



W100, W600, W900 Display Issues Troubleshooting Guide

October 4, 2019

Symptom:

Display is completely blank (ALL)

Horizontal or Vertical lines on the display (W600 or W900)

Causes:

Power supply issues

Ribbon cable faulty or loose

Faulty LCD display

Faulty option card

Faulty device or wiring connected to option card

Faulty Main Controller Board

Software Issues

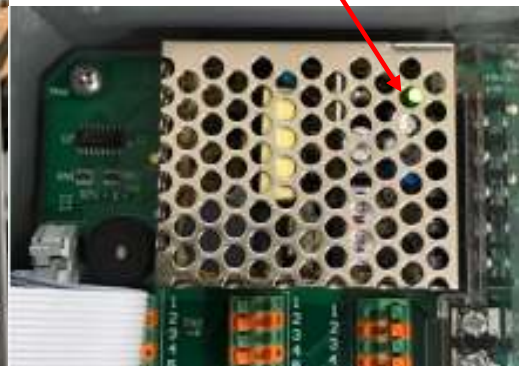
Corrective Actions:

First, make sure the controller is connected to AC power and turned on.

Then look at the power supply itself and verify that the green LED is lit.



W900



W100 or W600

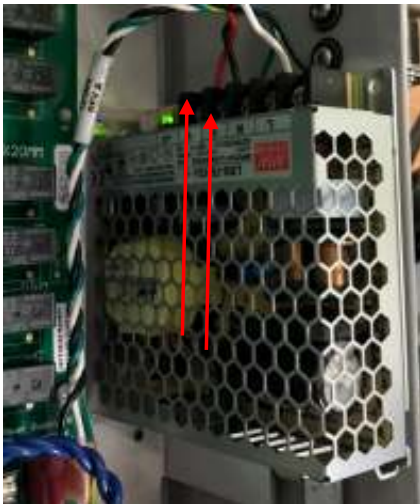
If not, either the AC power is not getting through the power switch to the relay board or the PS is faulty. Measure the AC into the PS, and if it's there you either have a bad PS or something is pulling down the VDC.

Disconnect the ribbon cable from the relay board. If the PS LED comes on, then something outside the relay board is pulling it down. Connect the ribbon to the relay board and disconnect from the main controller board. If the PS LED goes out, replace the ribbon cable.

For W900 if the PS LED is out with the ribbon detached from the relay board, power down and remove any I/O boards. Power up. If the PS LED lights, replace I/O boards one at a time, always powering down between each one, until you find one that causes the LED to go out. At this point it could be faulty wiring to that board, or the board itself. Disconnect the wiring to TB Terminal strip directly beneath that board, and if the problem persists, replace the faulty I/O board. Otherwise verify that wiring is correct, and that all devices connected are working properly.

For W600 if the PS LED is out only with the ribbon connected to the relay board, power down and remove any I/O boards. Power up. If the PS LED lights, replace I/O boards one at a time, always powering down between each one, until you find one that causes the LED to go out. At this point it could be faulty wiring to that board, or the board itself. Disconnect the wiring to TB Terminal strip for that board, and if the problem persists, replace the faulty I/O board. Otherwise verify that wiring is correct, and that all devices connected are working properly.

If the PS has the green LED lit, then measure the VDC output of the PS with a multi-meter (5 VDC for W100 or W600, 12 VDC for W900) at the terminals shown below. If the 5 VDC is outside 4.9 to 5.1, or 12 VDC is outside 11.8 to 12.2, carefully adjust the PS potentiometer to get it within range. Make tiny adjustments. If you are not capable of doing this, return for repair.



W900



W100 or W600

Alternatively, if the controller has Ethernet capability, connect to the controller using Ethernet and if the webpages are normal, no missing I/O, then software issues are not the problem. Go to the Config- Controller Details menu and see if the VDC is outside the normal range, and if so, adjust the PS potentiometer.

If the VDC is within range, look at the LEDs on the Main Controller Board. If the 3.3 V and 5 V are lit, then power is getting to the board.



W100

W600

W900

If not, try reseating the ribbon cable.

If still no power is getting to the front panel, the problem could be the ribbon cable, the ribbon connector on either side, or a faulty main controller board. The best solution is to return for repair.

If the voltage LEDs on the front panel are good, look at the main board processor status LED (D2 for W100, D7 for W600, D12 for W900). You should see the heartbeat sequence (blink-blink-pause).

If no heartbeat, try a power cycle if you haven't done one already.

If still not blinking, replace the main controller board.

If all the front panel LEDs look good, run the LCD test (software upgrade without any USB stick). If the display shows the progress of the failed software upgrade attempt, then the LCD display is OK.

If not, replace the LCD display (new W900), main controller board (W100), 191729 front panel configured for their model (W600), or 191921 main controller board/display configured for their model (old W900).

The only thing left if the power is good, the display is good, and the software status heartbeat is good is to run the flash dump & r-bag.

Symptom:

Touchscreen is not responding (W600 or W900)

Causes:

Poor connection between Touchscreen and Main Controller Board

Faulty Touchscreen

Corrective Actions:

Try removing and reseating the LCD display. On older controllers, there is flexible flat cable inserted into a small connector on the controller board. On newer controllers, remove the 11 screws holding the Main Controller Board to the front panel, pull the board up to remove it from the panel, then push it back on.

If still non-responsive, replace the LCD display (for older W600, replace the 191729 front panel assembly configured for their model number).

Symptom:

Missing menus or unassigned inputs and outputs

Stuck at "Initializing" for 5 minutes or more

Icons and menus in the wrong place

Touch one place, a different place responds (W600 or W900)

Causes:

Software Issues

Corrective Actions:

Send the appropriate flash dump and r-bag upgrade file for their model with instructions on the process to follow.