



**SINGLE BURNER
SOLID STATE**

Protectofier

COMBUSTION SAFEGUARD

**Operates with FLAME ROD
and/or**

P-C II (Ultra-Violet) SCANNER

BULLETIN P-1178 R3

FORM 7256

- Compact Design.
- Time Proven Plug-In Solid State FLAME-PAK Amplifier.
- Plug-In, Interchangeable Relays.
- Plug-In Power Transformer.
- Flame Rod and/or Ultra-Violet Sensing. Independent or simultaneously using same FLAME-PAK Amplifier.



**Enclosed
Dimensions**
6" wide
7-5/16" high
5" deep



**Open
Dimensions**
6" wide
6" high
5" deep

IRI ACCEPTED



FORM 7256-BTNR

- Solid State Plug-In Purge Timer Available in 15, 30, 60 and 90 Seconds. (Form 7256-BTNR)
- Safe Start Check on each light-off cycle.
- High Flame Signals minimize nuisance shutdowns.
- "NR" indicates automatic models provided with additional relay to prevent re-light attempt on flame failure.

SPECIFICATIONS:

Ambient temperature: minus 20° to plus 140° F
Flame response: 2 to 4 seconds (0.8 sec. available)
Voltage/Frequency:
120V AC ± 10%, 50-60 Hz
Voltage at E terminal to ground:
390V AC
Voltage at UV terminal to ground:
590V AC
Power consumption: 35 VA or less
Rating: 125 VA pilot duty

COMPONENTS

CHECK RELAY (ACF): The plug-in relay makes certain that the PROTECTOFIER is functioning properly. It is energized thru NC contacts of the Flame Relay. Failure of the Check Relay to prove safe-start check will prevent ignition and energizing of the fuel valve.

FLAME-PAK (SS100A): The plug-in electronic amplifier provides immediate response via the flame rectification principle. Sensing is achieved either by (1) a flame rod which creates a DC signal to the FLAME-PAK, or by (2) the P-C II U-V Scanner in which a DC signal is developed by an ultra-violet sensitive tube. In either system if the signal from the flame to the FLAME-PAK is interrupted, the fuel valves are de-energized, and an alarm circuit can be energized if required.

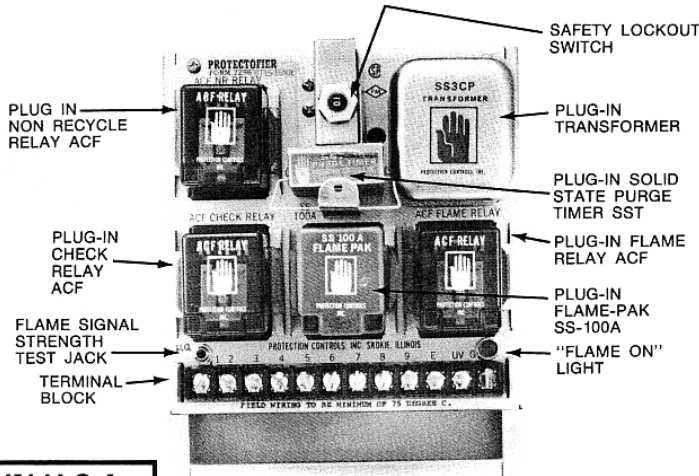
FLAME RELAY (ACF): The plug-in relay responds to FLAME-PAK operation energizing the circuit to the fuel valves.

TEST JACK: Provides convenient checking of input signal by placing a DC microammeter in series with the flame rod or P-C II Ultra-Violet Scanner.

FLAME ROD OR ULTRA-VIOLET SCANNER (P-C II): (either or both can operate in the same PROTECTOFIER system). The P-C II Ultra-Violet Scanner can be used with gas or oil flame. It is compact, containing only an ultra-violet sensing tube for direct 2-wire connection to the PROTECTOFIER.

TRANSFORMER (SS3CP): Provides low voltage for FLAME-PAK circuit and power source for "E" and "UV" terminals.

FLAME RESPONSE LIGHT: Neon indicator bulb energized with flame present.



MADE IN U.S.A.



PROTECTION CONTROLS, INC.

ELECTRICAL SAFETY EQUIPMENT

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FORM 7256

MODELS AVAILABLE

Designation and Function
120V 50-60 Hz
Single Burner

FORM DESIGNATION	MANUAL	AUTOMATIC	PURGE	LIMITED TRIAL FOR IGNITION **	RECYCLE ON FLAME FAILURE MANUAL	RECYCLE ON FLAME FAILURE AUTOMATIC	FLAME FAILURE ALARM
7256-AHE	×	—	—	—	—	—	×
7256-BE	×	×	—	15 sec	—	×	—
7256-BHE	×	×	—	15 sec	—	×	×
7256-BNRE	—	×	—	15 sec	—	—	—
7256-BNRHE	—	×	—	15 sec	—	—	×
7256-BT * NRE	—	×	*×	*×	—	—	—
7256-BT * NRHE	—	×	*×	*×	—	—	×

Above models with "E" suffix are enclosed.
Omit "E" suffix for open style.

Models with suffix "T" in Form number are provided with a plug-in "SST" purge timer to provide for fixed pre-purged cycle. Timing ranges available are listed in Table 1 below.

*Purge and trial for ignition cycle. Select from timing schedule in Table 2 below.

**15 second trial for ignition standard, 5 second and 10 second also available—specify.

TABLE 1

SST PURGE TIMER	
DESIGNATION	PURGE CYCLE***
SST-15	15 sec.
SST-30	30 sec.
SST-60	60 sec.
SST-90	90 sec.

TABLE 2

TIMING SCHEDULE—TIME IN SECONDS		
*	PURGE***	IGN TRIAL
15-5	15	5
15-10	15	10
15-15	15	15
30-5	30	5
30-10	30	10
30-15	30	15
60-5	60	5
60-10	60	10
60-15	60	15
90-5	90	5
90-10	90	10
90-15	90	15

INSTALLATION, OPERATION AND MAINTENANCE SHALL CONFORM WITH NATIONAL FIRE PROTECTION ASSOCIATION STANDARDS, NATIONAL AND LOCAL CODES, AND AUTHORITIES HAVING JURISDICTION. ANY MODIFICATION VOIDS APPROVALS.

***Purge time shall allow system to have a minimum of four fresh air changes.

FORM 7256 COMBUSTION SAFEGUARDS Single Burner

FORM			
7256-AH (open-type model for panel mounting)			\$302.75
7256-AHE (enclosed model)			336.25
15 SEC. IGN. TRIAL**	10 SEC. IGN. TRIAL**	5 SEC. IGN. TRIAL**	
7256-B	7256-B10	7256-B5	367.75
7256-BE	7256-B10E	7256-B5E	401.25
7256-BH	7256-B10H	7256-B5H	382.75
7256-BHE	7256-B10HE	7256-B5HE	416.25
7256-BNR	7256-B10NR	7256-B5NR	463.25
7256-BNRE	7256-B10NRE	7256-B5NRE	496.75
7256-BNRH	7256-B10NRH	7256-B5NRH	478.25
7256-BNRHE	7256-B10NRHE	7256-B5NRHE	511.75
7256-BT*-15NR	7256-BT*-10NR	7256-BT*-5NR	568.50
7256-BT*-15NRE	7256-BT*-10NRE	7256-BT*-5NRE	602.00
7256-BT*-15NRH	7256-BT*-10NRH	7256-BT*-5NRH	583.50
7256-BT*-15NRHE	7256-BT*-10NRHE	7256-BT*-5NRHE	617.00
200V or 230V 50-60 Hz (for export applications only) N.E.C. requires 115V			Add 15% to base price.
Replacement SST* Plug-in Purge Timer (*specify timing-15, 30, 60, 90 sec.)			125.50

"A" indicates basic combustion safeguard model.

**B (BREAKER) indicates lock-out switch model. Required for automatic lighted installations. System "latches-out" after failure to light within ignition trial time and cannot attempt re-start until switch is manually reset. Standard ignition trial time is 15 seconds, also available in 10 seconds, and 5 seconds. SPECIFY.

"E" (ENCLOSED) indicates enclosed model.

"H" (HORN) indicates alarm contact model.

"NR" (NON-RELIGHT) indicates non-relight model.

"T" (TIMER) indicates purge timer model. *SPECIFY purge timing - (15, 30, 60, and 90 seconds available.)

Purge time shall allow system to have a minimum of four fresh air changes.

All PROTECTOFIER models operate with flame rod (flame rectification principle) and/or PC-II U-V Scanner.

PROTECTOFIER prices include all plug-in components and are shipped only as complete units.

See Bulletin P-1178 and Service Manual PSM-1187.

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