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- HVAC Controls
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Preparation is Key New Equipment Wiring & Configuration

Wiring and configuring new equipment can sometimes be challenging. Preparation is key and here is a little break down of the procedure used by our technical support team to be able to propose the most efficient solution.

Preparation

1. Make a list of the equipment to be connected to the controller;

- a. Heating coil
- b. Cooling coil
- c. External temperature sensor
- d. Other devices

2. Next to the equipment list, add information concerning the type and the control signal used.

For a heating coil as an example, we require to know if it is a water coil or electric. Then we need to know the signal used to control the coil (On/Off 24Vac, Pulse, Modulating 0-10Vdc, Modulating 2-10Vdc or Floating). The same applies to sensors. What is it for? What signal does it have?

3. Identify the available outputs that can be used on the controller.

The easiest way to visualize the controller is to refer to the Specification & Installation Instructions of that controller which is available on our website.

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4. Use the instructions to identify the default values of the controller.

Most of the time, we can find a preconfigured input or output that matches the equipment requirements, which reduces configuration time. Unfortunately, the controllers cannot be preconfigured to fit all applications and some additional configurations must be made.

For equipment that does match the default configuration, simply select an unused input or output and go to the program mode.

Selecting the Appropriate Input or Output

Input/Output	Signal Type	Equipment/Ramp
Analog input	<ul style="list-style-type: none"> • 10kΩ type 3 or G • 0-10Vdc <i>on some models</i> 	<ul style="list-style-type: none"> • Temperature sensors • Humidity sensors • CO₂ sensors
Digital input	<ul style="list-style-type: none"> • Dry contact (voltage free) • 24Vac contact (wet contact) 	<ul style="list-style-type: none"> • Occupancy/night setback • Changeover • Flow • Door/window • Dirty filter • Overrides
Analog output	<ul style="list-style-type: none"> • 0-10Vdc • 2-10Vdc • 4-20mA with 500Ω resistance 	<ul style="list-style-type: none"> • Heating • Cooling • Fan Modulation • Modulating humidifiers
TRIAC output	<ul style="list-style-type: none"> • On/Off • Pulse • Floating 	<ul style="list-style-type: none"> • Heating • Cooling • Fan permission or start/stop • CO₂ alarm
Digital Output	<ul style="list-style-type: none"> • On/Off 	<ul style="list-style-type: none"> • Heating • Cooling • On/Off humidifier

Note: See Specification & Installation Instruction manual of the controller for voltage ratings and limitations.

The first controller always takes more time to configure but once it is done, usually the other controllers use the same setup. Do not forget that you can copy the configuration to other controllers using the copy configuration function (BACnet network must be present and controllers must be identical).

Following these simple steps will help you decide on the appropriate setup. If you are unsure, give us a call and we will guide you through it. Having the information as described above will greatly speed up the process.

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