CL-210-E/CL-211-E
CL-212-E/CL-213-E

Remote PM2.5/CO/CO2/Temperature/Humidity/
Dew Point Data Logger Module

Features

- Able to record PM2.5, CO, CO2, Temperature, Humidity and Dew Point Measurements
- Non-dispersive Infrared (NDIR) CO2 Sensor
- Up to 450,000 records with date and time stamps
- Supports the DCON, Modbus RTU/TCP, and MQTT Protocols
- Includes RS-485/Ethernet Communication Interfaces
- Relay Output for Alarm or IAQ Device Control

Introduction

The CL-200 series of data logger devices can be used to record PM2.5, CO, CO2, temperature, humidity and dew point information, including the date and time stamps, and are able to store up to 450,000 downloadable records.

Real-time data can be accessed from the CL-200 data logger from anywhere and at any time using the free Windows software, the iOS App, or the Android App, as long as they are connected to the same local network as the data logger.

Support is provided for common industrial protocols such as DCON, Modbus RTU, and Modbus TCP, as well as the emerging machine-to-machine (M2M)/)IoT (Internet of Things) connectivity protocol – MQTT. The CL-200 data logger can be connected via widely used communication interfaces including RS-485, Ethernet and PoE, meaning that the device can be easily integrated into existing HMI or SCADA systems, ensuring trouble-free maintenance in distributed control systems.

➲ Supports the MQTT Protocol for IoT Applications
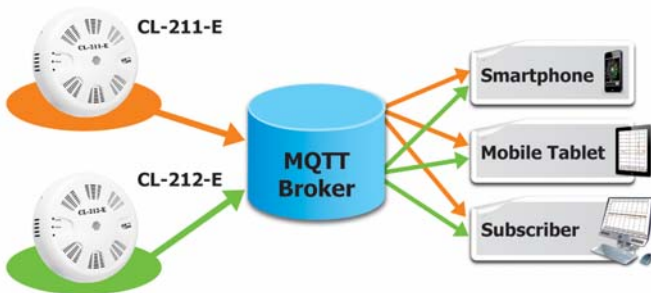
➲ Multi-platform Remote Access Software

Real-time data from the CL-200 data logger can be accessed from anywhere and at any time using the DL300 Utility, the iOS or Android App, or via a regular web browser, as long as they are connected to the same local network as the data logger.

System Specifications

Model	CL-210-E	CL-211-E	CL-212-E	CL-213-E
System				
PM2.5/CO/CO2/RH/T Alarm	Yes			
Real Time Clock	Yes			
Data Logger	Yes, up to 450,000 records			
Relay Output	Form A×1, SPST 30 VDC @ 16 A or 250 VAC @ 16 A			
Interface	RS-485/Ethernet			
Electrical				
Powered from Terminal Block	+12 to +48 VDC			
Power Consumption — Non-PoE	2.5 W (Max.)	2.66 W (Max.)	2.9 W (Max.)	3.24 W (Max.)
Power Consumption — PoE	2.65 W (Max.)	2.73 W (Max.)	3.22 W (Max.)	3.41 W (Max.)
Mechanical				
Installation	Ceiling Mounting/Wall Mounting			
Protection Class	IP20			
Dimensions (D x H)	Ø 150 mm x 53 mm			

■ I/O Specifications

Model	CL-210-E	CL-211-E	CL-212-E	CL-213-E
Environment				
Operating Temperature	0 to +50°C			
Storage Temperature	-30 to +75°C			
Humidity	10 to 90% RH, Non-condensing			
PM2.5 Measurement				
Range	0 ~ 400 µg/m3			
Resolution	1µg/m3			
Response Time	<= 1 min.			
CO Measurement				
Range	-	0 to 1000 ppm (Electrochemical)	-	0 to 1000 ppm (Electrochemical)
Resolution	-	1 ppm	-	1 ppm
Accuracy	-	±5% of measured value	-	±5% of measured value
Response Time	-	30 seconds	-	30 seconds
Warm-up Time	-	60 seconds	-	60 seconds
CO2 Measurement				
Range	-		0 to 9999 ppm (NDIR)	
Resolution	-		1 ppm	
Accuracy	-		±40 ppm ±3% of measured value	
Response Time	-		120 seconds	
Warm-up Time	-		5 minutes	
Temperature Measurement				
Range	-10 to +50°C			
Resolution	0.1°C			
Accuracy	±0.6°C			
Relative Humidity Measurement				
Range	0 to 100% RH, Non-condensing			
Resolution	0.1% RH, Non-condensing			
Accuracy	±5% RH, Non-condensing			
Dew Point				
Range	Calculated using temperature and relative humidity			
Resolution	0.1°C			

■ Simple and Powerful DL-300 Utility

The DL-300 Utility is a powerful tool that is designed for configuring the modules, monitoring real-time data, grouping DL-300 and CL-200 modules to view and manage the status of distribution groups, downloading log data, which can be exported to a CSV file that can then be imported into any industry-standard software or spreadsheet for analysis.
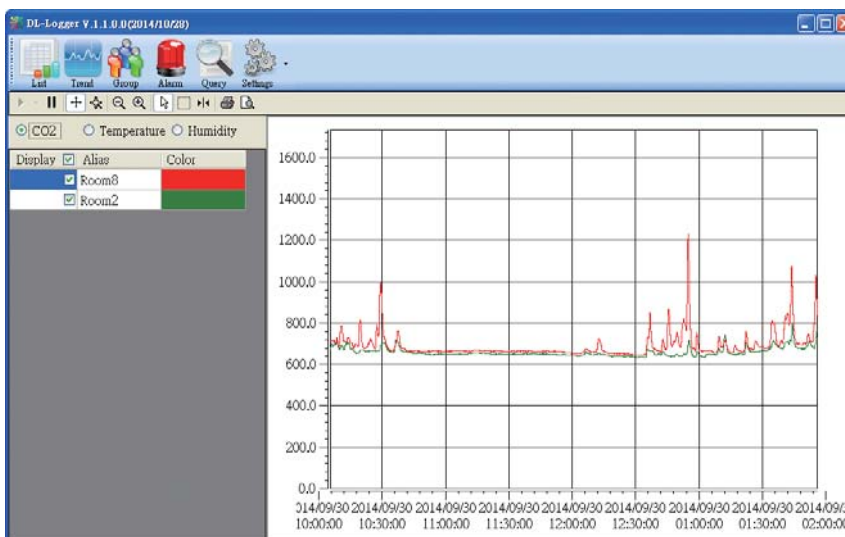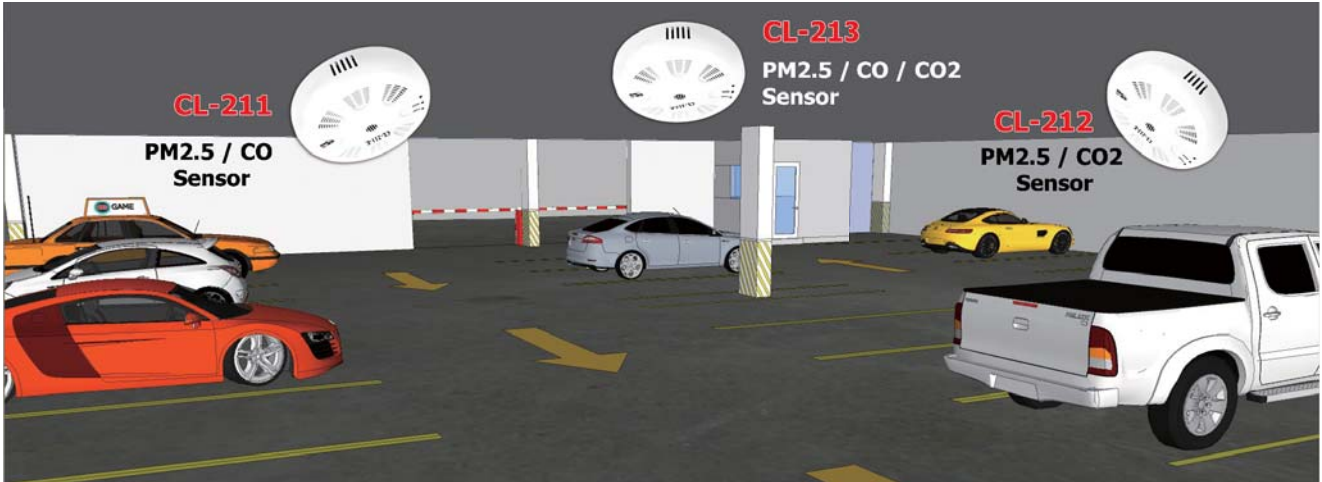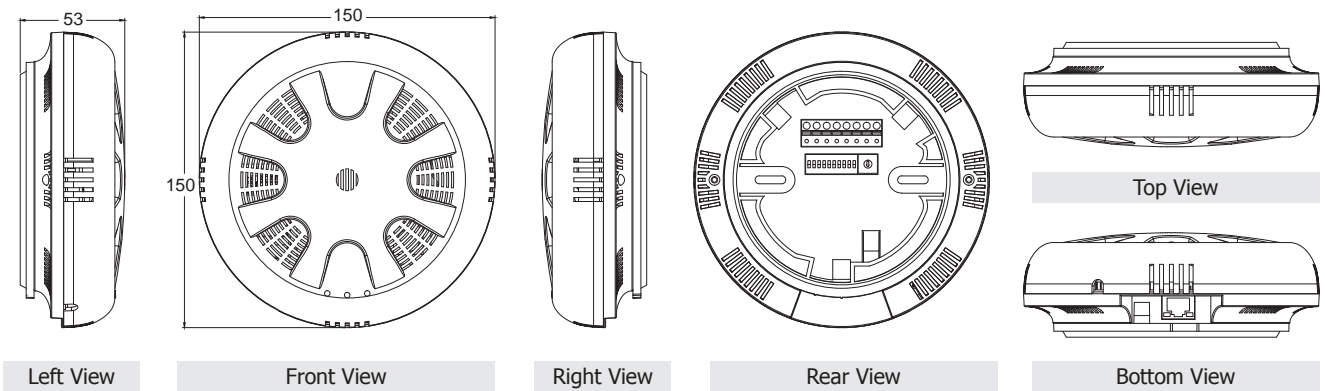
Applications

- Transportation of Food or Pharmaceuticals
- Food and Beverage Industry (HACCP)
- Blood Stations and Pharmacies
- Building and Energy Management
- Warehouse Management
- Museums, Archives and Galleries

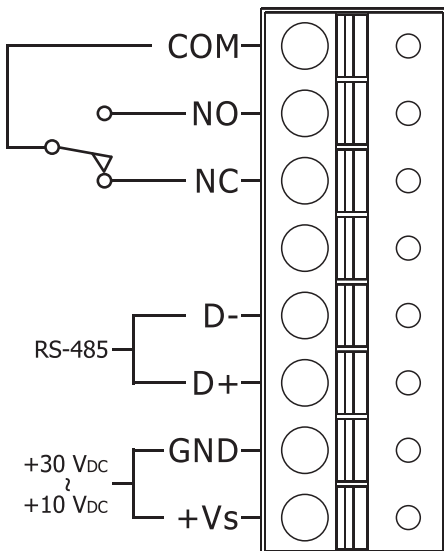## Indoor or Underground Parking Lot Automatic Monitoring Solution

The air quality automation system for indoor or underground parking lot can use the CL-200 series modules to monitor the health and safity information, such as PM2.5, CO, CO2, temperature, humiditym, dew point, and more...
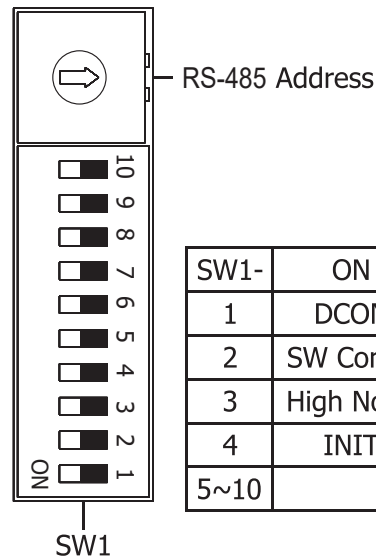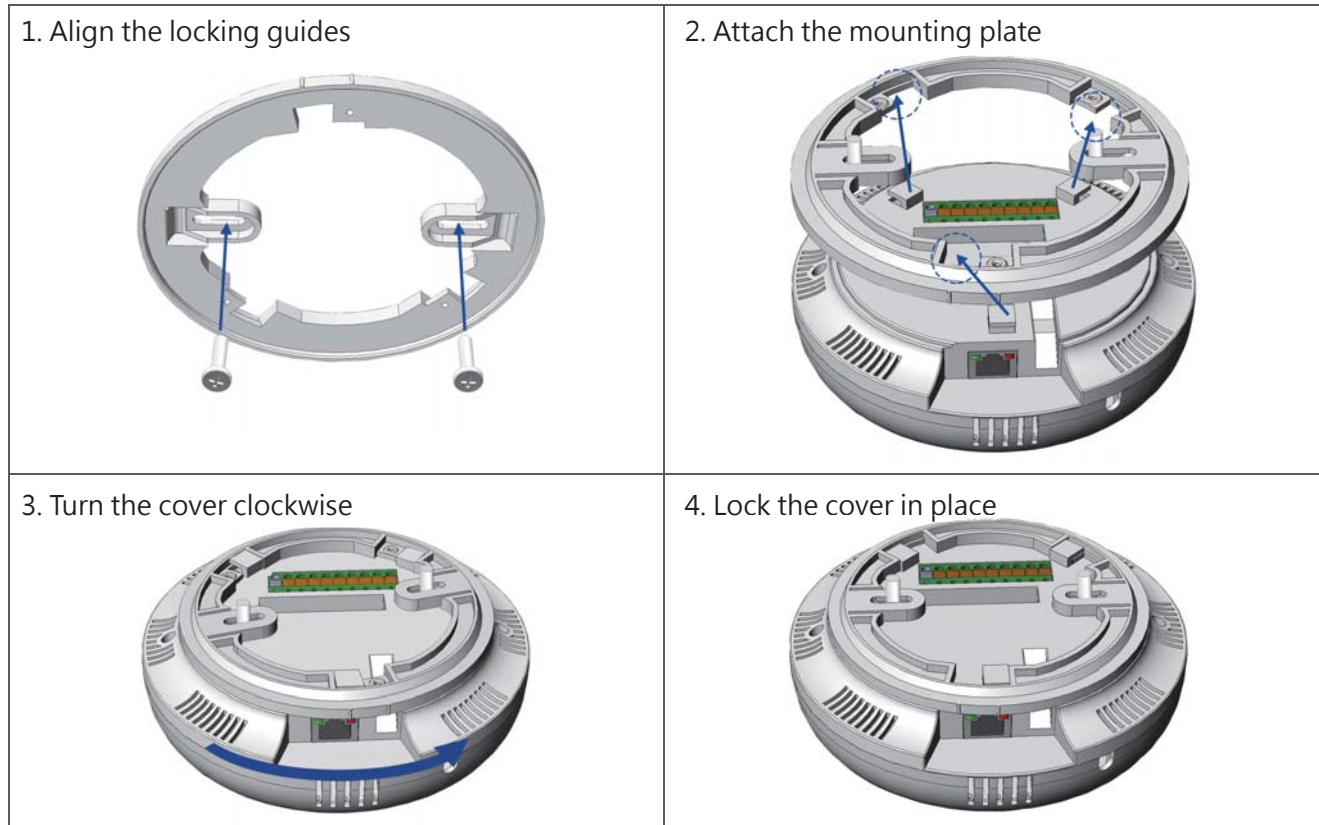

Dimensions (Units: mm)

| Left View | Front View | Right View | Rear View | Bottom View |

Pin Assignments & Wire Connections

COM
NO
NC
D-
D+
RS-485
GND
+30 VDC
~
+10 VDC
+Vs

E1 PoE

DIP Switch Settings

RS-485 Address

SW1

SW1-	ON	OFF
1	DCON	Modbus
2	SW Config	HW Config
3	High Node	Low Node
4	INIT	RUN
5~10	Reserved	

■ Mounting
▪ Ceiling Mounting

1. Align the locking guides	2. Attach the mounting plate
3. Turn the cover clockwise	4. Lock the cover in place

▪ Wall Mounting
(Requires External Wall Box EWB-C150)

1	2
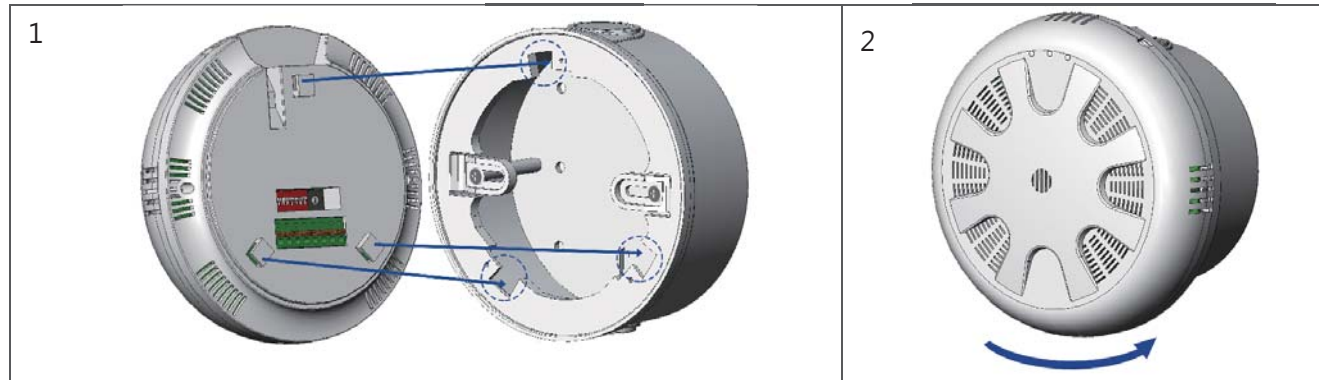
■ Ordering Information

CL-210-E CR	Remote PM2.5/Temperature/Humidity/Dew Point Data Logger Module (RoHS)
CL-211-E CR	Remote PM2.5/CO/Temperature/Humidity/Dew Point Data Logger Module (RoHS)
CL-212-E CR	Remote PM2.5/CO2/Temperature/Humidity/Dew Point Data Logger Module (RoHS)
CL-213-E CR	Remote PM2.5/CO/CO2/Temperature/Humidity/Dew Point Data Logger Module (RoHS)

■ Accessories

EWB-C150		External Wall Box for the CL-200 series
CA-RJ45-04		RJ45 Cable, Male-Female, 30cm (90º)