DVC-101 Series

LoRa Sensor Node

- Carbon Monoxide (CO) and Temperature & Humidity

Features

- LoRaWAN compliant
- High Receiver Sensitivity and long range solution
- Integrated with calibrated CO sensor
  - Accuracy: ± 5% or ±20ppm
  - Range: 0 ~ 500ppm
- Integrated with Compensated Temp/RH sensor
- Wide range DC power-in, 8~24V /or Micro-USB DC power-in, 5V
- Display CO concentration, Temp/ RH

DVC-101 series are designed to measure carbon Monoxide, Temperature and Humidity by LoRa long-range and low-power wireless connectivity. It is integrated LoRa wireless technology, CO Sensor knowhow and high-performance MCU solution for various IoT markets usage. With calibrated CO sensor module and compensated Temperature/Humidity sensor integration, the data is ready for use. It is perfect for monitoring air quality in basement parking, garage, Gas ranges/ ovens, Furnaces.

Specifications

Model name	**DVC-101WxD-2 series**	**DVC-101WxD-1 series**
Wireless		
Standard/ Protocol	Comply with LoRaWAN protocol	
Frequency	862-870 MHz ISM bands	902-928 MHz ISM bands
Tx Power	Up to 100mW	
Sensitivity	-132 dBm @ 980Kbps	
Receiver	LoRaWAN comply Receiver Gateway	
Antenna	824~960 MHz 2dBi SMA Male connector	
Sensor Operation		
Sensing element	CO: Electrochemical Temperature & humidity: CMOS sensor	
Response time	CO: < 30 sec. (90%) Temperature: min. 3 sec.；max. 30sec. at τ 63% Humidity: < 8 sec. at τ 63%	
Accuracy (at 25℃)	CO: ± 5% or ±20ppm Temperature: ±0.3℃ Humidity: ±3 %RH	
Repeatability	CO: < ± 5% Temperature: ±0.1℃ Humidity: ±0.1 %RH	
Zero Drift	CO: < 5 % /yr. Temperature: < 0.04 ℃/year Humidity: < 0.5 %RH/yr.	
Expected Life	> 6 years in normal use	
Measurement range*	CO: 0 ~ 500ppm Temperature: -40 ~ +125℃ Humidity: 0 ~ 95 %RH	
Pressure dependence	CO: 800 to 1200 mbar	

System operation	
Temperature	-10 ~ +50 ℃
Humidity	0 ~ 95%RH, Non-condensing
Storage temperature	Recommended Storage Temp : 0 ~ +20 ℃.
Warm-up time	≤ 1 min. (at full specs ≤ 15 minutes)
Signal output	NA
Alarm output	NA
Power supply	Wide range DC power-in, 8~24V /or Micro-USB DC power-in, 5V
Power consumption	TBD
Installation	Wall-mount
Dimension (mm)	Wall-mount: 113.57(H) x 80(W) x 28.79(D)
Case material	ABS

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Order information

Part Number	Description
DVC-101WxD-20000	LoRaWAN 868MHz CO sensor device
DVC-101WxD-10000	LoRaWAN 915MHz CO sensor device

Relative product information

Part Number	Description
DVC-301WxD-20000	LoRaWAN 868MHz CO2 sensor device
DVC-301WxD-10000	LoRaWAN 915MHz CO2 sensor device
DVC-201WxD-20000	LoRaWAN 868MHz PM2.5 sensor device
DVC-201WxD-10000	LoRaWAN 915MHz PM2.5 sensor device