

# CO<sub>2</sub> Sensor Fault

## Description of Fault

A CATALYST CO<sub>2</sub> Sensor Fault indicates the return air CO<sub>2</sub> readings are out-of-limit. A CATALYST CO<sub>2</sub> Sensor Fault Alarm is generated when the CO<sub>2</sub> sensor readings are high (2000 ppm) or low (0 ppm).

A CATALYST CO<sub>2</sub> Sensor Fault Alarm will automatically reset when the CO<sub>2</sub> registers a reading with an approximate value between 400-1200 ppm.

## Possible Causes

A CATALYST CO<sub>2</sub> Sensor Fault is typically caused by:

- Shorted or open CO<sub>2</sub> sensor cable (during installation).
- Damaged CO<sub>2</sub> sensor cable caused by the return damper or loose wire nuts.
- Failed CO<sub>2</sub> sensor.
- Improper voltage to the sensor.
- Shorted input on the controller.

# Troubleshooting

## eIQ Platform

1. On the eIQ Platform, navigate to the Status page of the unit.
2. Verify the CO<sub>2</sub> reading under the Return Air temperature.
  - a. If the CO<sub>2</sub> reading is 0 ppm or 2000 ppm a qualified technician to visit the site for further troubleshooting.
  - b. If CO<sub>2</sub> reading is between 400-1000 ppm contact TW for support.

## Site

1. Access the CO<sub>2</sub> sensor located in the return air duct.
  - a. Inspect the CO<sub>2</sub> sensor wire nut connections to the YELLOW W/ PURPLE STRIPE 4-C CABLE.
  - b. Inspect the CO<sub>2</sub> sensor and wire for damage.
  - c. Inspect the wiring of the sensor for the presence of 24V AC between the BLACK and RED wires of the yellow w/ purple stripe 4-C cable.

- d. Measure DC voltage coming from CO2 sensor on the Brown wire connected to the green wire on the CATALYST Yellow with a Purple stripe.
    - i. Does the DC voltage measurement match the readings on the eIQ? 10 volts would be 2000 ppm, 5 volts 1000 ppm.
    - ii. If not remove the connection brown wire from the green conductor coming from the yellow with a purple strip wire from the CATALYST. Verify that the DC voltage measurement doesn't change.
2. Contact Transformative Wave for further assistance at [technical@twavetech.com](mailto:technical@twavetech.com) or (855) 867-2333.