

# ELECTRONIC FLAME SUPERVISION PACKAGE CONTROL DUAL FUEL

MODEL: SENS-A-FLAME II

Revision: 0

BULLETIN  
7232/7252

## DESCRIPTION

Models 7232 and 7252 Package Control Systems are compact control panels. These rugged steel enclosures contain the Pyronics programmable Sens-A-Flame II combustion supervisory system. Model 7232 is a single burner package for dual fuel equipment. Model 7252 is a multiple (2 to 20) burner, dual fuel package. For single fuel system, see bulletin 7231/7251.

The system is designed to meet insurance codes, simplifying application and eliminating additional electrical design. All combustion light off and monitoring functions are incorporated in this standard package. Wiring is to numbered terminal strips. Full installation instructions and diagrams are provided. The heavy duty enclosure with switches and lights is designed for an industrial atmosphere (gasketed enclosure, oil tight lights and industrial switches).

Standard system functions include : limit check, motor start, purge, component check, ignition trail period, proving lights, main valve train control and 2 to 4 second shutdown on loss of flame. A wide range of fixed time purge and trial for ignition modules are available. Optional pilot interrupt and automatic purge recycling programs are available as plug in modules.

Off, purge (w/alarm silence) and start functions are controlled by a 3 position door mounted switch. Fuel is selected by a 2 position door mounted switch. Indicator lights are provided to show "Purge Complete" and "Flame On". All Sens-A-Flame II indicator lights (Purging, Purge Complete, Flame On, Reset, and on multiple burner systems, First Burner Out) are visible through the enclosure door. Motor starter, alarm and ignition transformer must be purchased separately and mounted remotely.

## SPECIFICATIONS

Voltages: 120V, 50/60 Hz., + 10, -15%

Power : 32VA (excluding connected load)

Ambient Temperature : -10 to 125 Degrees F (-23 to 52 Degrees C)

Flame Response : 2 to 4 seconds

Detector : Flame Rod and/or 7150 or 7155 series Ultra Vilot Detector

Mounting : See dimensional information

Maximum connected Load : 10 Amp

Maximum Load Ratings :

Main valves : 125VA Pilot Duty (with motorized Valves, 1250VA Inrush, 400VA Running)

Ignition : 360VA

Pilot Valve : 125VA Pilot Duty

Alarm : 1 Amp (120VA)

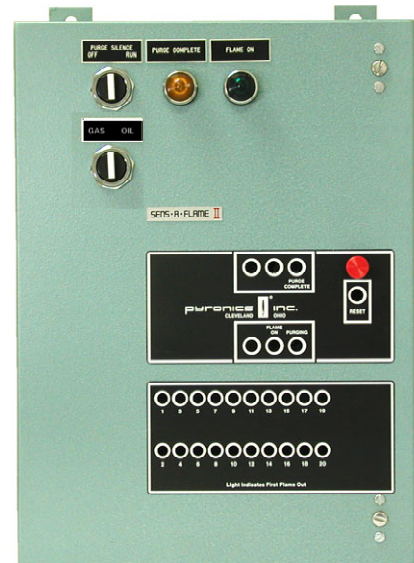
Motor Starter : 1 Amp (12VA)

Alternate Ratings :

Main Valves, Ignition, and Pilot Valves : 5 Amp Inductive @ 50% Power Factor

External Contact Rating : 10 Amp Maximum

**Sens-A-Flame II Terminals 1, 5, and 12 are low voltage. Do not connect to External Power source or Damage will result**



## FEATURES

- Dual fuel (gas/oil) operation.
- Rugged steel enclosure with piano hinged, gasketed door.
- Solid state combustion safeguard for 1 thru 20 burners.
- Totally field servicable with plug-in modules.
- Available for rapid delivery.
- Standard electrical diagram provided for quick simplified installation.
- Reduced maintenance time. Display locates problems fast and identifies specific burner location.
- Simplify light-off. Follow Sens-A-Flame II program sequence using panel mounted display.
- Minimize unauthorized access to control center. Reset combustion safeguard from panel without opening the control panel enclosure.

## APPROVALS



U.L. COMPONENT RECOGNIZED FILE  
MH8818 (MODEL 7232-1 7252-1 SERIES)

**CAUTION:** Operation of combustion equipment can be hazardous resulting in bodily injury or equipment damage. Each burner should be supervised by a combustion safeguard and only qualified personnel should install, make system adjustments and perform any required service.



**pyronics inc.**

COMBUSTION FOR INDUSTRY

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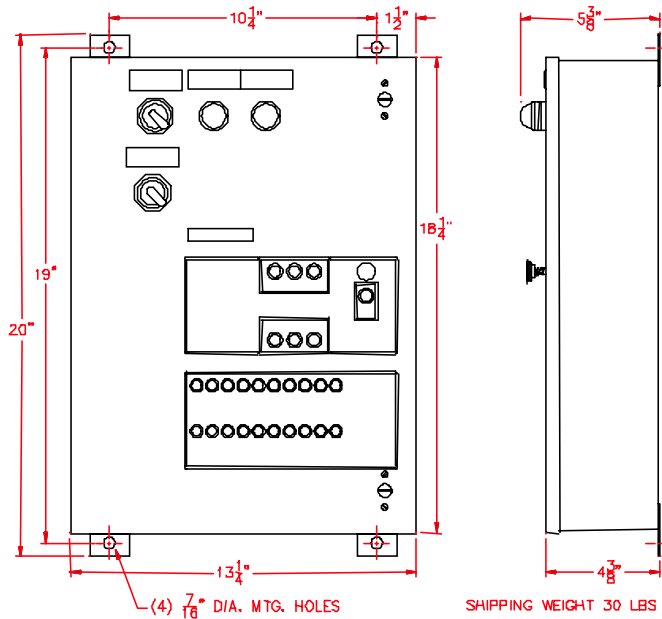
Tel: 216-662-8800  
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**NOTICE:** PYRONICS practices a policy of continuous improvement in the design of its products. It reserves the right to change the specifications at any time without prior notice.

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## DIMENSIONS



## ORDERING INFORMATION

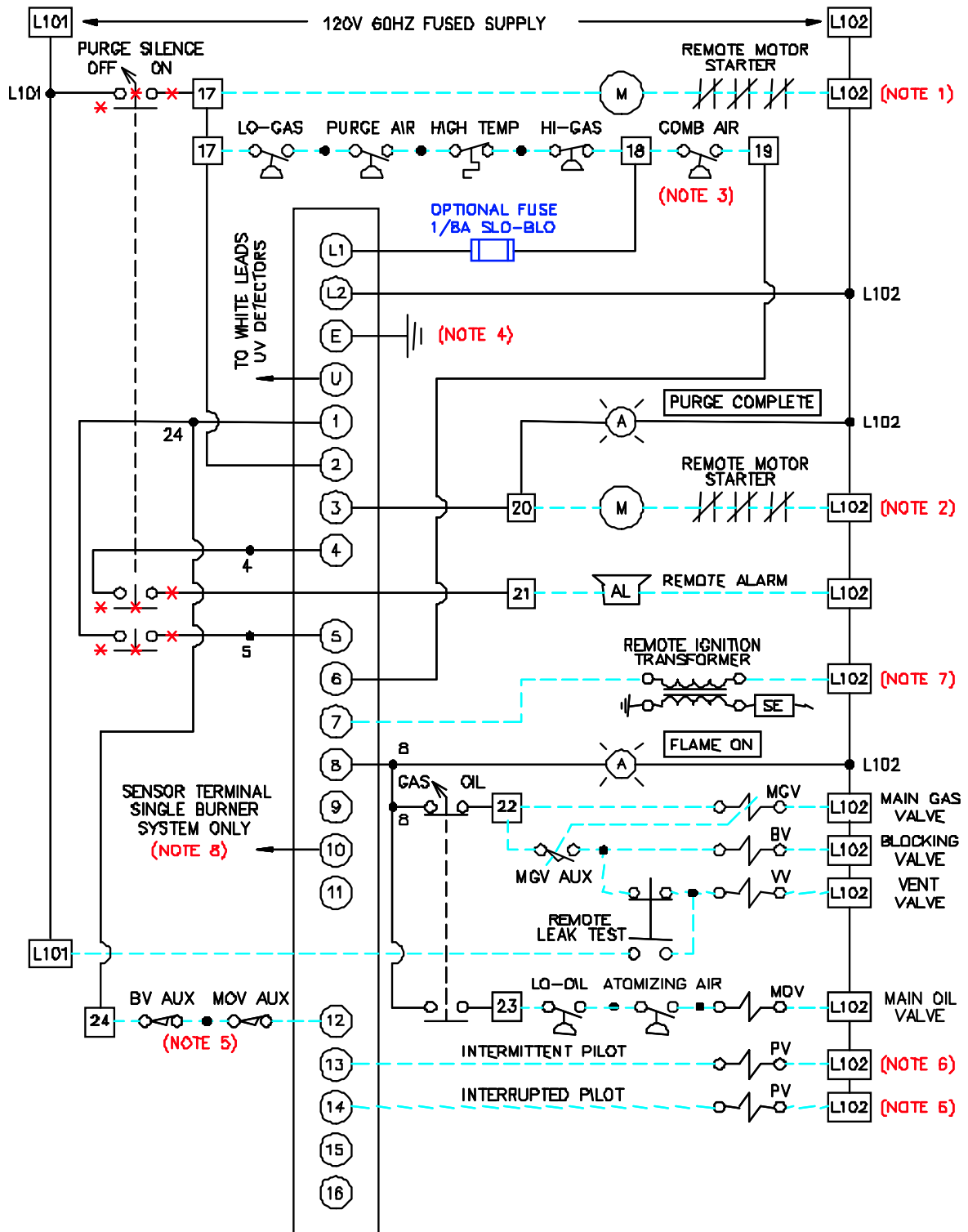
Select the proper model number for your application from the list below, then list the number in place of the X's on the top line:

Dual Fuel Burner Model Number .....	72X2	- X	XXX	- XX	- XX	- X	- XX
Cassis :	T						
Single Burner .....	3						
Multiple Burner (2 to 20 burners) .....	5						
Purge :							
Recycle .....	0						
Non-Recycle .....	1						
Purge Time :							
Switchable (30,90,180,or 300) .....	100						
0 seconds (fixed).....	000						
30 seconds (fixed).....	203						
60 seconds (fixed).....	206						
90 seconds (fixed).....	209						
120 seconds (fixed).....	212						
180 seconds (fixed).....	218						
240 seconds (fixed).....	224						
300 seconds (fixed).....	230						
Trail for Ignition Time :							
Manual System (blank module) .....	00						
5 Seconds .....	05						
10 Seconds .....	10						
15 Seconds .....	15						
30 Seconds .....	30						
45 Seconds .....	45						
60 Seconds .....	60						
Pilot Interrupt Time:							
Continuous Pilots (blank module) .....	00						
10 Seconds .....	10						
15 Seconds .....	15						
30 Seconds .....	30						
60 Seconds .....	60						
Flame Failure Response Time : 4 seconds .....	4						
Number of Burners :							
Single (Model 7232) .....	01						
Multiple (Model 7252) .....	02 thru 20						

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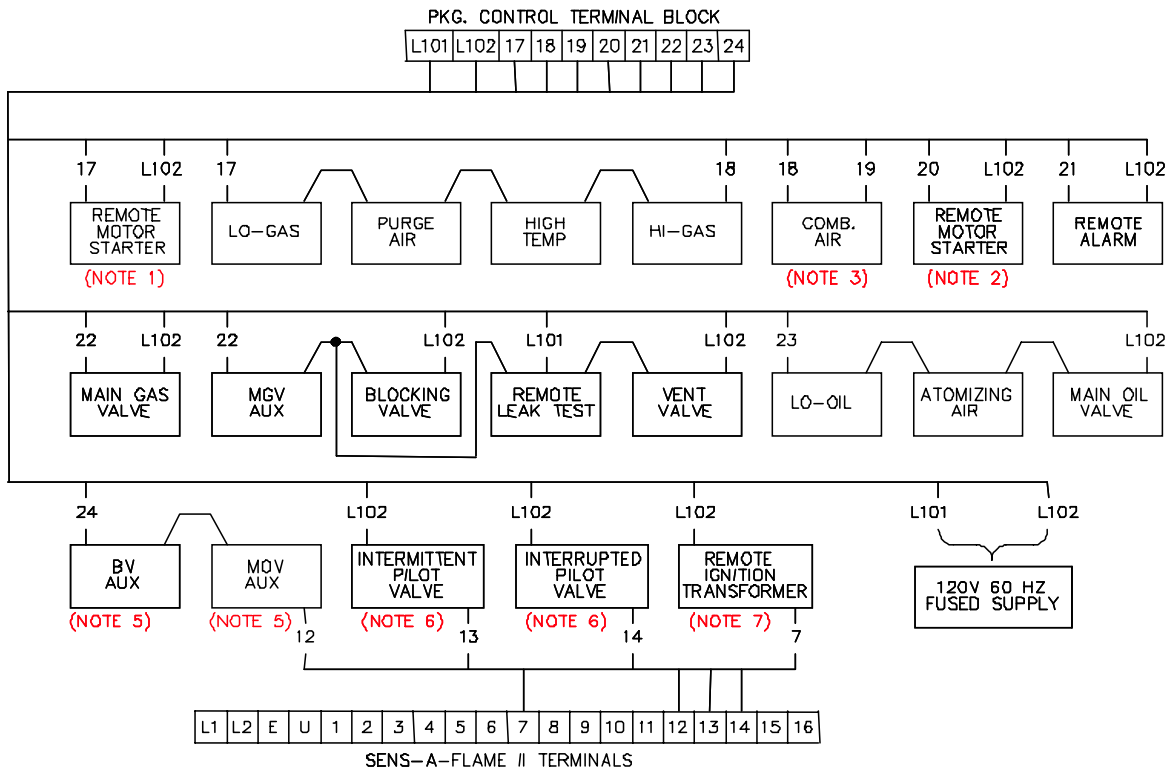
## BASIC EXTERNAL CIRCUIT



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## BASIC EXTERNAL CIRCUIT CONNECTIONS



## WIRING NOTES

1. Combustion air motor starter - Use when combustion air provides purge air (see alternative location Note 2)
2. Combustion air motor starter - Use alternate when purge air is provided by source other than combustion air.
3. Jumper if separate combustion air pressure switch is not used (for example : purge air/combustion air common switch)
4. Ground to burner piping directly if flame rods are used.
5. Omit if pilots are not interrupted.
6. For intermittent pilots, connect pilot valve to Sens-A-Flame II terminal 13. For interrupted pilots, terminal 14.
7. Maximum load 3 ignition transformers (150VA each) use external relay for greater load.
8. For single burner system, connect flame rod or black wire from 7150 or 7155 UV Detector to terminal 10. For multiple burner

## PANEL MOUNTING INSTRUCTIONS

1. Locate panel where ambient temperature is between -10 Degrees F and 125 Degrees F.
2. Enclosure may be mounted in any position. Allow clearance for door swing and wiring.
3. Determine that external loads (valves, ignition transformer, etc.) do not exceed ratings listed in specifications on pg 1.
4. Mount panel using 4 integral tabs provided. Refer to general dimensions on pg. 2 for mounting grid.
5. All wiring must conform to electrical codes, regulations and ordinances. Wiring must be NEC class 1. Type TW moisture resistant wiring is recommended.
6. Provide 120V line disconnect switch and proper fusing to the panel. No knockouts are provided. Bring wiring into enclosure as required through sides.
7. Refer to installation instructions, wiring diagram and notes provided for connection requirements.

**Note : For information on modules see Bulletin 7112 pages 5 through 11.**