
Series T3110

# Temperature and Humidity series T3110
## Outdoor, Indoor probe with 4-20mA output

### Technical data

| Technical parameters | Value |
|---|---|
| Output | 4-20mA |
| Measured Value | Temperature + Relative Humidity |
| Construction Type | Ambient Air |
| Design | Industrial |
| Temperature Measuring Range | -30 to 80 °C |
| Relay Output | No |
| Two-State Input | No |
| Lcd Display | Yes |
| PoE | No |
| Relative humidity range | 0 to 100% |
| Accuracy of relative humidity measurement | ±2.5% relative humidity from 5 to 95% at 23°C |
| Accuracy of temperature output | ±0.4°C |
| Available temperature units | degrees Celsius, Fahrenheit |
| Accuracy and range of dew point temperature output - for more details see graphs | ±1.5°C at ambient temperature T<25°C and RH>30%<br>range -60 to +80 °C |
| Accuracy and range of absolute humidity output | ±1.5g/m3 at ambient temperature T < 25°C<br>range 0 to 400 g/m3 |
| Accuracy and range of specific humidity output | ±2g/kg at ambient temperature T < 35°C<br>range 0 to 550 g/kg |
| Accuracy and range of mixing ratio output | ±2g/kg at ambient temperature T < 35°C<br>range 0 to 995 g/kg |
| Accuracy and range of specific enthalpy output | ±3kJ/kg at ambient temperature T < 25°C<br>range: 0 to 995 kJ/kg |
| Temperature operating range | -30 to +80°C |
| Temperature operating range of LCD display | readable to operating temperature +70°C, it is recommended to switch OFF the LCD over +70°C |
| Range of humidity sensor temperature compensation | all temperature range |
| Current outputs - two-wire connection | 4-20mA, galvanic isolated |
| Configuration of outputs and output range | user adjustable from the PC |
| Filtering ability of sensor cover | 0.025mm - filter with stainless steel mesh |
| Protection of the case with electronics | IP65 electronics, IP40 sensors |
| Power | 9-30Vdc |
| Dimensions | 88.5 x 170 x 39.5 mm (W x H x D), stem length 75 mm |
| Weight | approximately 150g |
| Warranty | 3 years |


Series S3120E

## Temperature and Humidity Series S3120E

Data logger is designed for record of temperature and humidity. Values are stored to a non volatile electronic memory. Data transfer to the personal computer for further analysis is performed via USB, RS232, GSM.

### Technical data

| Technical parameters | Value |
|---|---|
| Measured Value | Temperature + Relative Humidity |
| Construction Type | Ambient Air |
| Temperature Measuring Range | -30 to 70 °C |
| Two-State Input | No |
| Lcd Display | Yes |
| Built-In Printer | No |
| Operating temperature range | -30 to +70°C |
| Accuracy of temperature measurement | ±0.6°C from -30 to +30°C<br>±0.8°C from +30 to +70°C |
| Accuracy of air humidity measurement | ±3% RH from 5 to 95% at 23°C |
| Accuracy of dew point measurement - see details in graph | 2 °C at ambient temperature lower than 25°C and RH > 30%; range -60 to +70 °C |
| Resolution of the reading | 0.1°C, 0.1%RH |
| Real time clock | year, leap year, month, day, hour, minute, second |
| Data logging interval | adjustable from 10s to 24h (1minute to 24h in low-power mode) |
| Display and alarm refresh | each 10 s (each 1 minute in low-power mode) |
| Total memory capacity | 32000 temperature, humidity values in noncyclic logging mode |
| Data logging modes | noncyclic - data logging stops after filling the memory<br>cyclic - after filling memory oldest data is overwritten by new |
| Power | Lithium battery 3,6V, size AA |
| Typical battery life in low-power mode (1 minute sampling) | 6 years |
| Typical battery life in fast mode (10 second sampling) | 2.5 years |
| Battery life in continuous on-line mode with interval 1 minute | reduced to 70% of the above lives in fast mode |
| Battery life in continuous on-line mode with interval 10 second | 1 year |
| IP protection | IP30 |
| Dimensions | 93x64x29mm |

Series H3020

# Temperature and Humidity series H3020

## Technical data

| Technical parameters | Value |
|---|---|
| Output | None |
| Measured Value | Temperature + Relative Humidity |
| Construction Type | Ambient Air |
| Design | Industrial |
| Temperature Measuring Range | -30 to 80 °C |
| Relay Output | Yes |
| Two-State Input | No |
| Lcd Display | Yes |
| PoE | No |
| Maximum switching voltage, current, power of relay output | 50V, 2A, 60VA |
| Audible alarm | from built-in beeper - switchable |
| Relative humidity range | 0 to 100% |
| Accuracy of relative humidity measurement | ±2.5% relative humidity from 5 to 95% at 23°C |
| Accuracy of temperature output | ±0.4°C |
| Available temperature units | degrees Celsius, Fahrenheit |
| Accuracy and range of dew point temperature output - for more details see graphs | ±1.5°C at ambient temperature T<25°C and RH>30% range -60 to +80 °C |
| Accuracy and range of absolute humidity output | ±1.5g/m3 at ambient temperature T < 25°C range 0 to 400 g/m3 |
| Accuracy and range of specific humidity output | ±2g/kg at ambient temperature T < 35°C range 0 to 550 g/kg |
| Accuracy and range of mixing ratio output | ±2g/kg at ambient temperature T < 35°C range 0 to 995 g/kg |
| Accuracy and range of specific enthalpy output | ±3kJ/kg at ambient temperature T < 25°C range: 0 to 995 kJ/kg |
| Temperature operating range | -30 to +80°C |
| Temperature operating range of LCD display | readable to operating temperature +70°C, it is recommended to switch OFF the LCD over +70°C |
| Temperature compensation of the humidity sensor | all temperature range |
| Filtering ability of sensor cover | 0.025mm - filter with stainless steel mesh |
| IP protection | IP65 electronics, IP40 sensors |
| Power | 9-30Vdc, power consumption approximately 1W |
| Dimensions | 136 x 213 x 45 mm (W x H x D), stem lenght 75mm |
| Weight | approximately 350g |
| Warranty | 3 years |

Series MS55D

# Data logger Temperature and Humidity Series MS55D

Data loggers are designed for measuring, recording, evaluation and subsequent processing of input electrical signals, which are subject to relatively slow changes (> 1s). In conjunction with the appropriate sensors and transducers are suitable for monitoring physical quantities.

## Technical data

| Technical parameters | Value |
|---|---|
| Total memory capacity | 2MB (up to 480 000 values) |
| Memory type | internal SRAM, backed-up by Lithium battery |
| Data logging modes | noncyclic - logging stops after filling the memory<br>cyclic - after filling memory oldest data is overwritten by new |
| Data logging interval | adjustable individually for all input channels from 1 second to 24 hours |
| Real time clock | year, leap year, month, day, hour, minute, second, backed-up by Lithium battery |
| Input measured values (1 to 16 inputs) | are defined for each channel by installed input modules (see table) accordingly to user requirements |
| Resolution of the AD converter (analog channels) | 16 bits, conversion duration approximately 60ms/channel |
| Communication speed | 9600, 19200, 57600, 115200 Bd, 230400* Bd (* applicable for USB, Ethernet) |
| Power | 9 to 30Vdc, 24Vdc recommended |
| Operating temperature range | 0 to +50°C |
| Dimensions including connectors | 215 x 225 x 60 mm |
| Protection | IP20 |
| Weight | approximately 800 g |
| Warranty | 3 years |

Series C3121

## Temperature and Humidity Series C3121

Thermometer, hygrometer is designed for direct measurement of temperature, relative humidity.
Audio and optical alarm of measured values.
Memory of minimum and maximum measured values.
Function Hold – manual storing of actual values for later displaying.
LCD backlight.
Simultaneous reading of temperature and relative humidity, dew point temperature reading
selectable, external temperature-humidity probe with 1meter cable. Cable lengths 2 and 4 meters available optionally.

### Technical data

| Technical parameters | Value |
|---|---|
| Measured Value | Temperature + Relative Humidity |
| Construction Type | With T+RH Probe on Cable |
| Temperature Measuring Range | -30 to 105 °C |
| Data Logging Function | No |
| Operating temperature range | -10 to +60°C |
| Temperature sensor | RTD Ni1000/6180ppm |
| Accuracy of temperature measurement with built-in sensor | ±0.4°C |
| Accuracy of air humidity measurement | ±2.5%RH from 5 to 95% at 23°C, resolution 0.1% |
| Accuracy of dew point measurement | 1.5 °C at ambient T < 25°C and RH>30%, range -60 to +80 °C |
| Power | battery 9V |
| Battery life | 4 months typically |
| Dimensions | 141 x 71 x 27 mm, probe length 135mm, probe diameter 18mm |
| IP protection | IP20 |
| Weight including battery without probe | approximately 150 g |
| Warranty | 3 years |