

# Fireeye Sentryp<sup>®</sup> System Indicator 53SE2

53SE2 Model 1000  
UL Recognized Component  
Class MJAT2 File MH10808

## DESCRIPTION

Fireeye<sup>®</sup> Sentryp-53SE2 system indicator is a versatile and compact six point “first out” fault annunciator plus a pilot or main flame failure annunciator, and a four point indicator which monitors the operation of commercial/industrial fuel burner systems. Sentryp-53SE2 detects which of six interlocks are not closed during a burner start-up and also which one opens first, to cause a burner shutdown. If more than one interlock switch opens, Sentryp-53SE2 will annunciate the first one, and when that condition is corrected, it will annunciate the second one. Additionally, Sentryp-53SE2 will annunciate a pilot flame failure, or main flame failure condition. The “first out” annunciator uses solid state electronics for reliability and optical couplers for isolation. It connects directly to the interlock circuit being monitored, separate switches are not required. An integral six second delay is included to allow time for the interlock circuit to close on each start-up. Sentryp-53SE2 includes an alarm circuit which is powered after a “first out” trip. Manual reset is required. The unit also includes four status indicating neon lamps which show the presence of line voltage at any desired point.

Sentryp-53SE2 has a brushed aluminum finish, is gasketed and designed for flush mounting. A self-adhesive nameplate strip is provided for the identification of each function. Sentryp-53SE2 may be permanently installed on a burner control panel, or used as a portable service tool. The problem solving Sentryp-53SE2 provides operational information and reduces trouble shooting time and expense. Contact any Fireeye sales office for assistance with non-standard applications.

## SPECIFICATIONS

<b>Response Time:</b> 16 milliseconds	<b>Power Consumption:</b> VA (excluding alarm)
<b>Humidity:</b> 90% noncondensing (max)	<b>Alarm Contact rating:</b> 125VA pilot duty
<b>Weight:</b> 2 lbs. (900g)	<b>First Out Indication:</b> LED (red)
<b>Ambient Limits:</b> Min. 25°F (-4°C), Max. 125°F (52°C)	
<b>Supply Voltage:</b> Model 1000 - 102 to 132V 50/60Hz	
<b>Condition Indicators:</b> Long life neon	

## OPERATION

Fireeye SENTRYP system indicator, when wired with the typical burner control systems (shown in figures 1, 2, and 3), provides the following operation: Sentryp-53SE2 will indicate the four main functions of the burner operation— System on, motor, pilot, main burner. It will annunciate a pilot flame or main flame failure and which of six interlocks or limit switches are not closed at start-up or open during a firing period. The alarm is powered after any interlock trip or flame failure shutdown. Manual reset is required. Sentryp-53SE2 is reset each time the operating control opens its circuit.

## INSTALLATION

The 53SE2 installs in a panel surface or on the front surface of an enclosure. The unit may be mounted in any position (no parts are affected by gravity). Because total power consumption of the device is less than 2 watts, little heat is generated. The mounting kit included with each contains:

ITEM	Quantity	Description
1	2	10-32 Mounting Screws
2	1	Neoprene Gasket
3	1	Label Holder
4	2	Label Form (3 Labels Each)
5	1	Label Window

The Neoprene Gasket may be used for sealing between the front plate of the 53SE2 and the panel surface on which it is mounted. It is not necessary to use the gasket if sealing is not required. The plastic nameplate holding strip supplied is furnished with a self-adhesive strip on the back. The nameplate strip is positioned on the 53SE2 front plate so that the printed label aligns with the indicators. The nameplate information is typed on a label within the printed guidelines, and after typing, the label strip is cut along the printed outline. The protective vinyl window and the typed nameplate strip are both slid into the plastic holder to complete the assembly.

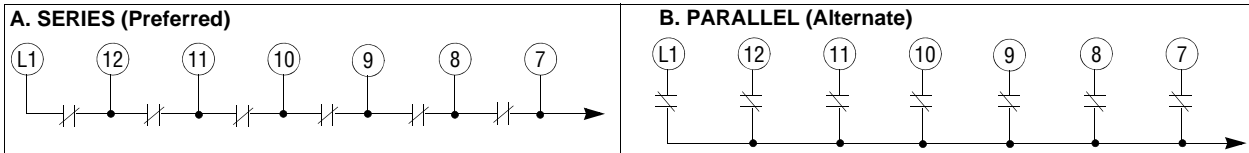
## ACCESSORIES

The following parts are not supplied with the 53SE2 but are useful for some installations.

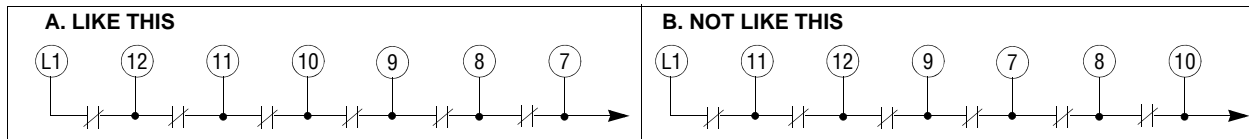
1. Weatherproof boot for reset switch (Fireye P/N 33-414).
2. Engraving plate (Fireye P/N 3-1705). This blank engraving plate is 1/16" thick. It matches the front plate of the 53SE2 and is mounted by the two 10-32 mounting screws of the 53SE2. The locknut for the reset switch must be removed to mount the plate and then replaced.

## WIRING

1. Follow the wiring suggestions in Figures 1, 2, or 3.
2. Jumper any unused interlock circuit.
3. The interlock switches may be connected in a series string (preferred), or in parallel. However, they must all be connected in a circuit that has the same supply as **L1, L2** of the 53SE2.
4. When interlock switches are wired in parallel, if two or more open simultaneously, or are open when the unit is first powered or reset, it is possible that Sentryp will annunciate both functions. A delay of 30 milliseconds between the opening of two switches will assure that only one function will be annunciated.

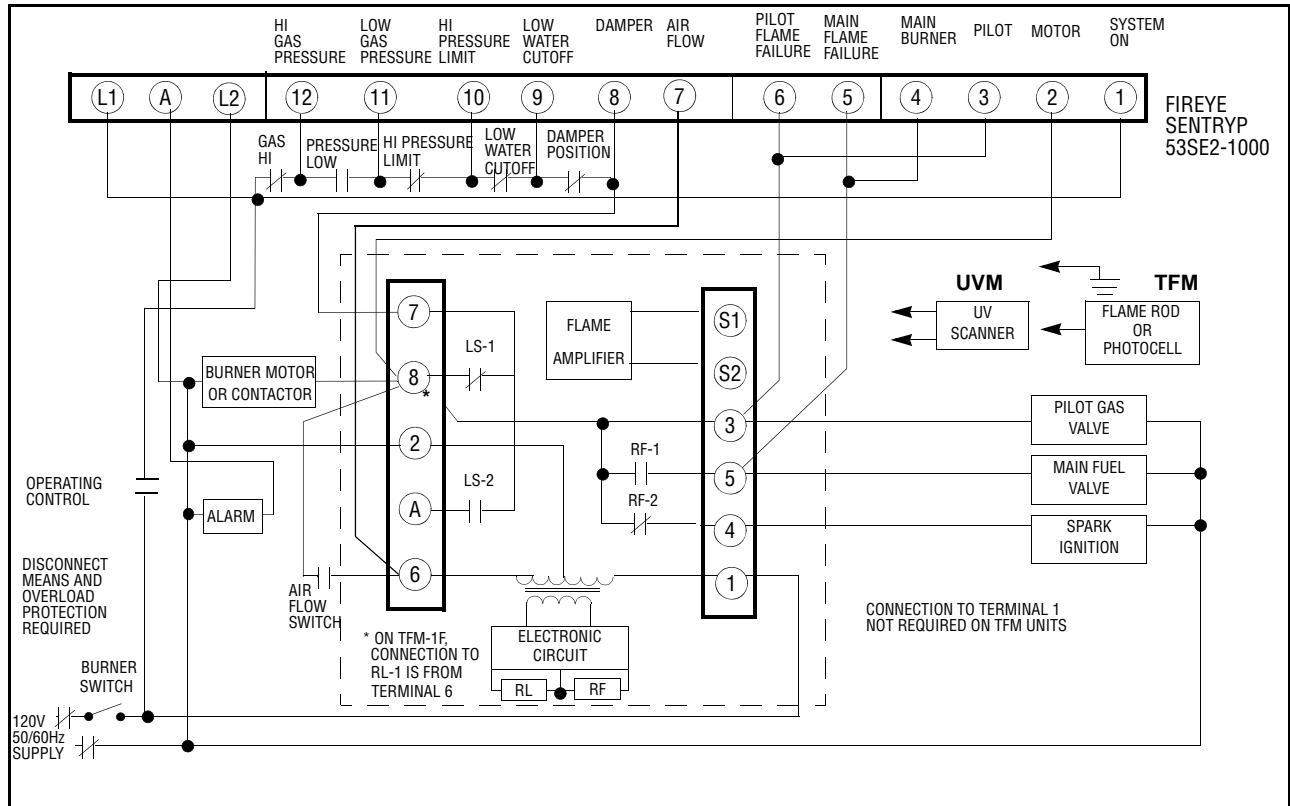


5. When the interlock switches are connected in series, the first switch must be connected between terminals L1 and 12, the second switch between terminals 12 and 11, and so on. If the first switch is connected incorrectly between terminals L1 and 11, and the second switch connected between terminals 11 and 12 and so on, the annunciator will not operate correctly.

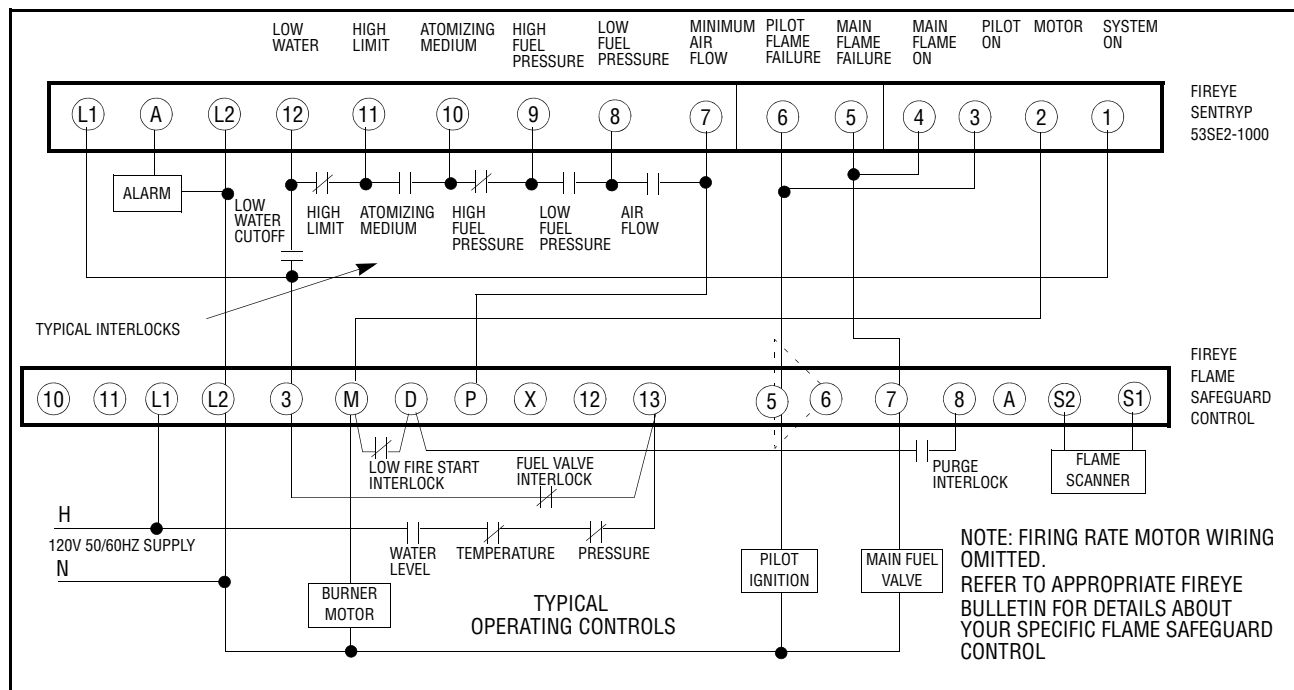


# WIRING DIAGRAMS

**FIGURE 1. Typical M-Series Wiring for pilot-ignited Burner with SENTRYP-53SE2 Model 1000**

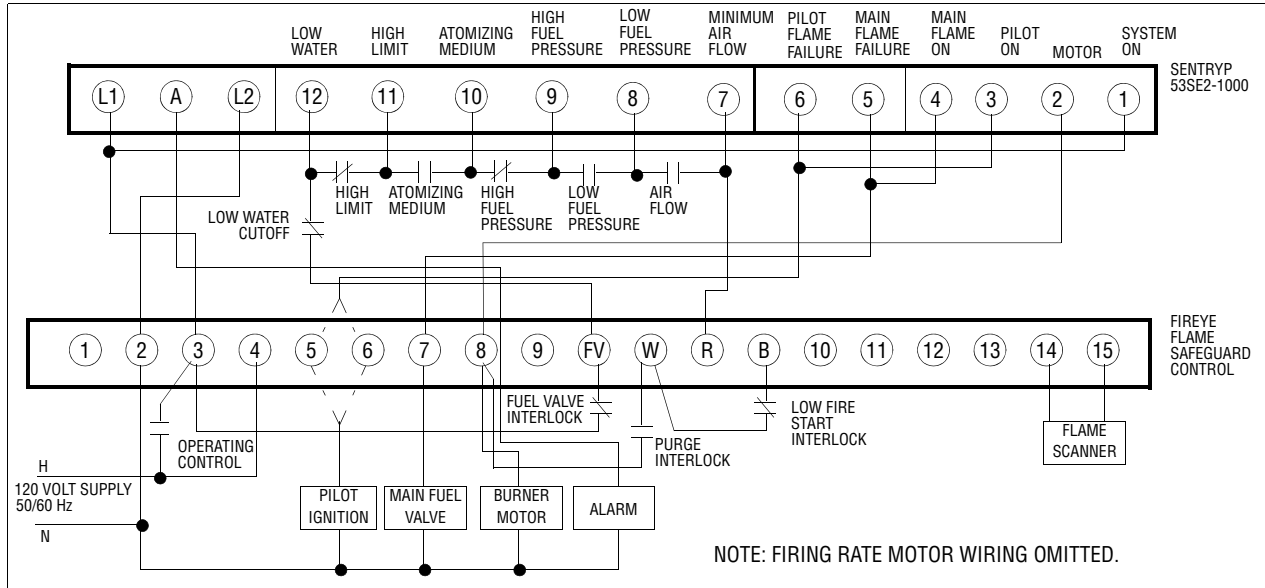


**FIGURE 2. Typical Wiring for Fireye C, D Series, or E110 FLAME-MONITOR Flame Safeguard Control with Fireye Sentryp-53SE2 Model 1000 and pilot ignited oil/gas burner.**

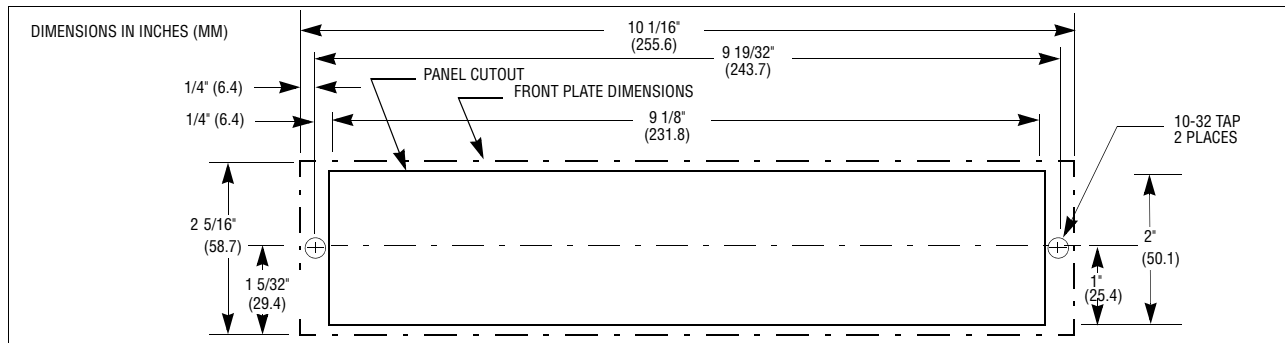




**FIGURE 3. Typical wiring arrangement for 26RJ8-6160, -6070, -6080 25RU8-4580, -6580 with SENTRY 53SE2 Model 1000 and a pilot-ignited burner**



**FIGURE 4. MOUNTING DIMENSIONS**



**NOTICE**

When Fireye products are combined with equipment manufactured by others and/or integrated into systems designed or manufactured by others, the Fireye warranty, as stated in its General Terms and Conditions of Sale, pertains only to the Fireye products and not to any other equipment or to the combined system or its overall performance.

**WARRANTIES**

FIREYE guarantees for *one year from the date of installation or 18 months from date of manufacture* of its products to replace, or, at its option, to repair any product or part thereof (except lamps, electronic tubes and photocells) which is found defective in material or workmanship or which otherwise fails to conform to the description of the product on the face of its sales order. **THE FOREGOING IS IN LIEU OF ALL OTHER WARRANTIES AND FIREYE MAKES NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED.** Except as specifically stated in these general terms and conditions of sale, remedies with respect to any product or part number manufactured or sold by Fireye shall be limited exclusively to the right to replacement or repair as above provided. In no event shall Fireye be liable for consequential or special damages of any nature that may arise in connection with such product or part.