

INSTRUCTIONS FOR REPLACING W600 and INTUITION-6 SERIES CIRCUIT BOARDS



CAUTION! There are live circuits inside the controller even when the power switch on the front panel is in the OFF position! The front panel must never be opened before power to the controller is REMOVED!



CAUTION! The hinged front panel is secured with Phillips screws, which require a tool to open. No user adjustments are inside. The electrical installation or modification of the controller must be done by trained personnel only and conform to all applicable National, State and Local codes!

ELECTROSTATIC DISCHARGE PRECAUTIONS

The following practices minimize the possible damage to the circuit boards due to improper handling.

- Keep the boards in the anti-static bag until ready to install
- Touch a known ground (metal pipe, etc.) to discharge any static before handling the circuit board
- Handling the circuit board by the edges, do not touch any components.
- Do not slide the circuit boards across any surface
- Note the orientation of the part being removed, and install the new part in the same orientation

RELAY BOARD REPLACEMENT

1. Open the front panel of the controller **AFTER POWER HAS BEEN REMOVED**. The Relay Board as shown in Figure 1 will have a ribbon cable and a number of discrete wires attached to it. These will have to be removed and later reinstalled on the new board. Some of these wires will be under a plastic safety cover (fastened with one captive flat head screw) that needs to be removed first.

Remove the power connection wires by loosening the screw terminals, noting the colors to L and N terminals.

Remove the ribbon cable, by pulling down the locking mechanism on each end of the connector, and pulling the cable up out of the connector. Be sure to note the position of the red line.

Remove the two flag terminals connecting the power switch to the board. Use needle-nosed pliers to grip the connectors.

Remove the discrete wires from the screw terminals. **Mark the wires so they can be reattached to the replacement board in the same position!**

2. Remove the six 8-32 screws that secure the relay board near each corner. The relay board will now be free.
3. Double check that the relay board you are installing is the same as the one you are removing.
4. Install the new relay board. Insert the six 8-32 screws into the mounting holes in the relay board and attach them to the enclosure. Reinstall grounding wires, reattach all discrete wires, and reconnect and lock the ribbon cable.
5. See the Controller Instruction Manual for further information on wiring the Inputs/Outputs.
6. Close the front panel of the controller, secure the front panel screws, and restore power. See the Instruction Manual for detailed information about the verification and control of the Relay Board.

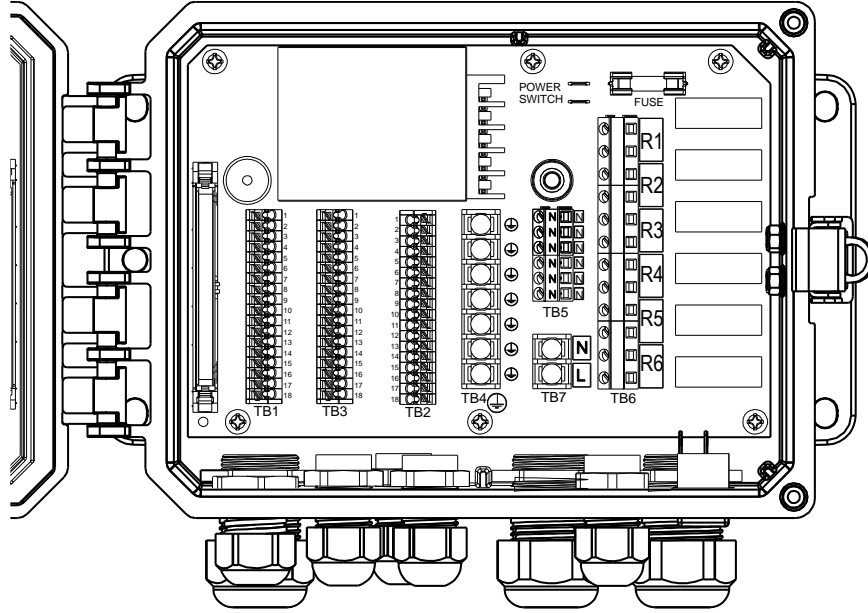


Figure 1

W600 FRONT PANEL ASSEMBLY REPLACEMENT

1. Open the front panel of the controller AFTER POWER HAS BEEN REMOVED.

Remove the ribbon cable from the Main Controller Board, by pulling down the locking mechanism on each end of the connector and pulling the cable up out of the connector. Be sure to note the position of the red line.

2. Double check that the front panel assembly you are installing is the same as the one you are removing.
3. With the panel open halfway, apply pressure to the edge of the panel to unsnap the hooks of the front panel hinge from the pins on the rear of the enclosure.
4. Install the new front panel assembly by hooking the hinge around the pins and pulling the panel towards you to snap it in place. If the controller is not mounted to a wall, rotating the front panel backwards will quickly snap the hinge in place. Replace the ribbon cable.
5. Remove the option boards from the old panel and reinstall them on the new panel (see Option Board Replacement below)
6. See the Controller Instruction Manual for further information on wiring the Inputs/Outputs.
7. Close the front panel of the controller, then secure the front panel screws and restore power. See the Instruction Manual for detailed information.

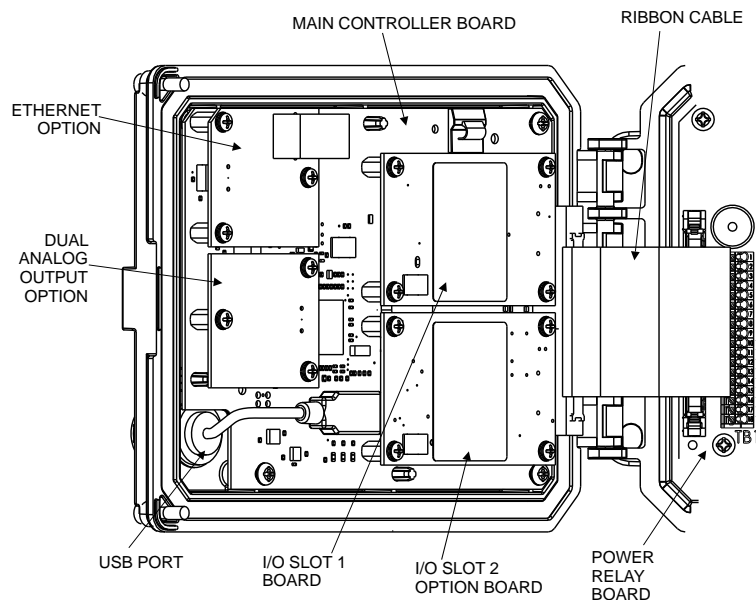


Figure 2

INTUITION-6 FRONT DOOR/DISPLAY ASSEMBLY REPLACEMENT

1. Open the door of the controller AFTER POWER HAS BEEN REMOVED.

Remove the ribbon cable from the Main Controller Board, by pulling down the locking mechanism on each end of the connector and pulling the cable up out of the connector. Be sure to note the position of the red line.

2. Double check that the front door assembly you are installing is the same as the one you are removing.
3. With the panel open halfway, squeeze the tabs at the bottom of the hinge and pull the door up until the pins of the front panel hinge clear the holes on the hinge on the rear of the enclosure.
4. Install the new front door by hooking the pins of the door's hinge into the holes in the rear panel hinge and push down to snap it in place. Replace the ribbon cable.
5. Remove the main controller board and all its option boards from the old door and reinstall them on the new panel (see Intuition-6 Main Controller Board and Option Board Replacement below).
6. See the Controller Instruction Manual for further information on wiring the Inputs/Outputs.
7. Close the front panel of the controller, then secure the front panel screws and restore power. See the Instruction Manual for detailed information.

INTUITION-6 MAIN CONTROLLER BOARD REPLACEMENT

1. If the controller has been programmed and you want to save most of the settings, insert a USB drive into the front panel connector and go to the Config – File Utilities – Export User Config File menu and save the settings to the USB drive. Remove the USB drive, and then remove power from the controller.
2. Open the front panel of the controller **AFTER POWER HAS BEEN REMOVED**. Remove the ribbon cable from the Main Controller Board, by pulling down the locking mechanism on each end of the connector and pulling the cable up out of the connector. Be sure to note the position of the red line on the ribbon cable. After removing the cable, push the locking arms back into the locked position so they are out of the way for step 4.
3. Remove the network board if it is installed. The sensor boards and the analog output board do not have to be removed from the plastic option board carrier. They can remain installed during this entire procedure. The network board must be removed to access the mounting screw underneath it.
4. Remove four #8-16 x 3/8" screws holding the corners of the plastic option board carrier to the controller board. and reinstall them on the new panel (see Intuition-6 Main Controller Board and Option Board Replacement below).
5. Grip the plastic option board carrier firmly and gently pull upwards to remove it, still containing sensor boards (if installed), and set aside.
6. The controller board is now free. To remove it from the door, grip the black plastic connector labelled J2 and pull firmly but gently upwards. The controller board must disengage from the 24-pin display connector and the 5-pin USB connector. Pull upwards on J6 and/or J10 (the network board header) until the controller board comes free from 29 gold pins. Rock the board back and forth gently to help slide the board off those pins.
7. Remove the replacement controller board from the static bag and install into the lid. The board should easily slip onto the three gray locator pins in the lid, one on top, one on bottom and one on the left. Engage the board onto those 3 pins and it should easily push onto the display connector and the USB connector. Push firmly on the board until it seats on the locator pins and on the screw bosses.

OPTION BOARD REPLACEMENT

1. Open the front panel of the controller AFTER POWER HAS BEEN REMOVED. If you are adding an option card rather than replacing one, skip to step 4.
2. Remove the 6-32 screws that secure the option board near each corner. The option board will now be free. Pull the option board straight up from its connector.
3. Double check that the option board you are installing is the same as the one you are removing. **IMPORTANT:** If changing from one type of sensor board to another disconnect all sensor wires from TB1 or TB2 first! Failure to do so may damage the sensor! Once the Sensor Input, Analog Input or Combination SI/AI boards are in their final location, reconnect sensors according to the wiring diagram on that board.
4. Sensor and Analog Input boards, as well as Ethernet Option boards are loaded with software that must be compatible with the software on the Main Controller Board. Go to <https://www.walchem.com/w600-upgrades>, download the latest software to a USB stick, and follow the instructions to upgrade the Main Controller Board software.
5. Install the new option board. See figure 2 for the board locations. Sensor boards and Analog Input boards are inserted into I/O Slot 1 and I/O Slot 2. Insert the 6-32 screws into the mounting holes in the option board and attach them to the front panel.
6. It is possible, if the software on the replacement Sensor or Analog Input, or Ethernet Option board is not at the latest version, you will get an error message, or the new board will not be detected. If this occurs, re-run the software upgrade.

