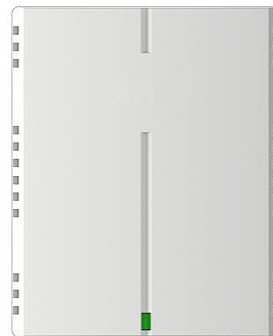


User's Manual

Carbon Dioxide Detector

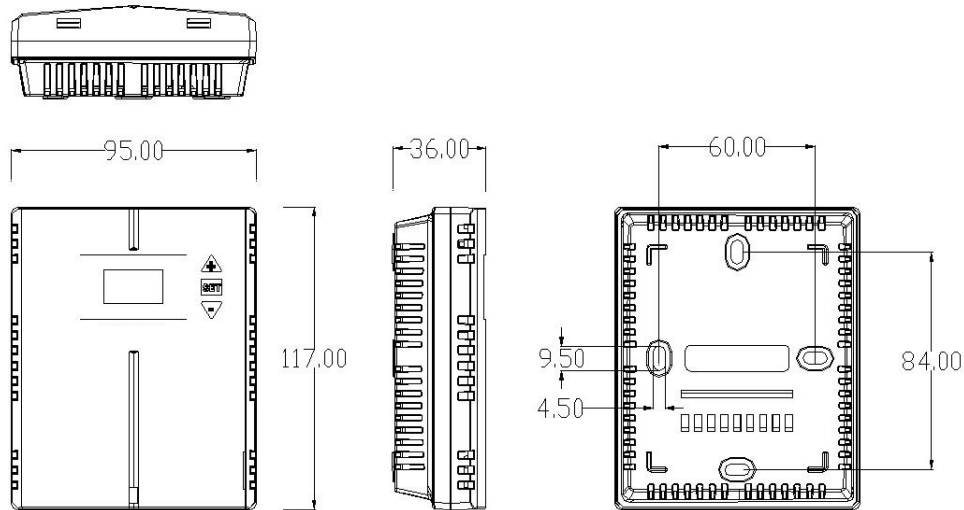
Model: AT-VLC-ND-A1



Specifications

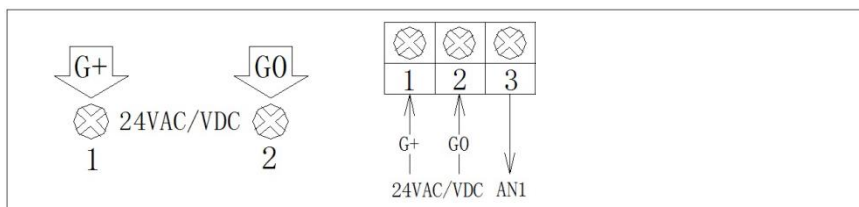
General Data			
Power supply	24VAC/VDC \pm 10%		
Consumption	3.5 W max. ; 2.0 W avg.		
Analog outputs	One 0~10VDC/4~20mA for CO ₂ measurement PID control output is selectable for CO ₂		
LED light	<table><tr><td>3-color mode (default) Green: \leq1000ppm Orange: 1000~1400ppm Red: $>$1400ppm Red flashing: CO₂ sensor faulty</td><td>Working light mode Green on: working Red flashing: CO₂ sensor faulty</td></tr></table>	3-color mode (default) Green: \leq 1000ppm Orange: 1000~1400ppm Red: $>$ 1400ppm Red flashing: CO ₂ sensor faulty	Working light mode Green on: working Red flashing: CO ₂ sensor faulty
3-color mode (default) Green: \leq 1000ppm Orange: 1000~1400ppm Red: $>$ 1400ppm Red flashing: CO ₂ sensor faulty	Working light mode Green on: working Red flashing: CO ₂ sensor faulty		
Operation condition	0~50°C; 0~95%RH, non condensing		
Storage condition	-10~60°C / 0~80%RH		
Net Weight / Dimensions	190g /117mm(L) \times 95mm(W) \times 36mm(H)		
Installation	wall mounting with 65mm \times 65mm or 2" \times 4" wire box		
Housing and IP class	PC/ABS fireproof plastic material, protection class: IP30		
Standard	EMC approval		
Carbon Dioxide			
Sensing element	Non-Dispersive Infrared Detector (NDIR)		
CO ₂ measuring range	0~2000ppm		
CO ₂ Accuracy @22°C(72°F)	\pm 60ppm + 3% of reading or \pm 75ppm (whichever is greater)		
Temperature dependence	0.2% FS per°C		
Stability	<2% of FS over life of sensor (15 year typical)		
Pressure dependence	0.13% of reading per mm Hg		
Calibration	ABC Logic Self Calibration Algorithm		
Response time	<2 minutes for 90% step change typical		
Signal update	Every 2 seconds		
Display resolution	1ppm		
Warm-up time	2 hours (first time) / 2 minutes (normal operation)		

Dimension and Mounting



- ◆ Please note the power supply is 24VAC/VDC \pm 10%. Don't install the detector with over the voltage.
- ◆ First of all, please prepare a flat head screwdriver and gently put it deep inside of the hole on the bottom of the detector housing. Then slant the screwdriver and open the cover gently. Do not mount it near diffuser or any steam source, in direct sunlight.
- ◆ Mount the wall plate. Place the detector against the wall at desired location; make sure wires can be passed through the notch on the wall plate.
- ◆ Connect wires to terminal strips. Make sure wiring connection correct and secure.
- ◆ Finally close the cover gently.

Wiring Diagram



Analog output selection

- ◆ The default analog output is 0-10V, 4~20mA can be selected by jumpers as below instruction.
- ◆ Open the cover, there are five black blocks J1 & S1~S4. J1=OFF corresponds to 0-10V and J1= ON corresponds to 4-20mA. At the same time, connect 'V' side of S1~S4 corresponds to 0-10V and connect 'A' side of S1~S4 corresponds to 4-20mA.

