Halcyon by FUJITSU

Service Tips

Integrated Controller Installation/ Operation

Using the Novus N2020 Temperature Controller

Using dry contacts on a Fujitsu system, a third party temperature controller can be connected to command operation at determined temperatures. Paired with a thermocouple sensing outdoor ambient temperature, on/off operation can be achieved for various applications. Depending on the capabilities of the controller and the amount of relays within it, boilers, furnaces, secondary mini splits etc., can be used in conjunction with a Fujitsu mini split for specific temperature based applications. Not all applications and installations are perfect. For applications using temperature offsets, please refer to engineering bulletin 0031 Temperature Correction Firmware Update. This bulletin will provide information on wiring and set up using one example.(Novus N2020)

Note: Control of the heat pump can be overridden at any point using a Fujitsu wired or wireless remote.

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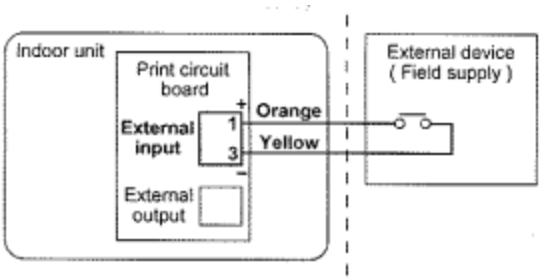
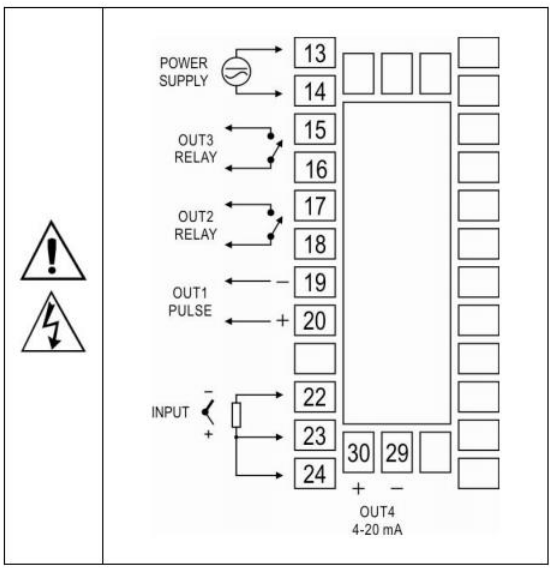
Wiring Information

1. Plug the Molex portion of the Dry contact wire into the External input section of the indoor control board. (reference the wiring diagram for the indoor unit for labeling of the plug on the board.) Note: Part number UTY-XWZX must be ordered separately to obtain the molex connector. 18 gauge or 22 gauge wire can be used for this connection.
2. Insert the wire section on the dry contact wires into the OUT2 Relay, Terminal 17, 18 of the temperature controller.
3. Wire thermocouple of choice to inputs 22, 23 on the temperature controller.
4. Wire the power source to terminal 13, 14 . Power supply 100 to 240 Vac (+/- 10%), 50/60Hz
5. When installing a temperature controller, it must be mounted in the conditioned space and the thermocouple should be installed on the outside to monitor outdoor temperature.
6. This installation method can be daisy chained to multiple indoor units, on multi-zone application. For daisy chaining information, reference service bulletin 036 or 037 Group control for multi/single zones.

For any purchasing information, you may call 1 (786) 235-2674 or visit www.novusautomation.com
Part numbers for the controller and thermocouple are listed below:
Thermocouple-8830005000
Controller-8202011300



Input example for dry contact operation



Schematic diagram for the temperature controller

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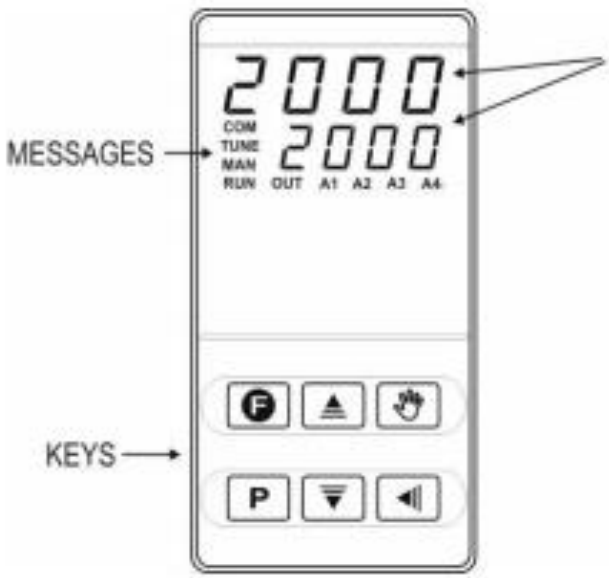
Menu Selection and Setup for the Temperature Controller

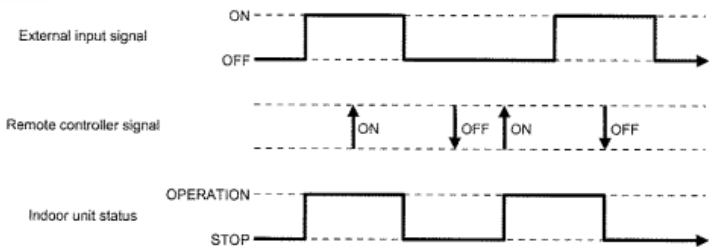
The temperature controller used in this example is the Novus N2020.

Note: The P key is used for navigating through menus and submenus throughout the controller.
Press and hold the P key in order switch from menu to menu.
Tap the P key to scroll through submenus under each main menu.

1. Hold down P until you see “Atun”. This is the turning Cycle Section . Tap the P button until you get to OUT2
2. Using the up and down arrows, change “off” to the “A1” setting. This will activate Alarm 1 to output 2 .
3. Hold P until “FUA1” appears. This is the Alarm Cycle Section
4. Using the up and down arrows, change “off” to “Hi” setting. The will close contacts to the relay when the ambient temperature is above the determined setpoint.
5. Tap P to toggle to the section “SPA1” to select the temperature desired for the unit to cut in or cut out.
6. Tap P until the main display screen appears. From that screen, continue tapping P until you reach “run” on the top display. Using the up and down arrows, change the option to “yes” if it is not already selected
7. Set the thermocouple type. Hold down P until you see “type”. Using the up and down arrows, select J,K,T, or pt100. Additionally pressing P at this screen will bring you to the “UNITS” heading. From there, you will be able to toggle between Fahrenheit and Celsius.



Pictured above is the Novus N2020 Temperature Controller



Fujitsu On/Off operation by external input

TYPE	CODE	RANGE OF MEASUREMENT
Thermocouple J	tc J	Range: -110 to 950 °C (-166 to 1742 °F)
Thermocouple K	tc K	Range: -150 to 1370 °C (-238 to 2498 °F)
Thermocouple T	tc t	Range: -160 to 400 °C (-256 to 752 °F)
Pt100	Pt	Range: -200 to 850 °C (-328 to 1562 °F)

All available thermocouple types are listed above