Alarm output
The alarm out put uses the normally closed contact on the safety relay. It will turn on if flame fails to light in the safety time or a fault is detected in the control. The output will also be on for a half second on power up until safety relay turns on.

Led Indications during normal operation

orange once a second	Waiting Time
rapid red flashing	Safety Time sparking
steady green	Running position flame on
orange once every 5 seconds	Inter-Waiting Time between trials
orange once a second	Flame Loss Waiting Time

Led error indications
If the control module internal diagnostics detect a fault it will go to lockout. Spark and both valves will be turned off. The led will flash the error code red .25 sec on and .25 sec off for the error code with then blink green per error code. Will turn off 1 second between codes. The control will remain in this condition until power is removed by turning off call for heat. Note the control contains 2 micros (microprocessors). The safety micro controls a safety relay that enables power to the valves. It monitors operation of master micro and will turn off safety relay if it detects a problem. The master micro controls the spark, flame sense and valve relay.

Codes other than 1-0 for no flame within safety time may indicate a problem with the control. Recycle control and if error repeats control must be replaced.

Error codes are:

red	green	
1	0	Flame did not light in safety time
1	1	Flame sense circuit stuck on
1	2	Safety micro fault
1	3	Line frequency or micro clock error
2	1	Valve relay transistor driver circuit fault
2	2	Valve relay contact fault
The following are software faults unlikely to occur		
3	0	Master micro code memory error
3	1	Master micro timing parameter storage error
3	2	Master micro RAM (random access memory) error during operation
3	3	Master micro RAM (random access memory) error on power up
3	4	Master micro program flow error
4	0	Timing parameters in safety micro do not match master micro