COMMERCIAL VB1202 SPLIT-MANIFOLD BURNER CONTROLLER

APPLICATION

Varidigm's Commercial Variable Burner Controller (VB1202) is a Satellite/Slave board designed for use with the Modulating VB1200 Master Controller in split-manifold burner applications. The VB1202 manages safeties and gas valve operation.

VB1202 Features:

- Satellite/Slave operation for use with Modulating VB1200 controller.
- Operates in response to commands from Varidigm's proprietary VB1200 communications.
- Tri-color LED indicates status and provides error codes for system service.
- UL/CUL component recognition under ANSI Z21.20.

SPECIFICATIONS

Power source: 120/208/240 VAC, 60 Hz, 1 phase, 15 ampere.

Humidity: 5 to 95% non-condensing.

Maximum Ambient Temperature:
Operating: –40º to 160 ºF (71 ºC).
Shipping: –40º to 185 ºF (85 ºC).

Motor load rating: 15 A @ 120 VAC.
7 A @ 240 VAC.

Indicator lights: One tri-color LED.

Compatibility

Combination gas valves: 24 VAC, 1 A.
Combustion air motor current: 15 A max.

UL/CUL: Component Recognition under ANSI Z21.20.

ORDERING INFORMATION

When ordering, specify model number from the table below:

Model Number	Description
VB1202	Split-manifold control

INSTALLATION

WHEN INSTALLING THIS PRODUCT

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check ratings given in instruction and on product to make sure product is suitable for application.
3. Installer must be a trained experienced service technician.
4. After installation is complete, check out product operation as provided in these instructions.

CAUTION

Controller carries line voltage and suitable interlocks should be used to protect service personnel.

Location & Mounting

This control is intended for mounting in a control compartment or other suitable location that is protected from moisture and combustion condensate. The enclosure must restrict access to live electrical parts. See Figure 2 below for mounting dimensions.

Disconnect/Breaker

External over current and disconnect means must be provided in accordance with NEC and local codes. The fuse or breaker protecting the motor/controller and other loads within the appliance must not exceed 20 amps. If the appliance requires a fuse greater than 20 amps, a separate 20-amp fuse must be provided for the motor/controller.

VB 1202 Sequence of Operation

1. Call for Heat: Commanded “ON” through VB1200 COMM terminals A, B and Ground.
2. Gas valve opens.
3. Split burner section lights off from modulating VB1200 controlled burner section.
4. Unit runs until heating cycle terminates.
5. Heating Cycle Termination.
   a. Any lock-out condition (Safety).
   b. The VB-1200 cycles OFF momentarily and restarts every six hours of continuous operation.
   c. VB1200 commands OFF operation through COMM terminals A, B and Ground.

VB1202 LAYOUT

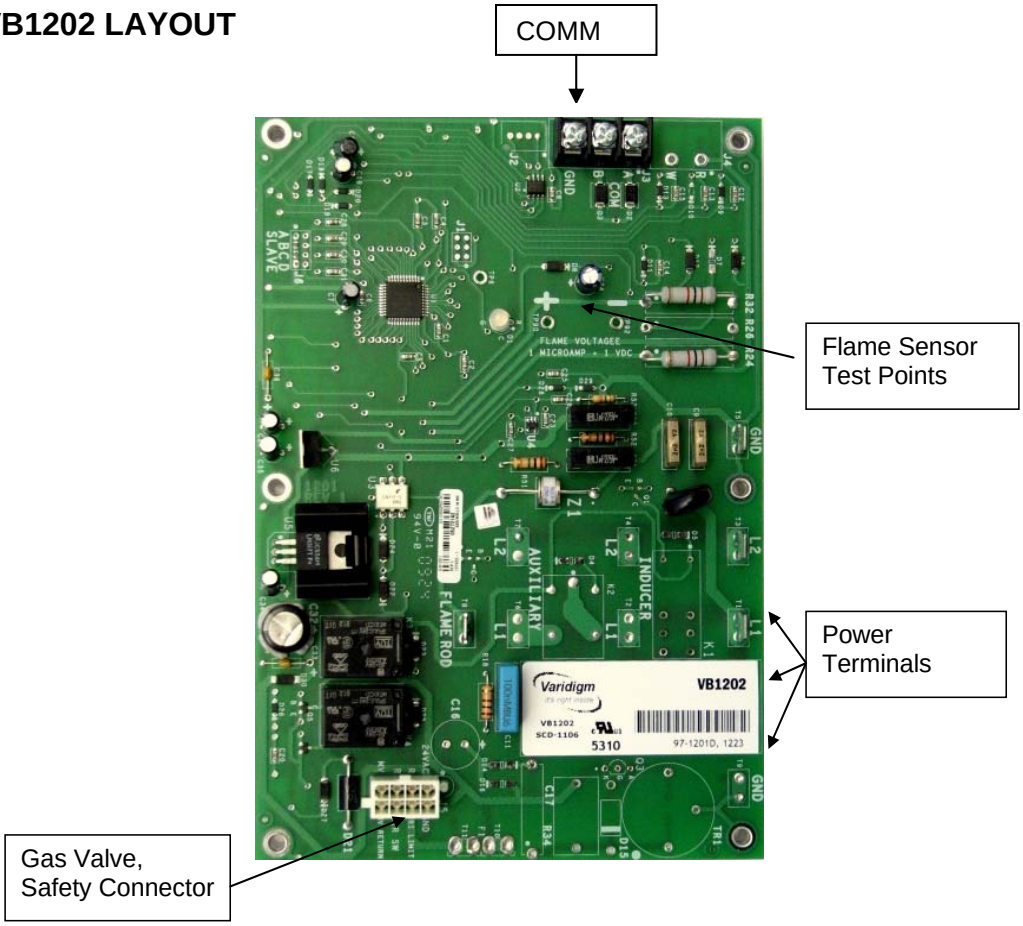


Figure 1 - VB1202 Connections

VB1202 Mounting Diagram

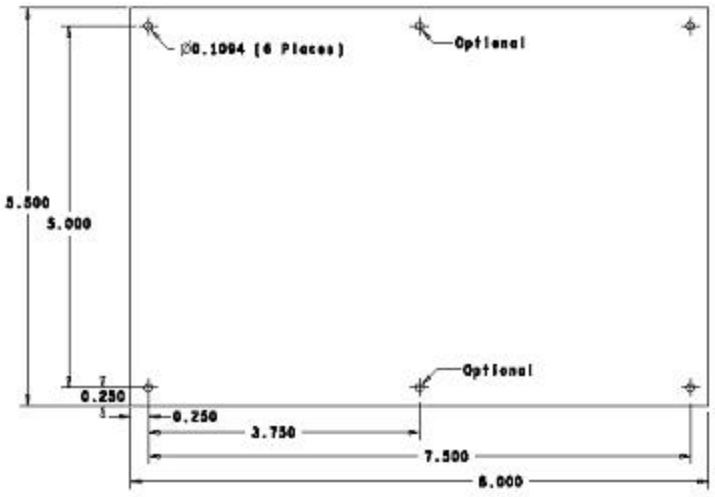


Figure 2 – VB1202 Mounting Dimensions

VB1202 Tri-Color LED Key

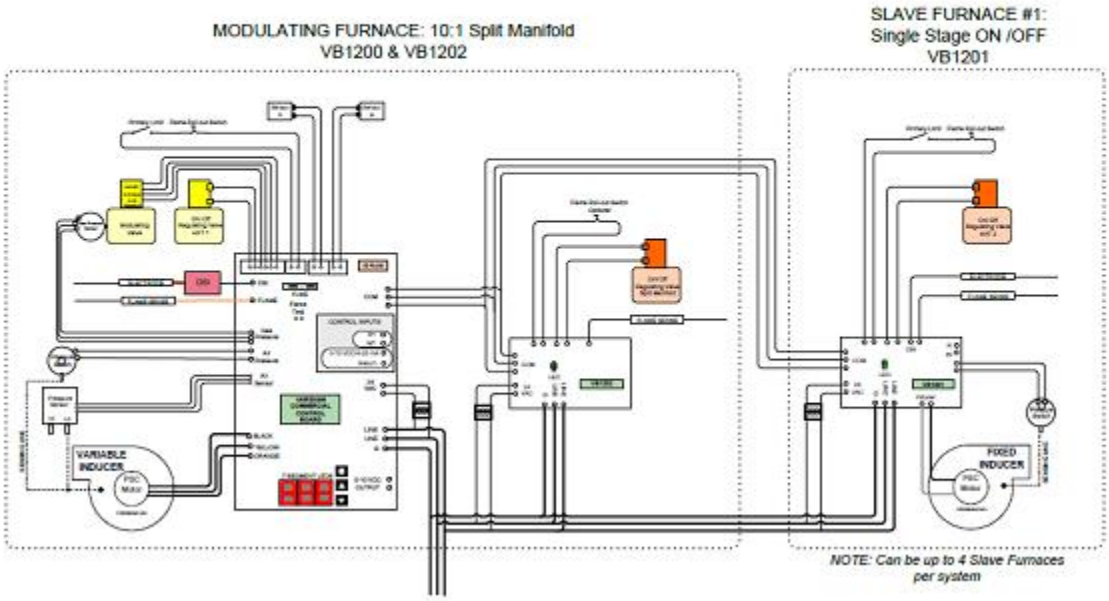
Flashes	Color	Condition
		Error conditions
Off	N/A	No power to the control board
Steady On	Red	Hard lockout on control fault or no 24 VAC.
1	Red	Insufficient inducer air pressure when inducer is on.
2	Red	Inducer air pressure is too high when inducer is off.
3	Red	Flame circuitry failure - flame is on when it should be off or it is off when it should be on.
4	Red	Gas valve failure.
5	Red	Gas valve safety relay failure.
6	Red	Reserved
7	Red	Primary limit failure
8	Red	Gas valve in test mode
9	Red	Safety startup failed to validate inducer air path.
		Normal and warning conditions
Slow	Green	Standby - no communication link established
Rapid	Green	Standby – in communication with VB1200 Master
1	Green	Call for heat, no gas
2	Green	Call for heat, gas
2	Yellow	Call for heat, gas, flame rod aged
Rapid	Yellow	Retry

VB1200 Error Codes when using VB1202 for Split Manifold System

Display Code	Description	Additional comments and notes
E10	VB-1202 COM Missing[1]	A 1200 with split manifold s/w must find a 1202 on the bus.
E11	VB-1202 Lockout[1] *(L/O)*	On split manifold 1200s, any 1202 L/O causes a 1200 L/O. Check 1202 control board LED state.
E18	VB-1202 Improper Flame[1]	
E19	VB-1202 Unexpected COM Present	A 1200 with standard s/w must **not** find any 1202 on the bus.

[1] Applicable to 1200 controllers that are configured as split manifold system controllers to work in conjunction with a Varidigm 1202 split manifold burner controller.

VB1200 / 1201 / 1202 Commercial Control Block Diagram



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