Fault Conditions

Error Mode	LED Indication
Internal Control Failure	Steady on
Air Flow Fault (35-61 Only)	1 Flash
Flame with No Call for heat	2 Flashes
Ignition Lockout	3 Flashes

The LED will flash on for 1/4 second, then off for 1/4 second during a fault condition. The pause between fault codes is 3 seconds.

MOUNTING AND WIRING

The Series 35-60 and 35-61 controls are not position sensitive and can be mounted vertically or horizontally. The case may be mounted on any surface with #6 sheet metal screws. All wiring must be done in accordance with both local and national electrical code.

WARNING:
The Series 35-60 and 35-61 use voltages of shock hazard potential. Wiring and initial operation must be done by a qualified service technician. The control must be secured in an area that will experience minimum vibration and remain below the operating temperature of 160°F. All connections should be made with UL approved 105°C rated 18 gauge, stranded, .054 thick insulated wire. Refer to wiring diagram when connecting the control to other components in the system.

CAUTION:
Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. A functional checkout of a replacement control is recommended.

TERMINAL DESIGNATIONS - QUICK CONNECT MODELS		
24VAC/R	24 VAC Supply to Processor	1/4" Quick Connect
TH/W	Thermostat Input	1/4" Quick Connect
PSW	Pressure Switch Input	1/4" Quick Connect
GND	System Ground	1/4" Quick Connect on 35-60 3/16" Quick Connect on 35-61
V1	Valve Power (output)	3/16" Quick Connect
V2	Valve Ground	3/16" Quick Connect
L1	120/240 VAC Input (hot)	1/4" Quick Connect
IND	Inducer Blower (output)	1/4" Quick Connect
NC	Alarm (normally closed contact)	1/4" Quick Connect
S1	Remote Flame Sensor	3/16" Quick Connect
FC+, FC-	Flame Current Test Pins	

CONNECTION LIST - 35-60 EDGE CONNECT MODELS		
PWR	24 VAC Power	PIN 1
NC	Alarm (normally closed contact)	PIN 3
VALVE	Valve Power (output)	PIN 4
SENSE	Remote Flame Sensor	PIN 5
GROUND	System Power	PIN 6

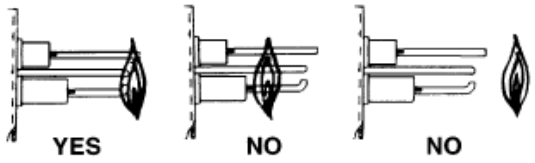
Edge connect harness is available from Fenwal:
Part Number: 05127324-0XX

PROPER ELECTRODE LOCATION

Proper location of the electrode assembly is important for optimum system performance. It is recommended that electrode assembly be mounted temporarily using clamps or other suitable means so that the system can be checked before permanently mounting the assembly. The electrode assembly should be located so that the tips are inside the flame envelope and about 1/2 inch (1 cm) above the base of the flame. See Figure 3 below.

CAUTIONS:
1. Ceramic insulators should not be in or close to the flame.
2. Electrode assemblies should not be adjusted or disassembled. Electrodes should have a gap spacing of 0.125± 0.031 in (3.12± 0.81 mm). If this spacing is not correct, the assembly must be replaced. Electrodes are NOT field adjustable.
3. Exceeding the temperature limits can cause nuisance lockouts and premature electrode failure.

Figure 3



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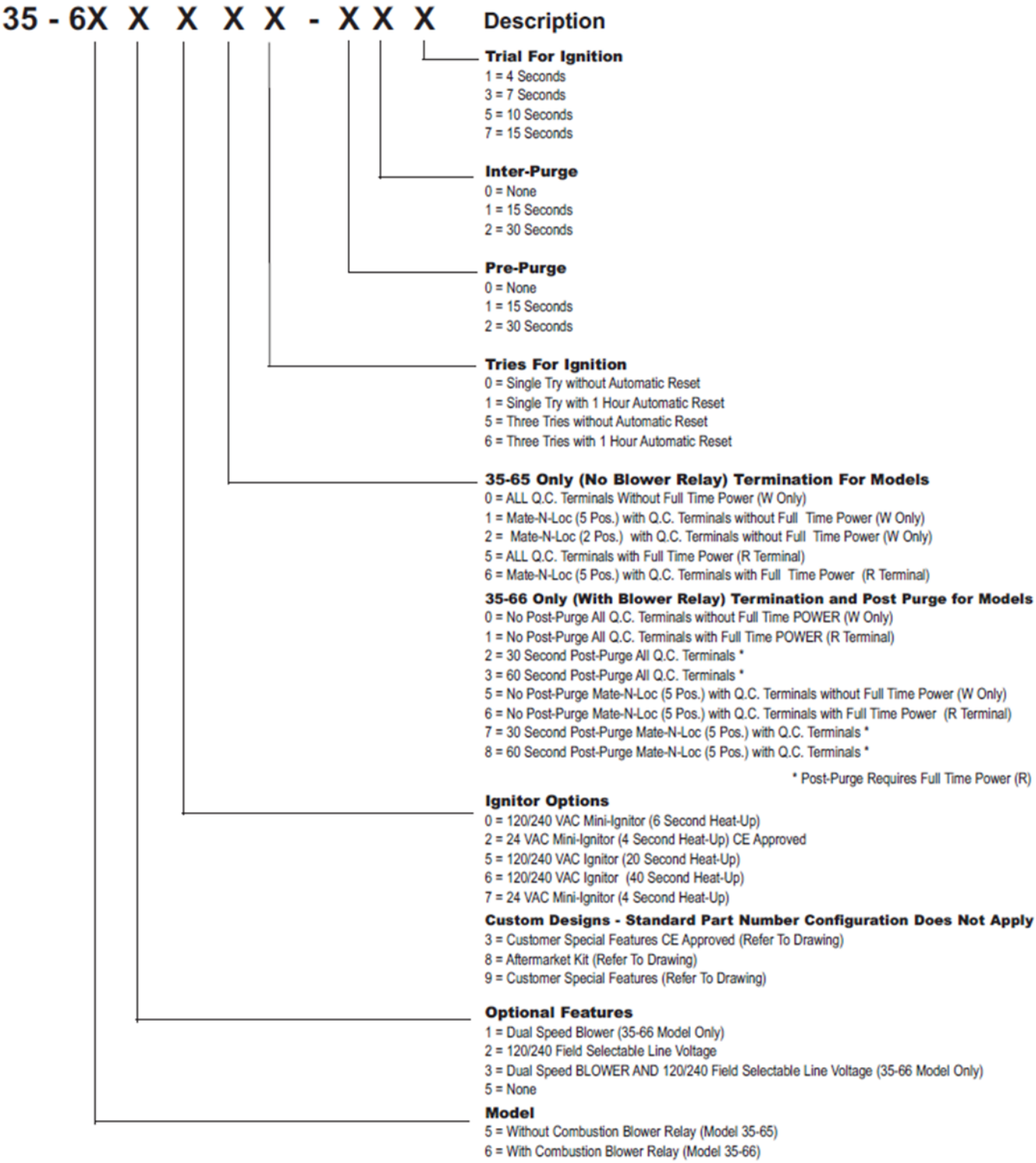
WARNING:
Operation outside specifications could result in failure of the Fenwal product and other equipment with injury to people and property.

CONTROL CONFIGURATION