ZON-0600 (Wi-Fi Enabled Zone Control)

Technical Data Sheet

Submittal: HBX ZON-0600

Project: [ ]

HBX Control Systems Inc. - Specification

Part 1: ZON-0600 Product

1. The Hydronic Zone Control must be a full microprocessor control with at least an 16-bit, 140MHz integrated microprocessor chip.

2. The Control must be capable of the following Input/Output Functions:

a. 4 x Thermostat communication and power inputs
b. 3 x Demand output relays (24VAC 2A)
c. 3 x Fancoil outputs (24VAC 2A)
d. 4 x Zone relay outputs (120VAC 5A) or (24VAC 5A)
e. 1 x Input power (120VAC 15A Max)
f. 2 x Pump relay (120VAC 5A)
g. 1 x Humidity Output (24VAC 2A)
h. 1 Auxiliary Input (24VAC 2A)

3. The control must be able to control 4 zone vales, pumps or dampers per module.

4. The control must be expandable up to an additional five (5) ZON-0600 modules for a maximum of 20 zones per system. The control must allow to pair additional ZON-0600 modules wiressley. No wiring is required to pair additional modules.

5. The control must allow for a system pump, heating pump, cooling pump, auxiliary pump, fancoil heat/cool pump, fancoil heat, fancoil cool to activate anytime when a zone demand is made.

6. The control must allow a delay for the system pump to activate for 1-240 seconds when utilizing zone valve or actuators.

7. The control must allow for zone post purge. Post purge is timed selectable for 1-240 seconds. The control must allow for a start delay. Start delay is timed selectable for 1-240 seconds.

8. The control must be able to control a fancoil, furnace, air conditioner unit.

9. The control must allow for only 2 wire thermostats (power and communication) to be used on the ZON-0600. Only the THM-0600 thermostats are compatible with the ZON-0600 module.

10. The control must be able to connect to a 2.4 GHz Wi-Fi network for remote control and monitoring using the ThermoLinx mobile app for android and IOS devices.

11. The control must allow for multiple zone priorities with the ability to have a permanent zone demand priority using the priority shield feature.

12. The control must allow for multiple zone demands (Low Temp, High Temp, DHW, Fancoil, Auxiliary setpoint, app demand).

13. The control must be capable of controlling 2 or 4 pipe geothermal applications (2 stage heating and 2 cooling).

14. The control must be capable of controlling humidification and dehumidification. The control must allow for the humidity target to be controlled automatically when connected to a wifi network or an external sensor.

15. The control must allow for operation of normally open and normally closed dampers. The control also allows for damper communication between modules.

16. The control must allow for wireless demand sharing communication between modules.

17. The control must allow the ability to tie in an auxiliary thermistor to run a setpoint.

18. The control must allow the ability to program and control for warm weather shutdown.

19. The control must allow the ability view all current zone temperatures and pump/valve/damper operation on the main screen.

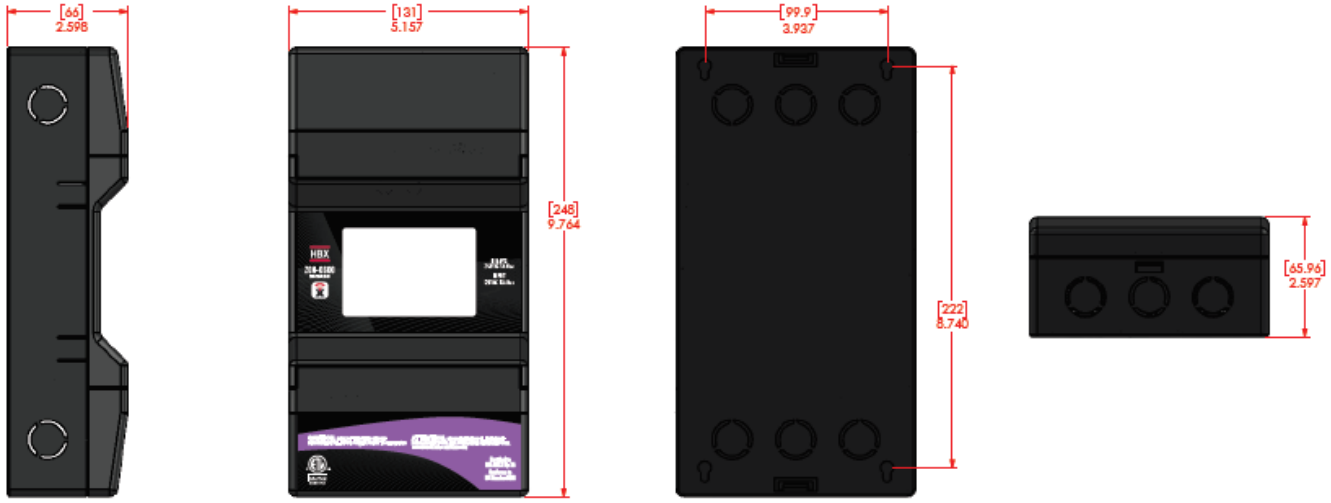
20. The control must allow for the time zone can be entered manually or set to auto. Auto time only works when the system is connected to a Wi-Fi network.

21. The Control unit must be ETL approved.

Part 2: Acceptable Products

1. HBX ZON-0600 Control

Part 3: Physical Dimensions



Part 4: Technical Data, Main Parts & Labels

Inputs/Outputs:

4 x THM-0600 Communication inputs
3 x Fancoil outputs 24VAC 2A
3 x Demand output replays 24VAC 2A
4 x Zone relay 120VAC 5A
2 x pump relay (120VAC 5A)
1 x Humidity output (24VAC 2A)
1 x Auxiliary input (24VAC 2A)

Combined relay power should not exceed 15A

Power supply:

120 VAC, 15A

Dimensions:

5.16” W x 9.83” H x 2.64”D (131mm x 246mm x 66.71mm)

Weight:

0.750 kg

ETL Listings:

Meets CSA C22.2 No. 24
Meets UL Standard 873
ETL Control No. 3068143

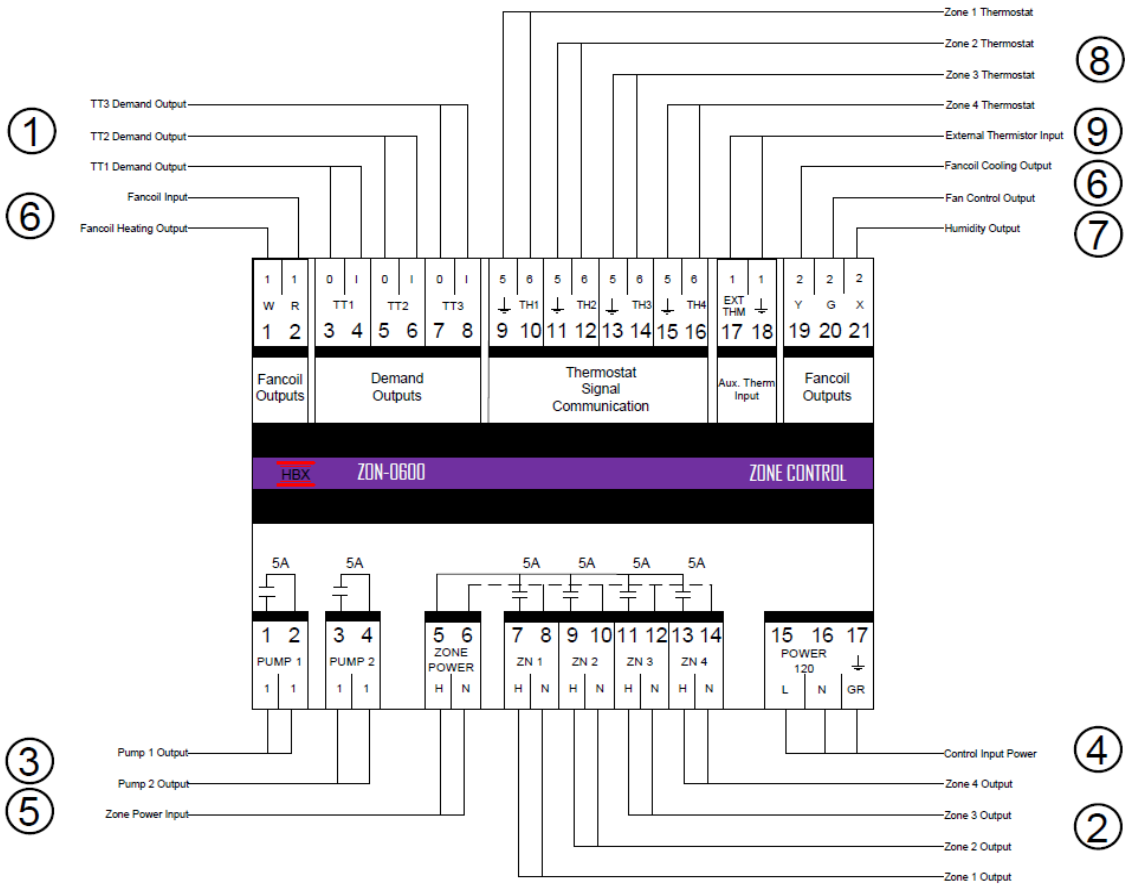
Storage:

50°F to 104°F (10ºC to 40ºC)

ZON-0550 RF info:

Contains IC: 7693A-24J40MB
Contains FFC ID: 0A3MRF24J40MB

Terminal Block Labels:



Wiring

All signal wiring must be a minimum of 18AWG at a maximum of 500ft.

1. **Demand outputs –** These are the outputs for the demands. These can be a heating, cooling, auxiliary, and app demand. 24VAC contact, dry contact TT/Low temperature demand for a boiler, or DHW/High temperature demand.
2. **Zone 1-4 output –** These are the outputs for the zone device. This can be a pump or a valve depending on power is supplied to terminals 5-6. These outputs can also be used for damper zones (terminals 1 & 3) or a 4 pipe system.
3. **Pump outputs –** These are dry contact outputs that can be used to control a pump for the following: System pump, heating pump, cooling pump, auxiliary pump (DHW), app demand pump, fancoil heat/cool pump, fancoil heat, fancoil cool.
4. **Input power –** This input is to power the ZON-0550. 0.5 Amps at 120VAC is required to power this device.
5. **Zone power –** This input is used to power the zone outputs and is rated for 240VAC, 120VAC or 24VAC.
6. **Fancoil output –** These are the outputs for the Fancoil demands. These can be a Fan Demand or an HRV Demand.
7. **Humidity Output -** This output is used for a humidity demand. This can be used to humidify or dehumidify.
8. **Thermostat Input 1-4 –** These terminals are used for power and communication for thermostat inputs. Only THM-0600 thermostats are compatible with this control.
9. **Auxiliary Input –** This terminal is an input for an external thermistor to monitor any temperature or read outdoor temperature, or run a heating setpoint.