ISO9001

CE QACE202401069

NFC-500S-UL

CONVENTIONAL PHOTOELECTRIC SMOKE DETECTOR

INSTALLATION GUIDE

DESCRIPTION

NEVERFIRE smoke detectors are low profile and have dual LEDS with 360-degree visibility, they are flashing in standby state but in fire state, they light up continuously in red. All data is written on the detector with lasers so that it cannot be erased or changed at all.

NFC-500S-UL photoelectric smoke detectors have been designed to EN54-7 and certified CE QACE20241069 (1) which play a vital role in ensuring that NEVERFIRE products placed on the market of the world are safe.

NEVERFIRE products certified ISO9001:2015(1) Quality management systems and requirements, which is global standard for trusted goods and services.

FEATURES

√ Superior performance and reliability.
√ Attractive new design.
√ Infrared Scattering Technology.
√ Meet EN54-7 Requirements.
√ Remote alarm indicating LED output.
√ Low power consumption.
√ Two–wire, plug-in conventional detection technology.
√ Designed for Fast and easy installation.
√ Wide angle LED's visibility (dual red color indication).
√ Compatible with most of fire alarm panels.
√ 4" mounting base detector.
√ Compatible with all NEVERFIRE conventional bases.
√ Simplified sensitivity measurement.
√ Removable detector cover and chamber for easy cleaning.
√ High signal-to-noise ratio and sensitivity stability are effective in a wide range of environmental conditions.

TECHNICAL DATA

Model	NFC-500S-UL
Operating Voltage	9~33V DC from fire alarm control panel IDC
Standby current	40 µA
Surge current	270 µA
Alarm current	15 mA
Startup time	10seconds
Smoke Sensitivity	0.08 dB\m – 0.12dB\m
Remote Output	15mA max. open collector
installation space	6m between each detector
OPERATING CONDITION	
Storage Temperature Range	-10ºC to 50ºC (14ºF to122ºF)
Operating Temperature Range	-10C to 37ºC (14ºF to 98.6ºF)
Operating Humidity Range	0%-95% Relative Humidity, non-condensing
MECHANICAL SPECIFICATIONS	
Ingress Protection Rating	IP42
Material	-Detector Housing: ABS (Fire Proof Plastic) -Terminals: Iron Nickel plated -stainless Steel
Color	White
Diameter	100mm Dia.
Height	55mm with base
weight	145g with base
Packaging	90Unit\Carton
Carton Dimensions	55*33*38cm

DETECTOR'S BOTTOM AND ORIENTATION BASE

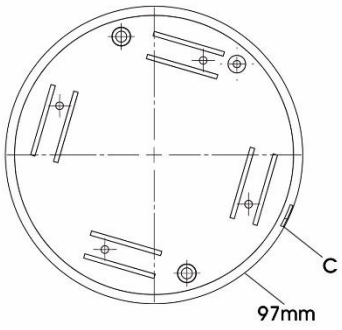

Fig.1 Bottom of the detector

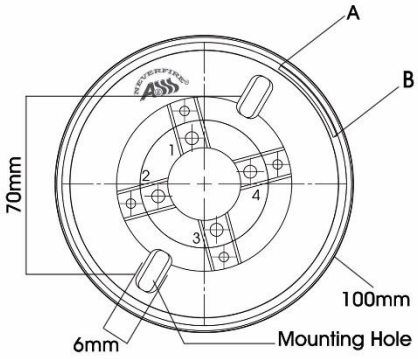

Fig.2 Orientation base

1. Remote indicator (-)
2. Zone (+)
3. Remote indicator (+) / Zone out
4. Zone (-) In / out

NOTE

This Terminal base is matches with NEVERFIRE detectors only.

ALALAMIA FOR SAFETY & SECURITY SYSTEMS CO. (ASSS)
16C, south industrial Zone,10th of Ramadan City, Sharkyia, Egypt.
www.asss-eg.com

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WIRRING AND MOUNTING

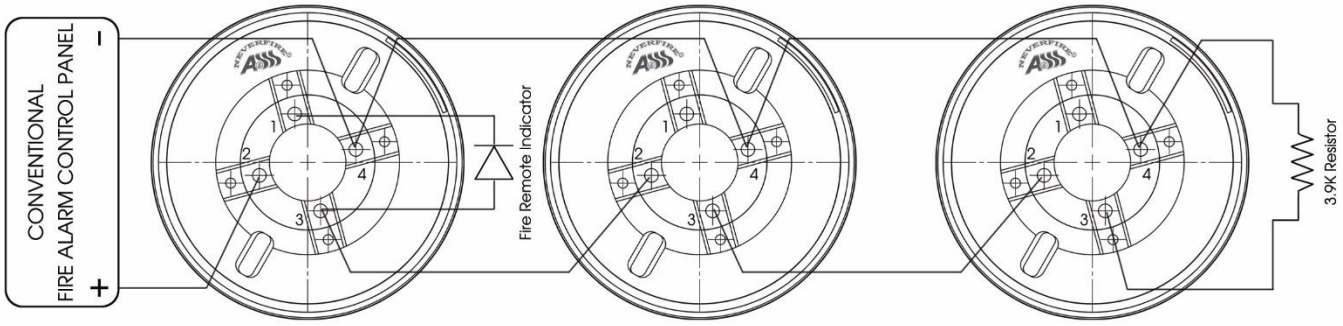

Fig.3 NFC-500S-UL Wiring

As Showing in Fig. 3 There are four terminals with numbers on the base, Terminal No.2 connects with the anode of the output end of compatible FACP, Terminal No.3 connects with terminal No.2 of the next base as output, Terminal No.4 connects with terminal No.4 of the next base and the cathode of the output end of compatible FACP, Terminal No. 3 with terminal No.1 connected to LED Indicator.
A 3.9k/1w terminal resistor can be connected between terminal No.3 and No.4 of the last base in a loop.

NOTE

Before Installing the detector, disconnect the power from the loop and verify that all bases are securely installed and that the wiring polarity is correct at each base.

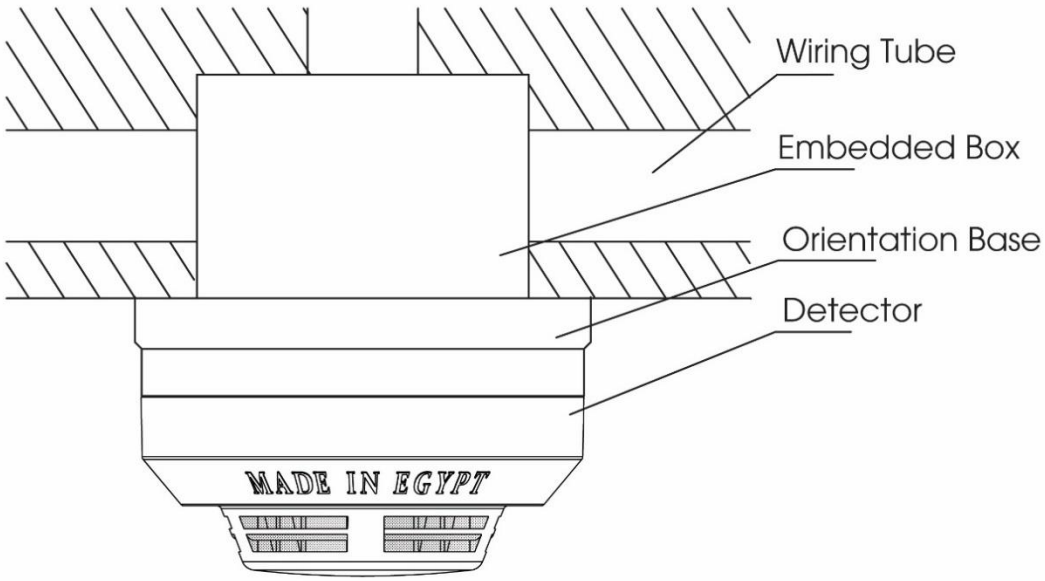

Fig.4 NFC-500S-UL Mounting

There are 3 marks on the orientation base and the detector bottom to show the installation direction. “A” and “B” marks on the orientation base of the detector and “C” mark on the bottom of the detector. when installing aligning the mark “C” to “A” and clockwise to “B”, then the detector is installed.

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During mounting the detector, some points should be put in consideration as the following: -

1) The horizontal distance from the detector to the wall or the girder should not be less than 0.5m.
2) There should not be any obstruction within 0.5m around the detector.
3) The horizontal distance from the detector to the blast hole of any air-conditioner should not be less than 1.5m; that to the multi-hole ceiling blast should not be less than 0.5m.
4) When installing detectors on corridor ceilings not wider than 2m, they should be placed in the middle. The spacing should not be more than 12.4m. The distance from the detector to end wall should not be more than half of the spacing.
5) The detector should be installed horizontally. If it has to be installed aslant, the gradient angle should not be more than 45º.

TESTING

1. Before testing, notify the proper authorities that the system is undergoing maintenance and will temporarily be out of service.
   Disable the zone or system undergoing maintenance to avoid unwanted alarms.
2. Test the detector after installation and regular maintenance.

Test Method

i Field testing can be done by Smoke Detector Sensitivity Tester, adjust its obscuration to 1.7% /ft to 2.6% /ft according to the manual, start testing until the detector alarms. If the tester shows “pass”, the detector passes the test.

ii You can also use similar smoke generating tools (cigarette or smoke gun) and blow the smoke at the smoke-in hole into the detector until it alarms.

Note: This test is only used for verifying the ability of the detector to alarm after smoke enters. It cannot be used to test its sensitivity.

iii After testing, reset the detector by power-cut over 5s. Notify the proper authorities the system is back in operation.

V If a detector fails in testing, clean it as described in "Maintenance" and test again. If it still fails, please return it for repair.

MAINTENANCE

The minimal requirement for detector maintenance should consist of cleaning surface dust by using a vacuum cleaner. Cleaning programs should comply with NFPA and local environments. Cleaning of the internal chamber should be done by NEVERFIRE technical representative only.

i the detector should be cleaned at least once a year to ensure normal operation of the system.

ii Before cleaning, notify the proper authorities that the system is undergoing maintenance and will temporarily be out of service.
   Disable the zone or system undergoing maintenance to avoid unwanted alarms.

iii Remove the detector to be cleaned. Take down the top cover by prizing along the three recesses with a minus screwdriver and clean the dust on the insect net by a vacuum pump or cleaner; if there is too much dust or it cannot be totally cleaned, you can take down the sensing chamber and pull out the insect net along axle, clean or replace the insect net, then remove the dust on the sensing chamber by vacuum pump or cleaner, and re-install the insect net and sensing chamber (note to install them to the end).
   Align the orientation marks on the two parts of enclosure and re-install the top cover.

IV Test the detector after re-installation.

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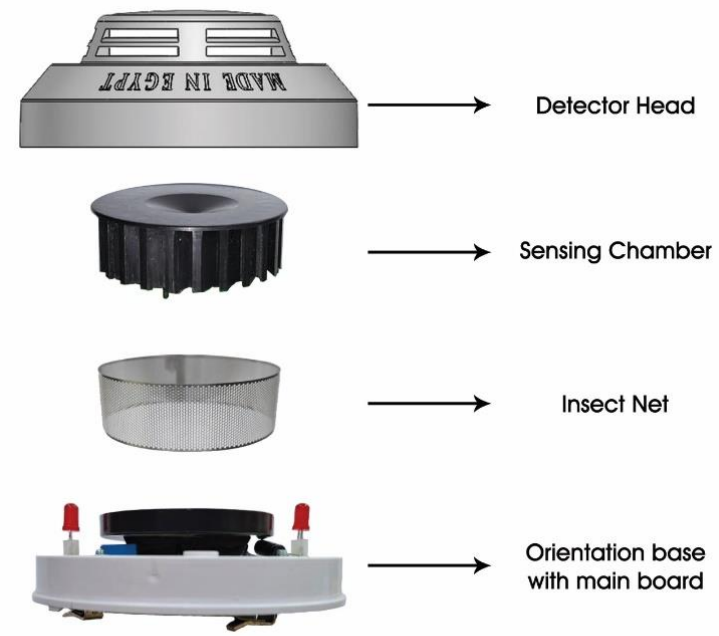

Fig.5 NFC-500S-UL Cleaning

WARRANTY

NEVERFIRE warrants that product from defects in design, materials and workmanship during the warranty period ensuring customers' confidence in product quality and performance.
For comprehensive information, including installation guidelines and compatibility details, please consult NEVERFIRE Installation Manual or reach out to our technical support team. Anybody, including the agents, distributors or employees, is not in the position to amend the contents of this warranty.

NOTE

1. The detector should be tested regular, at least one a year.
2. We recommend that the dust cover should not be removed until the project has been put in usage to prevent airbome dust particles from entering the detector.
3. To make sure the detector is always in good operation state, please maintain it according to NEVERFIRE's recommendations and relative national code.

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