INSTALLATION INSTRUCTIONS

HEAT COOL & HEAT PUMP

1-DAY
PROGRAMMABLE
DIGITAL THERMOSTAT

- Control up to 2 Heat & 1 Cool Stages
- Backlit Display & Button Legends
- Aux Heat Indicator
- Outdoor Sensor Ready
- Accepts EZ Programmer™
- Accepts Optional IR Remote Control

CONFIGURABLE IN SETUP:
- Auto or Manual Changeover
- Programmable or Non-Programmable

- Use with most Air Conditioning & Heating Systems including: 1 Stage Electric Cooling & 2 Stage Gas Heating, Heat Pump, Electric or Hydronic Heat.

TOTALINE®
Signature

⚠ CAUTION

Follow the Installation Instructions before proceeding. Set the thermostat mode to "OFF" prior to changing settings in setup or restoring Factory Defaults.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
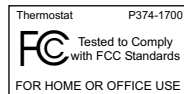
c **UL** us
LISTED
4Z95

| Thermostat | P374-1700 |

FC Tested to Comply with FCC Standards

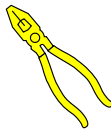FOR HOME OR OFFICE USE

Table of Contents

Proper installation of the thermostat will be accomplished by following these step by step instructions. If you are unsure about any of these steps, call a qualified technician for assistance.

Assemble tools

*Flat Blade
Screwdriver*

*Wire cutter
& Stripper*

Make sure your Heater/Air Conditioner is working properly before beginning installation of the thermostat.

Carefully unpack the thermostat. Save the screws, bracket, and instructions.

Turn off the power to the Heating/Air Conditioning system at the main fuse panel. Most residential systems have a separate breaker for disconnecting power to the furnace.

SECTION 2
Remove & Replace the Old Thermostat TOTALINE

2

Remove the cover of the old thermostat.
If it does not come off easily check for screws.

Loosen the screws holding the thermostat
base or subbase to the wall, and lift away.

Disconnect the wires from the old thermostat.
Tape the ends of the wires as you disconnect
them, and mark them with the letter of the
terminal for easy reconnection to the new
thermostat.

Keep the old thermostat for reference purposes,
until your new thermostat is functioning properly.

3

If the terminal designations on your old thermostat do not match those on the new thermostat, *refer to the chart below, or the wiring diagrams that follow.*

Wire from the old thermostat terminal marked	Function	Install on the new thermostat connector marked
G or F	Fan	G
Y1, Y or C	Cooling	Y1
W1, W or H	Heating	W1/O/B
Rh, R, M, Vr, A	Power	R
C	Common	C
O/B	Rev. Valve	W1/O/B**
W2	2nd Stage Heat	W2
RS+5	Remote Sensor +5vdc	RS+5
RSGND	Remote Sensor Ground	RSGND
RS2	Remote Sensor Signal #2	RS2

** O/B is used if your system is a Heat Pump.

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SECTION 4
Sample Wiring Diagrams

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Section 4 Contents:

4

6 Wire, 1 Stage Cooling, 1 Stage Heat
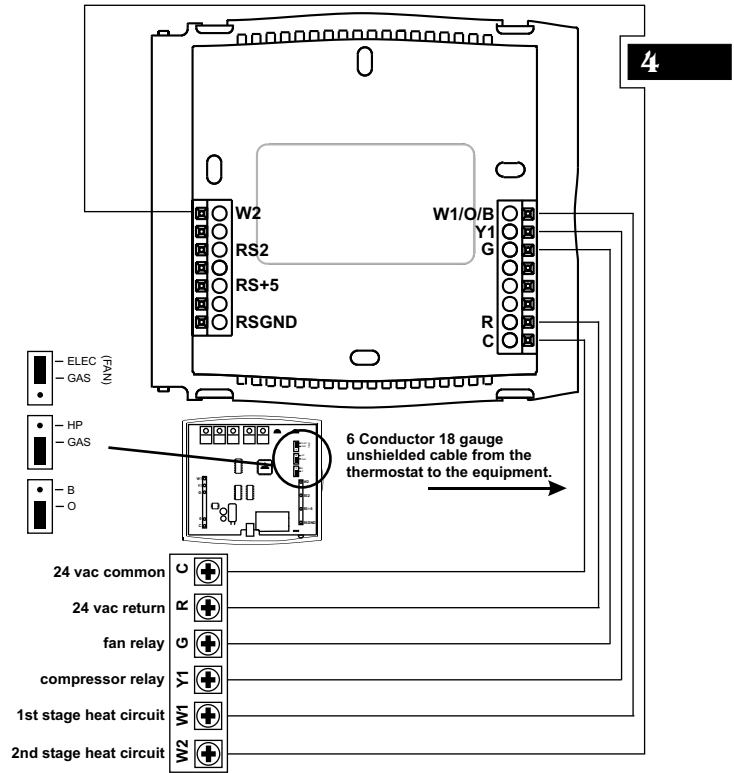
Residential & Commercial 1 Stage Cooling, with 1st stage Gas Heat   **OR**   Commercial Heat Pump 1 Stage Cooling with 2 Stage Heat

4

W2   W1/O/B
                                   Y1
RS2   G

RS+5

RSGND   R
                                   C

— ELEC (FAN)
— GAS

— HP
— GAS   **6 Conductor 18 gauge unshielded cable from the thermostat to the equipment.**

— B
— O

24 vac common — C

24 vac return — R

fan relay — G

compressor relay — Y1

1st stage heat circuit — W1

2nd stage heat circuit — W2

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TOTALINE
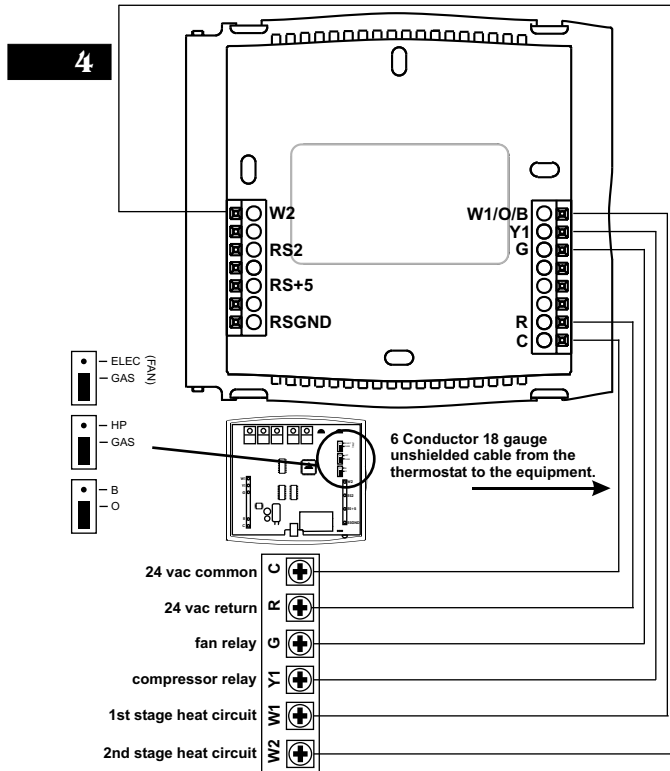
6 Wire, 1 Stage Cooling, 1 Stage Heat
Residential & Commercial 1 Stage Cooling,
with 1st stage Electric Heat

4

W2

W1/O/B
Y1
G

RS2

RS+5

RSGND

R
C

ELEC (FAN)
GAS

HP
GAS

B
O

**6 Conductor 18 gauge
unshielded cable from the
thermostat to the equipment.**

24 vac common   C

24 vac return   R

fan relay   G

compressor relay   Y1

1st stage heat circuit   W1

2nd stage heat circuit   W2

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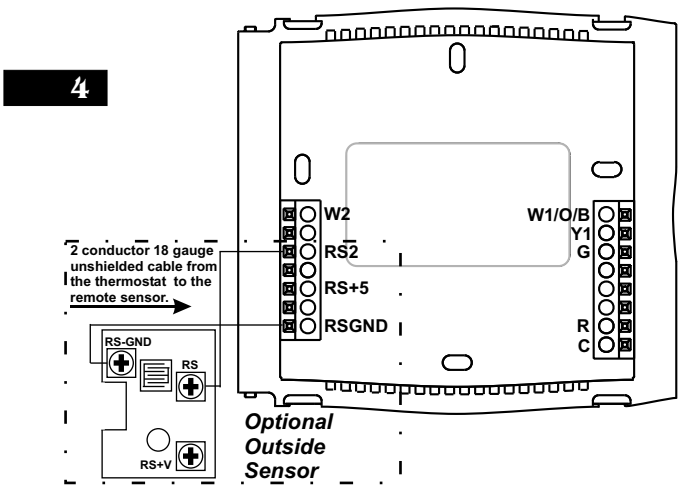**6 Wire, 1 Stage Cooling, 2 Stage Heat**
Residential Heat Pump with O Reversing
Valve 1 Stage Cooling, with 2 stage Heat

4

W2
RS2
RS+5
RSGND

W1/O/B
Y1
G

R
C

— ELEC (FAN)
— GAS

— HP
— GAS

— B
— O

6 Conductor 18 gauge unshielded cable from the thermostat to the equipment.

24 vac common	C
24 vac return	R
Fan Relay	G
Compressor Relay	Y1
Reversing Valve	O
2nd stage heat circuit	W2

Page 4.4
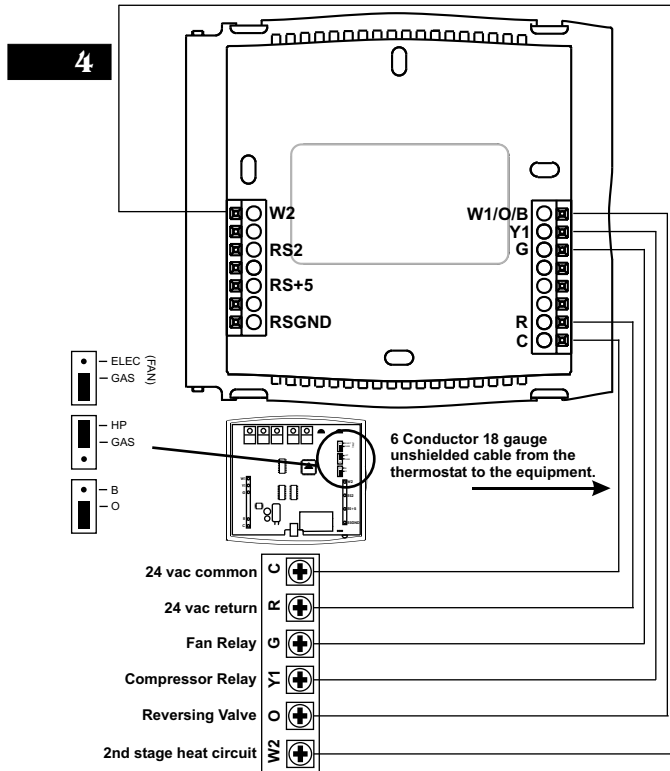
TOTALINE

6 Wire, 1 Stage Cooling, 2 Stage Heat
Residential Heat Pump with b Reversing
Valve 1 Stage Cooling, with 2 stage Heat

4

W2

RS2

RS+5

RSGND

W1/O/B

Y1

G

R

C

ELEC (FAN)
GAS

HP
GAS

B
O

**6 Conductor 18 gauge
unshielded cable from the
thermostat to the equipment.**

24 vac common	C
24 vac return	R
Fan Relay	G
Compressor Relay	Y1
Reversing Valve	b
2nd stage heat circuit	W2

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TOTALINE

Wired Remote Sensor

4

W2

2 conductor 18 gauge unshielded cable from the thermostat to the remote sensor.

RS2

RS+5

RSGND

W1/O/B
Y1
G

R
C

RS-GND

RS

RS+V

Optional Outside Sensor

Page 4.6
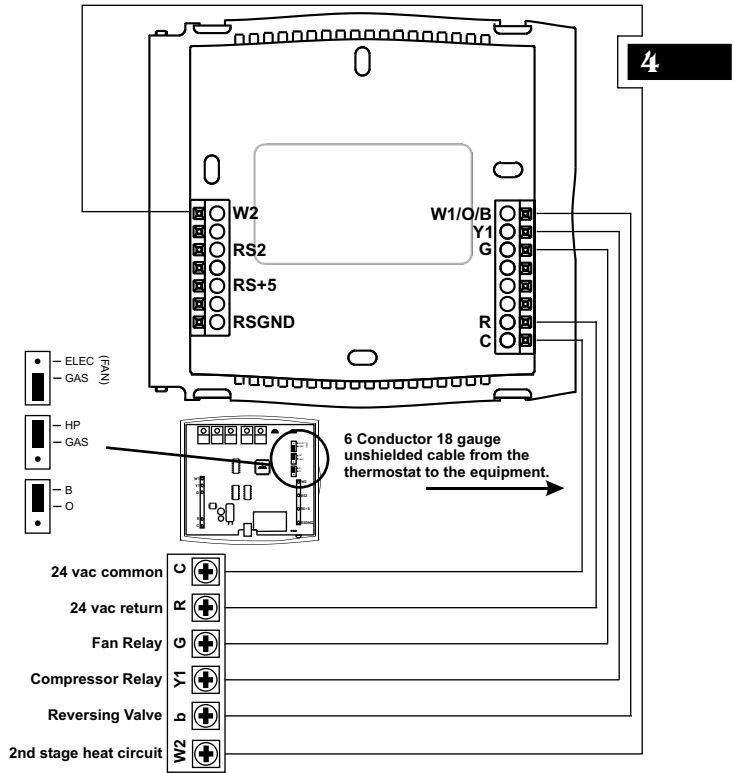
Turn the power on to the Heating/Air Conditioning system.

5

Press the *MODE* button repeatedly until the **HEAT** icon appears on the display. Press the Up or Down buttons until the set temperature is 10 degrees above room temperature. The furnace should turn on.

Press the *MODE* button repeatedly until the **COOL** icon appears on the display. Press the Up or Down buttons until the set temperature is 10 degrees below room temperature. The air conditioner should turn on. *NOTE: Most equipment has a time delay of 5 minutes between cool cycles. This feature is defeatable on the thermostat. Consult the Owner's Manual under Setup, cycles per hour.*

Press the UP button until the setpoint is equal to the room temperature. Press the *FAN* button to **Fan On**. The fan should turn on and run continuously.

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Under normal circumstances it will not be necessary to adjust the calibration of the temperature and humidity sensors. If calibration is required, please contact a trained HVAC technician to correctly perform the following procedure.

❶

6

MODE — Place the thermostat in the OFF mode.

12:00 Pm
Su
OFF   *72°*

❷

MODE

FAN

Press and hold the MODE button. While holding the MODE button, press and hold the FAN button for 5 seconds. All icons will appear on the display.

18:88 Am Pm Program On Setup *88*
Service Filter   COOL
                                           Outside
AUTO   *-188*   AUXHEAT
OFFON
Morning
DayNight
Evening
FanOn   *-88*

❸ PRESS

THERMOSTAT SENSOR

Press the UP and DOWN buttons at the same time twice. The thermostat temperature will be displayed and may be calibrated using the UP or DOWN buttons.

TWICE

72°

CALIBRATE

After calibration is complete, press the MODE button **once** to return to normal operation.

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SYMPTOM: The air conditioning does not attempt to turn on.
CAUSE: The compressor timer lockout may prevent the air conditioner from turning on, for a period of time.
REMEDY: Consult the Owner's Manual in the Setup section to defeat the cycles per hour and compressor timeguard.

7

SYMPTOM: The display is blank.
CAUSE: Lack of proper power.
REMEDY: Make sure power is turned on to the furnace and that you have 24vac between **R** & **W**. If **C** is used, 24vac between **R** & **C**.

SYMPTOM: The air conditioning does not attempt to turn on.
CAUSE: The cooling setpoint is set too high.
REMEDY: Consult the Owner's Manual in the Setup section to lower the cooling setpoint limit.

SYMPTOM: The heating does not attempt to turn on.
CAUSE: The heating setpoint is set too low.
REMEDY: Consult the Owner's Manual in the Setup section to raise the heating setpoint limit.

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SYMPTOM: When controlling a residential heat pump, and asking for cooling, the heat comes on.
CAUSE: The thermostat reversing valve jumper is set for **"b".**
REMEDY: Set the reversing valve jumper for **"O".** See pages 5.4 and 5.5.

7

SYMPTOM: When calling for cooling, both the heat and cool come on.
CAUSE: The thermostat equipment jumper is configured for **"HP"** and the HVAC unit is a Gas/Electric.
REMEDY: Set the equipment jumper for **"Gas".** See pages 5.2 and 5.3.