



Perimeter Intruder Detection System

Model NS200M

Security Controller



Instruction – NS Controller

INTRODUCTIONS

Thank you for purchasing the NXTAR NS200M Security Controller. This remarkable component has been engineered to provide its user with many years of reliable sensing capabilities utilizing fiber optics as its medium. Please take a few minutes to read this manual thoroughly before you connect and operate the NS200M.

As the operation may be multi-layered and the configuration options are very flexible, you are encouraged to discuss the requirements with your NXTAR Specialist in your country for technical assistance.



FEATURES

2 Zones

2 Individually calibrated zones to cover a maximum of 600m of perimeter on fence deployment, Powered by extremely high powered, stable light source, to give you constant and maintenance-free performance, all these housed in a strong cast aluminum casing.

Intelligent Discrimination

High performance software to calibrate the zones individually and the ability to monitor them simultaneously. Equipped with intelligent discrimination to help eradicate Nuisance Alarm and False Alarm to the lowest possible industrial standard. The NS200M is also able to identify the presence of Global Noises without the presence of weather station

100% Passive Outfield

NXTAR Systems is one of the few who is able to achieve a 100% passive components outfield. Our systems don't require any electrical powering once outfield. This is a very strong feat as it requires no deployment of electrical cables for powering and signal amplification for long distance transmission. It also enabled deployment within a faster.

Plug and Play

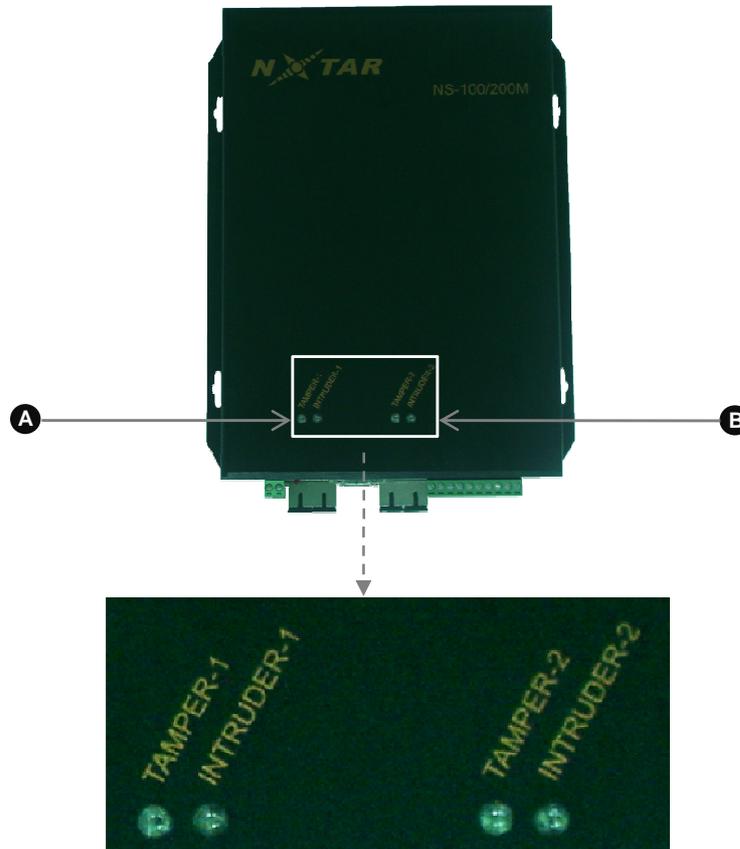
NXTAR enables the user and installer to connect all fiber optics with SC connectors. There is no need to expensive and fragile splicer to connect the fiber cables to their respective junctions/terminal boxes.



SYSTEM CHARACTERISTICS

- ①. **NXTAR Fiber Optic Intrusion Detection System** is based on the theory of “Interferometer”, utilizing fiber as a highly sensitive medium, indirectly or directly sensing pressure, vibration. The detected signals will be sent back to controller for further intelligent analysis, effectively discriminating the real human intrusion from false/nuisance alarm caused by small animals or global noise.
- ②. All NXTAR NS System come equipped with a NC/ CC dry contact which enables a wide range of security equipments to link up with our system. Upon triggering a TAMPER or ALARM signal, the NS communication and monitoring unit will trigger the NC/ CC contacts to perform its respective task. It can also be connected to speed dome cameras to zoom in on its present location to see and record the intrusion.
- ③. We at NXTAR understand that it is almost impossible to demand a perimeter, especially a big one, to be of the same landscape and environment. Therefore, the NS system can accept Individual zone settings for finer monitoring resolution. The perimeter can be segregated into as many zone as desired, but each should not exceed 100m by 1.5m for underground buried installation. To successfully apply the sensing fiber to achieve good Signal to Noise ratio, the medium in which it is deployed must also be uniform. This guide will provide our recommended installation methods and selection of medium, and should be followed as closely as possible to achieve optimum results.

FRONT PANEL



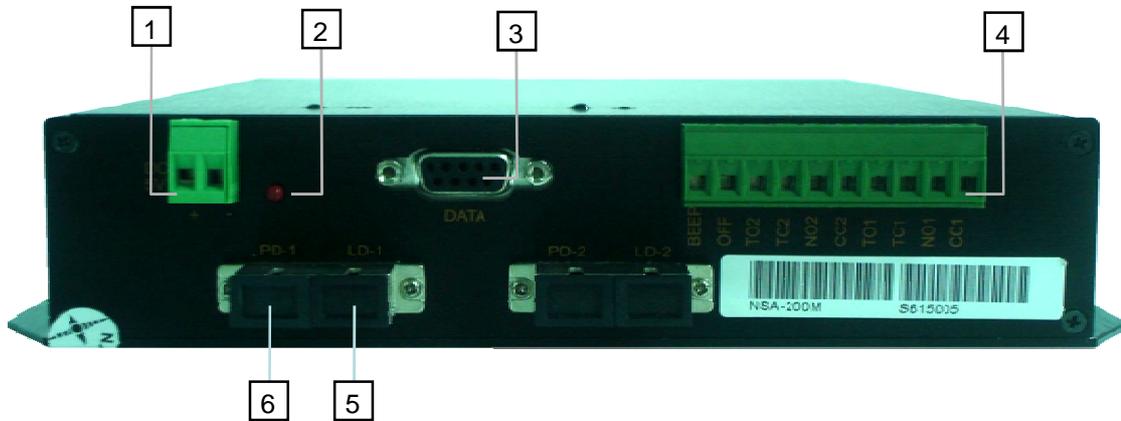
A TAMPER LED Indicator

When the LED is GREEN, it indicates normal operation and there is no breach in the fiber connection. It also signifies that the controller is ready for Operation. When LED is RED, it indicates that there is a breach somewhere in the system. This may be tampered or damaged by intruders. Thorough inspection is required at the respective zone or contact your dealers and supplier for an inspection. User can also refer to the operational software to detect if tampering occurs at the Leading Fiber or Sensing Fiber. User can refer to “Installation – System Setting and Calibration” for more details required. Necessary action should be carried out while the respective TO/TC contacts will also be activated accordingly less than 5S.

B INTRUDER LED Indicator

When the LED is no lighting, it indicates normal operation and that there is no intruder in the perimeter or the detection zones. When the LED is RED and blinking, it indicates that is a Warning Signal. It also indicates that there are some unknown project approached or touched detection area. When the LED is RED in any zone, it indicates that there is a intrusion in that detection zone. Necessary action should be carried out while the respective NO/CC contacts will also be activated accordingly at real time.

BOTTOM PANEL



1 DC Inlet

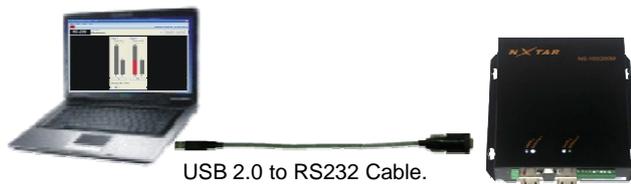
Connect to DC Adapter or Supply. The NS200M can take 5Vdc, 1A to power the system.

2 Power Tamper LED warning

LED indicates warning when the DC Power is reversely connected.

3 DATA Transmission Port

The controller output uses a RS-232 interface. It allows the user to communicate and calibrate the settings with a computer. After initial setting, it can be disconnected to allow independent operation.



4 Dry Contact

INTRUDER

There are 2 sets of dry contacts in this row. It is labeled "NO1/CC1" to "NO2/CC2" to trigger other devices of Zone 1 to 2 respectively if there is a presence of intruder in one of the zone.

TAMPER

There are 2 sets of dry contacts in this row. It is labeled "TO1/TC1" to "TO2 / TC2" to trigger other devices of Zone 1 to 2 respectively if there is a tampering in any of the zones. A check is required to see if there is a disconnection or breach in any of the connection or fibers outfield.

ACCESS CONTROL

Activate Entrance Channel Setting for access control use.

BOTTOM PANEL

Dry contact Status	NO1 & CC1	TO1 & TC1	NO2 & CC2	TO2 & TC2
Power off	Shunt	Shunt	Shunt	Shunt
Normal	Open	Open	Open	Open
CH1 TAMPER	Open	Shunt	N/A	N/A
CH1 INTRUDER	Shunt	Open	N/A	N/A
CH2 TAMPER	N/A	N/A	Open	Shunt
CH2 INTRUDER	N/A	N/A	Shunt	Open

Table 1 Dry contact status

5 Light Source Out LD1-LD2

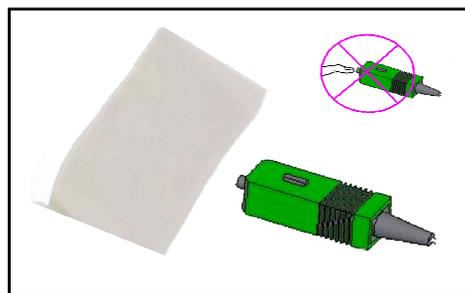
This is the output for the light source to send its light pulse into the connection. Do not stare into the output at any time during operation as it can caused permanent damaged to the eye.

6 Signal Input PD1-PD2

There are 2 sets of inputs to receive Tamper or Intruder signal from Zone 1 to 2. Please clean the connectors prior to connecting the SC connectors into their respective socket here. Do not stare into the sockets and connectors at all time to prevent permanent damaged to the user's eyes.

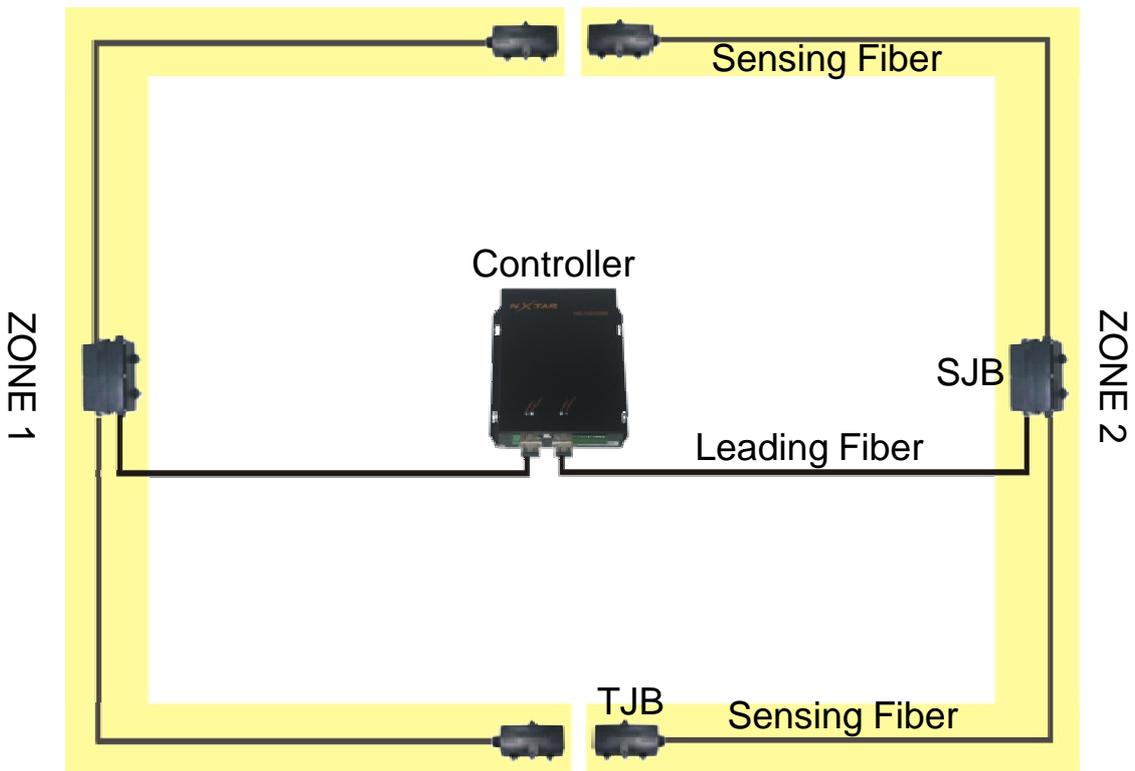
Cleaning of SC/ APC Connectors

Upon removing the covers, the SC/ APC connector can be accessed. Each SC/ APC connectors are to be cleaned individually with 99% alcohol and lint-free clean swipes.



SYSTEM STRUCTURE

Installation – NS Controller





SYSTEM TESTING

The objective of these tests is to verify that the NS200M Controller is working properly.

- 1) Make sure you have cleaned the connectors of LD with 99% Alcohol Solutions and clean swipes before connecting it into the socket.
- 2) Make sure you have cleaned the two SC connectors of PD1 to PD2 with 99% Alcohol Solutions and clean swipes before connecting them into their socket.

NOTE 1: The tip of the SC connectors are made of ceramic and are not to be touched by bare fingers. When connecting, please ensure that the tip does not touch the sides of the sockets!

- 4) Turn system on and wait for 5 seconds.
- 5) All the LED in the "TAMPER" should be GREEN. If any of the LEDs is RED, please to check optics loop of detection.
- 6) Connect the controller to PC with RS232, and activate NSS for parameter setting.
- 7) Please take extra care when you see the label below. Direct exposure of the eye to the tip of connectors can caused permanent damage to the user.



SPECIFICATIONS

Controller:

- 1) Power Spec: DC 5V / 2A

Interface Spec:

- 1) RS-232 X 01pc
- 2) Relay Contact
 - i) 120Vac/ 10A - 250Vac/ 7A,
 - ii) 24Vdc/ 10A
- 3) Intruder LED x 02
- 4) Tamper LED x 02
- 5) Beeper x 01

Mechanical Spec:

- 1) **Dimension:** 260mm x 205mm x 44.6mm (L x W x H)
- 2) **Net Weight:** 1.2kg

Operation Conditions:

- 1) **Operating Temperature** - 20°C ~ 60°C for mainframe
- 2) **Humidity** (Non-Operating) 30% ~ 95% (non-condensing)

Installation – NS Controller

DIMENSION

