L4064 COMBINATION WARM AIR FAN AND LIMIT CONTROLLERS ARE SUITABLE FOR ALL TYPES OF FORCED AIR HEATING SYSTEMS.

- L4064A-F,J and R turn fan on and off according to plenum temperature.
- L4064T has bimetal heater which turns fan on 90 seconds (nonadjustable) after the thermostat calls for heat. Fan turns off according to plenum temperature.
- The L4064B,D,F,R and SUPER TRADELINE model of L4064T have a manual fan switch which overrides the fan set points and keeps the fan running continuously.
- The L4064J and R have a special high temperature range suitable for gravity heating systems.
- Variety of fan and high limit setting ranges available.
- Push-in terminals provided to speed installation.
- Rigid or swivel bracket mounting, or surface mounting.
- Suitable for line voltage, low voltage, or self-generating Powerpile control applications.
- Slotted wiring knockouts for easy installation.
- Strain relief bushings included with SUPER TRADELINE and TRADELINE models protect wiring from field abuse.
- L4064 adapts to many competitive mounting holes for ease in replacement installations.
- SUPER TRADELINE and TRADELINE models include deluxe case with mounting adapters and screw terminal adapters for easy installation.
SUPER TRADELINE / TRADELINE MODELS

SUPER TRADELINE/TRADELINE models offer features not available on TRADELINE or standard models, and are designed to replace a wide range of Honeywell and competitive models. SUPER TRADELINE/TRADELINE models are selected and packaged to provide ease of stocking and handling as well as maximum replacement value. Specifications for SUPER TRADELINE and TRADELINE models are the same as those of standard models except as noted below.

SUPER TRADELINE MODELS AVAILABLE:
L4064B Fan and Limit Controller.

L4064T Fan and Limit Controller.

SUPER TRADELINE FEATURES INCLUDE:
• Universal adapters for 5/8, 3/4, and 1 in. diameter elements.
• Wiring space for related controls.
• All TRADELINE pack features as listed below.

TRADELINE MODELS AVAILABLE:
L4064B Fan and Limit Controller.

TRADELINE FEATURES INCLUDE:
• High limit stop—adjustable, factory-set at 200°F [93°C].

Mounting means—surface or rigid bracket.
Two round wiring knockouts in top and 2 slotted in bottom of case.
110265A Rigid Bracket, single wing with No. 8-32 setscrew.
Mounting screws provided.
123198A Push-in Screw Terminal Adapter.
127123 Steel Bushing with 135236 Wire Snap Ring to adapt insertion element to 1 in. (25.4 mm) hole in plenum.
137813 Strain Relief Bushing.
TRADELINE pack with cross reference label and special instruction sheet.

STANDARD MODELS

MODELS: L4064A—FJRT Fan and Limit Controllers.
See Tables I and II. Table I gives specifications in Fahrenheit degrees. Table II gives specifications in Celsius degrees.

TABLE I – L4064 SPECIFICATIONS IN DEGREES FAHRENHEIT.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SENSING ELEMENT</th>
<th>MANUAL FAN SWITCH</th>
<th>SCALE RANGE</th>
<th>FAN-ON RANGE</th>
<th>FAN-OFF RANGE</th>
<th>HIGH LIMIT FACTORY-SET</th>
</tr>
</thead>
<tbody>
<tr>
<td>L4064A</td>
<td>Helical bimetal</td>
<td>No</td>
<td>50</td>
<td>65</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>L4064B</td>
<td></td>
<td>Yes</td>
<td>50 to 100</td>
<td>100 to 125</td>
<td>100 to 200</td>
<td>250</td>
</tr>
<tr>
<td>L4064C</td>
<td>Flat, spiral bimetal</td>
<td>Yes</td>
<td>250</td>
<td>215 to 150</td>
<td>150 to 200</td>
<td>250</td>
</tr>
<tr>
<td>L4064D</td>
<td></td>
<td>Yes</td>
<td>300</td>
<td>305 to 200</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>L4064E</td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L4064F</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L4064J</td>
<td>Helical bimetal</td>
<td>No</td>
<td>80 to 100</td>
<td>100 to 150</td>
<td>150 to 200</td>
<td>250</td>
</tr>
<tr>
<td>L4064R</td>
<td></td>
<td>Yes</td>
<td>350</td>
<td>305 to 250</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Standard L4064T</td>
<td>Yes</td>
<td></td>
<td>350</td>
<td>290</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUPER TRADELINE</td>
<td></td>
<td>No</td>
<td>50</td>
<td>None – fan comes on 90 sec.</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>L4064T</td>
<td></td>
<td>Yes</td>
<td>250</td>
<td>after call for heat</td>
<td>to</td>
<td></td>
</tr>
</tbody>
</table>

ORDERING INFORMATION

WHEN PURCHASING REPLACEMENT AND MODERNIZATION PRODUCTS FROM YOUR TRADELINE WHOLESALER OR YOUR DISTRIBUTOR, REFER TO THE TRADELINE CATALOG OR PRICE SHEETS FOR COMPLETE ORDERING NUMBER, OR SPECIFY—

1. Order number.
2. Insertion depth—L4064A,B,E,F,J,R,T only.
3. Adjustable high limit stop, if desired (include desired set point).
4. Accessories, if desired.

IF YOU HAVE ADDITIONAL QUESTIONS, NEED FURTHER INFORMATION, OR WOULD LIKE TO COMMENT ON OUR PRODUCTS OR SERVICES, PLEASE WRITE OR PHONE:

1. YOUR LOCAL HONEYWELL RESIDENTIAL GROUP SALES OFFICE (CHECK WHITE PAGES OF PHONE DIRECTORY).
2. RESIDENTIAL GROUP CUSTOMER SERVICE
   HONEYWELL INC., 1885 DOUGLAS DRIVE NORTH
   MINNEAPOLIS, MINNESOTA 55422 (612) 542-7500
   (IN CANADA—HONEYWELL CONTROLS LIMITED, 740 ELLESMERE ROAD, SCARBOROUGH, ONTARIO M1P 2V9) INTERNATIONAL SALES AND SERVICE OFFICES IN ALL PRINCIPAL CITIES OF THE WORLD.
TABLE II - L4064 SPECIFICATIONS IN DEGREES CELSIUS.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SENSING ELEMENT</th>
<th>MANUAL FAN SWITCH</th>
<th>SCALE RANGE</th>
<th>FAN-ON RANGE</th>
<th>FAN-OFF RANGE</th>
<th>HIGH LIMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L4064A</td>
<td>Helical bimetal</td>
<td>No</td>
<td>10</td>
<td>18</td>
<td>52</td>
<td>38</td>
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<tr>
<td>L4064B</td>
<td>Flat, spiral bimetal</td>
<td>Yes</td>
<td>121</td>
<td>102</td>
<td>93</td>
<td>121</td>
</tr>
<tr>
<td>L4064C</td>
<td>Flat, spiral bimetal</td>
<td>No</td>
<td>27 to</td>
<td>38 to</td>
<td>27 to</td>
<td>66 to</td>
</tr>
<tr>
<td>L4064D</td>
<td>Flat, spiral bimetal</td>
<td>Yes</td>
<td>177</td>
<td>152</td>
<td>143</td>
<td>177</td>
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<tr>
<td>L4064E</td>
<td>Flat, spiral bimetal</td>
<td>No</td>
<td>10</td>
<td>None</td>
<td>10</td>
<td>38</td>
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<tr>
<td>L4064F</td>
<td>Flat, spiral bimetal</td>
<td>Yes</td>
<td>121</td>
<td>after call</td>
<td>93</td>
<td>121</td>
</tr>
<tr>
<td>L4064J</td>
<td>Helical bimetal</td>
<td>No</td>
<td>10</td>
<td>None</td>
<td>10</td>
<td>38</td>
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<tr>
<td>L4064K</td>
<td>Helical bimetal</td>
<td>Yes</td>
<td>121</td>
<td>none</td>
<td>10</td>
<td>38</td>
</tr>
<tr>
<td>Standard L4064T</td>
<td>No</td>
<td>121</td>
<td>after call</td>
<td>93</td>
<td>121</td>
<td></td>
</tr>
</tbody>
</table>

ELECTRICAL RATINGS (amperes):

<table>
<thead>
<tr>
<th>120 Vac</th>
<th>240 Vac</th>
<th>24 Vac</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAN LIMIT</td>
<td>FAN LIMIT</td>
<td>FAN LIMIT</td>
</tr>
<tr>
<td>Full Load</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>Locked Rotor</td>
<td>84</td>
<td>48</td>
</tr>
<tr>
<td>Max. Amp</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Pilot Duty—2 A at 25 Vac; 0.25 A at 0.25 to 12 Vdc.
Maximum Combined Connected Load—2000 VA.

HIGH LIMIT DIFFERENTIAL: 25 F [14 C].
LIMIT STOP SETTING: 150 F to 250 F [66 C to 121 C] in 10 F [5.6 C] increments (specify when ordering).
MINIMUM SWITCH TEMPERATURE:
L4064A,T—minus 40 F [minus 40 C].
L4064B,F,J,R—plus 32 F [0 C].
MAXIMUM SWITCH TEMPERATURE: 190 F [88 C].
MAXIMUM ELEMENT TEMPERATURE:
L4064A,F,T—350 F [177 C].
L4064J,R—600 F [316 C].
MOUNTING DIMENSIONS: See Fig. 1.

FIG. 1—MOUNTING DIMENSIONS IN in. [mm IN BRACKETS].
MOUNTING MEANS:
L4064A,B,E,F,J,R,T—rigid bracket, swivel bracket, or flush mounting.
L4064C,D—flush mounting only.
CASE DIMENSIONS: See Fig. 1.
ELEMENT DIMENSIONS:
L4064A,B,E,F,J,R,T (helical)—3/4 in. [19.1 mm] diameter; 5, 8, or 11-1/2 in. [127, 203.2 or 292.1 mm] insertion.
L4064C,D (flat spiral)—1-1/2 in. [38.1 mm] diameter; 1-1/2 in. [38.1 mm] insertion.
ADJUSTMENT MEANS: Adjustable levers on scaleplate.
FINISH: Zinc-plated steel.

WHEN INSTALLING THIS PRODUCT . . .
1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in the instructions and on the product to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check out product operation as provided in these instructions.

CAUTION
1. Disconnect power supply before beginning installation to prevent electrical shock and equipment damage.
2. When connecting cable or conduit to control, avoid straining the control case.

Follow furnace or burner manufacturer's instructions, if available. Do NOT exceed the ratings and limitations given in this section.

LOCATION
If this is a replacement installation, locate the L4064 in the same location as the control being replaced. Sensing tube length should be same as old control. If this is a new installation, the element should be installed only by a trained, experienced service technician according to the furnace manufacturer's instructions. The element must not touch any internal part of the furnace.

NOTE: The electrical rating is at maximum switch temperature of 190 F [88 C]. If plenum surface temperature exceeds 190 F [88 C], heat insulating material or mounting bracket must be used. The L4064J,R requires the use of a bracket in gravity systems.

MOUNTING
The devices may be mounted as follows:
L4064A,B,E,F,J,R,T—flush mounting or bracket (rigid or swivel).
L4064C,D—flush mounting only.

WIRING KNOCKOUTS:
L4064A,F,J,R—two in bottom of case, slotted for easy installation.
L4064T—one knockout in bottom of case.
UNDERWRITERS LABORATORIES INC. APPROVALS:
L4064A,B,C,D,T LISTED—File MP466, Guide MBPR;
ACCESSORIES:
1. 110265A Rigid Bracket—single wing, with No. 8-32 setscrew.
2. 129250A Rigid Bracket—double wing, with No. 8-32 setscrew.
3. 32612A Swivel Bracket.
4. 137813 Strain Relief Bushing.

FLUSH MOUNTING
L4064A,B,E,F,J,R,T
Hole in plenum should be just large enough to accommodate the 3/4 in. [19.1 mm] diameter element tube. For adequate clearance an 0.80 in. [20.3 mm] diameter hole is recommended.
L4064C,D
Hole in plenum should be 1-9/16 in. [39.7 mm] diameter to accommodate the 1-1/2 in. [38.1 mm] diameter element.
1. Remove cover by squeezing sides and pulling off.
2. Insert element in plenum and mark location of mounting holes. Make sure the case is snug against the plenum before marking the mounting holes.
3. Punch or drill holes for mounting screws.
4. Place insulation between plenum and case if necessary.
5. Fasten controller securely with mounting screws.
SWIVEL MOUNTING
L4064A,B,E,F,J,R,T may be swivel mounted. The swivel bracket requires a 1-9/16 in. [39.7 mm] hole in the plenum (Fig. 3).
1. Use bracket as a template to make the location of mounting holes in plenum. Drill or punch holes for mounting screws.
2. Fasten the bracket in place with furnished screws. Start the screws but do not tighten.
3. Insert element tube through bracket, straighten controller, and fasten. Tighten the mounting screws securely. It may be necessary to rotate the bracket to tighten all screws securely.

![32612A SWIVEL BRACKET](image)

**FIG. 3—SWIVEL MOUNTING. REQUIRES A 1-9/16 in. [39.7 mm] DIAMETER MOUNTING HOLE FOR ELEMENT INSERTION.**

RIGID BRACKET MOUNTING

**WARNING**
When mounting control on bracket, make sure setscrew strikes tube frame and not inner sensing element.

L4064A,B,E,F,J,R,T may be mounted using a rigid bracket. The rigid bracket requires a hole 0.80 in. [20.3 mm] diameter for mounting (Fig. 4).
1. Use bracket as a template to mark the location of mounting holes in plenum. Drill or punch holes for mounting screws.
2. Fasten bracket in place with furnished screws. Tighten the screws securely.
3. Insert element tube through bracket, straighten controller and fasten by tightening setscrew. Be sure screw strikes tube frame and does not strike inner sensing element.
4. For replacement installations with existing 1 in. [25.4 mm] diameter hole. SUPER TRADELINE and TRADELINE models are supplied with split steel bushings and wire snap ring. Follow the instructions below for using the steel bushing adapter.

![32612A RIGID BRACKET](image)

**FIG. 4—RIGID BRACKET MOUNTING REQUIRES A HOLE 0.80 in. [20.3 mm] DIAMETER FOR MOUNTING.**

STEEL BUSHING ADAPTER (SUPER TRADELINE and TRADELINE models)
1. Insert one-half of the split steel bushing through the wire ring (Fig. 5). It may be necessary to spread the ring slightly.
2. Insert the other half of the steel bushing into the ring making sure tabs and ears are at the same ends.
3. Place bushing assembly on element, ear end first.
4. Holding bushing at seams, push firmly to the control end of element.
5. Insert element tube with adapter through bracket, straighten controller and fasten. Tighten setscrew. Be sure screw strikes bushing and not inner sensing element.

![32612A HELICAL ELEMENT](image)

**FIG. 5—USING TRADELINE ADAPTER.**

WIRING
Disconnect power supply before beginning installation to prevent electrical shock and equipment damage. All wiring must comply with local electrical codes and ordinances or in the absence of local codes with the National Electrical Code ANSI C1-1981—NFPA 70. Follow burner or furnace manufacturer’s instructions if available; otherwise, proceed as follows.

**IMPORTANT**
The metal-fiberboard jumper must be removed when the limit is used in the low voltage circuit. To remove, pull out. To replace, push metal fiberboard jumper in with tab side up.
INSTALLATION (SUPER TRADELINE/TRADELINE shown)

The slotted knockouts on the bottom of the case and the strain relief bushing are provided to simplify the installation procedure and to protect the wires.

1. To remove the slotted knockout(s), use a long-nose pliers as shown in Fig. 6 and pull straight down.

2. Insert the strain relief bushing into the knockout as shown. The open side of the bushing should face the open side of the knockout.

3. Connect wire to the push-in terminals, pull wires through slot, and lay side by side.

4. When the wires have been connected to the control, close the movable gate on the strain relief bushing. Use a channel lock pliers to snap the gate shut (Fig. 8).

When connecting cable or conduit to this control, use care to avoid strain on the control case. When connecting wires to the push-in terminals, use the following procedure:

1. No. 14, 16, or 18 solid or No. 14 or 16 stranded wire may be connected to the terminals.

2. Strip insulation from wires the distance shown by the strip gauge on the controller.

3. Solid wire may be inserted by pushing into the terminal holes. If stranded wire is used, insert a small screwdriver into the slot next to the terminal (Fig. 9). Push in and hold while inserting wire in terminal. Then remove screwdriver. Stranded wire may be pushed directly in if solder dipped.

IMPORTANT

All wires must be clear of rotating scaleplate.
SCREW TERMINAL ADAPTERS (SUPER TRADELINE and TRADELINE models only)

Two 123198A Screw Terminal Adapters are provided with SUPER TRADELINE and TRADELINE models for converting push-in terminals to screw type terminals. These are for use on the fan side of the switch when it is desirable to connect more than one wire to a terminal.

NOTE: Because of temperature limitations on field wiring, the screw adapters should be used ONLY when the L4064 is installed on a mounting bracket. Do not remove fiberboard insulator from upper adapter; this insulates the adapter from the dial.

To install, push long, serrated prong all the way into the round terminal hole so that tip of small prong fits into square hole (Fig. 10).

FIG. 10—INSTALLING SCREW TERMINAL ADAPTER.

FIG. 12—L4064T 3-WIRE LINE VOLTAGE HOOKUP.

FIG. 11—A: LIMIT IN LOW VOLTAGE CIRCUIT.  
B: LIMIT IN LINE VOLTAGE CIRCUIT.  
C: LIMIT IN LINE VOLTAGE CIRCUIT WITHOUT JUMPER.
SETTIN GS AND ADJUSTMENTS

CAUTION

When adjusting the fan and limit setting levers, hold the scaleplate dial to keep it from turning and straining the sensing element.

IMPORTANT

To L4064T uses a bimetal heater to turn on the fan 90 seconds after a call for heat. When the call for heat ends, the fan will continue to run until the fan-off temperature is reached. If the L4064T is used to replace an L4064A or B, the blower fan may circulate cold air until the plenum heats up. No adjustment of the fan-on time is possible.

Move the setting levers to the control points recommended by the burner or furnace manufacturer. Use gentle finger pressure.

1. Move the FAN OFF setting lever to the temperature at which the fan is to stop to prevent circulation of cool air.

2. Move the FAN ON setting lever as follows:
   L4064A-F—FAN ON range is from 15 F [8 C] above the FAN OFF setting to 35 F [19 C] below the LIMIT OFF setting.
   L4064J,R—FAN ON range is from 20 F [11 C] above the FAN OFF setting to 45 F [25 C] below the LIMIT OFF setting.
   L4064T—Move the FAN ON indicator as needed for setting the FAN OFF indicator and LIMIT indicator. The FAN ON indicator is nonfunctional on the L4064T; the bimetal heater acts to turn on the fan 90 seconds after a call for heat from the thermostat.

3. Move the LIMIT setting lever to the temperature at which the high limit switch is to break the burner circuit.
   L4064A-F,T limit range is 100 F to 250 F [55 C to 139 C];
   L4064J,R limit range is 150 F to 350 F [83 C to 194 C].

MANUAL SWITCH (L4064B,D,R,T)

For constant fan operation (overriding fan setting levers), push the FAN switch button in. For fan to cycle automatically, pull button out.

OPERATION

L4064A,F,J,R—As the plenum temperature rises, the bimetal sensing element of the control warps and mechanically makes the fan contacts (at the FAN ON temperature setting). During normal operation, the call for heat ends before the LIMIT setting is reached and the fan contacts break as the plenum temperature falls and the FAN OFF setting is reached.

If the call for heat continues until the temperature in the plenum rises to the LIMIT setting, the bimetal element will mechanically break the limit contacts and de-energize the gas control circuit.

L4064T—The operation of the L4064T is the same as that of the L4064B except that this combination fan and limit control uses a bimetal heater to heat its bimetal sensing element. This heater acts to anticipate the rise in plenum temperature and turns on the fan 90 seconds after the thermostat calls for heat.

CHECKOUT

When installation is complete, turn on the power supply. Disconnect the fan at the fan motor or L4064. Set thermostat to call for heat. Burner should come on and limit controller should shut burner off when plenum temperature reaches the limit set point. Turn off power, reconnect the fan switch, turn on power and again set thermostat to call for heat. On L4064A,F,J,R fan should come on when plenum temperature has reached fan-on setting. On L4064T, fan should come on 90 seconds after call for heat. Fan should shut off on all L4064 models when call for heat ends and plenum has cooled to fan-off setting.