

MODEL 8700/8701 SERIES Q-STAT™ CO₂ AND TEMPERATURE MONITOR

INSTALLATION INSTRUCTIONS

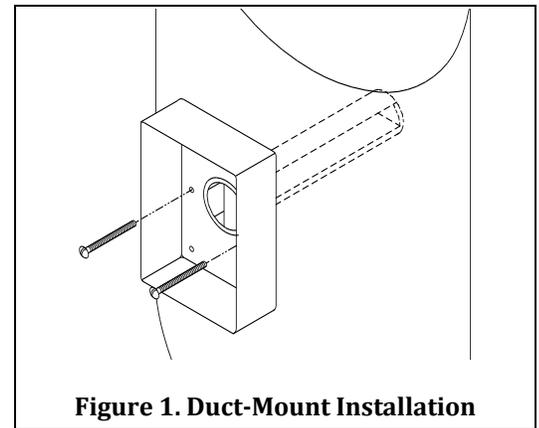
WARNING: The Model 8700/8701 series CO₂ and Temperature Monitor must be wired to 24 VAC only. Wiring the unit to 110 VAC will cause serious damage to the unit and void the warranty.

Component List

One of:	Model
801900	1 8700/8701-W (Wall-mount, 0–2,000 ppm)
801903	1 8700/8701-Wx-A (Wall-mount, 0–5,000 ppm)
801904	1 8700/8701-Wx-B (Wall-mount, 0–10,000 ppm)
801905	1 8700/8701-Dx (Duct-mount, 0–2,000 ppm)
801906	1 8700/8701-Dx-A (Duct-mount, 0–5,000 ppm)
801907	1 8700/8701-Dx-B (Duct-mount, 0–10,000 ppm)

Optional, pre-assembled components:

801901	1 LCD Display Board (Wall-mount)
801908	1 LCD Display Board (Duct-mount)
801902	1 Echelon Board



Rough-In

Wall-Mount Version

- Select the mounting location of the CO₂ monitor. The monitor is typically located as if it were a thermostat, at eye level about 5 to 6 feet above ground level.
- Cut a hole at this location, sized to mount a standard single-gang electrical box.
- Mount a single-gang electrical box.
- Run power and communications wiring to the electrical rough-in box. Leave 8 inches of slack at the CO₂ monitor end.
- Attach mounting bracket to single gang electrical box using screws provided.

Duct-Mount Version

- Drill a 1³/₈" hole at desired mounting location on duct. The strut of the sensor will go through this hole.
- Attach the lower half of the aspiration kit to the duct using #8 sheet metal screws, at least 5/₈" long (Figure 1).
- Run power and communications wiring to the aspiration kit, leaving 8 inches of slack at the CO₂ monitor end.
- String power cable through one hole and communications wiring through the other hole of aspiration kit, using strain-relief connectors. Cables, not loose wires, must be run through strain-relief to ensure an air-tight seal.

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Q-Stat is a trademark of TSI Incorporated.
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Wiring

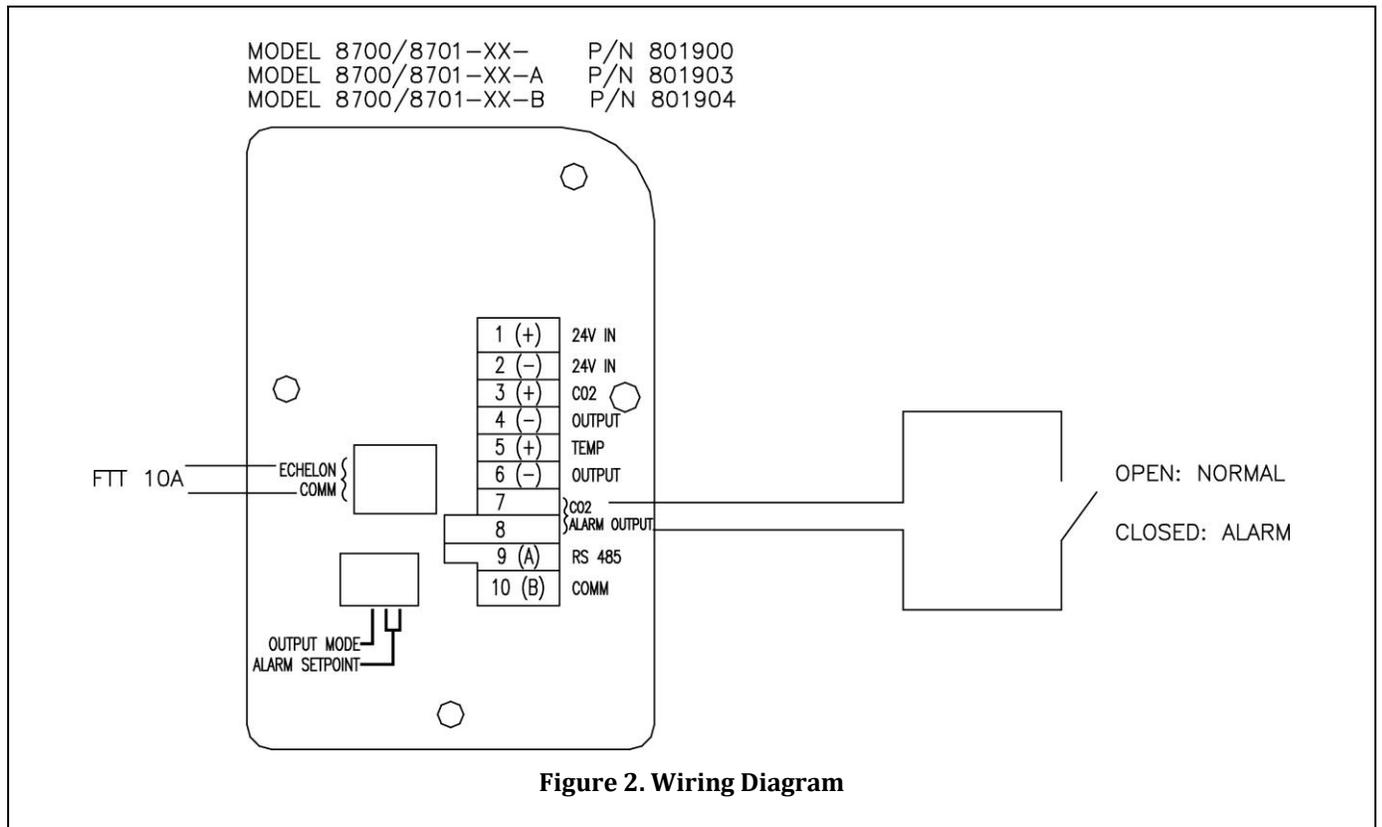
WARNING: The Model 8700/8701 CO₂ and Temperature Monitor must be wired to 24 VAC only. Wiring the unit to 110 VAC will cause serious damage to the unit and void the warranty.

Do **not** connect more than 24 VAC to any terminal.

Do **not** apply voltage to the RS-485 terminals or output terminals. These are output voltages only.

Make sure no power is applied until all wiring is complete.

- For all wiring, please refer to Figure 2.



- If digital communications are to be used, dip-switch 1 must be in the off position.
- Set output option (Voltage or Current) dip-switch according to Table 1. DIP switch is located on back of unit.

Output Option	DIP-Switch 2
0-10 VDC	Off
4-20 mA	On

Table 1. Output Options

- If remote alarm is used: Set alarm setpoint dip-switches according to Table 2. Then, wire external alarm device to the alarm terminals (Terminals 7 & 8).

Alarm Setpoint (ppm) max range 2,000/5,000/10,000 ppm	Dip-Switch 3	Dip-Switch 4
750/1,000/2,000	Off	Off
1,000/2,000/4,000	Off	On
1,250/3,000/6,000	On	Off
1,500/4,000/8,000	On	On

Table 2. Alarm Setpoints

- Connect temperature outputs (Terminals 5 & 6) to proper wires in cable, if desired.
- Connect CO₂ outputs (Terminals 3 & 4) to proper wires in cable.
- Connect communications cable to Terminals 9 & 10 if RS-485 communications are used.
- If LonMark® protocol is used, connect RS-485 communications cable to Echelon terminals.
- Connect the positive phase from the regulated 24 VAC power source to Terminal 1 and the neutral wire to Terminal 2. Both Terminal 1 and Terminal 2 are labeled 24 VAC.
- For the wall-mount version, hook the monitor to the top of the mounting bracket. Then, clip the bottom of the monitor to the mounting bracket (Figure 3).
- For the duct-mount version, screw the box cover to the box, using the screws provided (Figure 4).

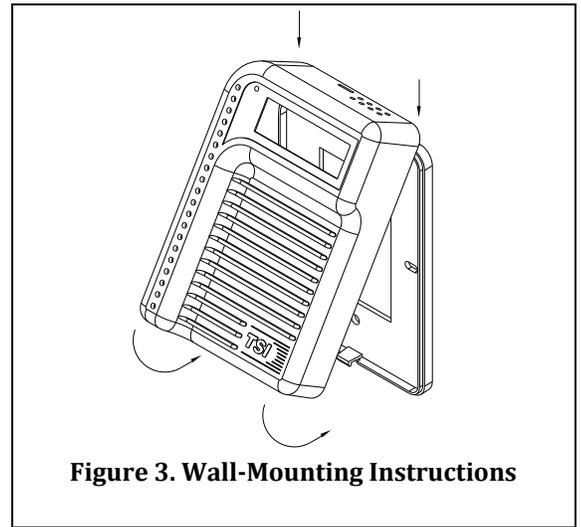


Figure 3. Wall-Mounting Instructions

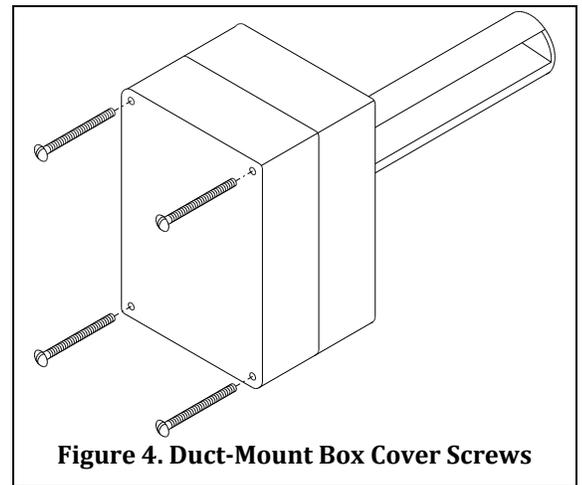


Figure 4. Duct-Mount Box Cover Screws

CE Version - Ferrite Installation

- For CE compliance, a ferrite bead must be installed on the wire running to the digital communications, either RS-485 or LonMark®.
- The ferrite bead should be no more than 10 cm away from the Q-Stat monitor end of the communications wire (Figure 5).

This concludes the installation instructions for the TSI Model 8700/8701 series Q-Stat CO₂ and Temperature Monitor. If you need assistance installing the system, please call TSI at (800) 874-2811.

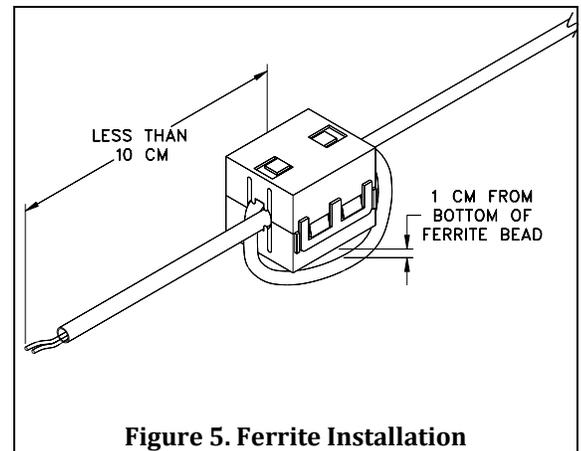


Figure 5. Ferrite Installation



UNDERSTANDING, ACCELERATED

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