

**TAKEX**

# FLAME SENSOR

CE 

FS-1000E



## FLAME DETECTION AT 33ft.( 10m ) AHEAD! SUPER HIGH SENSITIVITY IN A SMART DESIGN.

Flame sensor FS-1000E quickly detects ultraviolet rays contained in flames and activates a built-in alarm sound plus an open collector output.

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### Power supply

The FS-1000E can be powered from either type-3 alkaline battery ×2 pcs, or an external power source 9~30VDC depending on the application. Optional power source can be from a long life lithium battery.

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### External output to a security system

Equipped with a form A (N/O) open collector output, FS-1000E can be connected to a security control panel. Alternatively the output signal can be used to initiate a warning device e. g. bell, siren etc., when used with an external DC power supply.

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### 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 3 following detection times are selectable by a slide switch located on the sensor body.

H: 0.2sec. M: 1sec. L: 6sec.

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### Other functions

The internal alarm sounder output is greater than 80dB at 3.3ft. (1m) in front of the sensor. The internal sounder can be disconnected by cutting a jumper wire if required when using an external DC power supply.

Compact design enables FS-1000E to be installed at any location. Easy separation of the sensor unit from the base simplifies installation and maintenance.

#### Low battery

When using a battery power source, low battery condition is annunciated by an internal buzzer and external LED.

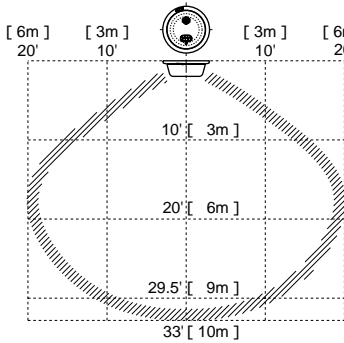
#### Power up

When power is turned on, an alarm sound is activated. If no alarm sound is activated, check the power source.

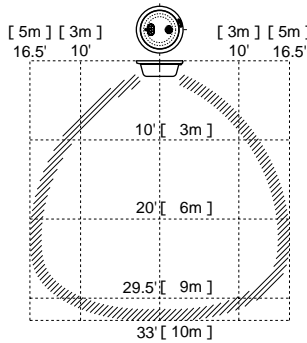
# FLAME SENSOR

## DETECTION AREA

(FRONT VIEW : CEILING MOUNT)  
(TOP VIEW : WALL MOUNT)



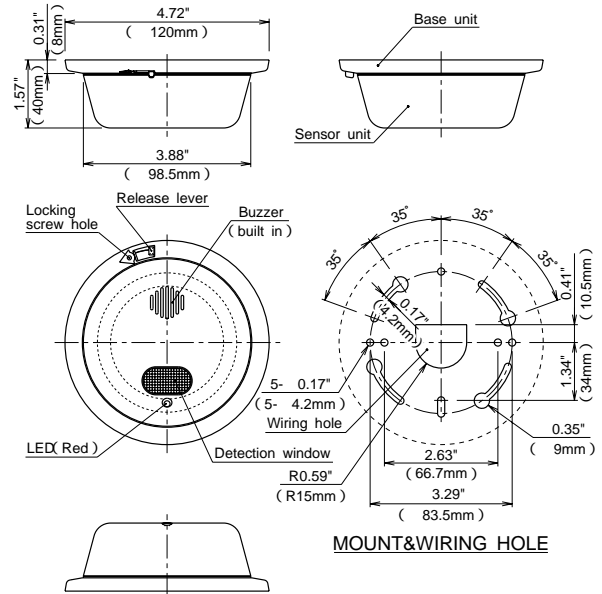
(SIDE VIEW : CEILING &  
WALL MOUNT)



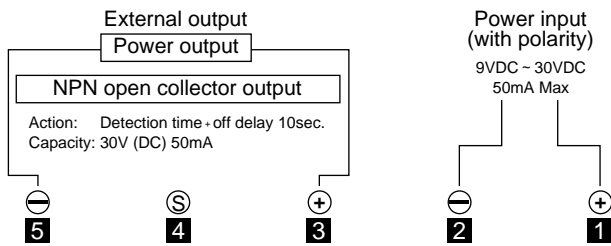
### CONDITION OF DETECTION AREA

DETECTION TIMER : H ( 0.2 sec. )  
SIZE OF FLAME : APPROX. 2.76" ( 7cm )  
ORIGIN OF FLAME : GAS LIGHTER

## EXTERNAL DIMENSIONS



## TERMINAL ARRANGEMENT



## SPECIFICATIONS

Model No.	FS-1000E
Detection system	Ultraviolet rays detection (Detected wave length 180 ~ 260nm)
Detection distance	33ft. (10m) (2.76" (7cm) lighter flame, in front)
Detection angle	Approx. 120° (conically)
Detection timer	3 steps changeover by slide switch H (0.2sec.), M (1sec.), L (6sec.)
Power supply	Type-3 alkaline battery (LR6) x 2 (3V) ...accessory Exclusive lithium battery (CR17450E-R-2-CM2) x 1 (3V) ...optional External power supply 9VDC to 30VDC with polarity
Power consumption	Stand by: 50 μA Max. when battery power supply 5mA Max. when external power supply Alarm: 50mA Max. when buzzer sounds
LED	Indication: Red LED Alarm: Flashing every 0.2sec. during off-delay approx. 10sec. Low battery: Light on 0.1sec. every approx. 5sec.
Buzzer	Alarm: Sounds intermittently every 0.2sec. during off-delay 10sec. Low battery: Sound 0.1sec. intermittently every approx. 5sec. Volume: 80dB or more 3.3ft. (1m) ahead (Silent setting is available by cutting internal jumper line)
External output	NPN open collector output (Useful as an output with voltage when external power is used) 30V (DC) 50mA, off-delay 10sec. continuous output
Wiring	Terminals
Ambient temp. range	+14°F to +140°F (-10 to +60 ) without condensation Battery performance may decrease under +32°F (0 ) or beyond +104°F (+40 )
Installation	Indoor (Ceiling or wall mount)
Weight	Approx. 7oz (200g) including battery (accessory) 1.8oz (50g)
External dimensions	4.72" (120mm) x H1.57" (40mm)
Appearance	ABS resin (white)
Accessories	Exclusive battery case of Type-3 x 2 pcs, x 1 Type-3 alkaline battery LR6 x 2 Sensor locking screw 3 x 6, x 1 Tapping screw 4 x 2.5, x 2

## OPTIONALS

Ceiling/wall  
mount attachment



BCW-401

Exclusive lithium  
battery



CR17450E-R-2-CM2

**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.

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