

## wizmart NB338 Conventional Smoke Detector

The EN-54 and UL approved conventional NB-338 series smoke detectors are engineered to the best quality and durability in accordance with both EN-54 and UL standards. They work with all conventional and intelligent fire control panels, and security panels as well. NB338 also comes as a multisensor smoke and heat detector. Your perfect choice of reliable smoke detectors that completely meets the most strict testing in both EN 54 and UL certified laboratories.

### Features

**SD-1** 12VDC Photoelectric Smoke Detector For Security System.

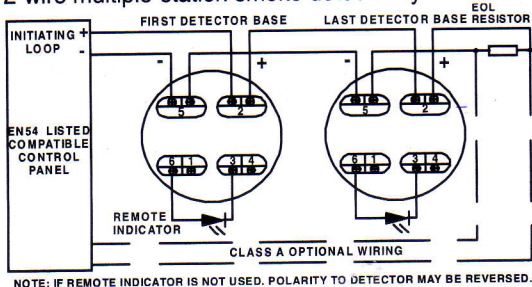
- 4 wire models
- Dual LEDs for 360° visibility
- Advanced detection and discrimination algorithms
- Easy installation and maintenance
- Sleek low-profile housing design
- Durable sensor head
- SMD circuit board design
- Satisfactory quality and reliability guaranteed

## Technical Specification

- Smoke sensitivity: 1.90±0.92% ft obscuration ( UL 268 standard), 0.10~0.14 dB/m ( EN-54 standard )
- Star-up Current: 160 uA maximum
- Reset Voltage: less than 1 volt
- Reset Time: less than 1 second
- Alarm Indicator: LED continuously emitting red light
- Remote Output: 15 mA maximum diode gate
- Temperature Range: -10°C to 50°C (EN), 0°C~38.8°C (UL)
- Humidity: 0 to 95% RH, non-condensing or icing
- Alarm Contact: (for 4-wire) N/O or N/C operation, Form A, 1.0A @ 30VDC / 0.5A @ 125 VAC
- Dimensions: 100mm (dia) x 46mm (ht) with base
- Weight: 130g with base
- IP rating: IP-42

### TYPICAL WIRING DIAGRAM

Figure 1(a) shows the typical wiring diagram of the 2-wire multiple-station smoke detector system.



NOTE: IF REMOTE INDICATOR IS NOT USED, POLARITY TO DETECTOR MAY BE REVERSED.

DO NOT PLACE LINKS BETWEEN THE WIRING POSITIONS OF TERMINALS 2 AND 5 TO PROVIDE POWER SUPERVISION

Figure 1(b) shows the typical wiring diagram of the 4-wire multiple-station smoke detector system.

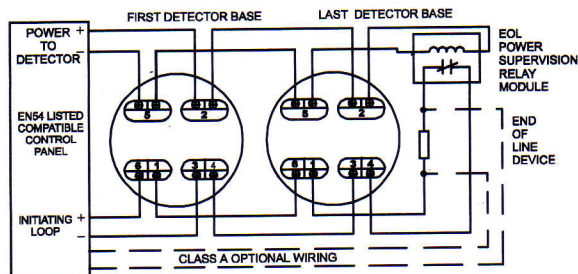


Fig. 1.B Installing the 4-wire multiple station smoke detector base

DO NOT PLACE LINKS BETWEEN THE WIRING POSITIONS OF TERMINALS 2 AND 5 TO PROVIDE POWER SUPERVISION

### WARNING

**TO PREVENT DETECTOR CONTAMINATION AND SUBSEQUENT WARRANTY CANCELLATION, THE SMOKE DETECTOR MUST REMAIN COVERED UNTIL THE AREA IS CLEAN AND DUST FREE.**

### INSTALLING THE BASE

- To insure proper installation of the detector head to the base, all the wires should be properly addressed at installation:
  - Position all the wires flat against terminals.
  - Fasten the wires away from connector terminals.
- If you use a jumper wire to connect the poles of terminal 2 and 5 when testing the detector loop continuity, be sure to remove the jumper wire prior to the installation of the detector head.
- The end-of-line device shown in fig. 1(a) and 1(b) should be compatible with the control unit. The end-of-line supervisory relay used should be rated for the DC power voltage used.
- Open area smoke detectors are intended for mounting on a ceiling or a wall in accordance with the fire standard in your country.
- The base of the smoke detector can be mounted directly onto an electrical junction box such as an octagonal (75mm, 90mm or 100mm), a round (75mm), or a square (100mm) box without using any type of mechanical adapter.

### INSTALLING THE HEAD

- Align the components as shown in Figure 2.
- Mate the detector head onto the base and twist clockwise to secure it.
- Do not install the detector head until the area is thoroughly cleaned of construction debris, dusts, etc. The maximum number of smoke detector installed in the same loop is 30 units.

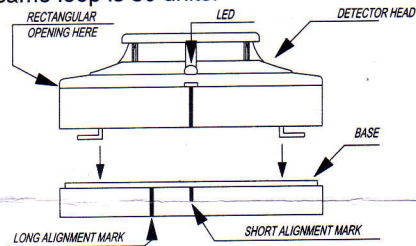


Fig.2 Mating detector head onto base

Figure 2 Mating detector head onto base

### ADJUSTING THE RELAY FOR NO/NC

The normal condition for the relay is "normally open" (NO).

- To adjust the normal condition of the relay to "normally closed" (NC), insert a screwdriver into the rectangular hole located on the side between the front cover and base and rotate to remove the front cover.
- Refer to figure 3. There is a jumper head next to the relay on the PCB. Remove the jumper head and reinsert it in the NC position.
- Carefully replace the front cover.

Relay contact rating:  
1A @ 30VDC,  
0.5A @ 125VAC.

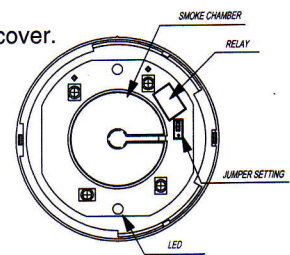


Fig.3 Schematic of detector structure

Figure 3 Schematic of detector structure  
When front cover is open.

### TESTING

- All the alarm signal services, releasing device and extinguisher system should be disengaged during the test period and must be re-engaged immediately at the conclusion of testing.
- After energizing the detector head for approximately one minute, check to see the indicator green LED flashing once every 3-5 seconds. If green LED fails to flash, it indicates the non-functioning of the detector or faulty wiring. Re-check the wiring or replace the detector if necessary.
- Allow smoke from a cotton wick or a test smoke aerosol to enter the detector-sensing chamber for at least 10 seconds. When sufficient smoke has entered the chamber, the detector will signal an alarm, this being visible by a continuous illumination of the LED. Reset each detector and/or control unit before attempting to test any additional detectors in the same zone. If the alarm fails in this step, it indicates a defective unit, which requires service.