# Compressed-air thermometer hygrometer with Ethernet interface and relays



code: H3531P

Compressed-air ambient humidity, temperature Ethernet sensor with two relay outputs. T+RH probe from hard anodized duralumin for compressed air up to 25 bars with cable. Humidex reading.
Sensor H3531P is designed for online monitoring of temperature, relative humidity of air without aggressive substances. Three binary inputs to detection of two-states signals are the advantage. Other devices are controlled by two relay outputs.

High precision capacitive polymer sensor ensures excellent long term calibration stability and ultimate accuracy. Measured values are also converted to other humidity interpretation: dew point temperature, absolute humidity, specific humidity, mixing ratio and specific enthalpy.

The device is supplied with T+RH probe with 1m cable. Cable lengths 2m or 4m available optionally.

**Processing and analysis of measured data:**

- online in COMET Cloud
- COMET Database software
- integration into 3-party systems

## Technical data

| | |
|---|---|
| TEMPERATURE SENSOR | |
| Measuring range | -30 to +105 °C |
| Accuracy | ±0.4 °C |
| Resolution | 0.1 °C |
| HUMIDITY SENSOR | |
| Measuring range | 0 to 100 % RH |
| Accuracy | ±2.5 % RH from 5 to 95 % at 23 °C |
| Resolution | 0.1% RH |
| DEW POINT | |
| Measuring range | -60 to +80 °C |
| Accuracy | ±1.5°C for dew point temperature +10°C and higher at ambient temperature +25°C<br>±2.0°C for dew point temperature 0°C at ambient temperature +25°C<br>±3.0°C for dew point temperature -10°C at ambient temperature +25°C<br>±6.0°C for dew point temperature -20°C at ambient temperature +25°C |
| Resolution | 0.1 °C |
| MEASURING THE MOISTURE OF COMPRESSED AIR | |
| Measuring range | up to 25 bars |
| Air flow velocity | up to 25 m/s at a pressure of 1 bar (1m/s at a pressure of 25 bar) |
| RELAY OUTPUTS | |

| | |
|---|---|
| Quantity | 2 |
| Maximal voltage | 50 V |
| Maximal current | 2 A |
| Maximal power | 60 VA |
| BINARY INPUTS | |
| Quantity | 3 |
| Signal for binary inputy | dry contact, open collector or two-state voltage signal.<br>Inputs are not galvanically isolated. |
| Minimum pulse duration on binary input | 500 ms |
| Voltage across open contact | < 3,3 V |
| Low voltage level | 0 to +0,5 V |
| High voltage level | +3,0 to +30 V |
| GENERAL TECHNICAL DATA | |
| Operating temperature | -30 to +80 °C |
| Channels | 1x connectable temperature+humidity probe |
| Acoustic alarm | from built-in beeper - switchable |
| Counted values | humidex, dew point, absolute humidity, specific humidity, mixing ratio, specific enthalpy |
| Output | Ethernet |
| Measuring interval | 2 s |
| Range of humidity sensor temperature compensation | all temperature range |
| Available temperature units | degrees Celsius, degrees Fahrenheit |
| Communication protocol | WWW, ModbusTCP, SNMPv1, SOAP, XML |
| Alarm protocols | E-mail (SMTP authentication is supported), SNMP Trap, Syslog |
| Power | 9-30 Vdc |
| Protection class | IP40 |
| Dimensions | 136 x 159 x 45 mm; length/diameter of external probe 150/18 mm |
| External probe cable length | 1 meter |
| Weight | approx. 410 g |
| Warranty | 3 years |