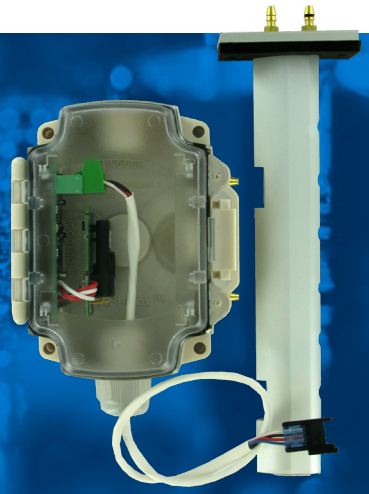
DUCT-MOUNTED E-BUS CO_2 SENSOR ASM01831



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 E-BUS CO_2 Sensor with Remote Pickup is used in conjunction with the Unit Controllers to monitor and control Return Air CO_2 levels in the building environment.

Some typical applications are:

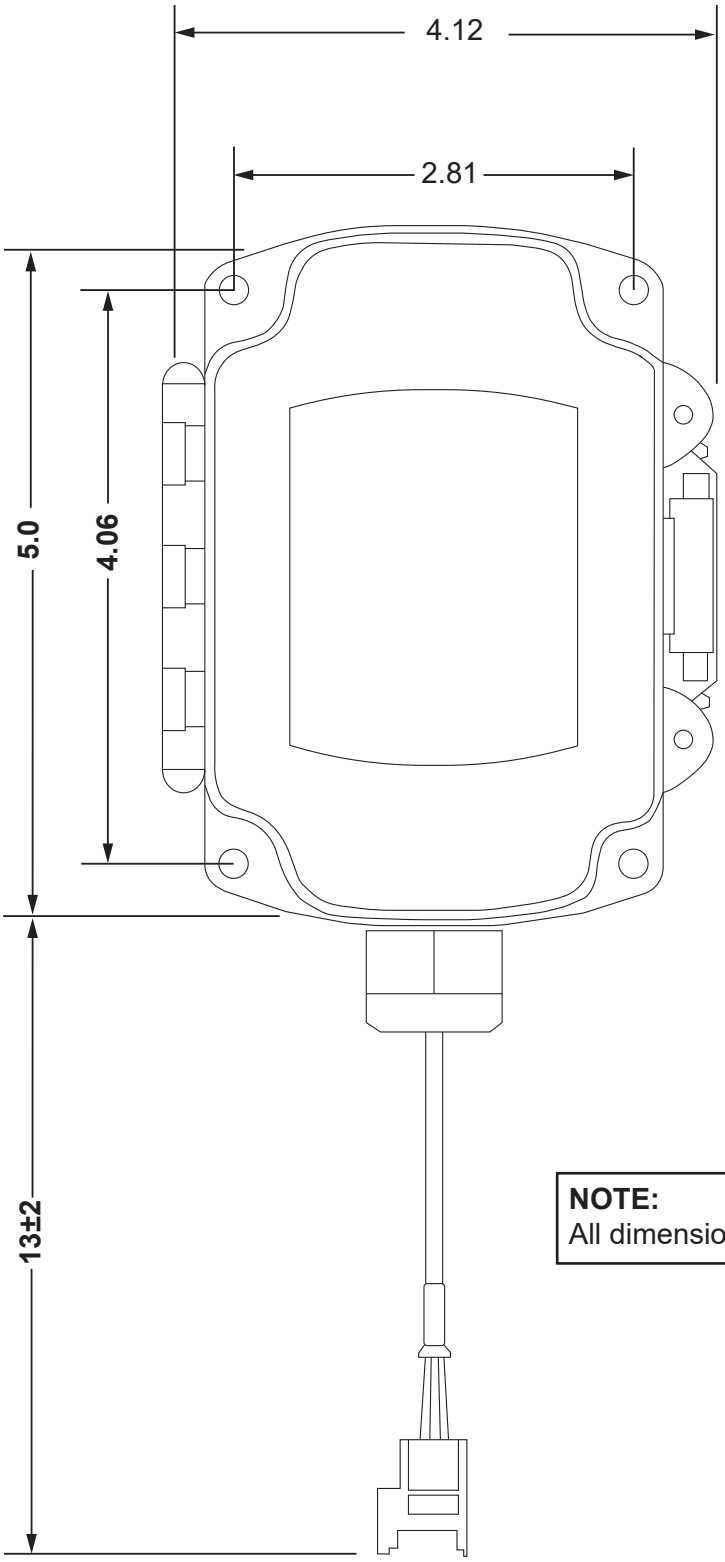
- IAQ ventilation control in a building where the occupancy varies frequently
- Controlling ventilation based on CO_2 levels to ensure excess outdoor air is not causing energy waste
- To ensure good air distribution throughout building zones

The CO_2 Sensor is used for monitoring duct CO_2 levels and is designed for permanent mounting in the Return Air duct. It utilizes an aspiration box to accurately capture CO_2 levels in the duct. It connects to the Unit Controller using an E-BUS cable with E-BUS connectors.

Electrical and Environmental	
Input Power	12-34 VDC
Operating Temperature	14°F to 122°F
Sample Method	Flow-Through 50-100 ml/min
Sensitivity	< +/- 20 ppm
Accuracy	+/- 50 ppm @ 1000 ppm or 2% measured value
Power Consumption	30 mW Max Avergage 1.25 W Peak Power
Operating Humidity	0-95% RH Non-Condensing
Measurement Range	0 - 2000 ppm
Resolution	+/- 1ppm
Communications	E-BUS

Contact AAON Support for Technical Assistance

www.aaon.com/contact



NOTE:
All dimensions are in inches.

Mounting

Step 1: Pickup Tube Installation: Find the location in the return duct where you want to sense the CO_2 level. Cut a 1.25 inch diameter hole in the location. Insert the pickup tube in this location with the inlet side (round holes) facing directly into the air stream. Secure the pickup tube to the ductwork using the included mounting plate and screws.

Step 2: Sensor/Aspiration Box Installation: Select a location for the sensor/aspiration box between the pickup tube and the unit controls cabinet while remaining within 10 ft. of the pickup tube. Ensure the tubing between the pickup tube and aspiration box is not restricted. Then secure the aspiration box to the duct using the included sheet metal screws.

Step 3: Tubing Installation: Connect included tubing to brass fittings on the side of the aspiration box. Connection order does not matter. Tubing may be cut to remove excess, if desired.

Step 4: E-BUS Cable Installation: Connect the included E-BUS cable to the integral E-BUS cable on the aspiration box and route to the unit controls cabinet. Connect the other end of the E-BUS cable to any available E-BUS port in the unit controls cabinet. If needed, longer E-BUS cables are available.