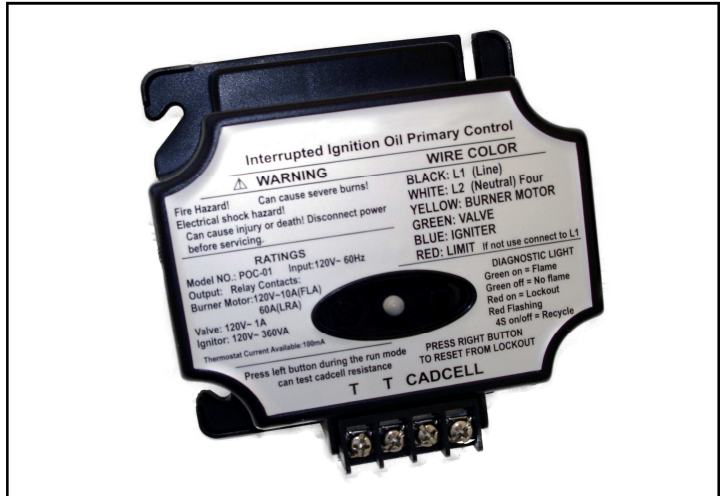


# Interrupted Electronic Oil Primary Control Model POC-01



## FEATURES:

- Electronic Interrupted Primary Ignition
- Dual Color LED Indicator light
- Burner System Lock Out Indicator
- Available in 15, 30, 45 Second Lockout Time
- Oil Resistant Plastic Cover
- Junction Box Mounting
- Proven Cad Cell Flame Detection
- On Board Diagnostics



## APPLICATIONS:

- ◆ Oil Fired Boilers
- ◆ Forced Warm Air Furnaces
- ◆ Water Heaters
- ◆ Various Oil Burner Applications

## DESCRIPTION:

The model POC-01 is a line voltage interrupted electronic oil burner primary control. The on-board diagnostics with dual color LED outputs provides assistance with troubleshooting to ensure a safe and efficient operation.

Used with a cad cell flame sensor this full featured design makes it the right choice for any oil fired appliance.

## WIRE COLOR CODE:

White—Neutral	Blue—Ignitor
Black—Line	Green—Valve
Yellow—Burner	Red—Limit

## Specifications

POWER INPUT VOLTAGE	- 102-132 VAC 60 Hz 120VAC Nominal
OUTPUT RELAY CONTACTS- BURNER MOTOR	120VAC—10A (FLA) 60A (LRA)
OUTPUT RELAY CONTACTS- VALVE	120VAC—1A
OUTPUT RELAY CONTACTS IGNITOR	120VAC—360VA
THERMOSTAT CURRENT	100 mA
SAFETY TEST TIME	5 SECONDS
VALVE DELAY TIME	15 SECONDS
CYCLE TIME	60 SECONDS (FIXED) 3 TRIES
LOCKOUT TIME	15, 30, 45 seconds (factory programmed)
SIZE (L x W x H)	4 11/32 x 4 5/32 x 2 1/4 inches
TEMPERATURE RATING	-40F to 150F, -40C to +66C
MOISTURE RESISTANCE	CONFORMAL COATED TO 95% R.H. AVOID DIRECT EXPOSURE TO WATER
ENCLOSURE	OIL RESISTANT PLASTIC CASE/COVER

## ON BOARD DIAGNOSTICS

LED INDICATION	LOCKOUT MODE
No Light	No Flame
Red Light Continuous	Lockout Mode
Red Light Blinking Fast 0.2 sec	Control System Error
Red Light Blinking Slow 4.0 sec	Cycle Mode
Green Light Continuous	Flame Detected

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# Information

## System Operation

### Lock Out Mode

When Red light is continuously on, terminate all control commands, DO NOT process any additional control commands.

Enter Lock Mode under following circumstances:

- ♦ Flame detected during the delay stage of opening the valve
- ♦ No flame during ignition stage trials
- ♦ When flame has gone out 3 times under a Single heating call (3 times limited per cycle mode)
- ♦ Flame detected during delay stage of shutting down the motor

Exit Lock Mode under following circumstances

- ♦ Press Button 2 to reset

### Limited Cycle Mode

When red indication light is on/off for 2 sec, terminate all control command, DO NOT process any further control commands

During each call for heat, cycle mode is limited to 3 trials

Enter mode under following circumstances:

- ♦ When flame has gone out during operation sequence

Exit mode under following circumstances:

- ♦ Device automatic exits the mode after 60sec
- ♦ Press button 2 to exit

### Limitation Mode

When Red light is continuously on, terminate all control commands, DO NOT process any further control commands

Enter mode under following circumstances

- ♦ Enter the mode after the system has gone through Lock Mode 3 times.

Exit mode under following circumstances:

- ♦ Press button 2, will exit the mode after 6sec

### Initial Mode

Waiting For Command

Enter mode under following circumstances

- ♦ No Command

Exit mode under following circumstances:

- ♦ Receive heating or other command. (From Safety to Initial Mode, must wait after the flame has gone out)

## Operation Mode

Green Light is continuously on

Enter mode under following circumstances

- ♦ Maintain until the stage is over

Exit mode under following circumstances

- ♦ Flame has gone out or call for heat is complete

## Cad Cell Flame Sensor

To ensure normal operation, resistance of CAD CELL must be under 1600 Ohm

Enter mode under following circumstances

- ♦ In Operation Mode, Press button 1

Exit mode under following circumstances

- ♦ Automatic exit

## Operation Stage

Safety Testing Stage: Initiate the system

Ignition Stage: Igniting (15sec)

Maintaining Stage: Keep Ignition (10sec)

## Time Parameters

**Safety Testing Time: 5sec**

**Delay time of opening the valve: 15sec**

**Delay time of shutting down the motor: 0min, 2min, 4min**

**Under Choice Mode: 0.5min 2min, 4min, 8min**

**Lock Time 15sec (can be reprogrammed)**

**Cycle Time: 60sec (Fixed)**

**Ignition extension Time: 10sec (Fixed)**

## Wire Connection:

Please see board wiring diagram.

**CAD CELL: connected with flame sensor**

**IGN: connect with ignitor, other end of ignitor is connected to L2**

**MOT: connect with motor, other end of motor is connect to L2**

**L1: power core**

**L2: power core**

**VAL: connect to oil valve, other end to L2**

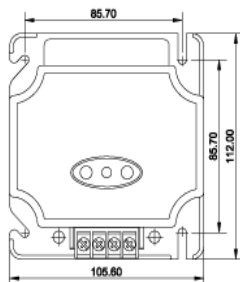
**T/T: connect to low voltage thermostat**

## Loss of Power Memory Function

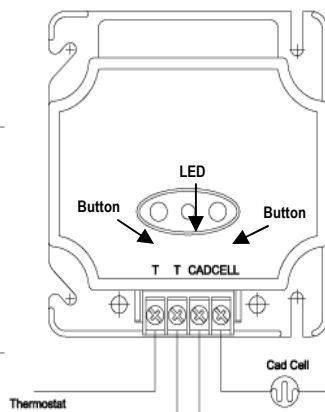
After the system is rebooted after a power loss, system will automatically set to previous mode before the power loss.

**EXPLOSION HAZARD. CAN CAUSE INJURY OR EQUIPMENT DAMAGE.**

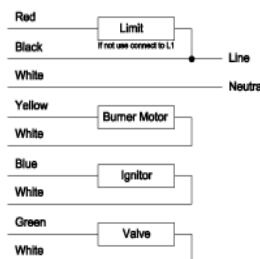
Only trained professional burner technicians should install and check out this control.



Dimensions



Wiring Diagram



All White Wire Connected Internally



**DISCONNECT THE POWER SUPPLY BEFORE MAKING WIRING CONNECTIONS TO PREVENT ELECTRICAL SHOCK OR EQUIPMENT DAMAGE.**