Quick Installation Guide

CoolMaster Product Line:

CoolMaster, CoolMasterPro, CoolMasterNet

HVAC Bridge

COOLAUTOMATION

THE INTERNET OF CLIMATE

Warning

Read these **Safety Precautions** carefully to ensure correct installation.

This manual classifies precautions into WARNING and CAUTION.

> ⚠️ **Failure to follow WARNING is very likely to result in such grave consequences as death or serious injury**

WARNING

- Only qualified personnel must carry out the installation work.

- Ask your dealer or technical representative to install the unit.

- Any deficiency caused by your own installation may result in an electric shock or fire.

- All electrical work must be performed by a licensed technician, according to local regulations and in accordance with the instructions in the installation manual.

- Any lack of electric circuit or any deficiency caused by installation may result in an electric shock or fire.

- Do not relocate or reinstall the **CoolMaster device** by yourself.

- Any deficiency caused by your own re-installation may result in an electric shock or fire.

- Make sure that all wiring is secured, that specified wires are used and that no external forces act on terminal connections or wires. Improper wiring connections or installation may produce heat and result in fire.

- Before touching electrical parts, turn off the unit.

- To dispose of this product, consult your dealer.

Caution

> ⚠️ Failure to follow CAUTION may result in serious injury or property damage, and in certain circumstances, may result in a grave onsequence.

CAUTION

- Do not allow children to play with the **CoolMaster device** and supervise them not to get access to the appliance.

- **CoolMaster device** is not to be used by persons with reduced physical, sensory or mental capabilities,

  or lack of experience and knowledge.

- Do not disassemble, modify or repair the **CoolMaster device**.

- Any deficiency caused by your modification or repair may result in an electric shock or fire.

- Never let the **CoolMaster device** to get wet.

- Water can cause damage to the **CoolMaster device**, and may cause an electric shock or fire.

- Do not use flammable materials (e.g. hairspray or insecticide) near the **CoolMaster device**.

- Do not clean the **CoolMaster device** with organic solvents such as paint thinner. The use of organic

  solvents may cause cracking, damaging the **CoolMaster device**, causing electrical shock or fire.

- **Do not apply AC110V or AC220V to the CoolMaster device. The maximum voltage that can be applied to the unit**

  directly is 24V DC.

- If damaged **CoolMaster device** can generate heat and cause a fire.

Caution

> ⚠️ Failure to follow CAUTION may result in serious injury or property damage, and in certain circumstances, may result in a grave consequence.

DO NOT INSTALL THE COOLMASTER DEVICE IN THE FOLLOWING LOCATIONS:

a) Where a mineral oil mist or oil spray or vapor is produced, for example, in a kitchen. Plastic parts may deteriorate and fall off or result in water leakage.

b) Where corrosive gas, such as sulfurous acid gas, is produced.

c) Near machinery emitting electromagnetic waves. Electromagnetic waves may disturb the operation of the **CoolMaster device** and cause the unit to malfunction.

d) Where flammable gas may leak, where there is carbon fiber or ignitable dust suspensions in the air, or where volatile flammable such as thinner or gasoline are handle Operating the **CoolMaster device** in such conditions can cause a fire.

e) High temperature area or directly flamed point. Heating and/or fire can occur.

f) Moist area, where there is exposure to water. If water enters the inside of the **CoolMaster device**, it may cause electric shock and electrical components may fail.

Contents

What's in the box

CoolMaster device

AC Power supply adapter
100V-240V 50/60hz to 12V
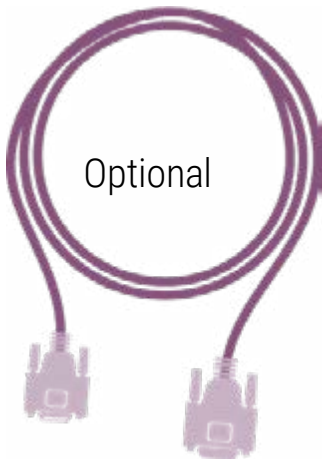
Optional

1 RS232 DB9
Male to Female
cable
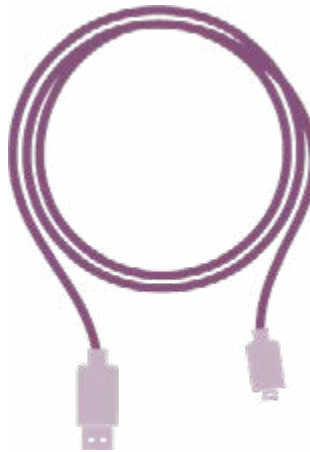
1 USB-Mini USB
cable

1 Ethernet
cable

CoolMaster device
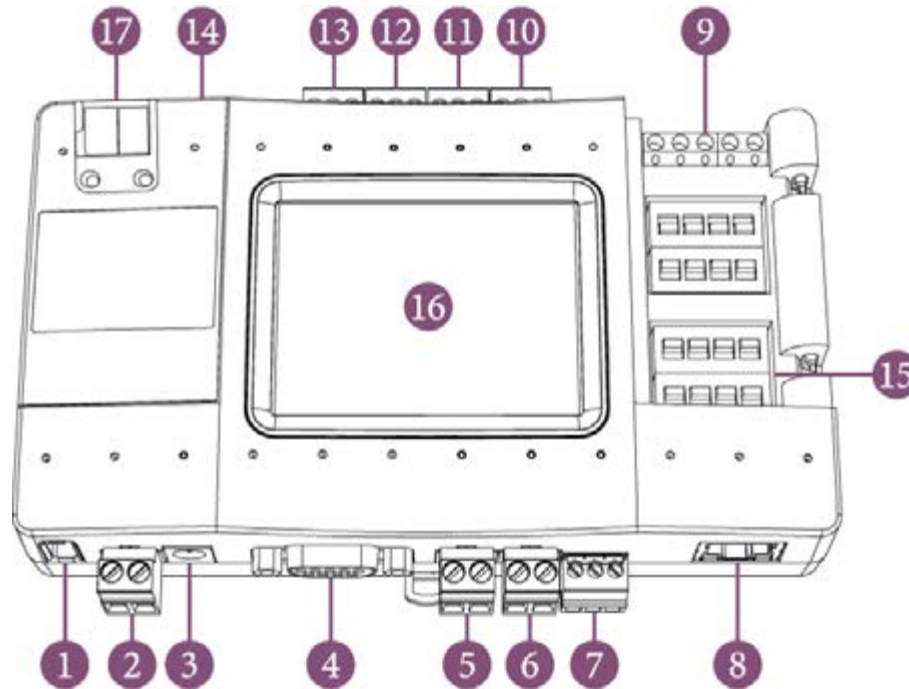
①	L8 - HVAC Line 8 (USB Host)	⑦	L3 - RS485	⑬	L4 - HVAC Line 4
②	Power	⑧	Ethernet Port	⑭	USB Device Port
③	Power Plug	⑨	GPIOs	⑮	DIP Switches P, Q, R, S
④	RS232 Port	⑩	L7 - HVAC Line 7	⑯	LCD Touch Screen
⑤	L1 - HVAC Line 1	⑪	L6 - HVAC Line 6	⑰	KNX (option)
⑥	L2 - HVAC Line 2	⑫	L5 - HVAC Line 5		

Preconfigured CoolMaster Device

Type label

This label uniquely identifies the manufacturer's configuration of the CoolMaster device. Located on the back of the enclosure.
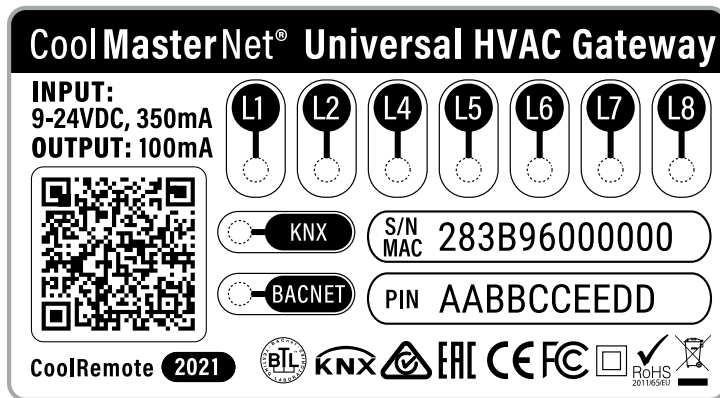
Type label with Configuration sticker

A preconfigured label example: configured for LG **LG** on L7
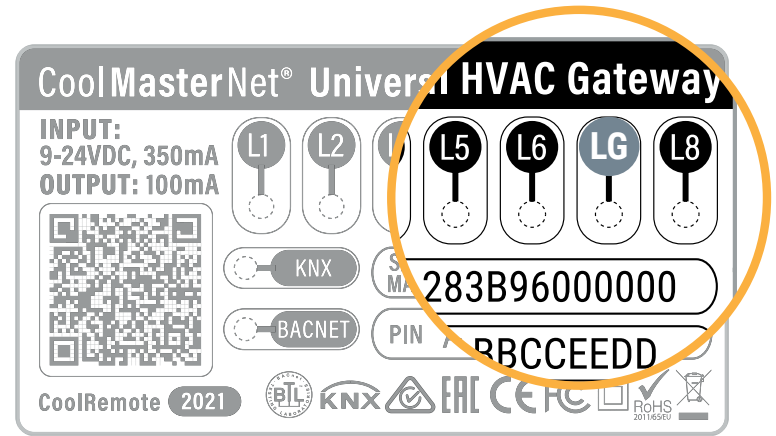
HVAC Line configuration

DK Daikin

HT Hitachi

HA Haier

ME Mitsubishi Electric

TO Toshiba

PN Panasonic

FJ Fujitsu

LG LG

SM Samsung

MD Midea

CG Chigo

GR Gree

AU AUX

BS Blue Star

MH Mitsubishi Heavy

CoolMaster Product line

	COOL**MASTER**	COOL**MASTER**PRO
Market Segment	Residential	Medium and Large Commercial
Main Use	Home Automation Integration, Remote control App	BMS integration
Max Connected Units	32	256*
Local access to sevice data	X	✓

* Max Connected Units is different per VRF/VRV manufacturer and include any type of connected unit (VRF indoor, CP, sensor, fan coil, any other HVAC unit). Please refer to technical specifications for more details.

HVAC Daikin VRV

(1) HVAC Communication Terminals

HVAC **outdoor** connection

F1		Daikin**
F2	DK	Max.* 64 indoor units per line
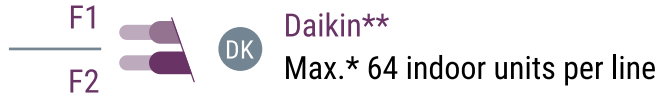
* For Heat Recovery systems the connection is at oudoor units only.

* See table on page 10 for Max connected indoors per model.

* Polarity is not required on the HVAC communication line.

** Centralized (group) address required.

(2) Connecting to the line plug

Secure the cables in the L1 line plug.

(3) Plugging to the CoolMaster device

Insert the plug in to the CoolMaster device L1 socket.

(4) Check DIP Switches are set correctly

Dip switches setup for VRV HVAC system on L1.

	1	2	3	4	
P	ON	ON	OFF	OFF	
Q	ON	OFF	ON	OFF	

P☰ Q☰ R☰ S☰

	1	2	3	4	
R	OFF	OFF	OFF	OFF	
S	OFF	OFF	OFF	OFF	

L1

Daikin HVAC Terminal

HVAC Daikin Non-VRV

> ⚠️ **Changing the dip switches Ⓢ, while DC voltage is present on L1, may damage thr CoolMaster device.**

For Daikin Non-VRV equipment, DC voltage supply by CoolMaster device might be required for proper operation.

⚠️ **MAke sure CoolMaster device is disconnected from power and HVAC line.**

① HVAC Communication Terminals

HVAC **Indoor** connection

F1

F2

DK Daikin**
Max.* 64 indoor units per line

* See table on page 10 for Max connected indoors per model.

* Polarity is not required on the HVAC communication line.
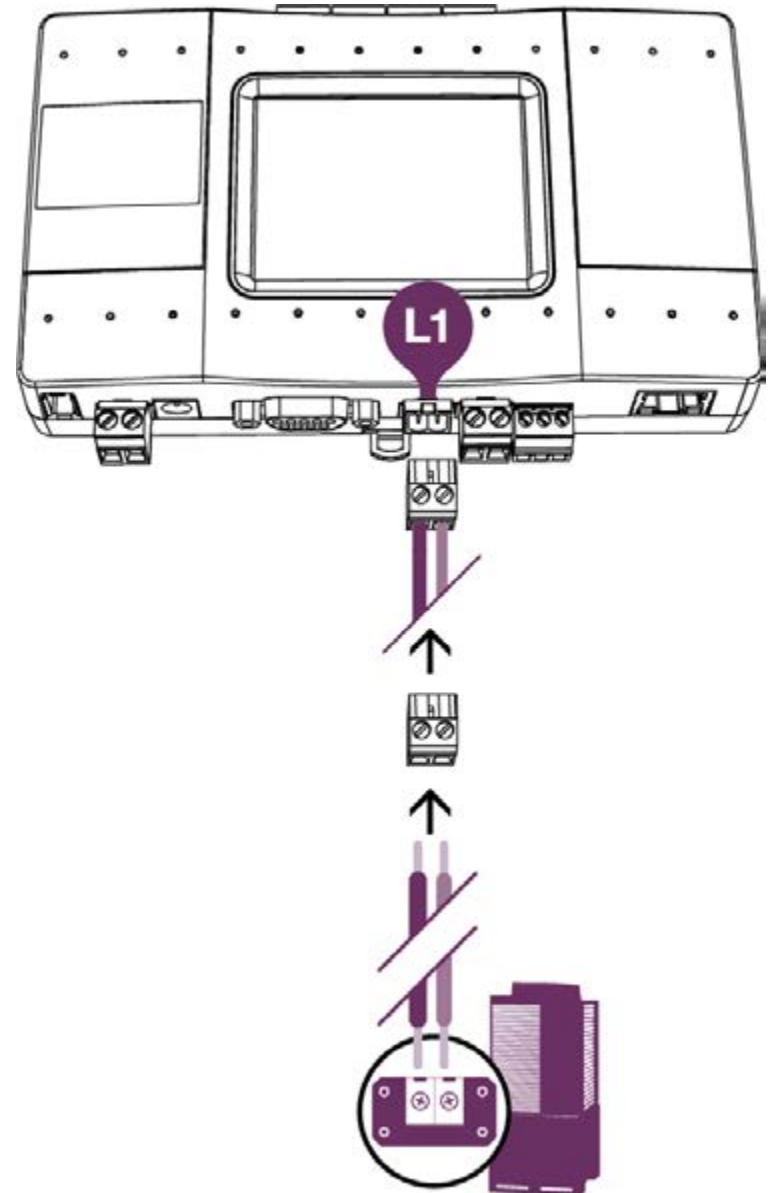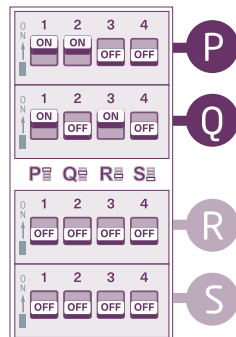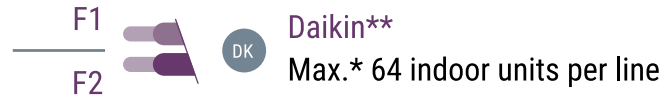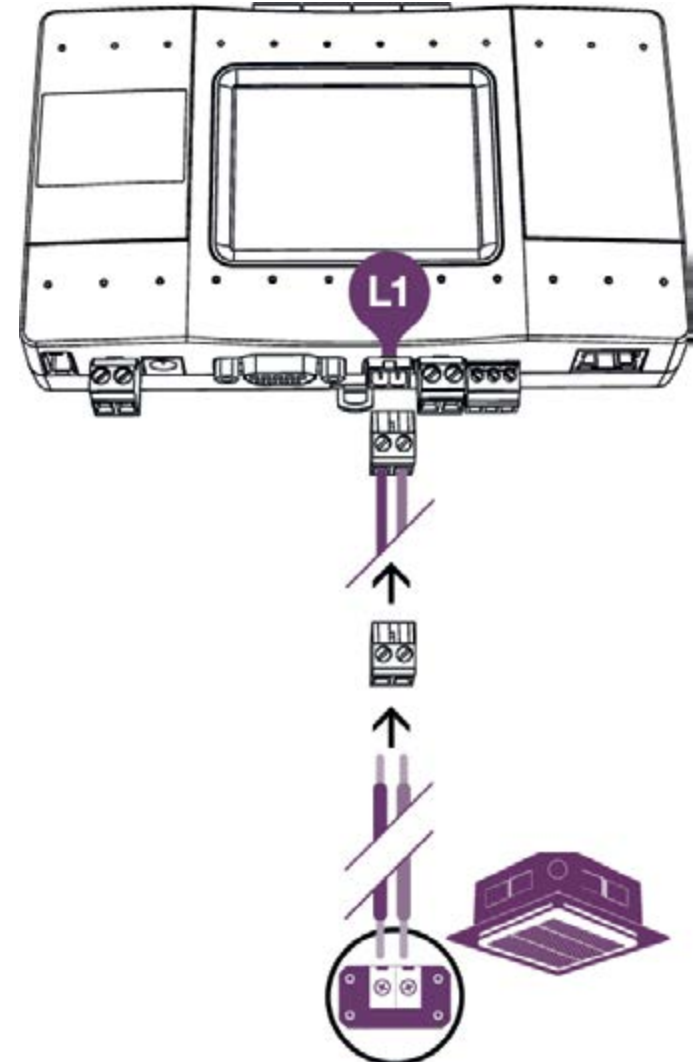
** Centralized (group) address required.

② Measure DC voltage on HVAC comm. line L1

③ If no **14-16V DC voltage** change the dip switches as shown below:
Go to settings ⚙ ➡ Go to HVAC lines ➡ Go to L1 ➡ Go to DC Out turn on ⬤ ON

④ **Turn ON the power** for CoolMaster device and **connect** it to HVAC line.

⑤ Connect to the communication terminals on the HVAC equipment and secure the cables in the L1 line plug.

⑥ Insert the plug in to CoolMaster device L1 socket.

L1

Daikin Non-VRV HVAC Terminal

	1	2	3	4	
ON I	ON	ON	OFF	OFF	**P**
ON I	ON	OFF	ON	OFF	**Q**

P≣ Q≣ R≣ S≣

	1	2	3	4	
ON I	OFF	OFF	OFF	OFF	**R**
ON I	ON	ON	OFF	OFF	**S**

HVAC Mitsubishi Electric VRF

① **HVAC Communication Terminals**
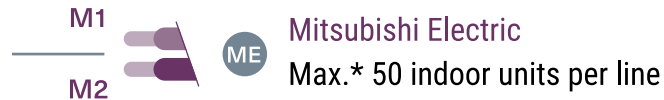
HVAC **outdoor** connection

M1
M2

ME Mitsubishi Electric
Max.* 50 indoor units per line

* See table on page 10 for Max connected indoors per model.

* For Heat Recovery systems the connection is at outdoor units only.

* Polarity is not required on the HVAC communication line.

② **Connecting to the line plug**

Secure the cables in the L1 line plug.

③ **Plugging to the CoolMaster device**

Insert the plug in to the CoolMaster device L1 socket.

④ **Check DIP Switches are set correctly**

Dip switches setup for VRF HVAC system on L1.

L1

P | 1 ON | 2 ON | 3 OFF | 4 OFF
Q | 1 OFF | 2 OFF | 3 OFF | 4 OFF

P Q R S

R | 1 OFF | 2 OFF | 3 OFF | 4 OFF
S | 1 OFF | 2 OFF | 3 OFF | 4 OFF

Mitsubishi Electric HVAC Terminal

HVAC Mitsubishi Electric Non-VRF

> ⚠️ **Changing the dip switches (S), while DC voltage is present on L1, may damage thr CoolMaster device.**

For Mitsubishi Electric Non-VRF equipment, DC voltage supply by CoolMaster device might be required for proper operation.

⚠️ **MAke sure CoolMaster device is disconnected from power and HVAC line.**

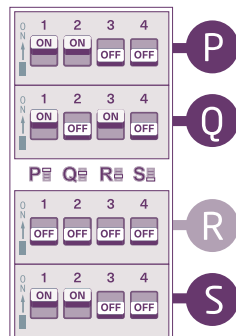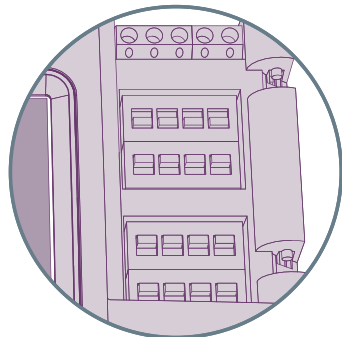**(1) HVAC Communication Terminals**

HVAC **Indoor** connection

M1
M2

(ME) Mitsubishi Electric
Max.* 50 indoor units per line
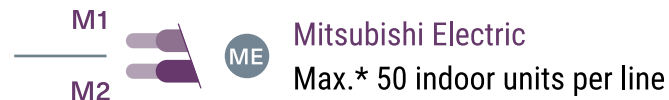
* See table on page 10 for Max connected indoors per model.
* Polarity is not required on the HVAC communication line.

(2) Measure DC voltage on HVAC comm. line L1

(3) If no **28-30V DC voltage** change the dip switches as shown below:

Go to settings ⚙ ➡ Go to HVAC lines ➡ Go to L1 ➡ Go to DC Out turn on `ON ⬤`

(4) Turn ON the power for CoolMaster device and **connect** it to HVAC line.

(5) Connect to the communication terminals on the HVAC equipment and secure the cables in the L1 line plug.

(6) Insert the plug in to CoolMaster device L1 socket.

L1
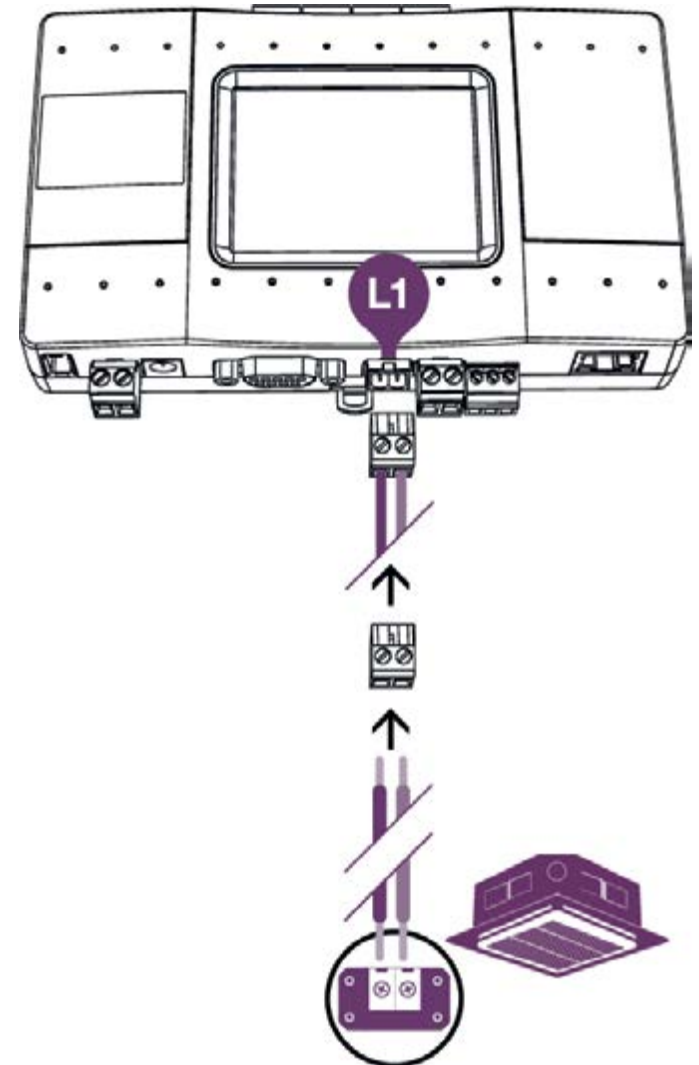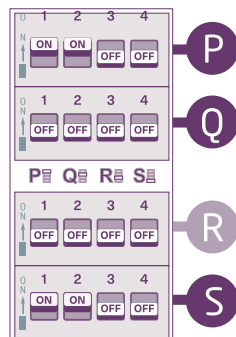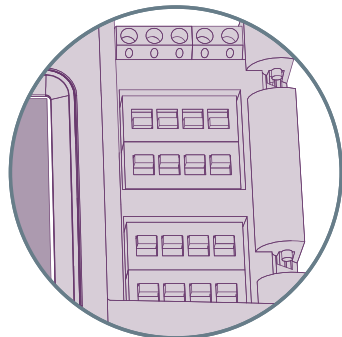
Mitsubishi Non-VRF HVAC Terminal

HVAC Panasonic/Sanyo VRF

(1) HVAC Communication Terminals
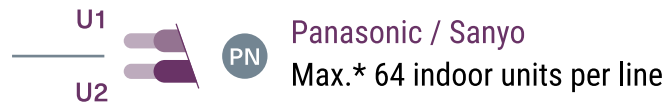
HVAC **outdoor** connection

U1

U2

PN Panasonic / Sanyo
Max.* 64 indoor units per line

* See table on page 10 for Max connected indoors per model.
* For Heat Recovery systems the connection is at outdoor units only.
* Polarity is not required on the HVAC communication line.
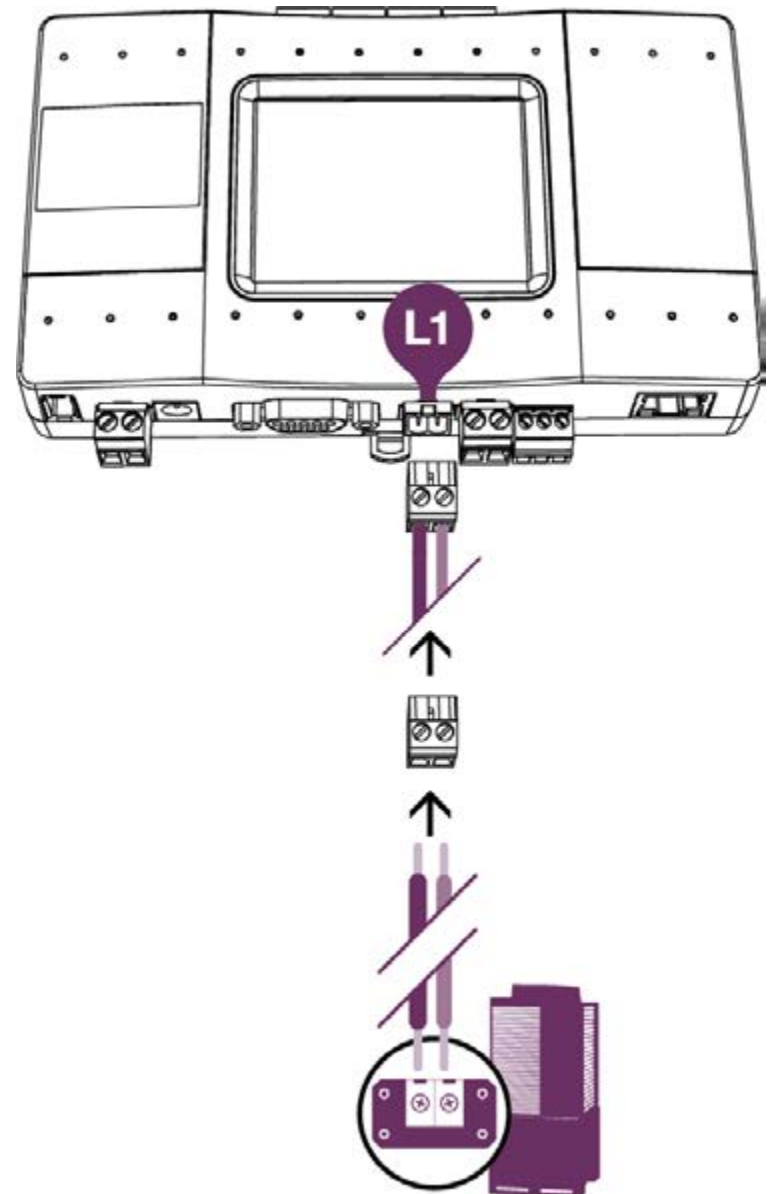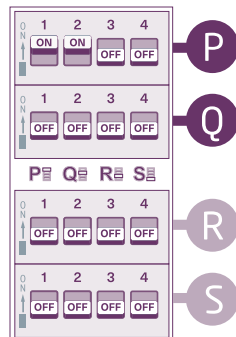
(2) Connecting to the line plug

Secure the cables in the L1 line plug.

(3) Plugging to the CoolMaster device

Insert the plug in to the CoolMaster device L1 socket.

(4) Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L1.

L1

	1	2	3	4	
ON	ON	ON	OFF	OFF	P
ON	OFF	ON	OFF	ON	Q

P Q R S

	1	2	3	4	
ON	OFF	OFF	OFF	OFF	R
ON	OFF	OFF	OFF	OFF	S

Panasonic / Sanyo HVAC Terminal

HVAC Toshiba VRF

① HVAC Communication Terminals

HVAC **outdoor** connection

U1

U2

TO

Toshiba
Max.* 64 indoor units per line

* See table on page 10 for Max connected indoors per model.
* For Heat Recovery systems the connection is at outdoor units only.
* Polarity is not required on the HVAC communication line.
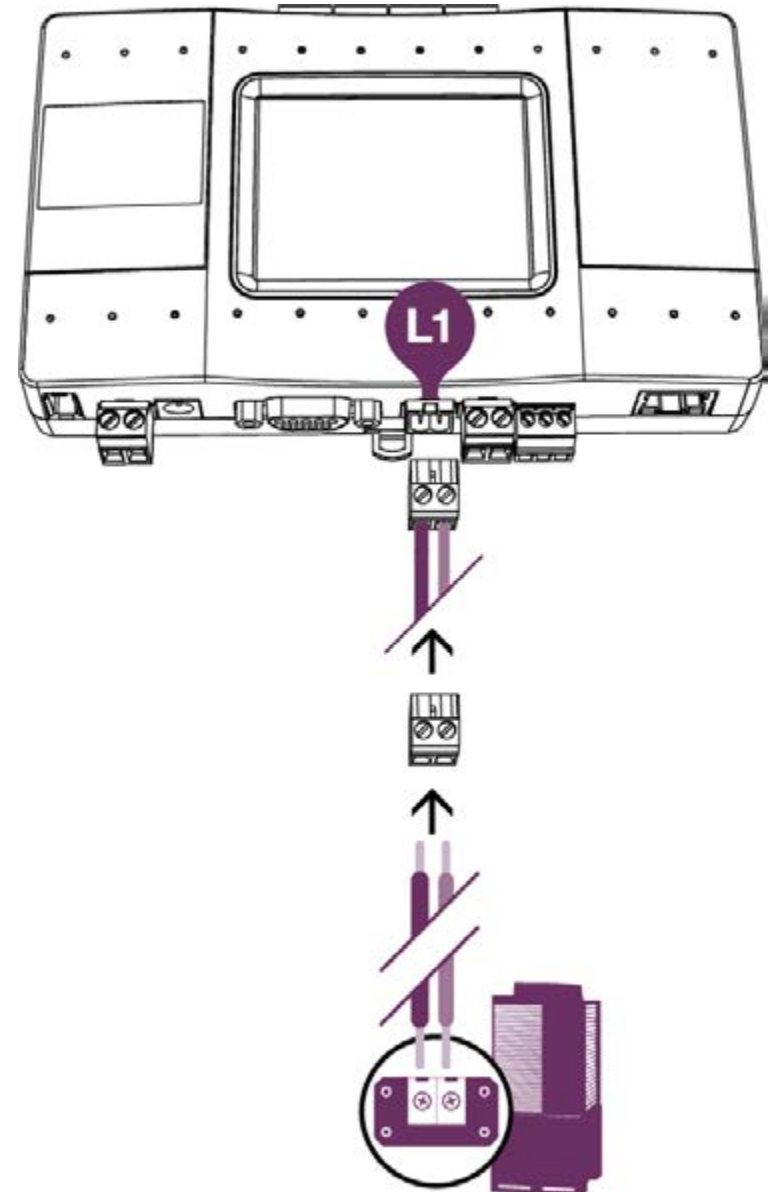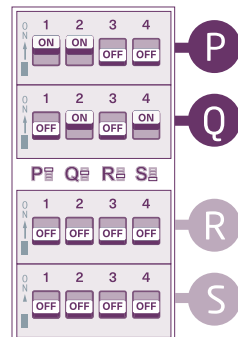
② Connecting to the line plug

Secure the cables in the L1 line plug.

③ Plugging to the CoolMaster device

Insert the plug in to the CoolMaster device L1 socket.

④ Check DIP Switches are set correctly
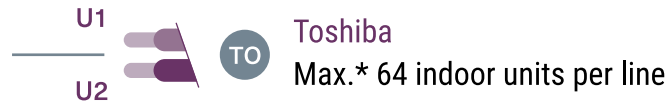
Dip switches setup for VRF HVAC system on L1.

L1

	1	2	3	4	
ON	ON	ON	OFF	OFF	**P**

	1	2	3	4	
ON	OFF	ON	OFF	ON	**Q**

P≣ Q≣ R≣ S≣

	1	2	3	4	
ON	OFF	OFF	OFF	OFF	**R**

	1	2	3	4	
ON	OFF	OFF	OFF	OFF	**S**

Toshiba HVAC Terminal

HVAC Hitachi VRF

① HVAC Communication Terminals

HVAC **outdoor** connection

1

2

HT **Hitachi**
Max.* 160 indoor units per line

* See table on page 10 for Max connected indoors per model.
* For Heat Recovery systems the connection is at outdoor units only.
* Polarity is not required on the HVAC communication line.
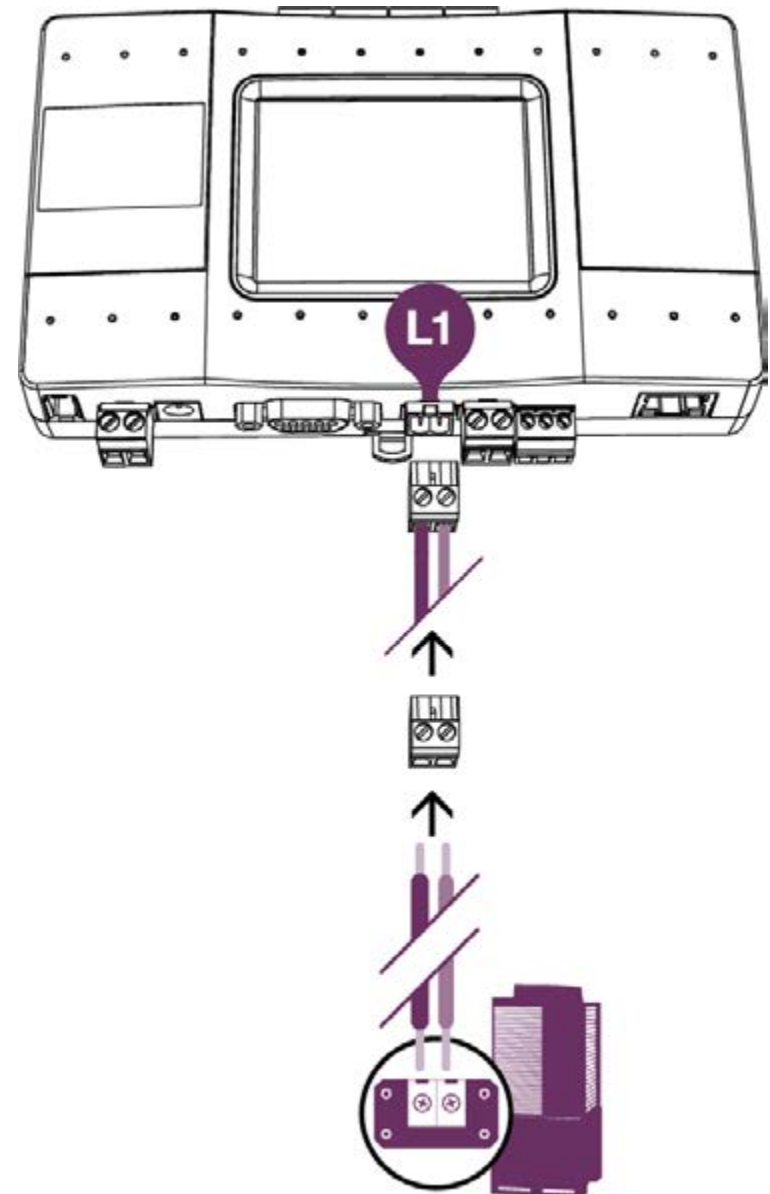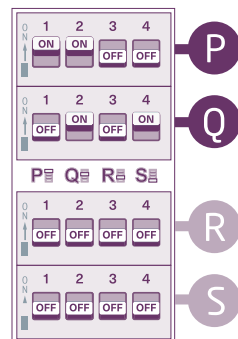
② Connecting to the line plug

Secure the cables in the L1 line plug.

③ Plugging to the CoolMaster device

Insert the plug in to the CoolMaster device L1 socket.

④ Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L1.

L1

	1	2	3	4	
ON	ON	ON	OFF	OFF	P
ON	OFF	ON	OFF	ON	Q

P☰ Q☰ R☰ S☰

	1	2	3	4	
ON	OFF	OFF	OFF	OFF	R
ON	OFF	OFF	OFF	OFF	S

Hitachi HVAC Terminal

HVAC Haier VRF

① HVAC Communication Terminals

HVAC **outdoor** connection

P

Q

HA — Haier
Max.* 64 indoor units per line

* See table on page 10 for Max connected indoors per model.

* For Heat Recovery systems the connection is at outdoor units only.

* Polarity is not required on the HVAC communication line.
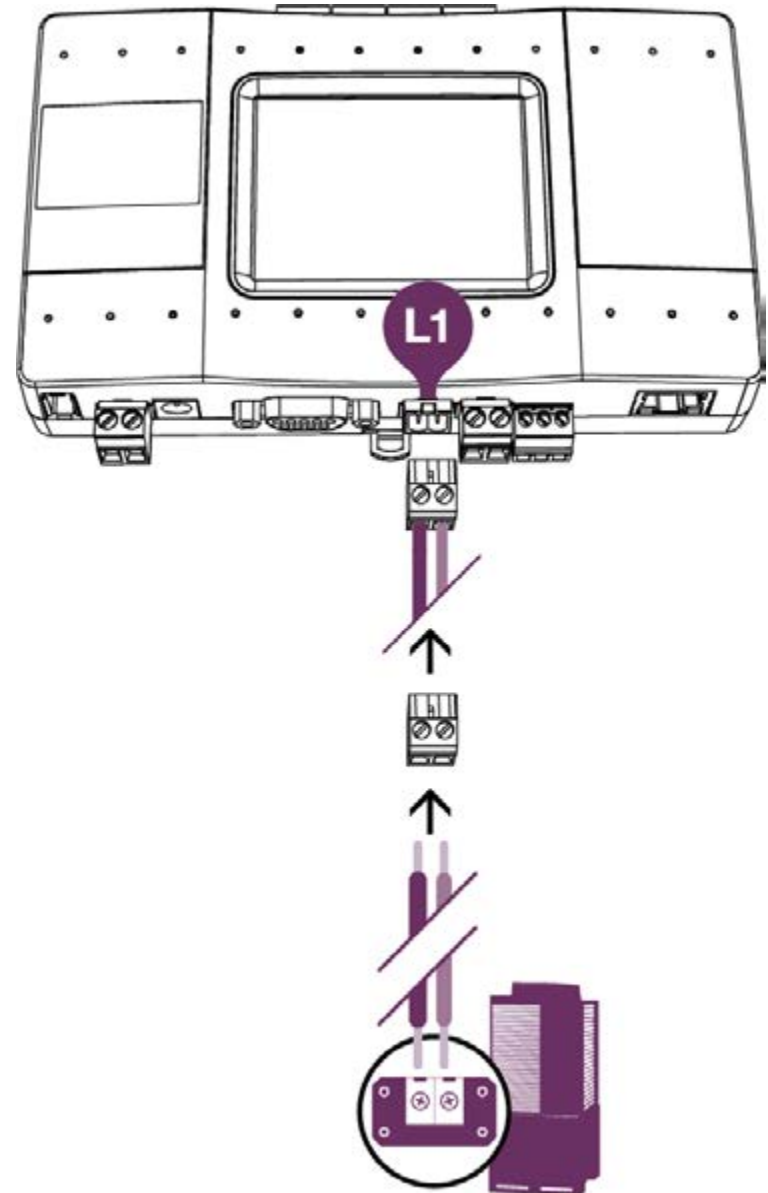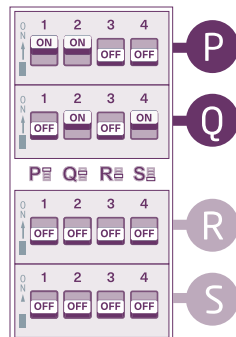
② Connecting to the line plug

Secure the cables in the L1 line plug.

③ Plugging to the CoolMaster device

Insert the plug in to the CoolMaster device L1 socket.

④ Check DIP Switches are set correctly
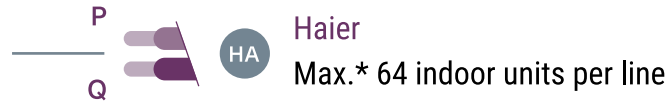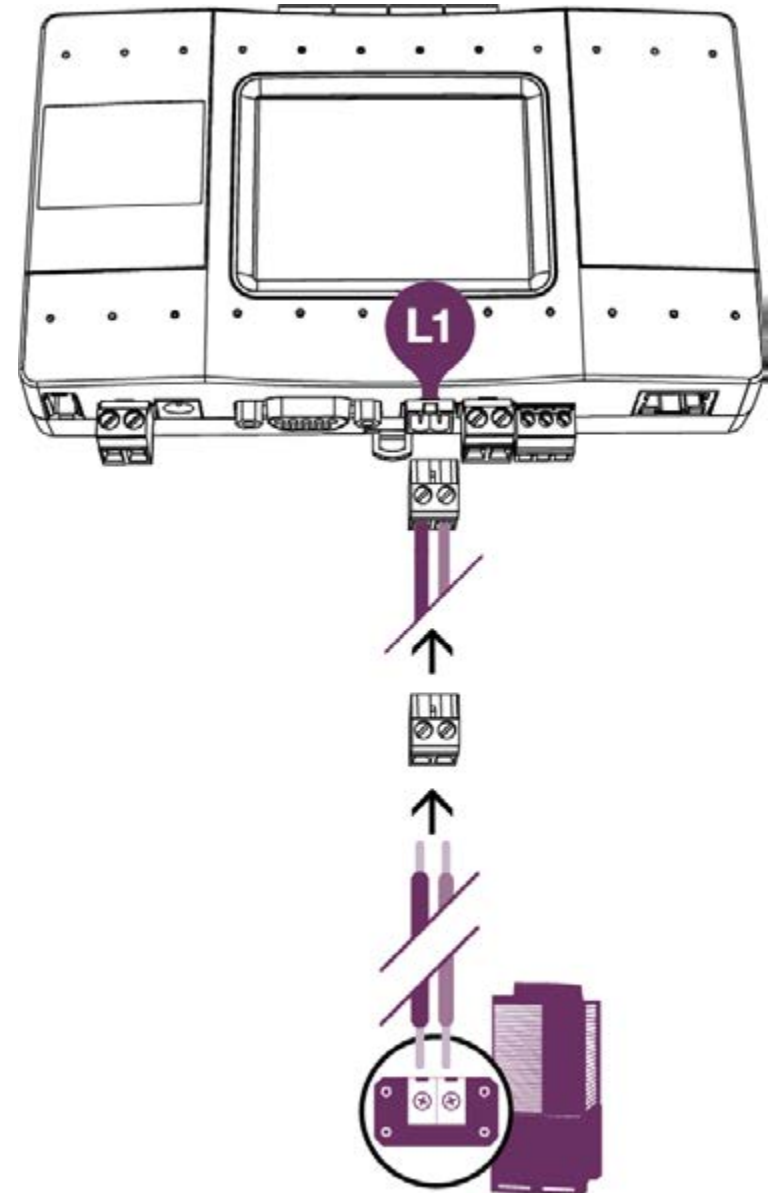
Dip switches setup for VRF HVAC system on L1.

	1	2	3	4	
ON	ON	ON	OFF	OFF	P
ON	OFF	ON	OFF	ON	Q
P	Q	R	S		
ON	OFF	OFF	OFF	OFF	R
ON	OFF	OFF	OFF	OFF	S

L1

Haier HVAC Terminal

HVAC Mitsubishi Heavy VRF

① HVAC Communication Terminals

HVAC **outdoor** connection

A		
	MH	**Mitsubishi Heavy**
B		Max.* 128 indoor units per line

* See table on page 10 for Max connected indoors per model.

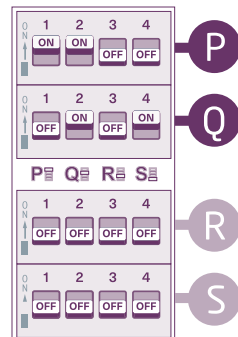## ② Connecting to the line plug

Secure the cables in the L7 line plug.

③ Plugging to the CoolMaster device

Insert the plug in to the CoolMaster device L7 socket.

④ Check DIP Switches are set correctly

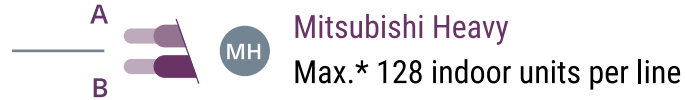Dip switches setup for VRF HVAC system on L7.

Mitsubishi Heavy HVAC Terminal

HVAC LG VRF

LG HVAC Terminal

① HVAC Communication Terminals

HVAC **outdoor** connection

Cent A		LG
Cent B	LG	Max.* 128 indoor units per line

* See table on page 10 for Max connected indoors per model.
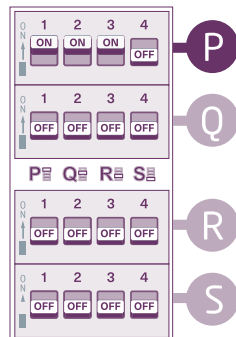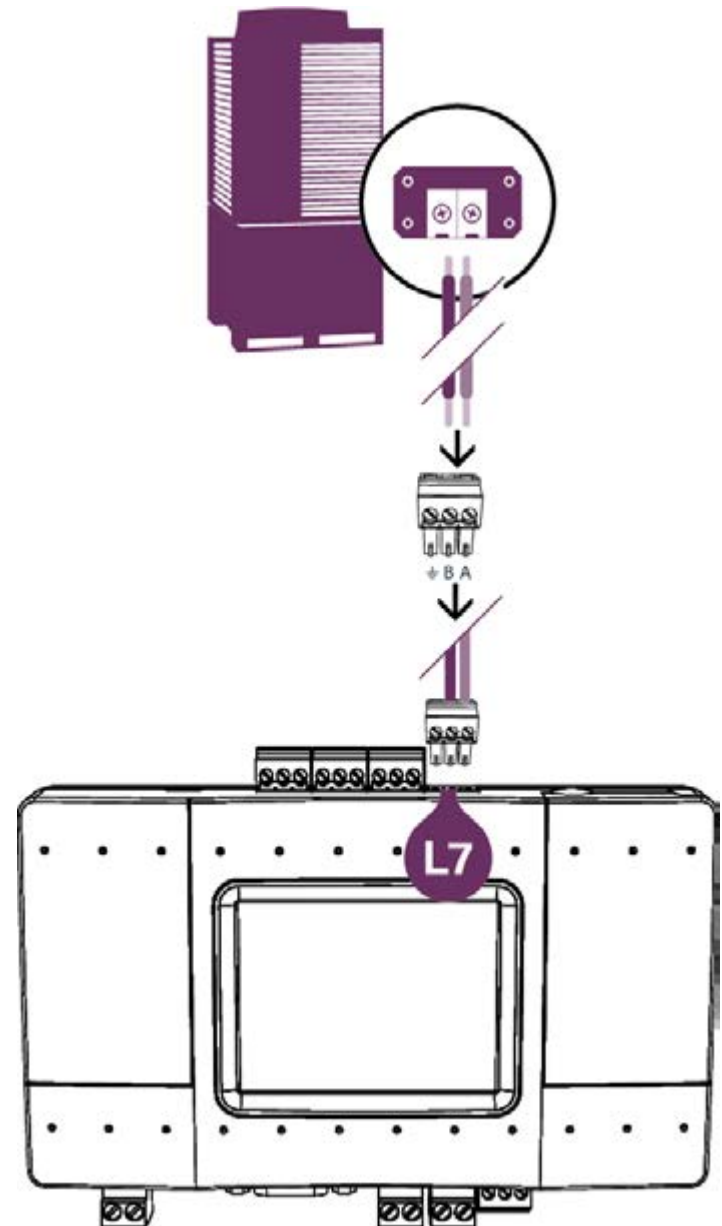
② Connecting to the line plug

Secure the cables in the L7 line plug.

③ Plugging to the CoolMaster device

Insert the plug in to the CoolMaster device L7 socket.

④ Check DIP Switches are set correctly

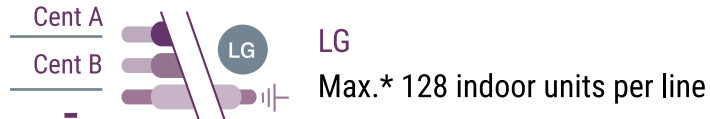Dip switches setup for VRF HVAC system on L7.

P
1	2	3	4
ON	ON	ON	OFF

Q
1	2	3	4
OFF	OFF	OFF	OFF

P Q R S

R
1	2	3	4
OFF	OFF	OFF	OFF

S
1	2	3	4
OFF	OFF	OFF	OFF

L7

HVAC AUX VRF

AUX HVAC Terminal

① HVAC Communication Terminals

HVAC **outdoor** connection

A

B

AUX

AUX
Max.* 64 indoor units per line

* See table on page 10 for Max connected indoors per model.
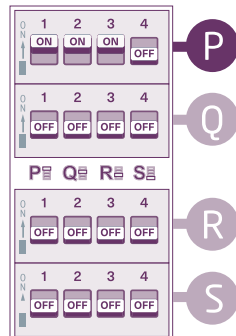
② Connecting to the line plug

Secure the cables in the L7 line plug.

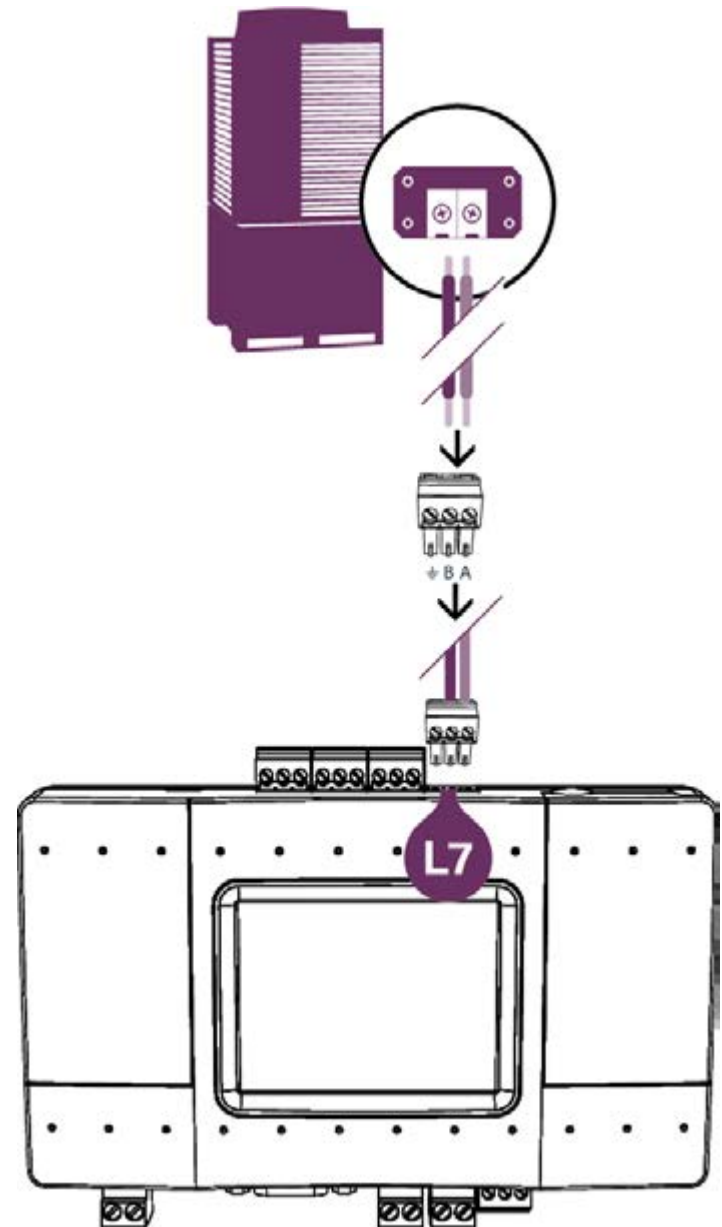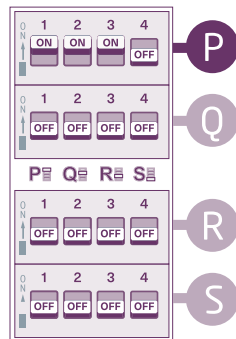## ③ Plugging to the CoolMaster device

Insert the plug in to the CoolMaster device L7 socket.

④ Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L7.

+ B A

L7

	1	2	3	4	
ON	ON	ON	ON	OFF	P

	1	2	3	4	
ON	OFF	OFF	OFF	OFF	Q

P Q R S

	1	2	3	4	
ON	OFF	OFF	OFF	OFF	R

	1	2	3	4	
ON	OFF	OFF	OFF	OFF	S

HVAC Gree/GMV4 VRF

① HVAC Communication Terminals

HVAC **outdoor** connection

G1	
G2	GR

Gree
Max.* 16 indoor units per line

* See table on page 10 for Max connected indoors per model.

② Connecting to the line plug

Secure the cables in the L7 line plug.

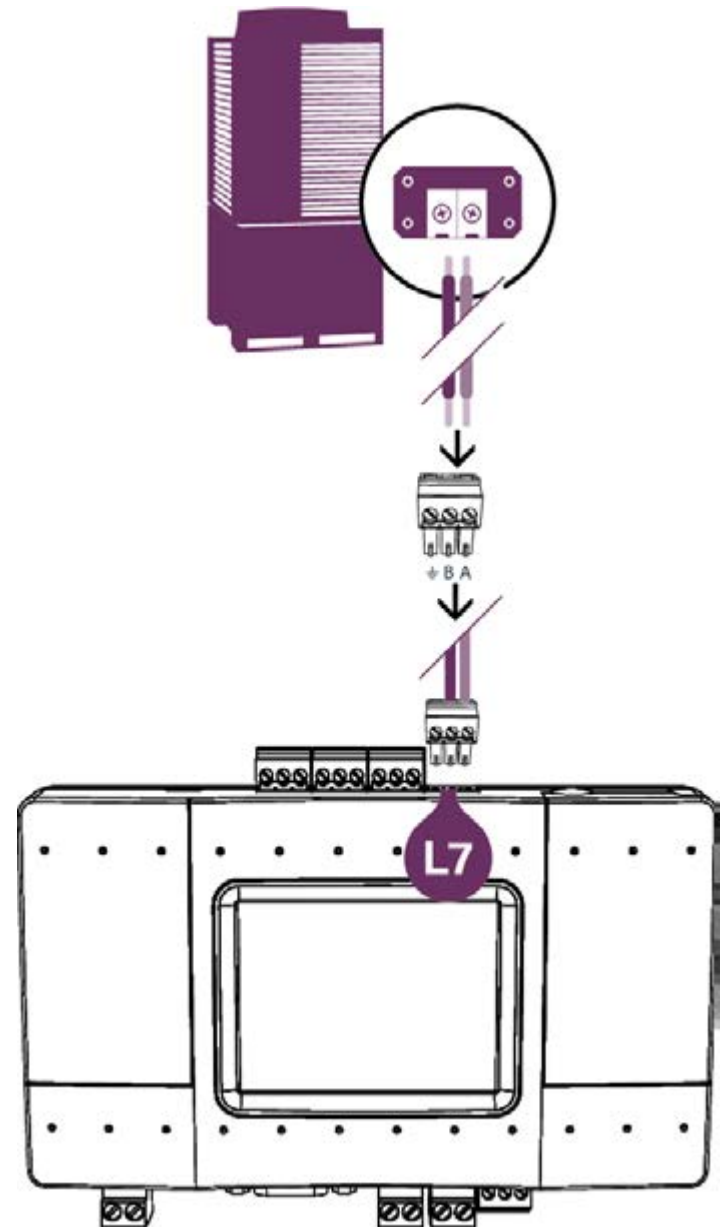## ③ Plugging to the CoolMaster device

Insert the plug in to the CoolMaster device L7 socket.

④ Check DIP Switches are set correctly

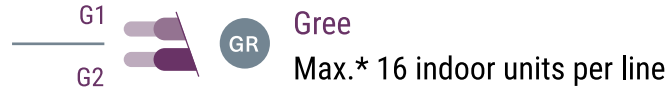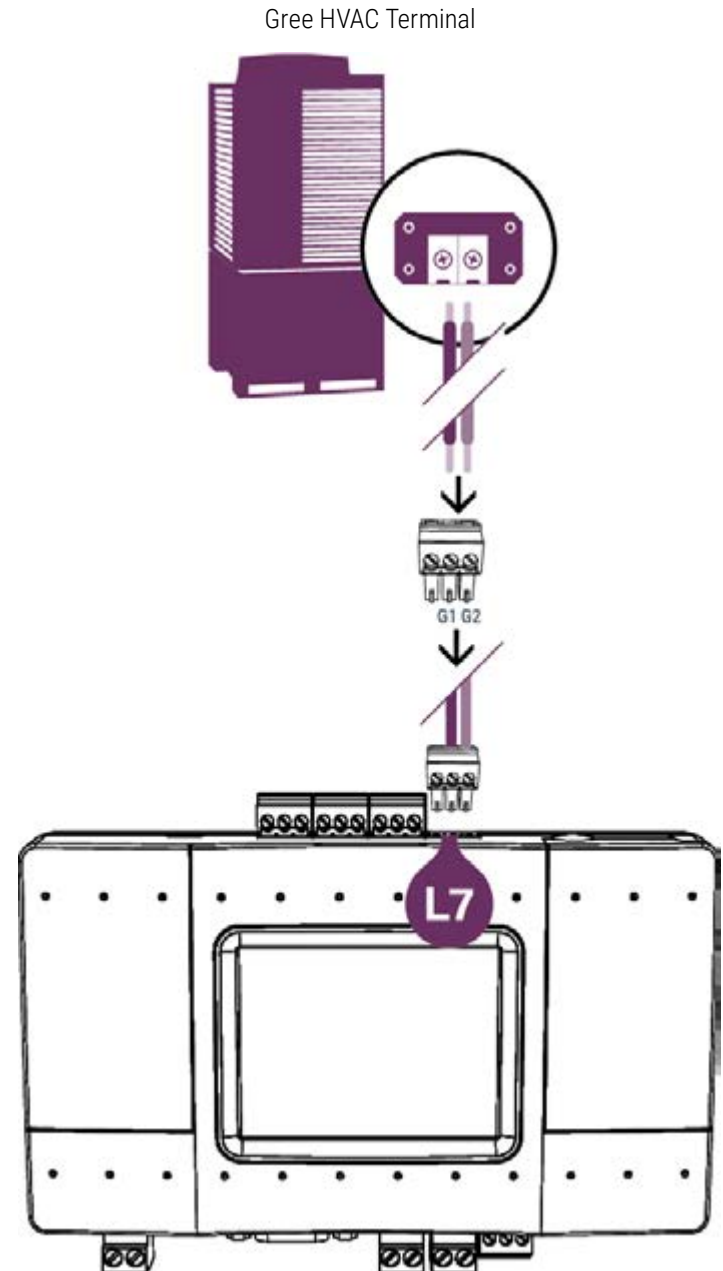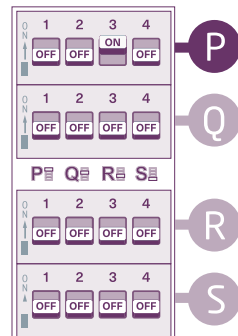Dip switches setup for VRF HVAC system on L7.

Gree HVAC Terminal

G1 G2

L7

P
ON	1	2	3	4
	OFF	OFF	ON	OFF

Q
ON	1	2	3	4
	OFF	OFF	OFF	OFF

P Q R S

R
ON	1	2	3	4
	OFF	OFF	OFF	OFF

S
ON	1	2	3	4
	OFF	OFF	OFF	OFF

HVAC Midea VRF

Midea HVAC Terminal

① HVAC Communication Terminals

HVAC **outdoor** connection

X	
Y	**Midea**
E	Max.* 64 indoor units per line

* See table on page 10 for Max connected indoors per model.
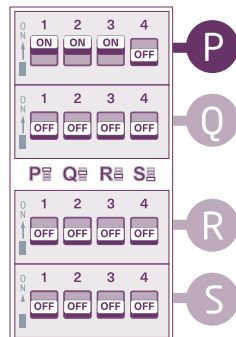
② Connecting to the line plug

Secure the cables in the L7 line plug.
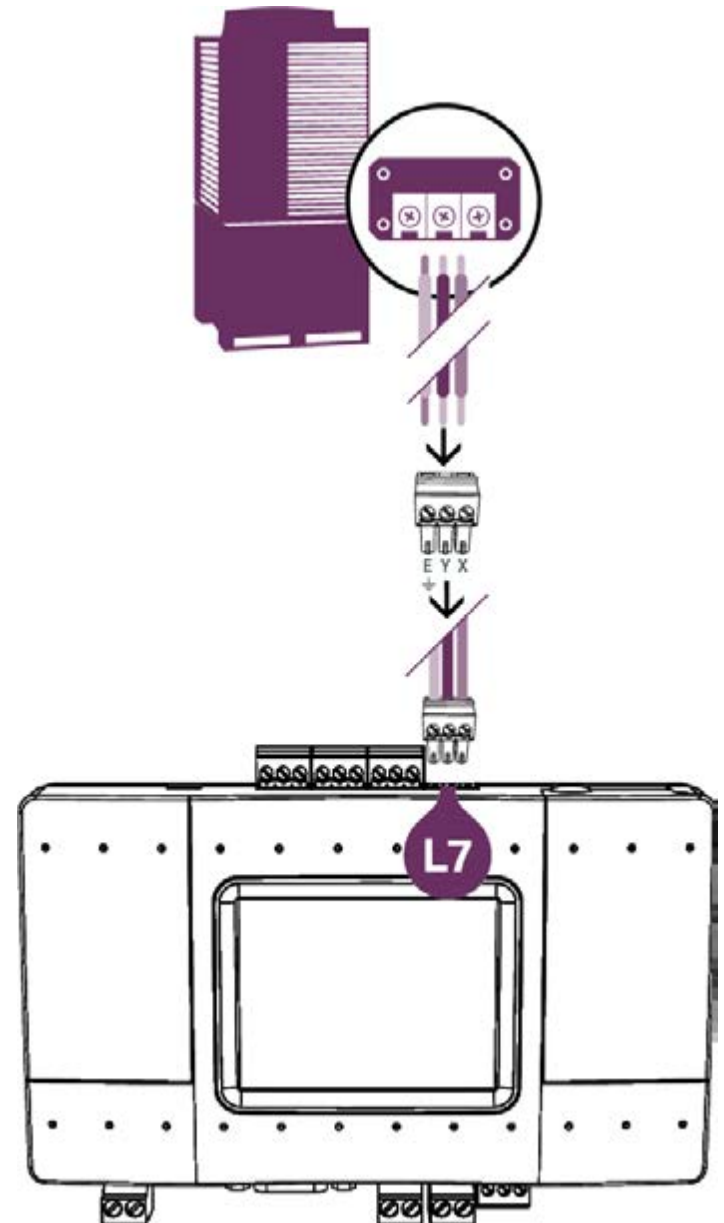
③ Plugging to the CoolMaster device

Insert the plug in to the CoolMaster device L7 socket.

④ Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L7.

	1	2	3	4	
ON/A	ON	ON	ON	OFF	P
ON/A	OFF	OFF	OFF	OFF	Q

P Q R S

	1	2	3	4	
ON/A	OFF	OFF	OFF	OFF	R
ON/A	OFF	OFF	OFF	OFF	S

HVAC Samsung VRF

① HVAC Communication Terminals

HVAC **outdoor** connection

R1			Samsung
R2		SM	Max.* 64 indoor units per line

* See table on page 10 for Max connected indoors per model.

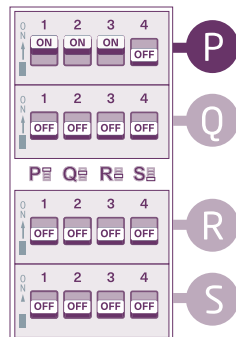## ② Connecting to the line plug

Secure the cables in the L7 line plug.

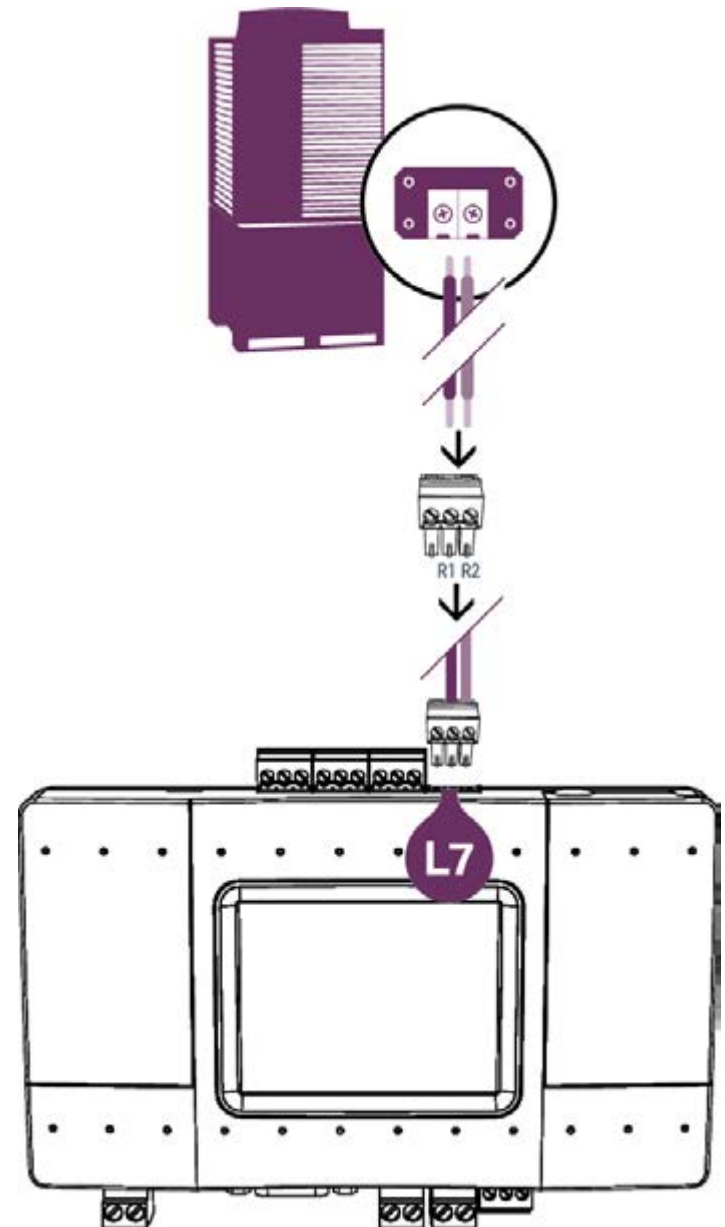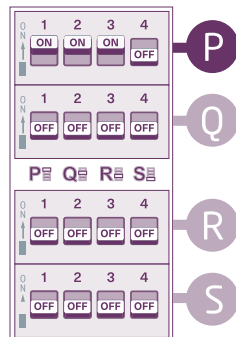## ③ Plugging to the CoolMaster device

Insert the plug in to the CoolMaster device L7 socket.

④ Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L7.

R1 R2

L7

	1	2	3	4	
ON	ON	ON	ON	OFF	P
ON	OFF	OFF	OFF	OFF	Q

P≡ Q≡ R≡ S≡

	1	2	3	4	
ON	OFF	OFF	OFF	OFF	R
ON	OFF	OFF	OFF	OFF	S

HVAC Chigo VRF

(1) HVAC Communication Terminals

HVAC **outdoor** connection

X
Y
E

CG

Chigo
Max.* 64 indoor units per line

* See table on page 10 for Max connected indoors per model.

(2) Connecting to the line plug

Secure the cables in the L7 line plug.
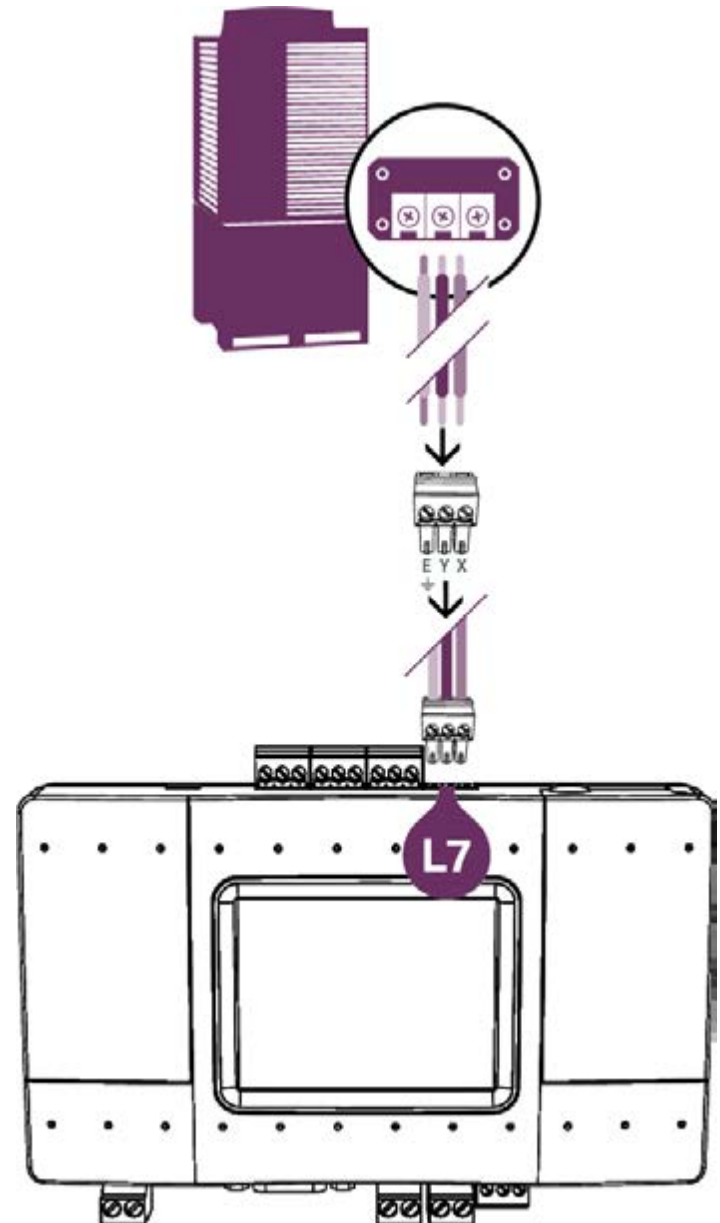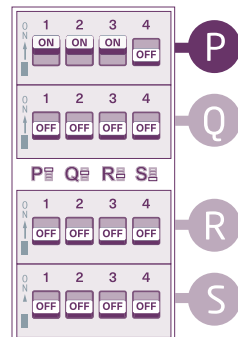
(3) Plugging to the CoolMaster device

Insert the plug in to the CoolMaster device L7 socket.

(4) Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L7.

Chigo HVAC Terminal

P — 1 ON 2 ON 3 ON 4 OFF
Q — 1 OFF 2 OFF 3 OFF 4 OFF
P□ Q□ R□ S□
R — 1 OFF 2 OFF 3 OFF 4 OFF
S — 1 OFF 2 OFF 3 OFF 4 OFF

HVAC Blue Star VRF

Blue Star HVAC Terminal

① HVAC Communication Terminals

HVAC **outdoor** connection

A2
B2

BS

Blue Star
Max.* 255 indoor units per line

* See table on page 10 for Max connected indoors per model.

② Connecting to the line plug

Secure the cables in the L7 line plug.
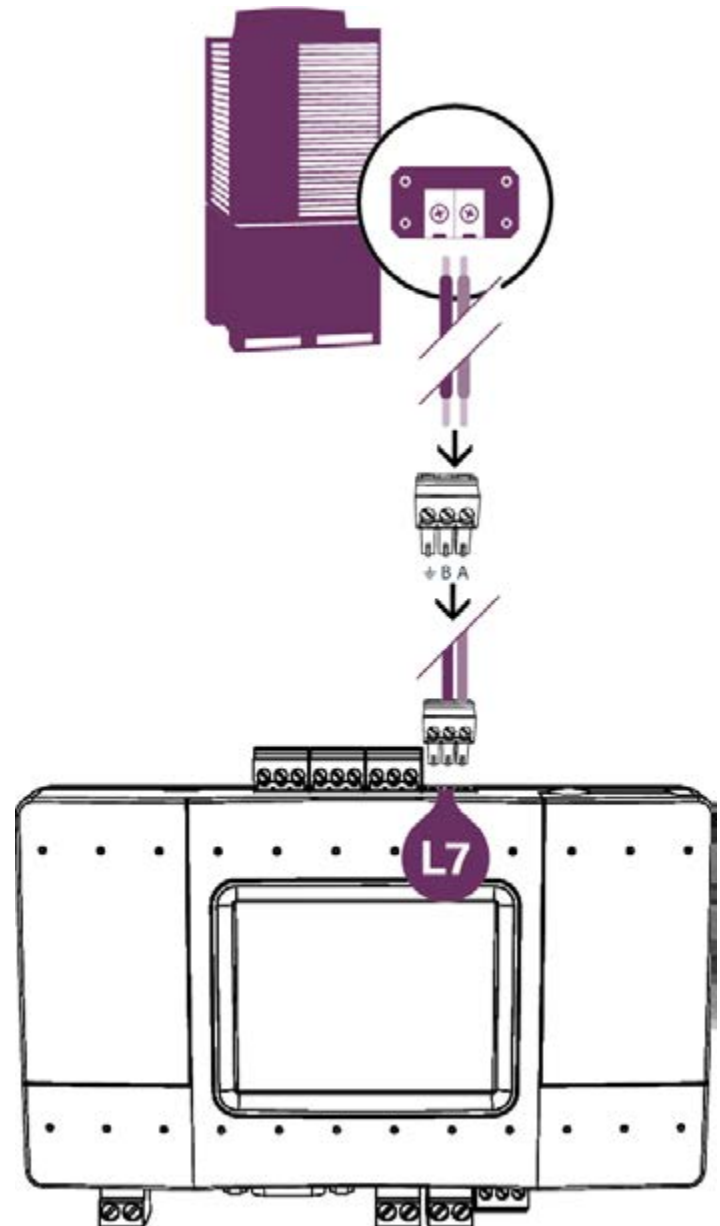
③ Plugging to the CoolMaster device

Insert the plug in to the CoolMaster device L7 socket.

④ Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L7.

+ B A

L7

P — 1 ON 2 ON 3 ON 4 OFF

Q — 1 OFF 2 OFF 3 OFF 4 OFF

P▤ Q▤ R▤ S▤

R — 1 OFF 2 OFF 3 OFF 4 OFF

S — 1 OFF 2 OFF 3 OFF 4 OFF

HVAC TICA VRF

1 **HVAC Communication Terminals**

HVAC **outdoor** connection

A2		TC	TICA
B2			Max.* 64 indoor units per line

* See table on page 10 for Max connected indoors per model.

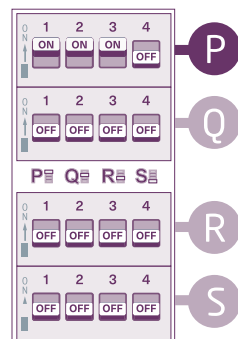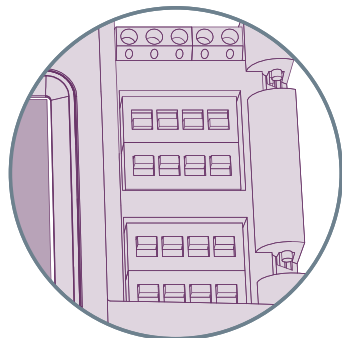**2** **Connect Outdoor Unit**

Secure wire in the A2 & B2 terminals on the Outdoor Unit.
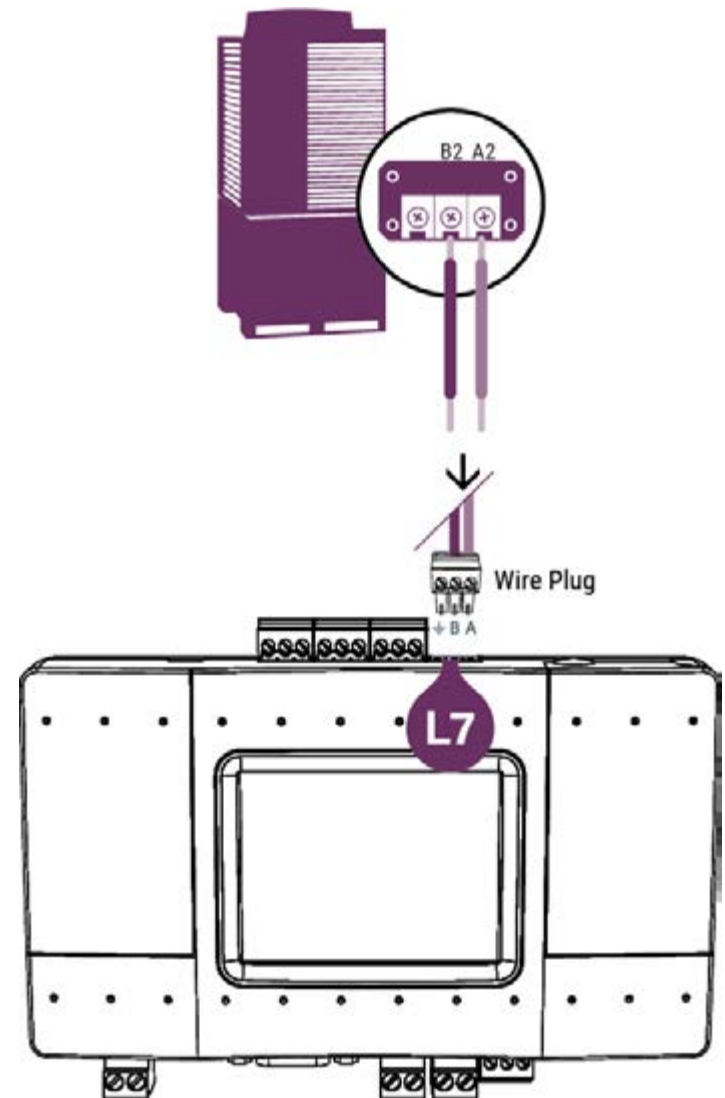
3 **Connect to CoolMaster device**

Secure wire from Outdoor unit to the wire plug.
Insert wire plug to CoolMaster device L7 socket.

4 **Check DIP Switches are set correctly**
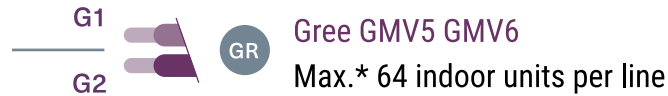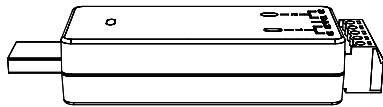
Dip switches setup for VRF HVAC system on L7.

27

HVAC Gree GMV5, GMV6 VRF

① HVAC Communication Terminals

HVAC **outdoor** connection

G1			GR	Gree GMV5 GMV6
G2				Max.* 64 indoor units per line

* See table on page 10 for Max connected indoors per model.

② Connecting to the CMNET-GR-GMV5/6

CoolAutomation USB Network Interface (CMNET-GR-GMV5/6) adapter is required for connecting up to two Gree GMV5/6 VRF lines. (Supplied by CoolAutomation)
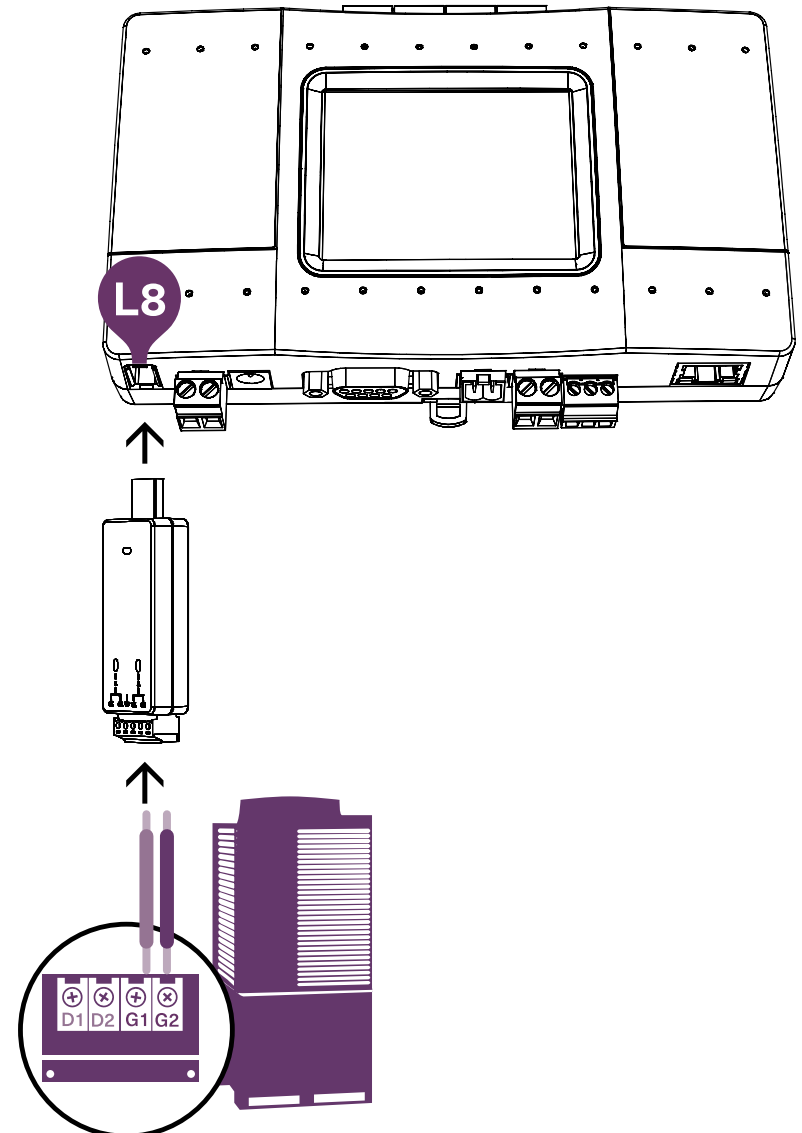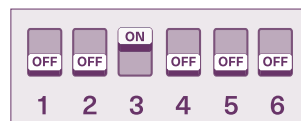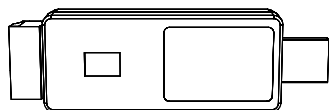
This adapter includes a CAN bus 120 Ω resistor.

③ Plugging to the CoolMaster device

Insert the plug in to the CoolMaster device L8 (USB).

④ Check DIP Switches are set correctly

Dip switches setup for GMV5/6 VRF HVAC system on L8.

1	2	3	4	5	6
OFF	OFF	ON	OFF	OFF	OFF

L8

D1 D2 G1 G2

Gree GMV5/6 HVAC Terminal

HVAC Fujitsu VRF

① HVAC Communication Terminals

HVAC **outdoor** connection

Z1		Fujitsu
Z2	FJ	Max.* 128 indoor units per line

* See table on page 10 for Max connected indoors per model.

## ② Connecting to the Echelon adapter
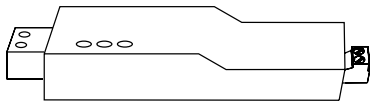
Echelon U10 USB Network Interface (TP/FT-10) adapter is required for connecting to Fujitsu VRF. (Not supplied by CoolAutomation)

③ Connect Echelon via USB Extension cable

Connect the USB Extension cable (A-Male to A-Female) to the Echelon adapter. (Not supplied by CoolAutomation)

④ Plug in to the CoolMaster device L8

Insert the USB cable in to the L8 USB host.
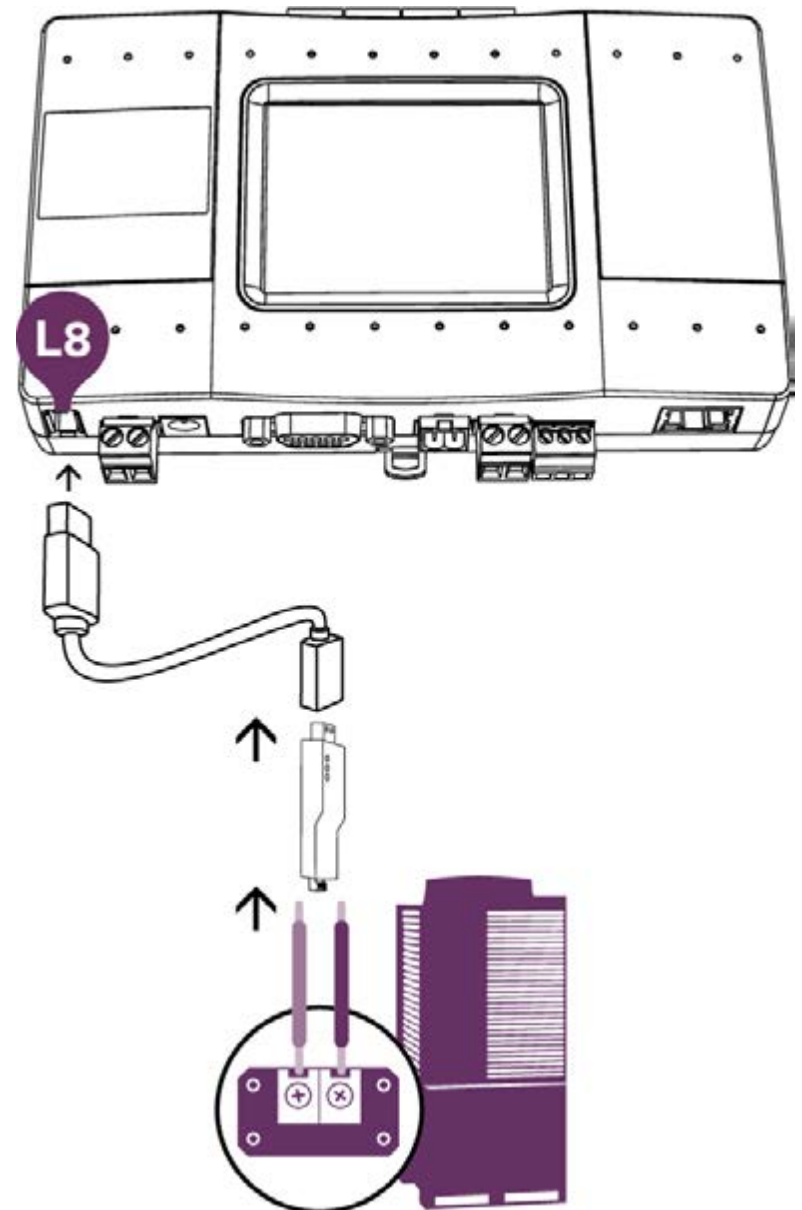
Fujitsu HVAC Terminal

How to change the brand of a specific line

In order to change the HVAC brand type on a specific line, please follow the below procedure on CoolMaster device screen:

(1) Go to Settings

(2) Go to HVAC Line

(3) Select the HVAC Line you want to configure

(4) Configure the HVAC line type

(5) Make sure the DIP switches are set properly for the brand (according to the details in the brand relevant section above)

(6) You will also have a red warning message if DIP switch are set incorrect

(7) Reset is required to make the change

CoolMaster device installation complete
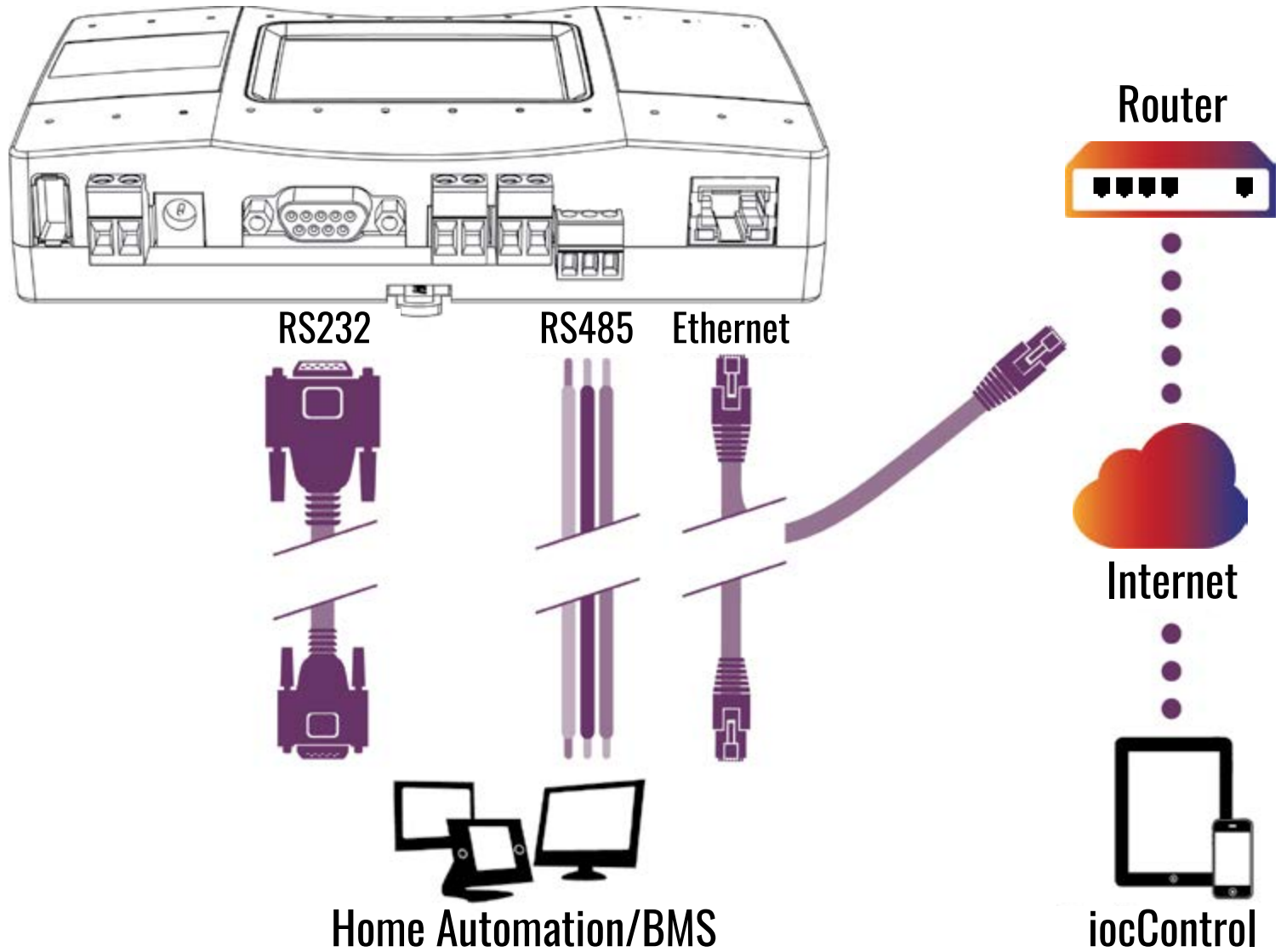
CoolMaster device Unit screen

After successful installation, unit's screen will show all the detected indoor units and their statuses.

1   Active HVAC line (DK 9/10) (Groups/Units)

2   Inactive HVAC line

3   All ON/OFF operation button

4   Scrollbar

5   Connected indoor unit with it's address and Set-Point temperature indication.

6   Indoor unit operation button (on/off)

7   Service settings button

8   CoolMaster device MAC address

9   CoolMaster device IP address

10   CoolRemote connectivity status

     Connected - Communicating

     Connected - Idle

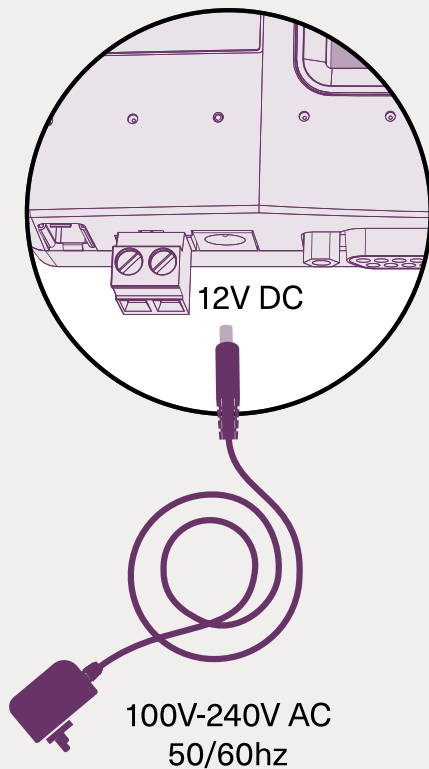   Disconnected - with error code
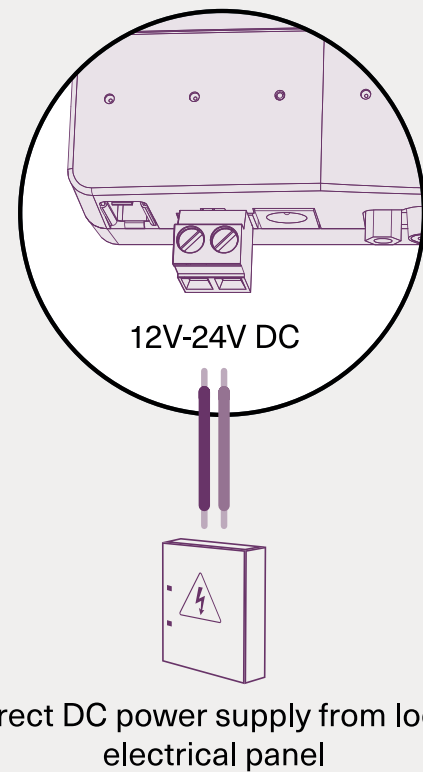
Home Automation, BMS & iocControl App

RS232   RS485   Ethernet

Router

Internet
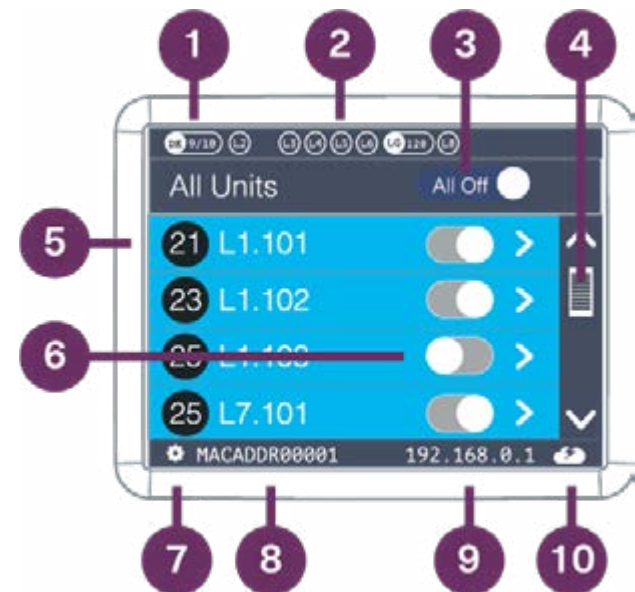
Home Automation/BMS   iocControl

Power Supply

Option A

AC Power supply adapter

(Included in the Box)

12V DC

100V-240V AC
50/60hz

Option B

Direct DC power supply

12V-24V DC

Direct DC power supply from local
electrical panel

All On/Off operation by external signal

All On

All Off

Mounting on a DIN rail

① Place the device mounting feet on the DIN rail

To unmount, pull the mounting lock down.
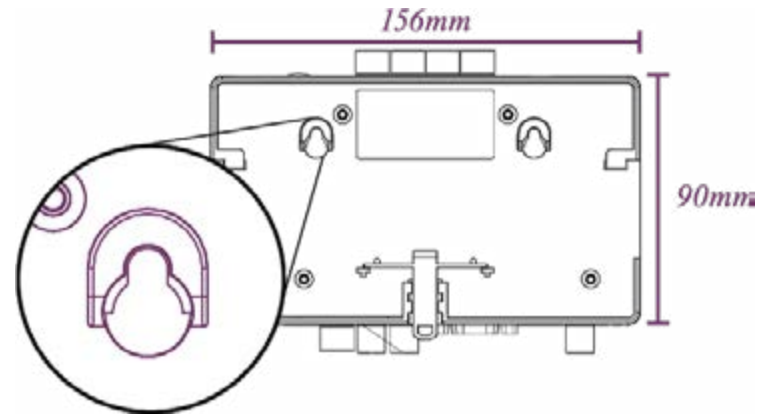
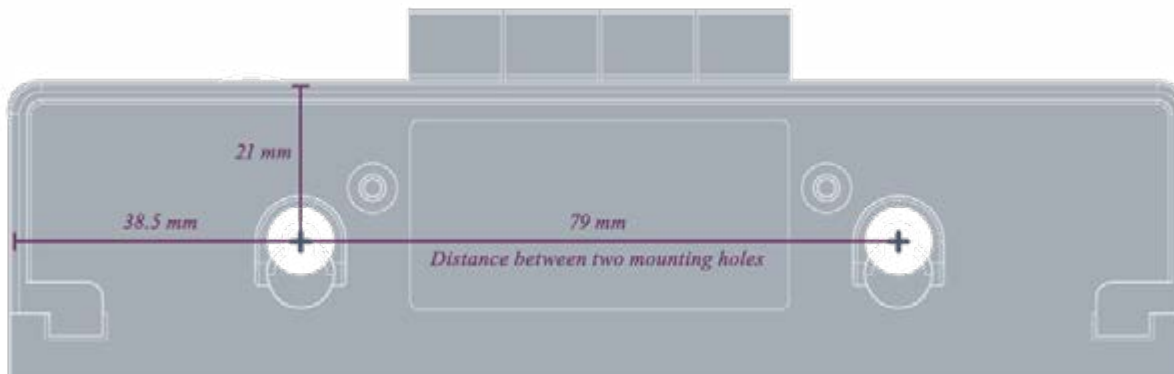② Push on the lower part of the device onto the DIN rail to lock it in place
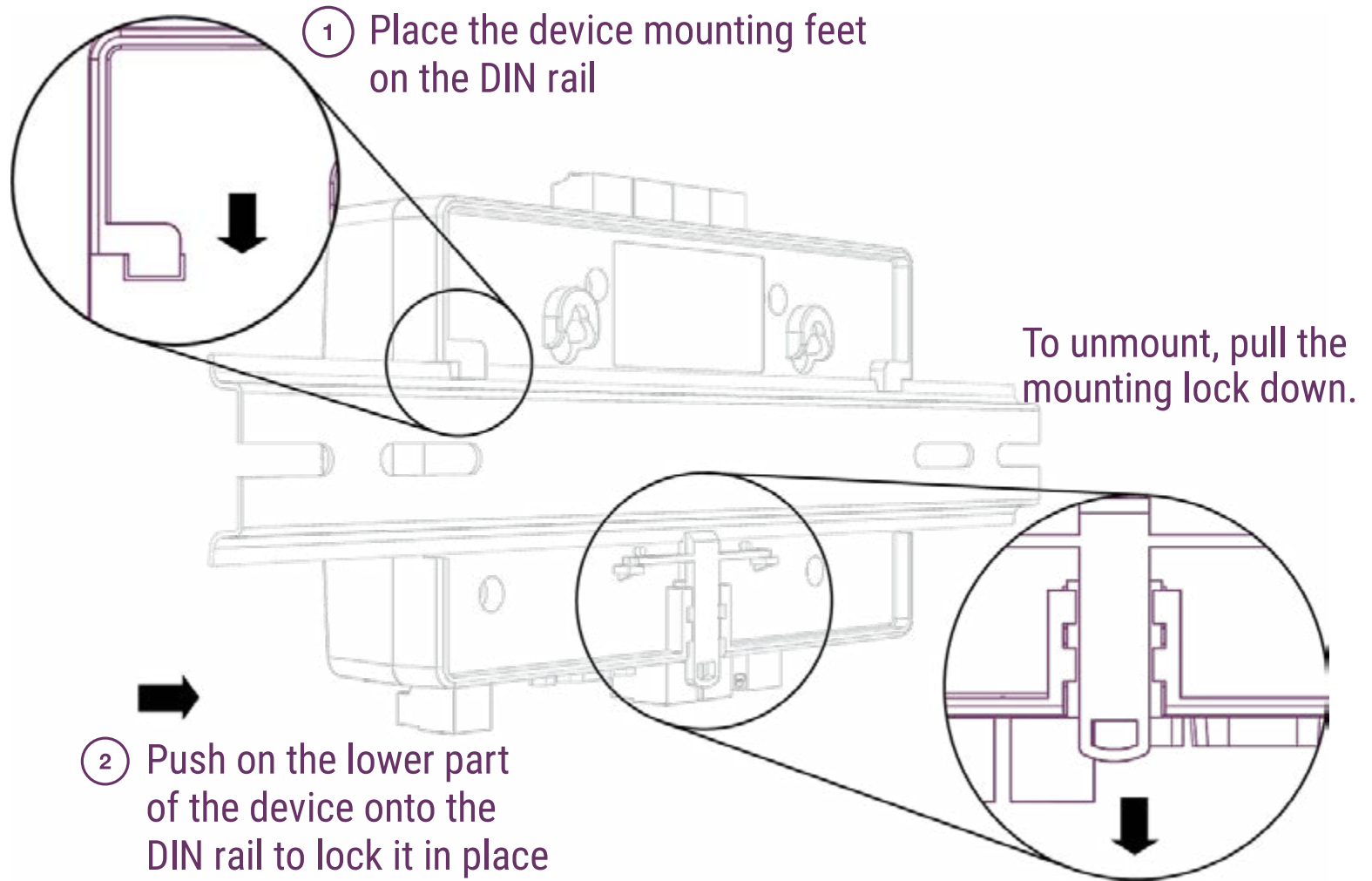
Mounting on a wall

For mounting the CoolMaster device with wall screws, please see attached template with 1:1 dimensions.

156mm

90mm
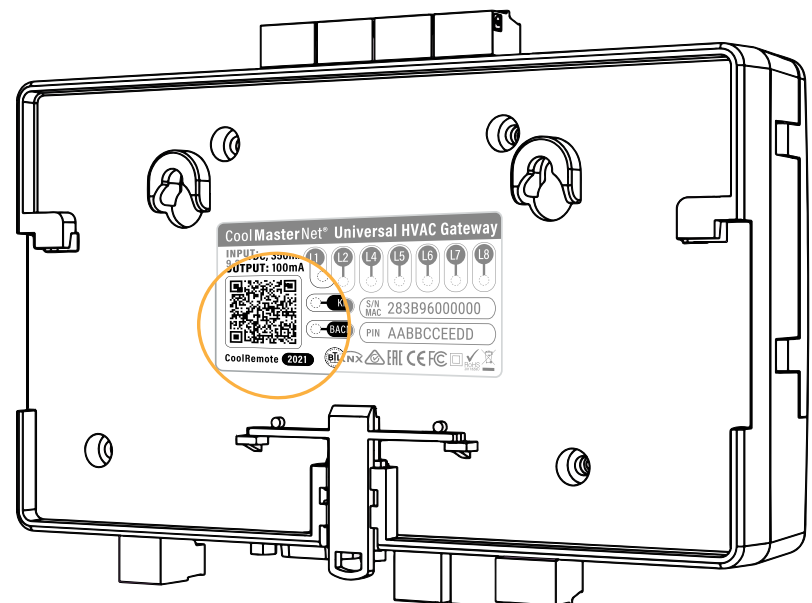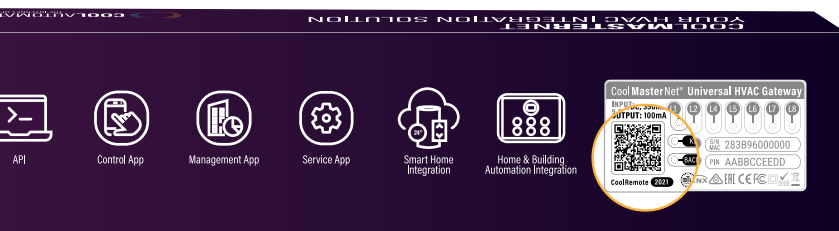
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

1:1 SCALE MOUNTING TEMPLATE FOR WALL SCREWS

21 mm

38.5 mm

79 mm
Distance between two mounting holes

Online Documentation and Support

Scan the QR code (on the box or back of the device) to get to

- ⊙ Online Documentation
- ⊙ Registration to the iocControl App
- ⊙ Support

Need more help?

Visit us at: https://coolautomation.com/support

THE INTERNET OF CLIMATE