

How to Select the Correct Heat Pump Thermostat Model

Many newer heat pump models feature advanced control logic which shifts operation of the reversing (O/B) valve from the thermostat to the compressor unit.

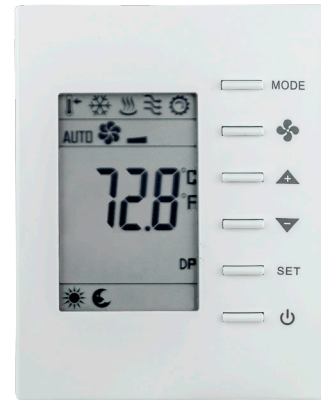
Heat pump units in this category are incompatible with traditional (O/B) heat pump thermostat models and require standard binary staged heat/cool thermostats similar to those used in conventional staged heating and DX cooling units.

It is important for purchasers to understand the control logic used in their heat pump units before purchasing and installing the controlling thermostat.

The following BASstat thermostats from Contemporary Controls support heat pump units with or without this updated control logic:

- BAST-321HP-B2 (wired) and BW2 (wireless) models: Support heat pump units that specify an O/B (orange/blue) wire terminal on the thermostat interface.
- BAST-221C/CH-B2 (wired) and BW2 (wireless) models: Support heat pump units that DO NOT specify an O/B (orange/blue) wire terminal on the thermostat interface. 221CH models include a built-in relative humidity (RH) sensor.

NOTE: Be sure to clarify this with the integrator/installer prior to product purchase.

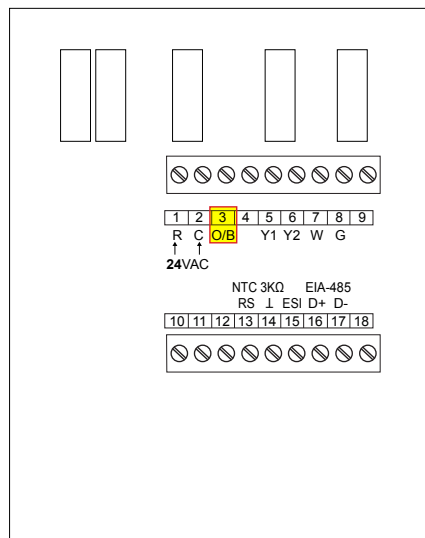


Wiring Diagrams

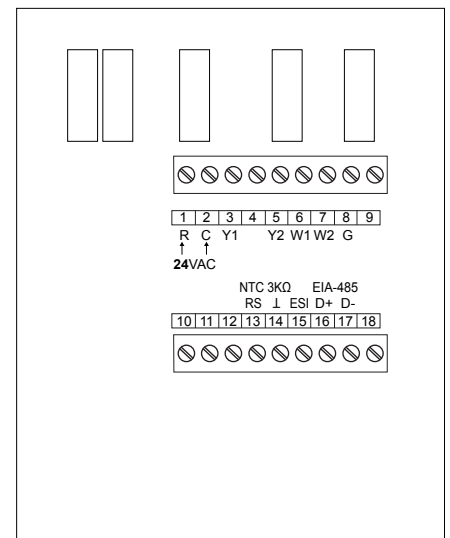
Wiring: 14 to 22 AWG wires or 1.5 mm² wires.

EIA-485 connection to pins 16(D+) and 17(D-) applicable to B2 - BACnet MS/TP models only. BW2 models use Wi-Fi connectivity.

BAST-321HP-B2 and BW2 models



BAST-221C/CH-B2 and BW2 models



Application Note – How to Select the Correct Heat Pump Thermostat Model

The BAST-221C and BAST-321HP models provide versatile BACnet communication in two options:

- BACnet MS/TP in B2 models have MS/TP baud rates 9.6 kbps – 76.8 kbps (BTL Listed)
- BACnet/IP in BW2 models have 802.11 b/g/n 2.4 GHz Wi-Fi
- Both models are BACnet compliant with a B-ASC device profile

Ordering Guidelines:

(O/B) logic controlled internally via heat pump: BAST-221C models

(O/B) logic controlled via the thermostat: BAST-321HP models

BASstat Ordering Information

Model	Description
BAST-221C-B2	BACnet MS/TP Thermostat 2-Heat, 2-Cool, 1-Fan, Wired
BAST-221C-BW2	BACnet/IP Thermostat 2-Heat, 2-Cool, 1-Fan, Wi-Fi
BAST-221CH-B2	BACnet MS/TP Thermostat 2-Heat, 2-Cool, 1-Fan, RH, Wired
BAST-221CH-BW2	BACnet/IP Thermostat 2-Heat, 2-Cool, 1-Fan, RH, Wi-Fi
BAST-321HP-B2	BACnet MS/TP Heat Pump 2-comp, 1-Aux Heat, 1-Fan, Wired
BAST-321HP-BW2	BACnet/IP Heat Pump 2-comp, 1-Aux Heat, 1-Fan, Wi-Fi

For more information, visit [BASstat Heat Pump Thermostats](#)

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