

CONVENTIONAL PHOTOELECTRIC SMOKE DETECTOR

MODEL: SD-622-(2/4)



PRODUCT INTRODUCTION

SD-622-(2/4) is a Conventional Photoelectric Smoke Detector that detects smoke using a pair of infrared diodes. The principle of detection is that particles (granules) in the smoke can reflect infrared light. The infrared diodes are placed in a specially designed chamber that blocks external light while allowing smoke to enter freely. In normal condition (no smoke), the diodes receive very weak infrared light. As smoke enters the chamber, the diodes receive infrared light of higher intensity. When the smoke reaches a certain density, the detector triggers an alarm. To minimize interference and reduce power consumption, the emitting circuit adopts pulse signal. The detector is available in 2-wire and 4-wire models.

PRODUCT FEATURES

- Strong adaptability for various circumstances and environments
- SMT design ensures high stability
- Metal shielding for anti-RFI and anti-EMI protection
- Low standby current
- Non-polarized power input
- Flashing LED status indicator
- Alarm relay with N.C./N.O. option (4 wire)
- Remote LED indicator output (2 wire)
- Magnetic switch for self-test function (optional)

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°C ~ +50°C	
ENVIRONMENT HUMIDITY	≤ 95%RH (NO CONDENSATION)	
ALARM OUTPUT	REMOTE LED	RELAY OUTPUT
CONTACT RATING	N/A	0.5A@DC28V
STANDARD	EN54-7, UL268	
DIMENSION	103mm DIAMETER x 53mm HEIGHT	

MAGNETIC SWITCH SELF-TEST

To test the detector, connect it to circuit and place a magnet close to the detector (between the terminal 3 and 4 on the bottom side). If the detector functions normally, the red indicator LED will light up.

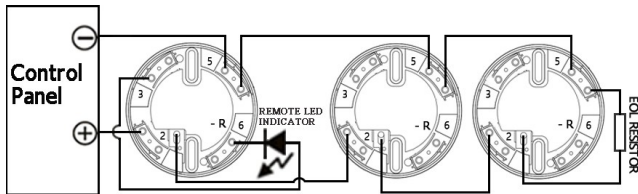
INSTALLATION

1. Connect the wires to the mounting base.
2. Choose a desired place (typically the center of the ceiling)
3. Mount the base securely, then insert the detector into the base and twist to lock it in place.

CONNECTION DESCRIPTION

- **Base terminals “2” and “5” for DC power input**, “2” in must be connected to the positive line in, and “5” in must be connected to the negative line in.
- **2-wire smoke detector with sounder**: “3” for DC power positive output; “6” for remote indicator cathode
- **4-wire smoke detector with sounder**: “6” for relay output N.C. or N.O.; “3” for relay output com.

WIRE DIAGRAM



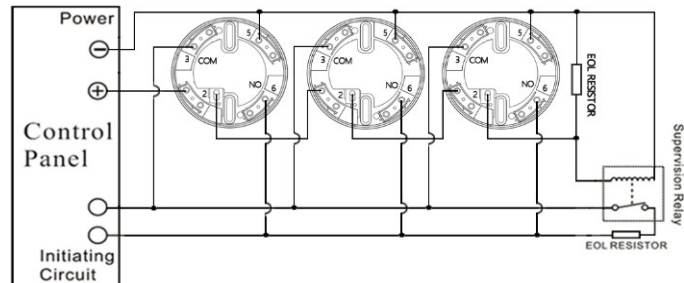
2 WIRE BASE TERMINALS

4. POWER (+) OUTPUT

2. POWER (+) INPUT

5. POWER (-) INPUT

6. REMOTE LED OUTPUT



4 WIRE BASE TERMINALS

3. RELAY OUTPUT (COM)

2. POWER (+) INPUT

5. POWER (-) INPUT

6. RELAY OUTPUT

NOTICE

1. Do not install the detector in harsh environment such as extreme cold, heat, or dusty area. Keep the dustproof cover in place until the detector is ready for actual use.
2. Ensure there is no obstruction within 0.5 meters of the detector.
3. Maintain a minimum distance of 0.5 meters between the detector and any wall.
4. The distance between two detectors should not exceed 15 meters, and the distance from a detector to any corner should be less than half of the spacing between detectors.
5. Install the detector horizontally. If angled installation is necessary, the tilt should not exceed 45 degrees.
6. Mount the base securely and ensure all wiring connections are reliable.
7. It is recommended to perform a simulated fire test every six months to ensure the detector is functioning correctly.
8. For various reasons—including environmental changes, electrical disturbances, or tampering—the product may not always perform as expected. Users are advised to take all necessary precautions to ensure personal and property safety