

# Combined Sensor with Two Pt1000 Inputs and One Input for Digital Probes, Ethernet Output and PoE

code: TA3645



The TA3645 model represents a hybrid Ethernet sensor that combines two highly accurate analog inputs for Pt1000 resistance probes with one digital input (for T+RH or CO2 probes).

Thanks to this configuration, the TA3645 is a universal monitoring device capable of measuring in the extreme range of -200 °C to +260 °C with an accuracy of  $\pm 0.2$  °C.

The device is an ideal solution for demanding applications in healthcare or industry: Pt1000 inputs reliably monitor refrigerators, freezers, cryogenic boxes, or ovens, while the digital probe simultaneously monitors the room climate (temperature, humidity, or CO2).

For convenient operation and easy integration, the TA3645 offers a large backlit LCD display, acoustic alarm signaling, and PoE support. It also features a cable resistance compensation function for Pt1000 probes directly from the web interface.

## Main Benefits:

- 2x Pt1000 input + 1x digital T+RH or CO2 probe
- Extreme temperature measuring range from -200 °C
- Backlit LCD display, acoustic and LED alarm signaling
- Power supply 5-24 V or PoE
- Integrated backup memory
- Modern web interface, IPv4/IPv6 support, Modbus TCP, COMET Cloud, and fully encrypted communication (HTTPS, SNMPv3, TLS)
- Integrated detachable bracket for easy installation

## Technical data

|                        |                                                                        |
|------------------------|------------------------------------------------------------------------|
| TEMPERATURE SENSOR     |                                                                        |
| Measuring range        | Depending on the connected Pt1000 probe                                |
| Accuracy               | Depending on the connected Pt1000 probe                                |
| Resolution             | 0.1 °C                                                                 |
| HUMIDITY SENSOR        |                                                                        |
| Measuring range        | Depending on the connected DSxx probe                                  |
| Accuracy               | Depending on the connected DSxx probe                                  |
| Resolution             | 0.1% RH                                                                |
| DEW POINT              |                                                                        |
| Measuring range        | Depending on the connected DSxx probe                                  |
| Accuracy               | Depending on the connected DSxx probe                                  |
| Resolution             | 0.1 °C                                                                 |
| CO2 SENSOR             |                                                                        |
| Measuring range        | 0 to 10,000 ppm                                                        |
| Accuracy               | $\pm(100 \text{ ppm} + 5\% \text{ of reading})$ at 23 °C and 1,013 hPa |
| Resolution             | 1 ppm                                                                  |
| CO2 probe cable length | 1, 2 or 4 meters                                                       |

|                                                 |                                                                                                                   |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| GENERAL TECHNICAL DATA                          |                                                                                                                   |
| Operating temperature range                     | -30 to +60 °C                                                                                                     |
| Measurement channels                            | 2× Pt1000 inputs + 1× digital T+RH or CO <sub>2</sub> probe, CINCH / ELKA connectors                              |
| Calculated values                               | dew point temperature, absolute humidity, specific humidity, mixing ratio, specific enthalpy, humidex, heat index |
| Supported temperature units                     | degrees Celsius (°C), degrees Fahrenheit (°F)                                                                     |
| Temperature compensation of the humidity sensor | across the entire temperature range                                                                               |
| Power supply                                    | Power over Ethernet (IEEE 802.3af) or 5-24 V DC                                                                   |
| Network interface                               | Ethernet                                                                                                          |
| IP support                                      | IPv4, IPv6                                                                                                        |
| Communication protocols                         | HTTP(s), Web server (WWW), HTTP GET (JSON, XML), Modbus TCP, SNMPv1, SNMPv2c, SNMPv3                              |
| Alarm protocols                                 | Email (SMTP), Syslog                                                                                              |
| Measurement interval                            | 1 s                                                                                                               |
| Ingress protection (IP rating)                  | IP30 (electronics)                                                                                                |
| Dimensions                                      | 116 × 85 × 42 mm (without connected probe)                                                                        |
| Weight                                          | 220 g                                                                                                             |
| Warranty                                        | 3 years                                                                                                           |