



CL-211/212/213

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

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 date and time stamps, and are able to store up to 450,000 downloadable records. Real-time data can be accessed from the DL-300 Utility from anywhere and at any time using the free Windows software. Support is provided for popular industrial protocols such as DCON and Modbus RTU. The DL-300 Data Logger can be connected via widely used RS-485 communication interfaces, meaning that the device can be easily integrated into existing HMI or SCADA systems, and is easy to be maintained in a distributed control system.

System Specifications

Model	CL-211	CL-212	CL-213
System			
PM2.5/CO/CO ₂ /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		
Electrical			
Powered from Terminal Block	+10 to +30 VDC		
Power Consumption	1.0 W (Max.)	1.2 W (Max.)	1.5 W (Max.)
Mechanical			
Installation	Ceiling Mounting/Wall Mounting		
Protection Class	IP20		
Dimensions (D x H)	Ø 150 mm x 53 mm		
Environment			
Operating Temperature	0 to +50°C		
Storage Temperature	-30 to +75°C		
Humidity	10 to 90% RH, Non-condensing		

Features

- PM2.5, CO, CO₂, Temperature, Humidity and Dew Point Measurement
- Non-dispersive Infrared (NDIR) CO₂ Sensor
- Up to 450,000 records with date and time stamps
- Support DCON and Modbus RTU Protocols
- Providing RS-485 Communication Interface
- Relay Output for Alarm Device or IAQ Device Control



Applications

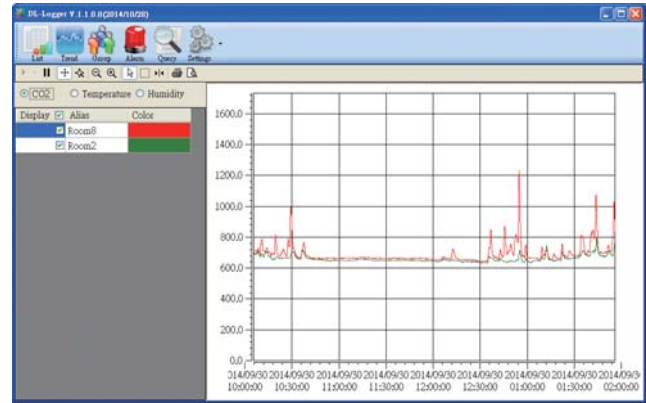
- Transportation of Food or Pharmaceuticals
- Food and Beverage Industry (HACCP)
- Blood Stations and Pharmacies
- Building and Energy Management
- Warehouse Management
- Museums, Archives and Galleries

I/O Specifications

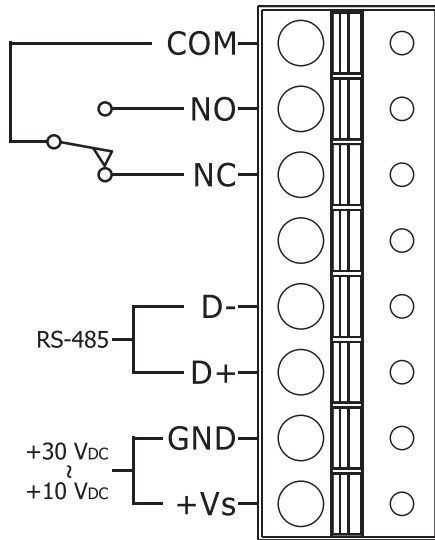
Model	CL-211	CL-212	CL-213
PM2.5 Measurement			
Range	0 ~ 400 µg/m ³		
Resolution	1µg/m ³		
Response Time	<= 1 min.		
CO Measurement			
Range	0 to 1000 ppm (Electrochemical)	-	0 to 1000 ppm (Electrochemical)
Resolution	1 ppm	-	1 ppm
Accuracy	±5% of measured value	-	±5% of measured value
Response Time	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	-	20 seconds	
Warm-up Time	-	60 seconds	
Temperature Measurement			
Range	-10 to +50°C		
Resolution	0.1°C		
Accuracy	±0.6°C		
Relative Humidity Measurement			
Range	0 to 100% RH		
Resolution	0.1% RH		
Accuracy	±5% RH		
Dew Point			
Range	Calculated using temperature and relative humidity		
Resolution	0.1°C		

Free and Power DL-300 Utility Software

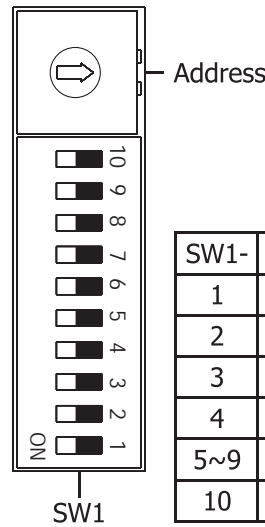
The DL-300 Utility is designed for setup modules, monitor real-time data, group DL-300 and CL-200 modules to view and manage the statuses of distribution groups, download log data and export data into a .CSV file that can be imported into any industry-standard software or spreadsheet for analysis.



Pin Assignments & Wire Connections

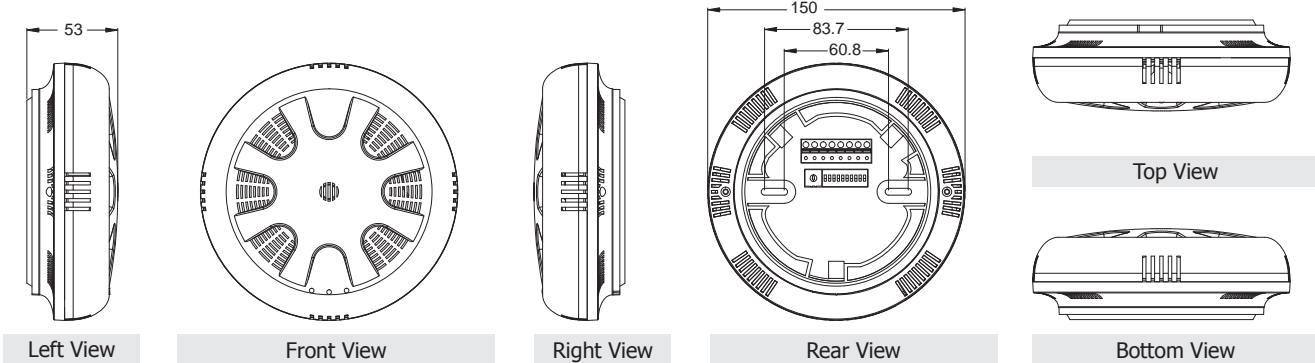


DIP Switch Settings



SW1-	ON	OFF
1	DCON	Modbus
2	SW Config	HW Config
3	High Node	Low Node
4	INIT	RUN
5~9	Reserved	
10	FW update	Null

Dimensions (Units: mm)

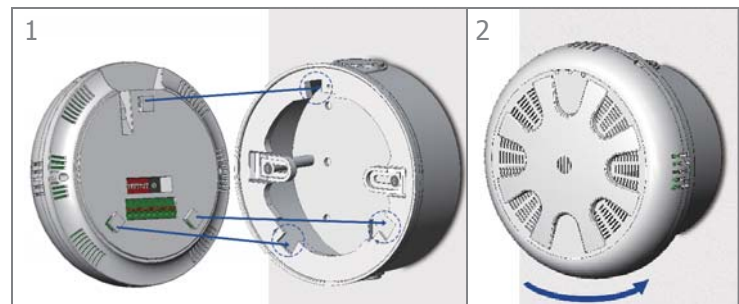


Installation

Ceiling Mounting



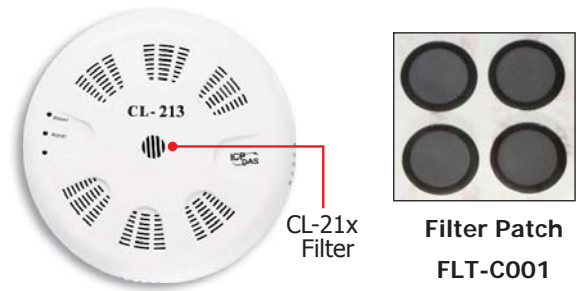
Wall Mounting (+ External Wall Box EWB-C150)



Installation

Replaceable Filter Patch:



CL-21x Series offers a replaceable filter patch on the back of the hood filter. This mechanism makes users to replace only the filter patch rather than uninstall all devices.



Ordering Information

CL-211 CR	Remote PM2.5/CO/Temperature/Humidity/Dew Point Data Logger Module (RoHS)
CL-212 CR	Remote PM2.5/CO2/Temperature/Humidity/Dew Point Data Logger Module (RoHS)
CL-213 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
FLT-C001		Replaceable Filter Patch