directly compatible with sixteen channel Comet data acquisition system MSx.