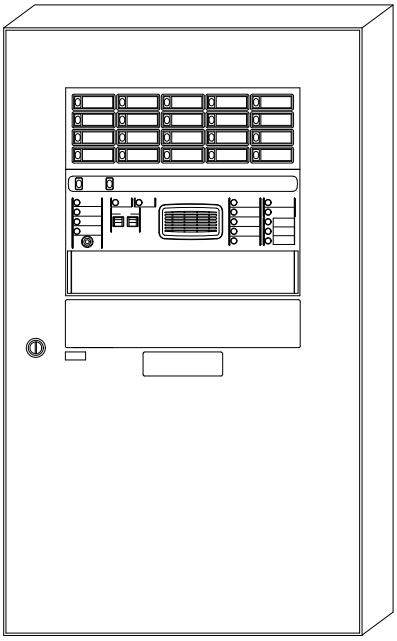
AUTOMATIC FIRE ALARM SYSTEM

Conventional Fire Alarm Control Panel

Operating Instruction Manual

Thank you for accepting Nittan Fire Alarm System

1PM3-nLA Type



Feature

- ●Equipped with alarm delay function.
  Maintains nominal 60 seconds delay time to reduce unwanted alarm caused by transient smoke and heat.
- ●Equipped with individual alarm delay OFF function.
  Specific zone alarm delay function can be cancelled by switch operation at random and can be available at site operation.
- ●Equipped with trouble monitoring function.
  Detector wiring, wiring to emergency PA, zone bell fuse line fault constant monitoring, lowering of circuit voltage (below 20.4 V), charging circuit (standby battery) and self monitoring of CPU trouble.
- ●Re-sounding mode of panel alarm sounder. .
  After alarm silence, automatically re-sounds by operation of manual alarm station or by receipt of alarm signal from other zone.
- ●Highly reliable design.
  LED is used for all indicators. Solid state by avoiding relays to the utmost and high function, high reliability in design by adopting CPU.
- ●Extra thin design (wall mounting type).
  Thickness of wall mounting type is 100 mm.
- ●Signal transfer of detector reset pulse can be possible.
- ●Enhanced thunder-proof measures.
  Enhanced thunder-proof measures have been applied to input line from detector etc.
- ●At emergency PA, zone alarm bell silence circuit is standard equipment.
- ●3 zones of alarm indicator circuit is standard equipment
  Even when CPU is down, fire signal can be received and alarm is indicated. But alarm delay circuit and self-holding circuit do not function.
- ●The second fire signal transfer is standard equipment. Emergency PA transfer is also equipped.
- ●By adopting plug-in terminal, one touch wire connection of external terminals is possible,

NITTAN COMPANY, LIMITED

Table of Contents

1. Caution on Safety ·····1

2. Name and Function of Each Section ·····2

3. Condition of Monitoring Time and Fire Alarm Time ·····7

4. Various Testing Methods ·····9

5. Symptom of Fuse Meltdown ·····10

6. Block Diagram ·····11

7. Connection Examples of Various Signal Transfer ·····12

8. Standard Specifications ·····14

9. Inspection and Maintenance ·····16

1. Caution on Safety

Before using this control panel, please carefully read this Operating Instruction Manual and use the panel correctly. Also keep this manual safely.

In order to indicate a degree of impending danger or damage, conditions expected to occur, if improperly operated, are indicated by ⚠ WARNING and by ⚠ CAUTION.	
⚠ WARNING	This indicates a possibility that yourself or other people may be killed or be seriously injured by improper operation.
⚠ CAUTION	This indicates a possibility that yourself or other people may be injured and equipment and property may be damaged by improper operation.

Caution on Safety

⚠ WARNING

◎ Qualification of Fire Protection Engineer is required to install this control panel.
Please ask us or engineering works company, without fail, to install. Please conduct installation of this control panel in accordance with Installation Manual.
◎ Do not open control panel except by authorized personnel (Fire Protection Engineer etc), otherwise equipment function may be lost and injury may be caused by electrification.
◎ When this control panel is at monitoring mode, please set all switches at normal positions.
◎ Please do not modify the control panel or replace its parts, otherwise equipment function may be lost and injury may be caused by fire or electrification.
◎ When gas detector actuates, shut-off main cock and inform gas company. Never put any objects which may cause fire and static electricity, closer to the control panel.
They may cause fire.

⚠ CAUTION

◎ Please avoid installation of this equipment where ambient temperature exceeds 40℃ and below 0℃, otherwise this may cause fire and electrification and also equipment function may be lost.
◎ When any trouble condition is found, please contact and consult with us, engineering works company or maintenance contract company, otherwise this may cause fire and electrification and also equipment function may be lost.
◎ Please secure effective space to enable switch operation in case of emergency, otherwise this may cause fire and electrification and also equipment function may be lost.
◎ Switch operation shall be carried out in accordance with the attached Operating Instruction Manual and explanation label attached to the equipment, otherwise this may cause fire and electrification and also equipment function may be lost.

Caution on Safety at Maintenance and Inspection Time

⚠ WARNING

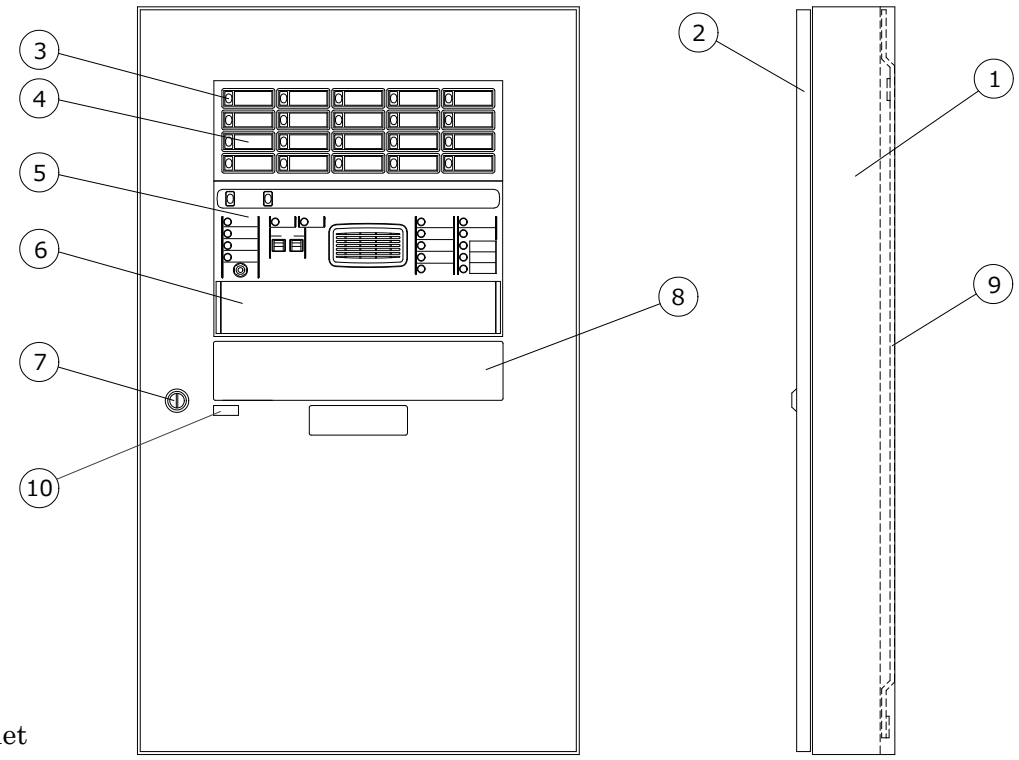
◎ When you change standby battery, please connect plus to plus and minus to minus securely and avoid causing short-circuit between electrodes. Short-circuit between electrodes causes liquid leakage, heat generation, injury or damage by burst.

⚠ CAUTION

◎ Do not install equipment where a lot of vibration, noise, humidity, dust exist and corrosive gas can be generated, otherwise this may cause fire and electrification and also equipment function may be lost.
◎ In case effects of thunderstorm, earthquake and flood damage are worried, equipment maintenance and inspection shall be carried out in consultation with maintenance contract company, in addition to statutory regular inspection.
Otherwise this may cause fire and electrification and also equipment function may be lost.
◎ When you exchange a detector, tightly fix to the socket by turning the detector until it clicks. If not, a detector may not function properly.
◎ Life of standby battery (Nickel Cadmium battery) is about 5 years. Please replace as appropriate by checking its period in use, otherwise, it may not function properly.
◎ When you clean equipment, please be careful not to touch switches by mistake.
Also confirm that the equipment is at normal monitoring condition all the time, otherwise this may cause fire and electrification and also equipment function may be lost.
◎ When you exchange a fuse, first shut-off power supply, then replace with specified current capacity fuse. If you use a fuse other than specified capacity, it may catch fire and cause trouble.
◎ Insulation resistance test shall be conducted only after applying necessary procedures for high voltage fracture prevention, otherwise it may cause trouble.

2. Name and Function of Each Section

Control Panel External View



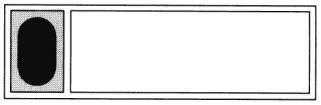
① Cabinet
② Door
③ Zone Alarm Indicator
④ Zone Name
⑤ Operating Panel
⑥ Operating Panel Cover
⑦ Lock
⑧ Simple Operation Manual Nameplate
⑨ Hanger
⑩ CUD label

Zone Alarm Indicator

When a fire breaks out, it indicates fire starting place.
Also when line break occurs at detector line, it indicates line break zone by flickering.

Difference in Zone Indicator Light

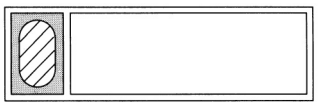
at fire time



turning on

Detector or manual alarm station operates and fire condition is indicated.

at line break time



flickering

Detector line is broken and is in abnormal condition.

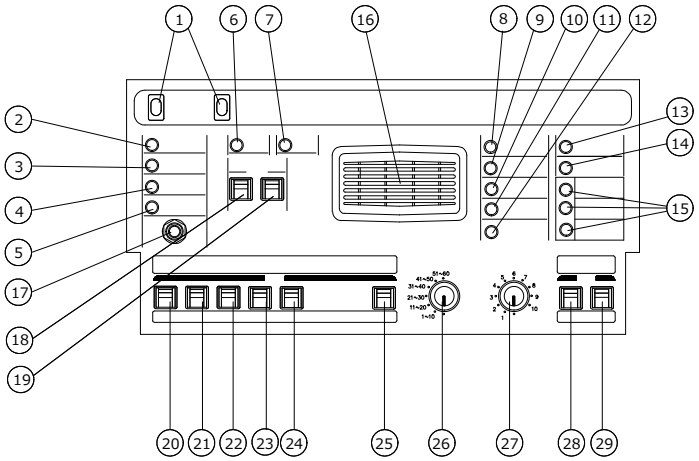
2. Name and Function of Each Section

This control panel has alarm delay function of max. 60 seconds for the fire signal from detector. Summary of delay operation is as follows. (The time is from all fire signal input time.)

About 10 seconds after detector operates, a reset pulse is output and detector is forced to reset automatically. About 20 seconds later, the control panel becomes fire signal count mode and when detector operates again, the control panel outputs fire alarm. Fire signal count mode continues for about 60 seconds and the panel returns to monitoring condition unless a detector actuates by then.

There are two ways of delay time and fire alarm is output about 20 seconds after heat detector operates and about 20~60 seconds after smoke detector operates.
When manual alarm station operates, fire alarm is output immediately.

Operating panel detailed explanation



(1) Fire indicator ·····Turns on (red), when a fire breaks out.

(2) AC power indicator ·····Normally turning on (blue) and indicates AC power is being supplied to control panel. If AC power indicator is turning off, this means either power failure or fuse (F1・F2・F4) meltdown.

(3) Circuit voltage indicator ·····Indicates power-on condition of control panel circuit voltage. When circuit voltage becomes lower than about 20.4V, the light turns off.

(4) Switch operation indicator ···If any one of switches is not at normal position, the light (red) flickers. (Operation of dip switch in the control panel does not make the light flicker.)

(5) Telephone indicator·····When a handset plug is inserted to a telephone jack of manual alarm station or annunciator panel, the telephone light turns on (red).

(6) Maintenance indicator·····When maintenance switch in the control panel is pressed to maintenance side, the light flickers (red).

(7) Zone alarm bell silence indicator --

(a) when zone alarm bell silence switch is pressed at fire, zone alarm bells silences.

(b) when maintenance switch is pressed to maintenance side, the light flickers.

(8) Alarm delay indicator ·····When fire signal is received, when at fire test or when to measure delay time, this alarm delay indicator turns on (red). The light turns off about 60 seconds later when no fire alarm is output.
When general alarm delay switch (S29) in the control panel is pressed to OFF side, alarm delay indicator flickers.
(The light does not flicker by operation of individual alarm delay OFF switch.)

2. Name and Function of Each Section

(9) CPU trouble indicator ……When CPU, handling with signals of alarm delay circuit and fire circuit etc, becomes in trouble, this indicator turns on. When this indicator turns on, immediately contact maintenance contract company because urgent repair is necessary.

(10) Fuse fault indicator ……When zone alarm bell output fuse (F6) melts down, the light turns on (red). When the fuse is exchanged, the light turns off.

(11) Battery fault indicator ……When standby battery is not connected, the light turns on (red).

(12) Emergency PA indicator ……At emergency PA and when zone alarm bell silences, the light flickers. At signal line fault, the light turns on.

(13) Manual alarm station indicator ……When fire signal is received from manual alarm station, the light turns on (red).

(14) Hydrant operation indicator ……When hydrant pump actuates, the light flickers(red).

(15) Other Alarm indicator ……When alarm signals of fire extinguishing system etc are input, the light turns on (red).

(16) Panel buzzer ……

1. Main alarm

The panel buzzer sounds continuously to inform a fire. Even buzzer is silenced, it will re-sound by operation of manual alarm station or when other zone line becomes fire condition.

2. Alert tone

This will intermittent sound at telephone calling time, at battery fault, at fuse fault, at turning on of other alarm and emergency PA, at sounding of line fault and circuit voltage fault (below 20.4V).

3. Maintenance tone

When the maintenance switch is operated, the panel buzzer sounds with a small click sound once in 10 seconds. After that, if pressing and holding the Panel Alarm Silence Switch, the panel buzzer is changed to sound once in 60 minutes. When this change is performed, the blinking cycle of Zone Alarm Bell Silence Indicator will change.
If pressing and holding the Panel Alarm Silence Switch again, or operating the Maintenance Switch again to be back to the initial position, then the panel buzzer is also back to the original sound, once in 10 seconds.

4. CPU trouble tone

Main CPU is in trouble, the panel buzzer sounds continuously with small sound volume

(17) Telephone jack ……Insert a handset plug into this jack while control panel buzzer is sounding and telephone light is turning on, then buzzer silences and telephone communication becomes possible. After telephone communication, unplug handset and confirm telephone indicator light turns off.

(18) Panel alarm silence switch ……When this switch (red) is pressed to silence side, fire alarm (16-1) silences. The sounder resounds when the panel receives fire signal from other zone so that press the switch again to silence side to stop sound. The switch is bounce-back type and returns to normal position after operation. Also when this switch is pressed to silence side, alarm buzzer (16-2) also stops.

Note: Telephone calling alarm buzzer sound can not be silenced by this switch.

(19) Zone alarm silence switch ……When pressed at zone alarm bell sounding time, zone alarm bells silence.

2. Name and Function of Each Section

The following switches are located inside of the operating board front cover.

(20) Reset switch ·····When this switch (red) is pressed to reset side, fire indicator etc (turning on of zone alarm indicator, alarm delay indicator, sounding of panel alarm sounder and zone alarm bell) are reset. These switches are bounce-back type so that when you release the switches after operation, they return to their normal positions.
Please note that CPU needs rise time of 2~3 seconds after operation.

(21) Alarm transfer isolation switch ·····When this switch is pressed to stop side, fire signal transfer to security company etc is shut-off. At this moment, switch operation light (4) starts to flicker.

(22) General alarm switch ·····When this switch is pressed to sound side, all of zone alarm bells can be sounded even not at fire. Also, this switch supersedes all other silence switches. At this moment, switch operation indicator (4) starts to flicker.
If emergency PA signal transfer circuit is available, signal transfer is output to all areas by this switch operation.

Note: Depending upon a type of system, bells may not be installed so that careful attention must be paid to its handling.

(23) Hydrant isolation switch---- Fire pump interlocking by operation of manual alarm station is cancelled. At isolation time, switch operation light (4) starts to flicker.

(24) Emergency PA isolation switch ·····When this switch is pressed to silence side, signal transfer to emergency PA silences. At this moment, switch operation light (4)starts to flicker.

(25) Fire test switch ·····This switch is used to measure alarm delay time at fire test. When the switch is pressed to test side, switch operation light (4) starts to flicker. Also, when switch is returned to normal position after pressing to test side for 1~2 seconds, alarm delay confirmation light turns on. For details, please refer to fire test items. Do not conduct battery test at the same time with fire test.

(26) Zone selection tens digit ·····After pressing fire test switch (25) to test side, configure tens digit by this switch.

(27) Zone selection ones digit----Press fire test switch (25) to test side and first configure tens digit by circuit selection switch (26), then ones digit by this switch and carry out the test.

(28) Auto Reset switch ·····When operation test of detector and manual alarm station is conducted, press this switch to reset side, then switch operation light (4) starts to flicker and fire holding function and alarm delay function are cancelled.
(The control panel can be automatically reset, either by detector reset pulse which is output every few seconds or by manual reset operation of manual alarm station.) From then onward, fire test is conducted per every one zone operation.

(29) Battery test switch ·····This switch is used for standby battery test. When the switch is pressed to test side for about 1 minute and if Circuit Voltage indicator (3)turns off, it is necessary to inspect charge circuit and standby battery. The switch is bounce-back type so that when you release the switch, it returns to normal position.

2. Name and Function of Each Section

Function of Each Section

The following switches and indicators are located inside the control panel.

Main power supply switch (S1) ……This switch functions ON and OFF of AC power supply (AC 220V) constantly used by fire alarm control panel. When pressed to On side, AC Power indicator (2) turns on and power is supplied.

Alarm delay ON/OFF ……When this switch is pressed to OFF side, fire signal delay by detector input is cancelled and fire is indicated immediately. At this moment, alarm delay indicator and switch operation indicator (4) start to flicker.

Individual alarm delay ON/OFF switch (S101) ……This switch is used when you wish to use a specific zone as alarm non-delay type. By configuring switch S101, located inside zone pcb, to OFF, it becomes non-delay type. Please handle carefully because switch operation light does not flicker by these switches.

Zone selection switch (S8C) ……One fire alarm zone pcb covers 10 zones and its switch has 6 pole contacts and is configured by every 10 zone by installation of zone board.
Example: S8C for zone corresponding to 1~10 of zone selection tens digit switch of operating board is ON only for the 1st switch.
These switches are already configured upon factory shipment.
Also these switches (alarm delay OFF switch, individual alarm delay OFF switch S101, zone selection switch S8C) are used by Fire Protection Engineer etc when system is configured, therefore, please do not operate these switches after installation of the control panel.

Maintenance switch (all alarm silence) ……This switch is used to silence all alarms when you do not wish to sound alarm device at maintenance/inspection time. By this switch operation (excluding telephone calling buzzer), maintenance indicator (6), zone alarm silence indicator (7), and switch operation indicator (4) start to flick and maintenance sound.
Even under this condition, when general alarm switch is operated, zone alarm bell starts to sound in all area.

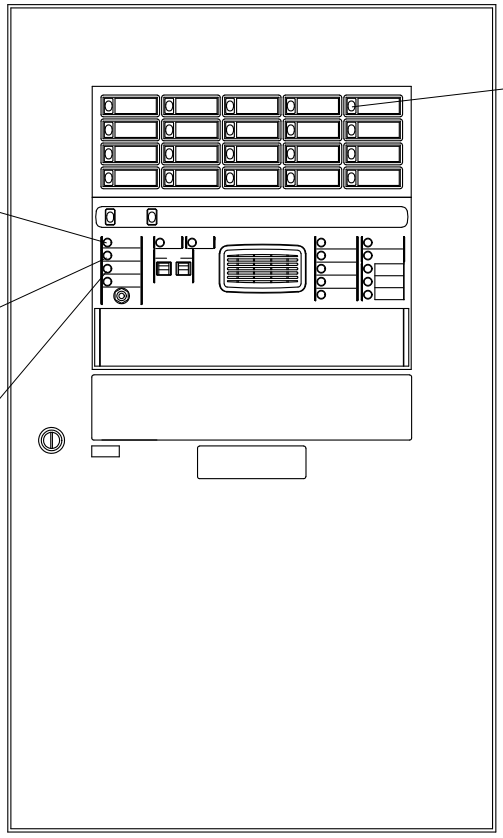
Note: It is very dangerous to use this switch at normal time. Please make sure to use this switch at normal position.

CPU reset switch ……When this switch is pressed, CPU resets once and when you release your finger, it returns to normal condition.

CPU RUN light ……This indicator (green) turns on when CPU functions properly.

3. Condition of Monitoring Time and Fire Alarm Time

The following is monitoring condition at normal time.



Fire Alarm Time

When detector alarms

When detector operates by heat, smoke or flame, zone alarm indicator turns on
Alarm delay confirmation light turns on.
After passing delay time (20~60 seconds), fire indicator turns on.
Panel alarm sounder and zone alarm bell start to sound.

When manual alarm station alarms

When manual alarm station is pressed, zone alarm indicator turns on.
Manual alarm station indicator turns on.
Alarm delay confirmation light turns on.
There is no alarm delay time function on manual alarm station, so fire indicator turns on immediately.
Panel alarm sounder and zone alarm bell start to sound.

3. Condition of Monitoring Time and Fire Alarm Time

When fire alarm sounds, please carry out the following procedures, without panic.

1. Identify fire zone by zone alarm indicator.

2. Rush to the site and upon confirming the fire condition, take appropriate course of action such as initial fire fighting, report, evacuation and guidance etc.

If alarm is not for fire (unwanted alarm, false alarm), please carry out the following procedures.

1. First silence panel alarm sounder and zone alarm bell.

2. Then confirm the following at the zone, for which zone alarm indicator is turning on.

   a) whether manual alarm station is pressed or not.
   If pressed, pull back the push button and reset.

   b) whether detector is operated or not.
   Detector equipped with confirmation light is turning on its confirmation light.
   In this case, check environmental condition of detector surroundings.
   This will help clarify causes of unwanted alarms and formulate its prevention measures.

3. Open front switch cover and press “Reset” switch to reset side and confirm that zone alarm indicator turns off.

If the system does not return to normal monitoring condition after the above operation, urgently contact inspection company.

4. Various Testing Methods

Fire Test

Before test, press “Alarm Transfer Isolation” switch, “Hydrant Isolation” switch and if necessary, “Maintenance” switch to maintenance side.

A. When every 5 zones are tested. (normally test is carried out in this manner).

① Press “Fire Test” switch to test side.

② Set “Zone Selection Tens Digit” switch to “1~10” and set “Zone Selection Ones Digit” switch to ”1”, then the 1st “Zone” alarm indicator turns on and at the same time, “Alarm Delay” indicator turns on.
After passing specified alarm delay time (20 seconds), the common “Fire” indicator turns on and panel alarm sounder and zone alarm bell start to sound.
When “Panel Alarm Silence” switch is pressed downward, panel alarm sounder silences and “Zone Alarm Silence” switch is pressed downward, zone alarm bell is silenced but when “Maintenance” switch is pressed to maintenance side, all zone alarm bells do not sound. However, “Alarm Delay” light continues to turn on.

③ When “Zone Selection Ones Digit” switch is set to “2”, the 2nd “Zone” alarm indicator turns on and panel alarm sounder starts to re-sound. At this moment, the 1st “Zone” alarm indicator remains turning on. The rest of remaining zones can be set to alarm condition one by one, but after the 1st zone alarm, fire test for the 2nd zone onward is carried out under alarm delay cancelled condition.

④ After completion of the 5th zone test, press “Reset” switch downward to conduct reset operation, then set “Zone Selection Ones Digit” switch to “6” and carry out the test for the 6th zone to the 10th zone in the same manner.

⑤ When the 11th zone test is carried out, set “Zone Selection Tens Digit” switch to “11~20” and set “Zone Selection Ones Digit” switch to “1”.
Note: Do not test over 5 zones at the same time since this may cause some trouble.

B. When every one zone is tested.

Press downward “Fire Test” switch and “Reset” switch and configure “Zone Selection Tens Digit” switch to “1~10”. When you operate “Zone Selection Ones Digit” switch from 1, fire test can be carried out per zone. When “Auto Reset” switch is pressed to “RESET” side, alarm delay function is cancelled but “Alarm Delay Confirmation” light turns on.

C. When a specific selected zone is tested.

Configure the specified zone by “Zone Selection Tens Digit” switch and “Zone Selection Ones Digit” switch and press “Fire Test” switch downward. “Zone” alarm indicator and “Alarm Delay” indicator turn on and after pre-determined delay time (20 seconds), “Fire” indicator turns on and alarm sounder sounds.
Note: When reset operation is made by “Reset” switch, CPU is cleared once.
CPU needs rise time of 2~3 seconds.

Standby Battery Test

Please confirm “Circuit Voltage” indicator is turning on when “Battery Test” switch is pressed downward. When the light is turning on, standby battery to be used at power cut is in normal condition. When “Circuit Voltage” light turns off (at below 20.4V) and alarm buzzer sounds, inspect charge circuit and battery. Please pay attention that alarm buzzer can not sound if standby battery is nearly flat. Also, at battery test when AC power is supplied, “AC Power Supply” light remains turning on.

4. Various Testing Methods

Measuring Delay Time

The following two types of time are measured.

A. Nominal delay time (smoke detector delay time).

B. Fire alarm delay time (heat detector delay time).

B-1 Measurement of nominal delay time.

(1) Press downward "Fire Test" switch for 1~2 seconds and as soon as the switch is returned to normal position, start measuring the time by stop watch etc. At this moment, "Alarm Delay" indicator turns on.

(2) "Alarm Delay" indicator turns off after passing a certain period of time. As soon as the indicator turns off, stop measuring the time.

(3) Record this elapsed time as "Nominal Alarm Delay Time" and if it remains between 55~60 seconds, it is normal.

B-2 Measurement of fire alarm delay time.

(1) Configure "Zone Selection Tens Digit" switch to "1~10" and "Zone Selection Ones Digit" to "1". Next, as soon as "Fire Test" switch is pressed downward, start measuring the time by stop watch etc. At this moment, the 1st "Zone" alarm indicator light and "Alarm Delay" indicator turn on.

(2) "Fire" indicator turns on after passing a certain period of time. As soon as the indicator turns off, stop measuring the time.

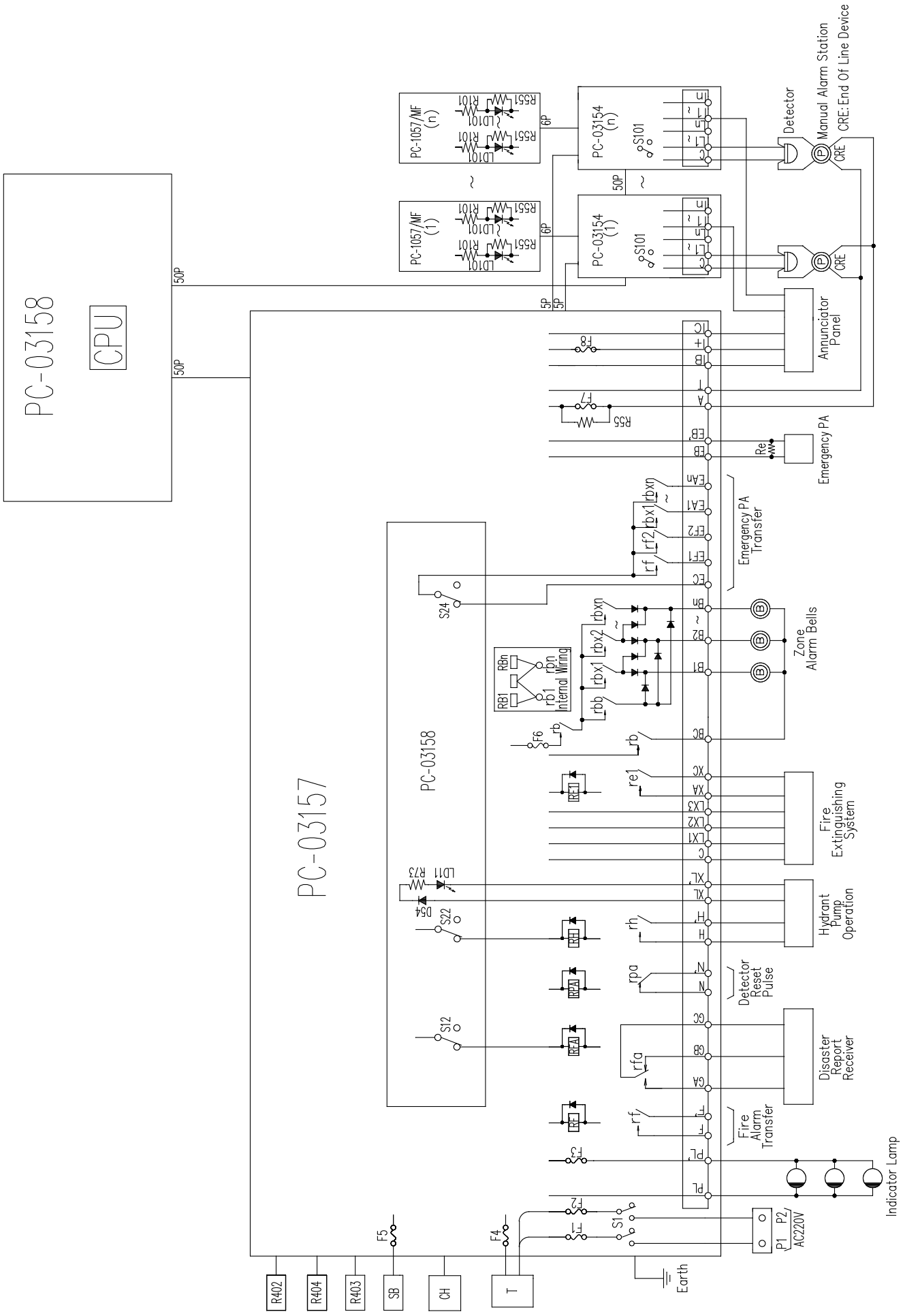
(3) Record this elapsed time as "Fire Alarm Receipt Start Time" and if it remains between 15~20 seconds, it is normal.

Note: Please measure the time 2~3 seconds after "Reset" switch operation. When you measure alarm delay time, set "Alarm Transfer Isolation" switch to silence side and "Hydrant Isolation" switch to isolation side and "Maintenance" switch to maintenance side, then carry out the measurement.

5. Symptom of Fuse Meltdown

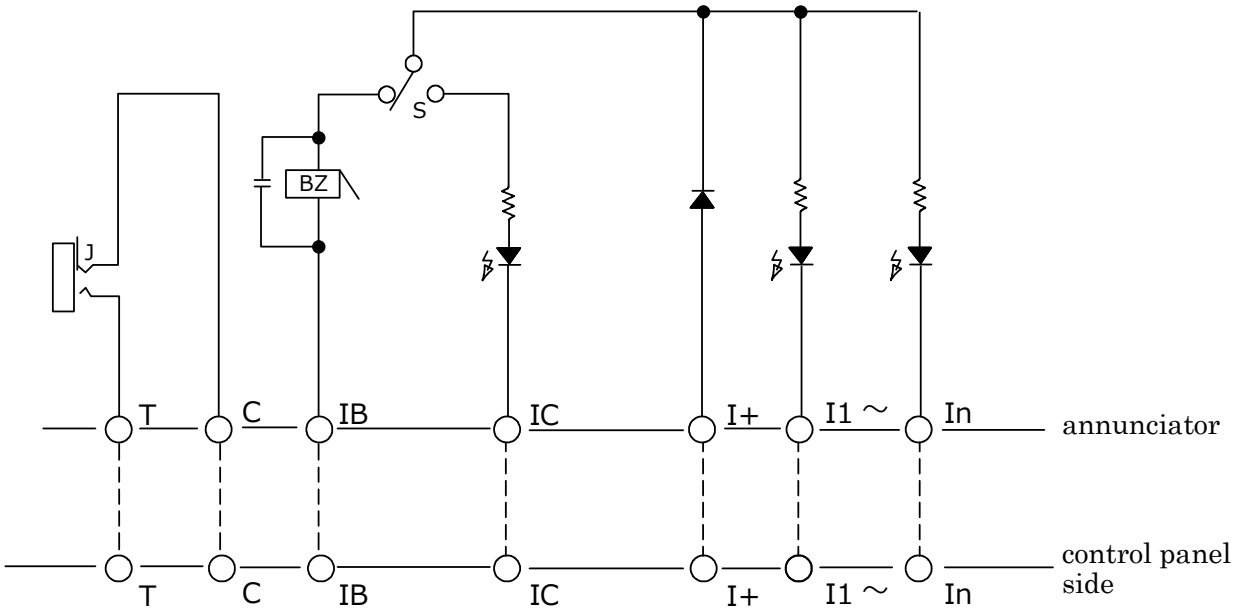
Fuse Symbol	Fuse Capacity (A)		Fuse For	Symptom of Fuse Meltdown
	5LA, 10LA	15LA~ 40LA		
F1 F2	1A	1A	Power supply primary side	" AC Power" indicator turns off, the same condition as power cut and changeovers to standby battery. Only "Normal" indicator continues to turn on.
F3	1A	1A	Indicator	Indicator lights installed at corridor etc turn off.
F4	2A	3A	Power supply secondary side	" AC Power" indicator turns off.
F5	2A	3A	Standby battery circuit	"Circuit Voltage" light turns off at power cut and at battery test time.
F6	1A	1A	Zone alarm bell	Zone bell does not sound. Alarm buzzer sounds.
F7	0.5A	0.5A	Manual alarm station	Push button switch of manual alarm station is pressed and response light of the manual alarm station does not turn on even when fire signal is transferred.
F8	0.5A	0.5A	Annunciator	Each indicator light of annunciator and alarm device do not sound.

6. Block Diagram



7. Connection Examples of Various Signal Transfer

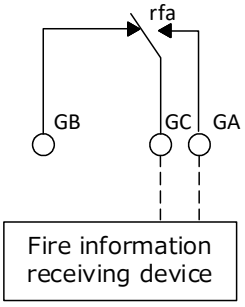
Annunciator connection



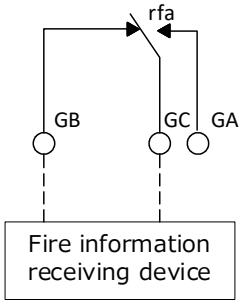
Signal transfer terminal connection

(1) signal transfer to security company etc.

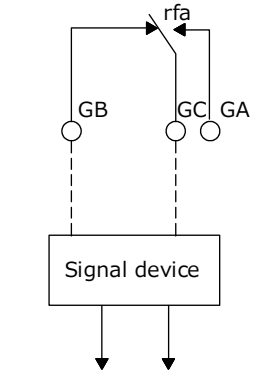
1-1 in case of constant open route type



1-2 in case of constant close route type

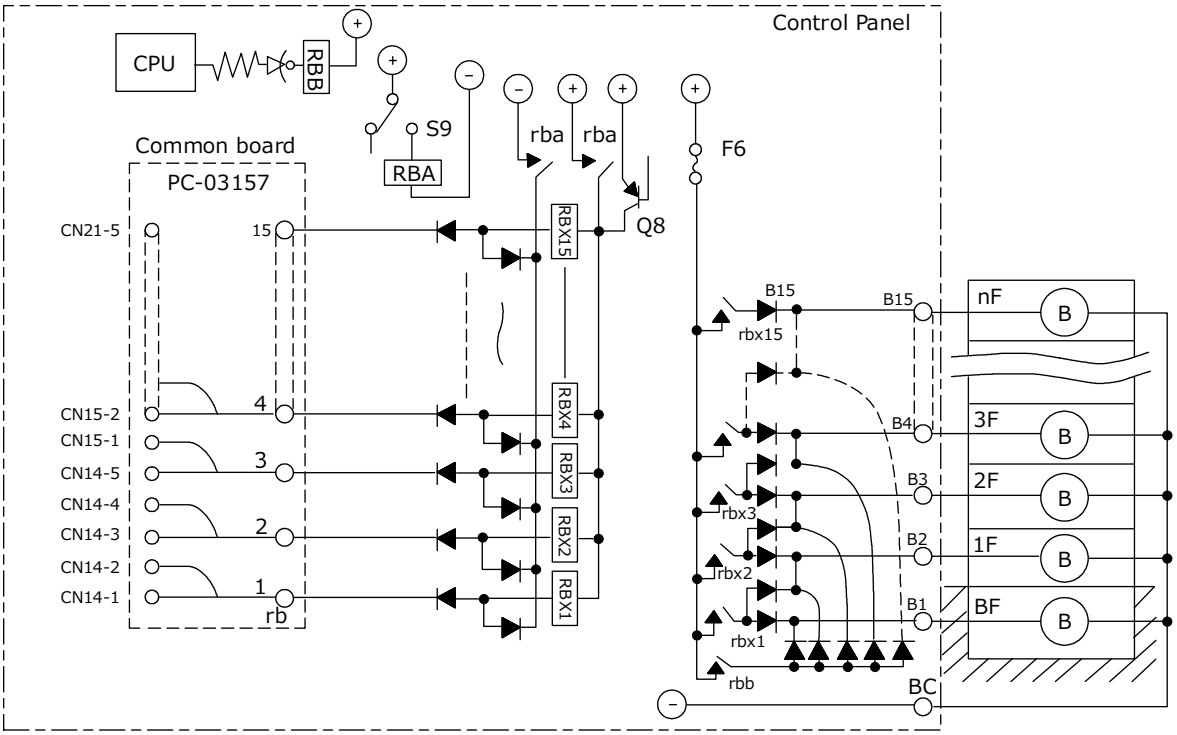


(2) signal transfer to guide light signal device



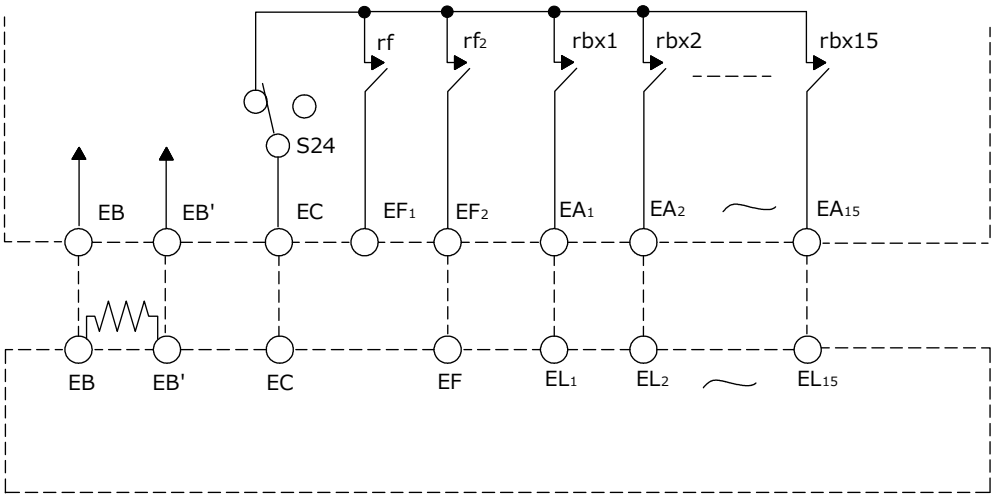
7. Connection Examples of Various Signal Transfer

Zone bell connection example



※Please bundle up all connector leads by type and connect to terminals.

Connection examples of signal transfer to Emergency PA system.



EF_1----fire confirmation (common fire and manual alarm station fire)

EF_2----fire confirmation (2^{nd} fire signal transfer and manual alarm station fire signal transfer)

※EA terminal number becomes the same as zone number, in case of less than 10 zones.

8. Standard Specification

Item	Specification
Power supply	Main power supply: AC 220 (50~60Hz), variation 198~242V. Standby battery: built-in sealed type Nickel Cadmium battery.
Number of detector fixed	Smoke, spot type detector (2KH etc): Max.40 per zone, in total less than 20 x zone number. Heat type detector: as required.
External wire resistance	Below max. 50 ohm.
Fire test	By fire test switch method or by zone selection switch (rotary type) test method.
Detector line fault monitor	Line fault constant monitoring method using special end-of-line device (CRE). At line fault, zone light flickers and alarm buzzer sounds.
Fire indicator	Red LED 2 lights----turn on at fire time.
Zone alarm indicator	Red LED 1 light----flickers at fire time and line fault time.
AC power indicator	Blue LED----turns on when AC power is supplied.
Switch operation indicator	Red LED----flickers at lock switch operation condition.
Circuit voltage indicator	Blue LED----turns on at normal circuit voltage. The light turns off at lowering circuit voltage (below about 20.4V). Warning buzzer sounds.
CPU RUN indicator	Green LED----turns on at CPU normal function time and turns off at CPU trouble time. (PC-03156 and PC-03158 backside)
CPU trouble indicator	Red LED----turns on at CPU trouble time and CPU trouble sound (small sound volume: main).
Battery fault indicator	Red LED----turns on when standby battery is not connected.Alarm buzzer sounds.
Fuse fault indicator	Red LED----turns on when zone alarm fuse is at line fault.Alarm buzzer sounds.
Manual alarm station indicator	Red LED----turns on when fire signal from manual alarm station is received.
Telephone indicator	Red LED----turns on when telephone call from manual alarm station or annunciator is received.
Alarm delay indicator	Red LED----turns on at alarm delay circuit function time. Flickers when alarm delay cancel switch (S29) is ON (The light does not turn on at individual alarm delay cancellation time.)
Other alarm indicator	Red LED x 3----turn on when external alarm is received. Alarm buzzer sounds.
Emergency PA indicator	Red LED----flickers when emergency PA signal is received and turns on when signal line is at fault. Alarm buzzer sounds.
Maintenance indicator	Flickers at maintenance switch operation time (red).
Zone alarm bell silence indicator	Flickers at zone alarm bell silence time and at maintenance switch operation time (red).
Panel inside switches	Main power supply switch, alarm delay cancel switch, individual alarm delay cancel switch, maintenance switch, CPU reset switch, zone configuration switch.
Operating panel switches	Outside of operating cover: Alarm silence (Non-lock), Zone alarm bell silence.
	Inside of operating cover: fire reset (Non-lock), signal transferisolation, general alarm, hydrant isolation, fire test, zone selection (rotary), test reset, battery test (Non-lock),emergency PA zone alarm transfer isolation.
Panel alarm sounder	Piezoelectric buzzer-resounding type.
Common alarm device	Telephone calling time, zone alarm bell fuse line fault time, standby battery omission time, emergency PA line (EB, EB') fault time, external alarm signal receiving time.
External signal transfer	Contact capacity DC24V Fire common signal transfer F-F'(a contact) 1A Fire signal transfer GA-GB-GC(C contact) 1A Detector reset pulse signal transfer N-N'(b contact) 0.5A External alarm signal transfer(1L only) XA-XC(a contact) 1A Emergency PA signal transfer(EC, EF, EF2, EA1~EA15) 1A EC(a contact Common----EA1~EA15 is standard equipment over 15 lines. Less than 10 lines-----the same number as zone number. Annunciator: special annunciator 1 set can be connected.
Auxiliary function	Power supply for indicator light AC25V 0.4A
Zone number	5~40L----wall mounting type
Telephone	1 line, telephone jack type

8. Standard Specification

Zone Alarm Device, Rating, External Size

●Wall mounting type

Zone No. L	5	10	15	20	25	30	40
Zone bell connection quantity	10	20					30
Zone bell block quantity	5	10	15				
Rated primary current (AC220V)	0.39A						
Indicator light power supply capacity (AC25V)	0.4A						
Standby battery capacity (Ah)	0.45						
External dimension Height x Width x Depth (mm)	760 x 450 x 100				1060 x 450 x 100		

Note: Zone bell connection quantity: A quantity when motor bell DC24V, 10mA is connected.

P type, Class 1 Control Panel Accessory List (1PM3-nLA)

Item Name	Quantity	
	5~10LA	15~40LA
Fuse 0.5A	2	2
Fuse 1A	4	4
Fuse 2A	2	0
Fuse 3A	0	2
Without fuse	1	
Hexagonal wrench	1	
Zone plate sheet	5	
Zone window transparent plate	3	
Alarm indication zone name sheet (orange)	1	
Alarm indication transparent plate	1	

These accessories are for the use of fire alarm control panel.
Do not use for other purposes.

9. Inspection and Maintenance

Inspection and maintenance of fire protection system etc and report of its result to Fire Service Authority are required under Japan Fire Service Law, therefore, we recommend you to carry out a similar inspection and maintenance at your end.

Type of fire protection system	Inspection content and method	Inspection period
Automatic fire alarm system	Inspection of external view and function	6 months
	Overall inspection	12 months
Wiring	Overall inspection	12 months

These regular inspections and report to Fire Service Authority shall be carried out by qualified personnel such as fire protection engineer, upon signing maintenance inspection contract with installation company etc.

Installation: year month date	
Installation	Name of Installer Address Tel.
Maintenance Contract	Name of Maintenance Co. Address Tel.

When any trouble is found on the equipment, please contact to the following address.

Point of Contact

Telephone No.: ( ) — —
Fax No.: ( ) — —

NITTAN COMPANY, LIMITED
54-5, 1-CHOME, SASAZUKA, SHIBUYA-KU, TOKYO, 151-8535, JAPAN
TEL: +81-3-5333-7021
URL: http://www.nittan.com/english

20.03B