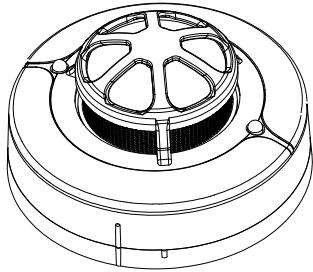


# INSTALLATION AND MAINTENANCE INSTRUCTIONS

## Model No.:AW-D138C-4W Ver1.0

### 4-Wire Conventional Smoke Detector



#### BEFORE INSTALLING

**NOTICE:** This manual should be left with the owner/user of this equipment.  
**IMPORTANT:** The detector must be tested and maintained regularly following the proper authorities' requirements. The detector should be cleaned at least once a year.

#### 1. GENERAL DESCRIPTION

The conventional smoke&heat detector combine a photo electronic sensing chamber and a temperature heat detector.

This detector is designed to provide open area protection and to be used with the conventional fire alarm panel.

Two LEDs on each detector provide local 360° visible alarm indication. They flash every six seconds indicating that power is applied and the detector is working properly. The LEDs latch on in alarm. LEDs will be off when a trouble condition exists indicating that the detector sensitivity is outside the listed limit.

The detector has an automatic reset function.

#### 2. SPECIFICATIONS

Operating Voltage Range: 9~28VDC Volts Non-polarized  
 Standby Current: ≤120uA @24VDC NO  
 ≤12mA @24VDC NC  
 Maximum Alarm Current (LED on): ≤20mA @24VDC NO  
 ≤5mA @24VDC NC

Alarm relay output capacity: 0.5A @30VDC (It is suitable for resistive load. If it is inductive load, the diode should be connected in parallel across the load. For specific wiring, please refer to Figure 1.)

Operating Humidity Range: ≤95%RH(40°C±2°C)RelativeHumidity, Non-condensing  
 Operating Temperature Range: -10°C to 50°C (14°F to 122°F)  
 Smoke Alarm Sensitivity: 0.18-0.3 dB/m  
 Fix Temperature Alarm: 57°C (135°F) A2R  
 Height: 55.7 mm installed in Base  
 Diameter: 100 mm

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

#### 3. INSTALLATION

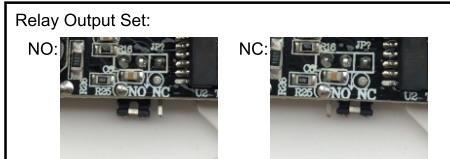
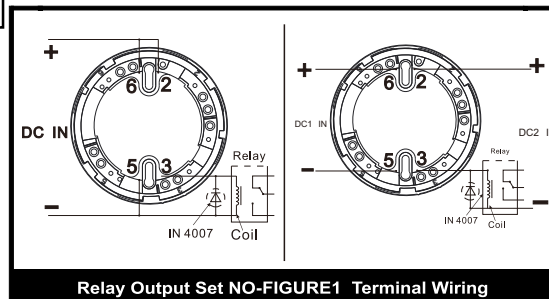
**NOTE:** All wiring must conform to applicable local codes, ordinances, and regulations.

##### INSTALL THE DETECTOR BASE

1. Open area smoke or heat detectors are intended for mounting on a ceiling or a wall in accordance with the fire standard in your country.
2. Attach mounting base to ceiling or wall. The base of the 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.
3. Position all wires flat against terminals, and fasten the wires on the terminals, See Figure 1.
4. Terminals functions description:

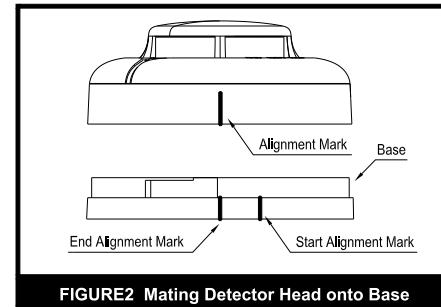
**Terminal 6: DC POWER IN (Non-polar)**  
**Terminal 5: DC POWER IN (Non-polar)**

**Terminal 2: ALARM OUT (Non-polar)**  
**Terminal 3: ALARM OUT (Non-polar)**



##### INSTALL THE DETECTOR HEAD

1. Align detector head alignment mark line with the base's start alignment mark line as shown in Figure 2
2. Push the detector head into the base while turning it clockwise to secure it in place.
3. Do not install the detector head until the area is thoroughly cleaned of construction debris, dusts, etc.
4. After all detectors have been installed, apply power to the control panel.
5. Test the detector(s) as described in the TESTING section of this manual.
6. Notify the proper authorities that the system is in operation.



**FIGURE2 Mating Detector Head onto Base**

#### REMOVE POWER FROM THE PANEL BEFORE INSTALLING DETECTORS.

#### 4. TESTING

Before testing, notify the proper authorities that the smoke/heat detector system is undergoing maintenance and will temporarily be out of service. Disable the zone or system undergoing maintenance to prevent unwanted alarms. Detectors must be tested after installation and as part of periodic maintenance.

#### NOTE:

1. Before testing the detector, check to ensure the LEDs blink. If they do not, the detector has lost power (check the wiring), it is defective (return it for repair), or the detector sensitivity is outside the listed limits.
2. 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.

**3. If the LED lights flashing, the detector is energized after one minute (LED light flashes 10 times), before they can be tested.**

#### SMOKE SENSOR TESTING (only for smoke detector and smoke & heat detector)

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 panel 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.

#### HEAT SENSOR TESTING

A hair dryer of 1000-1500 watts should be used to test the heat sensor. Direct the heat toward the heat sensor, holding the heat source approximately 12 inches from the detector in order to avoid damaging the plastic housing. The detector will reset only after it has had sufficient time to cool.

A sensor that fails any of these tests should be cleaned as described under MAINTENANCE, and retested. If the sensor fails after cleaning, it must be replaced. When testing is complete, restore the system to normal operation and notify the proper authorities that the system is back in operation.

#### 5. MAINTENANCE

Before removing the detector, notify the proper authorities that the smoke detector system is undergoing maintenance and will be temporarily out of service. Disable the zone or system undergoing maintenance to prevent unwanted alarms.

1. Remove the detector to be cleaned from the system.
2. Remove the detector cover by pressing firmly on each of the four removal tabs that hold the cover in place.
3. Vacuum the screen carefully without removing it. If further cleaning is required continue with Step 4, otherwise skip to Step 7.
4. Remove the chamber cover/screen assembly by pulling it straight out.
5. Use a vacuum cleaner or compressed air to remove dust and debris from the sensing chamber.
6. Reinstall the chamber cover/screen assembly by sliding the edge over the sensing chamber. Turn until it is firmly in place.
7. Replace the cover using the LEDs to align the cover and then gently pushing it until it locks into place. Make sure that the thermistors do not become bent under the cover.
8. Reinstall the detector.
9. Test the detector as described in TESTING.
10. Reconnect disabled circuits.
11. Notify the proper authorities that the system is back on line.

#### THREE YEARS LIMITED WARRANTY STATEMENT

We warrant its enclosed detector to be free from defects in materials and workmanship under normal use and service for a period of three years from date of manufacture. We make no other express warranty for this detector. No agent, representative, dealer, or employee of the Company has the authority to increase or alter the obligations or limitations of this Warranty. The Company's obligation of this Warranty shall be limited to the repair or replacement of any part of the detector which is found to be defective in materials or workmanship under normal use and service during the three year period commencing with the date of manufacture. After phoning our technical support number for a Return Authorization number, send defective units postage prepaid to our local representative office. Please include a note describing the malfunction and suspected cause of failure. The Company shall not be obligated to repair or replace units which are found to be defective because of damage, unreasonable use, modifications, or alterations occurring after the date of manufacture. In no case shall the Company be liable for any consequential or incidental damages for breach of this or any other warranty expressed or implied whatsoever, even if the loss or damage is caused by the Company's negligence or fault. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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