

FW511 Smoke Detector



DESCRIPTION

The FW511 is an intelligent Smoke Detector used with the FW500 Detector Base, is a UL listed component according to UL 268 and ULC-S529 for Fire Protective Signaling Systems for indoor use. It features a slim design which combines visual appeal with a high standard of reliability. It responds quickly and dependably to a broad range of fires. The detector has a Microcontroller Unit (MCU), performing comprehensive self-diagnostic tests and result analysis. The FW511 is intelligent, addressable, and takes one address on the Signaling Line Circuit (SLC) of the fire alarm control panel.

ATTENTION

The products must be installed in accordance with NFPA 72, CAN/ULC-S524, and/or Canadian Electrical Code depending on country of installation. Check information of equipment used in the system by other manufacturers for any guidelines or restrictions.



The detector should never be installed in the following locations: areas with excessive exhaust fumes, kitchen areas, near fireplaces, furnace rooms, etc. Smoke detectors are not to be used with detector guards unless the combination has been evaluated and found suitable for that purpose.

NOTE

Do not paint this device.

Any material extrapolated from this document or from Maple Armor's instructions or other documents describing the product for use in promotional or advertising claims, or for any other use, including description of the product's application, operation, installation, and testing is the sole responsibility of the user. Maple Armor will not assume any liability for such use. In no case will Maple Armor's liability exceed the purchase price paid for a product.

SPECIFICATION

Nominal Voltage	24VDC
Voltage Range	17.6 to 25.5VDC
Standby Current	0.14mA
Alarm Current	1mA
Smoke Sensitivity	1.6% ft to 2.3% ft
Operating Temperature	32°F to 100°F (0°C to 38°C)
Operating Humidity	0% to 93% RH
Diameter	4.13 in. (105mm)
Height (with base)	1.87 in. (47.5 mm)
Weight (with base)	4.6 oz (132 g)
Mounting	FW500 Base
Mounting Orientation	Ceiling, wall
Spacing	30 feet (9.1 m)

INSTALLATION

1. Mount the FW500 base onto a 2x4" electrical box using the screws provided, see Figure 1. The installation hole pitch is illustrated in Figure 2.

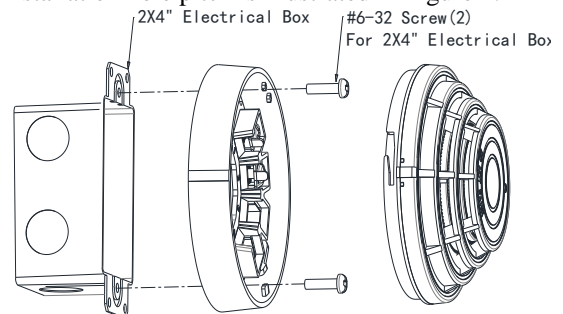


Figure 1. FW500 Base Installation

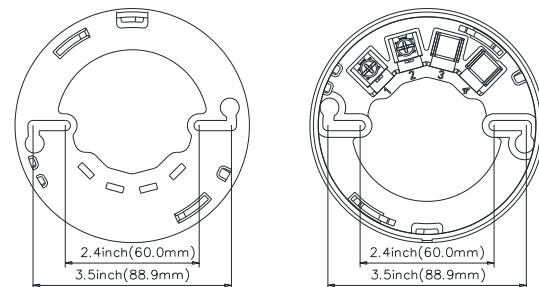
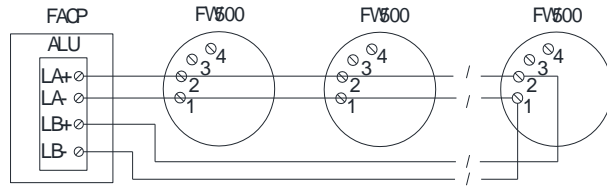


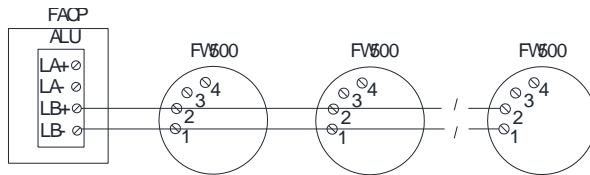
Figure 2. Wiring Terminals and Pitch of Hole

INSTALLATION, Continued

- Wire the SLC to the detector base, as illustrated in Figure 3. There is no polarity distinction between terminal 1 and terminal 2.



(a) Class A Circuit



(b) Class B Circuit

Figure 3. Wiring Diagram

- Set the detector address (1-252). Use the hand-held Programmer ReadWriter FW411. Refer to the FW411 Manual.
- Put the detector onto its base and secure it into position by turning clockwise.
- Apply power to the control unit to activate the SLC.

TESTING

- Before testing, inform the proper authorities that the system is undergoing maintenance and will temporarily be put out of service. Disable the system to prevent unwanted alarms.
- Make sure the indicator LED on the detector's surface is flashing. Failure to flash indicates a non-functioning detector or a faulty wiring. Check the wiring and remount the detector.
- Go/No Go Field Test: Use the aerosol, Solo A4. The LED on FW511 should latch steady-on and the system should go into alarm.
- Once the testing is completed, set the system back to normal operation and inform proper authorities.

MAINTENANCE

The detector needs to be tested on a regular basis. Refer to the Testing section for more information about the procedure. The detector has an automatic-drift-compensation feature to provide accurate-sensitivity detection. When the drift is out of range, the "Init.Dev_Bad" trouble will be displayed on the FACP, which means the sensitivity may be outside the limits and the detector needs cleaning.

- Before cleaning, notify the proper authorities that the system is undergoing maintenance and will be temporarily out of service.
- Disable the system to prevent unwanted alarms.
- Remove the detector to be cleaned from the system.
- Remove the detector cover and the maze cover.
- Use a vacuum cleaner or compressed air to remove dust and debris from the maze.
- Reinstall the detector.
- Test the detector as described in the Testing section.
- Notify the proper authorities that the system is back on line.

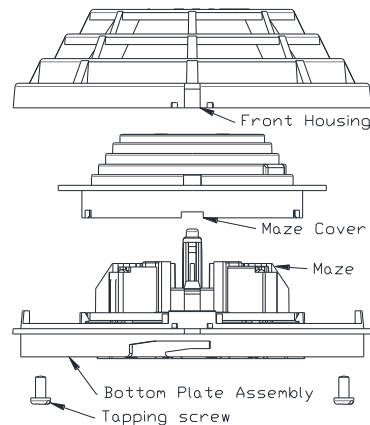


Figure 4. Cleaning