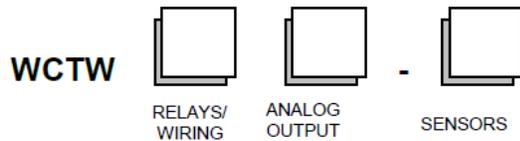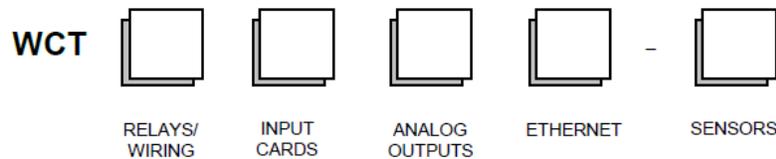This document is a guide for troubleshooting the analog output(AO) card if you are measuring 0mA as the value of the analog output signal.
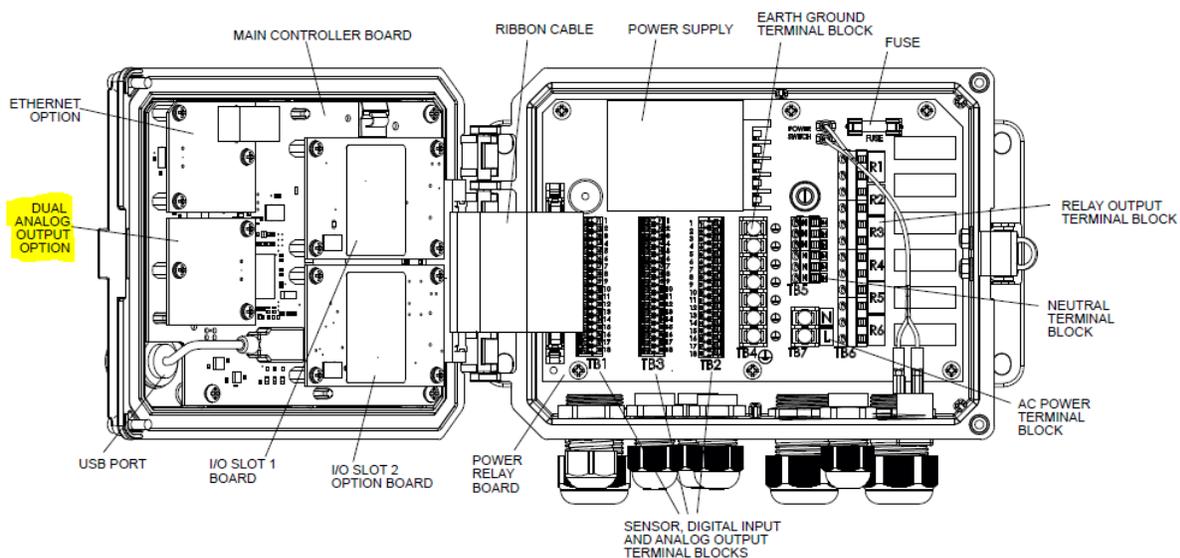
Controller Model

To determine if your controller has the analog output card installed, for the W100 controller, the model number must contain an "A" in the Analog Output block shown below. The analog output option can only be factory installed for the W100 controllers, it is not field upgradeable.

WCTW

RELAYS/ WIRING   ANALOG OUTPUT   SENSORS

For the W600 controller, there are 2 ways to determine if the controller has the analog output card. The model number must contain an "A" in the Analog Outputs block shown below.

WCT

RELAYS/ WIRING   INPUT CARDS   ANALOG OUTPUTS   ETHERNET   SENSORS

Or, the analog output card may have been installed in the field, and therefore the model number will not reflect that it is installed. So, open the front door of the controller, and visually inspect the back of the front door. If the analog output card is installed it will be located as shown below. It is a single card, but can output 2 analog signals (dual analog output option).

Programming the Analog Output card

W100 Menu

Alarm Menu

Inputs Menu (Sensor, Digital inputs)

Outputs Menu (Relays, Analog Output)

Configurations/Settings menu

Press the key **below** the icon to get to the main menu selections

In this example, I will program the analog output **(A1)** to send out 50% (12 mA) when put in **HAND** mode to prove if the AO card is working.

Press [↓] to access the Outputs menu.

Press ∨ to scroll down until *(A1)* is highlighted.

Press [↪] to enter the Analog Output menu.

Press ⚒ to go into the Settings menu.

Press ∨ to scroll down until *Mode* is highlighted.

Press [↪] to enter the Mode menu and then scroll down until *Manual Control* is highlighted.

Press ✓ to accept this option.

Press ⚒ to go into the Settings menu and *HOA* should be highlighted.

Press [↪] to enter the *HOA* menu and select *HAND*. Press ✓ to accept this option.
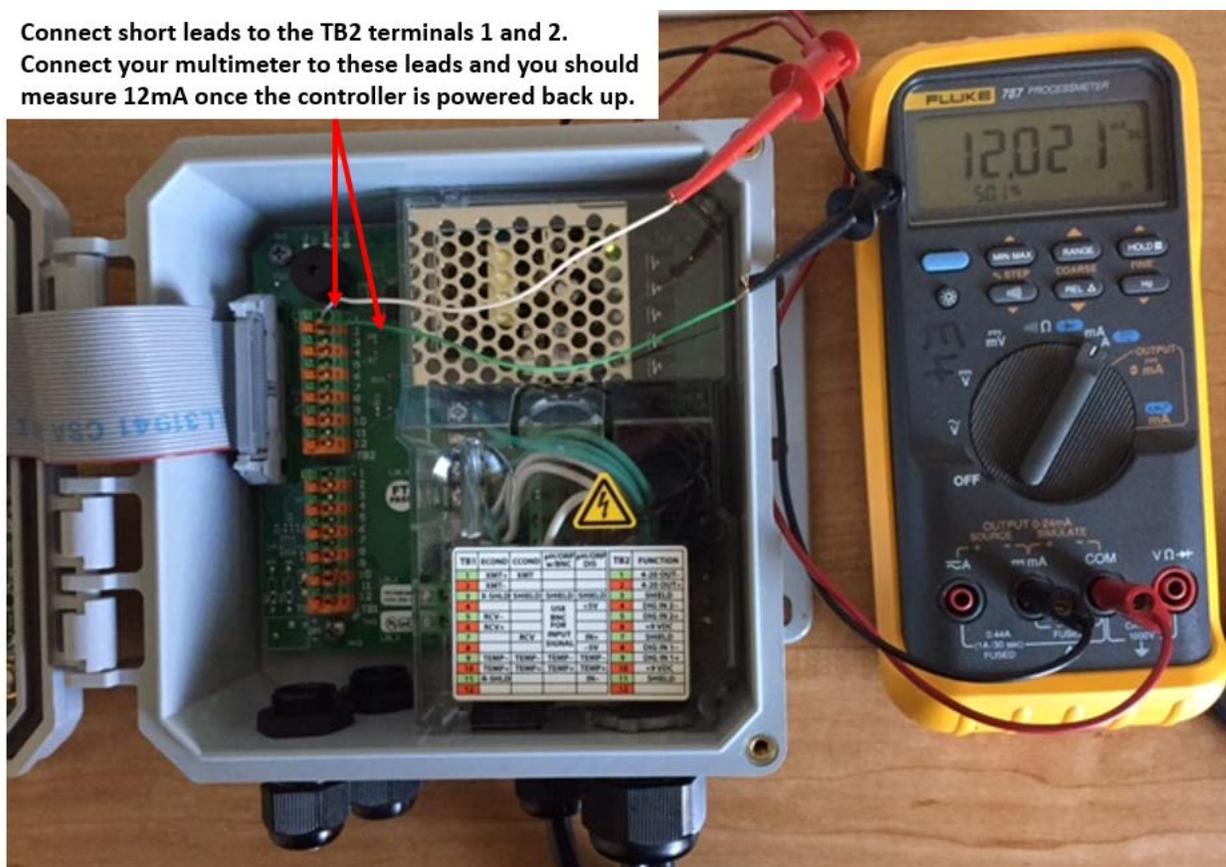
W100 continued

Press ⌄ to scroll down until ***Hand Output*** is highlighted.

Press [↵] to enter the ***Hand Output*** menu and enter ***50%***. Press ✓ to accept this value.

Power down the controller. If the AO signal wires are connected to the controller (TB2 terminals 1 and 2), please disconnect them.

Connect your multimeter as shown below. Then power up the controller.

Connect short leads to the TB2 terminals 1 and 2. Connect your multimeter to these leads and you should measure 12mA once the controller is powered back up.

If you do not read 12mA (approximately), then power down the controller. Please make sure the grey ribbon cable is installed with the red stripe on the bottom (as shown above) and the ribbon cable is securely seated on both ends.

Power the controller back up and see if you now read 12mA. If not, then the AO is faulty and a replacement front panel assembly (FPA = the entire front door) is needed. Please contact your distributor Walchem Customer Service 1-508-429-1110 for a replacement FPA.

Programming the Analog Output card

In this example, I will program the analog output **(A1)** to send out 50% (12 mA) when put in **HAND** mode to prove if the AO card is working.

Go to the Main Menu and press ⬇ to go to Outputs.

Scroll down and Press *(A1)* to go into the *(A1)* menu.

Press ✖ to go into the Settings menu.

Scroll down and press on *Mode* to enter the *Mode* menu.

Scroll until *Manual Control* is highlighted. Press ✔ to accept this option.

Press ✖ to go into the Settings menu.

Press *HOA* to enter the *HOA* menu.

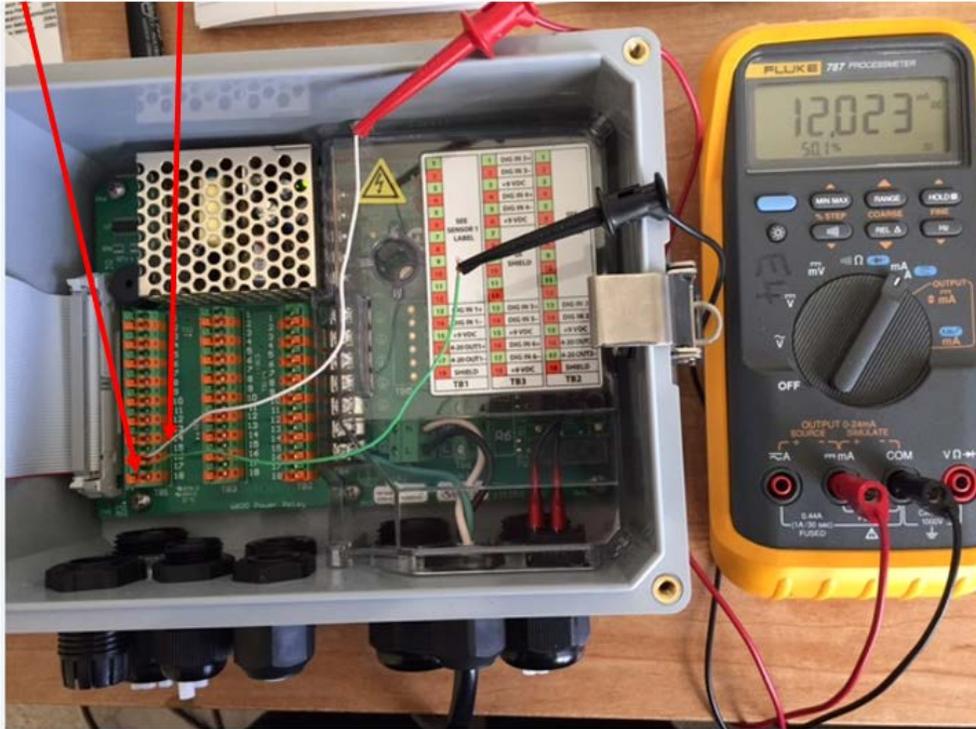Select *HAND* and then press ↰ to return to the *(A1)* menu.

Press *Hand Output* to enter the *Hand Output* menu.

Enter *50%* and then press ↰ to return to the *(A1)* menu.

Connect your multimeter as shown below. Then power up the controller

To test AO1, connect short leads to the TB1 terminals 16 and 17. Connect your
multimeter to these leads and you should measure 12mA once the controller is
powered back up. To test AO2, connect to TB2 terminals 16 and 17.

If you do not read 12mA (approximately), then power down the controller.   Please make sure the grey ribbon cable is installed with the red stripe on the bottom (as shown above) and the ribbon cable is securely seated on both ends.

Power the controller back up and see if you now read 12mA. If not, then the AO is faulty and a replacement AO card is needed. Please contact your distributor or Walchem Customer Service 1-508-429-1110 for a replacement.