INTELLISTAT™
Combination Temperature and Humidity Control

- 7 Day Programmable
- MicroPulse™ Technology
- Thermoglow® Backlight
- One-For-All Technology
- INTELLIMOT™ or Conventional Humidity Control
- Read Outdoor Temperature With Optional Sensor
- Humidity Programmable for Equipment Size
- Window Condensation Control
- Up to 24 gal./day @ 120° F Plenum Temperature

2 HEAT - 2 COOL

TEMPERATURE & HUMIDITY Complete Control from TOTALINE®

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**CAUTION**

Follow Installation Instructions before proceeding.

SET THERMOSTAT TO MODE "OFF" PRIOR TO CHANGING SETTINGS IN SETUP OR RESTORING FACTORY DEFAULTS.

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P/N P374-1600

Page 1
Front Panel

Pressing the Humidity Shift Key will shift the button functions. The 'lower' labeled functions are humidity controls.
Display

1. **Mode Indicators**
   Selects the operation mode of the equipment.
   - **HEAT** - indicates the heat mode.
   - **COOL** - indicates the air conditioning mode.
   - **AUTO** - indicates the system will automatically changeover between heat and cool modes as the temperature varies.
   - **OFF** - indicates the entire system is turned off.
   - **PROGRAM ON** - indicates the stored program is enabled to run. *Page 9.*

2. **Clock with Day of the Week**
   Indicates the current time and day. This clock is also used to program the time periods. *Page 5.*

3. **Room Temperature Display**
   Indicates the current room temperature.

4. **Desired Set Temperature**
   Indicates desired room temperature(s). *Page 7.*
Display

5 **Outside** Indication
Indicates the temperature displayed is from the optional outside sensor. *Page 22.*

6 **Morning, Day, Evening & Night** Indication
Indicates the program time period. *Page 9-12.*

7 **Setup** Indication
Indicates the thermostat is in the programming mode. *Page 13.*

8 **Fan Operation** Indication
- Indicates constant, continuous fan operation, (Fan On).
  When **Fan On** is not lit - indicates the fan will only operate when necessary to heat or to cool. *Page 7.*

9 **Service Filter** Indication
**Service Filter** indicates when the filter should be serviced under normal conditions.
Appears after 0 - 1950 hours of blower operation (adjustable). *Page 16.*

10 **Locked** Indication
**Locked** appears after the right combination of buttons are pressed, rendering the buttons inoperative. *Page 23.*

11 **Dry** Indication
Appears when room humidity is at or below 25%.

12 **Humidity** Indication
**MICROPULSE** spray indicator, **Pulses** with **INTELLIMIST** spray. Always on with conventional humidifier.

*Page 4*
Quick Start  Set the Clock and Go

During Setup & Programming:
Pressing the Up and Down buttons will modify the flashing selection.
(Represented in dark black)

This thermostat is preprogrammed from the factory to operate 1 or 2 Stage equipment without the need for further programming. To optimize the installation of this thermostat follow the instructions in the Advanced Setup section.

Page 5
Basic Operation

Select Mode

The **HEAT** setting indicates the temperature the room has to reach before the furnace will turn on to heat the room.

The **COOL** setting indicates the temperature the room has to reach before the air conditioner will turn on to cool the room.

**AUTO** will automatically select heat or cool based on room temperature demand.

**Program On** will activate the stored timer operation. (Morning, Day, Evening & Night Periods)

**OFF** indicates both heating and air conditioning systems are turned off.
Basic Operation

**Select Desired Temperature**

In any mode, adjust the desired Set Temperature with buttons.

Pressing the up/down buttons in Auto mode will adjust both the heat and cool set temperatures simultaneously. Pressing the up/down buttons in Heat or Cool modes will adjust only the heat or cool set temperature.

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**Fan Operation**

Indicates constant fan operation. This feature is active even if the thermostat is set to Off.

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**View Outdoor Temperature**

To view Outdoor temperature press the Outside button. The Outside temperature will be displayed until the Outside button is pressed again. 2 dashes appear if no outdoor sensor is connected.
In the Humidity mode, adjust the desired Humidity Level with buttons.

**Humidity Levels**
*(only available with INTELLIMIST™ Humidifier)*

When using an INTELLIMIST™ humidifier the moisture added to the airflow may be increased or reduced. If increased by pressing the High button, the moisture flow will be increased for 2 hours, then back to Med (normal) flow. Low setting remains until manually changed.

NOTE: Due to variations in environmental conditions, it is not always possible to achieve the desired humidity setpoint.
Programming 4 Time Periods

Press the PROGRAM button to enter time period programming.

Use the back cover Programming Worksheet to help with this section.

Press PROGRAM

Select the day of week (M - Su)

M

Adjust the start time for Morning.

7:30 AM

Adjust the cooling setpoint for Morning. (35 - 99°F)

7:30 AM 74°F

Adjust the heating setpoint for Morning. (35 - 99°F)

7:30 AM 72°F

Page 9
Adjust the start time for Day.

Adjust the cooling setpoint for Day. (35 - 99°F)

Adjust the heating setpoint for Day. (35 - 99°F)

Adjust the start time for Evening.

Adjust the cooling setpoint for Evening. (35 - 99°F)
Programming 4 Time Periods

Adjust the heating setpoint for Evening.
(35°F - 99°F)

Adjust the start time for Night.

Adjust the cooling setpoint for Night.
(35°F - 99°F)

Adjust the heating setpoint for Night
(35°F - 99°F)

Continued
The copy command becomes available after programming the entire previous day.

If Yes is selected:

Selecting Yes, then pressing mode will copy the previous day's program and then will ask the same copy question again. If yes is selected each time, this routine will repeat.

If No is selected:

If No is selected, as in previous steps, flashing prompts for input will appear for the 4 time periods for the next day.
Advanced Setup

Before entering Advanced Setup, use the Mode button to place the unit in OFF. These steps are normally set up by the installer. Setting these values incorrectly may result in improper operation. Setup steps 1 & 2 are found in the clock set section.

Press the Mode button. While holding the Mode, press the Program button to enter Setup screens.

Select Heat Pump operation (ON) or, Gas/Electric operation (OFF).

Select reversing valve type, O or B. (Step 4 appears if step 3 is ON.)

Select Electric Heat On or OFF. (Step 5 only appears if Step 3 is set to OFF.)

Adjust the Deadband

(1 - 6)

NOTE: Each step # is located at the top right corner of the display for easy reference.

Page 13
Select INTELLIMIST (ON), MicroPulse Control, or conventional humidity control (OFF).

Adjust the MicroPulse interval for the size HVAC equipment by Tonnage.

Steps 10 & 11 only appear if Step 9 is On

Select ON for ‘Standalone’ Humidity/Fan operation. Humidifier will turn on the fan and humidifier with a humidity demand, or, Select OFF to only turn on the humidifier if in Heat or Fan and there is a humidity demand.
Advanced Setup

Select Condensation Control for windows ON, or OFF. Page x.

Step 12 only appears if Step 9 is On.

Adjust the programmable fan timer. 0 - 60 minutes. 0:00 = off

Step 14 appears only if step 13 is not 0:00.

Adjust the programmable fan start time.

Step 15 appears only if step 13 is not 0:00.

Adjust the programmable fan stop time.

Select the display backlight always On, or Off after 8 seconds.
Advanced Setup

Press FAN
Reset the Service Filter counter to 0, to remove the icon from the display.

Adjust the number of hours the blower will run before the Service Filter icon appears on the display, 0 = off. (0 - 1950)

Select thermostat operation in degrees Fahrenheit or Centigrade.

Press MODE

Press PROGRAM To Exit
## Advanced Setup Table

<table>
<thead>
<tr>
<th>Step #</th>
<th>Description</th>
<th>Range</th>
<th>Factory Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Time of day clock set</td>
<td>24 hour</td>
<td>12:00 Am</td>
</tr>
<tr>
<td>2</td>
<td>Day of the week</td>
<td>Sun - Sat</td>
<td>Monday</td>
</tr>
<tr>
<td>3</td>
<td>Heat Pump operation</td>
<td>Off / On</td>
<td>Off</td>
</tr>
<tr>
<td>4</td>
<td>Reversing valve polarity</td>
<td>O / B</td>
<td>O</td>
</tr>
<tr>
<td>5</td>
<td>Electric Heat</td>
<td>Off / On</td>
<td>Off</td>
</tr>
<tr>
<td>6</td>
<td>Deadband, temperature swing</td>
<td>1 - 6</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>Heat - Cool temperature difference</td>
<td>0 - 6</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Cycles per hour</td>
<td>d, d1, 2 - 6</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>MicroPulse interval</td>
<td>Off / On</td>
<td>On</td>
</tr>
<tr>
<td>10</td>
<td>HVAC capacity - Tonnage for humidifier</td>
<td>1 - 7</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>Standalone Humidity with Fan</td>
<td>Off / On</td>
<td>Off</td>
</tr>
<tr>
<td>12</td>
<td>Window Condensation Control</td>
<td>Off / On</td>
<td>Off</td>
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<tr>
<td>13</td>
<td>Programmable Fan</td>
<td>0:00 - 0:60</td>
<td>0:00</td>
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<tr>
<td>14</td>
<td>Programmable Fan Start Time</td>
<td>24 hour</td>
<td>7:00 Am</td>
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<tr>
<td>15</td>
<td>Programmable Fan Stop Time</td>
<td>24 hour</td>
<td>9:00 PM</td>
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<tr>
<td>16</td>
<td>Thermoglow backlight</td>
<td>Off / On</td>
<td>Off</td>
</tr>
<tr>
<td>17</td>
<td>Service Filter run time set</td>
<td>0 - 1950</td>
<td>500</td>
</tr>
<tr>
<td>18</td>
<td>Fahrenheit or Centigrade</td>
<td>F / C</td>
<td>F</td>
</tr>
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</table>
MICROPULSE™ Technology Vs. Conventional Control - Advanced Setup Step # 9 allows the INTELLISTAT™ to be configured to control the INTELLIMOST™ Humidifier or a conventional Humidifier.

MICROPULSE™ Technology equipped controls for humidifiers are intelligent controls that take into account various parameters which include: HVAC equipment size, outdoor temperature, indoor temperature, heat or fan operation and whether the equipment is a Heat Pump or not.
The above information is used to calculate the amount of moisture the air will carry efficiently without saturating the inside of your duct work.
An INTELLIMOST™ humidifier will be ‘pulsed’ on and off with varying durations and intervals based on the above settings.
If the humidifier used with this control is not an INTELLIMOST™ Step # 9 should be OFF.

Conventional Humidity Control will provide a continuous signal to the humidifier as long as there is a humidity demand. To control a conventional humidifier, Step # 9 in the Advanced Setup Section should be set to OFF.

MEMORY BACKUP - In the event of a power loss, the INTELLISTAT™ will retain the stored program settings without external power or batteries.

MINIMUM HEAT/COOL SETPOINT DIFFERENCE - The Heat and Cool setpoints will not be allowed to come any closer to each other than the value set in Advanced Setup step # 7, on page 14. This minimum difference is enforced during Auto changeover and Program On operation.
MULTI-STAGE OPERATION - Control up to 2 Heat, 2 Cool Stages.

The 2nd Stage of heat or cool is turned on when:

(A) the 1st Stage has been on a minimum of 2 minutes and
(B) the temperature spread from the setpoint is equal to or greater than: the setpoint plus the deadband, plus 2 degrees.

WINDOW CONDENSATION CONTROL - When used with both an INTELLIMIST™ humidifier and an outdoor sensor, the INTELLISTAT™ control will reduce the moisture put into the airflow when it is cold outdoors. This will reduce the moisture buildup on the inside of windows.

The amount of reduction in humidity is calculated with a complex formula using various parameters which include: indoor temperature and outdoor temperature.

To activate this feature, Select ON, Step # 12 in the Advanced Setup section.
**PROGRAMMABLE FAN** - If the Programmable Fan timer is set to a value other than 0:00, the fan will run for the preprogrammed amount of time, page 15, step# 13. The Programmable Fan timer will start the fan at the top of each hour. The Programmable Fan may be active even if the thermostat mode is Off. Steps 14 & 15 restrict the hours in which Programmable Fan may operate. Step# 14, page 15 is the start time and step# 15 is the stop time. Setting the times to the same setting in both steps 14 & 15 will allow Programmable Fan to operate 24 hours a day.

**EMERGENCY HEAT** - Is a feature available to Heat Pump installations. To turn on Emergency Heat press in the Fan button. While holding the Fan button press the Up button for 2 seconds. The Cool setpoint display will read ‘EH’.

During Emergency Heat the thermostat will turn on the fan and the 2nd stage of heat, when there is a demand for heat, locking out the 1st stage compressor. Exiting Emergency Heat is the same as entering. During Emergency Heat only OFF and HEAT are available.
DUAL SETPOINT BEHAVIOR - The adjustable setpoint range is: 35 - 99 degrees in Fahrenheit and 2 - 36 degrees in Centigrade. When in the modes Heat or Cool, this adjustable range is unhampered. When adjusting any Auto mode, including programming 4 Time periods, the thermostat will not allow the Heat setpoint to get closer to the Cool setpoint than the value programmed as the minimum difference in step 7, page 14.

When entering the Auto mode from Cool, the Heat and Cool setpoints will remain spread apart by the amount that they were adjusted, prior to entering Auto. For example: If the Cool setpoint was set to 80 while in the Cool mode and the Heat setpoint was adjusted to 70 while in the Heat mode, upon entering the Auto mode the Heat and Cool setpoints would be 80 and 70. Both setpoints would then move up and down together, (in this example spread by 10 degrees), by pressing the up or down buttons.

To move the Heat and Cool setpoints closer together, enter the Cool or Heat mode by pressing the Mode button, then adjust the setpoint(s) closer together. Heat is limited to how close it can come to Cool by step 7, page 14.

FACTORY DEFAULTS - If, for any reason it is desirable to return all stored settings back to the factory default settings, press the Mode button. While holding the Mode button in, press the Fan button for 5 sec. All icons will appear. Press and hold in the Fan button until Fd appears. This resets all factory settings. To return to normal operation, press the Mode button twice more.
OUTDOOR SENSOR (Optional Accessory) - When connected to terminals RS+5, RS1, & RS GND on the back of the thermostat, the thermostat will read the temperature from the Outdoor Sensor when asked to. This thermostat will not control to this sensor, it is only to read outside temperature.

To read the temperature from the Outdoor Sensor, press the Outside button. The display will then only show Outside temperature. Pressing the Outside button will then return the display to normal operation.

The Outdoor sensor is also used by the thermostat to compare the outside temperature to the indoor temperature for window condensation control.

The Outdoor Sensor is available in a wired or wireless version. The wired sensor can be connected to the thermostat with up to 500’ of 20 ga. or 300’ of 18 ga. Unshielded, thermostat wire.

See the Outdoor Sensor instructions for further details.

ELECTRIC HEAT - Selecting Electric Heat ON, page 13, step 5, will cause the thermostat to turn on the fan immediately any time there is a heat demand. Since all gas furnaces control the fan, this feature should be off unless the heater is only electric.
KEYPAD LOCK - To prevent unauthorized use of the thermostat, the front panel buttons may be disabled. To disable, or 'lock' the keypad, press and hold in the Mode button. While holding the Mode button in, press the Up and Down buttons in together. The **Locked** icon will appear on the display.

To **unlock** the buttons, again press and hold the Mode button. While holding the Mode button in, press the Up and Down buttons in together. The **Locked** icon will disappear from the display.
<table>
<thead>
<tr>
<th>DAY</th>
<th>PERIOD</th>
<th>START TIME</th>
<th>COOL</th>
<th>HEAT</th>
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</table>
One-Year Warranty - This Product is warranted to be free from defects in material and workmanship. If it appears within one year from the date of original installation, whether or not actual use begins on that date, that the product does not meet this warranty, a new or remanufactured part, at the manufacturer’s sole option, to replace any defective part will be provided without charge for the part itself: PROVIDED the defective part is returned to the distributor through a qualified servicing dealer.

THIS WARRANTY DOES NOT INCLUDE LABOR OR OTHER COSTS incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of either defective parts or replacement parts. Such costs may be covered by a separate warranty provided by the installer.

THIS WARRANTY APPLIES ONLY TO PRODUCTS IN THEIR ORIGINAL INSTALLATION LOCATION AND BECOMES VOID UPON REINSTALLATION.

LIMITATIONS OF WARRANTIES - ALL IMPLIED WARRANTIES (INCLUDING IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY) ARE HEREBY LIMITED IN DURATION TO THE PERIOD FOR WHICH THE LIMITED WARRANTY IS GIVEN. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE MAY NOT APPLY TO YOU. THE EXPRESSED WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON WHATSOEVER.

ALL WORK UNDER THE TERMS OF THIS WARRANTY SHALL BE PERFORMED DURING NORMAL WORKING HOURS. ALL REPLACEMENT PARTS, WHETHER NEW OR REMANUFACTURED, ASSUME AS THEIR WARRANTY PERIOD ONLY THE REMAINING TIME PERIOD OF THIS WARRANTY.

THE MANUFACTURER WILL NOT BE RESPONSIBLE FOR:
1. Normal maintenance as outlined in the installation and servicing instructions or owners manual including filter cleaning and/or replacement and lubrication.
2. Damage or repairs required as a consequence of faulty installation, misapplication, abuse, improper servicing, unauthorized alteration or improper operation.
3. Failure to start due to voltage conditions, blown fuses, open circuit breakers or other damages due to the inadequacy or interruption of electrical service.
4. Damage as a result of floods, winds, fires, lightning, accidents, corrosive environments or other conditions beyond the control of the Manufacturer.
5. Parts not supplied or designated by the Manufacturer, or damages resulting from their use.
7. Electricity or fuel costs or increases in electricity or fuel costs from any reason whatsoever including additional or unusual use of supplemental electric heat.
8. ANY SPECIAL INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER. Some states do not allow the exclusion of incidental or consequential damages, so the above may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.