

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.

Linking Configuration	
Show (All devices	Get all I/O links Send all I/O links Delete all I/O links
Gateway DX80 GA	VTEWAY GET Link Data SEND Link Data
Node 1 None	GET Link Data SEND Link Data
- Input 1 🛛 Enabled K	Ctype Thermocouple Inp. 💌 GET SEND Gateway 💌 9 🗘 🗸 Output 9 🕱 Enabled Discrete Output 1 💷 GET SEN
UO configuration Invert I/O Units Degrees I Sample rate 00:00:00 Report rate 00:00:00 Report rype Analog Serial options Miscellaneous Sync counter Non Serial address IO configuration Baseline scale	Digital signal conditioning <pre></pre>

- 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.