



CDR 100VA

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 +3% of reading @ 25°C
- Self-Calibration (No re-calibration required)
- Fifteen years life time on CO₂ sensor

Description

CDR 100 is used to control CO₂ generator, ventilation or other cool/heat equipments. CDR 100 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

Technical data

Sensing element	Non-Dispersive Infrared Detector (NDIR)
Power supply	24 Vac/dc
Consumption	0.79 W max. ; 2.8W avg.
Accuracy	+/-40 ppm +3% of 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

Applications

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

Ordering

Type no.	Description
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Carbon Dioxide (CO₂) transmitter for room

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

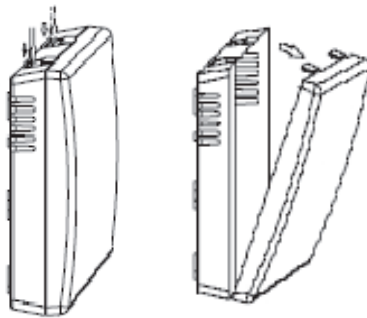
Remove the cover.
Please note, use your nails or other unsharp tools to depress the clips.

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.

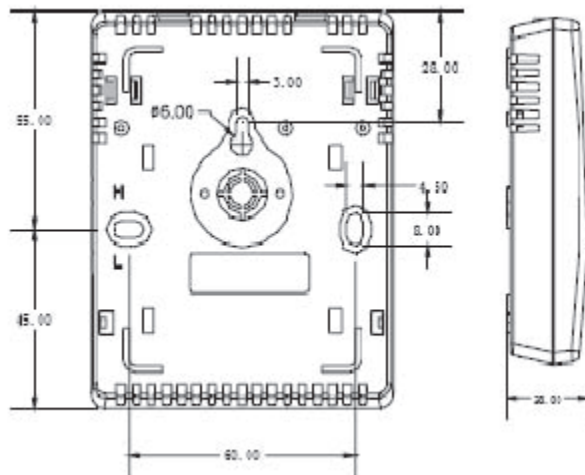
Mount the main part first, there are two dimensions available.
Place the transmitter against the wall at desired location; make sure wires can be passed through the notch on the back board.

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-S6 in the middle of the right PCB board.

When you block the up two pin of the S1-S6,
the analog output is voltage output.

When you block the down two pin of S1-S6,
the analog output is current output.

There is a set of short-circuit block jumper J1-J3 in the top of the PCB board.

As you put the J1 connection,
the analog output is 2-10 Vdc or 4-20 mA.

As the J1 is disconnected, the analog output is 0-10 Vdc or 0-20mA .

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.