

# MANUAL FOR PHOTOELECTRIC SMOKE DETECTOR

## PRODUCT INTRODUCTION

This product named Photoelectric smoke detector (hereinafter called detector) detects the smoke by a couple of infrared diodes. The principle of detecting is granule in the smoke can reflect infrared light. Infrared diodes are placed in the special chamber. The chamber can shield external light, but doesn't affect the smoke into it. While there is no smoke, the diode can receive very weak infrared light. When the smoke entering the chamber, diode can receive more and more light, and the detector can give out alarm signal when the smoke attains the certain density. In order to reduce the interference and lower power consumption, the emitting circuit adopts the pulse signal. The product in accordance with the networking approach is divided into 2-wire and 4-wire detectors.

## PRODUCT FEATURE

- STRONG ADAPT ABILITY FOR CIRCUMSTANCE
- SMT DESIGN, HIGH STABILITY
- METAL SHIELD, ANTI-RFI & ANTI-EMI
- LOW STANDBY CURRENT
- POWER SUPPLY NON-POLARIZED INPUT
- FLASHING LED POWER INDICATOR
- ALARM RELAY N.C./N.O.OPTIONAL (4 WIRE)
- REMOTE LED INDICATOR OUTPUT (2 WIRE)
- MAGNETIC SWITCH SELF-TEST FUNCTION (OPTION)

## TECHNICAL SPECIFICATION

PRODUCT CATEGORY	2 WIRE	4 WIRE
OPERATING VOLTAGE	DC 9V~35V	
STANDBY CURRENT	≤ 50uA	≤ 50 uA (relay NO) ≤ 16 mA (relay NC)
ALARM CURRENT	20~25 mA @12V 40~50 mA @24V	≤ 40 mA(relay NO) ≤ 20 mA (relay NC)
ALARM INDICATION	RED LED ON	
TEMPERATURE RANGE	0℃~+50℃	
ENVIRONMENT HUMIDITY	≤ 95%RH (NO CONDENSATION)	
ALARM OUTPUT	REMOTE LED	RELAY OUTPUT
CONTACT RATING	N/A	0.5A@DC28V
SENSITIVITY	0.08~0.16 dB/m	
STANDARD	EN54-7,UL268	
DIMENSION	100mm diameter*46mm deep	

## **MAGNETIC SWITCH SELF-TEST**

Connect the detector to circuit, and place magnetic close to the detector ( between the terminal 3 and 4 on the bottom side ), if the detector work normally, the red indicator LED would light on.

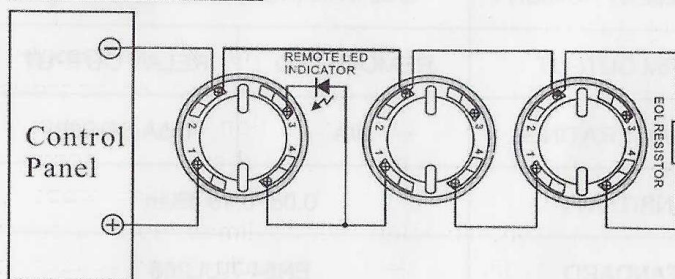
## **INSTALLATION**

1. Connect the wires to the mounting base.
2. Select a proper place (normally mounted on the center of ceiling). Fix the mounting base and then put the detector into the base and twist to fasten it.

## **CONNECTION DESCRIPTION**

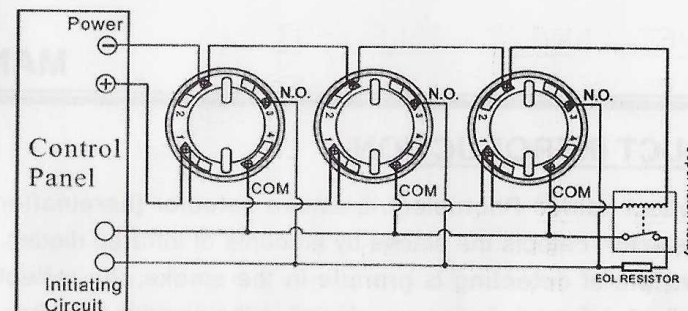
1. 2 wire smoke detectors: base terminals "1" and "2" for DC power input, non-polarized. When remote indicator is used, "1" in must be connected to the positive line in. "4" for DC power positive output. "3" for remote indicator cathode.
2. 4 wire smoke detectors: base terminals "1" and "2" for DC power input, non-polarized. "3" for relay output N.C. or N.O., "4" for relay output com.

## **WIRE DIAGRAM**



### **2 WIRE BASE TERMINALS**

- |                    |                      |
|--------------------|----------------------|
| 2. POWER (-) INPUT | 3. REMOTE LED OUTPUT |
| 1. POWER (+) INPUT | 4. POWER (+) OUTPUT  |



### **4 WIRE BASE TERMINALS**

- |                    |                        |
|--------------------|------------------------|
| 2. POWER (-) INPUT | 3. RELAY OUTPUT (N.O.) |
| 1. POWER (+) INPUT | 4. RELAY OUTPUT (COM)  |

## **NOTICE**

1. The detector can't be installed under worse environment. E.g.: coldest, hottest, dusty, do not move away the dustproof cover until use the detector indeed.
2. Make sure that there is no block within 0.5m from detector.
3. Keep the distance between detector and wall more than 0.5m.
4. Make sure the distance between detectors be less than 15m. And the distance between detector and corner must be less than half of the one between detectors.
5. Horizontally install the detector. If have to be installed slantingly, please keep the angle less than 45 degrees.
6. Base be installed solid, wire connection must be reliable.
7. Recommendations should be carried out every six months a simulated fire test, the test detectors are working properly.
8. For various reason, including, but not limited to changes in environmental conditions, electric disruptions and tampering, the product may not perform as expected. The user is advised to take all necessary precautions for his/her safety and the protection of his/her property.

