

## SERIES 05-37 PILOT RELIGHTER SPARK IGNITION SYSTEM

U.S. Patent Nos. 3,377,125; 3,632,285  
CANADA 874,665

### FEATURES

- 12 VDC, 24/120 VAC, and 240 VAC Models available
- Sparks only when pilot outage occurs
- Will reignite pilot burner before flame sensing device can cool and cause system to lock-out
- Does not require changes to existing pilot safety systems
- Easily installed
- Available with plastic dust cover
- Electrode assembly may be used with any pilot burner

The 05-37 is UL component recognized.

### GENERAL INFORMATION

The Fenwal Series 05-37 automatically relights gas pilots. It should only be applied to those systems which already incorporate the necessary pilot-safety control system.

In operation, the relighter emits a spark from the electrode to burner ground until the pilot flame is established. As soon as the flame is established, flame conduction causes the sparks to stop. If the pilot flame is extinguished, the spark immediately starts up again and continues until the flame is re-established. So efficient and swift is the response that you may never realize an outage has occurred. If the flame cannot be re-established, the pilot safety device will shut off the gas main supply.

The 05-37 may be ordered as a kit which includes a fire retardant plastic case, 24 inch long high voltage lead wire, and electrode. The standard electrodes (-250) are equipped with a fixed clamp adaptable to most installations. For a few applications where this clamp cannot be used, a universal strap clamp and electrode (-120) can be supplied. (See outline drawings.)

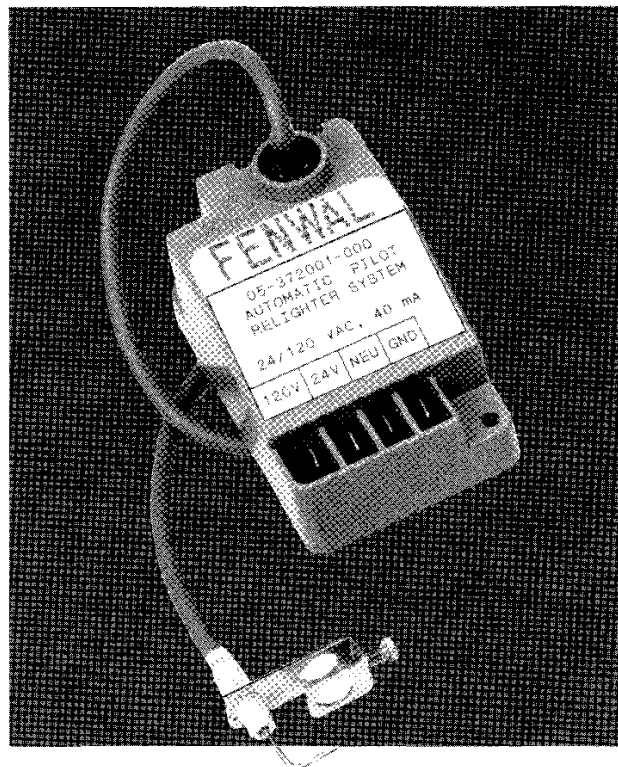
### SPECIFICATIONS

#### Input Voltages and Current Drain

12 VDC, 75 milliamps  
24/120 VAC, 25 milliamps  
240 VAC, 20 milliamps

**Ambient Temperature** -40 to +150 degrees F.

**High Voltage Lead** 24 inch standard, 36 or 48 inch available



**Terminals** Ark-Les (or equivalent) .250 male quick-connects (mating connectors supplied in relighter/electrode kits)

**Electrode Gap** 1/8 inch, +/- 1/32 inch

**Approvals** Underwriters Laboratories component recognized

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

*All specifications are subject to change without notice.*

### INSTALLATION

The 05-37 Series Control Board is mounted in a fire retardant plastic case. It is not position sensitive and can be mounted conveniently on a vertical or horizontal surface.

Mount the Electrode first, slipping the Electrode Mounting Bracket over the Pilot Thermocouple. Lightly tighten the Mounting Bracket Set Screw. Extend the High Voltage Lead to establish a mounting location for the Control Case within the radius of the cable.

Using the control as a template, mark the location of the two mounting holes.

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Drill the holes in the Mounting Panel. Align the unit against the panel and fasten with No. 6 screws.

If it is necessary to readjust the Electrode, bend the Electrode Rod with a pair of needlenose pliers to establish a gap of 1/8 inch (+/- 1/32) between the Electrode Tip and Burner Ground.

**CAUTION:** *Secure Electrode Wire before bending to avoid fracturing the ceramic insulator.*

### WIRING

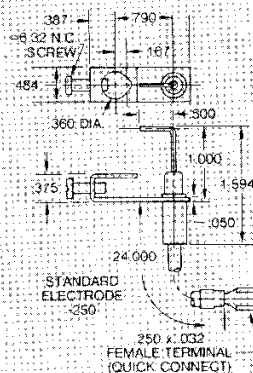
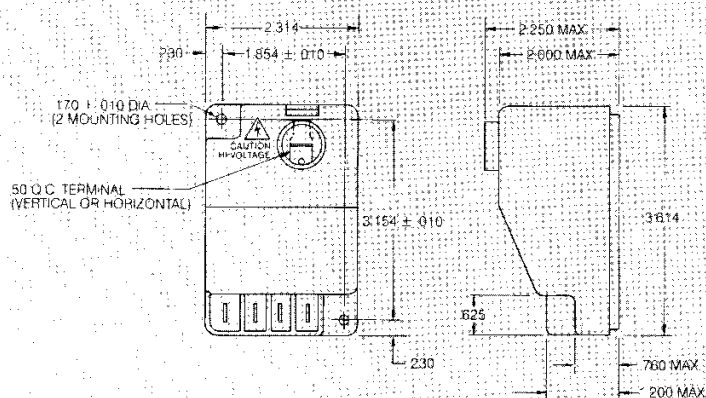
**WARNING:** *To prevent electrical shock and/or equipment damage, all wiring connections must be made with the Power Off.*

Number 18 to 22 AWG wire should be used for the Power Leads. Strip insulation 1/4 inch from the end of each wire. Carefully insert each of the wires into a Terminal Socket until the insulated portion is "seated". With a crimping tool or pliers, crush the shank of the terminal until the wire is firmly held.

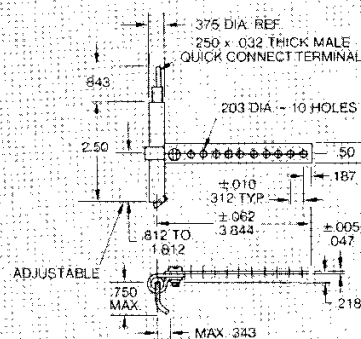
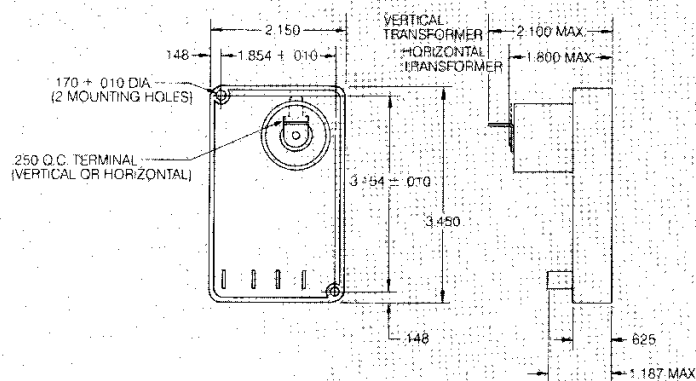
High voltage wire should be routed so it is a minimum of one inch from piping or metal frame. Do not bundle or wrap additional wires against the High Voltage Lead Wire.

Connections should be made according to the Wiring Diagrams shown on Page 3.

### OUTLINE DIMENSIONS



**STANDARD ELECTRODE/H.V. WIRE  
(05-100000-250)**

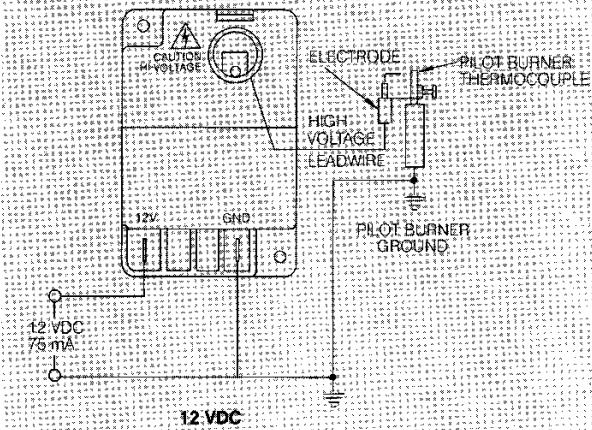
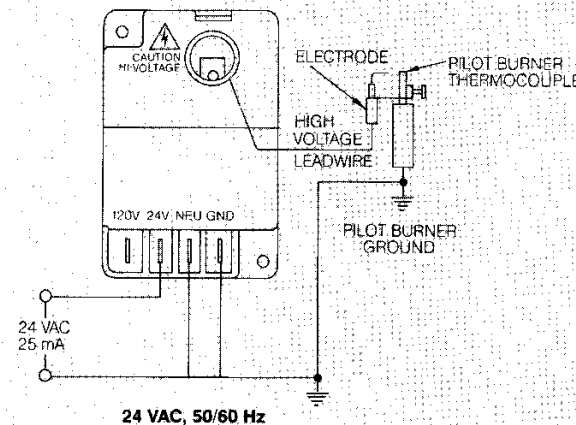
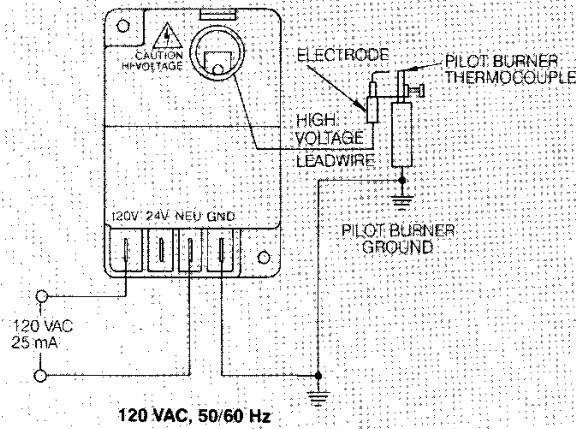
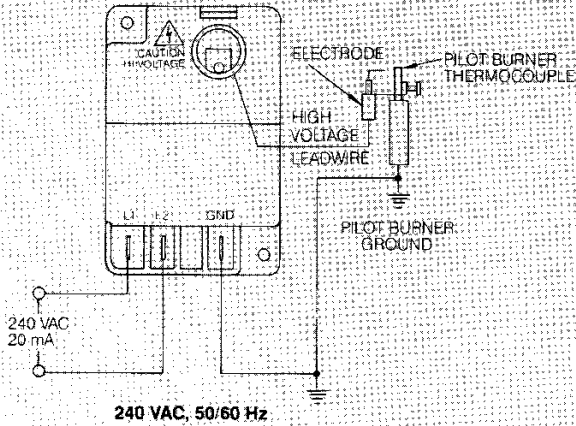


**UNIVERSAL ELECTRODE  
(05-100000-120)**

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## WIRING DIAGRAMS

**CAUTION:** Input voltage must match voltage rating on top of case. Refer to wiring diagram before powering the unit. Also, check to insure 1/8 inch spark gap.

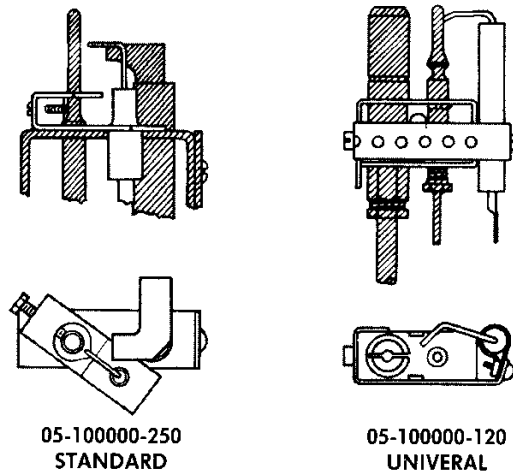


## OPERATION

1. Check all terminals to assure the leads are properly connected.
2. Manually shut off pilot and main gas supplies.
3. Apply power to the system.
4. Check that sparks occur across the Electrode Gap. If no spark is present, check voltage at the 05-37 Input Terminals, and verify electrode high voltage and "GND" connections.
5. If sparks occur at the Electrode Gap, open the Pilot Gas Supply.
6. Verify that the flame is established within five seconds, and that the sparks stop when the flame is present.
7. If sparking does not stop, make sure the Electrode Tip is in the flame. If sparking still does not stop, re-check equipment ground connections.
8. Turn off the pilot gas supply. Sparking should occur.

**WARNING:** "The Fenwal 05-37 is not Field Repairable, unsafe operation may result."

## TYPICAL ELECTRODE POSITIONING AND MOUNTING



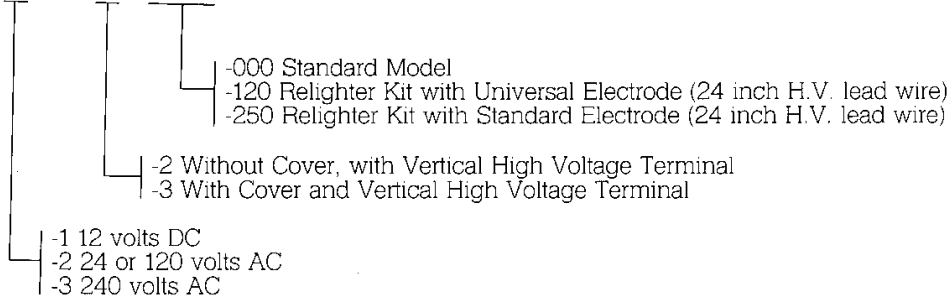
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### HOW TO ORDER

Determine available input voltage. Select Control Module or Kit from table below.

#### CATALOG NUMBER:

**05-37 X 0 0 X - XXX**



36 inch and 48 inch High Voltage Lead Wires are available:

-120 Electrode: 05-125948-036 36 Inch Lead Wire  
05-125948-048 48 Inch Lead Wire

-250 Electrode: 05-992029-036 36 Inch Lead Wire  
05-992029-048 48 Inch Lead Wire

"The information herein is to assist our customers in determining whether our products are suitable for their applications. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute a warranty, expressed or implied, including any warranty of merchantability or fitness for a particular purpose."

#### LIMITED WARRANTY STATEMENT

Fenwal Incorporated represents that this product is free from defects in material and workmanship, and it will repair or replace any product or part thereof which proves to be defective in workmanship or material for a period of twelve (12) months from the date of purchase but not to exceed eighteen (18) months after shipment by the manufacturer. For a full description of Fenwal's LIMITED WARRANTY, which, among other things, limits the duration of warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE and EXCLUDES liability for CONSEQUENTIAL DAMAGES, please read the LIMITED WARRANTY on the Fenwal quotation. Acceptance of Order and/or Original Invoice which will become part of your sales agreement. Defective units should be returned to the factory, Ashland, Massachusetts; shipment prepaid. Fenwal Incorporated will replace and ship prepaid.

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