

# FLAME SENSOR

## FS-2000E



**FLAME DETECTION AT 33ft. (10m) AHEAD!  
 PROTECTION AREA ADJUSTMENT ENABLES  
 INSTALLATION EASY, AND MANY FUNCTIONS  
 FOR PROFESSIONALS ARE AVAILABLE!**

Flame sensor FS-2000E quickly detects ultraviolet rays contained in flames and activates a built-in alarm sound plus an external output. Power is to be wired to 10~30VDC.

#### Operation set-up by detection timer

The alarm will be activated only when the sensor detects a flame (ultraviolet rays) in accordance with the detection timer. The 4 following detection times are selectable by a slide switch located on the sensor body.

<0.2 sec., 1 sec., 6 sec., 30 sec.,>

#### Other functions

- The internal alarm sounder output is greater than 80dB at 3.3ft. (1m) in front of the sensor, and it can be turned off.
- Equipped with Tamper output

#### Form C external output

Equipped with a Form C output, FS-2000E can be connected to a Fire / Security control panel.

Also the output signal can be used to initiate a warning device, CCTV surveillance as a part of advanced security system.

#### Alarm memory

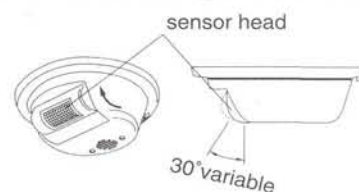
Which sensor is activated can be easily identified by Alarm memory indication.

Memory LED on the sensor body blinks for 3 min. and lights on for 47 min. after alarm activation.

#### Protection area adjustment

Compact design ( $\phi$  120mm) enables FS-2000E to be installed at any location. Easy separation of the sensor unit from the base simplifies installation and maintenance.

In addition, equipped with Protection area adjustment, wide selections of protection area setting are available.



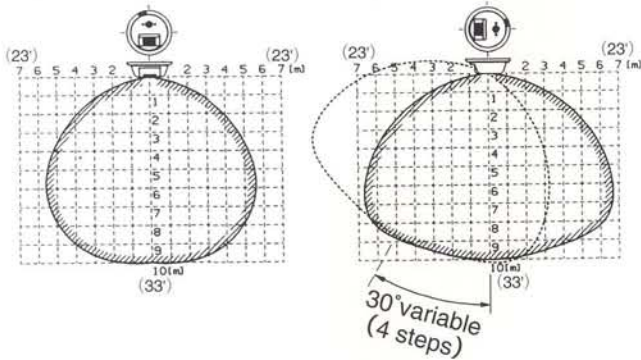
# FLAME SENSOR

## DETECTION AREA

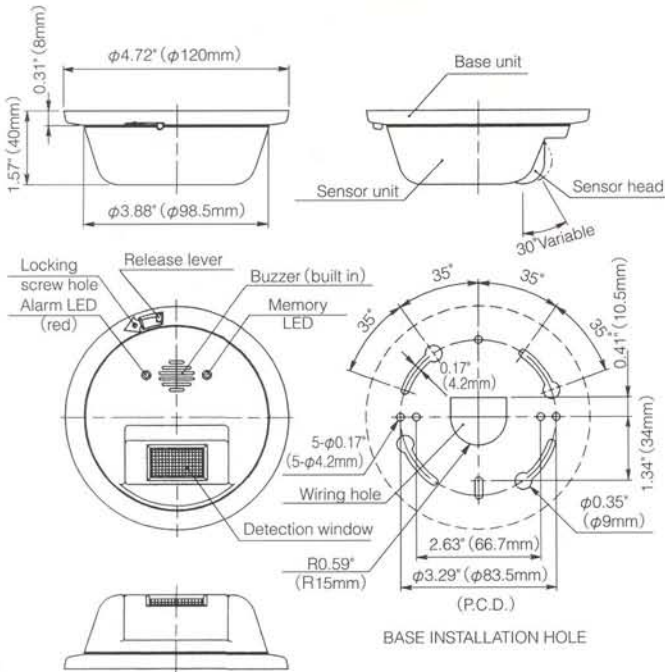
- Condition of detection area  
 Detection timer: 0.2sec.  
 Origin of flame : Gas lighter  
 Size of flame : Appox.2.76" (7cm)

Front view : Ceiling mount  
 Top view : Wall mount

Side view : Ceiling / wall mount



## EXTERNAL DIMENSIONS (unit:mm)

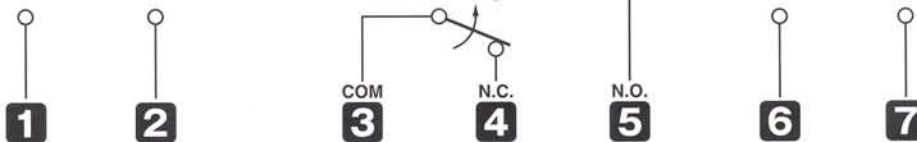


## TERMINAL ARRANGEMENT

**Power**  
 10V to 30VDC  
 (non-polarity)  
 Stand-by : 25mA  
 Alarm : 75mA Max. (buzzer : ON)  
 40mA Max. (buzzer : OFF)

**Alarm output**  
 Dry contact relay output Form C  
 Action : Offdelay (detection time + 2 sec.)  
 Capacity : 30V (AC/DC) 0.3A or less  
 protective resistance 3.3 ohms

**Tamper**  
 Dry contact output Form B (N.C.)  
 Action : Open when sensor body is detached  
 Capacity : 30V (AC/DC) 0.1A or less



Please Note : This sensor is designed to detect ultraviolet rays contained in flames and to initiate an alarm; it is not a fire-preventing device. TAKEX is not responsible for damage, injury or losses caused by accident, theft, Acts of God (including inductive surge by lightning), abuse, misuse, abnormal usage, faulty installation or improper maintenance.

## SPECIFICATIONS

Product name	FLAME SENSOR	
Model No.	FS-2000E	
Detection system	Ultraviolet rays detection (Detected wave length 185 to 260nm)	
Detection area	Distance	33ft.(10m)[2.76"(7cm) lighter flame, in front]
	Angle	Approx. 120° conically
	Adjustment range	Horizontal 25° .....by base unit Vertical 30° (4 steps).....by sensor head
Sensitivity adjustment	Detection timer 4 steps (0.2 sec., 1 sec. and 30 sec.)	
Power supply	DC10V to 30V (non-polarity)	
Power consumption	Stand by : 25mA or less	
	Alarm : 75mA or less (alarm sound ON) 40mA or less (alarm sound OFF)	
Alarm output	Dry contact relay Form C (alarm: open/close) Contact action: off-delay (approx. 2 sec.) Contact capacity: 30V(AC/DC) 0.3A, protective resistance 3.3 ohms	
Alarm memory	Auto-reset operation (on/off setting available) Memory LED blinks for 3 min. then lights on for 47 min.	
LED	Alarm LED (red): light on for off-delay 10 sec. Memory LED (yellow): light on when memory indicated, blink when power turned on	
Alarm sound (buzzer)	Alarm: Sounds intermittently every 0.2 sec. during off-delay 10 sec. Volume: 80dB or more at 3.3ft (1m) ahead (Silent setting is available)	
Tamper output	Dry contact relay Form B (N.C.) Action: open when cover is detached Capacity: 30V(AC/DC) 0.1A	
Wiring	Terminals	
Ambient temp. range	+14°F to +140°F (-10°C to +60°C) without condensation and freeze	
Installation	Indoor (ceiling or wall mount)	
Weight	Approx. 5.3oz (150g)	
Appearance	ABS resin (white)	
Accessories	● Tapping screw $\phi 4 \times 25$ . 2pcs. ● Sensor locking screw $\phi 3 \times 6$ . 1 pce.	
Optional	Ceiling mount attachment [BCW-401]	

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