

ELECTRONIC FLAME SUPERVISION SINGLE-BURNER

MODEL: SENS-A-FLAME II

Revision: 0

BULLETIN
7131

DESCRIPTION

Model 7131 Sens-A-Flame II is a second generation solid-state programmable combustion safeguard for supervising single burner applications. It includes the standard functions of purge timing, component check, trial period for ignition, proving pilots before energizing main valve and 2-4 second shut down on loss of flame. A range of fixed times for purge and trail for ignition is available. Function times are precisely generated by solid-state circuits.

Optional functions for remotely resetting timers, interrupting pilots and automatic recycle, starting with a repurge, are available. All functions are controlled by plug-in modules.

Indicating lights follow the programming sequence. An alarm terminal is energized if a flame is lost.

The sensor terminals will accept signals from Ultra Vilot Detectors (7150 or 7155) or a rectifying flame rod. Two flame rods, two Ultra Vilot Detectors or one of each may be used, in parallel, to monitor pilot and main flame separately on an interrupted pilot installation.

SPECIFICATIONS

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

Current : 0.175A (20VA maximum)

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 Dertector

Mounting : See dimensional information

Output Terminal Rating : 120V, 50/60 Hz.

Maximum Load Terminals 7,8,13,14 one of the following :

Ignition : 360VA

Valves : 125Va (with motorized valves, 1250VA inrush, 400VA running)

Inductive : 5A @ 50% power factor

Maximum Load Terminals 3 & 4 light or alarm : 1A (120VA)

APPROVALS



U.L. COMPONENT RECOGNIZED FILE MH8818 (MODEL 7131-1 SERIES)



FEATURES

- Solid-state derated circuits for maximum reliability
- Voltage regulated circuits
- Encapsulated modules
- Totally field serviceable with plug-in modules
- Internal circuit overload protection
- Voltage regulated circuits
- Precision solid-state timers
- Sensor terminal accepts UV Detector, or flame rod, or both, for separate pilot and main flame monitoring
- Function indicating lights
- Integrated circuit logic
- Optional timer remote reset module
- Optional automatic recycle program
- Optional interrupted pilot program

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.



ORDAN THERMAL PRODUCTS LTD
Combustion Equipment & Controls for Industry
21 Amber St # 9, Markham Ontario Canada L3R 4Z3
Tel: (905) 475-9292 Fax: (905) 475-3286
www.ordanthermal.com

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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MODULE DESCRIPTION

REGULATED POWER SUPPLY module furnishes all d.c. Power and circuit protection for control modules, relay operation and indicating lights.

PURGE TIMER module controls recycle/non-recycle option and purge timing. Select a fixed time which provides at least four changes of air. A switchable time module is available as a service spare. Recycle and non-recycle modules always force a complete new purge cycle.

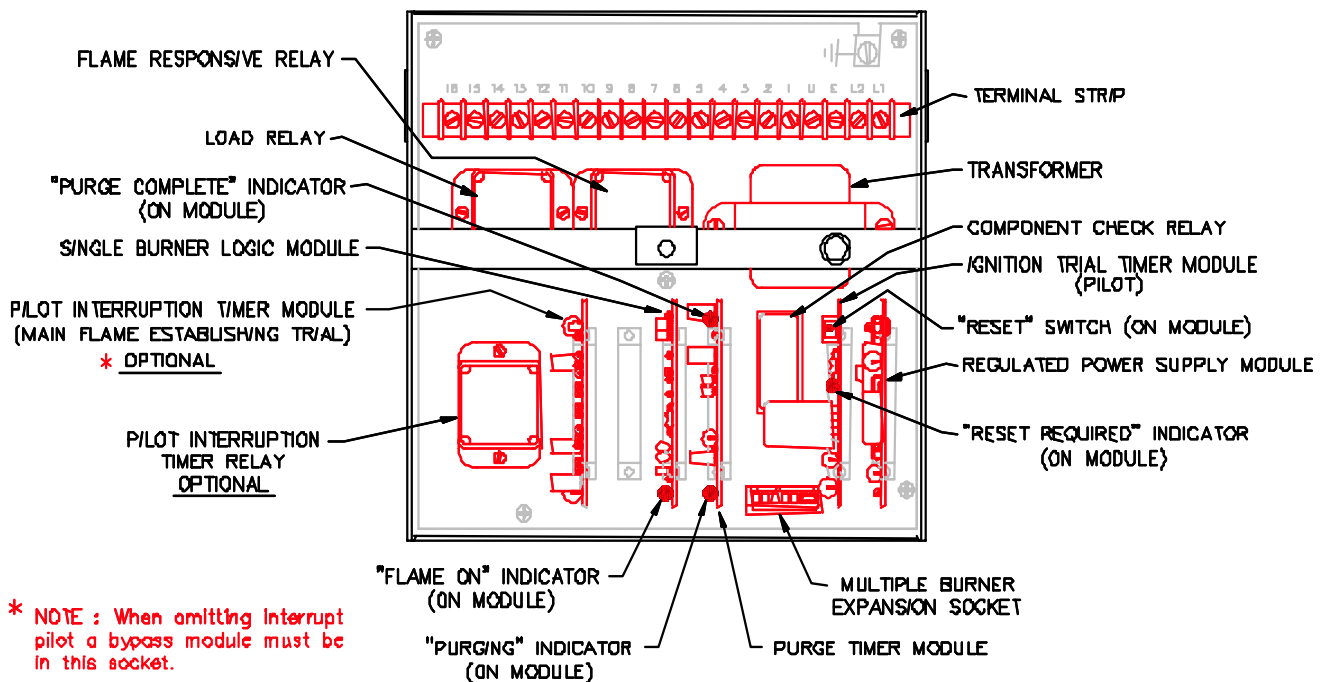
IGNITION TRIAL TIMER module limits ignition trail and shuts off pilot fuel and ignition if pilots are not proved within specified time, ignition lockout then occurs. Optional remote reset module available.

SINGLE LOGIC module amplifies flame signal and powers flame relay when flame is proved, also checks for component failure during purge and for proof of flame at burner during ignition and operation.

PILOT INTERRUPTION TIMER module used only on interrupting pilot systems along with PILOT INTERRUPTION TIMER RELAY, provides trail period for lighting main burners, then shuts off pilot fuel.

See note below

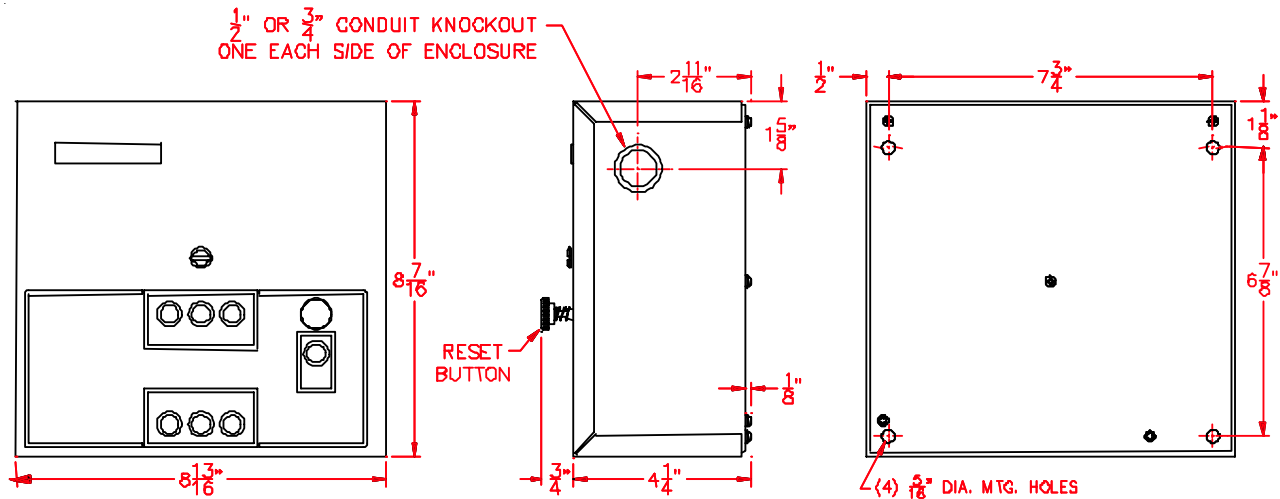
CHASSIS MODULE LOCATION



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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:

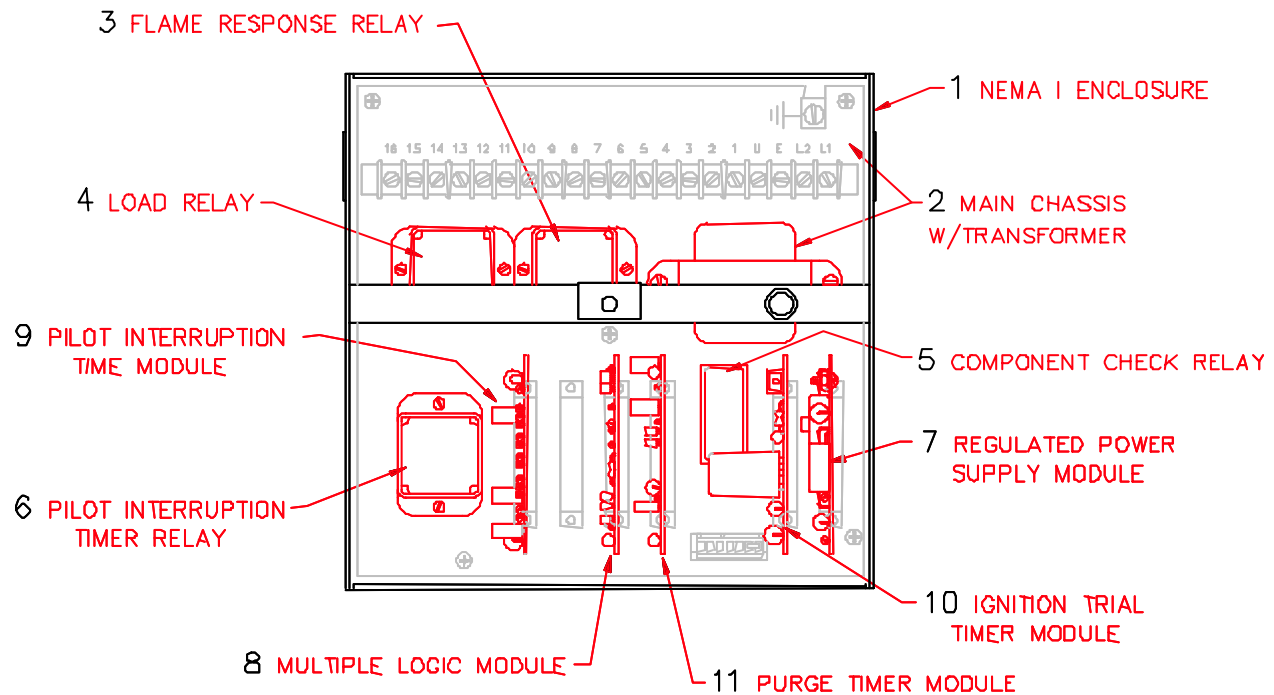
Single Burner Model Number	7131 - X	XXX - X	XX - XX	- X - XX		
Purge :						
Recycle	0					
Non-Recycle	1					
Purge Time :						
Switchable (30,90,180, or 300)	100					
0 seconds (fixed).....	000					
30 seconds (fixed).....	203					
60 seconds (fixed).....	206					
90 seconds (fixed).....	209					
120 seconds (fixed).....	212					
180 seconds (fixed).....	218					
240 seconds (fixed).....	224					
300 seconds (fixed).....	230					
Ignition :						
Remote Reset (leave blank if not required)		R				
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 :						
Continuous Pilots (blank module)				00		
10 Seconds				10		
15 Seconds				15		
30 Seconds				30		
60 Seconds				60		
Flame Failure Response Time : 4 seconds					4	
Single Burner :						01

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REPLACEMENT PARTS LIST

1) Nema 1 Enclosure	7187-3001	10) Ignition timer Module : Std. Reset	Remote Reset
2) Main Chassis w/Transformer	7187-1001	Manual	7183-1000
3) Flame Response Relay	7189-0001	5 Seconds	7183-1005
4) Load Relay	7189-0001	10 Seconds	7183-1010
5) Component Check Relay	7189-0002	15 Seconds	7183-1015
6) Pilot Interruption Timer Relay	7189-0001	30 Seconds	7183-1030
7) Regulated Power Supply Module	7181-2000	45 Seconds	7183-1045
8) Single Logic Module	7186-0001	60 Seconds	7183-1060
9) Pilot Interruption timer Module :		11) Purge Timer Module : Recycle	Non-Recycle
10 Seconds	7184-0010	Switchable (30, 90, 180	
15 Seconds	7184-0015	or, 300 sec.s)	7182-0100
30 Seconds	7184-0030	0 Seconds	7182-0000
60 seconds	7184-0060	30 Seconds	7182-0203
		60 Seconds	7182-0206
		90 Seconds	7182-0209
		120 Seconds	7182-0212
		180 Seconds	7182-0218
		240 Seconds	7182-0224
		300 Seconds	7182-0230



(See Bulletin 7112 pages 5 thru 12)