

Verifying 4–20 Output on Honeywell UDC 2500 modulation controllers

Following the completion of the burner purge cycle (at end of MTFI sequence), burner control will be transferred from Fireeye flame control system to Honeywell UDC 2500 modulation controller. At this point, the controller uses a 4–20 milliamp signal to communicate with the burner and modulation motor (via the mod motor resistor board).

Confirming 4-20 mA signal from Honeywell UDC modulation controller

Remove wires from terminals **19** and **21** on the back of the modulation controller (**Figure 1**) and place a 250 ohm resistor between the two terminals. Place controller in manual operation mode (using the M-A Reset button) and drive output to 0% then to 50% and 100% (using up arrow). Measure voltage (**in volts DC**) between **19** and **21**. Look for the following:

0% = 4 mA
50% = 12 mA
100% = 20 mA

If these measurements are not recorded, check wiring or replace controller as needed.

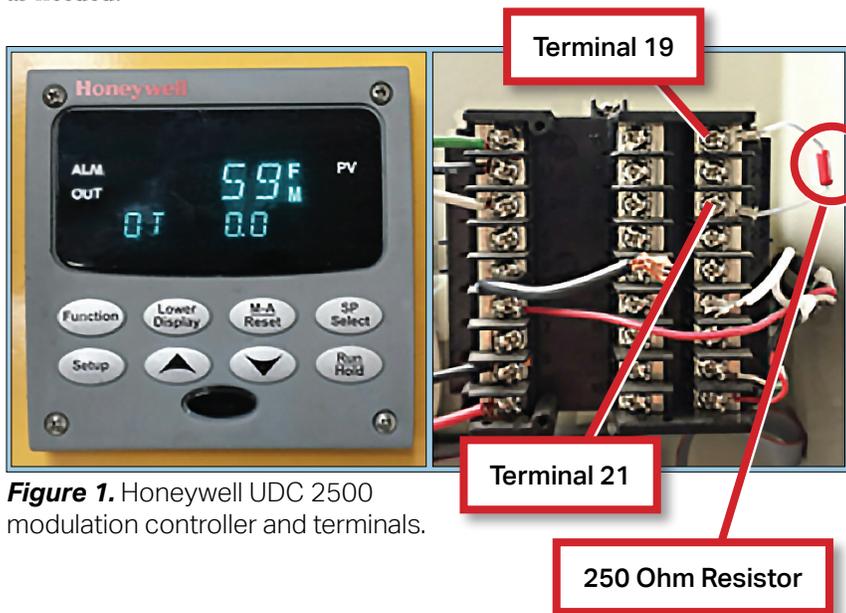


Figure 1. Honeywell UDC 2500 modulation controller and terminals.


DANGER



SHOCK HAZARD. High voltage is present on certain terminals and wires inside the main control panel, inside the mod motor and inside the burner panel. Touching them will cause death or serious injury.

Do not work on these components unless you are a qualified technician familiar with the hazards of electricity. Some circuits in the main control panel may receive power from remote sources. Thus, the breaker operator on the door may not deenergize all exposed live parts.

Always use a voltage tester to make sure there is no voltage on the terminals or bare wires you may touch.

Calculating 4–20 mA output

1. Measure volts DC between terminals 19 and 21 on the back of the Honeywell UDC 2500 controller.
2. Record voltage (DC).
3. Divide recorded voltage by 250 and multiply by 1000 to get milliamps.

Example: $.999 \div 250 = 0.003996 \times 1000 = 3.996 = 4.$