

### Duct Heater Installation Recommendations

#### Installation Recommendations

1. Tempco Duct Heaters may be bolted to the ductwork through the side, bottom or top. Bottom and side mounting are preferred to minimize wiring/terminal enclosure temperatures.
2. Before mounting, consideration should be given to the strength of the ductwork required to support the weight of the heater. Add additional hangers or supports as required.
3. The inlet side of the unit should be at least 48 inches downstream from any change in duct size or duct direction.
4. To minimize pressure drop, mount the duct with the narrow width of the heater perpendicular to the air flow.
5. Duct heaters may be mounted in tandem to increase the KW that can be installed.
6. Process temperature sensing should be located downstream from the duct heater.
7. Air flows must never be interrupted. Such events will cause overheating and/or premature heater burnout. Your installation should include high limit temperature controls. All standard duct heaters have a thermowell attached to one element for installing a thermocouple to sense element temperature. Additional protection for the heater from low air flow can be achieved by installing an air flow switch or pressure switch on the inlet side.
8. Select the terminal housing that provides the best terminal protection from the environment surrounding the application.

#### Wiring

1. Power supply conductors must have a minimum ampacity of 125% of the maximum heater load and be rated for the ambient temperature of the heater enclosure.
2. The air handler should run on a time delay after the heater is de-energized. This allows the elements to cool without overheating adjacent areas.
3. Duct heaters drawing more than 48 Amps are divided into smaller branch circuits, each drawing 48 Amps or less. Please note that the number of circuits, can be changed to accommodate any wiring requirements you may have.



**Note:** Before you proceed to make any changes on factory prewired heaters, check the heater wiring schematic or consult Tempco.

*All electrical wiring must be done in accordance with national and local electrical codes.*

#### Maintenance Recommendations

1. Never perform any type of service on duct heaters prior to disconnecting all power supply lines.
2. After long periods of idle use, clean elements prior to start-up.
3. Periodically clean the elements even during regular use so as not to allow dirt to build up on the elements.
4. Periodically check that mounting screws or bolts have not become loose from blower vibration.
5. Periodically check that electrical connections are clean and tight.
6. Failed elements are field replaceable, minimizing downtime and saving the cost of a complete new heater.

