



AT-Series - Ambient Thermostat

The following installation procedures are suggested guidelines for the installation of AT Ambient Thermostats.

Receiving, Storing and Handling

1. Inspect materials for damage incurred during shipping. Report damages to the carrier for settlement.
2. Identify parts against the packing list to ensure the proper type and quantity has been received.

1 Kit Contents



1.1 Precautions

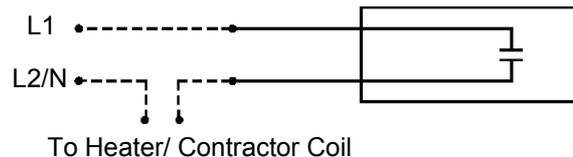
1. Do not expose unit to more than 100°F (56°C) above set point temperature.
2. Do not turn adjusting screw more than 7 revolutions in either direction from room temp.
3. Removal of adjusting screw may render unit inoperative.
4. If it is necessary to change the temperature setting in a heated system, do not turn adjusting screw more than one revolution at any one time.
5. Do not exceed the amperage rating shown.
6. Do not seal lead end with silicone sealant materials such as oils, caulking or grease.
7. Do not distort sensor sheath or damage the thermostat.

Table 1

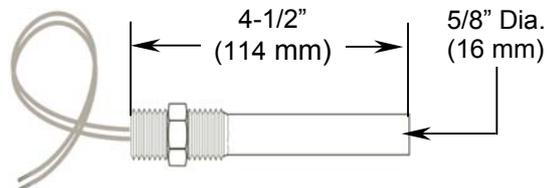
The AT-Series thermostat is approved with the junction box for the hazardous (classified) area	
AT Model #	Approved for:
AT-X/1	Class 1, Division 1 and 2, Group C and D
AT-X/2	Class 1, Division 1 and 2, Group B, C and D
AT-X/0	+ 40°C (+ 104°F)

2 Typical Wiring Diagram

For electrically hazardous (classified) locations, thermostat must be terminated in an explosion proof electrical junction box with volume not greater than 60 cubic inches suitable with ratings for area classification. The thermostat may be installed directly into a 1/2" NPT Hub.



2.1 Dimensions



3 Ratings/Specifications

Electrical rating	10A @ 120 Vac / 5A @ 240 Vac
Switch type	SPST ²
Control temperature range	-50°C to 85°C (-58°F to 185°F)
Max. exposure temperature	56°C (100°F) above set point temp. Control characteristics: "open on rise"
Differential	±0.6°C (1°F) ³
Construction	304SS
T-Rating	T5 (100°C)

4 Certifications / Approvals



Canadian Standards Association
 Ordinary Locations
 Hazardous Locations¹
 Class I, Division 1 and 2, Groups B, C & D

Note

1. For electrically hazardous (classified) locations, thermostat must be terminated in an explosion proof electrical junction box with ratings for area classification. Standard junction box is approved for Groups C and D. Group B approval requires alternative junction box when specified.
2. The National Electrical Code, Article 427-56(b) states: "Temperature-controlled switching devices which do not have an "off" position shall not be required to open all ungrounded conductors and shall not be permitted to serve as the disconnecting means." The AT thermostat has no "off" position and therefore may be used for switching one conductor of a two-phase heating circuit.
3. Depending on application and rate of temperature change.



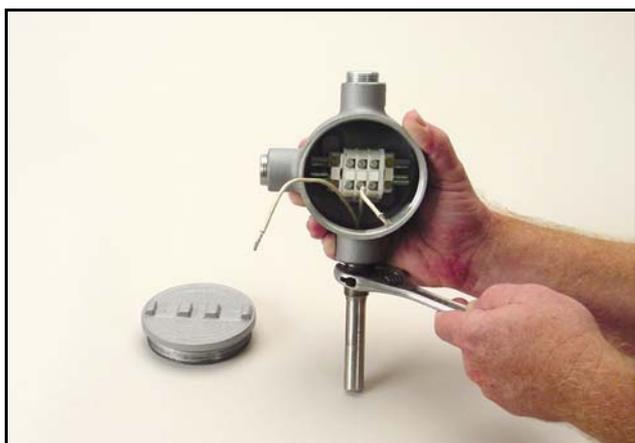
AT-Series - Ambient Thermostat

5 INSTALLATION PROCEDURES

Installation of Thermostat in Junction Box



1. Insert the thermostat directly into a junction box suitable for the application with a 1/2" NPT Hub. For electrically hazardous (classified) locations, thermostat must be terminated in an explosion proof electrical junction box suitable for area classification (Table 1).
2. The AT Thermostats are not hermetically sealed. "Seal-offs" are required for hazardous (classified) area installations.



NOTE: DO NOT apply excessive torque to the threaded mounting fittings as a resulting change in set point may occur.

- a) Electrical Connections maximum torque values without Teflon thread: 35 ft-lbs (47.5 N-m)
- b) Process Connections (into thermowell) maximum torque values with Teflon thread: 4.0 ft-lbs (5.4 N-m)

5.1 Temperature Setting Instructions

The factory set point for control is per Table 2. Changing the temperature setting should be made in the following manner:

NOTE: Counterclockwise rotations of the adjusting screw INCREASES temperature set point. Clockwise rotations of the adjusting screw DECREASES temperature set point. The adjustment rate is approximately 90°F (50°C) per full revolution of the screw.

1. Connect test light or other device suitable for determining on-off status.
2. Expose to media to be controlled.
3. Allow the temperature of the media to increase 10 to 20°F (5.6 to 11.1°C) above your required temperature set point by turning the adjusting screw counterclockwise. Allow media to stabilize each time the temperature is set.
4. Turn adjusting screw clockwise in small increments until desired control temperature set point is reached.
5. If an over adjustment is made or if a readjustment is required repeat the procedure.



Table 2

Catalogue Number	Temperature Setting ⁴
AT-10	+10°C (+50°F)
AT-20	+20°C (+68°F)
AT-30	+30°C (+86°F)
AT-40	+40°C (+104°F)
AT-50	+50°C (+122°F)
AT-X	Customer Specified ≤85°C (+185°F)