



# GE22-IP HP32-IP

**Ethernet Thermostat, 10/100Mbps**

**Standard (Gas/Electric) up to 2H/2C  
Heat Pump up to 3H/2C**

**Integrated Web Server**

**Secure Direct Connection via any  
Ethernet Network and the Internet**

## GENERAL DESCRIPTION:

The GE22-IP and HP32-IP are Ethernet networkable thermostats designed for new and replacement commercial or residential applications. The GE22-IP controls conventional HVAC equipment and the HP32-IP controls both traditional and dual fuel heat pump HVAC equipment. Using your favorite browser or the Net/X-IP™ Command Center software, Net/X™ makes it simple with near effortless changes to each setting on the thermostat. The thermostat's powerful integrated web server allows viewing on any PC, Mac, tablet or smart phone (both iOS and Android). The pushbuttons on the thermostat can be locked to give restricted override capabilities, and the optional Occupancy Sensor enables automatic energy savings. Onboard email and text message alerting for both customer and service personnel gives the peace-of-mind that you always know what's happening, when you're across the room or across the globe. *The GE22-IP and HP32-IP thermostats do not include scheduling capability on the thermostat. If on-thermostat scheduling is needed, use the RP32-IP or the UP32-IP thermostat.*

## STANDARD FEATURES:

**Free PC Software for Controlling Multiple  
Thermostats from a Single Screen**

- Integrated Web Server for Connectivity from Any Modern Web Browser
- Automatic Recognition of Browser Resolution and Formatting for Specific Screen Sizes, Including iPhone and Android phones
- Email & Text Message Alerting for up to 4 Recipients; Alerts include Hi/Lo Temps for Indoor, Outdoor, Inefficient Equipment Runs, Change Filter Notification, 2 Digital Inputs (think Condensate & Fault)
- Integrated Net/X™ API language, Allowing for Development of 3<sup>rd</sup> Party Apps
- Selectable Fahrenheit or Celsius Display
- Automatic Changeover from Heat-to-Cool and Cool-to-Heat
- 2 Occupied (Day-Cool & Day-Heat) and 2 Unoccupied (Night-Cool & Night-Heat) Setpoints
- Commercial Lockout with 1 or 3 Hour Override, with +/-3F Temp Adjustment
- 3 LED lights (2 for GE22 model); Inefficient Run and Filter Reminder indication with LCD icons; 1 for E-Heat
- Integrated Weatherbug® Current Conditions and 7-Day Forecasts
- Up to 6 Remote Indoor Sensors (NT-TEMP) and 1 Outdoor Sensor (NT-TEMP + NT-OUTDOOR)
- No Outdoor Sensor Needed for Heat Pump Compressor and Aux Heat Lockouts
- Optional Occupancy Sensors Available (Ceiling and Wall Mount)

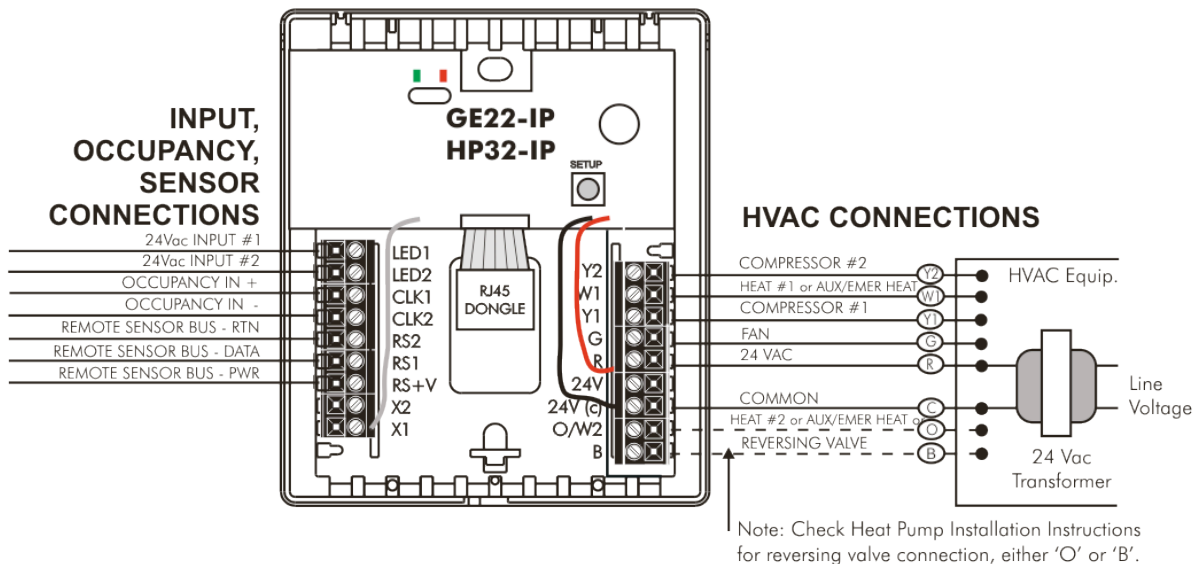


Wi-Fi™ versions also available: GE22-WIFI and HP32-WIFI

## SPECIFICATIONS:

<b>Rated Voltage:</b>	20V to 30VAC, 24VAC nominal
<b>Rated A.C. / D.C. Current:</b>	0.05 to 0.75 AC / 0.0 to 0.75 DC Amp continuous, per output, surges to 3 Amps max.
<b>Control Range:</b>	<b>Heating:</b> 38 to 88°F (6 to 30°C) in 1° steps <b>Cooling:</b> 60 to 108°F (16 to 40°C) in 1° steps
<b>Thermostat Sensing Range:</b>	20 to 124°F (0 to 48°C) <b>Control Accuracy:</b> +/-1°F @ 68°F (0.5°C @ 20°C)
<b>Minimum Deadband:</b>	(between Heat and Cool) 2°F (1°C) <b>Dims:</b> 4.5"Hx4"Wx1"D (114mmx102mmx26mm)
<b>Thermostat LEDs:</b>	Left Red – LED1/Fault , Center Red (HP only) – Emer Heat, Right Red – LED2/Filter
<b>Equipment Terminations:</b>	R - 24V switching voltage, W1 - Heat1 or Aux/Emer Heat, G - Fan, Y1-Compressor1, Y2 - Compressor2, O/W2 - Heat2 or Rev. Valve in Cooling, B-Rev. Valve in Heating
<b>Power Terminations:</b>	24V - remote power (not used), 24V(c) - power common (from HVAC equipment)
<b>Input Terminations:</b>	LED1 (Red LED / Filter Icon), LED2 (Red LED / Fault Icon)
<b>Ethernet Terminations:</b>	RJ45 Dongle Connector, 10/100Mbps
<b>Occupancy Terminations:</b>	CLK1 (+), CLK2 (-)
<b>Remote Sensor Terminations:</b>	RS+V - Power, RS2 - Return, RS1 - Data

## WIRING DIAGRAMS:



## OUTPUT TERMINAL FUNCTIONS

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| <p><b>LED1</b> 24Vac Input #1 for Filter or other Alert<br/>(Internally tied to Green LED and Filter Icon)</p> <p><b>LED2</b> 24Vac Input #2 for Condensate, Fault or other Alert<br/>(Internally tied to Yellow LED and Wrench Icon)</p> <p><b>CLK1</b> For use with External Occupancy Sensor (+)</p> <p><b>CLK2</b> For use with External Occupancy Sensor (-)</p> <p><b>RS2</b> Remote Sensor Bus (Power Return)</p> <p><b>RS1</b> Remote Sensor Bus (Data)</p> <p><b>RS+V</b> Remote Sensor Bus (Power)</p> | <p><b>Y2</b> Energizes compressor for second stage cooling, or for heat pumps, either second stage heating or cooling</p> <p><b>W1</b> Energizes heater for first stage heating, or for heat pumps, aux/emmer heat</p> <p><b>Y1</b> Energizes compressor for first stage cooling, or for heat pumps, either first stage heating or cooling</p> <p><b>G</b> Energizes fan circuit with a call for heating or cooling</p> <p><b>R</b> Independent Switching Voltage from HVAC equip</p> <p><b>24V</b> 24Vac</p> <p><b>24V(c)</b> 24Vac Common</p> <p><b>O/W2</b> Energizes heater for second stage heating, or for heat pumps, energizes the reversing valve in cooling mode</p> <p><b>B</b> Energizes the reversing valve in heating mode</p> |
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### GE22-IP DIP SWITCH SELECTIONS

(FACTORY DEFAULT) OFF	ON
NOT USED (KEEP OFF)	NOT USED (KEEP OFF)
1 HOUR OVERRIDE	3 HOUR OVERRIDE
4 MINUTES (ON/OFF)	2 MINUTES (ON/OFF)
KEYPAD UNLOCKED	KEYPAD LOCKED
FAN ON WITH HEAT CALL	FAN ON WITH PLENUM SWITCH
1-STAGE CONTROL	2-STAGE CONTROL
LED 1 + NO ICON	LED 1 + FILTER ICON
LED 2 + NO ICON	LED 2 + FAULT ICON

### HP32-IP DIP SWITCH SELECTIONS

(FACTORY DEFAULT) OFF	ON
NORMAL HEAT PUMP	DUAL FUEL HEAT PUMP (ADD ON)
1 HOUR OVERRIDE	3 HOUR OVERRIDE
4 MINUTES (ON/OFF)	2 MINUTES (ON/OFF)
KEYPAD UNLOCKED	KEYPAD LOCKED
ECONOMY	COMFORT
1-STAGE CONTROL	2-STAGE CONTROL
LED 1 + NO ICON	LED 1 + FILTER ICON
LED 2 + NO ICON	LED 2 + FAULT ICON