

Carbon Dioxide (CO₂) Transmitter

Operation Manual

CD-100(LG)



CD-100(G)



CD-100L(G)
(with LCD Display)

General

CD-100(G) and CD-100L(G) are one board analog output type transmitters of CO₂ Sensor, which are 4-wired or 3-wired supporting.

They give current output or voltage output and various functions are supported like as recalibration function, CO₂ measurement range selections for supporting user convenience.

Features

- **CO₂ SENSOR** : NDIR (Non-Dispersive Infrared) technology
- **LCD Display** model is available (CD-100L).
- **Analog Voltage/Current output**
0/4-20mA or 0/2-10V – settable by switch ,
- **3 wired / 4 wired output** – Order option
- **Re-calibration function**
10 minutes manual recalibration(MCDL) or weekly auto-calibration(ACDL) are supported and settable by switch.
- **CO₂ ppm measurement range** -settable by switch
- **Power Consumption** 0.4W at normal voltage of 24V DC, AC.
- **Size** : 123mmx70mmx43mm

CD-100(LG) Specification

General Performance

Operating Temperature range

-10 ~ 60°C

※ "BZ" Option : -40 ~ 40°C

Operating Humidity range

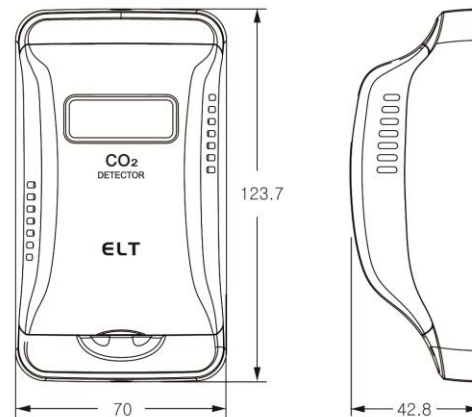
0 ~ 95% RH (Non-condensing): CD-100(L)

0 ~ 99% RH (Non-condensing): CD-100(L)G

Storage Temperature

-30°C ~ 70°C

Dimensions (unit : mm)



CO₂ Measurement

Sensing Method

NDIR (Non-dispersive Infrared)

Measurement Range

0 to 2,000/ 3,000 / 5,000 / 10,000ppm

(Optional)

Accuracy

±30ppm ±5%

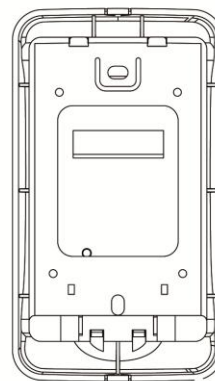
(ACDL operation : ±30ppm ±3% of reading),

Response Time(90%)

150 seconds

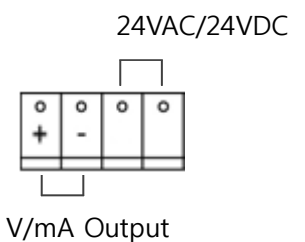
Sampling Interval

3 sec.

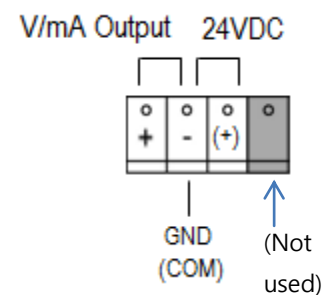


Wiring Method

[4-wired]24VAC or 24VDC



[3-wired]24VDC only



Electrical Data

Input Power

24VAC ± 20%, 50/60Hz(4-wired, 3-wired)

Or 24VDC ± 20% (3-wired available)

Current Consumption

Peak 100mA, Normal 10mA

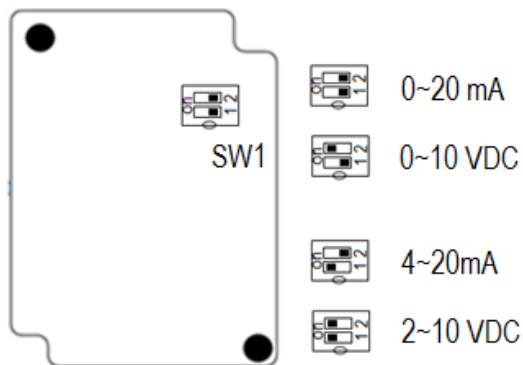
※ Two times of peak current capacity allocation is recommended.

Output Signals

■ **SW1** : Voltage, Current output and range selection.

0 ~ 20mA or 0 ~ 10VDC

4 ~ 20mA or 2 ~ 10VDC



PPM Measurement Range

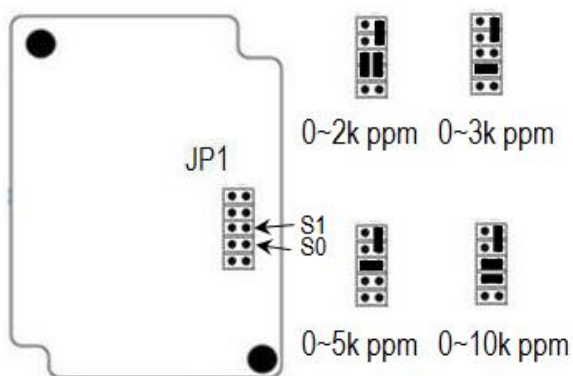
■ **JP1** :CO2 Measurement range selection.

2K ppm : 0 ~ 2,000ppm CO2

3K ppm : 0 ~ 3,000ppm CO2

5K ppm : 0 ~ 5,000ppm CO2

10K ppm : 0 ~ 10,000ppm CO2



Operation Mode Selection with MCDL and ACDL

■ **JP1** : Calibration selection

- **M** : MCDL

Users can do 10 minutes manual calibration (MCDL) when sensor showed much different ppm in severe condition like as agricultural applications.

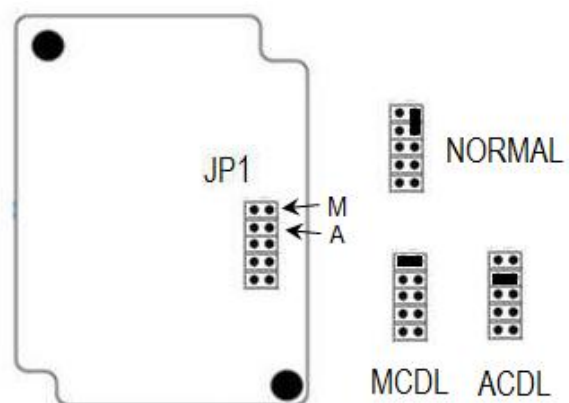
Procedures : Move the 2mm-pitch Jumper to 'M' position and wait over 11 minutes in fresh air. After the setting of ambient air-flowing status to be 400ppm finished, move back the Jumper CAP to NORMAL position again.

- **A** : ACDL

When users are using the CD-100 in indoor ventilation applications like as HVAC, building, houses etc., the ACDL function operation is strongly suggested.

Procedures : Move the 2mm-pitch Jumper to 'A' position

Auto calibration acts first 2days, and every 7 days after power on.



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