DUCT MOUNTED CO$_2$ SENSOR ASM02236

AAON Controls is involved in the design and selection of the sensors used with AAON units to ensure integration between sensors, controllers, software, and mechanical equipment.

PHYSICAL

Validating Information Provided by the Sensors to the Unit Controllers

The Duct Mounted CO$_2$ Sensor is used in conjunction with various AAON Controllers to monitor and control CO$_2$ levels in the building environment.

The CO$_2$ Sensor is used for monitoring room CO$_2$ levels and is designed for permanent duct mounting. It is used with the GPC-XP Controller, GBD-X Controller, GPC-X Controller, GPC Controller, GPC Plus Controller, BGC Controller, CVC Controller, CVP Controller, VAV/CAV Controller, and VCM Controller.

Sensor Electronics Mounted in Plastic Cover, Plastic Mounting Back Plate with Wiring Terminals, Aspiration Box and Pickup Tube, four Mounting Screws, two Housing Assembly Screws, one Allen Screw, one Jumper Block, and one 250 ohm Resistor for 4-20 mA Applications.

Environmental Requirements

The CO$_2$ Sensor needs to be installed in an environment that can maintain a temperature range between 32°F and 122°F and a humidity range between 0% and 95% RH (non-condensing).

Electrical and Environmental	
Input Power	18-30 VAC 18-42 VDC
Operating Temperature	32°F to 122°F
Signal Update	Every 5 Seconds
Sensing Method	Non-dispersive Infrared (NDIR) Absorption Gold Plated Optics
Analog Outputs	0-5 VDC, 0-10 VDC, 4-20 mA
Power Consumption	0.7 W @ 24 VAC
Operating Humidity	0-95% RH Non-Condensing
Measurement Range	0 to 2000 ppm
Accuracy	450-1250 +/- 30 ppm or 3% of Reading, 1250-2000 +/- 5% Reading + 30 ppm
Digital to Analog Error	+/- 1%

Contact AAON Support for Technical Assistance
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AAON
CONTROLS
AIRFLOW →

ASM02236
ASPIRATION BOX
8" PROBE

ASM02236
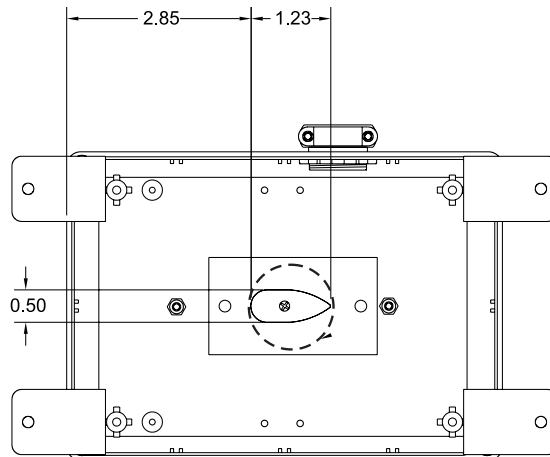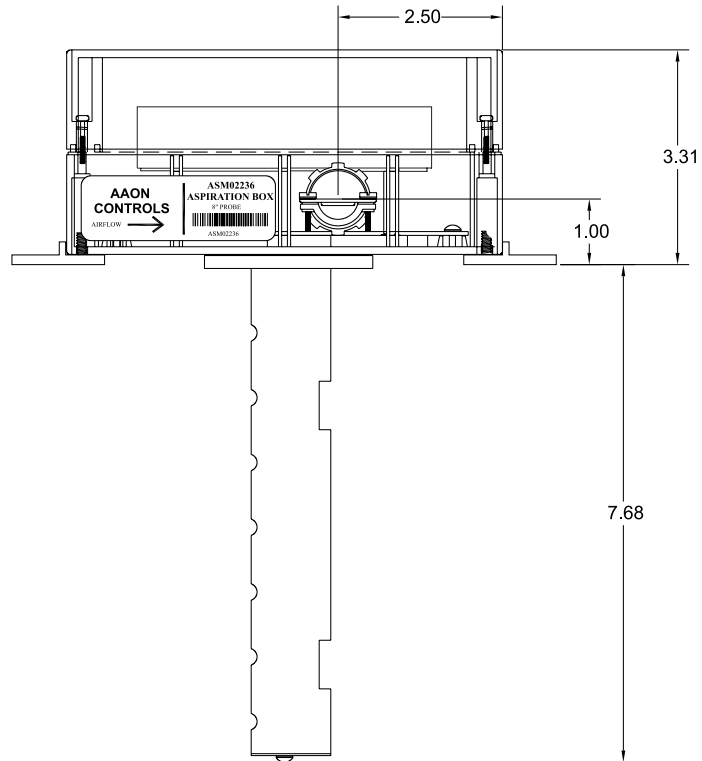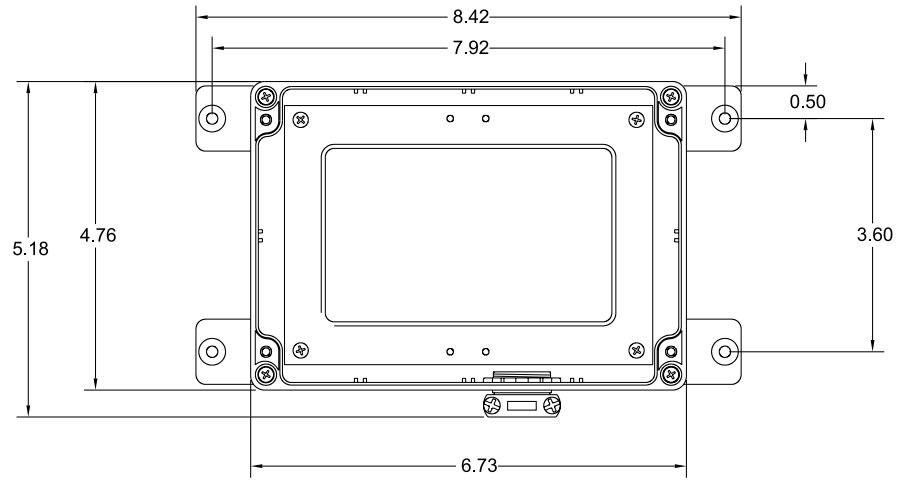
Mounting

Step 1: Find the general location on the side of the Return Air Duct where you want to mount the CO2 Sensor. Be sure to locate the box with the airflow in the proper direction per the airflow label. Using the Aspiration Box as a template, draw around it with a pencil on the duct. Locate the center of the box you have drawn and mark it. Using a 1 1/4" hole saw, drill a hole in the duct wall using the center you have just drawn as the drilling point. Insert the aspiration tube into the hole in the duct and mount the Aspiration Box to the Duct using a power screwdriver to secure the four mounting feet to the Duct wall using the four supplied sheet metal screws.

Step 2: Remove the Aspiration Box cover from the Aspiration Box base by loosening the four screws that secure it with a Phillips screwdriver. Using the Phillips screwdriver, loosen the two conduit clamp screws on the conduit clamp assembly located on the side of the Aspiration Box enough to allow the insertion of the wiring cable through the cable clamp opening and into the Aspiration Box using the appropriate length of cable as required by your application.

Step 3: Separate the sensor case into its front and rear sections. Secure the rear section of the case to the mounting posts inside the Aspiration Box using the included mounting screws and make the necessary wire connections depending on your application.

Step 4: Mount the front section of the case to the rear section of the case by aligning the top clips and then securing to the bottom clips. Secure the front and rear sections in place by using the supplied set screw.

Step 5: Tighten the conduit clamp screws on the Aspiration Box down until the conduit clamp is gripping the sensor wiring cable snuggly. *Do not over-tighten the clamp screws as this could damage the cable.*

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