NITTAN

CONVENTIONAL FIRE ALARM CONTROL PANEL 1PM2 Series

1PM2

Description

The 1PM2 is a conventional fire alarm panel with a stylish wall-mount design supplied in 5 to 60 zone formats. All detector circuits will be indicated with lighting red LEDs in alarm conditions and flushing in open circuit fault conditions. Slide-in paper labels are included for clear zone identification. The alarm panel has an alarm delay function on every detector circuits to reduce false alarms, including a zone-by-zone settable delay ON/OFF function.

1PM2 features a re-sounding function of panel buzzer by reception of any subsequence input from manual alarm stations or other zones ensuring an announcement of a fire spread after the buzzer silenced. The alarm panel also has a maintenance switch to enable installation or maintenance works to cut off the panel buzzer and zone alarms.

1PM2 to be equipped with a CPU for securing high reliability features also a CPU trouble back-up function. Even when the CPU falls down, basic functions are secured to indicate alarm zones, to sound alarms and to transfer the alarm signal.

The power consumption reduced 70% compared with Nittan's previous models contributes to cost reduction.

Features

- 5 to 60 zone model available
- Extra slim design
- Highly reliable design by adopting durable LED indicators and CPU
- 5 to 20 circuits for zone alarm bells available (due to the model on purchased)
- Alarm delay function
- Alarm delay ON/OFF switch function
- Trouble monitoring function
- CPU trouble back-up function
- Re-sounding mode of a panel buzzer
- Signal transfers for detector resetting available
- Equipped with high protection for Lightning surge
- Interrupting function for emergency announcements of silence zone alarms
- 3 alarm indicators for indicating the alarm inputs from building facilities such as hydrants
- CPU trouble back-up function
- Capability for transferring the second fire signal
- Signal transfer for Emergency PA facility also equipped
- Easy wiring by Push-in terminals' one-touch connection

Remote Test Function

Remote test function is available on 2KW-P and 2KAD2-P detectors etc. with a dedicated testing device.

* Operating Image

2KW-P

- Distinguishes steam and smoke
- Automatic sensitivity compensation
- Suited for Shower rooms and Kitchens

2KAD2-P

- Remote-test available
- Automatic sensitivity compensation
- Suited for Condominiums

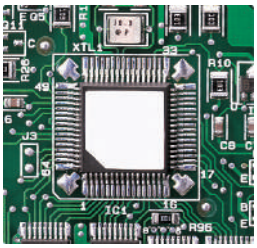
■ Main Features

1. High reliability, advanced fire detection

Re-sounding mode of panel buzzer

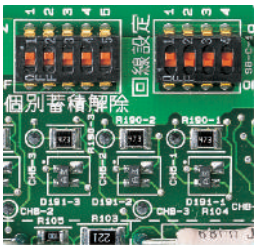
After Panel alarm silence by operator at fire, the panel buzzer automatically re-sounds by operation of manual alarm stations or by receipt of alarm signal from other zones to announce fire spread.

CPU trouble back-up function



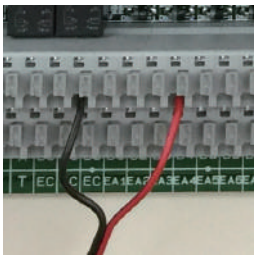
Even when CPU is down, basic function is carried on, fire signal can be received, zone indication, alarm sounding, fire alarm signal transfer, etc.

Alarm delay ON/OFF function



Alarm delay function can be cancelled zone by zone individually.

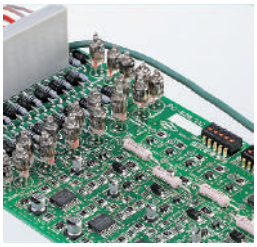
Outputs for Emergency PA system



Outputs for interlocking to Emergency PA system are provided as standard.

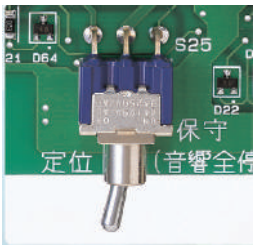
2. Advanced functions for easy installation and maintenance

Lightning surge protection



Lightning surge protection devices are provided as standard to main circuits to protect semiconductor parts.

Maintenance switch (All alarm silence)

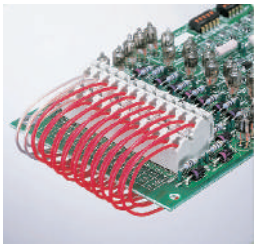


At maintenance work, unnecessary alarm sounding can be cut off by operating the maintenance switch (except telephone calling sound). Clicking sounds is made when the maintenance switch is ON to draw operator's attention.

Alarm delay ON/OFF switch

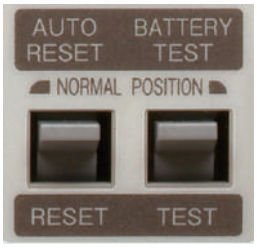
This switch can make the alarm delay function ineffective for installation and mainenance work.

Push-in type terminals



Push-in type terminals are employed to improve efficiency at installation.

Auto reset switch



When operation test of detectors and manual alarm stations are conducted, by pressing auto reset switch to the reset side, fire test can be conducted zone by zone and the tested detector and the control panel shall be automatically reset.

Self-checking function

Monitoring;

- Detector line open-circuit
- Circuit voltage low
- CPU trouble
- Fuse blow
- Disconnection of Standby battery
- Emergency PA line open-circuit

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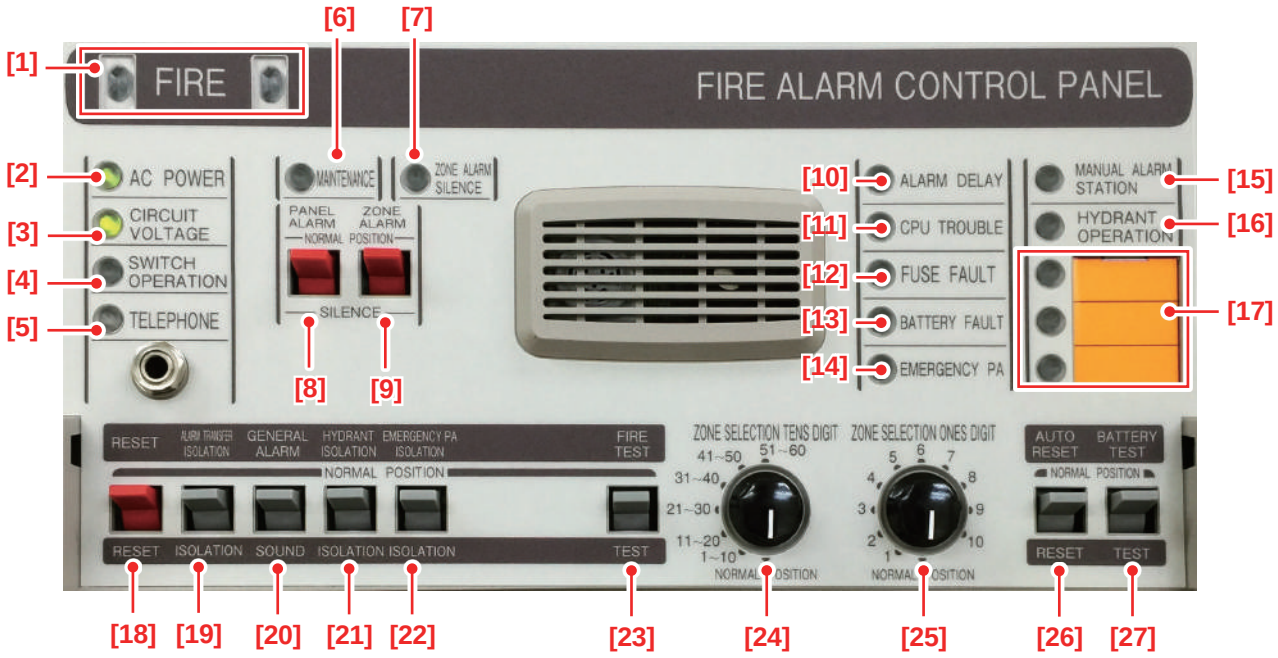
■ Indicators on Operation Panel



[1] FIRE (Red)
LED turns on when the panel is in an alarm condition.

[2] AC POWER (Green)
LED turns on when AC power is supplied to the main power circuit.

[3] CIRCUIT VOLTAGE (Green)
LED turns on as long as the main circuit voltage of the control panel is within acceptable levels (approx. 20.4 V and greater).

[4] SWITCH OPERATION (Red)
LED flashes when the panel switches are ON or not normal state.

[5] TELEPHONE (Green)
LED turns on when a handset is plugged into a telephone jack of a manual alarm station or an annunciator panel.

[6] MAINTENANCE (Red)
LED turns on during a maintenance mode.

[7] ZONE ALARM SILENCE INDICATOR (Red)
LED flashes when zone alarms are silenced.

[8] PANEL ALARM SILENCE switch
Activation of this switch when a panel buzzer is sounding, turns off the sounding buzzer.

[9] ZONE ALARM SILENCE switch
Activation of this switch makes zone alarms silenced.

[10] ALARM DELAY (Red)
LED turns on during a delay time of 60 sec, and flashes during a general alarm delay switch is OFF.

[11] CPU TROUBLE (Red)
LED turns on when the CPU is in a fault state.

[12] FUSE FALUT (Red)
LED turns on when a fuse for zone alarm outputs is blown.

[13] BATTERY FAULT (Red)
LED turns on when a standby battery is not connected to the panel.

[14] EMERGENCY PA (Red)
LED flashes during emergency PA announcements, and turns on when an open circuit is detected on the emergency PA lines.

[15] MANUAL ALARM STATION (Red)
LED turns on when a manual alarm station is activated.

[16] HYDRANT OPERATION (Red)
LED flashes while a hydrant pump(s) is in operation.

[17] Other Alarms (Red)
Each of the LEDs turns on when the panel receives alarm signals from building facilities via LXn-C contacts.

[18] RESET switch
Activation of this switch resets the panel condition.

[19] ALARM TRANSFER ISOLATION switch
Activation of this switch isolates an alarm signal transfer through GA-GB-GC contacts.

[20] GENERAL ALARM switch
Activation of this switch activates all the zone alarms and outputs alarm signals to an emergency PA facility.

[21] HYDRANT STATION ISOLATION switch
Activation of this switch isolates an alarm signal transfer through H-H' contacts.

[22] EMERGENCY PA ISOLATION switch
Activation of this switch isolates an alarm signal transfer to an emergency PA facility.

[23] FIER TEST switch
Use this switch for conducting a fire indication test.

[24] ZONE SELECTION TENS DIGIT switch
This switch sets tens digit of testing zones during a fire indication test.

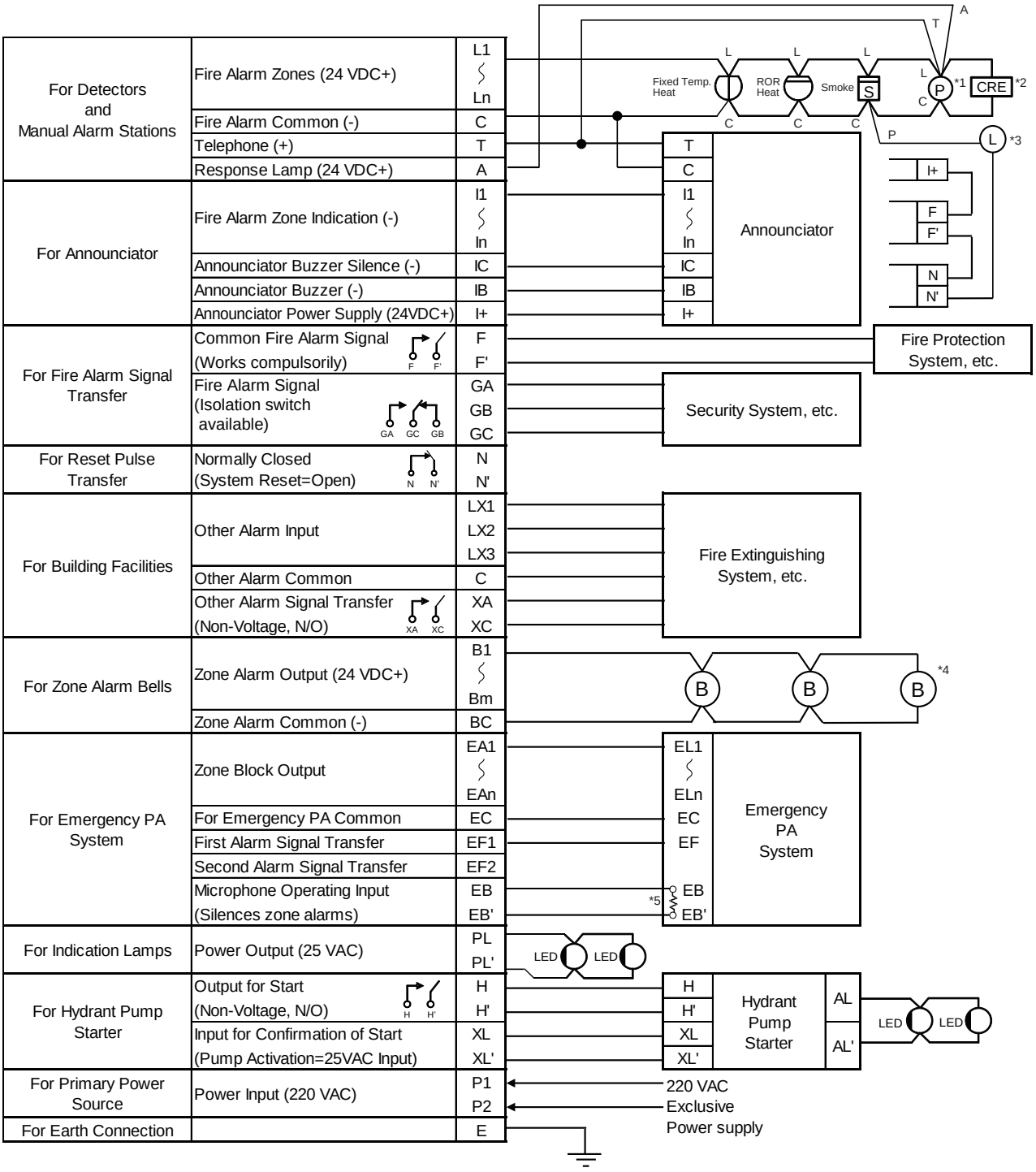
[25] ZONE SELECTION ONES DIGIT switch
This switch sets ones digit of testing zones during a fire indication test.

[26] AUTO RESET switch
Activation of this switch enables a non-latching test function which allows manual alarm stations and detectors to be tested and the panel to resets automatically.

[27] BATERY TEST switch
Activation of this switch enables a standby battery test.

Typical Wiring Diagram

For Detectors and Manual Alarm Stations	Fire Alarm Zones (24 VDC+)	L1 ~ Ln
	Fire Alarm Common (-)	C
	Telephone (+)	T
	Response Lamp (24 VDC+)	A
For Announciator	Fire Alarm Zone Indication (-)	I1 ~ In
	Announciator Buzzer Silence (-)	IC
	Announciator Buzzer (-)	IB
	Announciator Power Supply (24VDC+)	I+
For Fire Alarm Signal Transfer	Common Fire Alarm Signal (Works compulsorily) F F'	F F'
	Fire Alarm Signal (Isolation switch available) GA GC GB	GA GB GC
For Reset Pulse Transfer	Normally Closed (System Reset=Open) N N'	N N'
For Building Facilities	Other Alarm Input	LX1 LX2 LX3
	Other Alarm Common	C
	Other Alarm Signal Transfer (Non-Voltage, N/O) XA XC	XA XC
For Zone Alarm Bells	Zone Alarm Output (24 VDC+)	B1 ~ Bm
	Zone Alarm Common (-)	BC
For Emergency PA System	Zone Block Output	EA1 ~ EAn
	For Emergency PA Common	EC
	First Alarm Signal Transfer	EF1
	Second Alarm Signal Transfer	EF2
	Microphone Operating Input (Silences zone alarms)	EB EB'
For Indication Lamps	Power Output (25 VAC)	PL PL'
For Hydrant Pump Starter	Output for Start (Non-Voltage, N/O) H H'	H H'
	Input for Confirmation of Start (Pump Activation=25VAC Input)	XL XL'
For Primary Power Source	Power Input (220 VAC)	P1 P2
For Earth Connection		E



*1: P = Manual Alarm Station

*2: The CRE is a dedicated end-of-line device which comes with the 1PM2 fire alarm control panel.

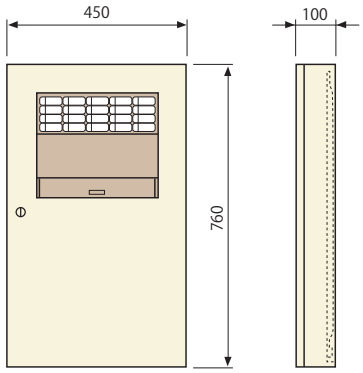
*3: Make sure to be used F-F' and N-N' terminals when use Remote indication lamps.

*4: Use the motor bells rated at 10 mA, 24 VDC.

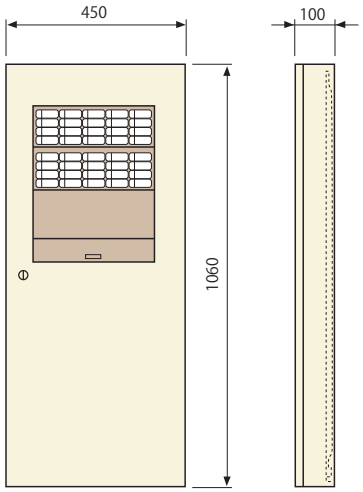
*5: The end-of-line resister comes with the 1PM2 fire alarm control panel.

Dimensions

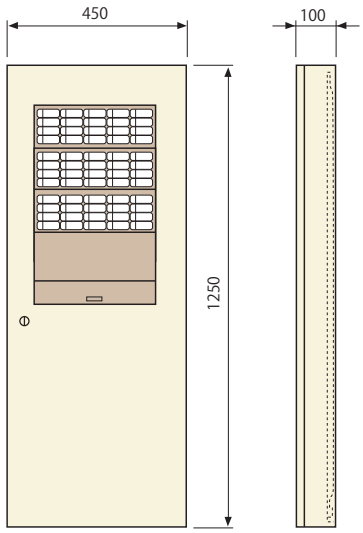
20 zones cabinet



40 zones cabinet



60 zones cabinet



Specifications	1PM2-nLA								
Number of Zones	5	10	15	20	25	30	40	50	60
Number of Bells (10 mA)	10	20					30		
Number of Bell Blocks	5	10	15					20	
Primary Rated Current	0.39 A								
Standby Battery	0.45 Ah						1.2 Ah		
Mounting Type	Wall-mounting type								
Dimensions (mm)	W 450 x H 760 x D 100				W 450 x H 1060 x D 100			W 450 x H 1250 x D 100	
Weight	18 kg				25 kg			30 kg	
Notes	Not included: Dedicated Battery, Telephone Handset								

Ordering Information

Model	Description
PTL-1	Telephone Handset
Nicd-battery (0.45AH)	Ni-Cd Battery (0.45AH) for 1PM2-5LA – 30LA
Nicd-battery (1.2AH)	Ni-Cd Battery for (1.2AH) for 1PM2-40LA – 60LA
PSH-nL	Annunciator Panel with n Zone
2KH2-LS	Optical Smoke Detector
CKLD-KPT	Beam Type Smoke Detector
LP05	Remote Station for Beam Detector
1CD-70-LS	Fixed Temp. Heat Detector, 70°C
2SC-LS	Rate of Rise Heat Detector
2KW-P	Dual Wavelength Type Optical Smoke Detector with Remote testing function
2KAD2-P	Optical Smoke Detector with Automatic sensitivity compensation and Remote testing function
MTS1	Remote Testing and Address Setting Device for 2KW-P, 2KAD2-P and others
LP01/1	Remote Station for MTG
3T	Common detector Base for LS type detector
B6T2	Common detector Base for LS type detector for connecting a remote indication lamp
B3-J	Detector Base for 2KW-P, 2KAD2-P, and others
1MF1A	Manual Alarm Station with telephone jack
BD-6-24-11	Local Alarm Bell (10 mA)
PL-R4-LED	Indication Lamp (LED type)
AL-4-24	Remote Indication Lamp
SRT-01M6L-47SGB	Local Combined Box (vertical type) with telephone jack c/w Surface Mounting Box

Specifications

Specifications	1PM2-nLA
AC Power	220 VAC ±10% 50/60 Hz
Standby Battery	Sealed Type Ni-Cd battery 5LA - 30LA Panel : 0.45 Ah 40LA - 60LA Panel : 1.2 Ah
Power Consumption	39 VA
Nominal Delay Time	60 sec. (For smoke detector: 60 sec. For heat detector: 20 sec.)
Dimensions	5L - 20L Panel : W 450 x H 760 x D 100 mm 25L - 40L Panel : W 450 x H 1060 x D 100 mm 50L - 60L Panel : W 450 x H1250 x D 100 mm
LED Indicators	Fire alarm, AC power, Circuit voltage, Switch operation, Telephone, Maintenance, Zone alarm silence, Alarm delay, CPU trouble, Fuse fault, Battery fault, Emergency PA, Manual alarm station, Hydrant operation, Other alarm (3 windows)
Functions	CPU fault monitoring, Fuse fault indication, Cable break monitoring
External Line Resistance	50 Ω and less
End of Line Device	CRE
Panel Alarm Sounder	Piezoelectric buzzer, automatic re-sounding type
Trouble Alarm	Detector line open-circuit, CPU trouble, Zone Alarm Fuse blows, No battery connected, Emergency PA line open-circuit, Alarm inputs from external equipment
Fire Alarm Transfer	Contact Capacity Common Fire Alarm : F-F' (Normally-Open) 1 A 24 VDC Fire Alarm : GA-GB-GC (Form-C) 1 A 24 VDC Reset Pulse : N-N' (Normally-Close) 1 A 24 VDC External Equipment Alarms : XA-XC 1 A 24 VDC Emergency PA : EC EF1 EF2 EA1-EAn* EB EB' (Normally-Open) 1 A 24 VDC *n: 5LA=5, 10LA=10, 15LA-40LA=15, 50LA-60LA=20
Output Current for Zone Alarms (Bell)	24 VDC 5L: 100 mA 10LA-30LA: 200 mA 40LA-60LA: 300 mA
Output Current for Indication Lamps	25 VAC 400 mA
Number of Connectable Detectors	Standard type Smoke detector: Max. 40 /zone, Total 20 x zones Heat detector: As required Thermistor type Heat detector: Max. 24 /zone, Total 12 x zones Detectors with test function: Max. 20 /zone, Total 10 x zones
Connectable Manual Alarm Station	1MF1A 1MI1A
Connectable Annunciator Panel	Model PSH x 1 unit
Operating Temperature	0°C to +40°C
Primary Materials	Main Body: SPCC t1.6 Door: SPCC t1.2 Operation Panel: Flame retardant resin
Body Color	JPMA Color Code A22-90B Semi-gloss (off-white)

All specifications are subject to change without any notice.
For more information, contact with NITTAN.

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