Overview: 24 Volts enters the Module (Stage 1) at THS and immediately for the trial period, the module should send spark to the Pilot and 24 Volts to the Pilot Valve (Stage 2). As soon as the trial period starts the Module is checking at the Sense terminal for Rectification (Stage 3). Rectification occurs as the pilot or a flame sensor is heated, the heat creates a small electrical signal expressed as Micro Amps (µA) that is returned to the Sense terminal. To test for flame rectification, disconnect the wire at the sense terminal and set your multimeter to µA. Then place one lead of your meter on the wire and the other on the terminal. Generally Honeywell modules require 1.5µA and Johnson modules require 0.15µA Minimum, but refer to the module manufacturer for exact specifications. With the pilot lit, your meter will show the µA reading returning from the pilot and you can then see what the module is reading. Once the module reads a current greater than it’s minimum, it will open MV (Stage 4) and send 24 Volts to the Main Gas Valve for the burner ignition. Also the Trial period will end and PV will stay open while MV is open. They will continue to send 24 Volts until the thermostat (not shown) interrupts the voltage to the THS terminal.
Direct Spark (Pilotless) Modules:

Overview: 24 Volts enters the Module (Stage 1) at THS and immediately for the trial period, the module should send spark to the pilot and 24 Volts Out on MV (Stage 2) to the Main Valve (and pilot valve on some units). As soon as the trial period starts the Module is checking at the Sense terminal for Rectification (Stage 3). Rectification occurs as the pilot or a flame sensor is heated, the heat creates a small electrical signal expressed as Micro Amps (µA) that is returned to the Sense terminal. To test for flame rectification, disconnect the wire at the sense terminal and set your multimeter to µA. Then place one lead of your meter on the wire and the other on the terminal. Generally Honeywell modules require 1.5µA and Johnson modules require 0.15µA Minimum, but refer to the module manufacturer for exact specifications. With the pilot lit, your meter will show the µA reading returning from the pilot and you can then see what the module is reading. Once the module reads a current greater than it’s minimum, it will end the trial period and continue to send 24V out on MV (Stage 4). It will continue to send 24 Volts until the thermostat (not shown) interrupts the voltage to the THS terminal.