

## Technical Note

### Configure a Thermocouple In to Trigger a Discrete Out

Use the User Configuration Tool (UCT) and extended control messages to set a K-type thermocouple Node input to trigger a discrete output on the Gateway when the thermocouple temperature rises above 120° F.

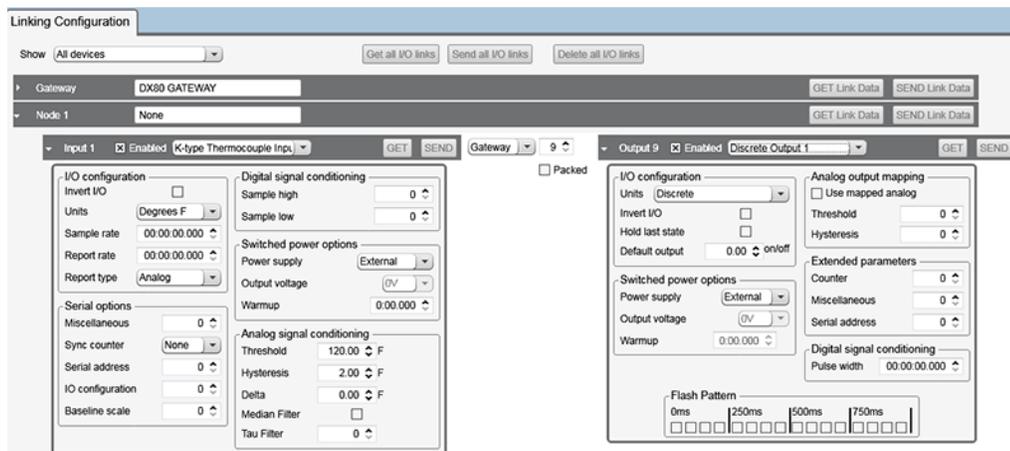
This configuration example assumes you have the following hardware and software:

- DX80 Performance P3 FlexPower Node
- User Configuration Tool (UCT) v2
- DX80 Performance Gateway with discrete outputs
- RS485 to USB adapter cable, model BWA-UCT-900

Extended control messages allow custom configuration of I/O parameters, such as sample rate, threshold, hysteresis in a DX80 device. The I/O parameters are set using a host interface, such as the User Configuration Tool (UCT) and the RS485 to USB adapter cable, model BWA-UCT-900.

1. On the P3 Node, set DIP switches 5, 6, 7, and 8 to the ON position for UCT/host configured setting.
2. Connect the Gateway to a computer with the UCT software installed and launch the UCT software.
3. On the Linking > Linking **Configuration** screen, select the Node number of the P3 Performance Node and click on the arrow next to the Node.
4. Select the Thermocouple input to use and click Enabled.
 

On the P3 Node, inputs 1 through 4 are thermocouple inputs. For our example, we will use Input 1.
5. From the drop-down list, select K-type Thermocouple input.
6. Click the arrow next to Input 1 to view the parameters.
7. Change the following parameters.



- a) Units: Degrees F
  - b) Report type: Analog
  - c) Threshold: 120 °F
  - d) Hysteresis: 2 °F
8. Click SEND to send the configuration to the network.
  9. Select the Gateway and output number to link the thermocouple input to.
 

In our example, we are using output 9.
  10. Click Enabled to enabled output 9. Use the drop-down list to select the discrete output number.
 

For our example, we are setting the Gateway's Output 9 to be Discrete Output 1.
  11. Click the arrow next to Output 9 to view the parameters.
  12. Set the Units to be Discrete.
  13. Click SEND to send the configuration to the network.