



1PM3



### ■ Description

The 1PM3 is a conventional fire alarm panel with a stylish wall-mount design. Product variation is from 10 to 40-zone supplied in 10 to 40 zone. Detector circuit in alarm is indicated by red LED. Open circuit condition is shown by blinking red LED. Slide-in paper labels are included for zone identification. The 1PM3 has an alarm delay function for all detector circuits to prevent from false alarm. Zone delay setting can be individually configured by ON/OFF switch.

The 1PM3 features a re-sounding function of panel buzzer by receiving any subsequence input from manual alarm stations or other zone alarm activation after the buzzer silenced manually. The 1PM3 also has a maintenance switch to enable to cut off the panel buzzer and zone alarm during installation or maintenance works .

The 1PM3 is equipped with a CPU for securing high reliability features, and also for a CPU trouble back-up function. Even when the CPU falls down, basic functions are continued to indicate alarm zone, to sound alarms and to transmit alarm signals.

The power consumption reduced 70% compared with Nittan's previous models.

### ■ Features

- 10 to 40 zone model variation
- Stylish wall-mount design
- High reliable model with durable components, LED indicators and CPU
- 10 to 20 circuit alarm bell zone(depends on the model)
- Alarm delay function
- Alarm delay ON/OFF switch
- Trouble monitoring function
- CPU trouble back-up function
- Panel buzzer re-sounding function
- Lightning surge protection
- A function of interrupting zone alarm to prioritize emergency announcement
- Three other alarm indicators for indicating inputs from building facilities
- CPU trouble back-up function
- Capability of transmitting the second fire signal
- Signal transmitting to Emergency PA facility
- Easy wiring by Plug-in type terminals one-touch connection
- Color universal design for people with color vision deficiency

### ■ Applications

Remote test function is available with using a test device MTT for the detector of PK2B-DP-006, PK2B-P-021 and others.

#### MTT

- Remote Tester



#### PK2B-DP-006

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



## ■ Main Features

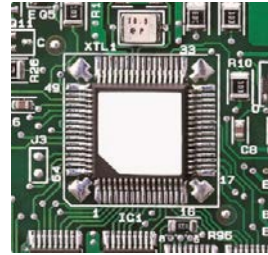
### 1. High reliability, advanced fire detection

#### 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 receiving alarm signal from other zones to announce fire spread.

#### CPU trouble back-up function



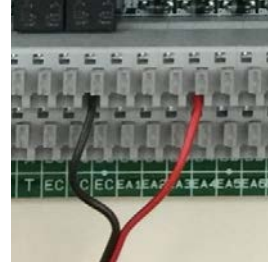
During the CPU is down, basic function is continued for alarm signal receiving, zone indication, sounding, fire alarm signal transmission, etc.

#### Alarm delay ON/OFF function



All zone can be set alarm delay ON/OFF by individual switch

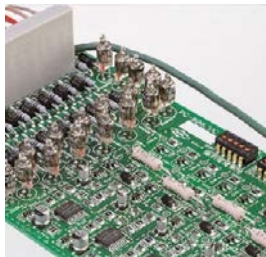
#### Outputs for Emergency PA System



Signal transmitting to the emergency PA system.

### 2. Advanced functions for easy installation and maintenance

#### Lightning surge protection



Lightning surge protection devices are equipped.

#### Maintenance switch(All alarm silsience)



At maintenance work, unnecessary alarm sounding can be cut off by operating the maintenance switch (except telephone calling sound).

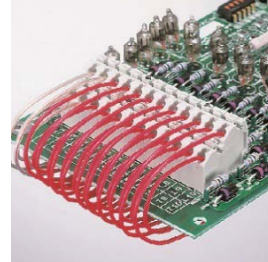
Clicking sound is made either once in 10 seconds or in 60minutes when the maintenance switch is ON

#### Alarm delay ON/OFF switch



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

#### Push-in type terminals



Plug-in type terminals are employed to improve installation effectively

#### Auto reset switch



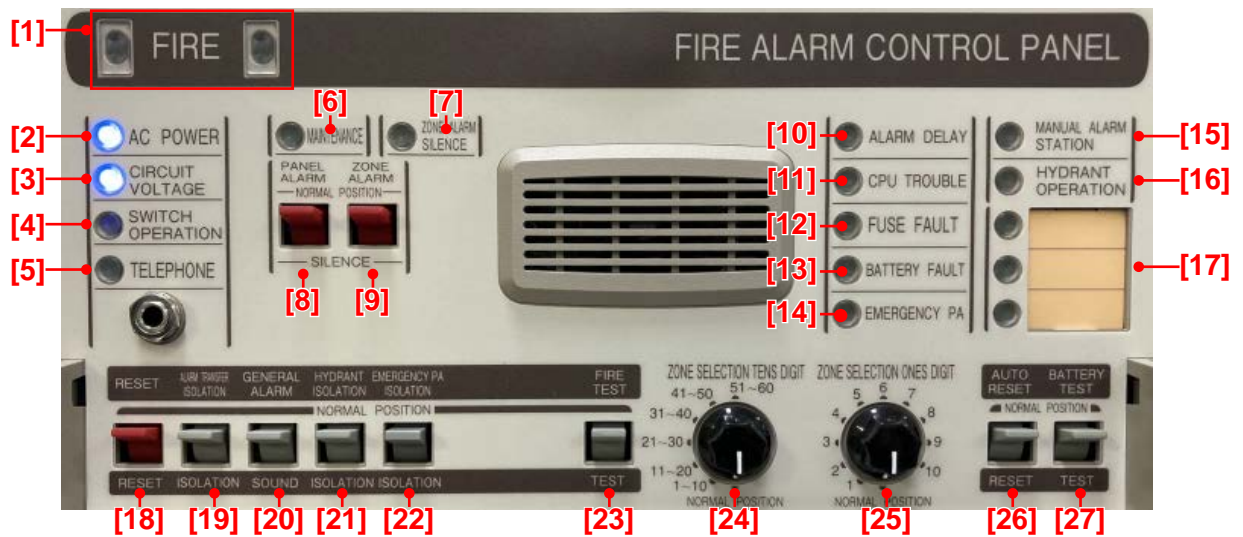
When operation test of detectors and manual alarm stations are conducted, by pressing auto reset switch to the reset side, fire test can be conducted zone by zone and the tested detector and the control panel shall be automatically reset.

#### Self-checking function

##### Monitoring;

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

## ■ Indicators on Operation Panel



### [1] FIRE (Red)

LED turns on when the panel is in an alarm condition.

### [2] AC POWER (Blue)

LED turns on when AC power is supplied to the main power circuit.

### [3] CIRCUIT VOLTAGE (Blue)

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 (Red)

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. During the maintenance clicking sound long mode, the LED turn on 900 msec and off 100 msec.

### [8] PANEL ALARM SILENCE switch

Activation of this switch turns off the sounding buzzer when a panel buzzer is sounding. Also use for change to the maintenance clicking sound long mode by pressing and holding this switch more than three seconds.

### [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 indicator (Red)

When fire signal is received from manual alarm station, the light turns on.

### [16] Hydrant operation indicator (Red)

When hydrant pump actuates, the light flickers.

### [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 TRANSMISSION ISOLATION switch

Activation of this switch isolates an alarm signal transmission 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 transmission through H-H' contacts.

### [22] EMERGENCY PA ISOLATION switch

Activation of this switch isolates an alarm signal transmission 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.

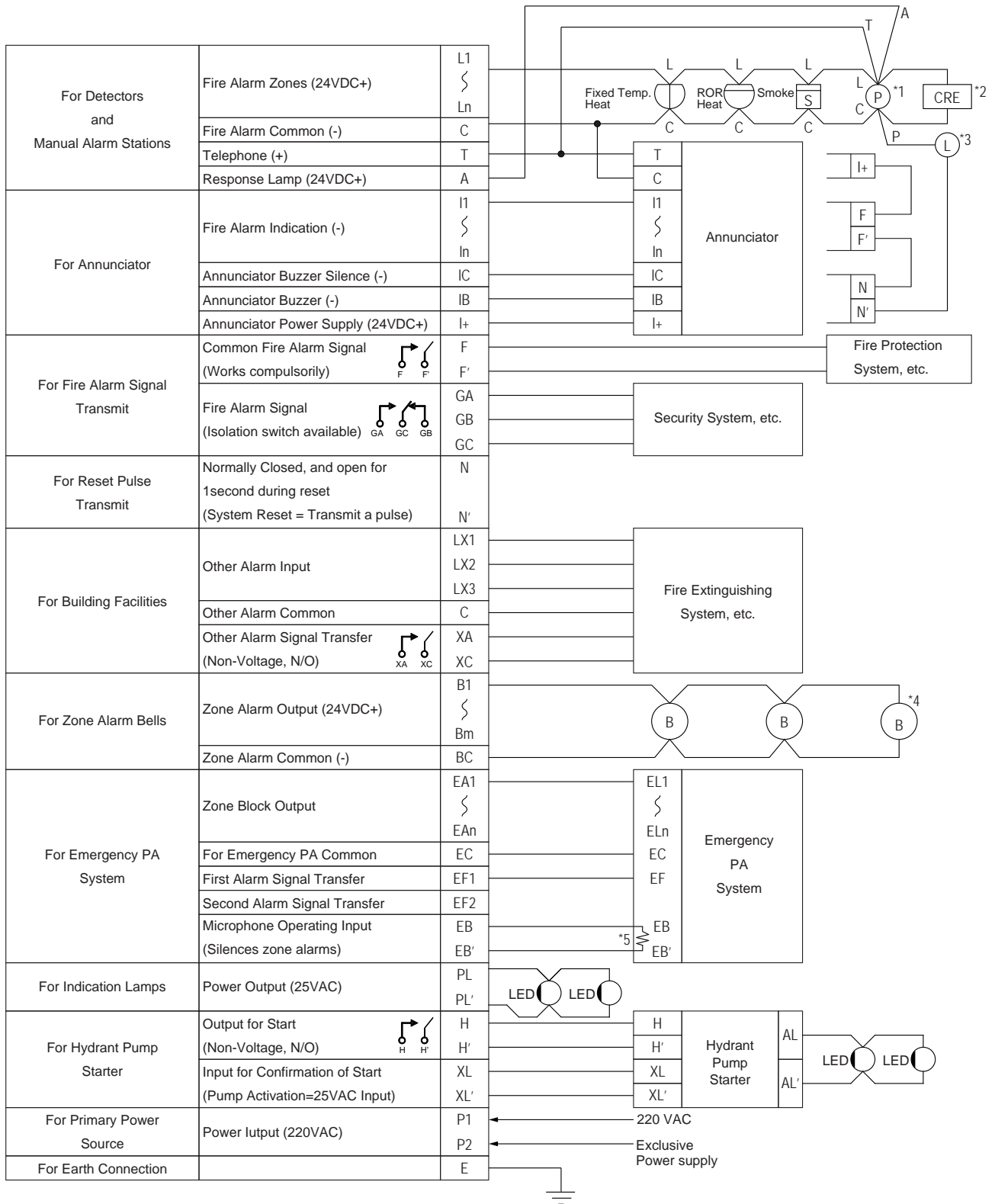
NOT TO BE USED FOR INSTALLATION PURPOSES.

Nittan reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

1PM3-DAT-01

Rev.01

# Typical Wiring Diagram



\*1: P = Manual Alarm Station.

\*2: The CRE is a dedicated end-of-line device which comes with the 1PM3 fire alarm control panel.

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

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

\*5: The end-of-line resistor comes with the 1PM3 fire alarm control panel.

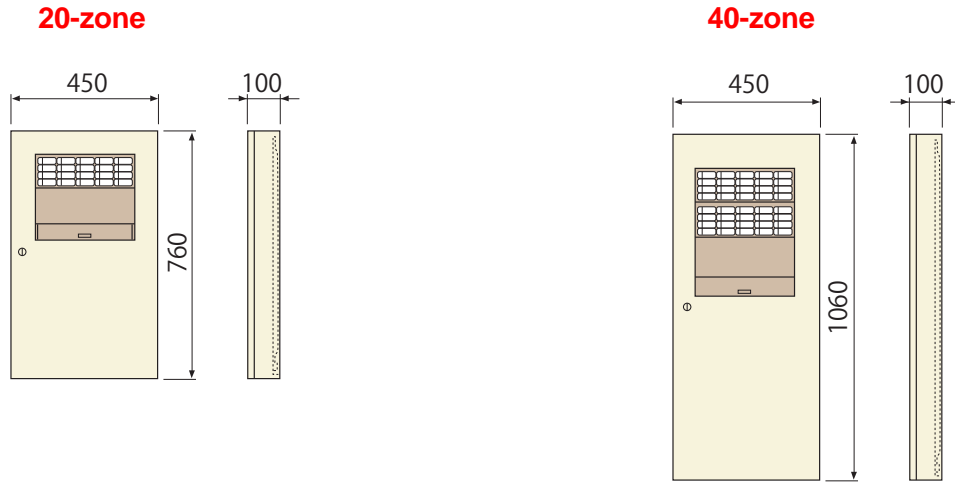
NOT TO BE USED FOR INSTALLATION PURPOSES.

Nittan reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

1PM3-DAT-01

Rev.01

## Dimension



| Model                          | 1PM3-nLA   |    |                     |    |
|--------------------------------|--|----|---------------------|----|
| Number of Zones                | 10   | 20 | 30                  | 40 |
| Number of Bells (10 mA)        | 20   |    |                     | 30 |
| Number of Bell Blocks          | 10   | 15 |                     |    |
| Primary Rated Current (220VAC) | 0.39A  |    |                     |    |
| Standby Battery                | 0.45 Ah  |    |                     |    |
| Mounting Type                  | Wall-mounting type                                 |    |                     |    |
| Dimensions (mm)                | W450 x H760 x D100                                 |    | W450 x H1060 x D100 |    |
| Weight                         | 18 kg  |    | 25 kg               |    |
| Notes                          | Not included: Dedicated Battery, Telephone Handset |    |                     |    |

## Ordering Information

| Model                 | 1PM3-nLA   |
|-----------------------|--|
| PTL-1                 | Telephone handset  |
| Nicd-battery (0.45AH) | Ni-Cd battery (0.45AH) for 1PM3-10LA – 40LA and 1PM2-10LA - 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-KPT2             | Beam type smoke detector   |
| LP05                  | Remote station for beam detector CKLD-KPT2   |
| 1CD-70-LS             | Fixed temp. heat detector, 70°C  |
| 2SC-LS                | Rate of rise heat detector   |
| PK2B-DP-006           | Dual wavelength type optical smoke detector with remote testing function                   |
| PK2B-P-021            | Optical smoke detector with automatic sensitivity compensation and Remote testing function |
| PR2B-P-009            | Dual band IR flame detector  |
| PS2B-PH-014           | Rate of rise heat with remote testing function   |
| MTT                   | Remote testing and address setting device for PK2B-DP-006, PK2B-P-021 and others           |
| LP01/1                | Remote station for MTT   |
| 3T                    | Common detector base for LS type detector  |
| B3-J                  | Detector base for PK2B-DP-006, PK2B-P-021, 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 combination box (vertical type) with telephone jack c/w surface mounting box         |

NOT TO BE USED FOR INSTALLATION PURPOSES.

Nittan reserves the right to make changes at any time without notice in prices, colours, materials, components, equipment, specifications and models and also to discontinue models.

1PM3-DAT-01

Rev.01

## ■ Specifications

| Specifications  | 1PM3nLA   |                                 |                  |  |            |                                |             |                                     |                |                                   |                               |   |                                 |                           |  |
|---|---|---------------------------------|------------------|--|------------|--------------------------------|-------------|-------------------------------------|----------------|-----------------------------------|-------------------------------|---|---------------------------------|---------------------------|--|
| AC Power  | 220 VAC ±10% 50/60 Hz   |                                 |                  |  |            |                                |             |                                     |                |                                   |                               |   |                                 |                           |  |
| Standby Battery   | Sealed Type Ni-Cd battery<br>10LA - 40LA Panel : 0.45 Ah  |                                 |                  |  |            |                                |             |                                     |                |                                   |                               |   |                                 |                           |  |
| Power Consumption   | 39 VA   |                                 |                  |  |            |                                |             |                                     |                |                                   |                               |   |                                 |                           |  |
| Nominal Delay Time  | 60 sec. (For smoke detector: 60 sec. For heat detector: 20 sec.)  |                                 |                  |  |            |                                |             |                                     |                |                                   |                               |   |                                 |                           |  |
| Dimensions  | 10L - 20L Panel : W 450 x H 760 x D 100 mm<br>30L - 40L Panel : W 450 x H 1060 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 Transmission                                   | <table> <thead> <tr> <th></th> <th>Contact Capacity</th> </tr> </thead> <tbody> <tr> <td>Common Fire Alarm : F-F' (Normally-Open)</td> <td>1 A 24 VDC</td> </tr> <tr> <td>Fire Alarm : GA-GB-GC (Form-C)</td> <td>1 A 24 VDC</td> </tr> <tr> <td>Reset Pulse : N-N' (Normally-Close)</td> <td>1 A 24 VDC</td> </tr> <tr> <td>External Equipment Alarms : XA-XC</td> <td>1 A 24 VDC</td> </tr> <tr> <td>Emergency PA : EC EF1 EF2 EA1-EAn* EB EB' (Normally-Open)</td> <td>1 A 24 VDC</td> </tr> <tr> <td colspan="2">*n: 10LA=10, 20LA-40LA=15</td> </tr> </tbody> </table> |                                 | 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: 10LA=10, 20LA-40LA=15 |  |
|   | 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: 10LA=10, 20LA-40LA=15                                 |   |                                 |                  |  |            |                                |             |                                     |                |                                   |                               |   |                                 |                           |  |
| Output Current for Zone Alarms (Bell)                     | 24 VDC 10LA-30LA: 200 mA 40LA: 300 mA   |                                 |                  |  |            |                                |             |                                     |                |                                   |                               |   |                                 |                           |  |
| Output Current for Indication Lamps                       | 25 VAC 400 mA   |                                 |                  |  |            |                                |             |                                     |                |                                   |                               |   |                                 |                           |  |
| Number of Connectable Detectors                           | <table> <tbody> <tr> <td>Standard type</td> <td>Smoke detector:</td> <td>Max. 40 /zone, Total 20 x zones</td> </tr> <tr> <td></td> <td>Heat detector:</td> <td>As required</td> </tr> <tr> <td>Thermistor type</td> <td>Heat detector:</td> <td>Max. 24 /zone, Total 12 x zones</td> </tr> <tr> <td>Detectors with test function:</td> <td></td> <td>Max. 20 /zone, Total 10 x zones</td> </tr> </tbody> </table>   | 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 |                           |  |
| 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<br>Door: SPCC t1.2<br>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.

**NITTAN**

54-5, 1-chome, Sasazuka,  
Shibuya-ku, Tokyo151-8535, Japan  
TEL:81-3-5333-7021 FAX:81-3-5333-8615

Distributed By