




# List of detection controller specifications and functions

|  |  | NS-200M (outdoor type)   | NS-200S (home type)   | NS-400/600C (commercial type)  | NS-600R (industrial type)  |
|--|--|--|---|--|--|
|  |  |   |  |    |   |
| 1  | System theory                                    | PIFOMIS (polarization insensitive fiber optic Michelson interferometric sensor)  |   |  |  |
| 2  | HARDZONE defense design structure                | Each zone of detection functions independently. Even if one zone is destroyed, the other zones still work perfectly to secure the remaining perimeter. Completely solve the fatal shortcomings of the destruction of one zone of the software partition (SOFTZONE), and the entire zone completely loses its defense function.               |   |  |  |
| 3  | Zones of Detection                               | 2 Zones  |   | 4 or 6 Zones   | 6 Zones  |
| 4  | Controller placement                             | Outdoor electrical box   |   | Indoor (surveillance center)   |  |
| 5  | Secured Length/zone                              | ≤300m  |   |  |  |
| 6  | Suitable for use                                 | Large areas such as fenced or fenced airports, power plants, petrochemical plants, ports, prisons, borders, and military camps   | Families with fences or walls   | Small and medium-sized defense areas such as fenced or fenced communities, schools, factories, collective farmhouses, etc. | Large-scale defense areas such as airports, power plants, petrochemical plants, ports, prisons, borders, military camps with fences or walls |
| 7  | Input power                                      | connected to an external DC5V input, with a power supply attached, input AC100V ~ 240V   | AC 100V ~ 240V  |  |  |
| 8  | Power consumption                                | ≤5W  |   |  | ≤10W   |
| 9  | Operating temperature                            | -20°C ~ 60°C   | -20°C ~ 50°C  |  |  |
| 10   | Storage temperature                              | -20°C ~ 60°C   |   |  |  |
| 11   | Laser di-oxide wavelength                        | 1535nm ~ 1565nm  |   |  |  |
|  | Laser diode constant temperature protection      | No   |   |  | Yes (25°C ± 1°C)   |
|  | DFB laser output power                           | Coaxial 4mW  |   |  | Butterfly 10mW (Laser stability ± 0.1dB)   |
| 12   | Sensing & detection medium                       | Fiber  |   |  |  |
| 13   | Sensing signals                                  | Vibration / Pressure   |   |  |  |
| 14   | Operating interface                              | Computer mounting the NS (NXTAR) software  | Controller buttons and screen or Computer mounting the NS (NXTAR) software        |  | Computer mounting the NS (NXTAR) software  |
|  | PC connection interface                          | RS232 to USB A type  | USB Mini type to USB A type   | RS232 male to USB A type / USB B type to USB A type  | RS232 male to USB A type   |
|  | Other communication interface                    | Can be converted to other communication interfaces such as RJ45 through a converter  |   |  |  |
| 15   | Sensitivity parameter setting                    | Level with 1~99 value setting with 4 dynamic range setting   |   |  |  |
|  |  | Period with 1~99 seconds setting   |   |  |  |
|  |  | Counts within sensing period   |   |  |  |
| 16   | Pre-warning indication                           | INTRUDER from non-lit to red blink   |   | Indicator light from green to red blink  | WARNING/INTRUDER from non-lit to red blink   |
| 17   | Intrusion indication                             | INTRUDER blink in red to lit in red  |   | Indicator light from blink in red to lit in red  | WARNING/INTRUDER from blink in red to lit in red   |
|  | Intrusion alarm relay status                     | Relay CCn & NOn become short from open (n=1 ~ 2)   | Relay NC-nI & CC-nI become short from open (n=1 ~ 2)                              | Relay IO1/IC1 & IO2/IC2 become short from open   | INTRUSION Relay NCn-CCn become short from open (n=1~6)   |
|  | Intrusion alarm horn sound prompt                | Yes (Beep sounds from controller)  |   |  |  |
| 18   | Tamper indication                                | TAMPER from lit in green to green blink  |   | Indicator light from lit in green to green blink   | TAMPER from lit in green to lit in red   |
|  | Tamper relay status                              | TAMPER relay TCn & TOn T become short from open (n=1 ~ 2)  | TAMPER relay NC-nT & /CC-nT become short from open (n=1 ~ 2)                      | Relay T-C1/T-C2 become short from open   | TAMPER relay NC-CC become short from open  |
|  | Tamper alarm horn sound prompt                   | No   |   | Yes (Beep sounds from controller)  |  |
| 19   | Power cut  | All relays become short from open  |   | Relay P-O1/P-O2 become short from open   | INTRUSION/TAMPER relay NC-CC become short from open  |
|  | Power cut parameter status                       | Designed with host parameters not affected by power cut  |   |  |  |
| 20   | System Integration                               | The system can be integrated with CCTV, auto-dialer, access control, siren, searchlights, network video, police and civilian connections. and etc. (relay expansion module)  |   |  |  |
| 21   | Dimension / Net weight                           | 28cm x 20.5cm x 4.7cm / 0.9kg  | 34.4cm x 26.5cm x 7.8cm / 3.1kg   | 30cm x 21cm x 8cm / 3.9kg  | 35cm x 42.8cm x 10cm / 4.9kg   |
| <b>Connect the computer and activate the NXTAR software to monitor the following functions</b> |  |  |   |  |  |
| 22   | Analysis reference for abnormal optical circuits | Online diagnosis provides user with the information about the status of sensing/leading fiber. Also, it can analyze the decay of optic power.  |   |  |  |
| 23   | Intelligent global noise filter                  | Within 1.6 seconds, the build-in advanced intelligent algorithm can filter out the increased global noise by comparing and analyzing N and S.  |   |  |  |
| 24   | Self calibration                                 | When fiber is cut or removed, tamper alarm will be issued within 5 seconds. Meanwhile, the diagram with a spanner will be shown in Maintenance Mode to notice user.  |   |  |  |
| 25   | Optical power decay pre-warning & autogain       | While fiber or optic components may malfunction, due to improper use, and leads to optic power decay, the system automatically enhance autogain 25 times within 5 seconds, making the system still work properly before repair. Simultaneously displays its overall optical path power attenuation status in Maintenance Mode.               |   |  |  |
| 26   | Grouping   | The system can filter out the global noise (strong wind, heavy rain, earthquake, thunder and etc) by grouping two or more zones in which the three basic parameters of these zones are met simultaneously. The system will analyze this signal as a non-intrusive signal and exclude it. And it is recommended to group 3 or more as a group |   |  |  |
| 27   | Monitor mapping                                  | User may download the map of the perimeter into to the software. The system can indicate the detection zones in accordance with the actual mapping to examine if there is any intrusion or tamper.   |   |  |  |
| 28   | Event log  | It can record the time of intrusion alarm or system failure in each defense zone, and also record the time of abnormality in the connection between the detector and the computer  |   |  |  |
| 29   | Signal analysis                                  | It can analyze the long-term sensing signal curve of each defense zone to optimize the parameter settings  |   |  |  |
| 30   | Remote monitoring and diagnosis function         | The detection controller can be transmitted to the remote monitoring or maintenance center via the Internet, and the maintenance mode can be turned on for network connection such as system abnormal diagnosis and parameter optimization. Achieve global synchronous remote real-time diagnosis and fast maintenance service.              |   |  |  |