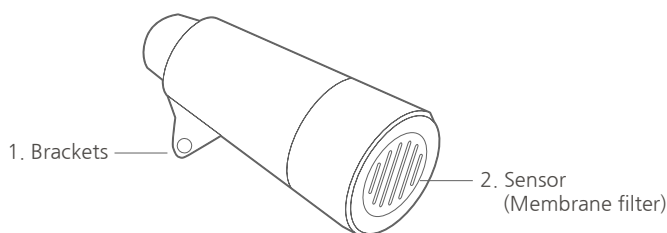# UA59-CO2-100-U

- Real-time CO2, Temperature Transmitter
- Long Lifetime using TC sensor
- Waterproof Housing with SUS303
- Individual Certificated included
- Operating On Windows / Linux / MacOS
- AT Command Support
- PC Recording Software (nest)
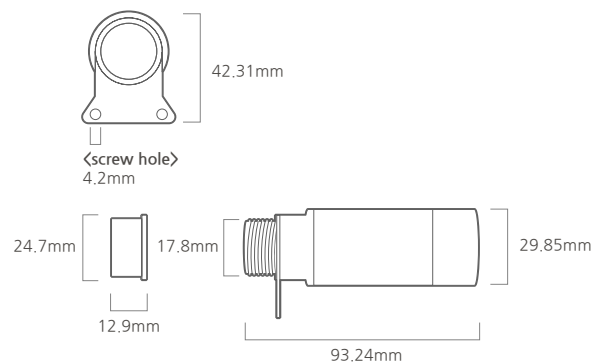- Android Recording App (nest Mobile)

UA59-CO2-100-U device is designed to measure Carbon Dioxide(CO2) and temperature in real-time via the USB connector. It has a long lifetime Thermal conductivity sensor, which can measure high concentration of CO2. Also, it has a waterproof stainless steel housing in order to use it on any chamber.

The UA Series is automatically recognized as a serial port on the operating system and accessed using the AT command. Multiple USB connections of the UA device could compose the multi-channel sensor. The sensor data is not stored in the UA, but recording in PC and Android device. 128CH real time monitoring software on pc, nest is downloadable on our website(www.radionode365.com). And android real time recording application 'nest mobile' is also available from google play store. The optional RN17X model helps UA series for you to setup remote web monitoring system.

Hardware

1. Brackets

2. Sensor
(Membrane filter)

Dimensions

42.31mm

<screw hole>
4.2mm

24.7mm   17.8mm   29.85mm

12.9mm

93.24mm

⚠ CAUTION!

- Gas flows might affect the thermal balance between CO2 Sensor and the PCB, which could influence the accuracy of the gas concentration measurements. If the gas concentration needs to be measured in a flow, it is advised to create some kind of dead space that is well vented, but keeps the sensor(s) out of the direct flow of the gas.

Contact Information

- www.radionode365.com
- master@dekist.com

High Density CO2 Gas Transmitter using TC Sensor

UA59-CO2-100-U Specifications

Sensor Channel Info.	• CH1: CO2 (Carbon dioxide) • CH2: Temperature
Gas Sensor Type	Thermal conductivity sensor
Gas Sensor Filter	Membrane Filter
Body Material	Stainless Steel
Measurement Range	• CO2: 1~100% • Temperature: -20~85°C
Measurement Unit (Selection using SW)	• CO2: %(Default), ppm • Temperature: °C(Default), °F
Measurement Cycle	1 sec
Sensor Resolution	• CO2: 0.01% (100ppm) • Temperature: 0.25°C
Sensor Accuracy (Repeatability)	• CO2: 0.5% + 3% of measured value (0~25%) 1% + 3% of measured value (0~100%) • Temperature: ±0.25°C
Compensation Logic	Temperature, Humidity Compensation apply
Baseline Drift	NONE
Long-term Drift	NONE
Gas Response Time	T90 < 1 sec
Warming up Time	NONE
Operating Condition	• Temperature: -20 ~ 85°C • Humidity: 0 ~ 100% R.H(non condensing)
Lifetime [1]	Semi permanent
Humidity-Sensitivity	NONE
Cross-Sensitivity	NONE
Power Consumption	5V (Max. 75mW)
Calibration Certificate	Individual Certificate. • CO2: Calibration with 5% CO2 calibration gas mixtures
Calibration Method	One point calibration
USB Port	USB 2.0 Type A Plug
Output Signal	USB digital, CDC Device (AT Command)
Software Support	• nest > 128CH recording software on PC > Download: www.radionode365.com • nest Mobile > 2CH recording software on Android devices > Download: Google play store • Calibration Software > Calibrator that compensates for measuring error. > Download: www.radionode365.com

1) Affected by usage environment

Application

• CO2 incubator
• Agricultural Products CA storage warehouse
• Centralized Gas Monitoring System
• Smart Farm Application
• Remote Alert System

Product Components

Model	Component
UA59-CO2-100-U	• UA59-CO2-100-U (1EA) • USB Extension Cable 1.5m (1EA) • Individual Calibration Certificate (1EA)

Optional Accessories

Model	Component
RG40	• Film Type USB Extension Cable 50cm (1EA)