

*Superseded by 36TE-2SI 10-72*

# Bypass Weathermaster® Air Terminals

## INTRODUCTION

The 36TE unit (see Fig. 1) is a nonchangeover version of the 36RV Bypass WEATHERMASTER Air Terminal with an electric resistance heater. It consists of an air inlet, sound absorbing plenum, balancing damper, primary air nozzles, bypass damper assembly, secondary coil, and condensate pan.

Controls for this unit are either self-contained or wall mounted: the thermostat can be mounted on the right-hand side of the unit or on the wall; the electrical controls are mounted on the left-hand side of the unit. Electrical controls include an On-Off toggle switch, fuse holder, fuse, microswitch, terminal block, automatic high-temperature limit switch, and a manual reset temperature limit switch.

When the unit thermostat senses a cold room temperature, it causes the bypass damper to close. Induced room air is then directed around the secondary coil. When the damper reaches its full bypass position, it contacts the microswitch which activates the heater.

This publication is designed as a supplement to the 36R Installation Instructions. Since the 36RV and 36TE units are similar, installation of the 36TE unit is the same as that described for the 36RV unit with the changes noted in this publication. Refer also to the 36R literature for unit and enclosure dimensional data.

*When unpacking unit, should any in-transit damage be observed, file claim with transportation agency.*

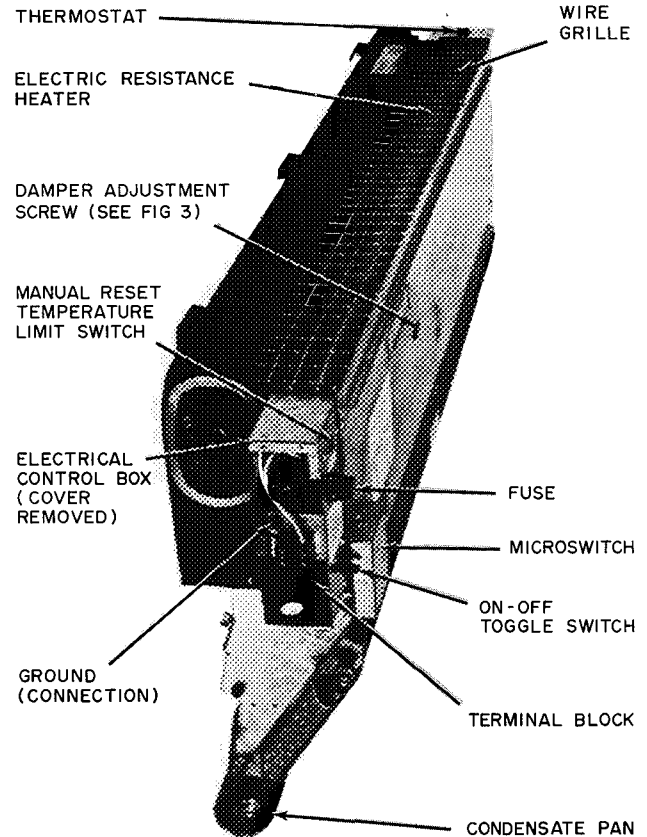
## INSTALLATION

### Unit Installation

1. Follow procedures outlined for installation of the 36RV air terminals. Refer to 36R Installation Instructions for details.
2. Do *not* remove protective cover from unit discharge unless discharge grille is being installed. If construction debris is still present in area, keep discharge covered to prevent debris from getting into unit heater.

### Wiring

1. Observe national and local codes.
2. Check to ensure that unit nameplate voltage corresponds with the line voltage available at the job site. *Do not exceed the allowable voltage variation of  $\pm 10$  percent.*
3. Make line voltage connections to terminal block in control box on unit. Make ground connection to *green* screw above terminal block. (See Fig. 1 and Fig. 2.)



**Fig. 1 — 36TE Bypass WEATHERMASTER Air Terminal**

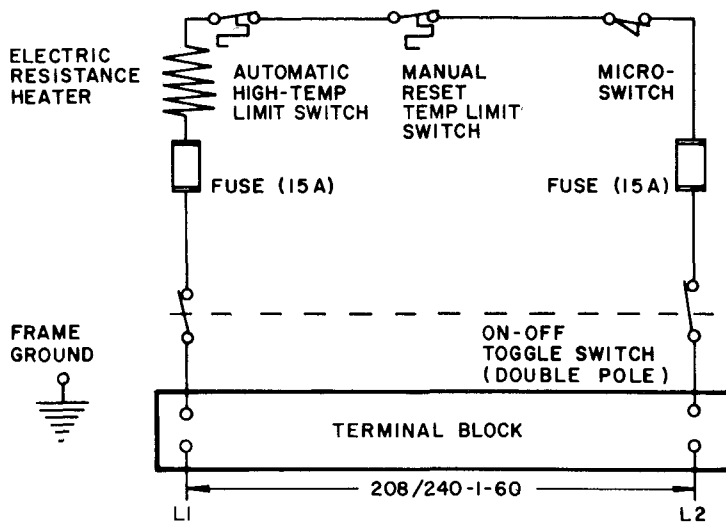
4. Refer to Table 1 for electrical data and usage.

*NOTE: Whenever the fan in the central station air handling apparatus is shut down, make sure that the electric resistance heater located in the 36TE unit discharge is inoperative. To ensure this, the heater circuit should be interlocked with the apparatus fan.*

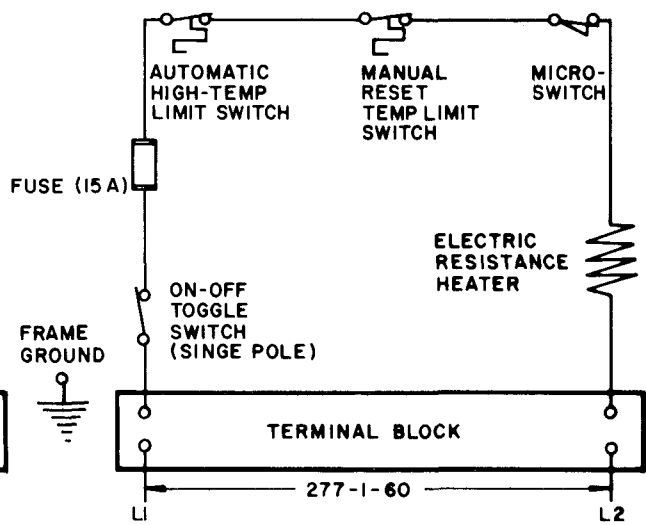
### Unit Balancing

1. Remove construction debris from unit and make sure that protective plastic has been removed from thermostat cover.
2. Units are shipped with plenum damper wide open. Turn damper adjustment screw, which is located in the front of the unit (see Fig. 1 and Fig. 3), *clockwise* to close damper and *decrease* nozzle pressure to design value. (Minimum allowable nozzle pressure is 1.0 in. wg.) Two or three runs may be necessary to obtain proper balance. (See Fig. 3.)

*NOTE: 36TE unit requires minimum 1.5 in. wg plenum pressure for control operation; maximum allowable plenum pressure is 5 in. wg.*

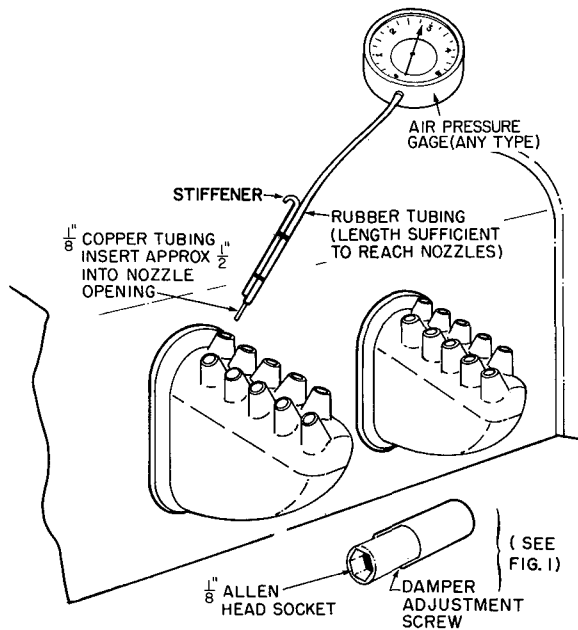


208/240-VOLT UNITS

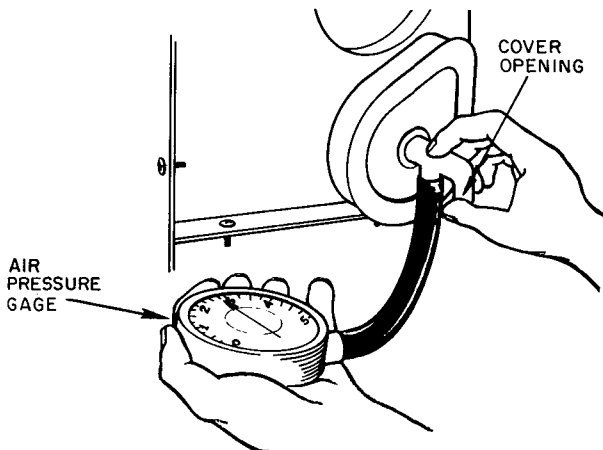


277-VOLT UNITS

Fig. 2 — 36TE Bypass Weathermaster® Air Terminal Wiring Schematics



MEASURING NOZZLE PRESSURE



MEASURING PLENUM PRESSURE

NOTE Unit must not be operated below a 1-in. wg nozzle pressure and a 1.5-in. wg plenum pressure

Fig. 3 — Measuring Nozzle and Plenum Pressures

Table 1 — Electrical Data and Usage

VOLTAGE/HZ	WATTS	FLA	FUSE AMPS	WIRE SIZE (AWG)	ALLOWABLE AMP-FT*
208-1-60	1000	4.81	15 0	14	332
	1500	7.22		12	527
	2000	9.63		10	834
	2500	12.10		8	1328
	3000	14.41		6	2061
240-1-60	1000	4.17	15.0	14	383
	1500	6.25		12	609
	2000	8.33		10	962
	2500	10.40		8	1533
	3000	12.50		6	2378
277-1-60	1000	3.62	15 0	14	442
	1500	5.42		12	702
	2000	7.23		10	1111
	2500	9.03		8	1769
	3000	10.85		6	2745

FLA — Full Load Amps

\*Copper wire sizes based upon 60 C Use latest National Electric Code (NEC) for wire lengths (allow 3% voltage drop) and fuse sizes Follow all local codes required. To obtain maximum wire length, divide allowable amp-feet by FLA

- Total primary air flow to a series of units fed by a common runout should not exceed 220 cfm.

**IMPORTANT:** Unit must not be operated with less primary air than shown below:

WATTS	MINIMUM CFM
1000	32
1500	51
2000	67
2500	83
3000	108

### Enclosure Selection

Standard 36RV enclosures with stamped steel discharge grilles can be used with the 36TE units. Plastic grilles must never be used. The steel grille should be locked in place after installation. On furred-in units, a discharge grille frame may be used with the discharge grille.

## MAINTENANCE

**CAUTION:** When On-Off toggle switch (see Fig. 1) is in the "Off" position, power is still supplied to lower terminal of switch and to terminal block. To prevent electrical shock whenever maintenance is being performed on unit, disconnect main power supply to unit.

Observe basic troubleshooting procedures as outlined for the 36RV units. Refer to 36R Operating and Maintenance Instructions. Check and follow up until malfunction is isolated.

If electric heater malfunctions, observe the procedures in Table 2; if bypass damper malfunctions, refer to procedures outlined for the 36RV units.

**Table 2 – 36TE Electric Resistance Heater  
Troubleshooting**

PROBLEM	POSSIBLE CAUSE	REMEDY
<b>Heater Inoperative</b>	On-Off toggle switch in "Off" position	Turn to "On" position
	No power to unit	Check main power supply
	Fuse(s) blown	Replace as required
	Microswitch deactivated	Check bypass damper to make sure it is in the full bypass position. If not, move thermostat lever to <i>red</i> . (See Fig. 1 ) If still not functioning, follow procedures outlined for 36RV unit.
	Back-up manual reset temperature limit switch open circuited	<i>Depress</i> button (see Fig. 1) to activate

*For replacement items use Carrier Specified Parts.*

*Manufacturer reserves the right to change any product specifications without notice.*

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