

Temperature - CO2 - Digital probe

APPLICATIONS

Module and probe used for monitoring temperature and CO2 concentration.

RADIOFREQUENCY

Up to 700 meters (765.53 yards) in open spaces, from 25 meters (27.34 yards) to 100 meters (109.36 yards) in enclosed spaces (buildings), and up to 400 meters (437.45 yards) inside with 3 repeaters.

FEATURE

Memory of 1500 points for temperature measurements and 1500 points for CO2 measurements in the radio module (equivalent to 10 days of autonomy with a measurement interval of 10 minutes).

SERVICE DISCOVERY PROTOCOL (SDP)

Setup is automatic. All you have to do is press the button on the Cobalt module for 3 seconds to connect it with the receiver. If the wireless signal is not optimal, Cobalt attempts to find a better path by using other Cobalt modules to relay its signal up to the receiver.

(With Thermo-Server software Version

4.1)



A cost-effective solution for monitoring temperature/CO2 in your CO2 incubators.

Cobalt is the industry's leading battery powered remote temperature/CO2 monitoring solution. Cobalt is an end-to-end wireless solution for remote temperature/ CO2 and sensor monitoring.

The Cobalt system is easy to install and easy to use. Since it's wireless, no cabling is required. It lets you accurately measure storage temperatures and CO2 for temperature- CO2-sensitive products remotely in real-time. Cobalt checks temperature and CO2 automatically, warns you in case of anomalies and stores temperature-CO2 data for tracking and traceability purposes.

This wireless module is designed to be installed on the outside of an incubator. The CO2/temperature probe is placed inside the enclosure via a capillary cable.

Cobalt collects and stores temperature/CO2 data at regular intervals, transmitting it wirelessly to a PC running the system management software. This software also handles alarms and data storage, giving you a fast and easy way to see all your measurements and anomalies in just a few clicks.



- **Range of temperature/CO2 measured:** from 0°C to +50°C and 0% to 10 CO2 concentrations.
- **Supply:** Adapter with 4 different plugs
Input: 100 to 240V AC - 50/60 Hz.
Output: 5V DC – 1A.
- **Battery for data backup:** LS17500 (Saft Mazda) - Lithium 3.6V. Battery life expectancy: 5 years.
- **Affixing the radio module:** Via double-sided Velcro® adhesive or magnetic adhesive on the side of the wall bracket.
- **ISM (Industrial Scientific Medical) band with 3 frequencies:** US/CAN 915 MHz, Europe 868 MHz, APAC 434 MHz.

- FCC 15 compliant. CE EN-300-220.
- Channel width: 50 kHz
- Frequency deflection: 16 KHz
- Transmission speed: 9600 Baud in NRZ mode
- Modulation type: GFSK
- Driven receiver sensitivity for BER= 1%: from -107dbm to -110 dbm
- Driven transmission: from 8 dbm to 10 dbm
- Power output: 25 mW

Plastic enclosure: ABS and Polycarbonate.
Temperature range for exposure of the module (functioning of the electronics of the radio module): 0°C to 50°C (32° to 122°F). 0 to 90% RH non condensing.
Index of protection: IP65.

Depending on usage, battery change may be required between 1 year and 3 years. Cobalt notifies you approximately two months before the end of battery life (when 10% battery life remains). You can change your own batteries or have it done by OCEASOFT or other qualified technician.

Size: 132.74 x 64.15 x 34 mm
Weight: 150 g

ON-DEMAND

TEMPERATURE / CO2 READING

Following a short press on the green button, Cobalt immediately takes a reading of the sensor. On devices with two sensors (e.g Temperature/CO2 sensors), the CO2 reading on the first sensor is displayed for 3 seconds. Press the button again to read the second sensor (temperature).

CALIBRATION MANAGEMENT

Calibration by disconnection of the remote module sensor. Calibration is easier because the remote module is not on the measurement channel (digital sensor).

ROBUST SOLUTION

Digital technology sensor is insensitive to interference thanks to the use of error-correcting code and CRC (checksum).

FIND OUT MORE

For more information on any of our products or services please visit us on the Web at:
www.oceasoft.com

Large LCD Display



Alarm icon



Battery level indicator



Performance indicator: wireless range (RSSI)



Most recent temperature / CO2 reading



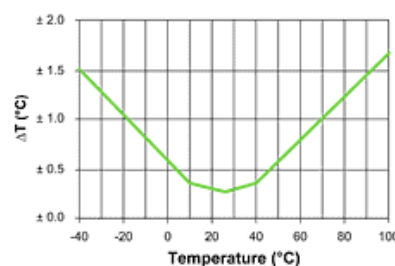
Display unit and text: this customizable text shows the sensor name, as well as various alert messages, such as "Sensor Fail", "Low Bat", "High Value", etc.

Spontaneous alarms.

The device sends an alarm to the Thermo-Server software (thus to the user) in case values exceed pre-determined upper or lower thresholds. Cobalt includes the ability to send spontaneous alarms with additional information:

- **Sensor failure:** For example, if a probe is disconnected, Cobalt attempts to establish communication with its sensor. If connection is not possible, a technical alarm is sent. The user is thus notified immediately if there is a problem getting readings.
- **Low battery:** When the battery-life counter reaches 10%, a technical alarm is automatically sent to let the user know that the battery needs to be changed soon.

DIGITAL TEMPERATURE-CO2 PROBE



- **Range of temperature/ CO2 measured:** 0°C to 50°C (32°F to 122°F) and 0 to 10% CO2
- **Type of probe:** Digital probe with 4 leads
- **Dimensions of the probe:** 65 mm x 75 mm x 14 mm plastic casing (ABS, Polycarbonate) with PTFE filter.
- **Length of the cable:** 0.80 m (flat cable)
- **Connector:** Connector with 4 golden pins between the probe and the radio module
- **Temperature measurement uncertainty:** +/- 0.3°C without calibration and +/- 0.15°C after calibration (+10°C to +40°C)
- **CO2 measurement uncertainty:** 0.2% +/- 2% of measured value (1% to 9% CO2)
Resolution: 0.0625°C and 0.0025% CO2
- **Calibration certificate:** Yes linked to COFRAC
- **Calibration point:** Calibration of the probe in comparison at +37°C / 80% RH and 5% CO2 Others points upon request.
- **Index of protection:** Probe IP44.

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