Installation Manual

IX-DA, IX-DB (Video Door Station)
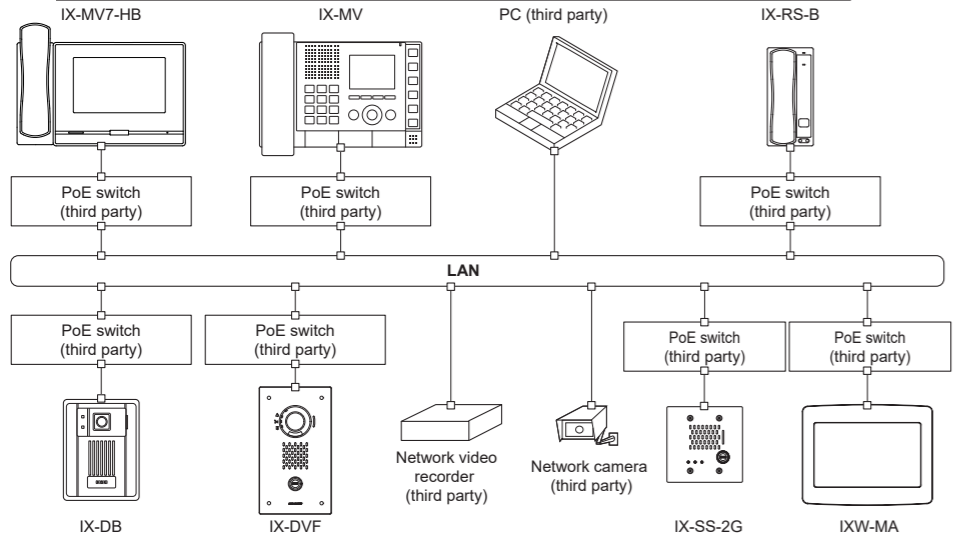## IX-BA, IX-BB (Audio Only Door Station)

AIPHONE

Introduction

- Read this manual before installation and connection.
  Read the "Setting Manual" and "Operation Manual". The manuals, IX Support Tool and IX Supervision Tool can be downloaded from our homepage at "https://www.aiphone.net/support/software-document/" free of charge.
- After completing installation and connection, program the system according to the "Setting Manual". The system cannot operate unless it is programmed.
- After performing installation, review with the customer how to operate system. Leave documentation accompanying the Master Station with the customer.

Important

Perform installation and connection only after gaining sufficient understanding of the system and this manual.
The illustrations used in this manual may differ from the actual stations.
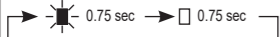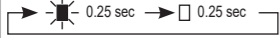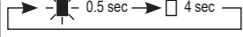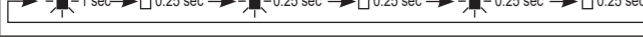
Example of System Configuration

IX-MV7-HB   IX-MV   PC (third party)   IX-RS-B

PoE switch (third party)   PoE switch (third party)   PoE switch (third party)

LAN

PoE switch (third party)   PoE switch (third party)   PoE switch (third party)   PoE switch (third party)

IX-DB   IX-DVF   Network video recorder (third party)   Network camera (third party)   IX-SS-2G   IXW-MA
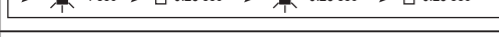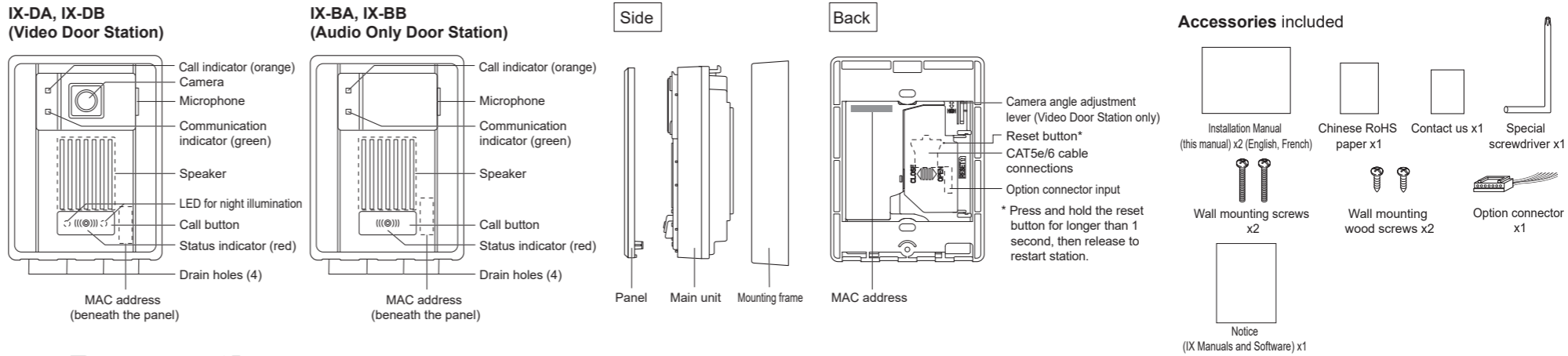
Indicators

Refer to the separate "Operation Manual" for indicators other than those listed.

☼: Light ON   ☐: Light OFF

Name		Status (Pattern)	Explanation
Status indicator	Red flashing	Normal flashing — 0.75 sec / 0.75 sec	Booting
		Fast flashing — 0.25 sec / 0.25 sec	Device error
		Long interval flashing — 0.5 sec / 4 sec	Communication failure
		Long irregular flashing — 1 sec / 0.25 sec / 0.25 sec / 0.25 sec / 0.25 sec / 0.25 sec	Firmware version upgrading
		Short irregular flashing — 1 sec / 0.25 sec / 0.25 sec / 0.25 sec	Initializing
	Red light	☼	Standby

Part Names and Accessories

IX-DA, IX-DB (Video Door Station)

- Call indicator (orange)
- Camera
- Microphone
- Communication indicator (green)
- Speaker
- LED for night illumination
- Call button
- Status indicator (red)
- Drain holes (4)

MAC address (beneath the panel)

IX-BA, IX-BB (Audio Only Door Station)

- Call indicator (orange)
- Microphone
- Communication indicator (green)
- Speaker
- Call button
- Status indicator (red)
- Drain holes (4)

MAC address (beneath the panel)

Side   Back

- Camera angle adjustment lever (Video Door Station only)
- Reset button*
- CAT5e/6 cable connections
- Option connector input

* Press and hold the reset button for longer than 1 second, then release to restart station.

Panel   Main unit   Mounting frame   MAC address

Accessories included

- Installation Manual (this manual) x2 (English, French)
- Chinese RoHS paper x1
- Contact us x1
- Special screwdriver x1
- Wall mounting screws x2
- Wall mounting wood screws x2
- Option connector x1
- Notice (IX Manuals and Software) x1

Precautions

⚠ Warning — Negligence could result in **death or serious injury**.

1. Do not, under any circumstances, open the station.
   Voltage within some internal components may cause electrical shock.
2. Do not dismantle or alter the unit. This may result in fire or electrical shock.

   Dismantling or alteration

3. The station is not designed to explosion-proof specifications. Do not install or use in locations that can contain flammable gases. This may result in fire or explosion.
4. Do not connect any terminals on the station directly to an AC power line. This may result in fire or electrical shock.

⚠ Caution — Negligence could result in **injury to people or damage to property**.

1. Do not install or connect the station with the power on. This may result in electrical shock or malfunction.
2. Make sure the wiring is correct and there are no wiring shorts before switching on the station. This may result in fire or electrical shock.
3. Do not put your ear close to the speaker when using the station. May cause harm to the ear if a sudden loud noise is emitted.

Notice

1. Aiphone assumes no responsibility for damages as a result of delayed or unusable services, which were due to failures in network equipment, communication services by Internet and cellular phone companies, line interruptions, communication failures, or inaccuracies or omissions in the transmission unit.
2. We will under no conditions be liable for damage that occurs due to the inability to communicate due to malfunctions, problems, or operational errors in this product.
3. If personal information leaked by eavesdropping or unauthorized access in the communication paths over the Internet, please be aware that Aiphone assumes no responsibility for the damages.
4. We will under no conditions be liable for any damages or losses resulting from this product's contents or specifications.
5. This manual was created by Aiphone Co., Ltd., all rights reserved. Copying a part of or this entire manual without prior permission from Aiphone Co., Ltd. is strictly forbidden.
6. Please note that this manual may be revised or changed without prior notice.
7. Please note that product specifications may be changed for the sake of improvement without prior notice.
8. Please be aware that it is the customer's responsibility to ensure that their computer is secure. We will under no conditions be liable for security failures.
9. This system is not intended for life support or crime prevention. It is just a supplementary means of conveying information. Aiphone will under no conditions be liable for loss of life or property which occurs while the system is being operated.
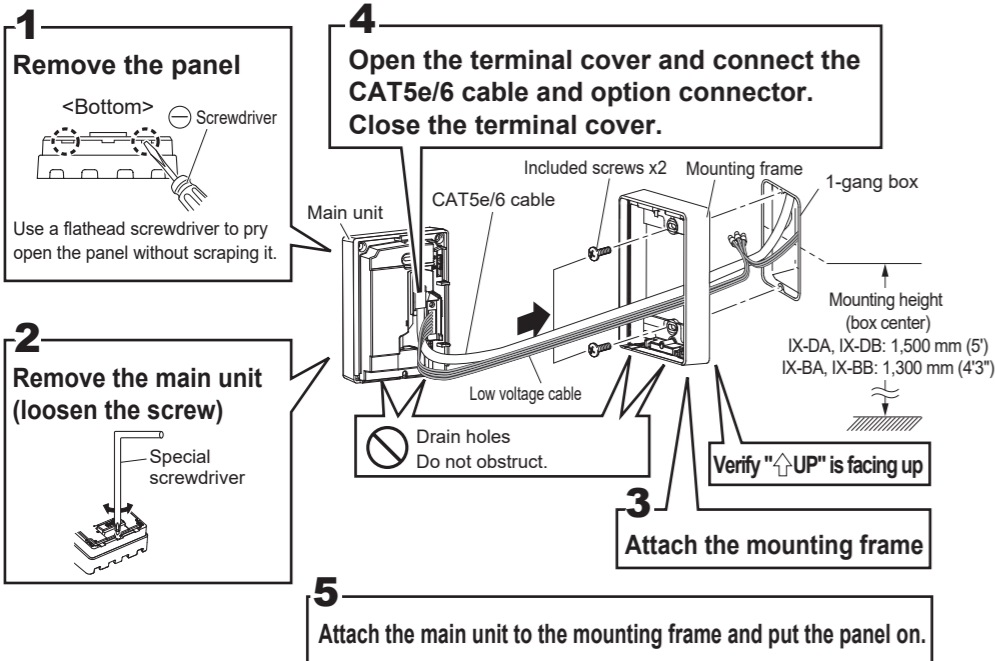10. Keep the unit more than 1m (3.3') away from radio or TV set.

11. Install the unit in an area that will be accessible for future inspections, repairs, and maintenance.
12. If the unit is down or does not operate properly, unplug the power supply or turn off the POWER switches.
13. If it is used close to a cellular phone, the unit may malfunction.
14. The unit can be damaged if dropped. Handle with care.
15. The unit turns inoperative during power failure.
16. If the station is installed in an area with an extremely strong electrical field, such as in the vicinity of a broadcasting station, it may create interference and cause a malfunction.
17. At a gate or porch illuminated by a fluorescent lamp, the picture may vary, but this is not a malfunction.
18. If stripes or fine patterns are reflected, outlines and colors shown may differ from actual people or backgrounds, but this is not a malfunction.
19. Warm-color lighting shining on the video door station may change the tint of the picture on the monitor.
20. When using fluorescent lights to illuminate the screen its colors may periodically change (color rolling), but this is not a malfunction.
21. The unit case may become a warm with use, but this is not a unit malfunction.
22. Warm air flowing from inside may interact with the temperature difference in the outside air to cause condensation to occur on the camera unit. It is recommended that you block the points from which warm air is flowing out, such as incoming line ports, in order to prevent condensation.
23. Keep the intercom wires more than 30cm (12'') away from AC 100-240V wiring. AC induced noise and/or unit malfunction could result.
24. Door station is weather-resistant, but do not spray high-pressure water. Unit trouble could result.
25. Installing the device in the following locations could cause malfunction:
    - Locations near heating equipment
    - Locations subject to liquid, iron filings, dust, oil, or chemicals
    - Locations subject to moisture and humidity extremes
    - Locations where the temperature is quite low
    - Locations subject to steam or oil smoke
    - Sulphurous environments
    - Locations close to the sea or directly exposed to sea breeze
26. When installing or using the station, give consideration to the privacy rights of subjects, as it is the responsibility of the system owner to post signs or warnings in accordance with local ordinances.
27. In 50Hz regions, if a strong fluorescent light light enters directly into the camera, it may cause the image to flicker. Either shield the camera from the light or use an inverter fluorescent light.
28. Installing the station in the following locations as is may affect the clarity of the image:
    - Where the device is installed in a dark location and there is light behind the subject
    - Where lights will shine directly into the camera at night time
    - Where the sky fills much of the background
    - Where the background of the subject is white
    - Where direct sunlight is present
29. If existing wiring is used, the device may not operate properly. In that case, it will be necessary to replace the wiring.
30. Do not use an impact driver to fasten screws. Doing so may cause damage to the device.
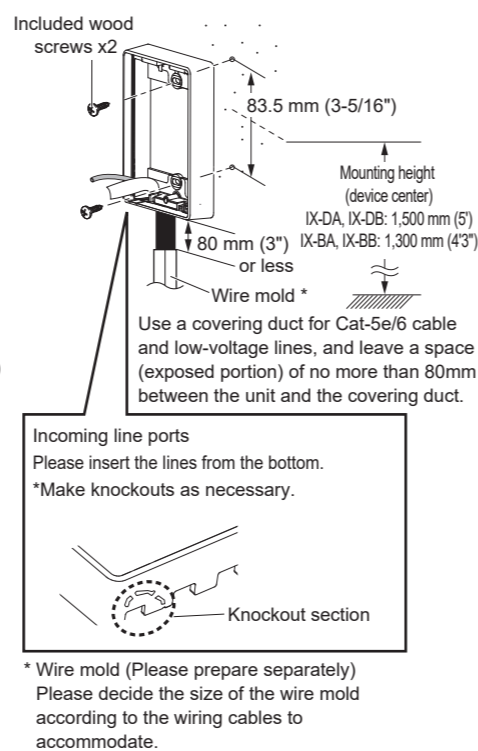
Installation of Door Station

⊘ There is no space to accommodate the wiring in the back of the unit. If you do not use a 1-gang box, please provide openings or handle exposed wiring in other ways.

■ Back wiring

1
Remove the panel
<Bottom> ⊖ Screwdriver
Use a flathead screwdriver to pry open the panel without scraping it.

2
Remove the main unit (loosen the screw)
Special screwdriver

4
Open the terminal cover and connect the CAT5e/6 cable and option connector. Close the terminal cover.

Main unit
CAT5e/6 cable
Included screws x2   Mounting frame
1-gang box

Mounting height (box center)
IX-DA, IX-DB: 1,500 mm (5')
IX-BA, IX-BB: 1,300 mm (4'3")

Low voltage cable
Drain holes Do not obstruct.

Verify "⇧UP" is facing up

3
Attach the mounting frame

5
Attach the main unit to the mounting frame and put the panel on.

■ Surface wiring

Included wood screws x2

83.5 mm (3-5/16")

Mounting height (device center)
IX-DA, IX-DB: 1,500 mm (5')
IX-BA, IX-BB: 1,300 mm (4'3")

80 mm (3") or less

Wire mold *

Use a covering duct for Cat-5e/6 cable and low-voltage lines, and leave a space (exposed portion) of no more than 80mm between the unit and the covering duct.

Incoming line ports
Please insert the lines from the bottom.
*Make knockouts as necessary.

Knockout section

* Wire mold (Please prepare separately) Please decide the size of the wire mold according to the wiring cables to accommodate.
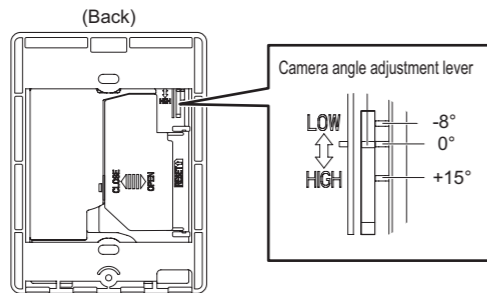
💡 If the accessory screws are unusable for plaster board or a concrete wall, etc., please use a product such as an anchor or concrete plug (not included).

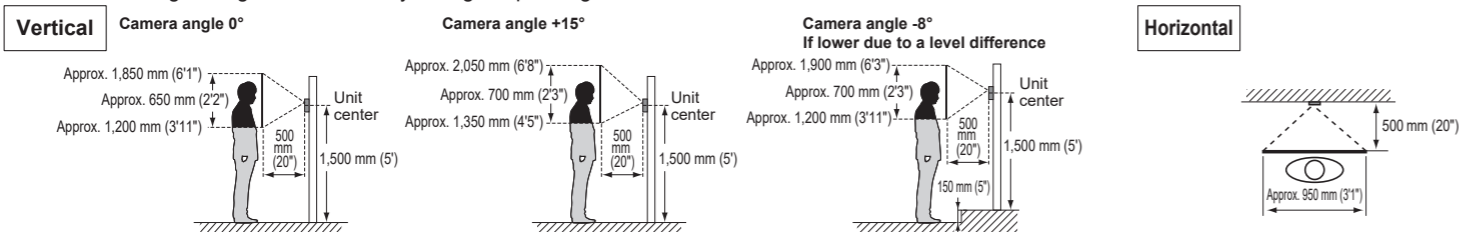## Imaging Range and Mounting Location (IX-DA, IX-DB)

■ Imaging Position Settings
The camera angle can be adjusted up or down (-8°, 0°, +15°) using the camera angle adjustment lever. Set it to the optimal level.

(Back)

Camera angle adjustment lever
LOW -8°
     0°
HIGH +15°

■ Wall Mounting
The indicated range is a guideline that may change depending on the installation environment.

| Vertical | Camera angle 0° | Camera angle +15° | Camera angle -8° If lower due to a level difference | Horizontal |

Camera angle 0°
Approx. 1,850 mm (6'1")
Approx. 650 mm (2'2")
Approx. 1,200 mm (3'11")
500 mm (20")
Unit center
1,500 mm (5')

Camera angle +15°
Approx. 2,050 mm (6'8")
Approx. 700 mm (2'3")
Approx. 1,350 mm (4'5")
500 mm (20")
Unit center
1,500 mm (5')

Camera angle -8°
Approx. 1,900 mm (6'3")
Approx. 700 mm (2'3")
Approx. 1,200 mm (3'11")
500 mm (20")
Unit center
150 mm (5')
1,500 mm (5')

Horizontal
500 mm (20")
Approx. 950 mm (3'1")

When light enters the camera, the monitor screen may flicker brightly or the subject may become dark. Try to prevent strong lighting from entering the camera directly.
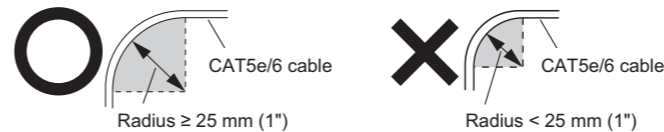
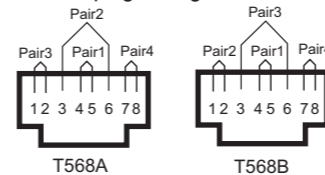## Connection Precautions

■ Cable
The cable is not included with the product.
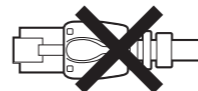
CAT5e/6 cable
- **Use a straight cable when connecting between equipment.**
- Do not use a CAT5e/6 cable with a bending angle of less than a 25 mm (1") radius. A radius of less than 25 mm (1") could cause a communication failure.

Radius ≥ 25 mm (1")   CAT5e/6 cable
Radius < 25 mm (1")   CAT5e/6 cable

- Do not peel the jacket off the CAT5e/6 cable any more than is necessary.
- Attach the RJ45 modular plugs using either EIA/TIA-568A or 568B.

Pair2
Pair3 Pair1 Pair4
1 2 3 4 5 6 7 8
T568A

Pair3
Pair2 Pair1 Pair4
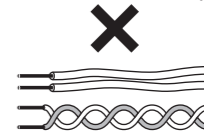1 2 3 4 5 6 7 8
T568B

- **Use the LAN tester to confirm conduction before connecting the CAT5e/6 cable.**
- The RJ45 connector with cover cannot be connected to CAT5e/6 cable terminals for Master Station or Door Stations. Use cables without covers on the connectors.

- Do not pull the CAT5e/6 cable or apply excessive load.

Cable precautions
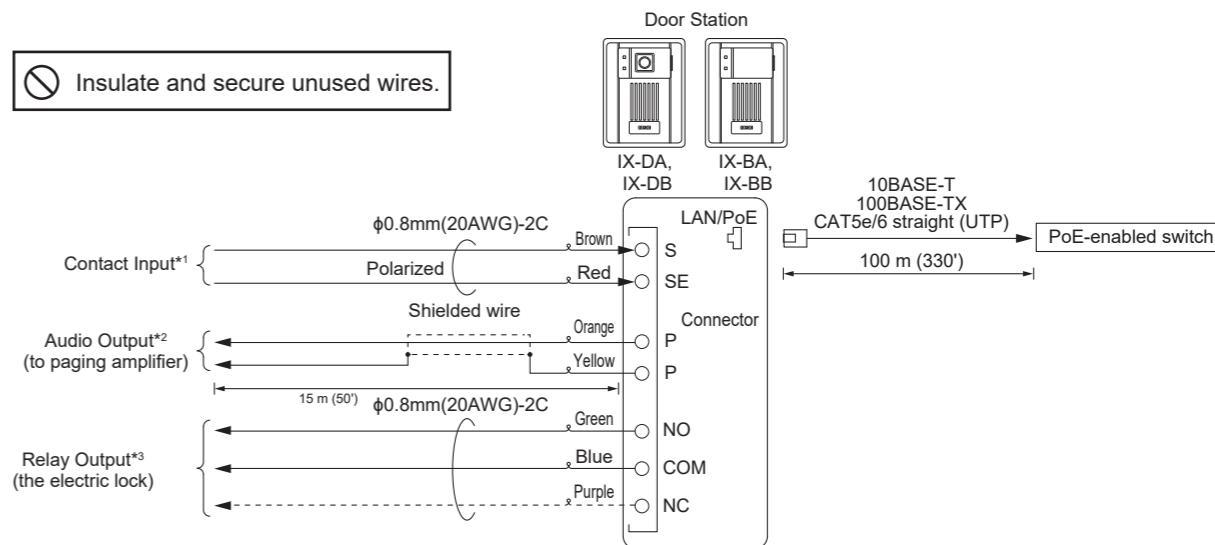- Do not use separate conductors or twisted pair cables.

- Do not use an odd number cable.

Wiring Connection

⊘ Insulate and secure unused wires.

Door Station

IX-DA, IX-DB   IX-BA, IX-BB

IX-DA, IX-DB   IX-BA, IX-BB   LAN/PoE

10BASE-T 100BASE-TX
CAT5e/6 straight (UTP)   PoE-enabled switch
100 m (330')

Contact Input*1   φ0.8mm(20AWG)-2C
Polarized   Brown — S
Red — SE

Connector

Audio Output*2 (to paging amplifier)   Shielded wire
Orange — P
Yellow — P
15 m (50') φ0.8mm(20AWG)-2C

Relay Output*3 (the electric lock)
Green — NO
Blue — COM
Purple — NC

*1 Contact Input Specifications

Input method	Form C dry contact (N/O or N/C) *
Fixed detection time	200msec - 2000msec by settings
Contact resistance	Maximum closure resistance: 700 Ω or less Minimum open resistance: 3 kΩ or more
Terminal short-circuit current	10 mA or less
Voltage between the terminals	DC 5V or less (between open terminals)

* Even if the input continues at the time of reset, the operation will not be performed again.

*2 Audio Output Specifications

Output impedance	600 Ω
Output audio level	300 mVrms (600 Ω when terminated)

*3 Relay Output Specifications

Output method	Form C dry contact (N/O or N/C)
Voltage between the terminals	AC 24V, 0.5A (resistive load) DC 24V, 0.5A (resistive load) Minimum load (AC/DC): 100 mV, 0.1 mA