



Triple IR Flame Detector

Model: ZT-30P

User Guide

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<ZT-30P User Guide >

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1 Unpack & Checking Contents

- Unpack the delivered pack and check the following contents.

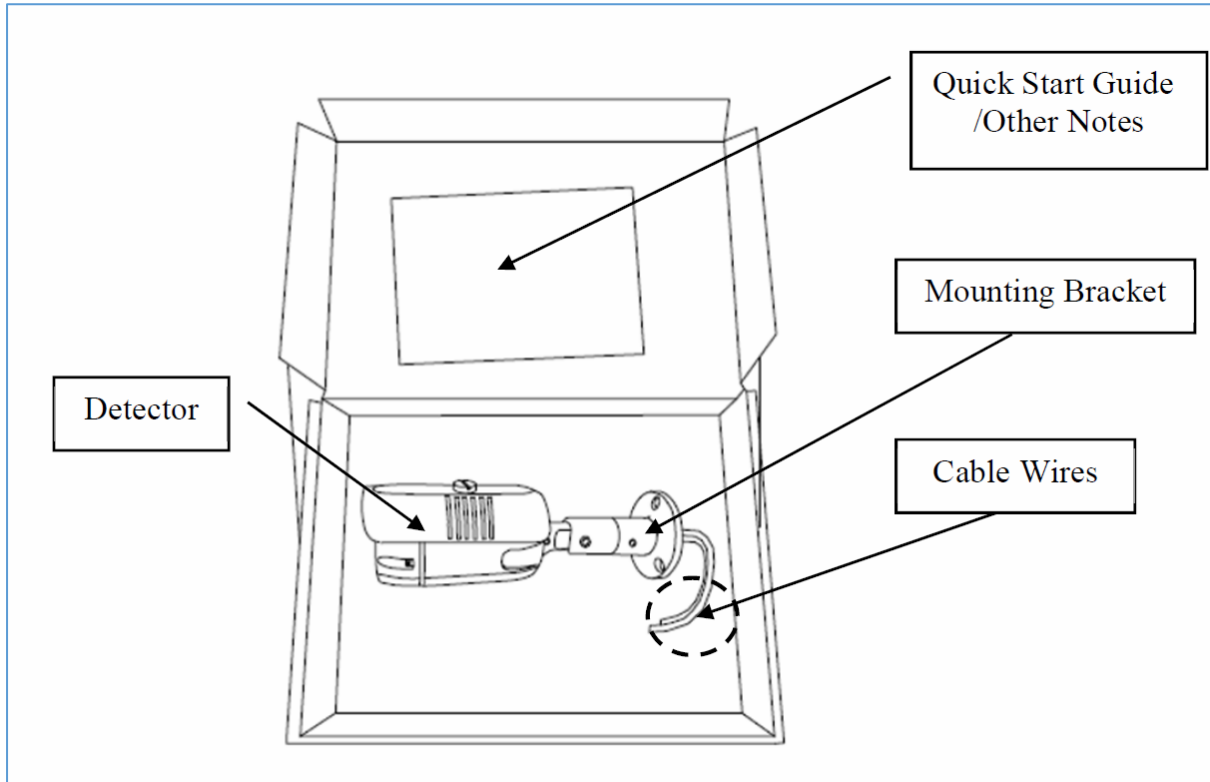
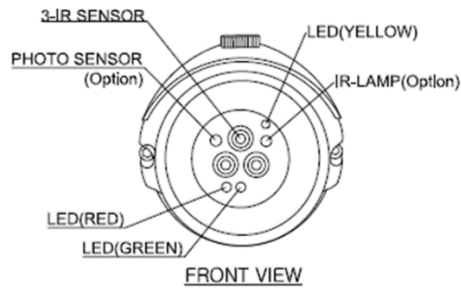
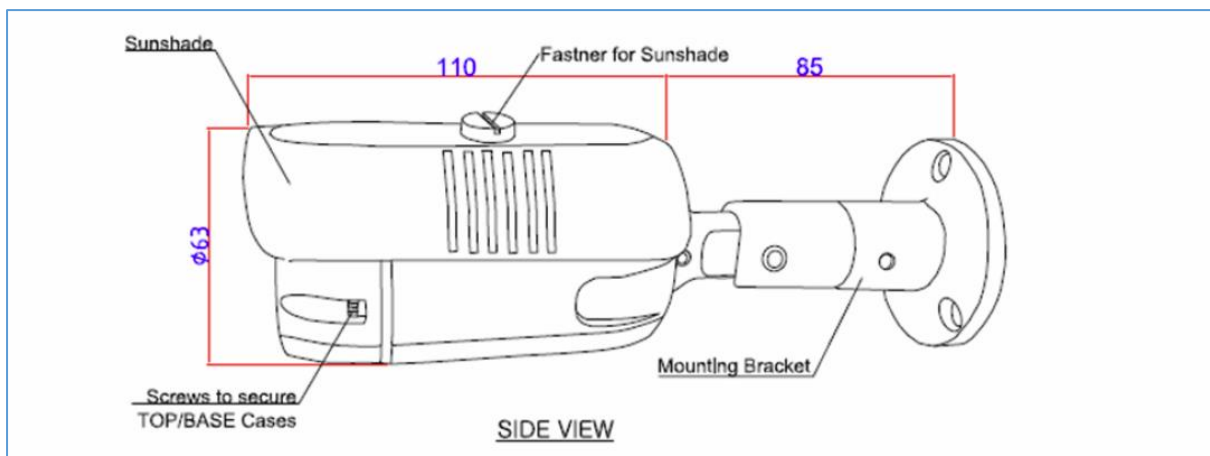


Figure 1. Product Contents & Outline Indication



Front View

ZT-30P



2 DIP Switch Settings (If necessary)

- 1). After removing the Sunshade, separate TOP Cover & Base cover and change the Setting of the DIP Switch.

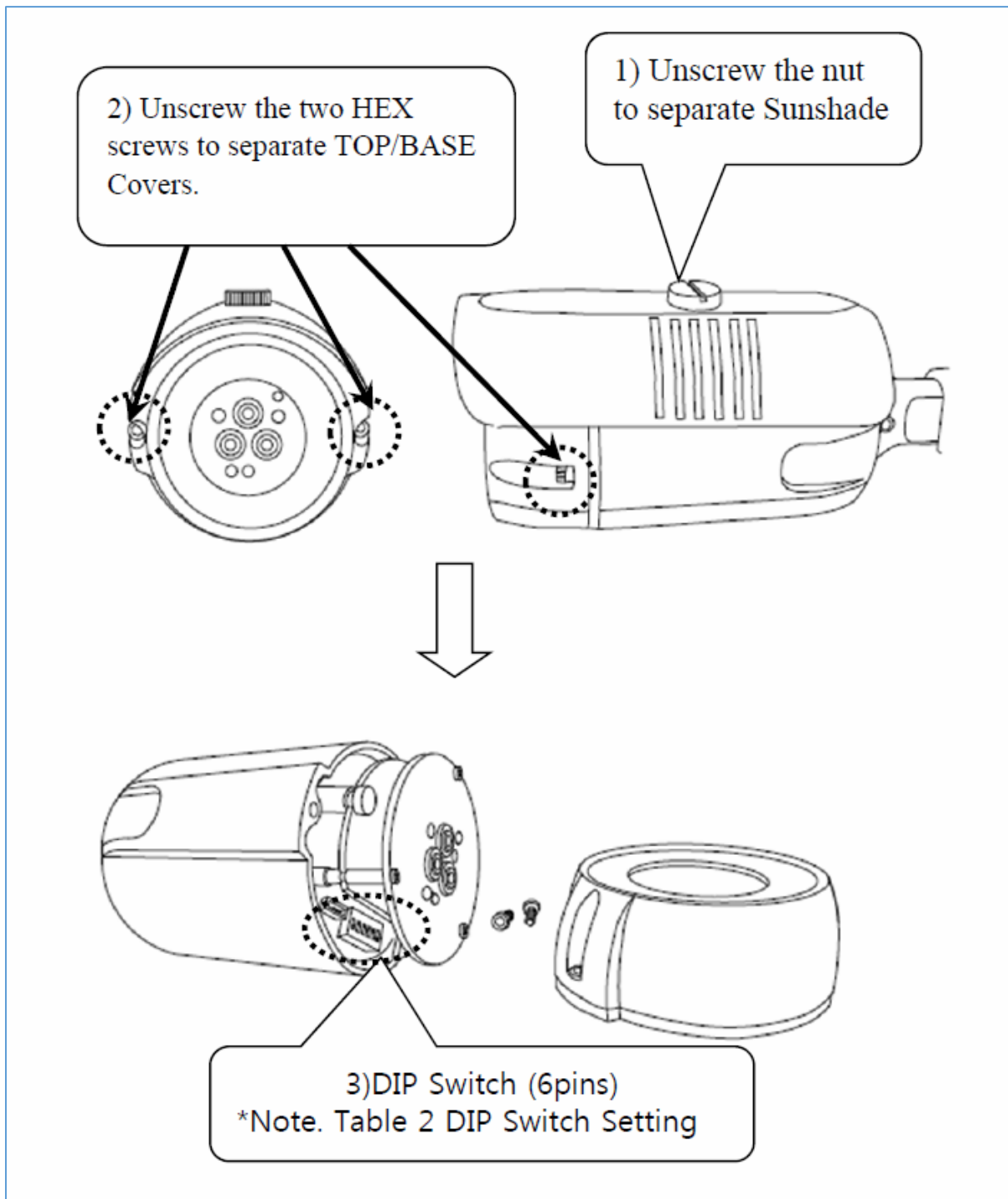


Figure 2. Change of DIP Switch Setting

- 2). After completing the change of DIP Switch Setting, combine the TOP Cover and BASE Cover by screwing together. Make sure that they are screwed together securely otherwise the detector may fail to be waterproof.

3 Installation

- 1). Shown Fig.3, after screwing Top / Base Covers & Sunshade, place the detector in its designated locations on the wall and secure it with the provided three (3) fasteners through three (3) holes of detector mounting bracket.

Release the locking three (3) “Hexagonal Socket Set Screws” in such a way that allows rotating detector and point the detector towards the protected area and make certain the view of area I unobstructed.

Secure the detector that position by tightening the locking three (3) “Hexagonal Socket Set Screws” on the mounting bracket.

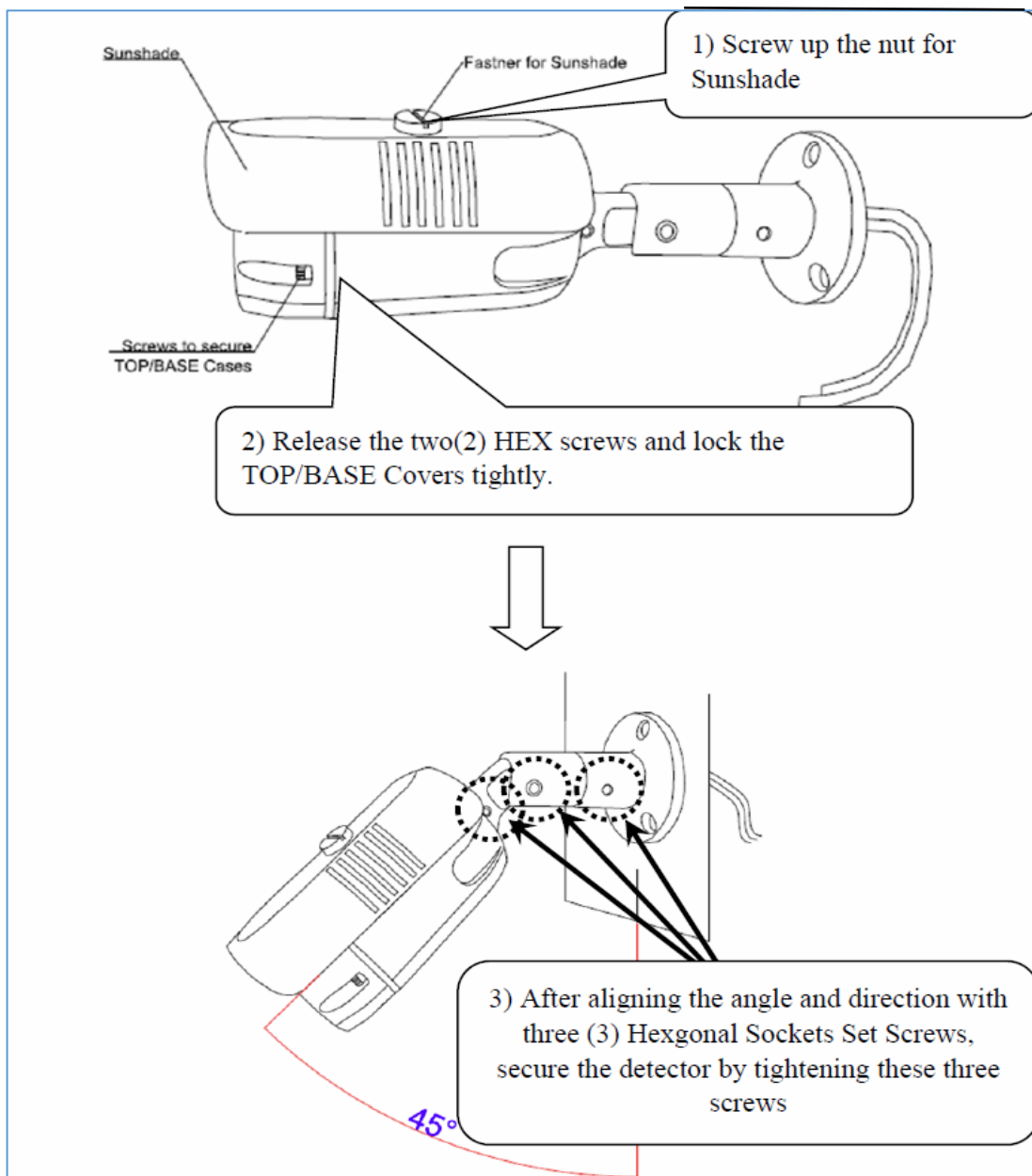


Figure 3. Final installation & Adjustment

The Detector is now correctly located, aligned and ready to be connected to the system.

4 Operation

Once powered up, the detector will begin appr. 20 sec start-up routine. During this time, all three (3) LED indicators will be blinking. Once the start-up procedure has finished and no faults are present, the detector will begin normal operation (Green LED will remain on).

Table1. Output Signals/LED Indicator versus Detector State

| Detector Status | Green LED (Power) | Red LED (Alarm) | Yellow LED (Fault) |
|---|----------------------------------|-----------------|--------------------|
| Power Up – 20 Second Start Delay | Blinking | Off | Blinking |
| Internal Power Fault or System Power Out of Range / Fault | Off | Off | Blinking |
| Normal Operation (Stand-By) | On | Off | Off |
| Fire Detection (Warning) | Off | On | Off |
| Fire Confirmed | All LEDs Blinking Simultaneously | | |

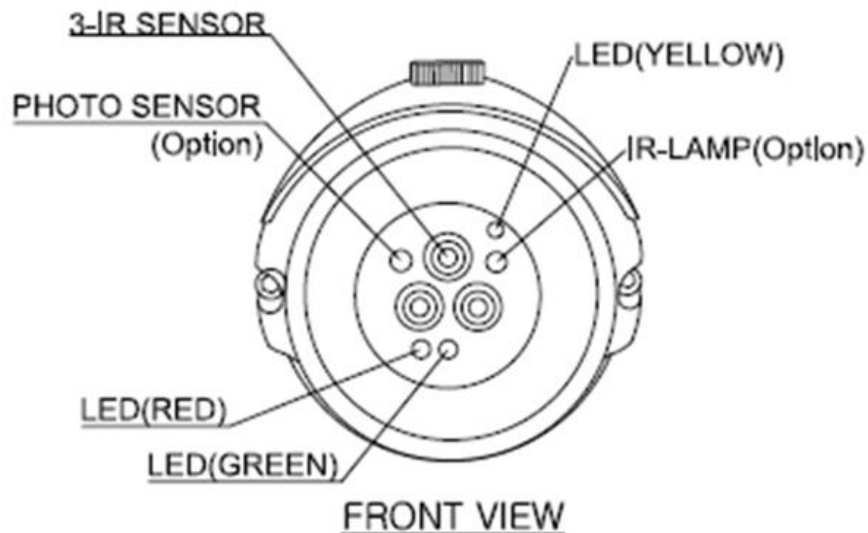
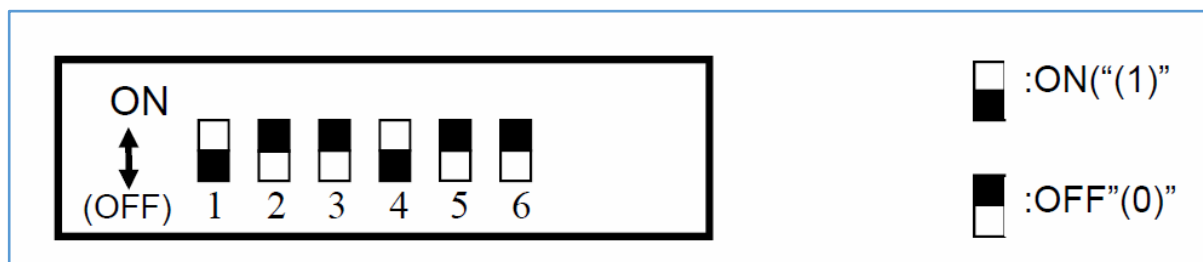


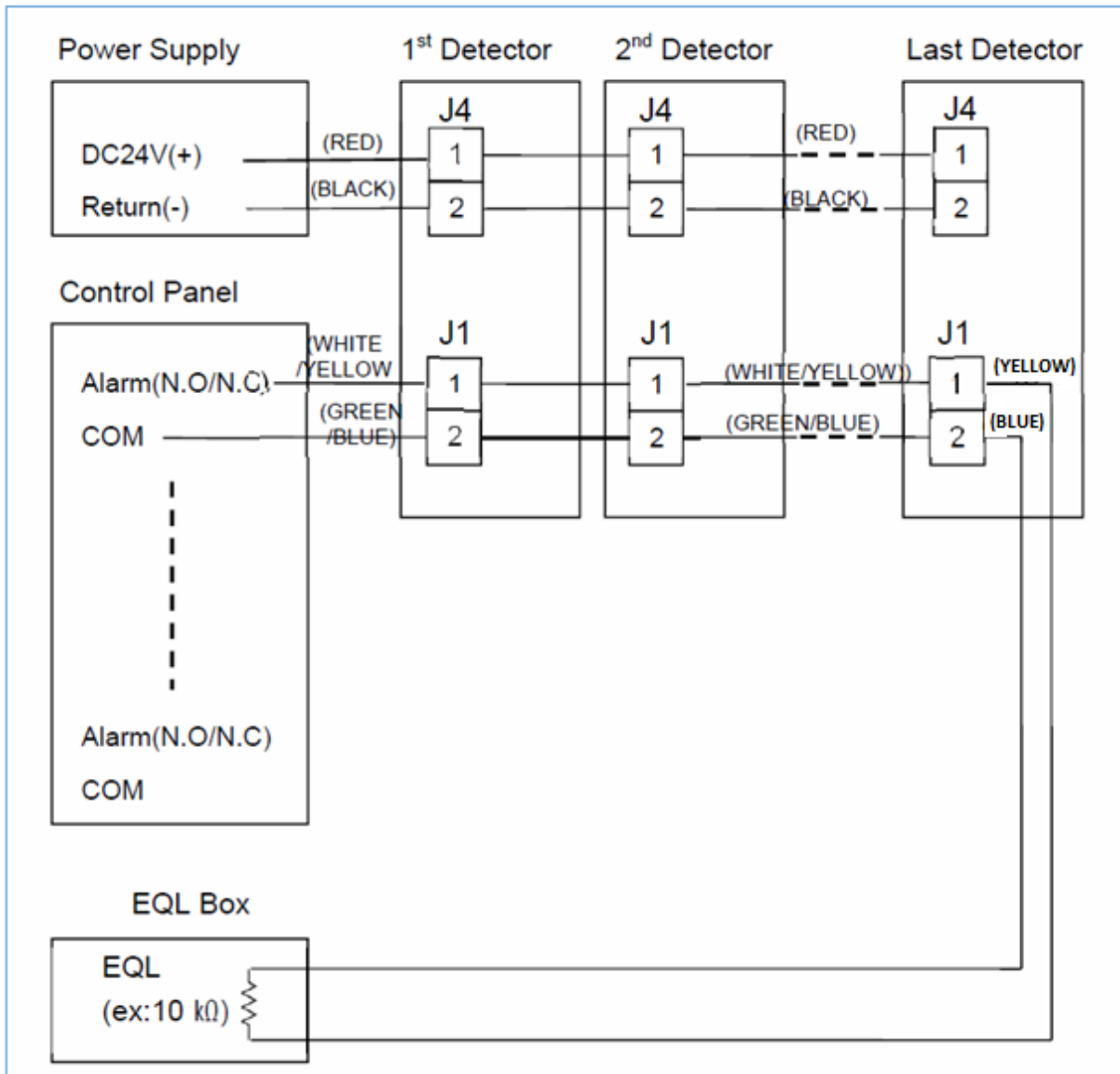
Table 2. DIP Switch Settings



| DIP Switch Position No. | | | | | | Mode Selections |
|-------------------------|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | |
| • | • | | | | | Sensitivity Range (1) OFF-OFF(00) : Highest OFF-ON(01) : High ON-OFF(10) : Medium <default> ON-ON(11) : Low |
| | | • | • | | | Alarm Delay Time (2) OFF-OFF(00) : 1 Sec OFF-ON(01) : 3 Sec ON-OFF : 5 Sec ON-ON : 7 Sec <default> |
| | | | | • | | Alarm Latch Setting (3) OFF(0) : 20 Sec <default> ON(1) : Until Reset |
| | | | | | • | Reserved (for design Setting) OFF(0) : <default> |

Notes:

- (1). The detector offers four (4) sensitivity settings. The settings refer to the n-Heptane fore of 33 cm-sq.
- (2). When an Alarm (Detection) level condition is encountered, the detector delays the execution of the Alarm output relay by the specified period of time. The detector will then, additionally, evaluate the fire condition during the specified Alarm Delay Time. If the Alarm level is still present, the Alarm outputs will be activated. If this condition no longer exists, the detector will return to its standby state. The LED will indicate warning level during the delay time only if the fire condition exists.
- (3). The detector has a selectable latched alarm output capability, which operates according to the selectable function. If selected, upon the detection of a fire, the detection signal is latched until manually reset (disconnecting the power supply or performing a manual BIT). Latching affects the ALARM RELAY, 4-20mA output, the ALARM LED...



Notes: 1. (): denotes an example of optional colour wirings.

5 Technical Specification

| Model | ZT-30P | |
|---|---|---|
| Part Number | 47-156 | |
| Spectrum Response | Three IR Bands (IR3) | |
| Spectrum Response (at highest sensitivity setting for 0.1m ² pan fire) | Fuel | Distance |
| | n-Heptane Gasoline Diesel LPG* Ethanol IPA Methane** | 65m 65m 45m 30m 40m 40m 35m |
| | *0.5m high/0.2m width plume fire, **30" plume fire | |
| Response Time | Typically 5 seconds | |
| Adjustable Time Delay | Up to 7 seconds | |
| Sensitivity Range | 4 sensitivity ranges for 0.1m ² n-Heptane pan fire from 15m to 65m | |
| Field of View | Horizontal / Vertically Typical 120° & 120° Max | |
| Built-in-Test | Automatic self-check to verify the lens cleanliness/electronic circuits & etc | |
| Temperature Range | Operating/Storage: -40°C to 75°C | |
| Humidity | Up to 95% non-condensing | |
| Operating Voltage | 24VDC nominal (18-32VDC) | |
| Power Consumption | Standby: max. 50mA, Alarm: max. 70mA | |
| Cable Entry | 1 x Ø6mm | |
| Wiring | According to the requirements | |
| Electromagnetic Compatibility | Complies with EN 61000-6-4 and EN 50130-4 | |
| Electrical Interface | 4-Wiring relay contact outputs | |
| Relays | Alarm(N.O.), Fault(N.C) SPST volt-free contacts rated 5A at 30VDC or 250VAC | |
| RS-485 (option) | RS-485 Modbus compatible communication link that can be used in computer controlled installations | |

| | |
|------------------------------|--|
| Materials | Heavy duty copper free aluminium with white powder coating |
| Mounting (Tilt Mount) | Heavy duty copper free aluminium with white powder coating |
| Dimensions | Detector 63(D) x 110 (L) mm |
| Weight | Detector & Mounting Bracket (Aluminium): 0.3kg |
| Water and Dust | IP65 |
| EMI/RFI | EN61000 |
| Hazardous Area | N/A |
| Performance | Designed to meet FM3260 (EN54-10) |

- END -