Application
For on-off control of unit heater motors, electrical heater, high input motor starter coils.

Features
• Separate units for °C and °F.
• 2°F differential.
• Dial stop pins to limit dial range.
• Lock cover screw kits available.
• Agency approval.
• Switch bases AT-602 and AT-603 available for custom applications.

Applicable Literature
• Cross-Reference Guide F-23638
• Reference Manual F-21683
• Application Manual F-21335

†See Table-4 for agency approvals.
Setpoint Dial Range: See Table-1.
Sensing Element: Bimetal.
Differential: 2°F (1°C) maximum.
Electrical Switch: Snap action SPST switch with heavy-duty contacts.
Amp Ratings, See Table-2.
Connections: Coded screw terminals.
Cover: Beige plastic as standard with brushed bronze inserts.
Mounting: Flush or 2 x 4 wall box.
Locations: NEMA Type 1 indoor only.
Dimensions: 4-3/8" high x 2-3/4" wide x 1-5/8" deep (111 mm x 70 mm x 43 mm).

Table-1 Model Number Description.

<table>
<thead>
<tr>
<th>Standard Model</th>
<th>Company Identification</th>
<th>Dial Range</th>
<th>Night Depression (24V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA-1101</td>
<td>Schneider Electric</td>
<td>55 to 85°F</td>
<td>No</td>
</tr>
<tr>
<td>TA-1101-116</td>
<td></td>
<td>13 to 29°C</td>
<td>No</td>
</tr>
<tr>
<td>TA-1101-602</td>
<td></td>
<td>55 to 85°F</td>
<td>Yes</td>
</tr>
<tr>
<td>TA-1102</td>
<td>Schneider Electric</td>
<td>45 to 75°F</td>
<td>No</td>
</tr>
<tr>
<td>TA-1102-116</td>
<td></td>
<td>7 to 23°C</td>
<td>No</td>
</tr>
<tr>
<td>TA-1102-602</td>
<td></td>
<td>45 to 75°F</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table-2 Electrical Ratings.

<table>
<thead>
<tr>
<th>Full Load Amps</th>
<th>Locked Rotor Amps</th>
<th>Non-Inductive Amps</th>
<th>Pilot Duty VA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>24/120 Vac</td>
<td>240 Vac</td>
<td>240 Vac</td>
</tr>
<tr>
<td>24/120 Vac</td>
<td>240 Vac</td>
<td>24/120 Vac</td>
<td>240 Vac</td>
</tr>
<tr>
<td>7.2</td>
<td>3.6</td>
<td>44</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td></td>
<td>120 Vac</td>
<td>240 Vac</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7.0</td>
<td>68 @ 24 Vac</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>340 @ 120/240 Vac</td>
</tr>
</tbody>
</table>

Table-3 Each Standard Model Contains the Following.

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Blank cover insert</td>
</tr>
<tr>
<td>1</td>
<td>Cover insert with setpoint dial cutout</td>
</tr>
<tr>
<td>1</td>
<td>5/64&quot; Allen head screw for securing cover to thermostat base</td>
</tr>
<tr>
<td>1</td>
<td>5/64&quot; Allen head wrench</td>
</tr>
<tr>
<td>2</td>
<td>Dial stop pins to limit setpoint range</td>
</tr>
<tr>
<td>1</td>
<td>Thermostat</td>
</tr>
</tbody>
</table>

Table-4 Agency Approvals.

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Part Number</th>
<th>UL Listed</th>
<th>CSA Certified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal cover option</td>
<td>TA2-110X</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Plastic cover</td>
<td>TA-110X</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Night depression option</td>
<td>TA-110X-602</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Standard Cover

Options for Schneider Electric Models Only
(for quantities of 24 or more each part number)

Add “dash-number” (-XXX) suffix to base part number for desired option.
For metal covers, specify TA2-110X-XXX.

ACCESSORIES
AT-101  Lock cover kit
AT-104  Dial stop pins (pins included with each unit)
AT-504  Plaster hole cover kit (small)
AT-505  Surface mounting base
AT-546  Auxiliary mounting plate
AT-602  Selector switch sub-base DP4T
AT-603  Selector switch sub-base one DP4T, one DPDT
AT-1103 Wire guard
AT-1104 Cast aluminum guard
AT-1105 Plastic guard
AT-1155 Plastic guard
AT-1165 Plastic guard
TOOL-11 Calibration wrench
TOOL-13 Contact burnishing tool

Figure-1  Switch Action and Terminal Identification.
INSTALLATION

Inspection

Inspect the carton for damage. If damaged, notify the appropriate carrier immediately. Inspect the device for obvious damage. Return damaged products.

Requirements

- Job wiring diagrams
- Tools (not provided):
  Volt-ohm meter
  Appropriate screwdriver for mounting screws and terminal connections
- Appropriate accessories
- Mounting screws, two (2) provided for securing to a 2 x 4 conduit box
- Training: Installer must be a qualified, experienced technician

CAUTION:

- Disconnect the power supply before installation to prevent equipment damage.
- Make all connections in accordance with the wiring diagram and in accordance with national and local electrical codes. Class 1 wiring is required unless all circuits to contacts are powered from a Class II source. Use copper conductors only.
- Do not exceed ratings of the device.

Mounting and Wiring (See Figure-2 and Figure-7)

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

CAUTION:

Do not locate the thermostat near sources of heat or cold such as lamps, motors, sunlight, or concealed ducts or pipes, or where there is a danger of electrocution (i.e., shower rooms).

The thermostat is designed for service in any normally encountered human environment. Avoid locations where excessive vibration, moisture, corrosive fumes or vapors are present. NEMA Type 1 covers are intended for indoor use primarily to provide a degree of protection against contact with the enclosed equipment.

Thermostats with guards that restrict air flow must have heating or cooling anticipation.

1. Pull all wires.
2. Fasten mounting plate to box or wall.
3. Make electrical connection to thermostat screw type terminals. Green ground wire is located on mounting plate for use in all applications.
4. Hook thermostat on top of mounting plate and swing down into place.
5. Tighten thermostat mounting screw.

Figure-2 Thermostat Mounting.
**CHECKOUT**

After installing a thermostat, make an initial check of the switching action. Verify the switch action by listening to and watching the switch contacts, using a voltmeter between the proper sides of the switch, or by observing the controlled device.

1. Run the setpoint dial to a temperature above ambient. This should cause the thermostat to switch, calling for heat.
2. Turn the setpoint dial setting down gradually. The switch should break contact.

**CALIBRATION**

All thermostats are calibrated at the factory and normally will not require any such attention. However, if recalibration is necessary for any reason, proceed as follows:

1. Disconnect power to thermostat.
2. Set the adjusting dial to correspond to actual room temperature.
3. Remove thermostat cover, remove screw that secures right-hand side of insulator, fold back insulator, and remove contact cover. (See Figure-3.)

**CAUTION:**

Do not breathe on the thermostat or handle excessively as this will affect the accuracy of the final calibration.

4. If contact blade is made to the left (R) contact, use a 3/16" open end wrench (TOOL-11) to turn calibration screw counterclockwise (looking at head of screw) until blade just breaks contact. Thermostat is now properly calibrated.

**NOTE**

Each complete revolution of screw changes calibration approximately 8°F.

5. If contact is **not** made to the left, turn the calibration screw slowly clockwise until element makes to the R contact. Thermostat is now properly calibrated.
6. Replace contact cover insulator and thermostat cover.
7. Restore power to thermostat.
8. Recheck calibration about 30 minutes later to be sure heat from handling did not result
ADJUSTMENTS
Concealed Control Dial

Knurled Dial Removal (See Figure-4)
1. Remove the thermostat cover.
2. Secure the control dial with hand so that the dial will not rotate.
3. Place needle nose pliers at knurled ring of the control dial at the points where the knurled ring is attached to the control dial.
4. Twist the pliers at each knurled ring attachment point until the entire knurled ring of the control dial is removed.

Cover Insert Installation (See Figure-5)
1. Select appropriate cover insert.

NOTE
If blank insert is used, the knurled ring must be removed from the setpoint dial. See Knurled Dial Removal section. Also, remove dial window by sliding and/or pressing window from front of cover.

2. Remove protective backing and protective skin on face of cover insert.
3. Press insert uniformly on thermostat with logo in lower left-hand corner.
Limit Control Dial Range

**Dial Stop Pin Insertion** (See Figure-6)

1. Remove thermostat cover.
2. Secure the control dial with hand so that the dial will not rotate.
3. Place a dial stop pin in the jaws of a needle nose pliers.
4. Insert the dial stop pin in the appropriate hole on either (or both) side(s) of the control dial to restrict dial rotation.

![Figure-6 Dial Stop Pin Insertion.](image)

**MAINTENANCE**

Open areas at bottom and around base of thermostat should be kept clean and free from obstructions to allow proper flow of air. If switch contacts need cleaning, this may be done with a contact burnishing tool.

**FIELD REPAIR**

These thermostats are not field repairable. Replace entire device.
DIMENSIONAL DATA

All dimensions are in inches (millimeters in brackets). See Figure-7.

Figure-7 Mounting Dimensions.