ANTARES

T.004.00 Controller with CO$_2$ Control

Instruction Manual

Before Installation

⚠ WARNING

Turn off T.004.00, all electronic source and electrical devices which will be connected before installation and maintenance. The controller must be mounted on wall for operation.

⚠ CAUTION

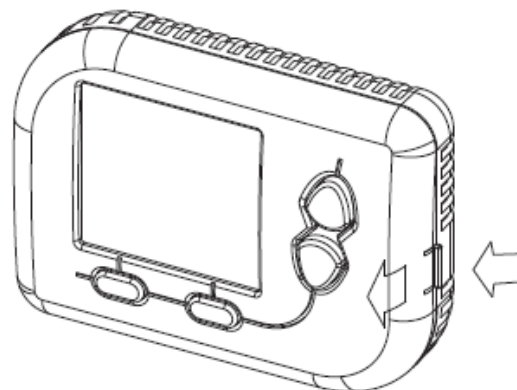The installer must be a trained service personnel.

Installation Location

The controller should be mounted on an inner wall ~5 feet (1.5m) above the floor in a position where it is readily affected by changes of the general room temperature with freely circulating air.

Prevent direct exposure to sunlight, drip or splash.

Do not place the unit at a location where air circulation is low, or where there are great temperature changes (e.g. near door). Do not place the controller near heat generating sources (e.g. radiators, hot air vents, TV or lights).

Opening the Cover

Press on the spot shown below in order to detach the front shell from its base as shown in the figure.
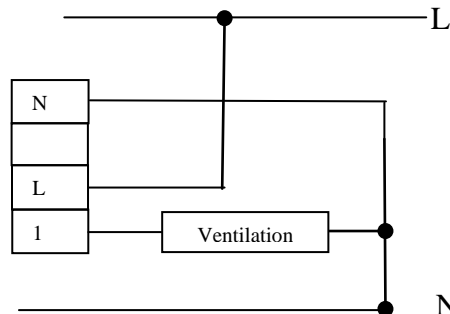
Wiring the Terminal

Do not use metal conduits or of cables provided with a metal shealth. There are 3 wiring terminals at the back of the controller which are labeled below.
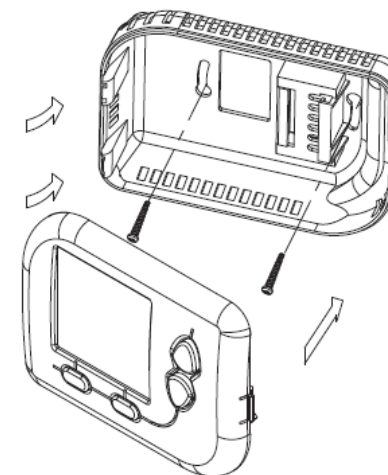The recommended wire range is AWG 14 - 22.

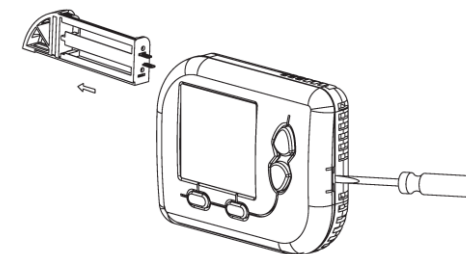| Symbols	Terminals
N	Neutral, 230VAC
	BLANK
L	Live , 230VAC
1	Ventilation Output (CO2)

Mounting

Ensure that the surface is level.
Place the cables at the hole near the terminal block.
Insert 2 pcs of wall anchors into the holes of the wall.
Fasten the controller with 2 pcs of long screws through the 2 mounting holes as shown in the below figure.
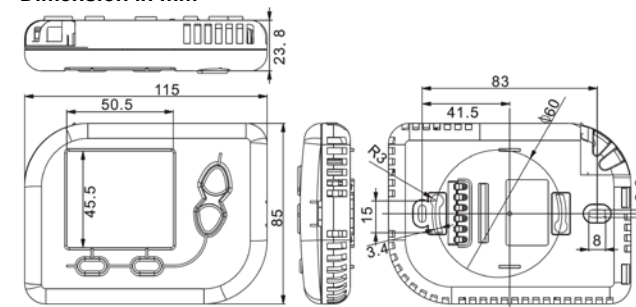
Opening

Pull out the battery drawer and then lightly press on the spots shown below in order to detach the front shell from its base.
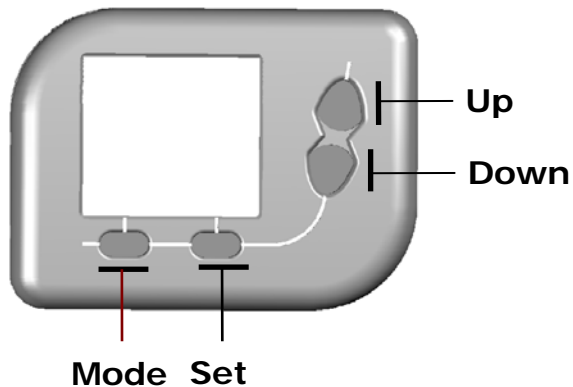

Dimension in mm

Basic Key and Operation

When the unit is powered on, all the LCD segments are on and the unit goes to Normal Display Mode.
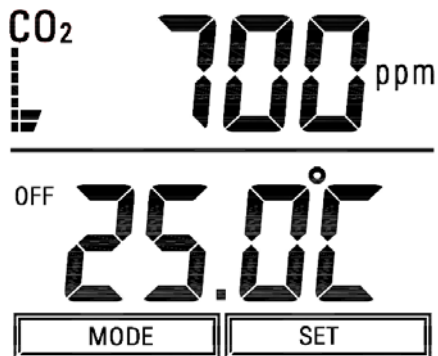
Keys	Function
Up	Setting Value Increase
Down	Setting Value Decrease
Mode	Switch Off / On Mode
Set	Internal Setting

Key Interface

Up

Down

Mode Set

Normal Display Mode
Temperature and CO2 measurement starts. The measured value will be displayed.

Off / On Mode
Press the "Mode" key to switch between On and Off Mode.

Off mode
The "OFF" symbol appears, The controller turns all outputs off.

On mode
The "OFF" symbol disappears, The controller starts control the CO2 level with the ventilation output and buzzer sound for C02 alarm.

CO2 Value Set Point
Press "Up" or "Down" key once to start the setting of the CO2 value. The set point will be flashing.

Hold "Up" or "Down" Key to increase or decrease the desire CO2 set point. Ventilation output will be **ON** when CO2 value exceeds the set point and will be **OFF** when CO2 value is below the set point.

After no keys is pressed for ~10 seconds, the setting will be saved and the unit will return to the Normal Display Mode.

Internal Setting
Press the "Set" key in Normal Display Mode to enter the internal setting page. Press "Up" or "Down" key to switch between items and then press "Set" key to select the target item. Press "Up" or "Down" to adjust the value.
When the setting is done, press "Mode" key for exit. During the internal setting session, the controller will automatically exit the session, if no key is pressed for ~10 seconds.

AL	Alarm On / Off	Off – sound off On – sound on
ALSt	Alarm Setpoint	100-4500 ppm
CO2P	CO2 Span	100-500 ppm
UnIt	Display Unit	°C °F
OFSt	Temperature Offset	+/- 0-3 °C / 0-6 °F
CAL	CO2 Sensor Calibration	CS- Calibration start CE- Calibration end AS-Auto-calibration start AE-Auto-calibration end dE-Calibration reset

CO2 alarm
Buzzer will turn on every minute when alarm setting selects ON and CO2 value higher than the alarm set point.

CO2 Sensor Calibration
This product is calibrated at factory and calibration is generally not required. However, in case a deviation is found.

Recalibration C02

> ⚠ **CAUTION**
>
> Activate this self-calibration function ONLY in an open air environment where the CO2 level is close to the earth background CO2 concentration level (400ppm).

Manual Calibration
Place T.004.00 in an open air environment (CO2 level ~400ppm).

Hold "Mode" and "Set" key to enter system setting and then press "Set" key to enter CO2 sensor Calibration(CAL).

Press "Up" or "Down" key to select "CS" and press "Set" key to send the command to start calibration and display shows "COF" as acknowledgement.

This calibration takes around 12 minutes, please keep it in the open air environment. During Calibration, "ppm" will be flashing on the display.

After 12minutes, the calibration end automatically and "ppm" will stop flashing.

Auto Calibration
In case there is no open area available for calibration, use auto calibration. It takes ~ 2 days to collect data and use the lowest measured CO2 value as a reference to calibrate

Hold "Mode" and "Set" key to enter system setting and then press "Set" key to enter CO2 sensor Calibration(CAL).

Press "Up" or "Down" key to select "AS" and press "Set" key to send the command to start calibration and display shows "COF" as acknowledgement.

This calibration takes ~2 days, During Calibration, "ppm" will be flashing on the display.

After 2 days, the calibration end automatically and "ppm" will stop flashing.

Other commands (CE, AE, dE) are for special purpose and not use in normal situation. If those commands are sent, please reset the power and run the calibration process again if necessary.

Specification

Temperature Measurement:	0 - 40°C (32 - 99 °F)
Resolution:	0.1 °C (0.5 °F)
Accuracy:	±0.5°C (1 °F)
CO2 Measurement:	0-4999 ppm
CO2 Resolution:	1 ppm
CO2 Accuracy:	+/- (75 ppm + 5% of measure.) value
Operation Voltage:	230Vac +10/-15%
Output Rating:	5A
Sense Type:	NTC 10K
Terminal:	2mm^2 Cable
Operating Temperature:	0 - 50°C
Storage Temperature:	-5 - 50°C
Sensing Element:	NTC thermistor

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