HBX Control Systems Inc.
4516 – 112th AVE SE
Calgary, AB T2C 2K2

Submittal: HBX ZON-0500

Project:[ ]

HBX Controls Inc Specification

Part 1: ZON-0500 Product

1. The Hydronic Zone Control must be a full microprocessor control with at least an 8-bit, 8MHz integrated microprocessor chip.

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

a. 4 x Demand (Thermostat) dry contact inputs

b. 1 x Dry Contact Boiler/Chiller Output Relay

c. 4 x 2-wire Zone Power Outputs (24-240VAC, 5A @ 120VAC)

d. 1 x 2-wire Zone Power Input (24-240VAC)

e. 2 x 24 VAC transformer outputs (**6VA total, thermostat power only**)

4. The Control must be capable of standalone operation, or directly interfacing (no cross-wiring) as an expansion module with HBX CPU-1000 and HBX ECO-1000 controls.

5. The Control must allow, by DIP switches, for multiple priority selections.
i. No zone priority
ii. Sequential (left to right) priority
iii. Zone pair priority (two left over to right)
iv. Module priority (module over module, left to right)

6. The Control must be daisy chainable, with no cross-wiring required, and there is no limit on how many can be connected together.

7. The Control must allow for zone post purge. Two different post purge times (45 or 180 seconds) should be available by DIP switch selection.

8. The Control, when functioning as a CPU-1000 expansion module, will have DIP switch selections for each zone, allowing for internal demands to be seen by the CPU-1000 as a high temperature demand (HTD), or heat demand (HD) when the CPU-1000 is operating in Mixing Mode.

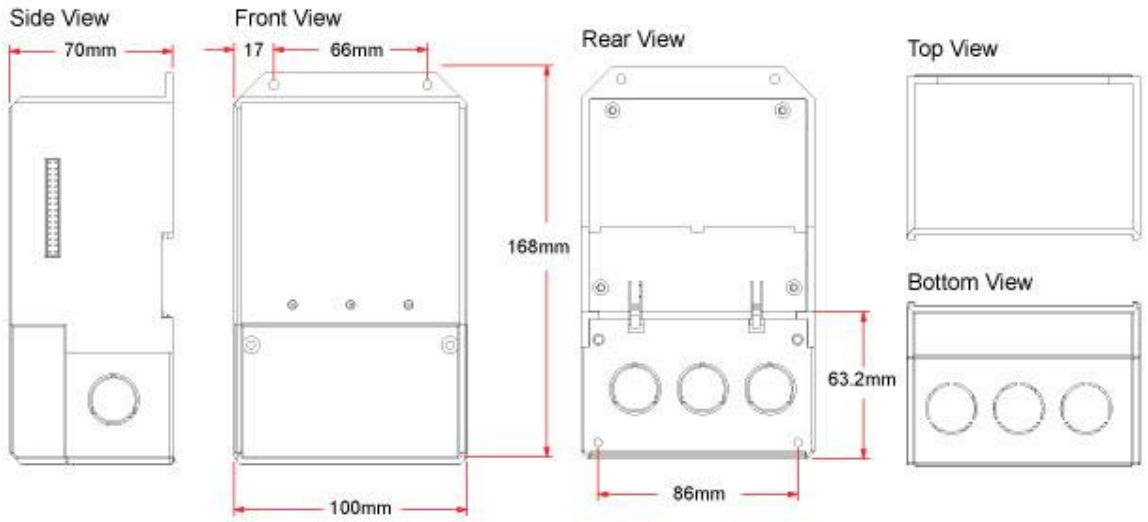
9. The Control, when functioning as an ECO-1000 expansion module, will have DIP switch selections for each zone, allowing for internal demands to be seen by the CPU-1000 as a heat demand (HD), or cool demand (CD) when the ECO-1000 is operating in Geothermal Mode.

10. The Control unit must be ETL approved.

Part 2: Acceptable Products

1. HBX ZON-0500 Control

Part 3: Physical Dimensions



Part 4: Technical Data, Main Parts & Labels

Inputs/Outputs:

1 x Boiler/Chiller Dry Contact (2A @ 120 VAC) Output
4 x Relay Powered Contact (5A @120VAC) Zone Outputs
4 x Dry Contact (Thermostat Inputs)
1 x Zone Power Input (24-240VAC)
2 x Thermostat power outputs (6VA total)

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Power supply:

120 VAC, 2A (protected by integrated fast acting fuse)

Supplied Parts:

32-Pin Connector 033-0037

Dimensions:

3.94” x 6.61” x 2.76” (100mm x 168mm x 70mm)

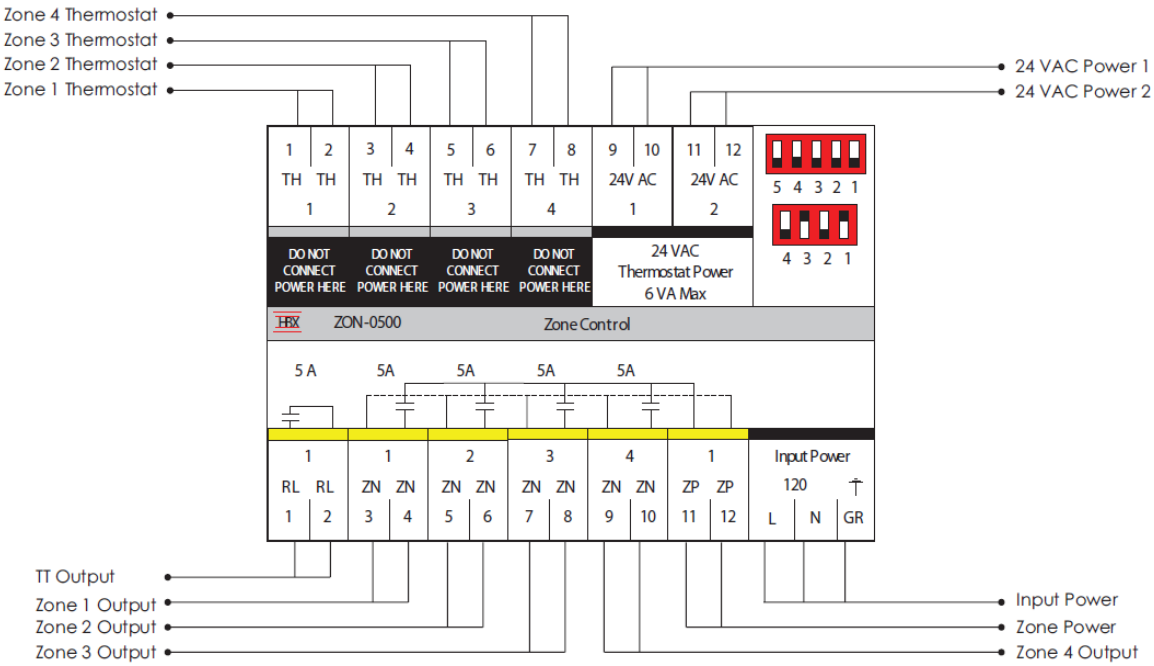
ETL Listings:

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

Storage:

50°F to 104°F (10ºC to 40ºC)

Terminal Block Labels:



DIP Switch Functions:

Left DIP Switches

DIP 1

ON = 180 seconds zone post purge time
OFF = 45 seconds zone post purge time

DIP 2

ON = Sequential priority on
(zone 1 over 2 over 3 over 4)
OFF = Sequential priority off

DIP 3

ON = Dual Zone priority on
(zones 1 & 2 over 3 & 4)
OFF = Dual Zone priority off

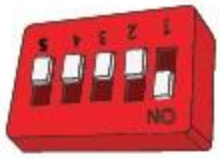
DIP 4

ON = Module priority
OFF = No module priority
⚠ Module priority can be used in conjunction with sequential and 1, 2 over 3, 4.

DIPs 2 & 3 are not to be selected together. Select only one or the other.

Right DIP Switches

DIP 1



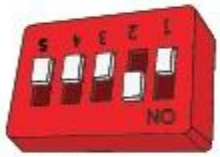
ON = Temporary priority, zone 1 over zones 2 -4 (60 mins or until satisfied)
OFF = Temporary priority off

⚠ When used in conjunction with a CPU-1000, this DIP will give on board DHW priority over ZON-0500 modules.

⚠ When using more than one ZON-0500 use the DIP on the first zone module connected.

⚠ When used in conjunction with an ECO-1000, this function is not available, leave DIP in OFF position.

DIPs 2 - 5



ON = High temp demand (CPU-1000 - Mixing only)
OFF = Heat/ Low temp demand (CPU-1000 - Staging/ Mixing)
Dip Switches 2 - 5 can be any combination of high temp demands or heat demands.

DIPs 2 - 5

ON = Cool demand (ECO-1000)
OFF = Heat demand (ECO-1000)

Dip Switches 2 - 5 can be any combination of cool demands or heat demands.

⚠ Must match up heat/ cool priorities on ECO-1000 with priorities on ZON-0500.

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Part 5: Connecting the ZON-0500 Module:

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