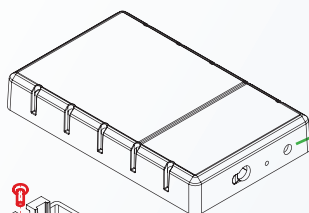




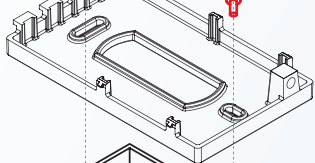
Made in USA

Enclosure cover



Locking Set Screw

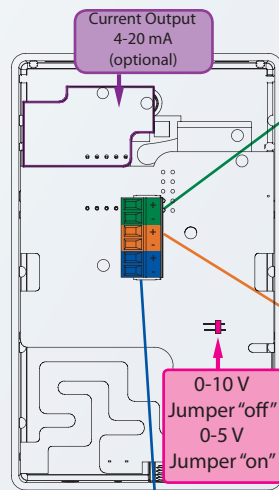
Enclosure base



To wall-mount your AirSense Model 308T Series controller:

1. Feed wires through enclosure base and mount the base either directly onto a junction box or wall;
2. Connect wires to screw terminals on circuit board per instructions at right;
3. Align and snap enclosure cover closed;
4. Back set screw out to secure enclosure cover.

Junction box is for illustration purposes; not included with AirSense Model 308T



**Power input**  
18-30 VDC  
18-28 VAC  
(polarity matters for VDC only)

Outputs available in either Voltage (0-10V / 0-5V) or Current (4-20mA optional)

All '-' terminals are electrically connected.

Output	Sensors
Output 1	CO2

0-10 V Jumper "off"  
0-5 V Jumper "on"

### Temperature Sensor

1. 1,000 Ω platinum RTD
2. 10,000 Ω NTC thermistor, type 2
3. 10,000 Ω NTC thermistor, type 3

### Warning And Alarm Indication

Sensors	Warning level LED is YELLOW	Alarm level LED is RED
CO2	1000 ppm	2000 ppm

### Analog Output Scaling

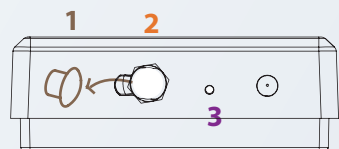
Output	CO2 ppm	
Voltage Output 0 - 10V (default setting "off")	0 Volts	0
	5 Volts	1000
	10 Volts	2000
Voltage Output 0 - 5V (jumper selectable "on")	0 Volts	0
	2.5 Volts	1000
	5 Volts	2000
Current Output 4-20 mA (optional)	4 mA	0
	12 mA	1000
	20 mA	2000

## Calibration-Kit

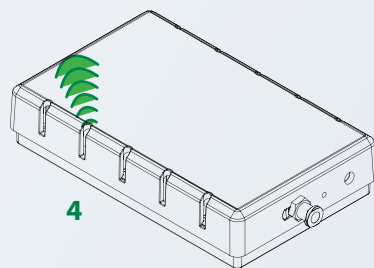


Your sensor comes factory-calibrated and does not need to be calibrated upon initial installation. Calibration kits are available.

## CO2 Calibration Procedure with 24-hour occupancy option only



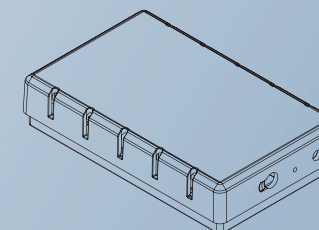
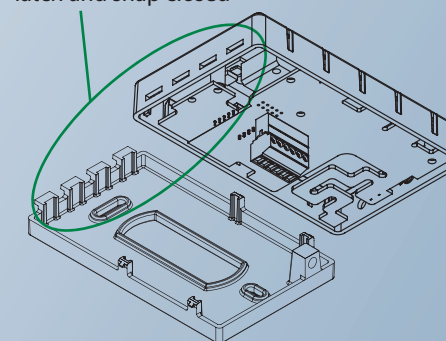
Bottom Side



Isometric View

1. Temporarily remove dust cover from Bottom side of enclosure cover.
2. Place 2000 PPM CO2 calibration gas tube in side port and slide onto the fitting inside. Turn on gas.
3. Allow calibration gas to flow for one minute, then use a 1/16" allen wrench (or equivalent) to depress switch (inside hole 3 at left) for 5 seconds. LED will blink **yellow**.
4. After **5 minutes** the LED will **blink green**. The calibration process is completed.
5. Press and hold switch (labeled 3 at left) to accept calibration. The LED will turn **solid green** after only a few seconds, indicating that calibration is complete.
6. At this point it is safe to turn off gas and remove gas tubing from calibration port.
7. When calibration is complete, replace dust cover on gas calibration port.

Align top and bottom latch and snap closed



Once lid closed, back out set-screw to secure enclosure cover.

Requires 3/32" Allen wrench.

## Introduction

The AirSense Model 308T Series is a non-dispersive infrared analyzer for measuring environmental CO2 concentration in ventilation systems and indoor living spaces. Its measurement range of 0 - 2000 ppm (parts per million; 1000 ppm = 0.1%) covers the range required to monitor compliance with ASHRAE or other ventilation efficiency standards. The AirSense Model 308T comes configured for:

Wall or duct-mounting;  
0-5 / 0-10 Voltage or 4-20mA outputs

Standard AirSense Model 308T are equipped with AdaptiveSense Technology (AST) to ensure accuracy and lifetime calibration free maintenance.

In 24 hour occupancy applications. A simple one-point calibration procedure and a built-in calibration port that requires no special fittings or adapters make the AirSense Model 308T simple to operate and maintain.

## Displays and Indicators

The AirSense Model 308T Series includes a single tri-color LED on the front panel which illuminates whenever the unit is operating. This LED indicates:

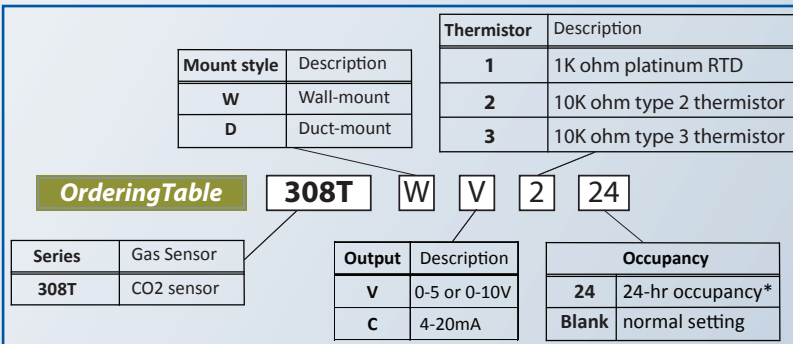
**Green** -> CO2 sensor at normal levels

**Yellow** -> CO2 sensor at Warning levels

**Red** -> CO2 sensor at Alarm level

**Blinking Red** -> Sensor error

Parameter	Value
Operating Principle	Non-dispersive infrared (NDIR)
Gas Sampling Method	Diffusion
Measurement Range	0-2000 ppm
Repeatability	± 20 ppm CO2
Measurement Accuracy	± 30 ppm ± 2% of reading
Temperature Accuracy	± 1.5°F (± 0.9°C)
Recommended Calibration Interval	AST lifetime maintenance free calibration
Warm Up Time	Less than 1 minute
Power Requirements	18 - 30 VDC or 18 - 28 VRMS AC
Operating Temperature Range	50 - 122°F (10 - 50°C)
Operating Humidity Range	0 - 95% RH, non-condensing
Voltage Output (linear)	0-5 or 0 - 10 VDC full scale standard
Optional Current Output (linear)	4-20 mA
Dimensions	4.5 x 2.8 x 0.9 inches
Warranty	18 months



## Temperature sensor curves

### 1,000 Ω RTD Sensor

Temp (°C)	Temp (°F)	Resistance (Ω)
-10	14.0	960.86
-9	15.8	964.78
-8	17.6	968.70
-7	19.4	972.61
-6	21.2	976.53
-5	23.0	980.44
-4	24.8	984.36
-3	26.6	988.27
-2	28.4	992.18
-1	30.2	996.09
0	32.0	1000.00
1	33.8	1003.91
2	35.6	1007.81
3	37.4	1011.72
4	39.2	1015.62
5	41.0	1019.53
6	42.8	1023.43
7	44.6	1027.33
8	46.4	1031.23
9	48.2	1035.13
10	50.0	1039.03
11	51.8	1042.92
12	53.6	1046.82
13	55.4	1050.71
14	57.2	1054.60
15	59.0	1058.49
16	60.8	1062.38
17	62.6	1066.27
18	64.4	1070.16
19	66.2	1074.05
20	68.0	1077.94
21	69.8	1081.82
22	71.6	1085.70
23	73.4	1089.59
24	75.2	1093.47
25	77.0	1097.35
26	78.8	1101.23
27	80.6	1105.10
28	82.4	1108.98
29	84.2	1112.86
30	86.0	1116.73
31	87.8	1120.60
32	89.6	1124.47
33	91.4	1128.35
34	93.2	1132.21
35	95.0	1136.08
36	96.8	1139.95
37	98.6	1143.82
38	100.4	1147.68
39	102.2	1151.55
40	104.0	1155.41
41	105.8	1159.27
42	107.6	1163.13
43	109.4	1166.99
44	111.2	1170.85
45	113.0	1174.70
46	114.8	1178.56
47	116.6	1182.41
48	118.4	1186.27
49	120.2	1190.12
50	122.0	1193.97

### 10,000 Ω Type II Thermistor

Temp (°C)	Temp (°F)	Resistance (Ω) 10,000 Ω @ +25°C
-10	14	55,328.60
-9	15.8	52,406.53
-8	17.6	49,655.89
-7	19.4	47,065.70
-6	21.2	44,625.72
-5	23	42,326.42
-4	24.8	40,158.95
-3	26.6	38,115.02
-2	28.4	36,186.93
-1	30.2	34,366.50
0	32	32,650.00
1	33.8	31,029.25
2	35.6	29,498.39
3	37.4	28,051.95
4	39.2	26,684.81
5	41	25,392.19
6	42.8	24,169.64
7	44.6	23,012.98
8	46.4	21,918.31
9	48.2	20,881.97
10	50	19,900.54
11	51.8	18,970.82
12	53.6	18,089.82
13	55.4	17,254.73
14	57.2	16,462.90
15	59	15,711.88
16	60.8	14,999.34
17	62.6	14,323.12
18	64.4	13,681.17
19	66.2	13,071.57
20	68	12,492.53
21	69.8	11,942.36
22	71.6	11,419.48
23	73.4	10,922.37
24	75.2	10,449.66
25	77	10,000.00
26	78.8	9,572.16
27	80.6	9,164.98
28	82.4	8,777.34
29	84.2	8,408.21
30	86	8,056.61
31	87.8	7,721.63
32	89.6	7,402.39
33	91.4	7,098.07
34	93.2	6,807.91
35	95	6,531.17
36	96.8	6,267.17
37	98.6	6,015.25
38	100.4	5,774.80
39	102.2	5,545.25
40	104	5,326.04
41	105.8	5,116.67
42	107.6	4,916.63
43	109.4	4,725.47
44	111.2	4,542.75
45	113	4,368.06
46	114.8	4,201.00
47	116.6	4,041.21
48	118.4	3,888.33
49	120.2	3,742.03
50	122	3,602.00

### 10,000 Ω Type III Thermistor

Temp (°C)	Temp (°F)	Resistance (Ω) 10,000 Ω @ +25°C
-10	14.0	47,541
-9	15.8	45,266
-8	17.6	43,113
-7	19.4	41,074
-6	21.2	39,142
-5	23.0	37,312
-4	24.8	35,577
-3	26.6	33,933
-2	28.4	32,373
-1	30.2	30,894
0	32.0	29,490
1	33.8	28,157
2	35.6	26,892
3	37.4	25,690
4	39.2	24,548
5	41.0	23,463
6	42.8	22,431
7	44.6	21,451
8	46.4	20,518
9	48.2	19,631
10	50.0	18,787
11	51.8	17,984
12	53.6	17,219
13	55.4	16,491
14	57.2	15,798
15	59.0	15,137
16	60.8	14,507
17	62.6	13,907
18	64.4	13,334
19	66.2	12,789
20	68.0	12,268
21	69.8	11,771
22	71.6	11,297
23	73.4	10,845
24	75.2	10,413
25	77.0	10,000
26	78.8	9,606
27	80.6	9,229
28	82.4	8,869
29	84.2	8,525
30	86.0	8,196
31	87.8	7,882
32	89.6	7,581
33	91.4	7,293
34	93.2	7,017
35	95.0	6,754
36	96.8	6,501
37	98.6	6,259
38	100.4	6,028
39	102.2	5,806
40	104.0	5,593
41	105.8	5,390
42	107.6	5,194
43	109.4	5,007
44	111.2	4,828
45	113.0	4,655
46	114.8	4,490
47	116.6	4,332
48	118.4	4,179
49	120.2	4,033
50	122.0	3,893



**Model 308T Series**