DL-301/DL-302/DL-303

CO/CO2/Temperature/Humidity/Dew Point Data Logger

Features

- Simultaneous Display for CO, CO2, Temperature, Humidity and Dew Point
- Measurement Range
  - CO: 0 ~ 1000 ppm
  - CO2: 0 ~ 9999 ppm
- Non-dispersive Infrared (NDIR) CO2 Sensor
- 2.8" LCD Touch Screen
- Able to store up to 450,000 records with date and time stamps
- Touch-screen and Web-based Configuration Interface
- Free Software Utility, iOS APP and Android App Included
- Able to Display Multilingual Messages on the Screen
- Supports the DCON, Modbus RTU, Modbus TCP and MQTT Protocols
- Includes RS-485/Ethernet/PoE Communication Interfaces
- Relay Output for Audible/Visual Alarm or IAQ Device Control
- Desktop, DIN-Rail or Wall Mounting

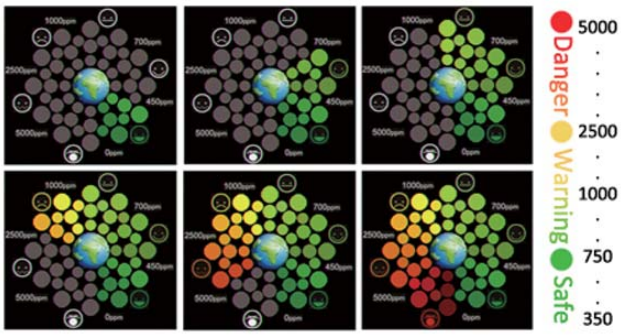
Introduction

The DL-300 series of Data Logger devices can be used to record 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 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.

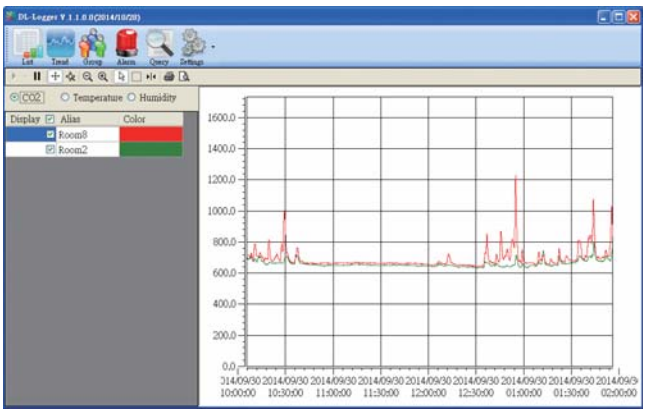
Support is provided for popular industrial protocols such as DCON, Modbus RTU, and Modbus TCP, as well as the emerging machine-to-machine (M2M)/)IoT (Internet of Things) connectivity protocol – MQTT. The DL-300 Data Logger can be connected via widely used communication interfaces including RS-485, Ethernet and PoE, meaning that the device can be easily integrated into existing HMI or SCADA systems, and is easy to be maintained in a distributed control system.

Large 2.8" LCD Touch Screen, with clear Color Chart to indicate the CO/CO2 Level

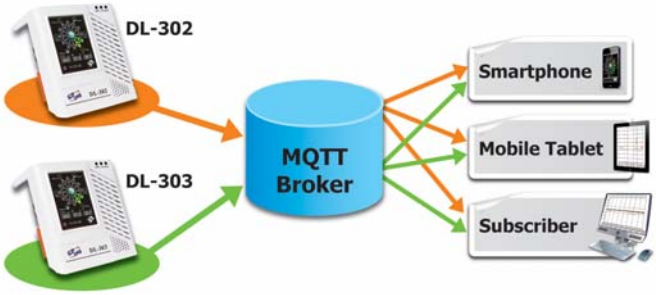


Free and Power DL300 Utility Software

The DL300 Utility can be used to configure the modules, monitor real-time data, group DL-300 modules so that the status of distribution groups can be viewed and managed. The utility also allows the log data to be downloaded and exported to a .CSV file that can then be imported into any industry-standard software or spread sheet for analysis.



Supports the MQTT Protocol for IoT Applications



Multi-platform Remote Access Software

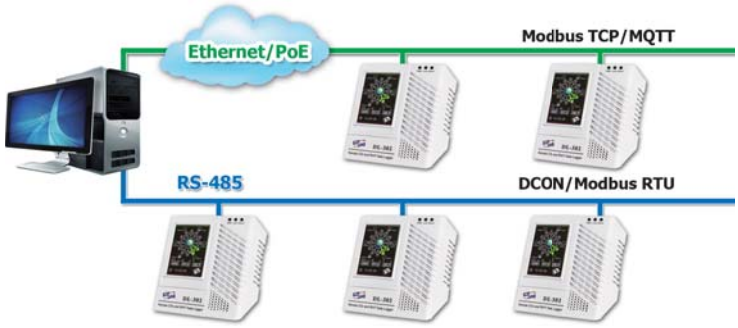
Real-time data from the DL-300 Data Logger can be accessed from anywhere and at any time using the DL300 Utility, the iOS or Android App, or via a regular web browser, as long as they are connected to the same local network as the Data Logger.

Display Messages in Multiple Languages

The display-message-on-screen function supports multiple language character sets based on UTF-8 encoding. Either pre-configured messages or dynamic messages can be remotely displayed using Modbus commands, or a dynamic message can be sent via the web-based interface.

Applications

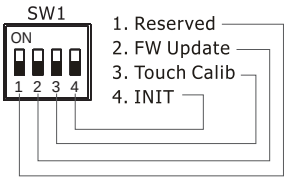
- Transportation of Food or Pharmaceuticals
- Food and Beverage Industry (HACCP)
- Blood Stations and Pharmacies
- Building and Energy Management
- Warehouse Management
- Museums, Archives and Galleries

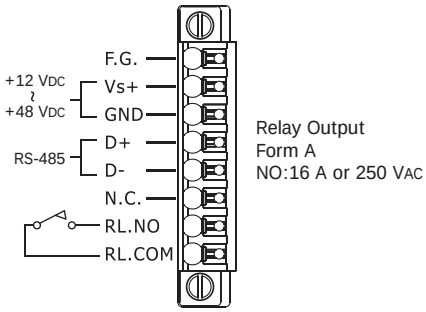


Specifications

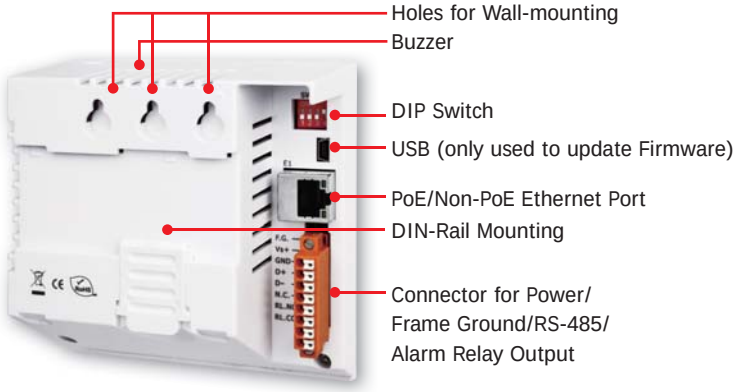
Model		DL-301	DL-302	DL-303
CO Measurement				
Range		0 to 1000 ppm (Electrochemical)	-	0 to 1000 ppm (Electrochemical)
Resolution		1 ppm	-	1 ppm
Accuracy		±5% of measured value	-	±5% of measured value
Response Time		30 seconds	-	30 seconds
Warm-up Time		60 seconds	-	60 seconds
CO2 Measurement				
Range		-	0 to 9999 ppm (NDIR)	
Resolution		-	1 ppm	
Accuracy		-	±30 ppm ±3% of measured value	
Response Time		-	20 sec	
Warm-up Time		-	60 sec	
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		
System				
CO Alarm		Yes	-	Yes
CO2 Alarm		-	Yes	Yes
Real-time Clock		Yes		
Data Logger		Yes, 450,000 Records		
Relay Output		Form A×1, SPST 30 VDC @ 16 A or 250 VAC @ 16 A		
Interface		RS-485/Ethernet/PoE		
Main Machine Interface				
LCD		2.8 TFT (Resolution 240 x 320 x 16), Defective Pixels <= 3		
Backlight Life		20,000 hours		
Brightness		160 cd/m2		
Touch Panel		Yes		
Electrical				
Powered from Terminal Block		+12 to +48 VDC		
Powered from PoE		IEEE 802.3af, Class 1 (48 V)		
Power Consumption	PoE	1.84 W (Max.)	2.65 W (Max.)	2.83 W (Max.)
	Non-PoE	1.74 W (Max.)	2.14 W (Max.)	2.24 W (Max.)
Mechanical				
Dimensions (L x W x H)		114 mm x 106 mm x 56 mm		
Installation		Desktop, DIN-Rail or Wall Mounting		
Environment				
Operating Temperature		0 to +50°C		
Storage Temperature		-30 to +75°C		
Humidity		10 to 90% RH, Non-condensing		

Pin Assignments & Wire Connections

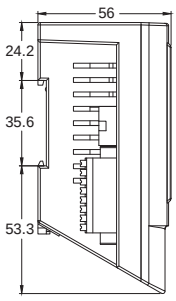




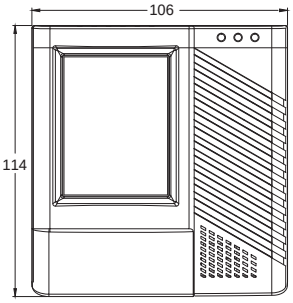
Appearance



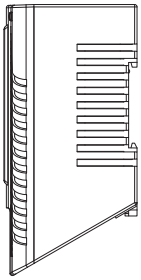
Dimensions (Units: mm)



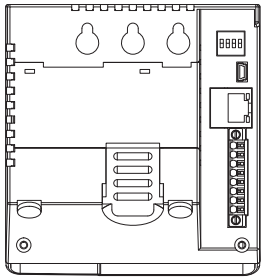
Left View



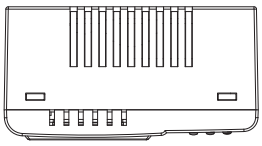
Front View



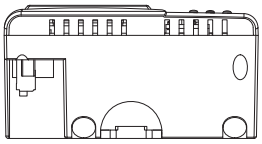
Right View



Rear View



Top View



Bottom View

Ordering Information

DL-301 CR	Remote CO/Temperature/Humidity/Dew Point Data Logger with Safety Alarm (RoHS)
DL-302 CR	Remote CO2/Temperature/Humidity/Dew Point Data Logger with Safety Alarm (RoHS)
DL-303 CR	Remote CO/CO2/Temperature/Humidity/Dew Point Data Logger with Safety Alarm (RoHS)

Accessories

 **NS-205 CR**	Unmanaged 5-port Industrial Ethernet Switch. 24 VDC Input (RoHS)	 **MDR-20-24 CR**	24V/1A, 24 W Power Supply with DIN-Rail Mounting (RoHS)
 **NS-205PSE CR**	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink connectors. 48 VDC Input (RoHS)	 **MDR-60-48 CR**	48V/1.25A, 60 W Single Output Industrial DIN Rail Power Supply (RoHS)
 **NS-205PSE-24V CR**	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink connectors. 24 VDC Input (RoHS)	 **tM-7561 CR**	USB to Isolated RS-485 Converter (RoHS)