Compact Temperature, Humidity, Barometric Pressure, and CO2 Sensor, Ethernet Output and PoE



code: TA7640

The TA7640 is the most comprehensive compact sensor in the Web Sensor series. It combines temperature, relative humidity, atmospheric pressure, and CO2 concentration measurement, providing an overview of indoor air quality (IAQ).
A new NDIR module with high accuracy in the common range and the ability to measure up to 10,000 ppm is used for CO2 measurement.

The device is ideal for monitoring indoor air quality in offices, schools, and conference rooms, and for applications requiring comfort and health.

Three-color LED signaling allows use as an air quality 'traffic light' for easy ventilation control.

The TA7640 also calculates variables such as Humidex for assessing thermal comfort. Features include encrypted communication, PoE power, time backup, and the ability to send alarms via email or acoustic signaling.

Main Benefits:

- Comprehensive monitoring of indoor air quality
- Precise measurement of temperature, humidity, CO2, and barometric pressure
- 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	-30 to +60 °C
Accuracy	±0.4 °C
Resolution	0.1 °C
HUMIDITY SENSOR	
Measuring range	5 to 95 % RH
Accuracy	± 2,5 % RH from 5 to 60 % RH
Resolution	0.1% RH
DEW POINT	
Measuring range	-60 to +80 °C
Accuracy	±1.6 °C at ambient temprature T < 25°C and RH > 30%
Resolution	0.1 °C
CO2 SENSOR	
Measuring range	0 to 5000 ppm
Accuracy	±(50 ppm +3% of reading) at 25 °C and 1013 hPa

Resolution	1 ppm
ATMOSPHERIC PRESSURE SENSOR	
Measuring range	600 to 1100 hPa
Accuracy	±1.3 hPa at 23 °C, from 800 to 1100 hPa
Resolution	0.1 hPa
GENERAL TECHNICAL DATA	
Operating temperature range	-30 to +60 °C
Measurement channels	Integrated temperature, humidity, atmospheric pressure and CO₂ sensors
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)
Supported atmospheric pressure units	hPa, kPa, mbar, mmHg, inHg, inH2O, PSI, oz/in2
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), IP40 (sensors)
Dimensions	116 x 85 x 42 mm; stem 77 x 18 mm
Weight	240 g
Warranty	3 years