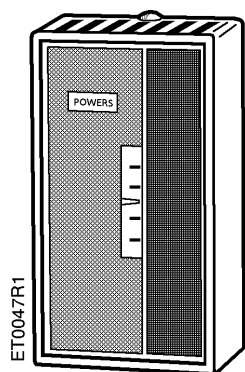
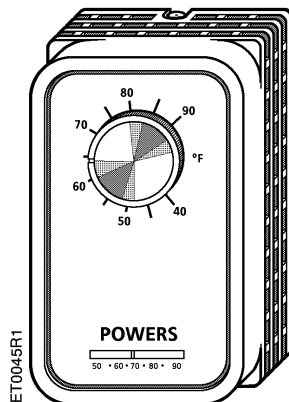


Powers™ Controls

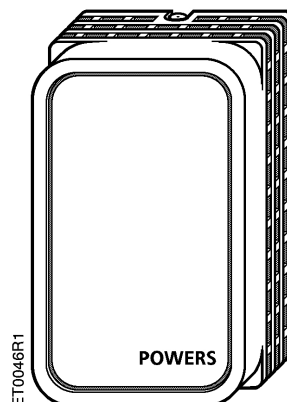
ET 134 Line Voltage Room Thermostats



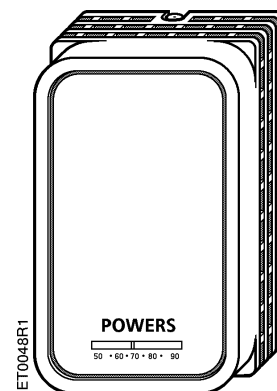
134-1083



134-1084 & 134-1085
Exposed Knobs



134-1084 & 134-1085
Concealed Adjustment



134-1086

Description

The ET 134 line voltage room thermostat is a wall mounted instrument available with exposed or concealed set point adjustment. Models are available with Single-Pole, Single-Throw (SPST) or Single-Pole, Double-Throw (SPDT) contact action and for standard-duty (nominal 1/4 hp; 10 amps, non-inductive) or heavy-duty (nominal 1 hp; 22 amps, non-inductive) applications.

Features

134-1083

- Locking cover with allen screws
- Concealed auto-off-fan selector switch
- Adjustable high range stop

134-1084, -1085, -1086

- Separable mounting plate for mounting and wiring without removing cover
- Locking cover with allen screws
- Concealed, adjustable low and high range stops
- Internal, dual Celsius and Fahrenheit scale

Warning/Caution Notations

WARNING		Personal injury/loss of life may occur if a procedure is not performed as specified.
CAUTION		Equipment damage, or loss of data may occur if the user does not follow procedure as specified.

Application

These line voltage thermostats control heating, cooling or year round air conditioning units in commercial, industrial or residential installations. Typical uses are for unit heaters, fan coils, blast coils, refrigerated storage room, electric heat, duct furnaces, greenhouses, etc.



WARNING:

These thermostats are designed for use only as an operating control. Where an operating control failure would result in personal injury and/or loss of property, it is the responsibility of the Installer to add devices (safety, limit controls) or systems (alarm, supervisory systems) that protect against, or warn of, control failure.

Product Numbers

Table 1. Product Numbers and Specifications.

Product Number	Set Point Adjustment	Set Point Range °F (°C)	Diff °F (°C)	Switch Action	Motor Rating (Full Load Amps)		Resistive Rating (Amps)		Weight lbs. (kg)
					120 Vac	240 Vac	120 Vac	277 Vac	
134-1083	Concealed	40 to 90 (5 to 30)	1.8 (1)	SPST with "AUTO-OFF FAN" Switch	6.0	3.0	—	—	1.3 (0.6)
134-1084	*Exposed Knob, or Concealed		1.8 (1) Htg. 2.3 (1.3) Clg.	SPDT Heating/Cooling	6.0	3.0	10.0	10.0	1.0 (0.45)
134-1085			3 (1.7) Htg. 3.5 (2) Clg.		16.0 Htg. 8.0 Clg.	8.0 Htg. 8.0 Clg.	22.0 Htg.	22.0 Htg.	
134-1086	Concealed		1.8 (1)	SPST open on Temperature rise Heating only	6.0	3.0	—	—	1.0 (0.45)
134-117	Aluminum Thermostat Guard and Baseplate								1.3 (0.6)
134-034	Concealed Adjustment Faceplate								0.03 (0.02)

NOTE: Approval UL File E35198

*Each thermostat is shipped with a blank faceplate for use when concealed adjustment is desired.

Mounting

The proper location of a heavy-duty room thermostat is very important to ensure good performance.

- Make sure the thermostat is in a place where air circulates around it freely.
- Never install the thermostat on or near an outside wall.
- Keep the thermostat away from windows and doors.
- Do not locate the thermostat too close to a strong light or any other false source of heat such as direct sunlight, steam lines, etc.
- Mount the thermostat on a post or partitioning wall, but make sure that there are no pipes or duct work in that wall or in the other side of the wall.
- Mount in a vertical position.

Wiring**WARNING:**

Disconnect the power supply before wiring connections are made to avoid possible electrical shock or equipment damage.

Make all wiring connections using copper conductors only and in accordance with the National Electrical Code and local regulations. Loads exceeding the rating of the thermostat should be handled by means of a relay or motor starter.

- Install an electrical conduit box for the thermostat.
- Pull the required wires to this box.

**CAUTION:**

Use terminal screws furnished (#8-32 x 1/4-inch binder head screw). Substitution of other screws can cause problems in making proper connections.

Service

There is no servicing of the thermostat. Replace if inoperative.

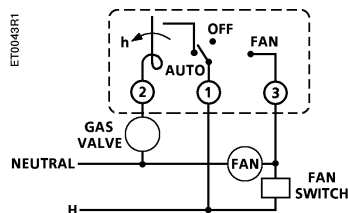
**Installation of
134-1083**

Read previous sections on Mounting and Wiring.

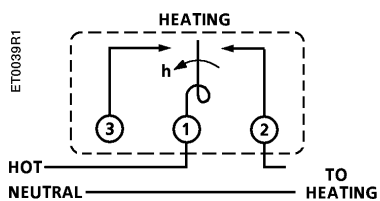
1. Make the wiring connections to the numbered terminals on the back of the thermostat. *Figure 1* shows a typical wiring diagram.
2. Remove the thermostat cover by loosening the allen screws at the top and bottom of the thermostat. The allen wrench is included with the thermostat.
3. Mount the thermostat to the box using the two keyhole openings in the thermostat base.
4. Set the high temperature cut-out stop.
 - a. Turn the thermostat dial so the desired high temperature setting minus one degree is at the pointer. See *Figure 2*.
 - b. Loosen the stop screw and slide the screw toward the back of the dial against the step behind the dial.
 - c. Tighten the stop screw.
5. Set the desired temperature. Turn the dial to the pointer located at the nine o'clock position. See *Figure 2*.
6. Turn the selector switch so that desired AUTO, OFF, or FAN reads vertically. *Figure 2*.
7. Replace the thermostat cover. Tighten the screws on the bottom and top of the thermostat.

The installation is now complete.

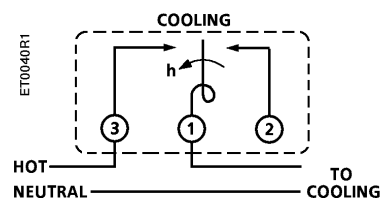
Installation of 134-1083, continued



Typical Auto-Off-Fan application for 134-1083 thermostat.



Typical heating application for 134-1084, -1085, -1086 thermostats.



Typical cooling application for 134-1084, and -1085 thermostats.

Figure 1. Wiring Diagrams.

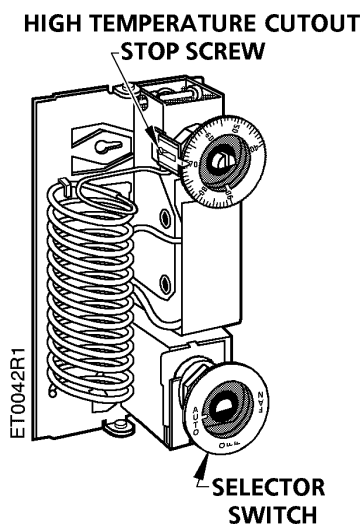


Figure 2. Interior View of 134-1083.

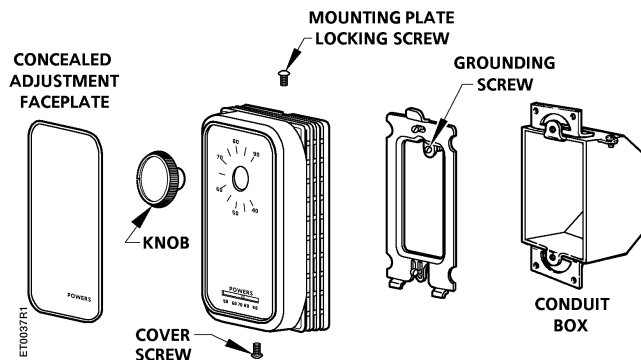


Figure 3. Mounting a 134-1084, -1085, and -1086 Thermostat to a Conduit Box.

**Installation of
134-1084, -1085,
-1086**

Read previous section on Mounting and Wiring.

1. Do not remove the thermostat cover to install.
2. Remove the mounting plate from back of the thermostat by unscrewing the mounting plate locking screw (see *Figure 3*) with the allen wrench provided.
3. Fasten the plate to the conduit box with the screws provided on the mounting plate.
4. Make the wiring connections to the terminals on the back of the thermostat. Terminal number 1 identification is stamped on the terminal block. See *Figure 1* for typical wiring diagrams.
5. Hook the two slots in the back of the thermostat over the prongs of the mounting plate. Swing the thermostat into position on the plate.
6. Tighten the mounting plate locking screw.

The installation is now complete.

Adjustments**To remove the
thermostat cover**

1. Pull off the knob.
2. Loosen the thermostat cover screw with the allen wrench provided.

**To convert to concealed
adjustment**

1. Remove the thermostat cover following instructions above.
2. Peel off the backing from the enclosed faceplate.
3. Position the new faceplate over the factory -installed faceplate.
4. Press firmly onto the cover.
5. Set the thermostat dial by lining up the desired set point at the nine o'clock position.
6. Replace the cover and tighten the thermostat cover screw.

**To set high and low
range stops****See *Figure 4***

1. Before the cover is removed, set the dial to the maximum stop setting.
2. Remove the knob as described above.
3. Hold the dial firmly, press tab "A", and rotate the tab clockwise until it stops against stop "C".
4. Release the tab and be sure it snaps into the desired notch.
5. Set the dial at the lowest temperature stop setting desired.
6. Hold the dial firmly, press tab "B" and rotate it counter clockwise until it stops against stop "C".
7. Release the tab and be sure it snaps into the desired notch.
8. Replace the cover, tighten the cover screw, and push on the knob.
9. Rotate the knob to the desired setting.

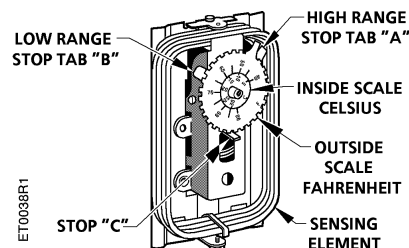


Figure 4. Interior of 134-1084, -1085, and, -1086 Thermostats with High and Low Adjustment Stops.

Dimensions

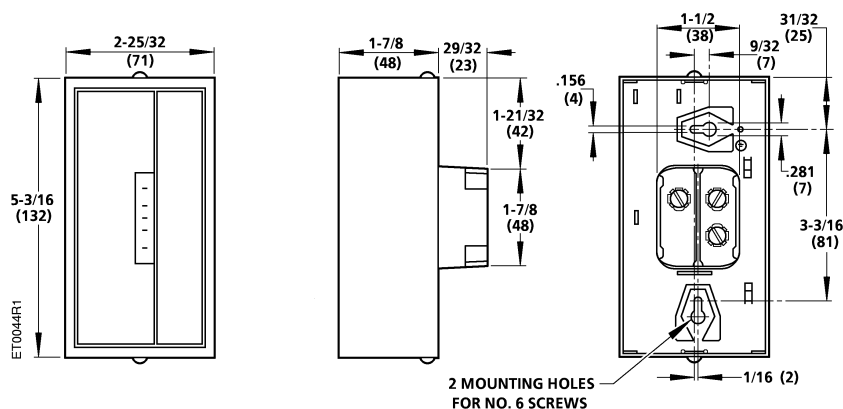


Figure 5. Dimensions of the 134-1083 Thermostat.

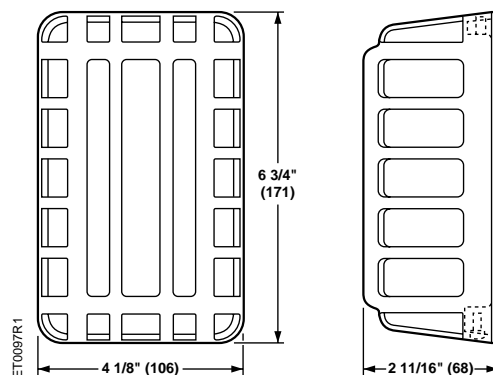


Figure 6. Dimensions of 134-117 Thermostat Guard.

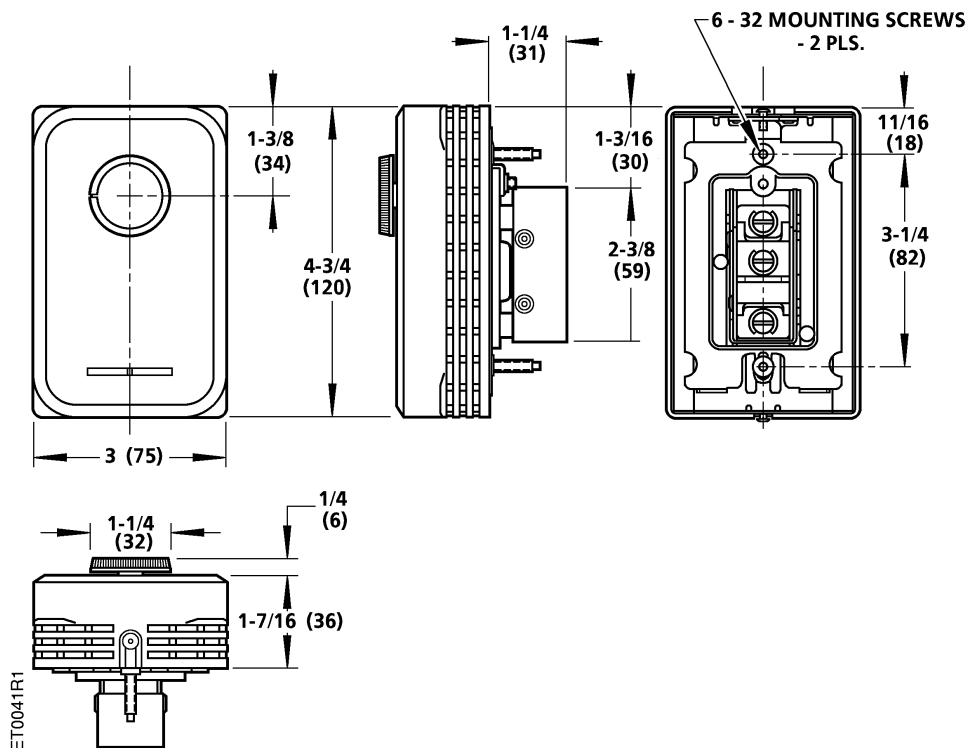


Figure 7. Dimensions of the 134-1084, -1085, and -1086 Thermostats.

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