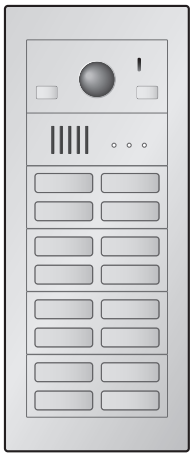
Panasonic

Installation and Operating Instructions

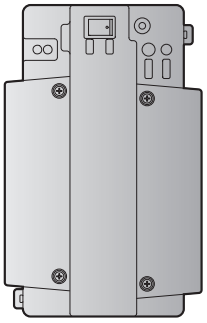
Video Intercom System — Lobby station/Distributor

Model No. **VL-VM series / VL-VM701**



Lobby station
(16 call buttons)

Lobby station
(8 call buttons)



Distributor
(VL-VM701)*1

Thank you for purchasing a Panasonic product.
Please follow all instructions in this document and save it for future reference.
Carefully read the information found in the section titled "2.1 Important safety information" in particular.
*1 In India, VL-VM701 is not sold and bus wiring is not available.

This system is an auxiliary system; it is not designed to provide complete protection from property loss. Panasonic will not be held responsible in the event that property loss occurs while this system is in operation.

Note to the installer

- **This document includes instructions for both installation and operation. See the section titled "4 Installation" for installation instructions.**
- Please read this document carefully, and install the product safely and correctly by following the instructions.
- Only use attachments/accessories specified by the manufacturer.
- The installation shall be carried out in accordance with all applicable installation rules.

1. Introduction

2. Important Information

3. Preparation

4. Installation

5. Basic Operations

6. Other information

1.1 System overview

This document explains how to install and configure a Video Intercom System for Apartment Complexes comprised of the VL-VM series devices.
Additionally, general information is provided for connecting other devices to the system.

1.1.1 Main features

Easy installation

– A flexible system that accommodates up to 32 rooms can be designed by combining call button modules.
– The lobby station supports the two main wiring methods (star and bus).

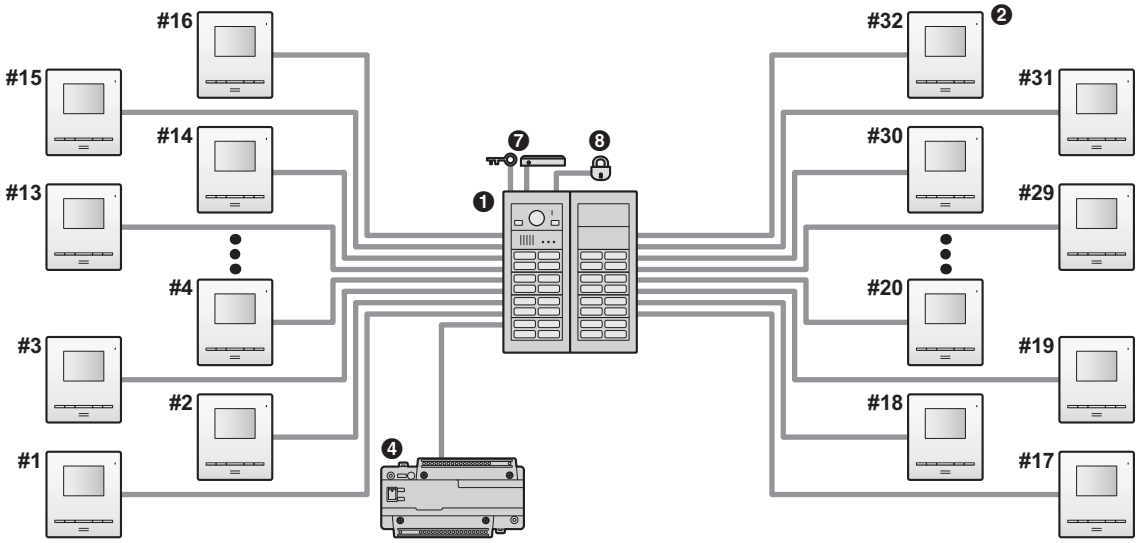
Easy maintenance

– Our unique front-access nameplates are easily changed, even after the lobby station is installed.

1.1.2 System configuration

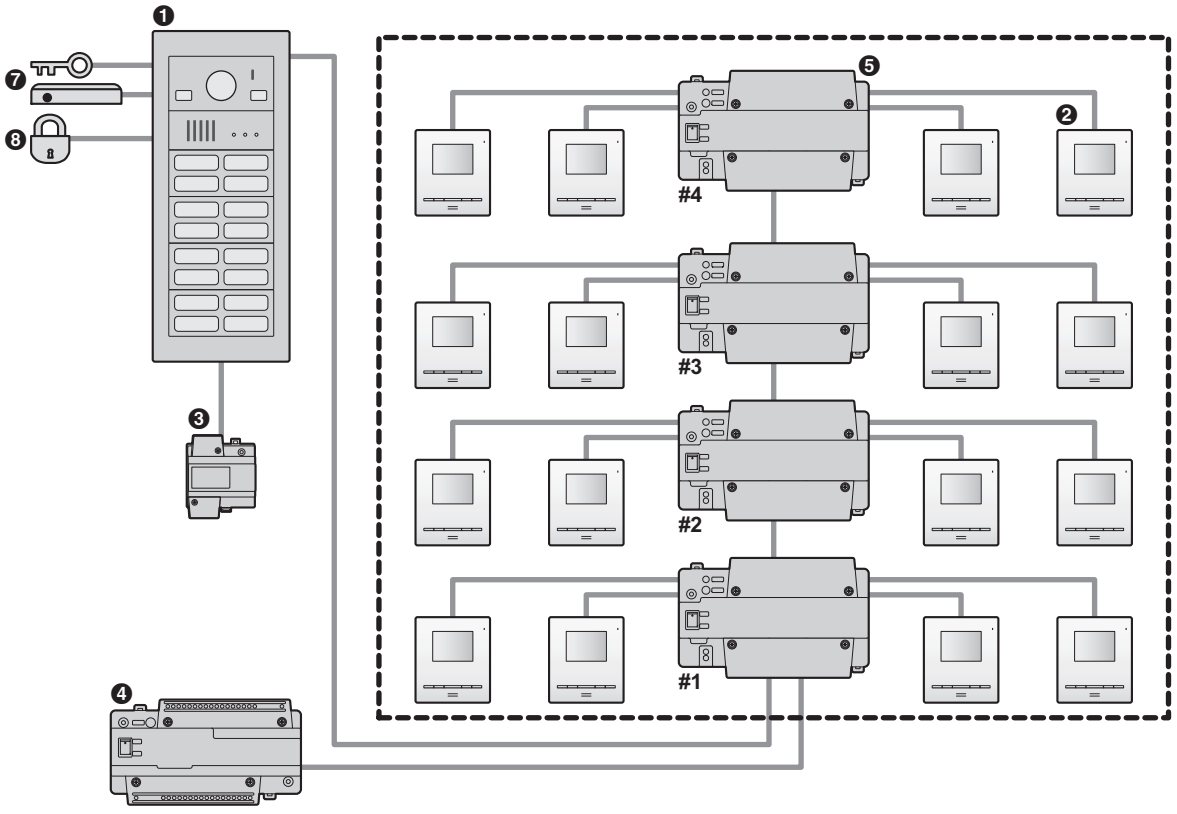
Star wiring example

Example: 32 call buttons on the lobby station



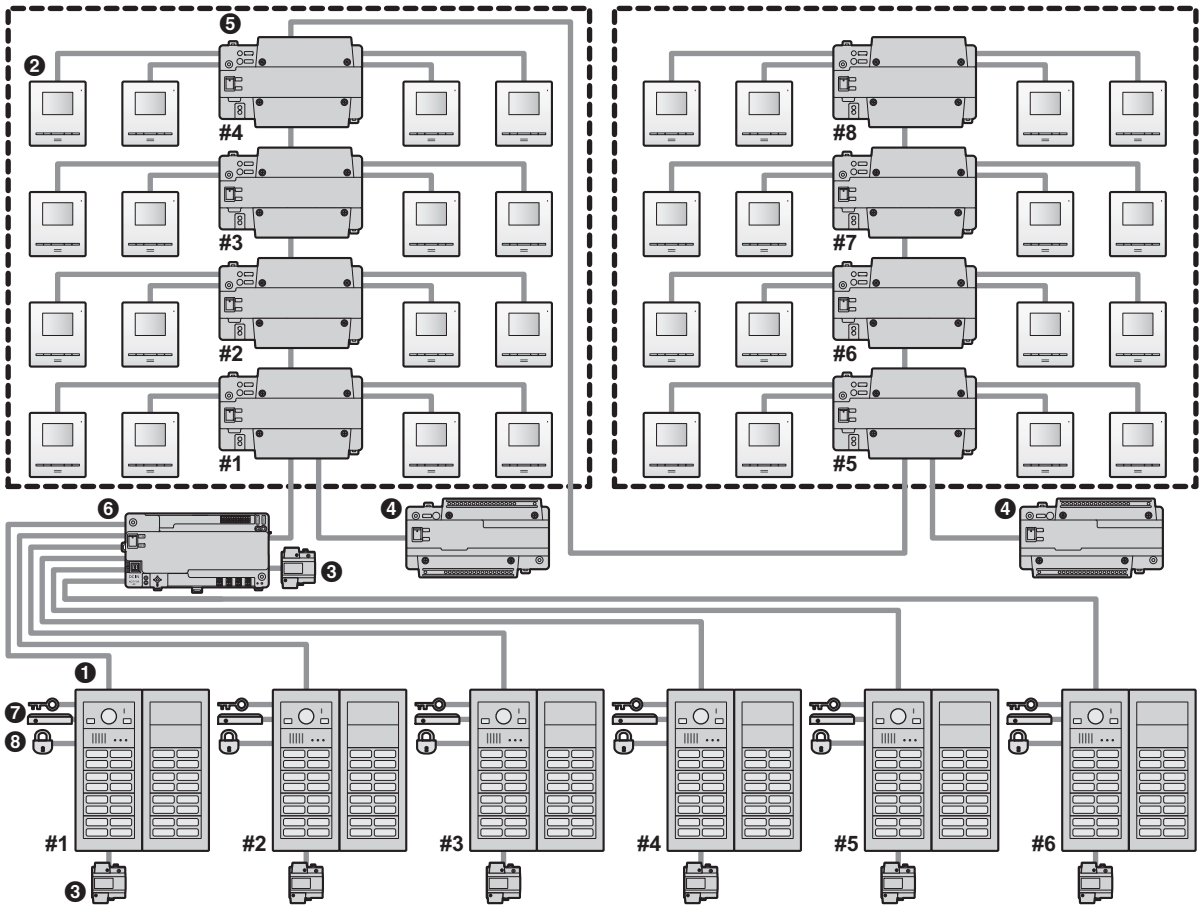
Bus wiring example

Example 1: 16 call buttons on the lobby station



Bus wiring example

Example 2: 32 call buttons on the lobby station/6 lobby stations



System devices

- See page 23 for information about connections for power supply units.

No.	Item	Star wiring	Bus wiring
❶	Lobby station (VL-VM series)	Up to 1	Up to 6
❷	Main monitor*1, *2	Up to 32 (depending on the composition of the lobby station's modules)	
❸	Power supply unit (VL-PS240)	The number of required power supply units differs depending on the number of devices used.	
❹	Power supply unit (VL-PS2410)	The number of required power supply units differs depending on the number of devices used.	
❺	Distributor (VL-VM701)	–	Up to 8
❻	Extension box (VL-V703)	–	Up to 1
❼	K-IN connection device (example: access controller and/or open door sensor, etc.)	Up to 2	Up to 2
❽	Electric lock	1 per lobby station	1 per lobby station

*1 See page 18 for specifications and information about supported models.

*2 VL-MV10 and VL-MWD501 support door bells. For VL-MWD501, a sound is played when the door bell is pressed, but **"Doorphone unavailable"** is displayed on the screen (this is normal).

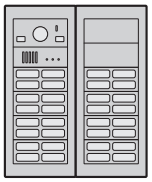
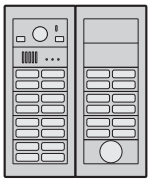
1.1.3 Lobby station components

The lobby station is composed of the following modules according to the number of rooms. See page 26 for information about assembly.

Note:

- Regardless of the number of button module combinations, a maximum of 8 button modules can be used in 1 lobby station.

Large type lobby station example

Module					
Model no.	**Number of call buttons (Unit: pcs.)**	32	28	16	13
VL-VM101	Camera module	1	1	1	1
VL-VM301	1-button module	–	–	–	1
VL-VM302	2-button module	–	–	–	–
VL-VM303	3-button module	–	–	–	–
VL-VM304	4-button module	8	7	4	3
VL-VM901	Blank panel	2	2	–	–
VL-VM801	Extension cable	1	1	–	–
VL-VM603	Back box	2	2	1	1
VL-VM503*1	Surface mount cover*1	2	2	1	1
VL-VM902	VIGIK® panel*2	–	1	–	–

Small type lobby station example

Module						
Model no.	**Number of room buttons (Unit: pcs.)**	24	16	8	7	6
VL-VM101	Camera module	1	1	1	1	1
VL-VM301	1-button module	–	–	–	–	–
VL-VM302	2-button module	–	–	–	–	1
VL-VM303	3-button module	–	–	–	1	–
VL-VM304	4-button module	6	4	2	1	1
VL-VM901	Blank panel	–	1	–	–	–
VL-VM801	Extension cable	1	1	–	–	–
VL-VM602	Back box	2	2	1	1	1
VL-VM502*1	Surface mount cover*1	2	2	1	1	1
VL-VM902	VIGIK panel*2	–	1	–	–	–

*1 The surface mount cover cannot be attached when the lobby station is flush mounted. However, make sure to use the surface mount cover when the lobby station is surface mounted.

*2 For France

2.1 Important safety information

To prevent severe injury or loss of life or property, and to ensure proper and safe operation of your product, read this section carefully before using the product.

WARNING

Preventing fire, electric shock and short circuits

- **Leave installation work to the dealer. Installation work requires technical knowledge and experience. Electrical connection work should be performed by certified personnel only. Failure to observe this may cause fire, electric shock, injury, or damage to the product. Consult the dealer.**
- **For Australia/New Zealand only:**
  VL-PS240 or VL-PS2410 only: Installation must only be by a registered electrician. Wiring must be performed according to AS/NZS 3000 wiring rules.
- Use only the power supply unit VL-PS240 or VL-PS2410.
- Do not place objects on the power cables. Install the product where no one can step or trip on the power cables.
- Do not allow the power cables to be excessively pulled, bent or placed under heavy objects.
- Make sure all connections from the power outlet to the power supply unit are secure.
- Never touch the power supply unit and power cables with wet hands.
- Do not use the power supply unit for outdoor installations (it is for indoor use only).
- Do not disassemble or modify the product. Refer servicing to an authorised service centre when service is required. Disassembling the product or manipulating the product in a way not described in the documentation may expose you to dangerous voltages and other risks.
- Do not touch the product or the power supply unit during an electrical storm. There may be a remote risk of electric shock from lightning.
- Never install wiring during a lightning storm.
- Do not connect non-specified devices.
- Do not connect a power cable to a terminal that is not specified in this document.
- When opening holes in walls for installation or wiring, or when securing the power cable, make sure you do not damage existing wiring and ductwork.
- Do not make any wiring connections when the power outlet is turned on.
- Do not install the product and power supply unit in the following places:
  – Places where the product and power supply unit may be splashed with water or chemicals
  – Places where there is a high concentration of dust or high humidity
- Do not push any objects through the openings of the product.
- If any of the following conditions occur, disconnect the power supply unit from the power outlet, and then refer servicing to an authorised service centre.
  – The product emits smoke, an abnormal smell or makes unusual noise
  – The power cables are damaged or frayed
  – Metal objects have been dropped inside the product
- When existing wires are used, it is possible that they contain AC voltage. Contact an authorised service centre.

Preventing accidents

- Name plate buttons may become a choking hazard. Keep name plate buttons out of reach of children. If you suspect a child has swallowed a name plate button, seek medical advice immediately.

CAUTION

Preventing accidents, injuries, and property damage

- Do not use the product in unstable areas or areas prone to strong vibrations. This may cause the product to fall, resulting in damage to the product or injury.
- Make sure you turn off the power at the breaker before performing any wiring work.
- Always connect power cables to the appropriate connection terminals. Incorrectly connecting the power cables may damage the power supply unit.
- To prevent the power cables from disconnecting and to prevent electric shock, secure the power cable using the included cable binders and attach the cable covers.
- Insert the power cables firmly all the way into the terminals. If the cables are not inserted all the way, heat may be generated.
- If the wiring passes outdoors, use a conduit and a surge protector.
- If the wiring passes underground, use a conduit, and do not make any connections underground.
- Install the product securely adhering to the instructions in this document to prevent it from falling off the wall. Avoid installing onto low-strength walls, such as gypsum board, ALC (autoclaved lightweight concrete), concrete block, or veneer (less than 18 mm thick) walls.
- The power supply unit is used as the main disconnect device. Ensure that the power outlet is installed near the product and is easily accessible.
- Do not put your ear(s) near the speaker, as loud sounds emitted from the speaker may cause hearing impairment.

2.2 Important safety instructions

When using this product, basic safety precautions should always be followed to reduce the risk of fire, electric shock, or personal injury.
Use only the power supply unit indicated in this document.

SAVE THESE INSTRUCTIONS

2.3 Privacy and rights of portrait

When installing or using the product, please take into consideration the rights of others with regard to privacy.

- It is generally said that "privacy" means the ability of an individual or group to stop information about themselves from becoming known to people other than those whom they choose to give the information. "Rights of portrait" means the right to be safe from having your own image taken and used indiscriminately without consent.
- Please observe the legal regulations (data protection, video surveillance) in your country during use.

2.4 Disclaimer

- To the maximum extent permitted by law, Panasonic assumes no responsibility for injuries or property damage resulting from failures arising out of improper installation or operation inconsistent with this document.

2.5 Other important information

- When you leave the product unused for a long period of time, unplug it from the power outlet.
- If you stop using the product, remove it from the walls to prevent it from falling off.
- When power fails, this product cannot be used.
- Panasonic may not be liable for damages due to external factors such as power failures.

2.6 General information

- **The available products differ depending on your region. For more information, please consult your dealer.**
- In the event of problems, you should contact your equipment supplier in the first instance.
- After removing the product and any included items from the packaging, store, dispose, or recycle the packaging as necessary. Note that certain types of packaging may be a suffocation or choking hazard.

Graphical symbols for use on equipment and their descriptions

Symbol	Explanation
	Alternating current (A.C.)
	Direct current (D.C.)
	Protective earth
	Protective bonding earth
	Functional earth
	For indoor use only
	Class II equipment (equipment in which protection against electric shock relies on Double Insulation or Reinforced Insulation)
	"ON" (power)
	"OFF" (power)
	Stand-by (power)
	"ON"/"OFF" (power; push-push)
	Caution, risk of electric shock

Disposal of Old Equipment (Only for European Union and countries with recycling systems)

This symbol (①) on the products, packaging, and/or accompanying documents means that used electrical and electronic products must not be mixed with general household waste.
For proper treatment, recovery and recycling of old products, please take them to applicable collection points in accordance with your national legislation.
By disposing of them correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment.
For more information about collection and recycling, please contact your local municipality.
Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union

This symbol (①) is only valid in the European Union. If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

2.7 For India only

Declaration of Conformity with the requirements of the E-Waste (Management) Rules

The Product is in conformity with the requirements of the reduction of hazardous substances of the E-Waste Rules.

The content of hazardous substance with the exemption of the applications listed in SCHEDULE II of the E-Waste Rules:

1. Lead (Pb) – not over 0.1% by weight;
2. Cadmium (Cd) – not over 0.01% by weight;
3. Mercury (Hg) – not over 0.1% by weight;
4. Hexavalent chromium (Cr6+) – not over 0.1% by weight;
5. Polybrominated biphenyls (PBBs) – not over 0.1% by weight;
6. Polybrominated diphenyl ethers (PBDEs) – not over 0.1% by weight.

Disposal information

For the purpose of recycling to facilitate effective utilization of resources, please return this product to a nearby authorized collection centre, registered dismantler or recycler, or Panasonic service centre when disposing of this product.

Please see the Panasonic website for further information on collection centres, etc., or call the toll-free number below.

Website:
http://www.panasonic.com/in/corporate/sustainability/panasonic-india-i-recycle-program.html
Service helpline: 1800 103 1333 or 1800 108 1333

2.8 For Europe

For information of Compliance with EU relevant Regulatory Directives,

Contact to Authorised Representative:

Panasonic Testing Centre
Panasonic Marketing Europe GmbH
Winsbergring 15, 22525 Hamburg, Germany
http://www.ptc.panasonic.eu/doc

Ecodesign information

Ecodesign information under EU Regulation (EC) No. 1275/2008 amended by (EU) Regulation No. 801/2013. From 1 January 2015.
Please visit here:
http://www.ptc.panasonic.eu/erp
Click [Downloads] → [Energy related products information (Public)]
Power consumption in networked standby and guidance are mentioned in the web site above.
This device is classified as a HiNA device (networked equipment with high network availability), according to Ecodesign requirements.

3.1 System devices

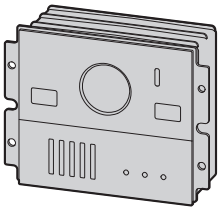
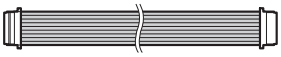
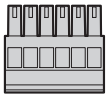
The following modules or devices are sold separately. Please contact your nearest Panasonic dealer for sales information.

Compatible system devices (as of July 2018)

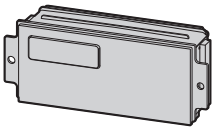
3.1.1 Lobby station

The lobby station is composed of combinations of modules. The following items are included with the modules.

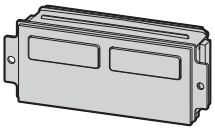
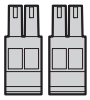
VL-VM101

Item	Quantity
Camera module 	1
Flat cable Used to connect modules. 	1
3-pin terminal block Used to connect wires to the K-OUT connection terminals. 	1
6-pin terminal block Used to connect wires to the K-IN (4 pins) and connection terminals when using bus wiring (2 pins). 	1
DC terminal block Used to connect wires from the power supply unit to the lobby station. 	1

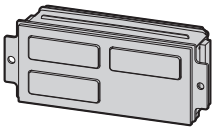
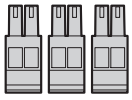
VL-VM301

Item	Quantity
1-button module 	1
Flat cable Used to connect modules. 	1
2-pin terminal block Used when using star wiring. 	1
Spare button Used as a spare when replacing name plates. 	1
Name sheet Used as a spare when replacing name plates. 	2
Screw (2 mm × 3 mm) Used to prevent the removal of name plates. 	2

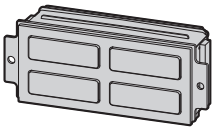
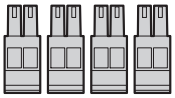
VL-VM302

Item	Quantity
2-button module 	1
Flat cable Used to connect modules. 	1
2-pin terminal block Used when using star wiring. 	2
Spare button Used as a spare when replacing name plates. 	1
Name sheet Used as a spare when replacing name plates. 	2
Screw (2 mm × 3 mm) Used to prevent the removal of name plates. 	3

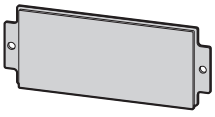
VL-VM303

Item	Quantity
3-button module 	1
Flat cable Used to connect modules. 	1
2-pin terminal block Used when using star wiring. 	3
Spare button Used as a spare when replacing name plates. 	2
Name sheet Used as a spare when replacing name plates. 	4
Screw (2 mm × 3 mm) Used to prevent the removal of name plates. 	5

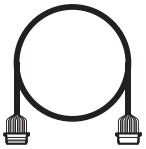
VL-VM304

Item	Quantity
4-button module 	1
Flat cable Used to connect modules. 	1
2-pin terminal block Used when using star wiring. 	4
Spare button Used to prevent the removal of name plates. 	2
Name sheet Used as a spare when replacing name plates. 	4
Screw (2 mm × 3 mm) Used to prevent the removal of name plates. 	6

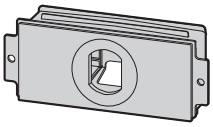
VL-VM901

Item	Quantity
Blank panel 	1

VL-VM801

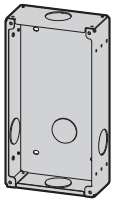
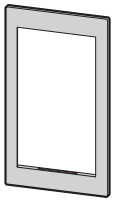
Item	Quantity
Extension cable Used to connect 2 frames of a lobby station together. 	1

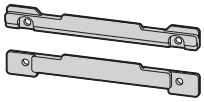
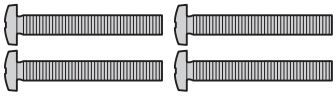
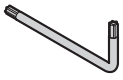
VL-VM902 (for France)

Item	Quantity
VIGIK panel 	1
Waterproof rubber[*1] Used when attaching the VIGIK reader. 	1

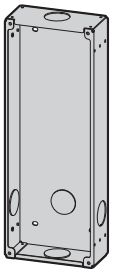
*1 The waterproof rubber is fixed to the panel with tape. Remove the waterproof rubber when attaching the panel.

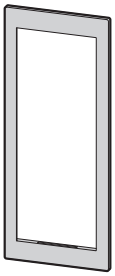
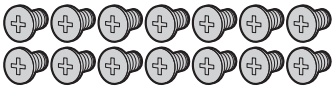
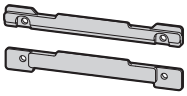
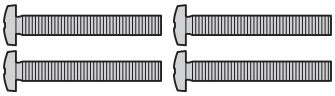
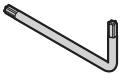
VL-VM602 (small type)

Item	Quantity
Back box 	1
Frame Used to assemble modules. 	1

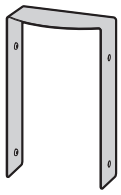
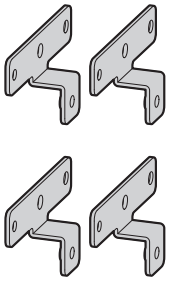
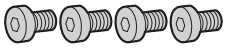
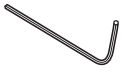
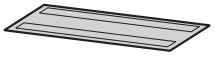
Item	Quantity
Side plate Used to secure and attach the left and right sides of modules. 	2
Screw (3 mm × 5 mm) Used to attach modules to side plates. 	10
Upper/lower plate Used to attach the back box to a wall. 	2
Screw (4 mm × 25 mm) Used to secure the upper and lower plates. 	4
Hexalobular screw (3 mm × 12 mm) Used to secure the lobby station to the back box. 	1
Hexalobular wrench 	1

VL-VM603 (large type)

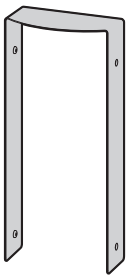
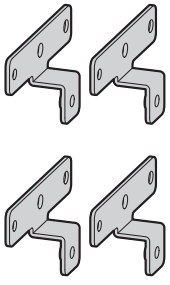
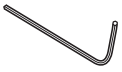
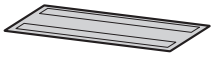
Item	Quantity
Back box 	1

Item	Quantity
Frame Used to assemble modules. 	1
Side plate Used to secure and attach the left and right sides of modules. 	2
Screw (3 mm × 5 mm) Used to attach modules to side plates. 	14
Upper/lower plate Used to attach the back box to a wall. 	2
Screw (4 mm × 25 mm) Used to secure the upper and lower plates. 	4
Hexalobular screw (3 mm × 12 mm) Used to secure the lobby station to the back box. 	1
Hexalobular wrench 	1

VL-VM502 (small type)

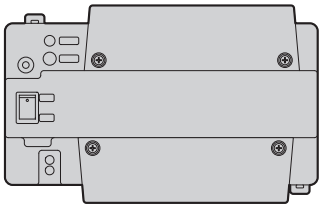
Item	Quantity
Surface mount cover 	1
Bracket Used to attach the surface mount cover to the back box. 	4
Hex screw (3 mm × 5 mm) Used to attach the bracket to the back box.  Used to attach the surface mount cover to the bracket. 	8
Hex wrench 	1
Dustproof sheet Used to attach the sheet to the bottom of the back box. 	1

VL-VM503 (large type)

Item	Quantity
Surface mount cover 	1
Bracket Used to attach the surface mount cover to the back box. 	4
Hex screw (3 mm × 5 mm) Used to attach the bracket to the back box.  Used to attach the surface mount cover to the bracket. 	8
Hex wrench 	1
Dustproof sheet Used to attach the sheet to the bottom of the back box. 	1

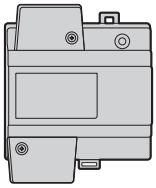
3.1.2 Distributor

VL-VM701 (bus wiring)

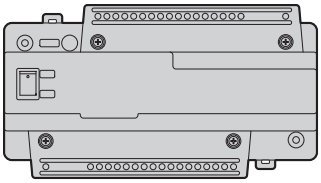
Item	Quantity
Distributor 	1
Screw (3.8 mm × 20 mm) Used to secure the distributor to the wall. 	2
Cable binder Used to secure the connected wires. 	2

3.1.3 Power supply unit

VL-PS240 (0.6 A type)

Item	Quantity
Power supply unit 	1
Screw (4 mm × 40 mm) Used to secure the power supply unit to the wall. 	2
Cable binder Used to secure the AC and DC wires. 	2

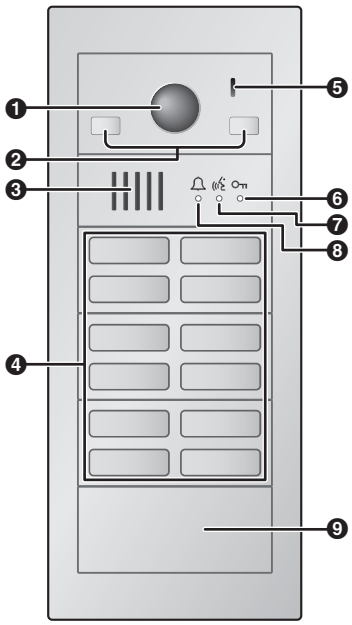
VL-PS2410 (2.5 A type)

Item	Quantity
Power supply unit 	1
Screw (3.8 mm × 20 mm) Used to secure the power supply unit to the wall. 	2
Cable binder Used to secure the AC and DC wires. 	2

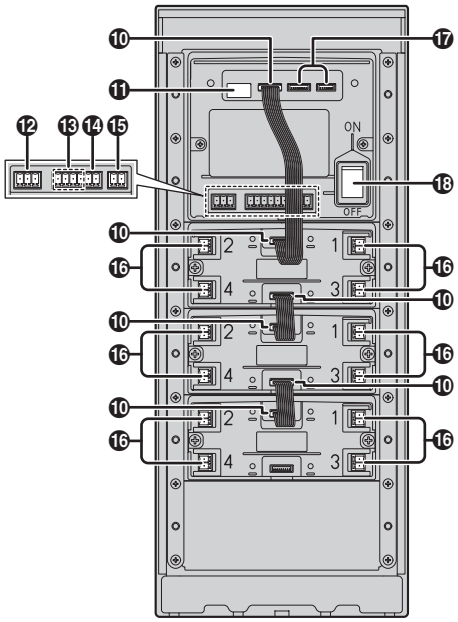
3.2 Device diagrams

3.2.1 Lobby station

Front view
Example: 12 call buttons on lobby station



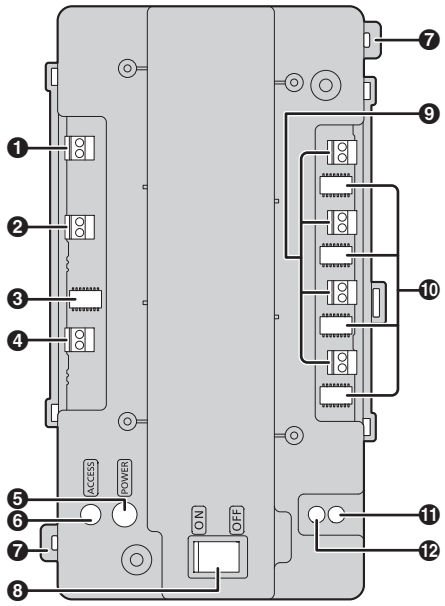
Rear view
Example: lobby station with terminal cover removed



❶ **Lens cover**
❷ **Light**
❸ **Speaker**
❹ **Call buttons**
Illuminates in dark environments depending on the DIP switch settings (page 40).
❺ **Microphone**
❻ **Unlock indicator (; blue)**
❼ **Talk indicator (; amber)**
❽ **Call indicator (; red)**
❾ **Blank panel**
❿ **Flat cable connector**
Used to connect modules together.
⓫ **DIP switches**
See page 40.
⓬ **K-OUT connection terminals (output)**
Used to send signal to an electric lock.
⓭ **K-IN connection terminals (input)**
Used to receive signals from an access controller and/or open door sensor, etc.
⓮ **Line connection terminals for bus wiring**
Used to connect to distributors or extension boxes when using bus wiring.
⓯ **DC IN connection terminals for power supply**
Used to connect the lobby station to the power supply unit.
⓰ **Line connection terminals for star wiring**
Used to connect to main monitors when using star wiring.
⓱ **For internal use only**
⓲ **Power switch**

3.2.2 Distributor

Example: distributor with the cable cover removed



❶ **Connection terminals (output) for next distributor**

❷ **Connection terminals (input) for lobby station, extension box or previous distributor**

❸ **DIP switches for distributor ID setting**
See page 41.

❹ **DC IN connection terminals for power supply**
Used to connect the distributor to the power supply unit.

❺ **POWER indicator**
See page 43.

❻ **ACCESS indicator**
See page 43.

❼ **Hook for tying cables to with a cable binder**

❽ **Power switch**

❾ **Connection terminals for main monitors**

❿ **DIP switches for room number ID setting**
See page 42.

⓫ **Function button (• •)**
For internal use only.

⓬ **Reset button (•)**
Used when restarting the distributor.

3.3 Specifications

Whole system capacity

- Lobby station (VL-VM series):
  Star wiring: up to 1
  Bus wiring: up to 6
- Main monitor*1 (VL-MV10, VL-MWD501, VL-MVN511, VL-MWD272, VL-MWD273, VL-MV71, VL-MV72): up to 32*2
- Distributor (VL-VM701): up to 8*3
- Extension box (VL-V703): up to 1*4

Lobby station (VL-VM series; sold separately)

Power source	Power supply unit VL-PS240: 24 V DC, 0.6 A or VL-PS2410: 24 V DC, 2.5 A
Power consumption	VL-VM101 Standby: 1.8 W Operating: 9.9 W Measurement conditions: – Lobby station consists of VL-VM101 (1 pcs.) and VL-VM301 (1 pcs.). – VL-MV10 (1 pcs.) is connected to the lobby station. – VL-PS240 is used as the power supply unit.
Dimensions (mm) (height × width × depth)*10 (excluding protruding sections)	**Flush mount (small type):** approx. 226 × 130 × 9*5, *6 **Flush mount (large type):** approx. 315 × 130 × 9*5, *7 **Surface mount (small type):** approx. 233 × 135 × 89*8 **Surface mount (large type):** approx. 322 × 135 × 89*9
Mass (weight)*10	**Flush mount (small type):** approx. under 1.3 kg*6 **Flush mount (large type):** approx. under 1.8 kg*7 **Surface mount (small type):** approx. under 1.7 kg*8 **Surface mount (large type):** approx. under 2.2 kg*9
Operating environment	Ambient temperature: approx. -15 °C to +55 °C Relative humidity (non-condensing): up to 90 %
Installation method	Flush mount (using the back box; sold separately) Surface mount (using the back box and surface mount cover; sold separately)
External material	Stainless steel (surface mount cover) Aluminum (partially PC and ABS)
Talking method	Hands-free
Image sensor	1/4 inch CMOS sensor (approx. 1M pixels)
Viewing angle	Horizontally: approx. 170° Vertically: approx. 110°
Minimum illuminance required	1 lx (within approx. 50 cm from the camera lens)
Lighting method	White coloured LED lights
IP rating	IP55*11, *12
IK rating	Compliant with IK08*12
Audio guidance languages (when unlocking a door)	English/German/French/Italian/Spanish/Dutch/Arabic/Persian
HAC (Hearing Aid Compatibility)	Not Compatible

*1 The available products differ depending on your region. For more information, please consult your dealer.
*2 Depending on the composition of the lobby station's modules.
*3 Required when using bus wiring.
*4 Required when expanding the lobby stations with bus wiring.
*5 Excluding sections embedded into the wall.
*6 Includes (VL-VM101 x 1 pcs.) + (VL-VM304 x 2 pcs.) + VL-VM602 (small type)
*7 Includes (VL-VM101 x 1 pcs.) + (VL-VM304 x 4 pcs.) + VL-VM603 (large type)
*8 Includes (VL-VM101 x 1 pcs.) + (VL-VM304 x 2 pcs.) + VL-VM602 + VL-VM502 (small type)
*9 Includes (VL-VM101 x 1 pcs.) + (VL-VM304 x 4 pcs.) + VL-VM603 + VL-VM503 (large type)
*10 For France: Does not include the dimensions and weight of the VIGIK.
*11 Water resistance is only assured if the product is installed correctly according to the instructions, and appropriate water protection measures are taken.
*12 When a VIGIK module is installed, the rating does not include the VIGIK module.

Distributor (VL-VM701; sold separately)

The distributor is for indoor use only.

Power source	Power supply unit VL-PS240: 24 V DC, 0.6 A or VL-PS2410: 24 V DC, 2.5 A
Power consumption	Standby: 1.6 W Operating: 9.0 W Measurement conditions: – Consumption for 1 VL-VM701 device when other VL-VM701 devices are not supplying power. – VL-MV10 (1 pcs.) is connected to VL-VM701. – VL-PS240 is used as the power supply unit.
Dimensions (mm) (height × width × depth) (excluding protruding sections)	Approx. 133 x 210 x 51
Mass (weight)	Approx. 440 g
Operating environment	Ambient temperature: approx. -10 °C to +55 °C Relative humidity (non-condensing): up to 90 %
Installation method	Attach to DIN rail Wall mount (using included screws)
External material	ABS (flame retardant ABS resin)

Power supply unit (VL-PS240; sold separately)

The power supply unit is for indoor use only.

Power source	Input: 220–240 V AC, 0.2 A, 50/60 Hz Output: 24 V DC, 0.6 A
Dimensions (mm) (height × width × depth) (excluding protruding sections)	Approx. 116 × 100 × 54
Mass (weight)	Approx. 230 g
Operating environment	Ambient temperature: approx. 0 °C to +50 °C Relative humidity (non-condensing): up to 90 %
Installation method	Attach to DIN rail Wall mount (using included screws)
External material	Flame retardant PC+ABS resin

Power supply unit (VL-PS2410; sold separately)

The power supply unit is for indoor use only.

Power source	Input: 220–240 V AC, 1 A, 50/60 Hz Output: 24 V DC, 2.5 A
Dimensions (mm) (height × width × depth) (excluding protruding sections)	Approx. 116 × 210 × 58
Mass (weight)	Approx. 530 g
Operating environment	Ambient temperature: approx. 0 °C to +50 °C Relative humidity (non-condensing): up to 90 %
Installation method	Attach to DIN rail Wall mount (using included screws)
External material	Flame retardant PC+ABS resin

4.1 Installation cautions

Refer to the information found in 2 Important Information (page 7) before installing the product.

CAUTION

- Always connect power cables to the appropriate connection terminals. Incorrectly connecting the power cables may damage the power supply unit.
- To prevent the power cables from disconnecting and to prevent electric shock, secure the power cables using the included cable binders and attach the cable covers.
- If the wiring passes outdoors, use a conduit and a surge protector.
- If the wiring passes underground, use a conduit, and do not make any connections underground.
- Install the product securely adhering to the instructions in this document to prevent it from falling off the wall. Avoid installing onto low-strength walls, such as gypsum board, ALC (autoclaved lightweight concrete), concrete block, or veneer (less than 18 mm thick) walls.

4.2 Installing the power supply unit (sold separately)

Required items

– Power supply unit (VL-PS240 or VL-PS2410; sold separately)
– Cable binders (included with power supply unit)
– Screws (included with power supply unit)
– Wires for AC and DC connection (user supplied) See "4.6.2 Wire type and maximum wire length (Page 39)".

Installation location

- The device must be installed inside an electrical panel or cabinet.
- A readily accessible disconnect device shall be incorporated external to the equipment.
  The external disconnect device must be certified, and have a creepage and clearance distance of 3 mm or more.

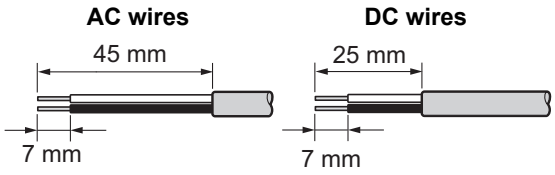
Installation methods

The following 2 methods can be used for installing the power supply unit.

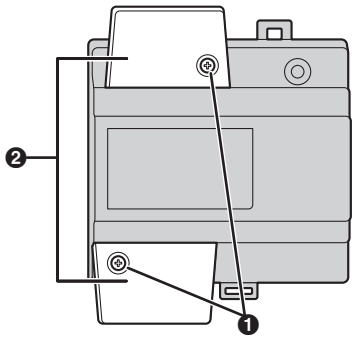
– mounting on a DIN rail (user supplied)
– attaching directly to a wall

4.2.1 Connecting the AC wires and DC wires (VL-PS240)

1 Strip the ends of the wires that connect to the power supply unit as shown below.

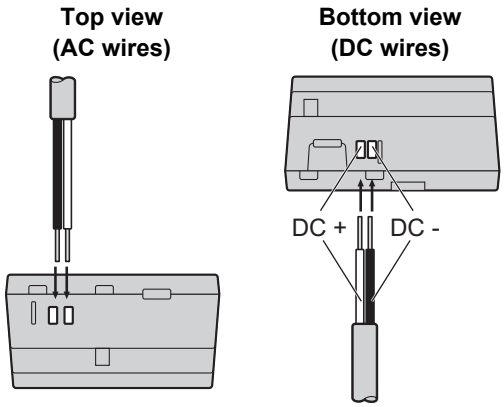


2 Remove the cable cover screws and then remove the cable covers.



❶ Screws
❷ Cable covers

3 Connect the AC wires to the AC IN terminals on the top of the power supply unit, and then connect the DC wires to the DC OUT terminals on the bottom of the power supply unit.

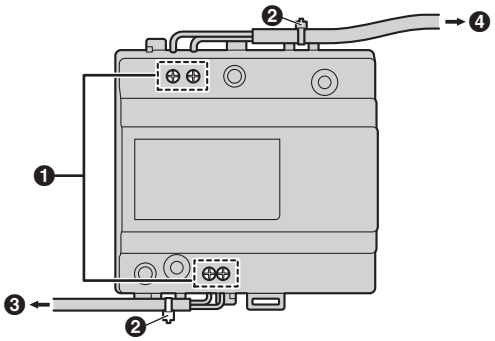


- For DC wires, the black wire is negative (-) and the other colour wire is positive (+). Note the colour of each DC wire and which terminal each wire should be connected to, and insert the DC wires as shown.

CAUTION

- Insert the power cables firmly all the way into the terminals. If the cables are not inserted all the way, heat may be generated.

4 Tighten the terminal screws to secure the AC and DC wires (bare wire area) to the terminals, and then use the cable binders to secure the AC and DC wires (jacketed area) to the cable binder holes on the top and bottom on the power supply unit.



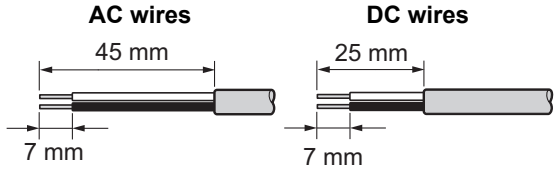
❶ Terminal screws
❷ Cable binders connected to cable binder holes
❸ To lobby station
❹ To AC power outlet

- Recommended torque:
  - AC IN terminals: 0.5 N·m {5.1 kgf·cm}
  - DC IN terminals: 0.45 N·m {4.6 kgf·cm}

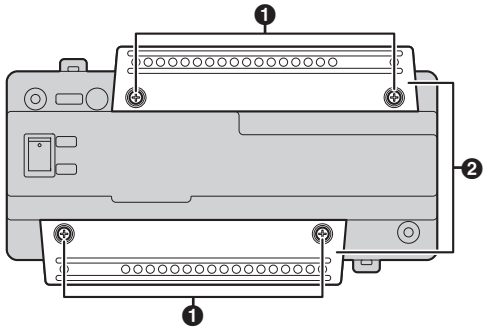
5 Make sure to reattach the cable covers and then securely fasten the cable cover screws.

4.2.2 Connecting the AC wires and DC wires (VL-PS2410)

1 Strip the ends of the wires that connect to the power supply unit as shown below.

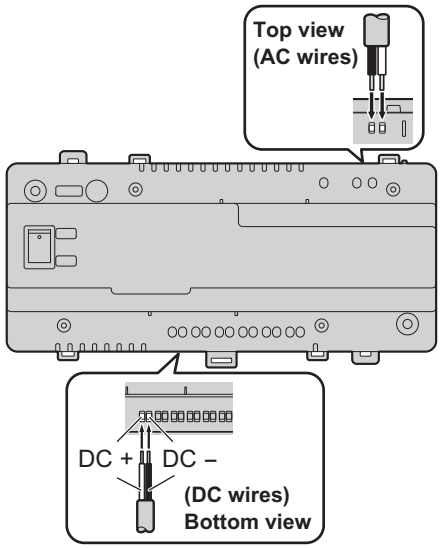


2 Remove the cable cover screws and then remove the cable covers.



❶ Screws
❷ Cable covers

3 Connect the AC wires to the AC IN terminals on the top of the power supply unit, and then connect the DC wires to the DC OUT terminals on the bottom of the power supply unit.

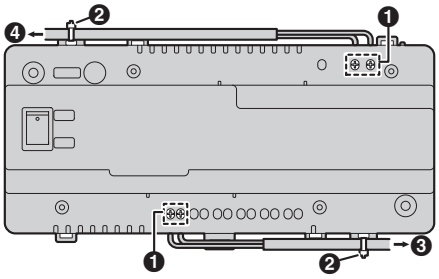


- For DC wires, the black wire is negative (-) and the other colour wire is positive (+). Note the colour of each DC wire and which terminal each wire should be connected to, and insert the DC wires as shown.

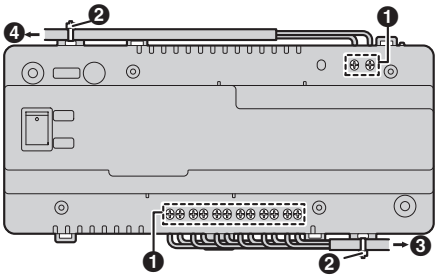
CAUTION

- Insert the power cables firmly all the way into the terminals. If the cables are not inserted all the way, heat may be generated.

4 Tighten the terminal screws to secure the AC and DC wires (bare wire area) to the terminals, and then use the cable binders to secure the AC and DC wires (jacketed area) to the cable binder holes on the top and bottom on the power supply unit.
Example: DC terminal 1 is used.



Example: DC terminal 1-6 are used.



❶ Terminal screws
❷ Cable binders connected to cable binder holes
❸ To lobby station or distributor
❹ To AC power outlet

- Recommended torque:
  – AC IN terminals: 0.5 N·m {5.1 kgf·cm}
  – DC IN terminals: 0.45 N·m {4.6 kgf·cm}

5 Make sure to reattach the cable covers and then securely fasten the cable cover screws.
- After reattaching the cable covers, attach the cable to the cable hook.

6 After connecting wires to each device, turn the output switch on.
- The OUTPUT indicator lights when the output switch is turned on.

4.2.3 Information about the power supply unit

After connecting the power supply units, make connections to each device.

Note:

- The VL-PS2410 power supply unit has 6 DC OUT connection terminals. (Use the VL-PS2410 so that the combined output does not exceed 2.5 A. Check the power consumption of each device for more information.)
- Other than for VL-MV10 bus-powered main monitors, use the power supply units included with the main monitors or connect the power cord of the main monitors.
- VL-MV10 bus-powered main monitors receive power from a lobby station (when using star wiring) or a distributor (when using bus wiring), and therefore do not need a power supply unit. When using VL-MV10, we recommend using a VL-PS2410.

Power supply for distributors and wiring for power supply units

In order to start up distributors ((Ⓐ); maximum of 8) that use bus wiring, use either the VL-PS240 or VL-PS2410 power supply units in one of the following arrangements.

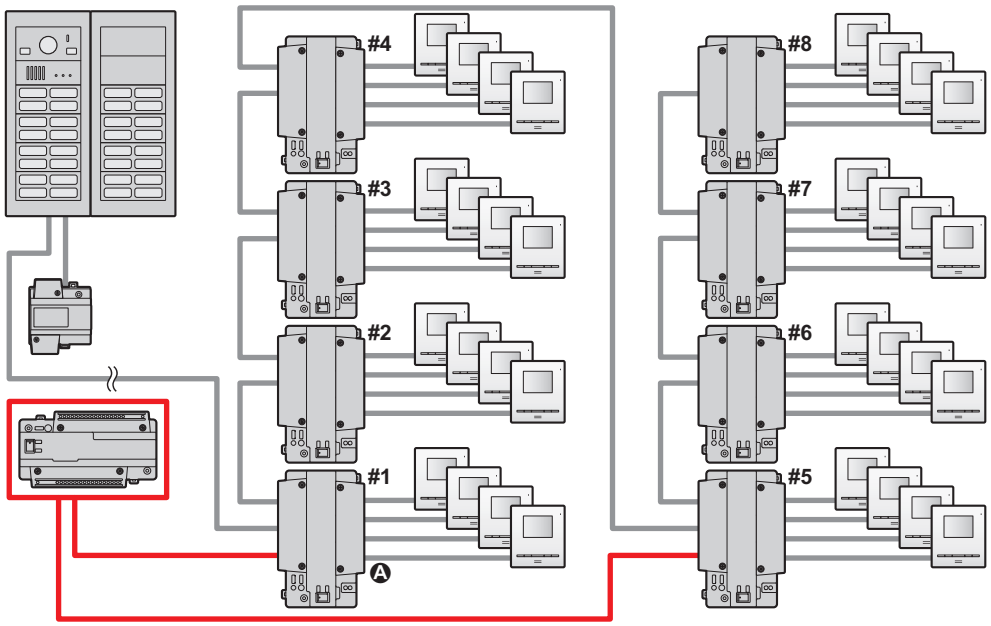
■ **Number of operable VL-VM701 (distributors)**

		Number of connectable distributors	
		With VL-MV10 main monitor	**With other main monitors**
Power supply unit	VL-PS240 **(0.6 A type)**	Up to 1 distributor (VL-PS240 can only be used in systems with 1 distributor)	Up to 4 distributors (for each power supply unit)*1
	VL-PS2410 **(2.5 A type)***1	Up to 8 distributors (for each power supply unit)	Up to 8 distributors (for each power supply unit)

*1 Connection when using 1 power supply unit: 1st distributor
Connection when using 2 power supply units: 1st distributor and 5th distributor

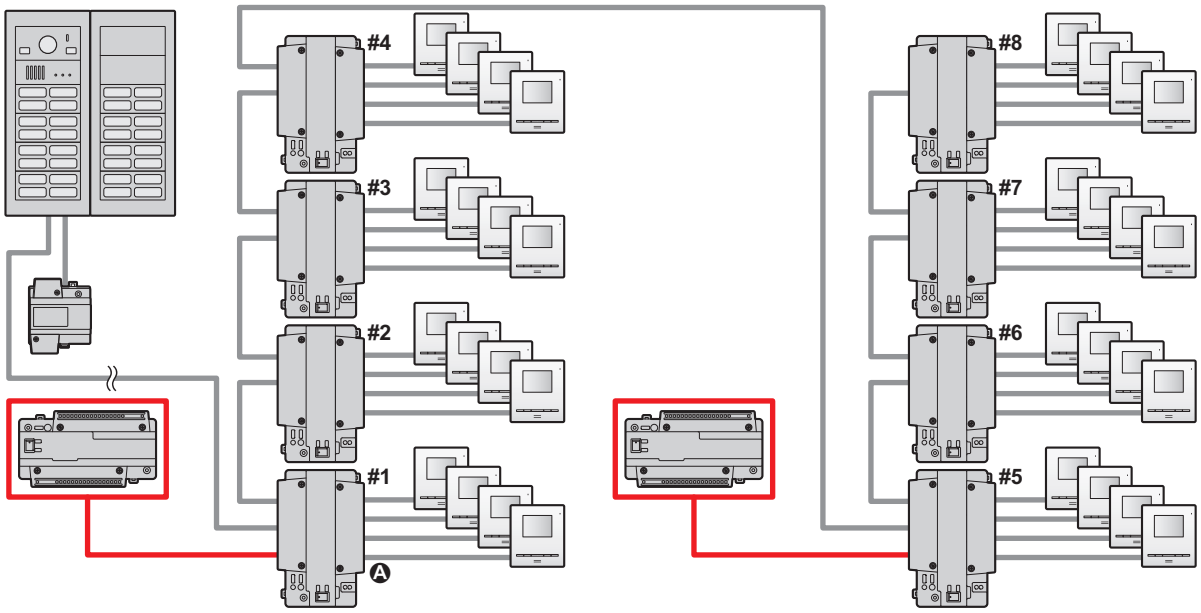
Example: when a VL-MV10 is connected using 1 VL-PS2410 power supply unit

If the system consists of 1 VL-PS2410 and 5 or more distributors are used, connect wiring from the VL-PS2410 to the 1st and 5th distributors.



Example: when a VL-MV10 is connected using 2 VL-PS2410 power supply units

The system consists of 2 VL-PS2410 power supply units.

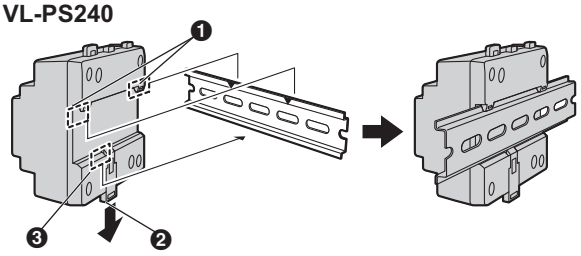


4.2.4 Mounting on a DIN rail

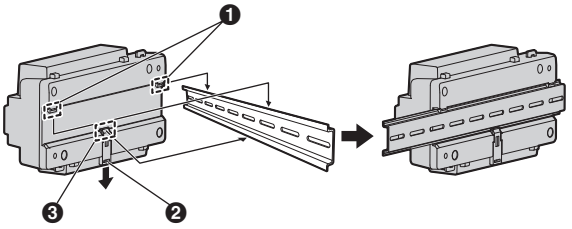
Attach the power supply unit to the DIN rail so that the bottom hook is positioned at the bottom of the power supply unit.

1. Hang the top hooks (❶) of the power supply unit on the top of the DIN rail.
   - At this point the power supply unit will be hanging from the DIN rail but will not be secure.
2. Pull the lever (❷) down, make sure the bottom of the power supply unit is flat against the DIN rail, and then release to lever.
   - The bottom hook (❸) will slide up, securing the bottom of the power supply unit to the DIN rail.

VL-PS240



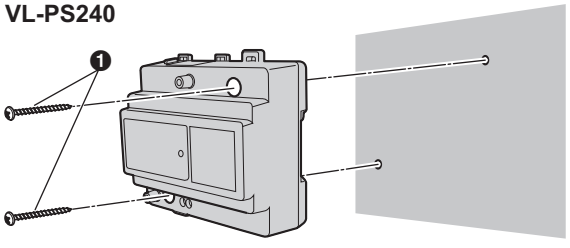
VL-PS2410



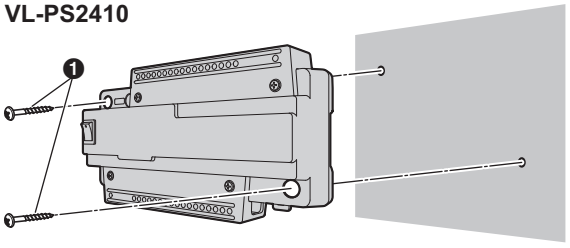
4.2.5 Attaching directly to a wall

Attach the power supply unit to the wall securely using the 2 mounting screws (❶).

VL-PS240



VL-PS2410



4.3 Installing the lobby station

Required items

- Module parts kit (sold separately) with lobby station assembly
- Back box parts kit (sold separately)
- Surface mount cover parts kit (sold separately)*1
- Extension cable (sold separately) used to connect 2 frames of a lobby station together
- Wires that connect the lobby station to the electric lock, and K-IN connection device (example: access controller and/or open door sensor, etc.)
  See "4.6.2 Wire type and maximum wire length (Page 39)".

*1 A surface mount cover is required when the lobby station is surface mounted.

Installation location

- Do not install the product in the following locations. There may be a risk of malfunction or communication disturbances.
  - Places where vibration, impact, or echoing occurs.
  - Places near a high concentration of dust, hydrogen sulphide, ammonia, sulphur, or noxious fumes.
  - Places where there is excessive smoke, dust, and high temperature.
  - Places exposed to direct sunlight.
  - Places where most of the background is the sky.
  - Places where the background is a white wall, and direct sunlight will reflect off it.
  - Near ocean coasts, where sea breezes will contact the product directly, or near sulphuric hot springs (exposure to salt can reduce the product's life expectancy).
- Install the product away from electronic appliances such as TVs, radios, personal computers, air conditioners, boiler control panels with intercom, home security equipment, wireless devices, or digital cordless phones.
- Dust protection/water protection is IP55. Only when installation work specified in this document is properly performed and appropriate water protection treatment is performed.
- Make sure the rear of the product is not subject to water.
- Depending on the installation location, condensation may form on the product's lens cover. This may cause images to become obscured. Condensation will dissipate as the temperature rises.

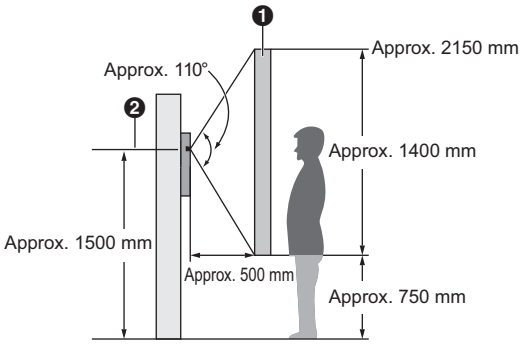
4.3.1 Installation position of the lobby station and camera range

Refer to the following examples and confirm the area viewable by the camera. In each illustration, the viewable area is indicated by "❶" and the centre of the camera lens is indicated by "❷".

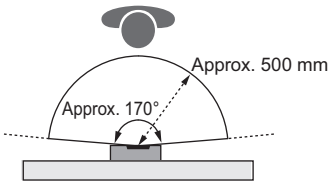
Side view

Camera height: 1500 mm

Camera lens angle: 0°



Top view



Note:

- The measurements and angles shown here are for reference purposes and may vary depending on the environment.
- Install the lobby station so that the lobby station is not exposed to strong light. If strong light shines on the lobby station, the visitor's face may not be distinguishable.

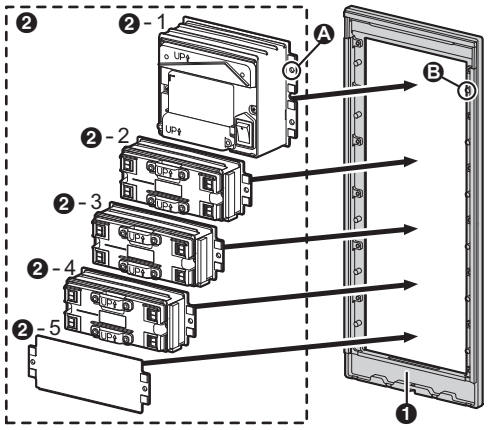
4.3.2 Assembling lobby station modules

The lobby station is composed of a combination of modules according to the number of rooms connected to.

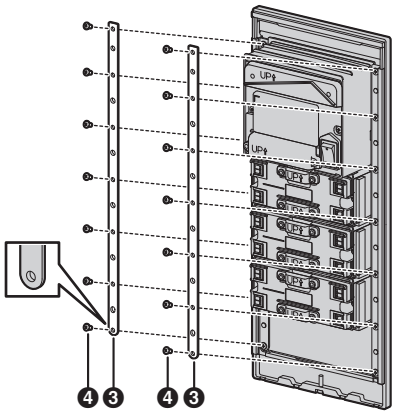
– See page 6 for information on the composition of each module.
– See page 10 for information on the items included with each module.

Example: lobby station for camera module × 1 pcs. + button module × 3 pcs. + blank panel × 1 pcs.

1 Attach each module (❷) to the frame (❶) as shown below.
- Starting from the camera module, attach each module in order from the top. (❷-1—❷-5)
- Insert the holders (Ⓐ) into the slots (Ⓑ) on the both sides of the frame.
- The combination of modules changes according to the number of rooms connected to.



2 Hold down the left and right side plates (❸), secure them using the screws (❹). Make sure that each module is securely attached.
- The included number of screws differs according to the back box type (large or small) connected to.



4.3.3 Connecting flat cables

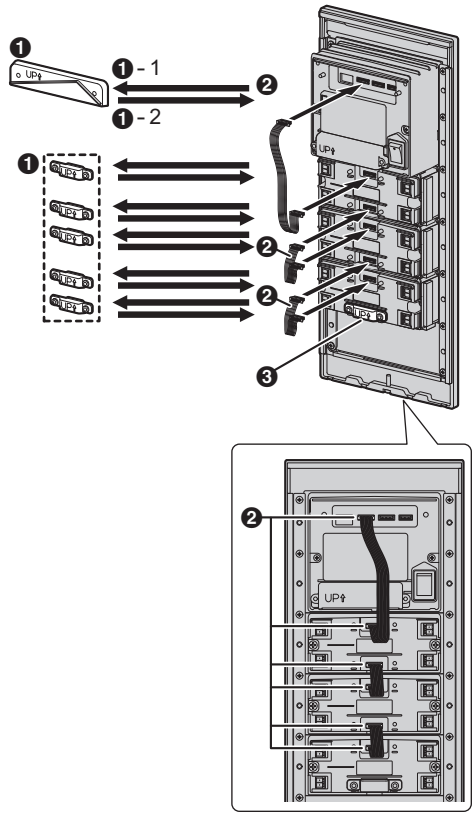
1 Remove each terminal cover (❶) from each module (❶-1).
- Remove the terminal cover of the attached module.

2 Connect the flat cable (❷) from the camera module to the module of the next button.
- Starting from the camera module, attach each module in order from the top.

3 Connect the flat cables (❷) to all of the remaining modules.

4 After connections are completed, reattach each terminal cover (❶) to each terminal (❶-2). Make sure each module is securely attached.
- ❸: 1 of the included flat cables will not be used

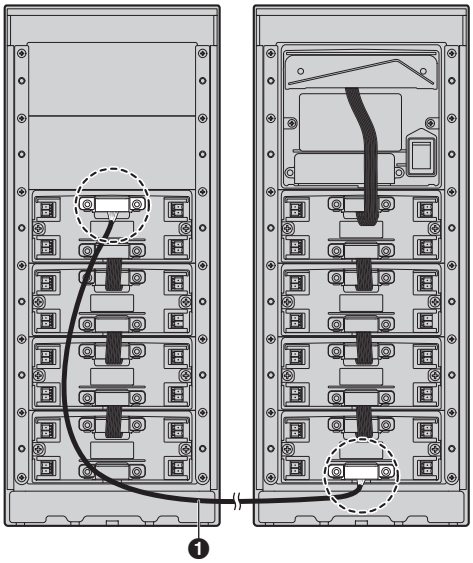
Example: lobby station for camera module × 1 pcs. + button module × 3 pcs. + blank panel × 1 pcs.



4.3.4 Connecting 2 frames of a lobby station using the extension cable

When connecting 2 frames of a lobby station together, connect them using the VL-VM801 extension cable (sold separately; ❶) as shown below.

Example: lobby station for camera module × 1 pcs. + button module × 8 pcs. + blank panel × 2 pcs. (2 of the included flat cables will not be used)



4.3.5 Connecting the VIGIK panel (for France)

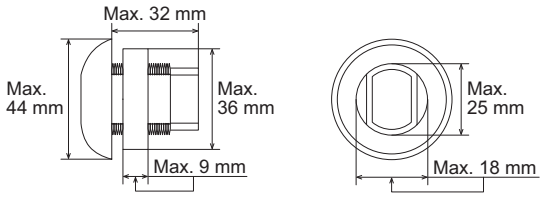
The lobby station is compatible with VIGIK installation. Refer to the documentation of the VIGIK for information about installation.

Required items

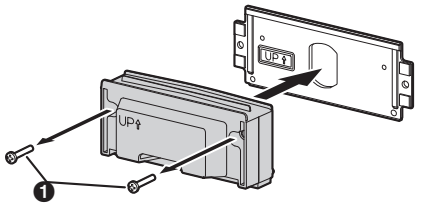
– VIGIK system (user supplied)
– Cable that connects the lobby station to the VIGIK system (user supplied)

Supported sizes

When selecting a VIGIK system, select one that meets the following guidelines.

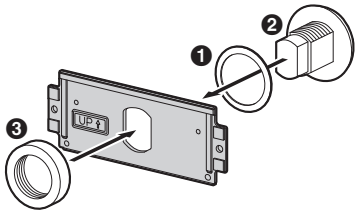


1. Remove the waterproof rubber from the panel, and then remove the screws (❶) on the left and right side of the module and panel.

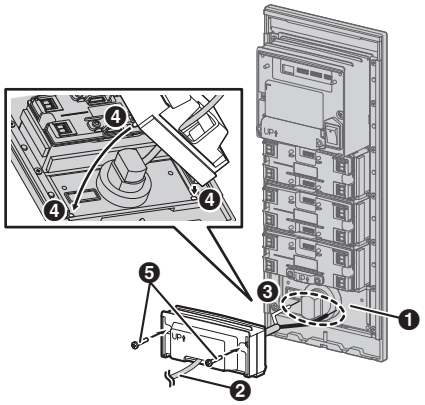


2. As shown in the following illustration, securely attach the VIGIK by following the instructions in the documentation for the VIGIK.
   - The word "UP" should be facing up.

   ❶ Waterproof rubber (included with the VIGIK panel)
   ❷ VIGIK reader (user supplied)
   ❸ Attachment nut or similar part (supplied with the VIGIK)



3. Attach the VIGIK panel to the frame.
   a. As shown in the following illustration, attach the VIGIK panel to the frame (❶).
   b. Securely attach the cable (user supplied; ❷, ❸) by following the instructions in the documentation for the VIGIK.
   c. Align the protrusions of the cover with the holes of the plate (❹).
   d. Make sure to reattach the panel and module by securing the screws (❺).



4.3.6 Installing the lobby station to a wall

The following 2 methods can be used for installing the lobby station.

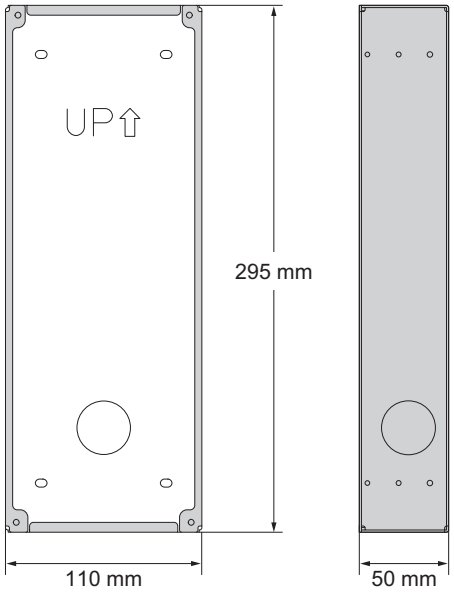
– flush mounting using the back box (sold separately)
– surface mounting using the back box and surface mount cover (sold separately)

Back box dimensions and preparation

1. Open a hole in the wall for the back box.
- Note the dimensions of the back box.

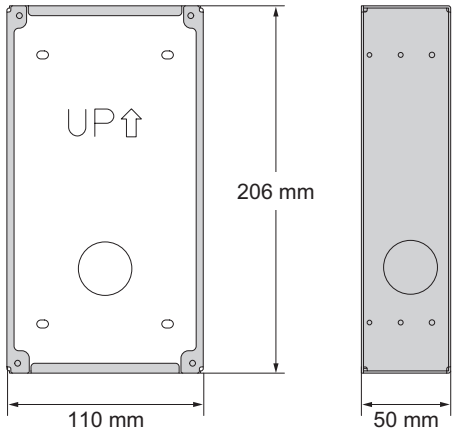
VL-VM603 (large type: back box)

Front view **Side view**

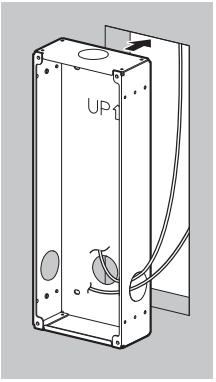


VL-VM602 (small type: back box)

Front view **Side view**



2. Open the knockout holes of the back box, and then pass all the necessary cables and the following wires through the knockout holes.
– wires from the power supply unit
– wires from the electric lock, and K-IN connection device (example: access controller and/or open door sensor, etc.)
– wires from each main monitor, wires from the distributor, or wires from the extension box

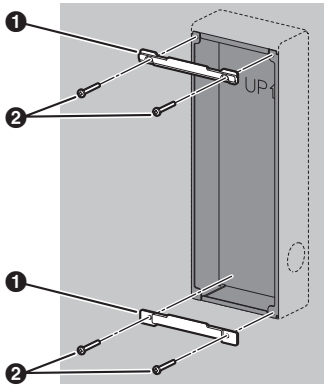


4.3.7 Flush mounting using the back box

1 Open the knockout holes of the back box and pass cables through them.
- See the instructions in "Back box dimensions and preparation (Page 28)".

2 Install the back box in the wall.

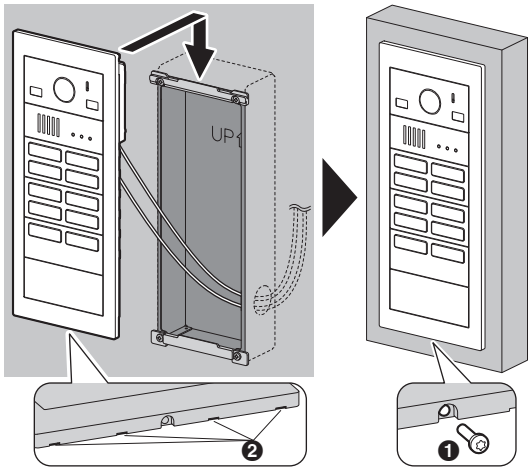
3 Attach the upper and lower plates (❶) using 4 screws (❷) to the back box.



4 Set the DIP switches.
- See page 40 for information about lobby station DIP switches.
- See page 41 for information about distributor DIP switches when using bus wiring.

5 Connect the wires and cables to the lobby station.
- See 4.6.2 Wire type and maximum wire length (Page 39).

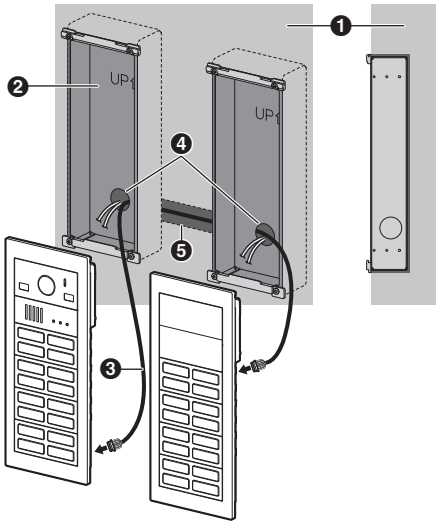
6 Attach the lobby station to the back box, and then use the hexalobular wrench to secure the lobby station to the back box using 1 hexalobular screw (❶).
- Do not cover the water drain holes (❷).



Note:
- Required pull-out capacity of a single screw is 294 N {30 kgf} or more. If this criteria is not met, make sure to take additional measures to increase strength.

Installing 2 frames of a lobby station

When connecting 2 frames of a lobby station together, use the extension cable (sold separately) and install to the wall as follows.

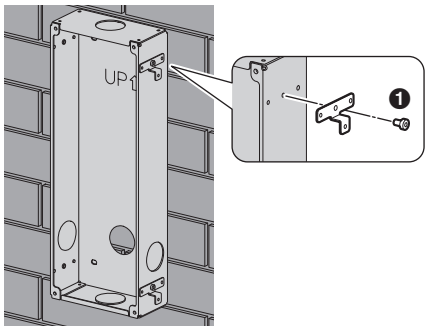


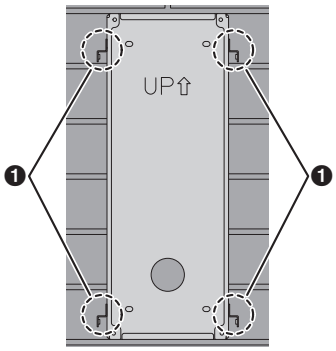
❶ Wall
❷ Back box
❸ Extension cable (VL-VM801; sold separately) (approx. 1 m)
❹ Holes
❺ Pass extension cables from hole behind the wall.

4.3.8 Surface mounting using the back box and surface mount cover

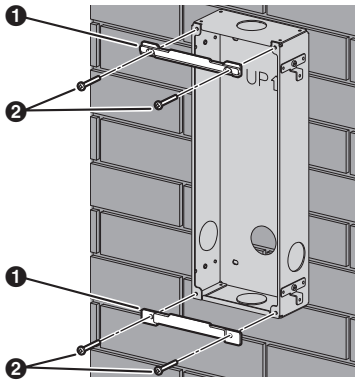
1 Open the knockout holes of the back box and pass cables through them.
- See the instructions in "Back box dimensions and preparation (Page 28)".

2 Use the hex wrench to secure the back box in 4 areas using 4 brackets and 4 hex screws (❶), and then install the back box to the wall.





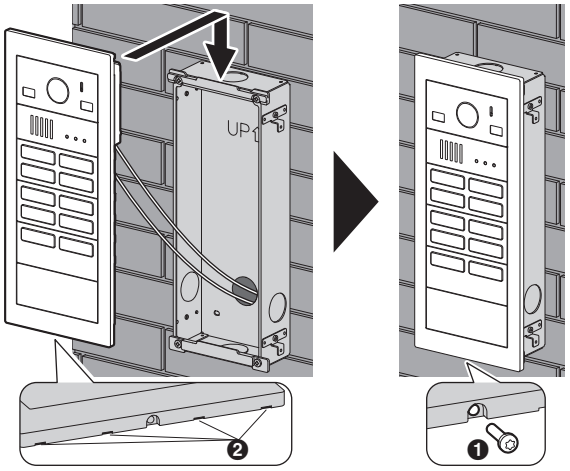
3 Attach the upper and lower plates (❶) using 4 screws (❷).



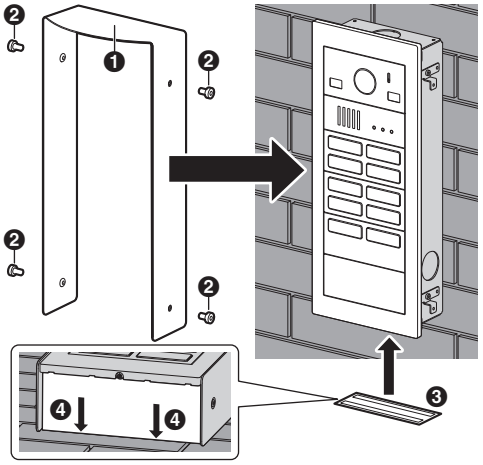
4 Set the DIP switches.
- See page 40 for information about lobby station DIP switches.
- See page 41 for information about the distributor DIP switches when using bus wiring.

5 Connect the wires and cables to the lobby station.
- See "4.6.2 Wire type and maximum wire length (Page 39)".

6 Attach the lobby station to the back box, and then use the hexalobular wrench to secure the lobby station to the back box using 1 hexalobular screw (❶).
- Do not cover the water drain holes (❷).

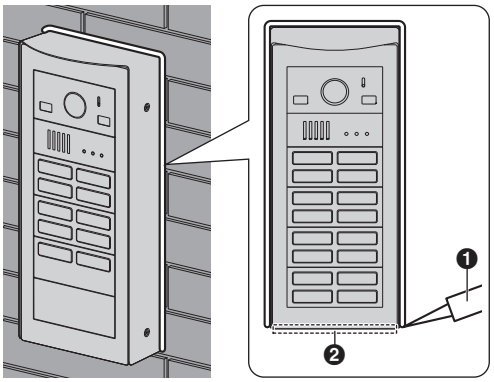


7 Attach the surface mount cover (❶) to the back box.
- **a.** Use the hex wrench to secure the surface mount cover in 4 areas using 4 hex screws (❷).
- **b.** Remove the tape from both sides of the dustproof sheet (❸), and then affix the dustproof sheet to the bottom side of the back box. Affix the dustproof sheet so that it aligns with the wall (❹).

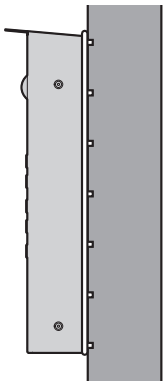


8 After securing the surface mount cover to the back box, caulk the top and side of the surface mount cover with water-resistant sealant. Do not caulk the bottom side.

Front view



Side view



❶ Area caulked with water-resistant sealant

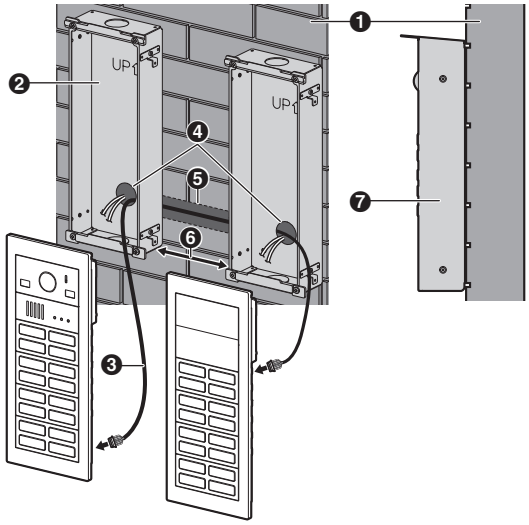
❷ Area not to be caulked

Note:

- Required pull-out capacity of a single screw is 294 N {30 kgf} or more. If this criteria is not met, make sure to take additional measures to increase strength.

Installing 2 frames of a lobby station

When connecting 2 frames of a lobby station together, use the extension cable (sold separately) and install to the wall as follows.



❶ Wall

❷ Back box

❸ Extension cable (VL-VM801; sold separately) (approx. 1 m)

❹ Holes

❺ Pass extension cables from hole behind the wall.

❻ Space is required to fasten screws when attaching the surface mount cover to the back box. When there are 2 frames for a lobby station, make sure that there is 6 cm or more space between the back boxes.

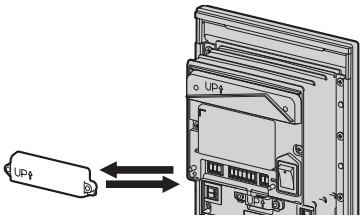
❼ Illustration of the surface mount cover attached.

4.3.9 Connecting the wires

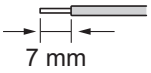
Important:

- **Make sure you turn off the power to all devices at the breaker before performing any wiring work. Failure to observe this may cause product failure.**

1 Remove the terminal cover from the camera module.



2 Strip the wires from all devices as below.



3 Insert the wires from the power supply unit into the DC terminal block, tighten the terminal block screws, and then attach the terminal block to the DC connection terminals.

- Connect the wires as follows.
  DC IN: Power supply unit

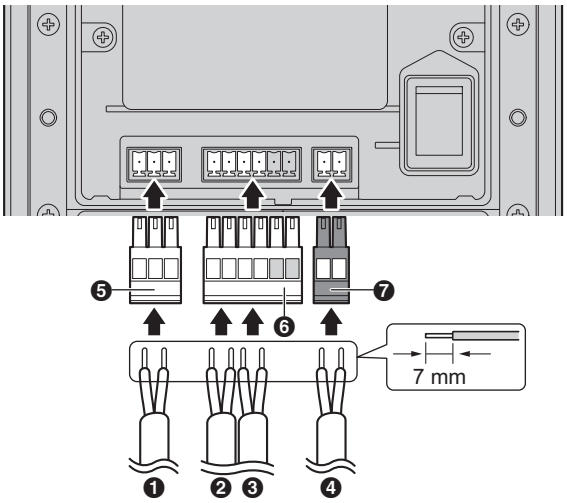
4 Insert the wires from the electric lock into the 3-pin terminal block, tighten the terminal block screws, and then attach the 3-pin terminal block to the K-OUT connection terminals.

- Connect the wires according to the specifications of the electric lock. Only 2 wire connections are needed.
  NC and COM: For normally-open circuit type electric locks
  COM and NO: For normally-closed circuit type electric locks

5 Insert the wires from the K-IN connection devices into the 6-pin terminal block, tighten the terminal block screws, and then attach the terminal block to the K-IN connection terminals.

- Connect the wires as follows.
  K-IN 1 C1 and C2/K-IN 2 C1 and C2:
  K-IN connection device (example: access controller and/or open door sensor, etc.)

Camera module

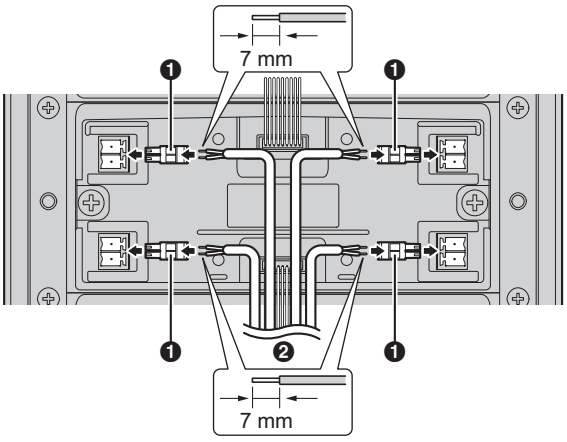


❶ Wires from electric lock
❷ Wires from access controller
❸ Wires from open door sensor
❹ DC wires from power supply unit
❺ 3-pin terminal block
❻ 6-pin terminal block
❼ DC terminal block

6 **When using star wiring:**
Insert the wires from the main monitor into the 2-pin terminal block, tighten the terminal block screws, and then attach the terminal block to the line connection terminals.

- Connect the wires from the main monitor.
- When using star wiring, skip to step 8.

Example: 4-button module

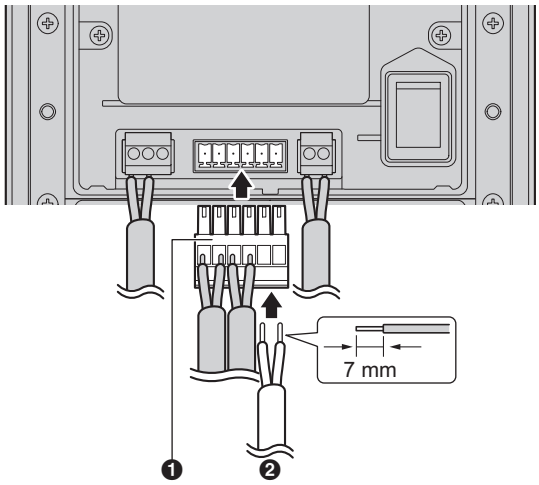


❶ 2-pin terminal block
❷ Wires from main monitor (star wiring)

7 **When using bus wiring:**
Insert the wires from the distributor or the extension box into the 6-pin terminal block, tighten the terminal block screws, and then attach the terminal block to the line connection terminals.

- Connect the wires as follows.
  L1 and L2: Distributor or extension box

Camera module



❶ 6-pin terminal block
❷ Wires from distributor or extension box (bus wiring)

8 Make sure to reattach the terminal cover to the terminal of the camera module.

9 **When using bus wiring and a VL-V703 extension box:**
Make the following connections for the extension box. Refer to the following items of the documentation of the VL-V900/VL-V901 series (including the VL-V703 extension box) for details about installation.

– Included items
– Device diagrams
– How to connecting wiring (stripping wires and cables, wire release button, or cable release button)

Download the documentation from the Web site below.
https://panasonic.net/cns/pcc/support/intercom/v900

a. Connect the wires from the power supply unit.
- Connect the wires as follows.
  DC IN: Power supply unit

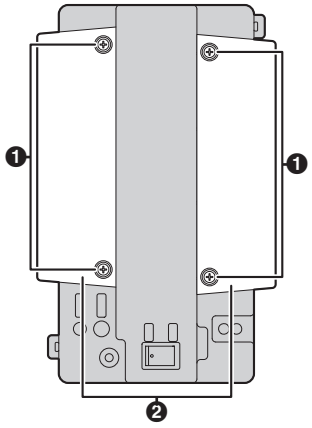
b. Insert the wires from the lobby station.
- Connect the wires as follows.
  L1 and L2: Lobby station

c. Insert the wires from the distributor
- Connect the wires as follows.
  V700/VM701 L1 and L2: Distributor

10 **When using bus wiring and VL-VM701 distributor:**
Make the following connections for the distributor.

a. Remove the cable cover screws and then remove the cable covers.

Distributor



❶ Screws
❷ Cable covers

b. Insert the wires from the power supply unit into the DC terminal block, tighten the terminal block screws, and then attach the terminal block to the DC connection terminals.
- Connect the wires as follows.
  DC IN: Power supply unit

c. Insert the wires from the lobby station, extension box, or previous distributor into the 2-pin terminal block, tighten the terminal block screws, and then attach the terminal block to the connection terminals.
- Connect the wires as follows.
  IN VM101/VM701 L1 and L2: Lobby station, extension box, or previous distributor

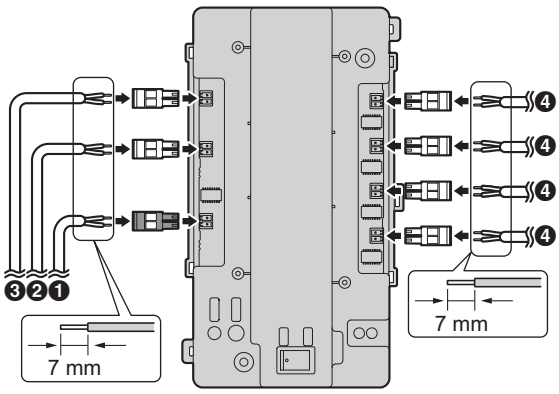
d. Insert the wires from the next distributor into the 2-pin terminal block, tighten the terminal block screws, and then attach the terminal block to the connection terminals.
- Connect the wires as follows.
  OUT VM701 L1 and L2: Distributor

e. Insert the wires from the main monitor into the 2-pin terminal block, tighten the terminal block screws, and then attach the terminal block to the line connection terminals.
- Connect the wires as follows.
  D1 and D2: Main monitor

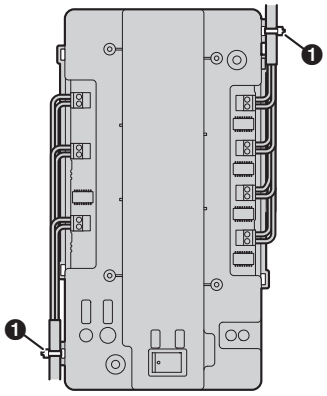
f. After wiring each terminal to the distributor, use the cable binders to secure the wires to the cable binder holes on the top and bottom on the distributor.

g. Make sure to reattach the cable covers and then securely fasten the cable cover screws.

Distributor



❶ DC wires from power supply unit
❷ Wires from lobby station, extension box, or previous distributor
❸ Wires from next distributor
❹ Wires from main monitor



❶ Cable binders connected to cable binder holes

Note:

- Make sure the wires are inserted fully into the terminal block and that the terminal block screws are tight enough to prevent the wires from pulling out.
- Make sure each terminal block is securely connected to the connection terminals.
- Refer to "4.6.2 Wire type and maximum wire length (Page 39)" for connection diagrams.
- Refer to "4.6.2 Wire type and maximum wire length (Page 39)" for information on the type and length of wires that can be used.

4.4 Installing the extension box (sold separately)

Refer to the following items of the documentation of the VL-V900/VL-V901 series (including the VL-V703 extension box) for details about wall mounting installation.

– Included items
– Device diagrams
– Specifications
– Mounting on a DIN rail or attaching directly to a wall

Download the documentation on the Web site below.
https://panasonic.net/cns/pcc/support/intercom/v900

4.5 Installing the distributor (sold separately)

Required items

– Distributor (VL-VM701; sold separately)
– Cable binders (included with distributor)
– Screws (included with distributor)
– Wires for the distributor connection (user supplied) See 4.6.2 Wire type and maximum wire length (Page 39).

Note:

- For more information about connections for the VL-VM701 distributor, refer to step 10 on page 33.

Installation methods

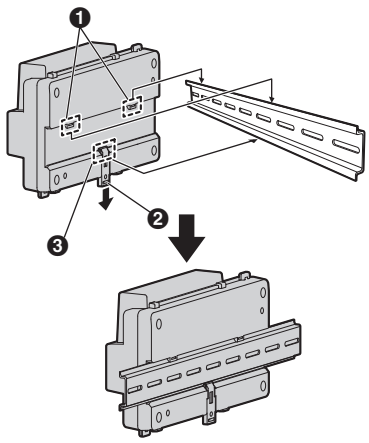
The following 2 methods can be used for installation.
– mounting on a DIN rail (user supplied)
– attaching directly to a wall

4.5.1 Mounting on a DIN rail

Attach the distributor to the DIN rail so that the bottom hook is positioned at the bottom of the distributor.

1 Hang the top hooks (❶) of the distributor on the top of the DIN rail.
   - At this point the distributor will be hanging from the DIN rail but will not be secure.

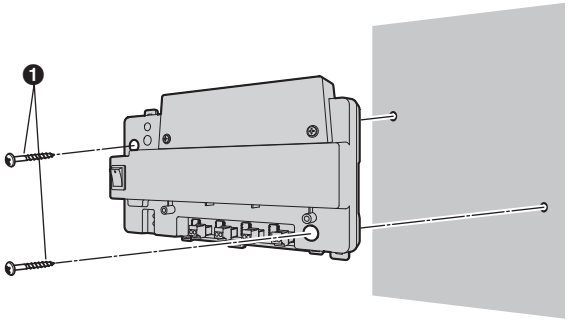
2 Pull the lever (❷) down, make sure the bottom of the distributor is flat against the DIN rail, and then release to lever.
   - The bottom hook (❸) will slide up, securing the bottom of the distributor to the DIN rail.



4.5.2 Attaching directly to a wall

Attach the distributor to the wall securely using the 2 mounting screws (❶).

- Attach the bottom cable cover after attaching the distributor to the wall.



4.6 Wiring Connections

4.6.1 Wiring schematics

Note:

- See page 23 for information about connections for power supply units.
- See page 40 for information about lobby station DIP switch settings.
- See page 41 for information about distributor DIP switches when using bus wiring.
- Insert the wires fully into the connection terminals. After inserting the wires, pull slightly on each wire to make sure it is firmly connected.

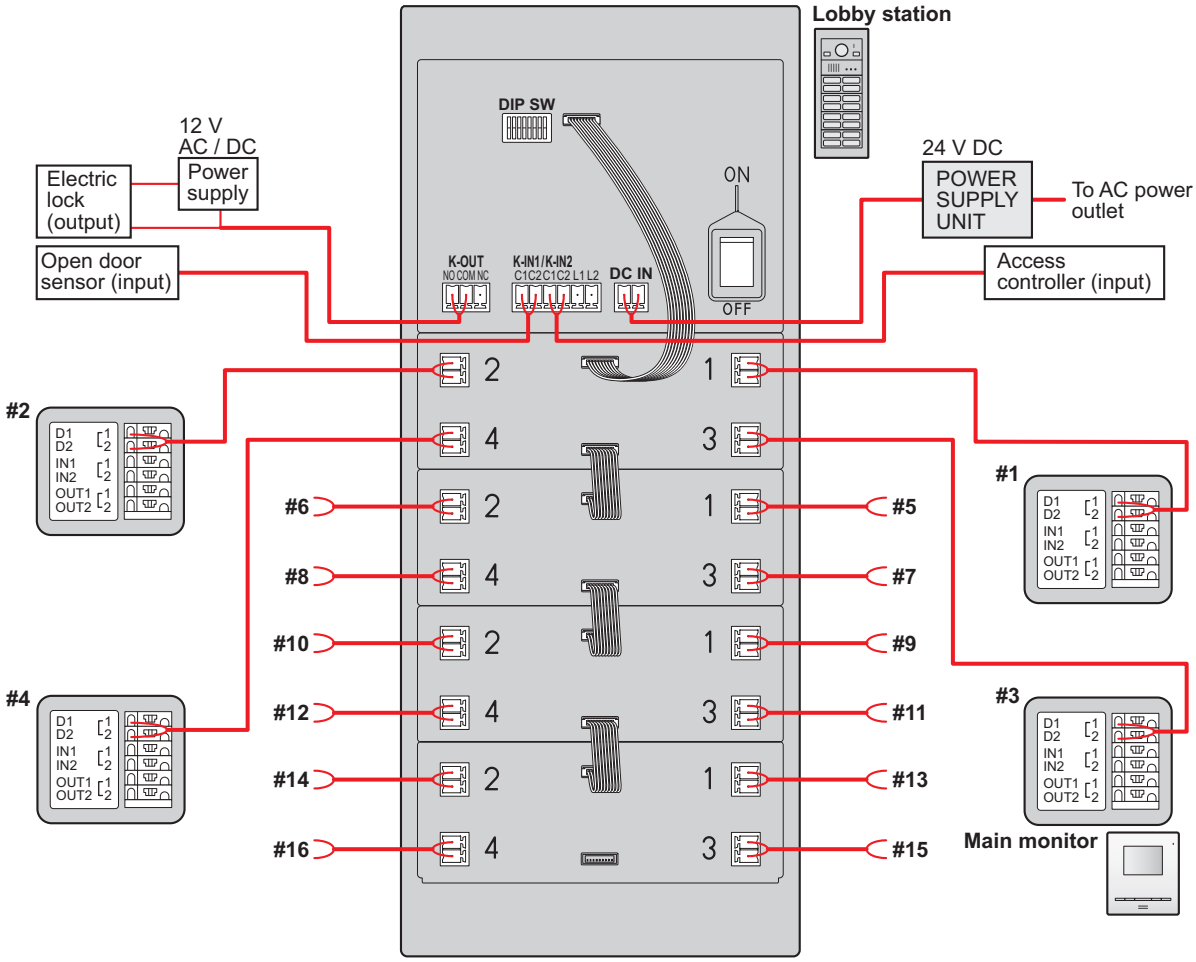
Star wiring example

Maximum number of devices

- Lobby station: up to 1
- Main monitor: up to 32 (depending on the composition of the lobby station's modules)

Important:

- **When using star wiring, do not connect wires from main monitors to L1 and L2.**
- **Wiring is non-polarised.**



Bus wiring examples

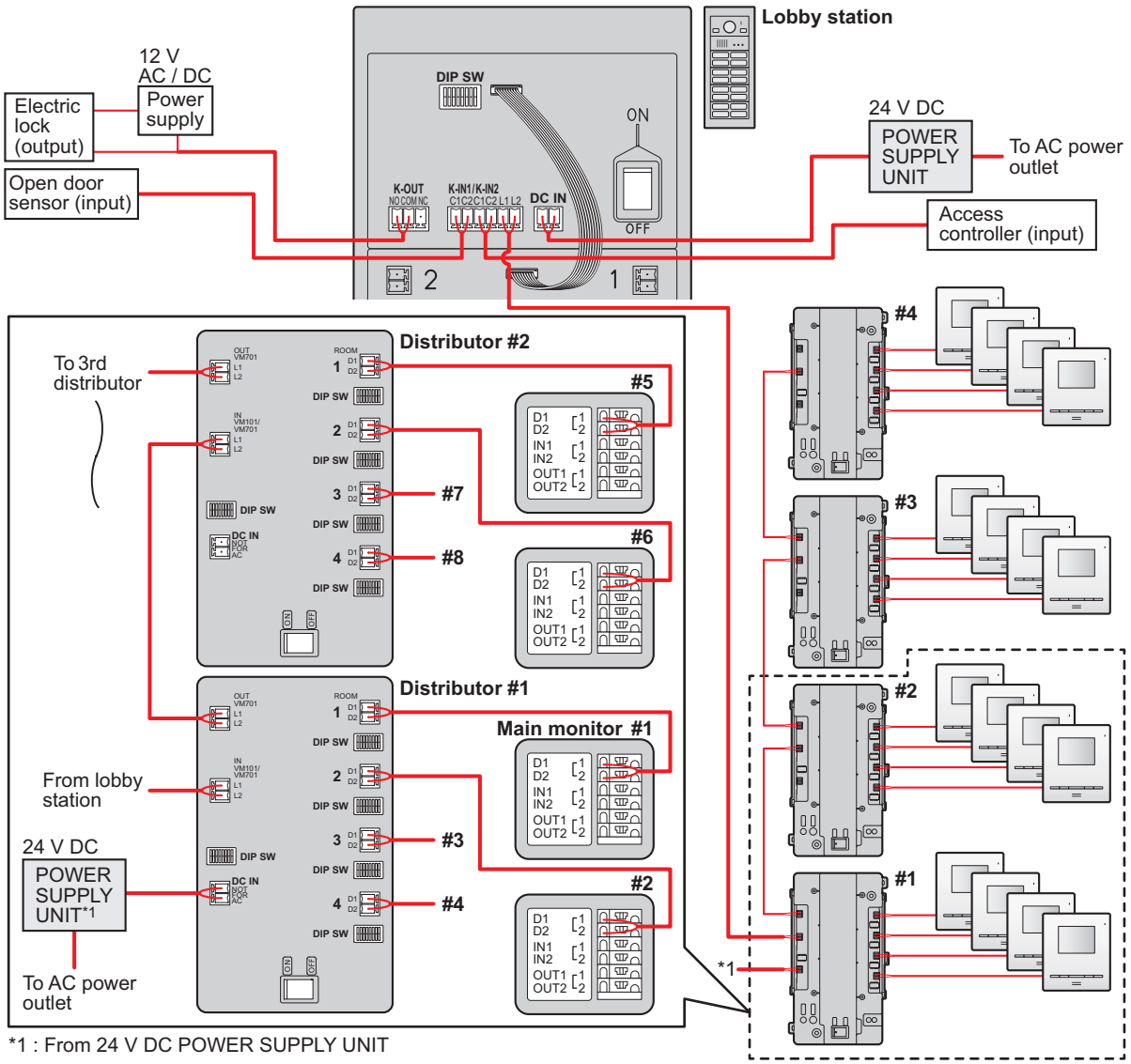
Maximum number of devices

- Lobby station: up to 6
- Main monitor: up to 32 (depending on the composition of the lobby station's modules)
- Distributor: up to 8
- Extension box: up to 1 (required when expanding the lobby stations)

Using the distributor

Important:

- **When using bus wiring, do not connect wires from main monitors to the terminals on the rear of the lobby station's button modules.**
- **Wiring is non-polarised.**

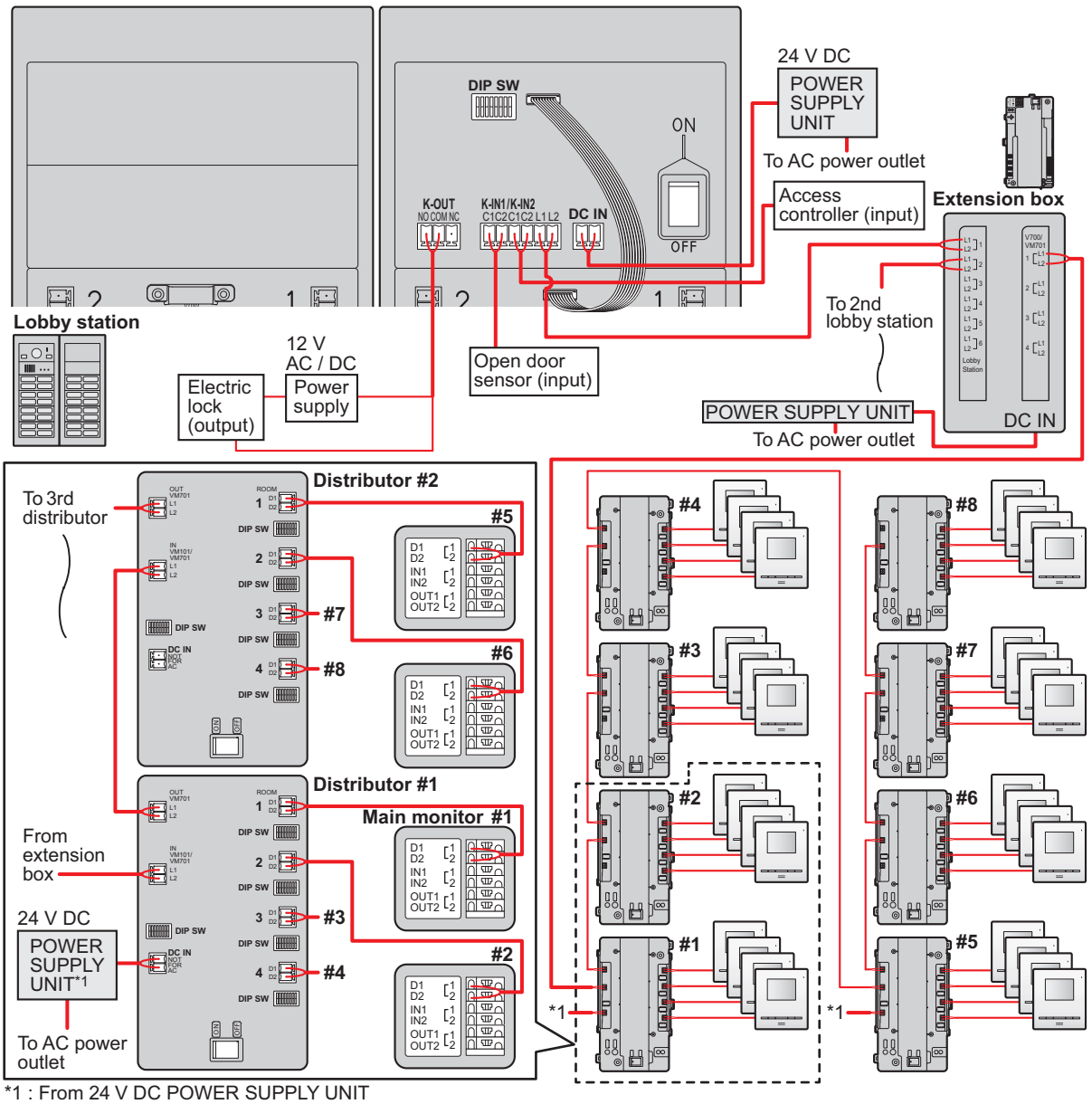


*1 : From 24 V DC POWER SUPPLY UNIT

Using the extension box and distributor

Important:

- **When using bus wiring, do not connect wires from main monitors to the terminals on the rear of the lobby station's button modules.**
- **When connecting to an extension box:**
  - **Set all DIP switches of the extension box (VL-V703) to off.**
  - **Do not connect wires to connectors 2 to 4 for the V700/VM701 on the extension box (VL-V703).**
  - **Cannot monitor from the main monitor.**
    Set DIP switch "8" for the lobby station to the "on" position (prohibits monitoring; page 40).
- **Wiring is non-polarised.**



*1 : From 24 V DC POWER SUPPLY UNIT

4.6.2 Wire type and maximum wire length

Wiring run				Wire diameter	Max. length
Star wiring	Lobby station	↔	Main monitor	0.65 mm (22 AWG)	approx. 100 m
				1.2 mm (17 AWG)	approx. 200 m
	Power supply unit (VL-PS240)	↔	Lobby station	0.65 mm (22 AWG)	approx. 10 m
				2 mm (12 AWG)	approx. 20 m
	Power supply unit (VL-PS2410)	↔	Lobby station	0.65 mm (22 AWG)	approx. 50 m
				2 mm (12 AWG)	approx. 100 m
Bus wiring	Lobby station	↔	Distributor The farthest distributor	0.65 mm (22 AWG)	approx. 100 m
				1.2 mm (17 AWG)	approx. 200 m
	Distributor*1	↔	Main monitor*2	0.65 mm (22 AWG)	approx. 100 m
				1.2 mm (17 AWG)	approx. 200 m
	Power supply unit (VL-PS240)	↔	Lobby station	0.65 mm (22 AWG)	approx. 10 m
				2 mm (12 AWG)	approx. 20 m
	Power supply unit (VL-PS2410)	↔	Lobby station	0.65 mm (22 AWG)	approx. 50 m
				2 mm (12 AWG)	approx. 100 m
	Power supply unit (VL-PS240) Power supply unit (VL-PS2410)	↔	Distributor	0.65 mm (22 AWG)	approx. 10 m
				2 mm (12 AWG)	approx. 20 m
Power supply unit		↔	AC power source	1.2 mm (17 AWG)	No requirement
				2 mm (12 AWG)	
Lobby station		↔	Electric lock K-IN connection device (example: access controller and/or open door sensor, etc.)	0.5 mm (24 AWG)	According to specification of connected device.
				1.2 mm (17 AWG)	

*1 Distributor connected to a power supply unit (when using VL-MV10 main monitors)
*2 The farthest main monitor (when using VL-MV10 main monitors)

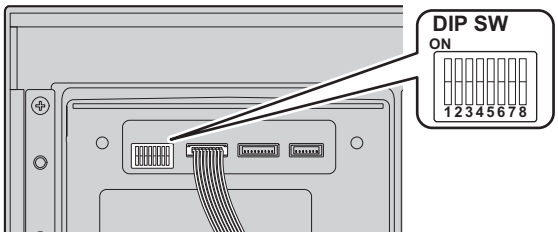
Note the following when selecting wiring

- Use 2-conductor (solid copper) wiring with a PE (polyethylene)-insulated PVC jacket.
  Mid-capacitance, non-shielded cable is recommended.
- A certified power supply wiring has to be used with this equipment. The relevant national installation and/or equipment regulations shall be considered. A certified power supply wiring not lighter than ordinary polyvinyl chloride flexible wiring according to IEC 60227 shall be used.
- When an extension box is connected, the maximum wire length from the lobby station to the distributor does not change.

4.7 DIP switch settings

4.7.1 Lobby station DIP switch settings

The following lobby station DIP switch settings are required when installing the lobby station.



Item	Setting	DIP switch	Item	Setting	DIP switch
Wiring method	Star wiring	ON OFF 1 2 3 4 5 6 7 8	Audio guidance language (when unlocking a door)	No audio guidance	ON OFF 1 2 3 4 5 6 7 8
	Bus wiring	ON OFF 1 2 3 4 5 6 7 8		English	ON OFF 1 2 3 4 5 6 7 8
Backlighting for call buttons in standby mode	Turns on in dark condition	ON OFF 1 2 3 4 5 6 7 8		German	ON OFF 1 2 3 4 5 6 7 8
	Always on	ON OFF 1 2 3 4 5 6 7 8		French	ON OFF 1 2 3 4 5 6 7 8
	Always off	ON OFF 1 2 3 4 5 6 7 8		Spanish	ON OFF 1 2 3 4 5 6 7 8
Prohibit monitoring from a main monitor ● When using a VL-V703 (extension box), set DIP switch "8" to the "on" position (prohibits monitoring).		ON OFF 1 2 3 4 5 6 7 8		Italian	ON OFF 1 2 3 4 5 6 7 8
Allow monitoring from a main monitor		ON OFF 1 2 3 4 5 6 7 8		Dutch	ON OFF 1 2 3 4 5 6 7 8
				Arabic	ON OFF 1 2 3 4 5 6 7 8
				Persian	ON OFF 1 2 3 4 5 6 7 8

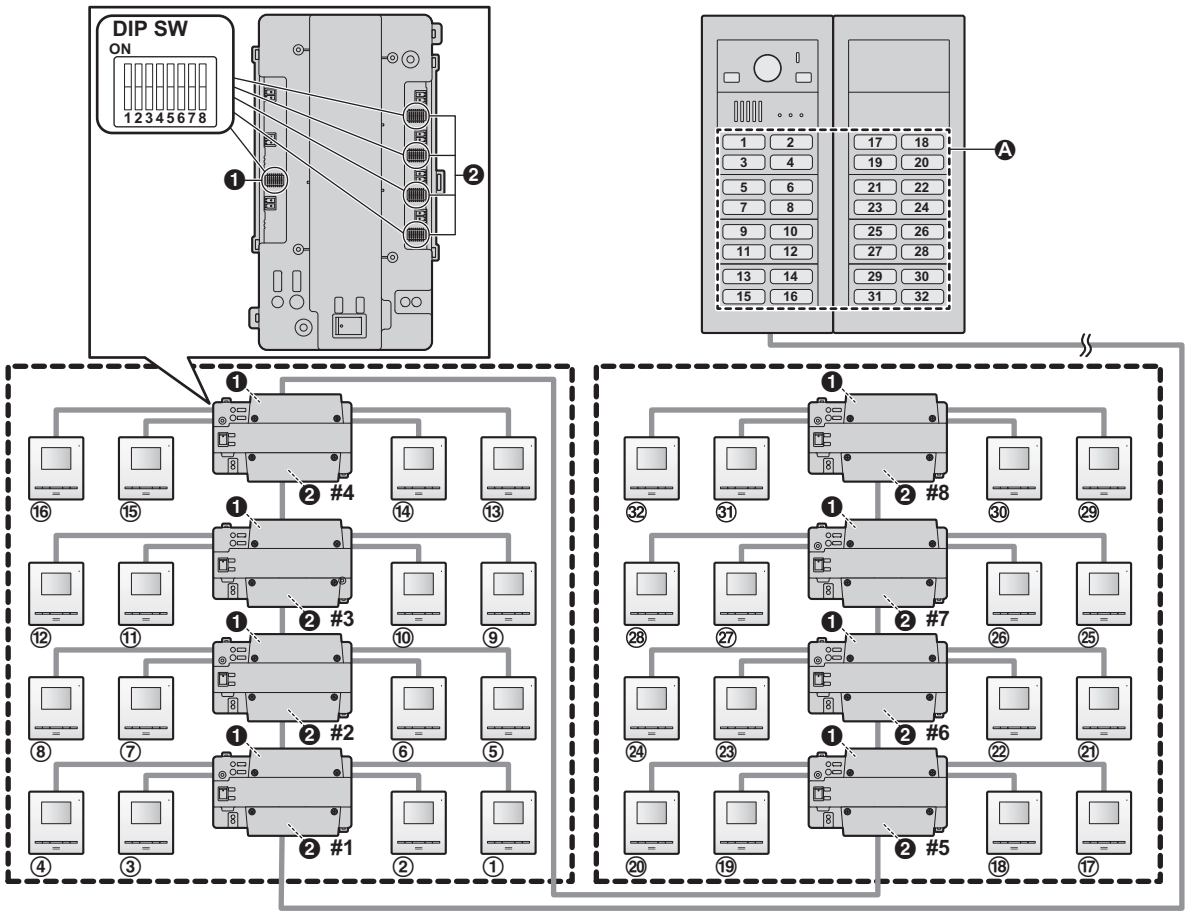
4.7.2 Distributor DIP switch settings

The following DIP switch settings are required when installing the distributor using bus wiring.

– Distributor ID settings #1 – #8: applicable DIP switches (❶) must be configured at each distributor.
– Room number ID settings ① – ㉜: applicable DIP switches (❷) must be configured according to each button number of the lobby stations and rooms.

Ⓐ: For the purpose of an explanation, numbers are written on the name plates of each call button of the lobby stations.

Example: When configuring room number 20, set the DIP switch of the applicable distributors ⑳.



Distributor ID settings ❶

Setting	DIP switch	Setting	DIP switch	Termination	DIP switch
Distributor ID **#1**	ON OFF 1 2 3 4 5 6 7 8	Distributor ID **#5**	ON OFF 1 2 3 4 5 6 7 8	Farthest end distributor	ON OFF 1 2 3 4 5 6 7 8
Distributor ID **#2**	ON OFF 1 2 3 4 5 6 7 8	Distributor ID **#6**	ON OFF 1 2 3 4 5 6 7 8		
Distributor ID **#3**	ON OFF 1 2 3 4 5 6 7 8	Distributor ID **#7**	ON OFF 1 2 3 4 5 6 7 8	Not farthest end distributor	ON OFF 1 2 3 4 5 6 7 8
Distributor ID **#4**	ON OFF 1 2 3 4 5 6 7 8	Distributor ID **#8**	ON OFF 1 2 3 4 5 6 7 8		

Room number ID settings ❷

Setting	DIP switch	Setting	DIP switch
Button ①		Button ⑰	
Button ②		Button ⑱	
Button ③		Button ⑲	
Button ④		Button ⑳	
Button ⑤		Button ㉑	
Button ⑥		Button ㉒	
Button ⑦		Button ㉓	
Button ⑧		Button ㉔	
Button ⑨		Button ㉕	
Button ⑩		Button ㉖	
Button ⑪		Button ㉗	
Button ⑫		Button ㉘	
Button ⑬		Button ㉙	
Button ⑭		Button ㉚	
Button ⑮		Button ㉛	
Button ⑯		Button ㉜	

4.8 Distributor POWER and ACCESS indicators

You can use the POWER and ACCESS indicators to check the status of devices.

- All distributors lit in green indicate that there is no problem.
- A red flashing indicator indicates that there is an error.

Category	Meaning	POWER (green)	ACCESS (red)
Normal operation	Idle	Lit	Off
	Call or monitoring in progress	Lit	Lit
Error	All DIP switches are in the "off" position	Lit	Flashing slowly
	The DIP switch positions used for distributor ID settings are not permitted	Lit	Flashing slowly
	• DIP switches for distributor ID settings "5", "6", and "7" are in the "on" position • DIP switches for room number ID settings "7" and "8" are in the "on" position	Lit	Flashing slowly

4.9 Connecting other devices

4.9.1 Electric locks

You can connect an electric lock to each lobby station via the K-OUT connection terminals. An electric lock is used to open the entrance door in conjunction with another action, such as pressing a button, swiping an access card, inserting a key, entering a door access password, etc.

- One electric lock can be connected to each lobby station.
- When selecting an electric lock, select a device that meets the following guidelines.
  - N/C or N/O dry closure contact
  - 12 V AC/DC, less than 1 A
- After connecting an electric lock to the lobby station, confirm that the electric lock can properly lock doors, and if a main monitor can be used to unlock electric locks.
  You can also select the length of time control signals are sent to unlock the electric locks (turn on K-OUT) using a main monitor.
  (How long the entrance door remains unlocked depends on each electric lock's specification.)
  For detailed information about setting configuration of electric locks, refer to the documentation included with the electric lock.
- Operations for configuring an electric lock differ depending on the model of the main monitor.
  Refer to the documentation included with your main monitor[*1] for information about "Configuring electric locks".

[*1] Please note that the "Doorphone" setting name shown in the product display and documentation of the main monitor has the meaning of "Lobby station".

4.9.2 K-IN connection devices

You can connect an access controller and/or open door sensors, etc. to each lobby station via the K-IN connection terminals. K-IN connection terminals are used to determine whether the user is allowed to open the door using a push button, key switch, card reader, etc.
The K-IN connection device works together with the electric lock. The electric lock signal is set to unlock only for the time there is an input to K-IN.
The length of time control signals are sent to unlock the electric locks (turn on K-OUT) is the input time of K-IN plus 5 seconds.

- One K-IN 1 connection device and one K-IN 2 connection device can be connected to each lobby station.
- For detailed information about setting configuration of K-IN connection devices, refer to the documentation included with the K-IN connection devices.

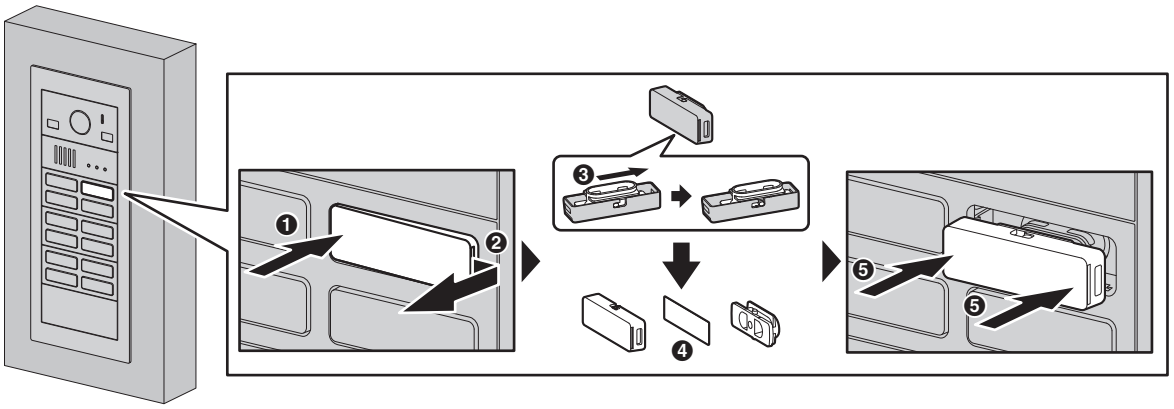
4.10 Room name plates

The room name plates of the lobby station can be attached in the follow ways.

– Attached so that room name plates can be easily attached and removed in order to change the names of residents.
– Attached so that room name plates cannot be easily attached and removed (tamper prevention). After consulting with contractors and facility staff, use screws to secure each name button module to the lobby station.

Removing/attaching room name plates

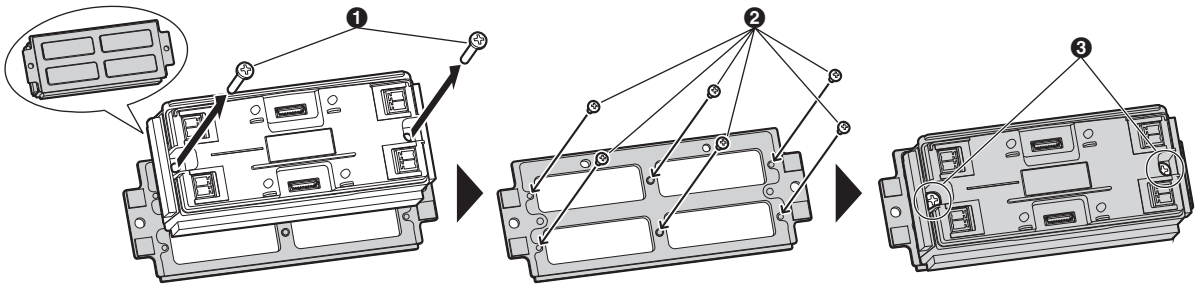
1. Remove the name plate button as shown in (❶) and (❷) below.
2. Remove the name plate by sliding it (❸) out from the button.
3. Remove the name plate as shown in (❹) below and change the contents of the name plate.
4. Reattach the name plate button as shown in (❺) below.
   - Make sure that the name plate button is securely attached.



Attaching the room name plates so that they cannot be easily removed

1. Remove the screws (❶) on the left and right side of the button module and panel, and then remove the button module and panel.
2. As shown in the following illustrations, from the rear of the button module, secure the left and right sides of the button module with screws (❷).
   - The number of included screws used differs depending on the button module used. Refer to page 10 for information.
3. Reattach the button module and panel by securing the screws (❸) on the left and right side of the button module and panel. Make sure the panel is securely attached.

Example: 4-button module



5.1 System conditions and limitations

Please note the following system conditions and limitations.

- Only one call or monitoring session can be handled at a time.
  - If the call button for the same lobby station is pressed multiple times, the last call button pressed has priority.
  - If the call buttons for multiple lobby stations are pressed, the first call button pressed has priority.
  - The main monitor cannot monitor with the lobby station when the lobby station is in use (monitoring with other devices, on call).
- When lobby stations are connected to extension boxes, main monitors cannot monitor the outside with any of the lobby stations.
- Even when multiple lobby stations are connected to an extension box, is displayed for all of the lobby stations (except for VL-MV10 (bus-powered main monitor)).
- All calls and monitoring sessions are disconnected after the "timeout" time elapses. The time is 90 seconds for calls and 180 seconds for monitoring.

5.2 Lobby station operations

5.2.1 Calling a resident

Enter the resident's call button to call.

- indicator flashes in red while calling the resident.
- After the resident answers the call, indicator lights in amber.
- When the door is unlocked, the audio guidance is announced from the lobby station, and the indicator lights in blue.

6.1 Basic troubleshooting

For advanced troubleshooting, refer the information on the following web site.
https://panasonic.net/cns/pcc/support/intercom/vl-vm

If the system does not operate correctly, particularly after installing or modifying the system, first check the following points.

- Power is supplied to each device
- All cables are connected correctly and fully inserted into the terminals (see page 36 to 39)
- The in/out connections between units are correct (see page 36 to 38)
- The DIP switch settings for the lobby station are correct (see page 40)
- The DIP switch settings for the distributor are correct (see page 41 to 42)

Red lit or flashing indicators for the distributor

Indicators lit or flashing in red indicate there is an error. See "4.8 Distributor POWER and ACCESS indicators (Page 43)" for more information.

General issues

Problem	Cause & Solution	Page
Calls are disconnected.	• The call with higher priority was made by pressing a button on another lobby station, causing the current call to be disconnected. → Wait and try again later. • The current call timed out and was disconnected. → To conserve system resources, all calls time out and are disconnected after a programmed amount of time.	45
Cannot monitor lobby stations from the main monitor.	• Lobby stations connected to extension boxes may not be able to be monitored from main monitors. • Another lobby station and the main monitor are on a call.	38
Cannot monitor lobby stations selected from the monitor list on the main monitor.	• If the selected lobby station is connected to an extension box, it may not be able to be monitored from main monitors.	38

Main monitor display issues

Image from	Display	Cause & Solution	Page
Lobby station	• No image is displayed. • Images have poor quality.	• The cables are not correctly connected. → Check cable connections and make sure that all cables are fully inserted into the terminals. • Power is not connected to all units. → Check the power connection and connect power to all units.	36, 39
	• “`Doorphone unavailable`” is displayed.	• It is displayed when calls from the lobby station are disconnected. → This is not a device malfunction. Wait for the message to disappear from the display. • It is displayed when monitoring a lobby station when another main monitor is already on call with or monitoring the lobby station. → This is not a device malfunction. Either wait for the message to disappear from the display or press the OFF button.	–

6.2 Cleaning

Wipe the product with a soft, dry cloth.

- For excessive dirt, wipe the product with a slightly damp cloth.
- When the product is installed near ocean coasts, wipe the product with a slightly damp cloth once every 2 to 3 months.

Important:

- **Do not use any cleaning products that contain alcohol, polish powder, powder soap, benzine, thinner, wax, petroleum, or boiling water. Also do not spray the product with insecticide, glass cleaner, or hair spray. This may cause a change in colour or quality of the product.**

6.3 Terms and illustrations in this document

- Model number suffixes (e.g., the "EX" in "VL-VM101EX") are omitted unless necessary.
- Design and specifications are subject to change without notice.
- Illustrations may vary slightly from the actual product.

6.4 Trademarks (for France)

- VIGIK® is a registered trademark of La Poste.
- All other trademarks identified herein are the property of their respective owners.

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