



CDR 100VA

Technical data

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| Sensing element | Non-Dispersive Infrared Detector (NDIR) |
| Power supply | 24 Vac/dc |
| Consumption | 0.79 W max. ; 2.8W avg. |
| Accuracy | +/-40 ppm + 2% reading @ 25 °C |
| Measurement range | 0-2.000 ppm |
| Stability | < 2% of FS over life of sensor (15 years typical) |
| Non-linearity | < 1% of FS |
| Response time | < 2 minutes for 90% step change |
| Signal update | Every 2 seconds |
| Warm up time | < 2 hours (first time) < 2 minutes (operational) |
| Output | 0-10 Vdc, 2-10 Vdc, 0-20 mA or 4-20 mA (3-wire), selectable via jumper |
| Flow rates | Diffusion version 80-120 cc/min. |
| Operating conditions | 0 to +50°C 0 to 95% RH, non condensing |
| Storage conditions | -40 to +70°C |
| NDIR life | 15 years |
| Weight | 150 g |
| Dimensions | 102 x 90 x 40 mm |
| Applicable Standards: | EN 55014:2000+A1: 2001+A2: 2002, EN 61000-4-2: 1995+A1: 1998+A2: 2001, EN 61000-4-3: 2002+A1: 2002 |
| Applicable EC directives: | 89/336/EEC |

Features

- **Outputs**
0-10 Vdc, 2-10 Vdc, 0-20 mA or 4-20 mA (3-wire)
selectable via jumper
- **Power supply** 24 Vac/dc
- **Measures** 0-2.000 ppm
- **Accuracy** +/-40 ppm + 2% reading @ 25 °C
- **Self-Calibration** (No re-calibration required)
- **Fifteen years life time** on CO₂ sensor

Description

CDR 100VA is used to control CO₂ generator, ventilation or other cool/heat equipments. CDR 100VA can also be connected with DDC/PLC controller or other automation system.

Ventilation control by CO₂ is a viable and energy efficient way of controlling ventilation to target cfm/person levels based on actual occupancy. It's reasonable than traditional approach of providing fixed ventilation based on maximum occupancy.

Monitor and control zone ventilation efficiency and take advantage It reduces ventilation and energy costs in applications with variable occupancy. of using preconditioned transfer air from under occupied spaces for ventilation

Applications

- Office premises
- Airports
- Hotels
- Conference rooms
- Restaurants
- Apartments
- Hospitals
- Schools
- Meeting rooms

Ordering

| Type no. | Description |
|----------|-------------|
|----------|-------------|

Carbon Dioxide (CO₂) transmitter for room

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|------------------|--|
| CDR 100VA | 0-10 Vdc, 2-10 Vdc, 0-20 mA or 4-20 mA output (3-wire) output selectable via jumper |
|------------------|--|

Mounting and Wire Connection

Notice the supply power voltage of the transmitter: 24 Vac/dc.
Do not install the transmitter on voltages higher than marked on the transmitter.

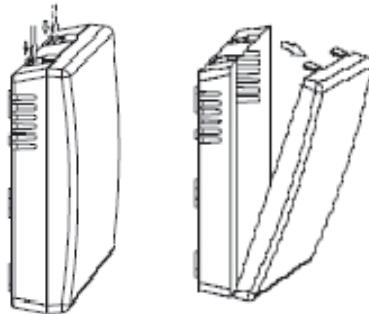
Remove the cover.
Please note, use your nails or other unsharp tools to depress the clips.

Mount the transmitter on the place where you want to detect CO₂ level. Do not mount it near diffuser or any steam source, in direct sunlight.

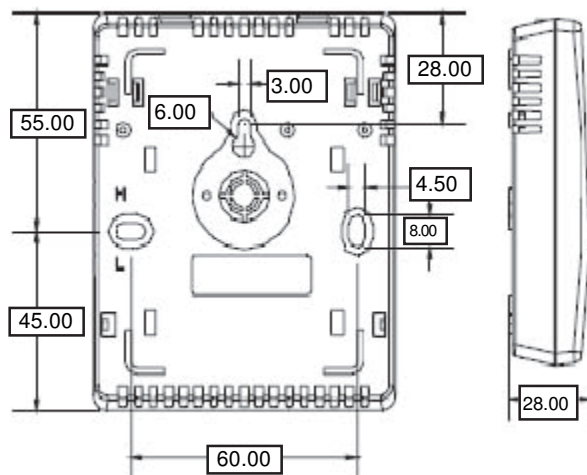
Mount the main part first, there are two dimensions available.
Place the transmitter against the wall at desired location; make sure wires can be passed through the notch on the back board.

Connect wires to terminal strips,
Make sure wiring connection correct and secure.

Remove the cover



Dimensions in mm



Wiring

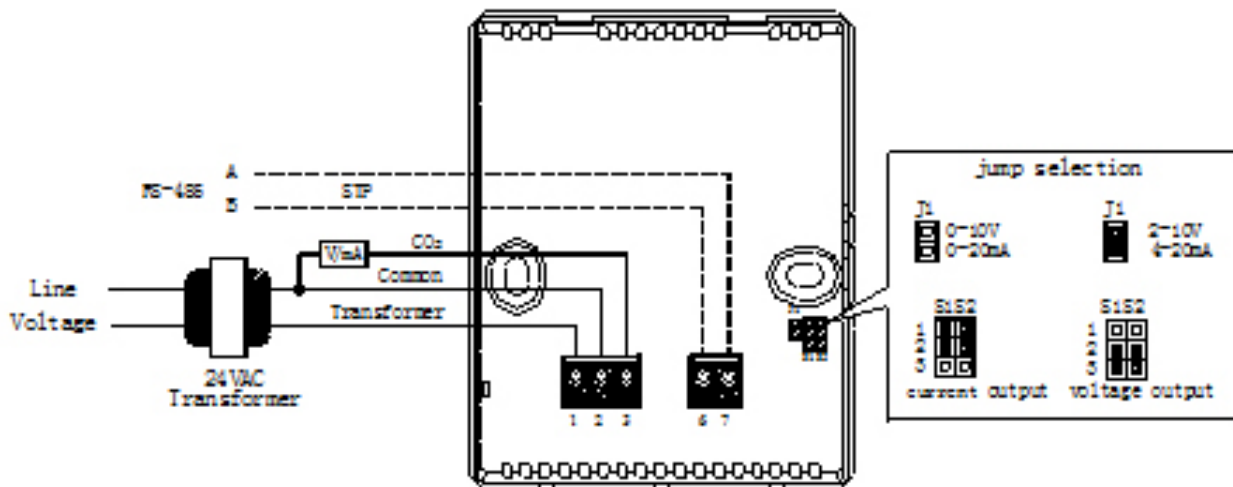
| Connection Terminal | Funtion | Electric data |
|---------------------|-------------------|------------------------------------|
| 1 G+ | Power(+) | 24 Vac/24Vdc + |
| 2 G0 | Power ground (-) | 24 Vac/24 Vdc |
| 3 OUT | Analog output (+) | see Jumper Settings /Select Output |

Jumper Settings / Select Output

Power off and remove the face cover, you can see a set of short-circuit block jumper S1~S2 in the middle of the right PCB board. When you block (short) the bottom two pins of the S1-S2, the analog output is voltage output; when you block (short) the top two pins of S1-S2, the analog output is current output.

There is a set of short-circuit block jumper J1-J3 next to S1~S2. As you put in the J1 connection, the analog output is 2-10 Vdc or 4-20mA, as the J1 link is disconnected, the analog output is 0-10 Vdc or 0-20 mA .

The J2 and J3 are just for manufacture test, the default is disconnection. Don't change it!



We reserve the right to make changes in our products without any notice which may effect the accuracy of the information contained in this leaflet.