Owner's Manual

Model
S1-THEC11NS

SOURCE 1 HVAC SERVICE PARTS™

Use with most systems: 1-Heat, 1-Cool

Non-Programmable | Digital Thermostat

- Control up to 1-Heat & 1-Cool
- Battery or System Powered
- Fahrenheit or Celsius
- Gas/Electric or Heat Pump

Contents

Page #

Safety Warnings

P/N S1-THEC11NS

CAUTION Follow *Installation Instructions* carefully.

DISCONNECT POWER TO THE HEATER - AIR CONDITIONER BEFORE REMOVING THE OLD THERMOSTAT AND INSTALLING THE NEW THERMOSTAT.

WARNING

CAUTION

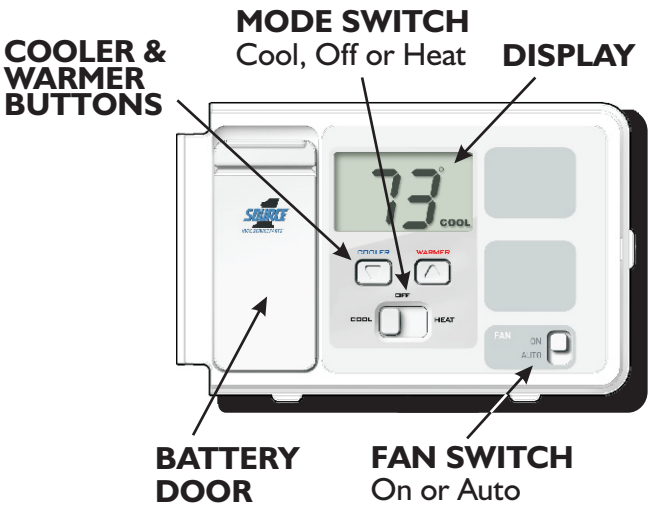
The two Alkaline “AA” batteries must be replaced at least once every 12 months to ensure proper operation. The “Low Battery” icon will appear on the thermostat display when it is time to replace the batteries. If the thermostat is connected to 24v power, the batteries should still be installed, but are not required.

When “Low Battery” is displayed the batteries must be replaced immediately. The manufacturer cannot be liable for improper operation of the thermostat if the batteries are not immediately replaced.

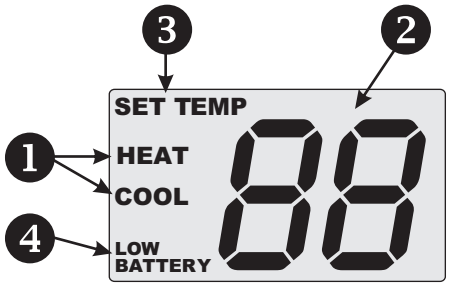
Annual battery replacement is especially critical in locations subject to freezing temperatures. The thermostat will be unable to turn on the heating system if the batteries are exhausted.

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.

Location of Controls

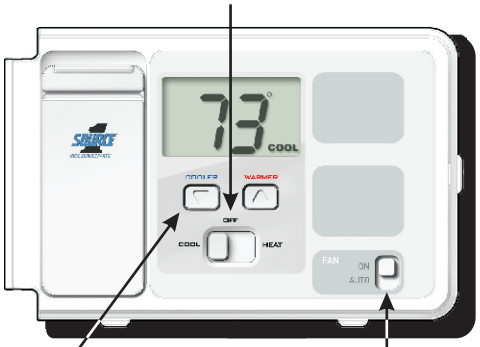


Display



1. Heat and Cool indicators.
   In normal operation, Heat or Cool appears, depending on the Mode Switch position. When heat or cool is energized, the Heat or Cool indicator will flash.
2. Current room or set temperature.
3. Desired set temperature indicator.
   When this indicator is on, the large numbers represent the desired room temperature. Pressing the COOLER or WARMER button during normal operation will cause the large numbers to switch from the current room temperature to the desired set temperature.
4. Indicates battery life is low; it is recommended to replace the batteries at this time.

Normal Operation

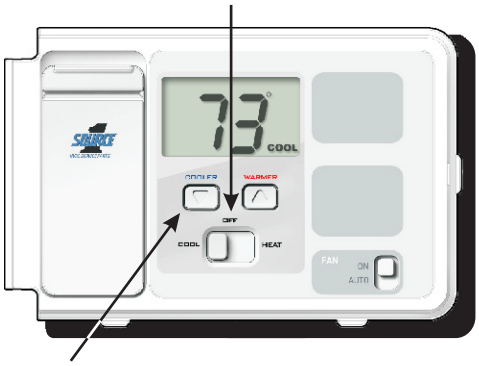


Operation

1. Select Cool or Heat with the Mode Switch.
2. Normally leave the fan switched to Auto.
   In Fan Auto, the fan will turn on only with a heat or cool demand. When Fan On is selected, the fan will run continuously.
3. Adjust the desired set temperature with the COOLER or WARMER buttons.

Fahrenheit or Celsius

MODE SWITCH
Cool, Off or Heat



COOLER & WARMER BUTTONS

Operation

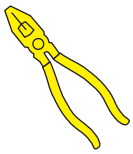
1. Select Off with the Mode Switch.
2. Press and hold the COOLER and WARMER buttons at the same time until the temperature is displayed in degrees Celsius.
3. Repeat this process to display the temperature in degrees Fahrenheit.

Preparation

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.

These tools will be required:

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 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.

Remove & Replace Old Thermostat

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.

Battery Replacement

1. The batteries are easily accessible from the battery slot located on the front of the thermostat (fig. 1). To open the battery slot, press down on the battery cover (fig. 1) and pull out (fig. 2).

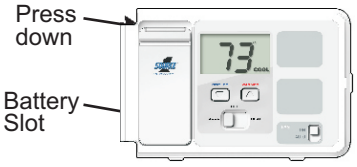


FIG. 1

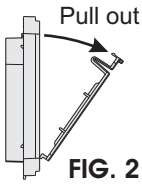
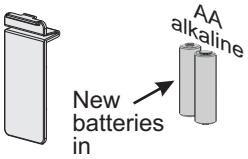


FIG. 2

2. Remove the old batteries and replace with the new AA alkaline batteries (fig. 3).



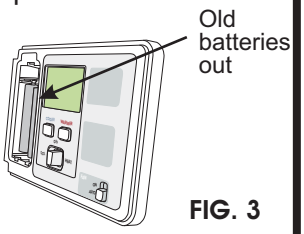


FIG. 3

3. Place the bottom hook of the battery cover into the slot and snap closed (fig. 4).

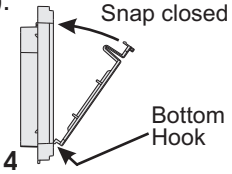


FIG. 4

The batteries must be replaced immediately when the thermostat displays the Low Battery icon.

Wire Connections

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
C	Common	C (optional)
RH, R, M, Vr, A	Power (Heating Transformer)	RH*
Y1 or Y	Cooling	Y
W1, W or H	Heating	W
G or F	Fan	G
RC, R, M, Vr, A	Power (Cooling Transformer)	RC*
O/B	Rev. Valve	O/B

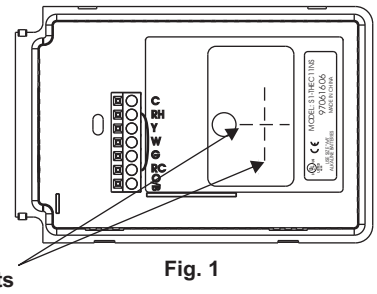
*The RC and RH terminals have a factory installed jumper to control single transformer systems. Remove this jumper to control dual transformer systems.

Thermal Insulating Sheet

A label is provided on the backplate that prevents drafts originating inside the wall from entering the thermostat.

These drafts, left unchecked, may cause incorrect room temperature readings.

Please do not remove this label from the thermostat. Insert the wires through the slots provided in the label as shown in Fig. 1.



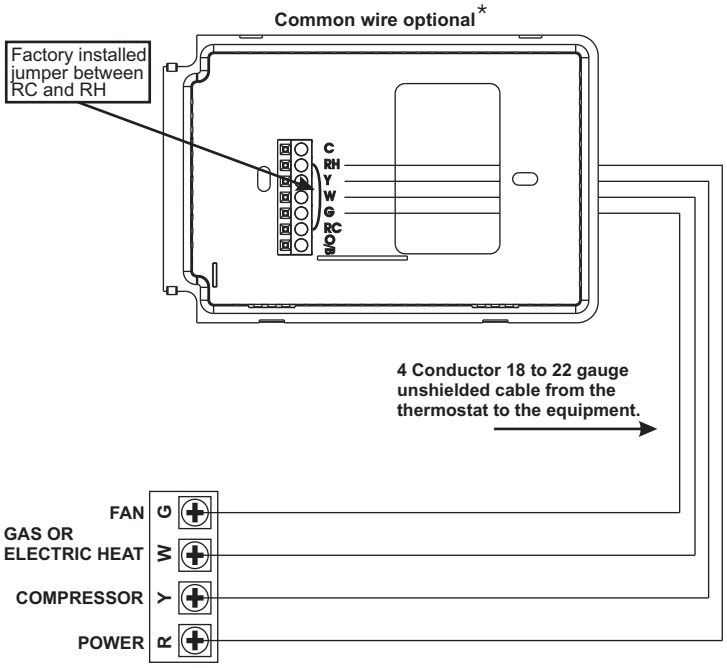
Wire Slots

Fig. 1

Sample Wiring Diagrams Gas or Electric Heat

4 Wire, 1 Stage Cooling, 1 Stage Heating

Residential Gas or Electric Heat, Electric Cool, split systems & package units.
For jumper configuration see pages 18 and 19.

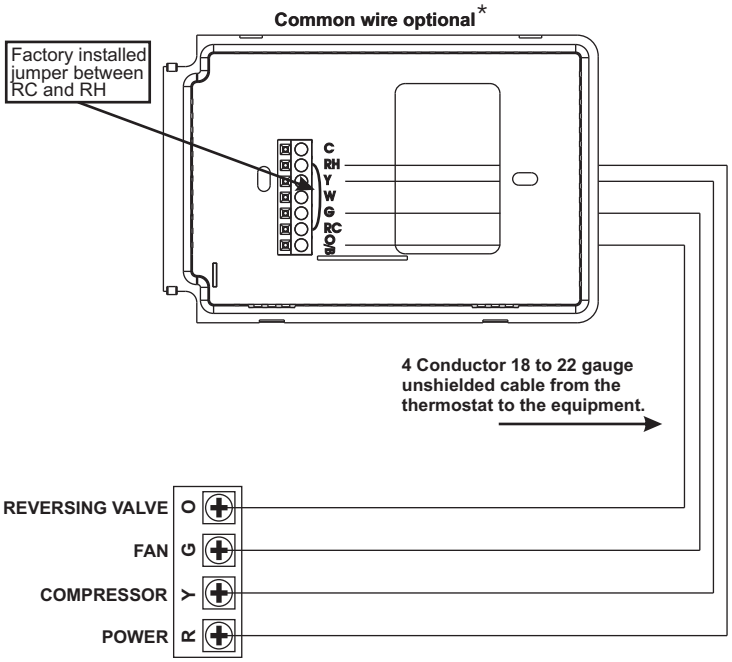


* **Common wire is optional in all installations. If a common wire is not used the thermostat must be powered by two AA alkaline batteries. These batteries must be replaced (page 10) each year or when the Low Battery indicator is displayed (page 3).**

Sample Wiring Diagrams Gas or Electric Heat

4 Wire, 1 Stage Cooling, 1 Stage Heating-Heat Pump with O reversing valve.

Residential Heat Pumps, split systems & package units, with no auxiliary heat.
For jumper configuration see page 20.

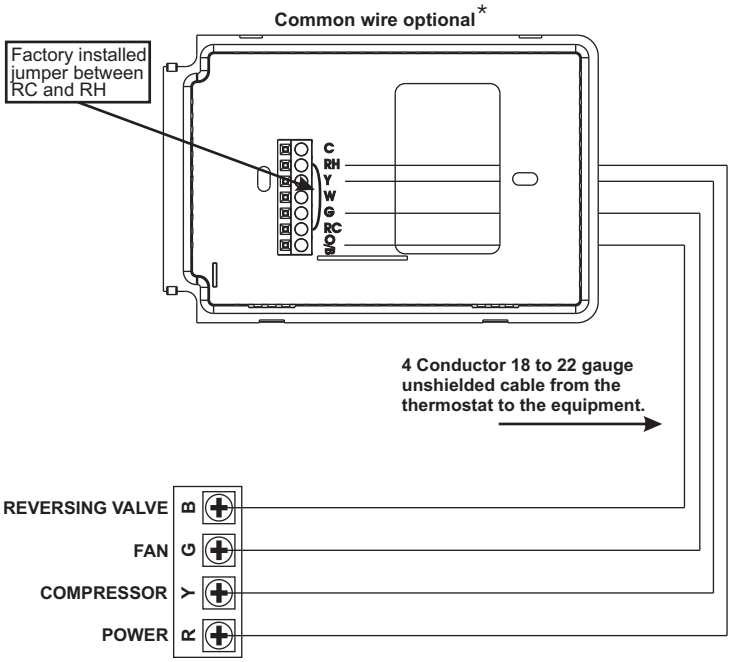


* **Common wire is optional in all installations. If a common wire is not used the thermostat must be powered by two AA alkaline batteries. These batteries must be replaced (page 10) each year or when the Low Battery indicator is displayed (page 3).**

Sample Wiring Diagrams Gas or Electric Heat

4 Wire, 1 Stage Cooling, 1 Stage Heating-Heat Pump with B reversing valve.

Residential Heat Pumps, split systems & package units, with no auxiliary heat.
For jumper configuration see page 21.

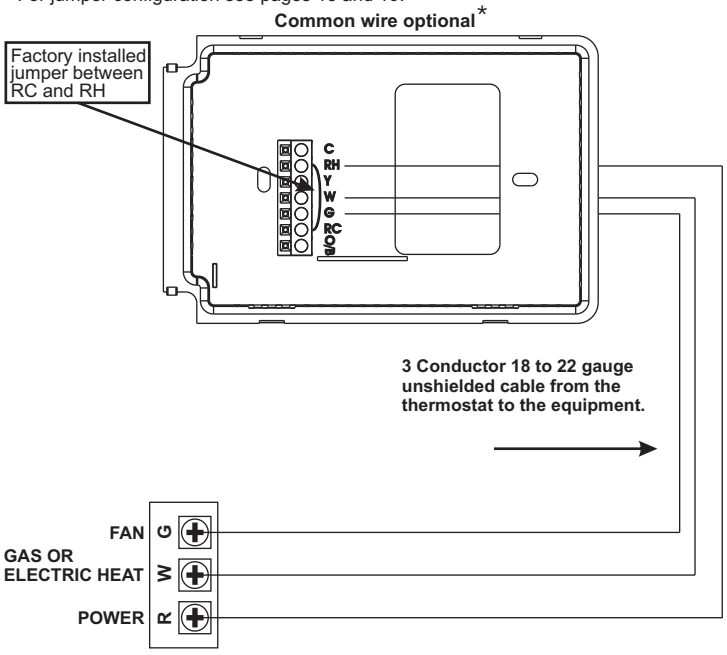


* **Common wire is optional in all installations. If a common wire is not used the thermostat must be powered by two AA alkaline batteries. These batteries must be replaced (page 10) each year or when the Low Battery indicator is displayed (page 3).**

Sample Wiring Diagrams Gas or Electric Heat

3 Wire, 1 Stage Heating

Residential Gas or Electric Heat units with a separately controlled fan.
For jumper configuration see pages 18 and 19.

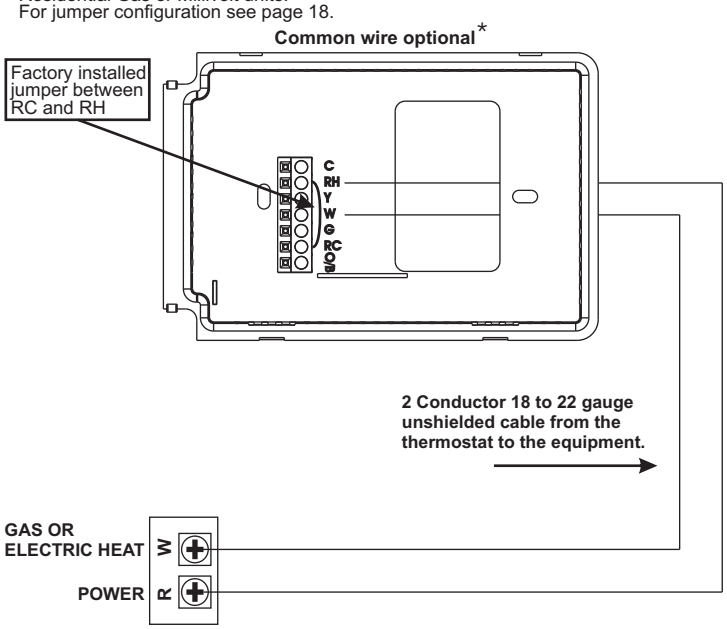


* **Common wire is optional in all installations. If a common wire is not used the thermostat must be powered by two AA alkaline batteries. These batteries must be replaced (page 10) each year or when the Low Battery indicator is displayed (page 3).**

Sample Wiring Diagrams Gas or Electric Heat

2 Wire, 1 Stage Gas Heat

Residential Gas or Millivolt units.
For jumper configuration see page 18.

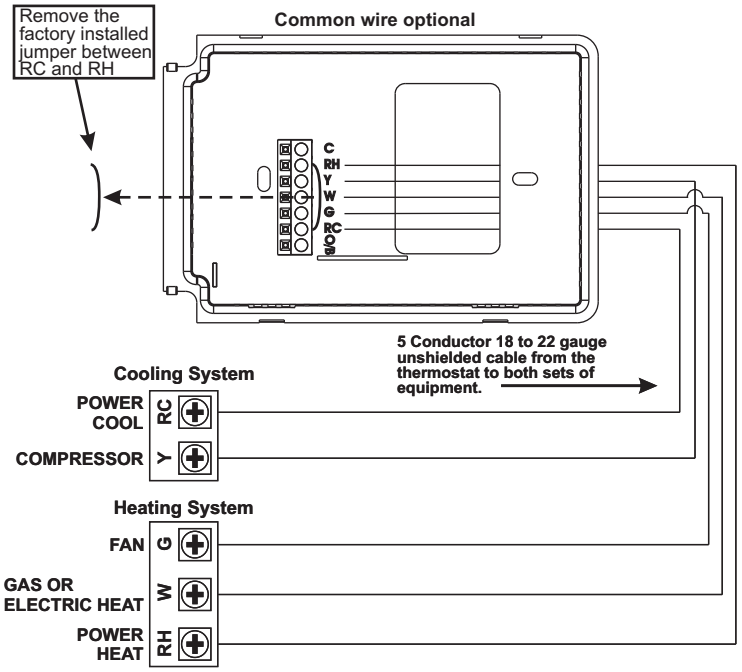


* **Common wire is optional in all installations. If a common wire is not used the thermostat must be powered by two AA alkaline batteries. These batteries must be replaced (page 10) each year or when the Low Battery indicator is displayed (page 3).**

Sample Wiring Diagrams Gas or Electric Heat

Dual Transformer 5 Wire, 1 Stage Cooling, 1 Stage Heating

Residential Gas or Electric Heat, Electric Cool, split systems & package units.
For jumper configuration see pages 18 and 19.

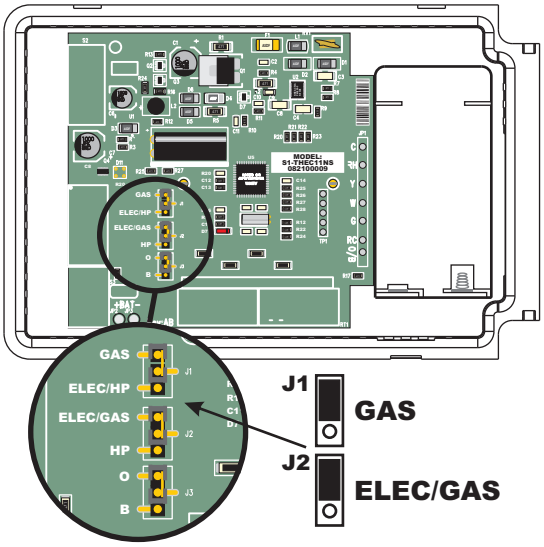


* **If a common wire is used it must be connected to the furnace common terminal. If a common wire is not used the thermostat must be powered by two AA alkaline batteries. These batteries must be replaced (page 6) each year or when the Low Battery indicator is displayed (page 3).**

Jumper Configuration

Cooling and Gas Heating

Residential Gas, Electric Cool, split systems & package units.



Jumper #1 (J1) should be set for **GAS** and Jumper #2 (J2) should be set for **ELEC/GAS** for for typical gas furnace heating with electric cooling. Jumper #3 (J3) is not used.

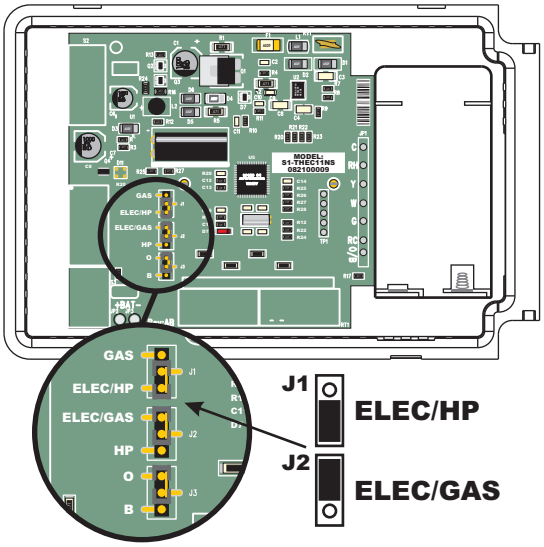
	OUTPUTS	
	No Demand	With Demand
Cooling Mode	O/B*	**Y**, **G**, O/B*
Heating Mode	O/B*	**W**, O/B*

*Output active depending on O/B jumper configuration - For normal operation do not connect to equipment.

Jumper Configuration

Cooling and Electric Heating

Residential Electric Heat units with a separately controlled fan.



Jumper #1 (J1) should be set for **ELEC/HP** and Jumper #2 (J2) should be set for **ELEC/GAS** for for typical electric heating with electric cooling. Jumper #3 (J3) is not used.

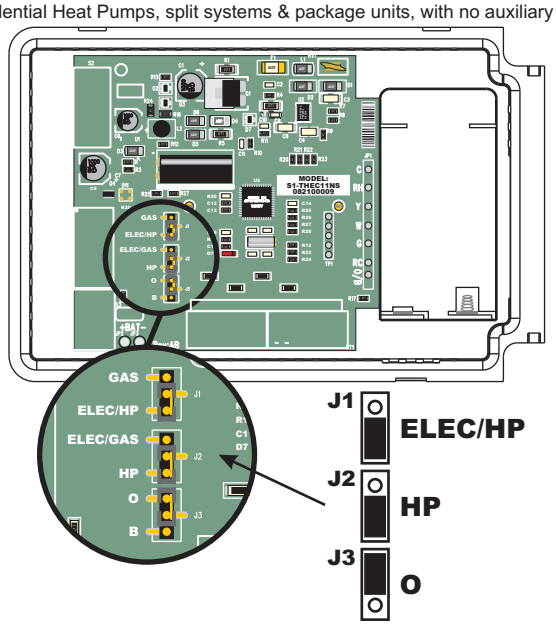
	OUTPUTS	
	No Demand	With Demand
Cooling Mode	O/B*	**Y**, **G**, O/B*
Heating Mode	O/B*	**W**, **G**, O/B*

*Output active depending on O/B jumper configuration - For normal operation do not connect to equipment.

Jumper Configuration

Cooling and Heating - Heat Pump with O reversing valve.

Residential Heat Pumps, split systems & package units, with no auxiliary heat.



Jumper #1 (J1) should be set for **ELEC/HP**, Jumper #2 (J2) should be set for **HP**, and Jumper #3 (J3) should be set for **O** for typical heat pump operation. **Note: Thermostat does not have Auxiliary Heat / Emergency Heat capability.**

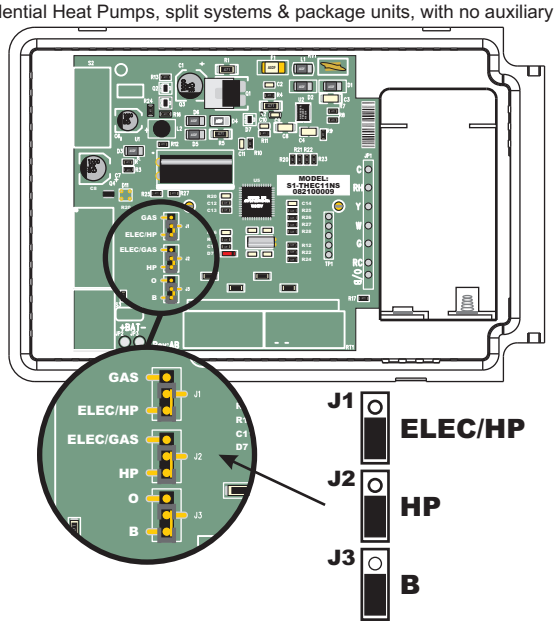
	OUTPUTS	
	No Demand	With Demand
Cooling Mode	O	**Y**, **G**, **O**
Heating Mode	—	**Y**†, **G**

† Y active in Heating

Jumper Configuration

Cooling and Heating - Heat Pump with B reversing valve.

Residential Heat Pumps, split systems & package units, with no auxiliary heat.



Jumper #1 (J1) should be set for **ELEC/HP**, Jumper #2 (J2) should be set for **HP**, and Jumper #3 (J3) should be set for **B** for typical heat pump operation. **Note: Thermostat does not have Auxiliary Heat / Emergency Heat capability.**

	OUTPUTS	
	No Demand	With Demand
Cooling Mode	—	**Y**, **G**
Heating Mode	B	**Y**†, **G**, **B**

† Y active in Heating

Test Operation

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

On the thermostat, slide the Mode Switch to **HEAT**. Press the COOLER or WARMER button until the set temperature is 10 degrees above room temperature. The HVAC unit should energize in the heating mode (Page 6). ***Note: You may need to wait up to five minutes for heating to energize due to the compressor lockout feature.***

On the thermostat, slide the Mode Switch to **COOL**. Press the COOLER or WARMER buttons until the set temperature is 10 degrees below room temperature. The HVAC unit should energize in the cooling mode (Page 6). ***Note: You may need to wait up to five minutes for cooling to energize due to the compressor lockout feature.***

On the thermostat, slide the Mode Switch to **OFF**. Slide the Fan Switch to **Fan On.** The fan should turn on and run continuously (Page 6).

Trouble Shooting

SYMPTOM: The slide switches on the thermostat are very difficult to move.
CAUSE: The backplate of the thermostat is screwed too tightly into a wall that is not perfectly flat.
REMEDY: Loosen the screws holding the thermostat into the wall.

SYMPTOM: The Air Conditioning does not attempt to turn on.
CAUSE: The cooling setpoint is set too high, the Mode Switch is not set for Cool, or the batteries are too weak.
REMEDY: Consult the Normal Operation section in this manual to:

- **L**ower the cooling setpoint (Page 6).
- **C**orrect the Mode Switch position (Page 6).
- **R**eplace the batteries (Page 10).

SYMPTOM: The fan does not turn on even though the compressor has energized.
CAUSE: The Fan Switch is not completely in the On or Auto position.
REMEDY: Slide the Fan Switch firmly into the On or Auto position.

Trouble Shooting

SYMPTOM: The Heating does not attempt to turn on.

CAUSE: The heating setpoint is set too high, the Mode Switch is not set for Heat, or the batteries are too weak.

REMEDY: Consult the Normal Operation section in this manual to:

- **R**aise the heating setpoint (Page 6).
- **C**orrect the Mode Switch position (Page 6).
- **R**eplace the batteries (Page 10).

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Battery Stat P/N S1-THEC11NS
FC Tested to Comply with FCC Standards
FOR HOME OR OFFICE USE

P/N 88-548
Rev. 4

Warranty

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 owner's 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.
6. Manufacturer products installed outside the continental U.S.A., Alaska, Hawaii, and Canada.
7. Electricity or fuel costs or increases in electricity or fuel costs for 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.