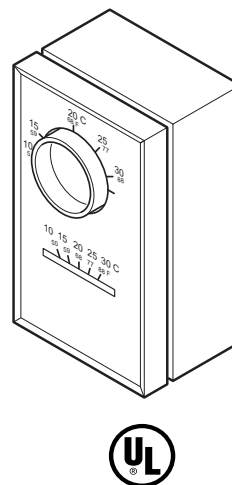


**Heavy-Duty Room Thermostat  
General Instructions****Application**

The TC-114 heavy-duty room thermostat has a SPDT switch that can be used to control unit heaters, motors, or non-inductive loads per Table-1.

**Features**

- Bimetal sensing element
- NEMA Type 1 housing
- Dual marked dial in °F and °C
- Built in temperature indication
- Flush or 2 x 4 wall box mounting



# Specifications

**Sensing Element:** Bimetal.

**Connections:** Color-coded 6" (152 mm) leads.

**Cover:** Beige plastic with brushed bronze metal insert.

**Mounting:** Flush or 2 x 4 wall box.

**Locations:** NEMA Type 1 indoor only.

**Dimensions:** 4-1/2" high x 2-3/4" wide x 1-1/8" deep (114 x 70 x 29 mm).

## Agency Listing

**UL 873:** Underwriters Laboratories Inc. listed (File # E50023 Category Temperature-Indicating and Regulating Equipment).

**Table-1 Model Chart**

Part Number	Application	Setpoint Dial Range °F (°C)	Differential °F (°C)	Electrical Switch See Table-2
TC-114	On-off control of unit heaters or motors	50 to 86 (10 to 30)	2 (1.1) Heat 3 (1.7) Cool	SPDT snap action

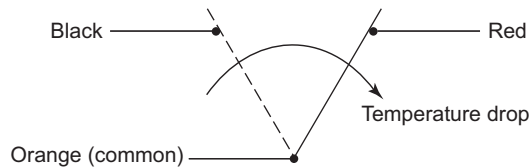
**Table-2 Maximum Electrical Ratings**

Part Number	Full Load Amps		Locked Rotor Amps		Non-Inductive Amps		
	24/120 Vac	240 Vac	24/120 Vac	240 Vac	120 Vac	240 Vac	277 Vac
TC-114	9.8	8	58.8	48	25	25	—

### Accessories

AT-504	Mounting base
AT-1163	Wire guard (requires AT-504)
AT-1165	Plastic guard
AT-1155	Plastic guard

## Typical Application (Wiring Diagram)



Red makes ON temperature drop.

Figure-1 TC-114 Wiring Diagram.

## Installation

### Inspection

Inspect the package for damage. If damaged, notify the appropriate carrier immediately. If undamaged, open the package and inspect the device for obvious damage. Return damaged products.

### Requirements

- Job wiring diagrams
- Tools (not provided)
  - Volt-ohm meter
  - Room temperature thermometer
  - Appropriate screwdriver(s) for cover and mounting screws

## Precautions



## Location

### General

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**Warning:** Electric shock hazard! Do not locate the thermostat where there is a danger of electrocution such as in shower rooms.

Wire the thermostat in series with the control circuit so that safety devices are maintained. Failure to observe these warnings can result in severe injury or death.

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#### **Caution:**

- Installer must be a qualified, experienced technician.
- Disconnect power supply before installation.
- Make all connections in accordance with electrical wiring diagrams and in accordance with national and local codes.
- *Use copper conductors only.*
- Do not exceed rating of the device.

Failure to observe these precautions can result in injury and damage the unit.

---

### Mounting

The thermostat requires upright mounting on a flat vertical surface. Locate the thermostat where it will be exposed to unrestricted circulation of air which represents the average temperature of the controlled space.

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#### **Caution:**

- Do not locate thermostat near sources of heat or cold such as lamps, motors, sunlight or concealed ducts or pipes.
- The thermostat is designed for service in any normally encountered human environment. Avoid locations where excessive moisture, corrosive fumes, or vibrations are present. NEMA Type 1 covers are intended for indoor use, primarily to provide a degree of protection against contact with the enclosed device.

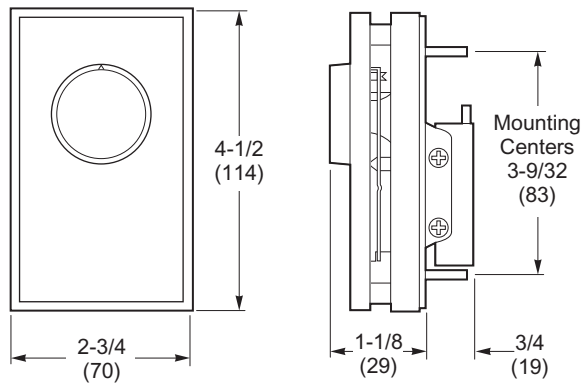
Failure to observe these precautions can result in improper operation or damage the unit.

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### Procedure

The thermostat may be installed on either a flush switch box or a surface switch box. See Figure-2 for mounting dimensions.

1. Pull the required wires.
2. Make the electrical connections to the thermostat as required by your application. Refer to Figure-1.
3. Remove the cover by holding the metal base in the area of the switch and pull outward on the one-piece plastic cover.
4. Mount the thermostat. Number 6 screws are provided for switch box mounting. Reinstall the thermostat cover.



Dimensions shown are in inches (mm)

Figure-2 Mounting Dimensions.

## Checkout

After installing the thermostat, make an initial check of the switching action by observing the controlled device.

1. Move the setpoint dial to a temperature above ambient. This should cause the thermostat to switch to the red lead, calling for heat.
2. Move the setpoint down gradually. The switch should make a contact to the black lead on a call for cooling.

## Run/Adjust

All thermostats are calibrated at the factory and normally will not require any attention other than setting the setpoint dial at the desired temperature.

## Maintenance

Open areas on the thermostat cover should be kept clean and free from obstruction to allow proper flow of air.

## Repair

The thermostat is not field repairable. If the system is not operating correctly and the reason is traced to the thermostat, it should be replaced.

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