

#### **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 CoolMasterNet 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 consequence.

#### **CAUTION**

- Do not allow children to play with the CoolMasterNet and supervise them not to get access to the
  appliance.
- CoolMasterNet 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 CoolMasterNet.
- Any deficiency caused by your modification or repair may result in an electric shock or fire.
- Never let the CoolMasterNet to get wet.
- · Water can cause damage to the CoolMasterNet, and may cause an electric shock or fire.
- Do not use flammable materials (e.g. hairspray or insecticide) near the CoolMasterNet.
- Do not clean the **CoolMasterNet** with organic solvents such as paint thinner. The use of organic solvents may cause cracking, damaging the **CoolMasterNet**, causing electrical shock or fire.
- Do not apply AC110V or AC220V to the CoolMasterNet. The maximum voltage that can be applied to the unit directly is 24V DC.
- If damaged CoolMasterNet 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 COOLMASTERNET 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 CoolMasterNet 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

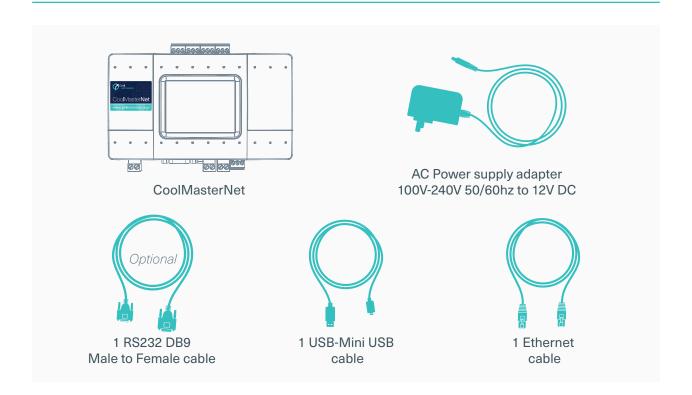
  Operating the CoolMasterNet in such conditions can cause a fire.
- e. High temperature area or directly flamed point. Heating and/or fire can occur.
- f. Moist area, where there is exposure to water. If water enters the inside of the CoolMasterNet, it may cause electric shock and electrical components may fail.

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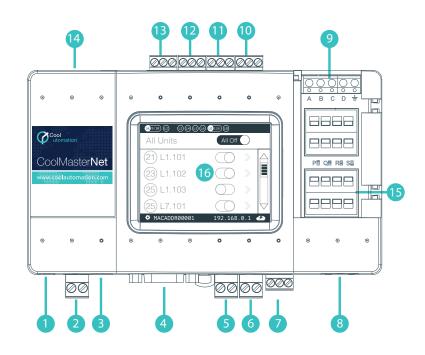
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### What's in the box



### CoolMasterNet

- 1 L8 HVAC Line 8 (USB Host)
- 2 Power
- 3 Power Plug
- 4 RS232 Port
- 5 L1 HVAC Line 1
- 6 L2 HVAC Line 2
- 7 RS485
- 8 Ethernet Port
- 9 GPIOs
- 10 L7 HVAC Line 7
- 1 L6 HVAC Line 6
- L5 HVAC Line 5
- B L4 HVAC Line 4
- **USB** Device Port
- 15 DIP Switches P, Q, R, S
- 16 LCD Touch Screen



## **Preconfigured CoolMasterNet**

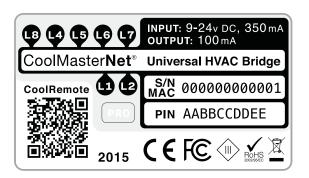
#### Type label

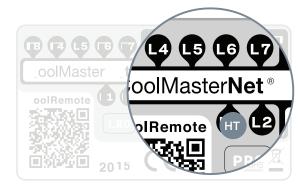
This label uniquely identifies the manufacturer's configuration of CoolMasterNet.

Located on the back of the enclosure.

#### Type label with Configuration sticker

A preconfigured label example: configured for HT on L1







Changing HVAC System setup requires activation
For more info, see <a href="http://coolautomation.com/support/coolmasternet/activation">http://coolautomation.com/support/coolmasternet/activation</a>

## **HVAC Line configuration**

#### Configuration stickers for HVAC line L1

- Daikin PRO
- Mitsubishi Electric PRO
- Panasonic
- Sanyo
- Toshiba
- Hitachi (JCI) 🗪
- York (US)
- **Y** York
- **HA** Haier

#### Configuration stickers for HVAC line L7

- LG LG
- Mitsubishi Heavy
- GR Gree
- Midea
- Samsung
- Trane
- Trane (US)
- Kentatsu
- Chigo
- Blue Star

#### Configuration stickers for HVAC line L8

- Fujitsu
- Rheem (US)
- GR Gree (GMV 5)

PRO Optional Support for service and diagnostics functions.

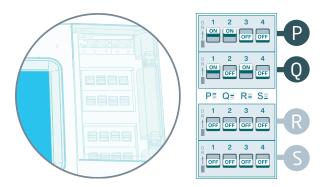
### HVAC Daikin VRV — on L1

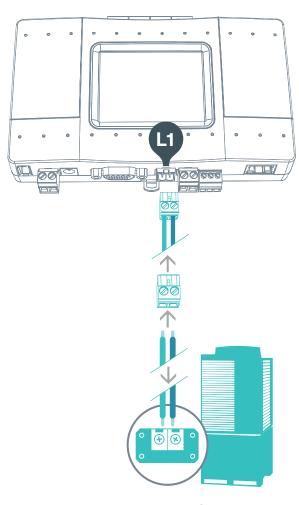
1 HVAC Communication Terminals

Connect to the communication terminals on the HVAC equipment:



- \* For Heat Recovery systems the connection is at oudoor units only.
- \* Polarity is not required on the HVAC communication line.
- \*\* Centralized (group) address required.
- Connecting to the line plug Secure the cables in the L1 line plug.
- 3 Plugging to the CoolMasterNet
  Insert the plug in to the CoolMasterNet L1 socket
- 4 Check DIP Switches are set correctly Dip switches setup for VRV HVAC system on L1





Daikin HVAC Terminal

### **HVAC Daikin Non-VRV** — on L1



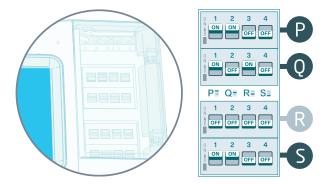
Changing the dip switches S, while DC voltage is present on L1, may damage the CoolMasterNet.

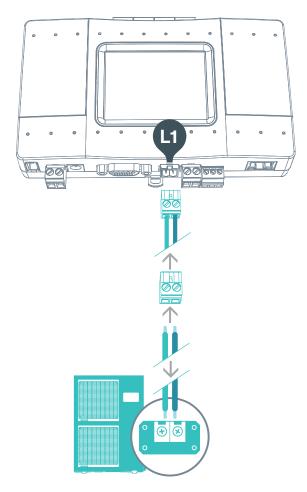
For Daikin Non-VRV equipment, DC voltage supply by CoolMasterNet might be required for proper operation.

- ▲ Make sure CoolMasterNet is disconnected from power and HVAC line.
- 1 Measure DC voltage on HVAC comm. line L1
- 2 If no 14-16V DC voltage change the dip switches as shown below:

Requires Activation Command www.coolautomation.com/support/activation

- 3 Turn ON the power for CoolMasterNet and connect it to HVAC line.
- 4 Connect to the communication terminals on the HVAC equipment and secure the cables in the L1 line plug.
- 5 Insert the plug in to CoolMasterNet L1 socket.





Daikin Non-VRV HVAC Terminal

### **HVAC Mitsubishi Electric VRF** — on L1

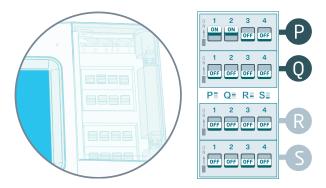
1 HVAC Communication Terminals

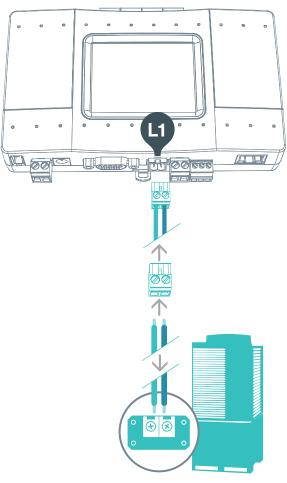
Connect to the communication terminals on the HVAC equipment:

HVAC communication terminal's names\*



- \* For Heat Recovery systems the connection is at outdoor units only.
- \* Polarity is not required on the HVAC communication line.
- Connecting to the line plug Secure the cables in the L1 line plug.
- 3 Plugging to the CoolMasterNet Insert the plug in to the CoolMasterNet L1 socket
- 4 Check DIP Switches are set correctly Dip switches setup for VRF HVAC system on L1





Mitsubishi Electric HVAC Terminal

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### **HVAC Mitsubishi Electric Non-VRF — on L1**



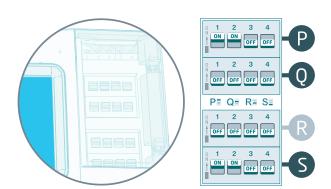
Changing the dip switches (5), while DC voltage is present on L1, may damage the CoolMasterNet.

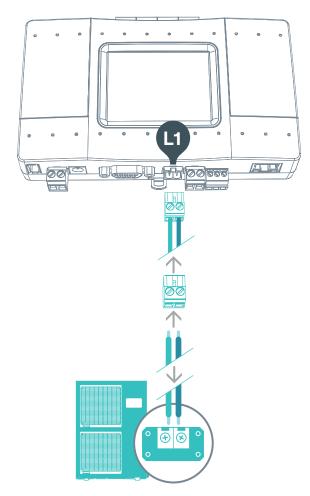
For Mitsubishi Electric Non-VRF equipment, DC voltage supply by CoolMasterNet might be required for proper operation.

- Make sure CoolMasterNet is disconnected from power and HVAC line.
- 1 Measure DC voltage on HVAC comm. line L1
- 2 If no 28-30V DC voltage change the dip switches as shown below.

Requires Activation Command www.coolautomation.com/support/activation

- 3 Turn ON the power for CoolMasterNet and connect it to HVAC line.
- 4 Connect to the communication terminals on the HVAC equipment and secure the cables in the L1 line plug.
- 5 Insert the plug in to CoolMasterNet L1 socket.





Mitsubishi Non-VRF HVAC Terminal

## HVAC Panasonic/Sanyo VRF — on L1

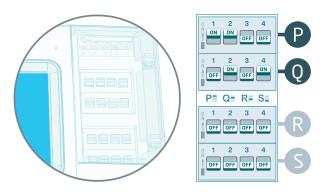
#### 1 HVAC Communication Terminals

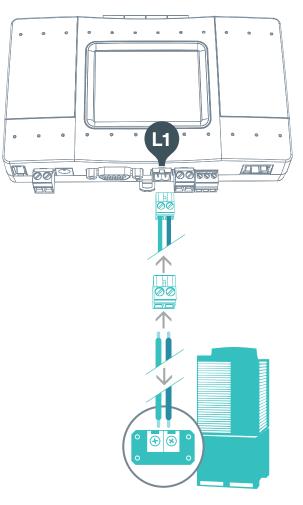
Connect to the communication terminals on the HVAC equipment:

HVAC communication terminal's names\*



- \* For Heat Recovery systems the connection is at outdoor units only.
- \* Polarity is not required on the HVAC communication line.
- Connecting to the line plug Secure the cables in the L1 line plug.
- 3 Plugging to the CoolMasterNet Insert the plug in to the CoolMasterNet L1 socket
- 4 Check DIP Switches are set correctly
  Dip switches setup for VRF HVAC system on L1





Panasonic / Sanyo HVAC Terminal

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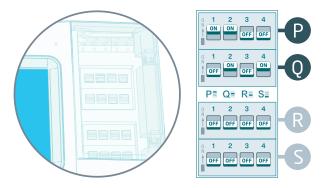
### **HVAC Toshiba VRF** — on L1

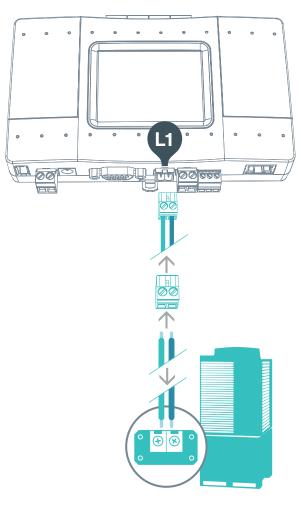
1 HVAC Communication Terminals

Connect to the communication terminals on the HVAC equipment:



- \* For Heat Recovery systems the connection is at outdoor units only.
- \* Polarity is not required on the HVAC communication line.
- Connecting to the line plug Secure the cables in the L1 line plug.
- 3 Plugging to the CoolMasterNet Insert the plug in to the CoolMasterNet L1 socket
- 4 Check DIP Switches are set correctly
  Dip switches setup for VRF HVAC system on L1





Toshiba HVAC Terminal

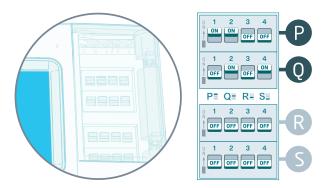
## HVAC Hitachi (JCI) VRF — on L1

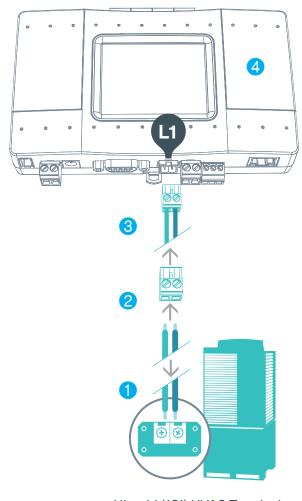
**1** HVAC Communication Terminals

Connect to the communication terminals on the HVAC equipment:



- \* For Heat Recovery systems the connection is at outdoor units only.
- \* Polarity is not required on the HVAC communication line.
- Connecting to the line plug Secure the cables in the L1 line plug.
- 3 Plugging to the CoolMasterNet Insert the plug in to the CoolMasterNet L1 socket
- 4 Check DIP Switches are set correctly
  Dip switches setup for VRF HVAC system on L1





Hitachi (JCI) HVAC Terminal

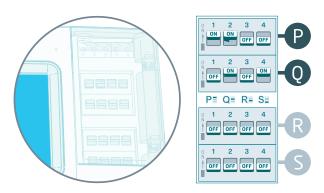
## HVAC York (US) VRF — on L1

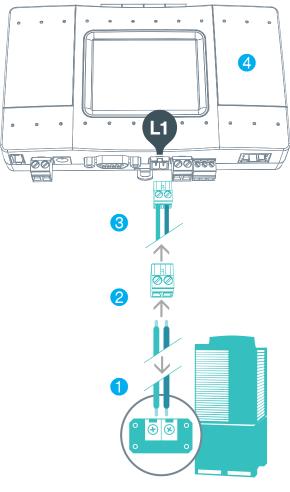
**1** HVAC Communication Terminals

Connect to the communication terminals on the HVAC equipment:



- \* For Heat Recovery systems the connection is at outdoor units only.
- \* Polarity is not required on the HVAC communication line.
- Connecting to the line plug Secure the cables in the L1 line plug.
- 3 Plugging to the CoolMasterNet
  Insert the plug in to the CoolMasterNet L1 socket
- 4 Check DIP Switches are set correctly Dip switches setup for VRF HVAC system on L1





York (US) HVAC Terminal

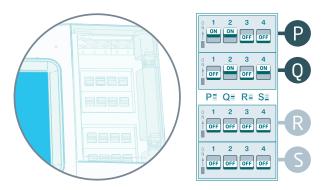
### **HVAC York VRF** — on L1

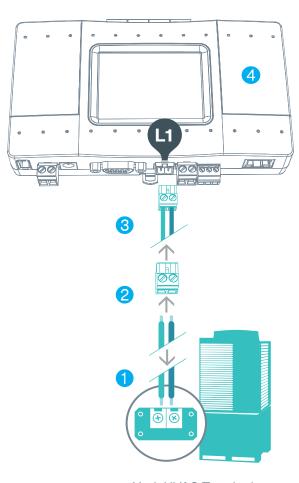
1 HVAC Communication Terminals

Connect to the communication terminals on the HVAC equipment:



- \* For Heat Recovery systems the connection is at outdoor units only.
- \* Polarity is not required on the HVAC communication line.
- Connecting to the line plug Secure the cables in the L1 line plug.
- 3 Plugging to the CoolMasterNet Insert the plug in to the CoolMasterNet L1 socket
- 4 Check DIP Switches are set correctly
  Dip switches setup for VRF HVAC system on L1





York HVAC Terminal

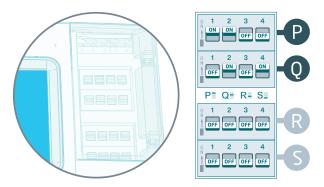
### **HVAC Haier VRF** — on L1

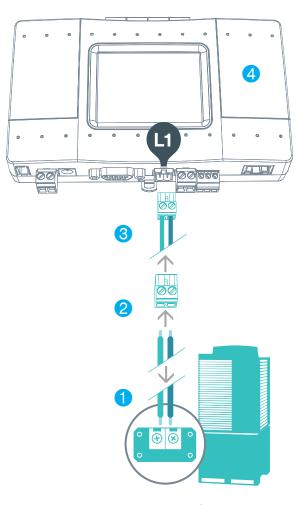
1 HVAC Communication Terminals

Connect to the communication terminals on the HVAC equipment:



- \* 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 CoolMasterNet Insert the plug in to the CoolMasterNet L1 socket
- 4 Check DIP Switches are set correctly
  Dip switches setup for VRF HVAC system on L1





Haier HVAC Terminal

## **HVAC Mitsubishi Heavy VRF — on L7**

1 HVAC Communication Terminals

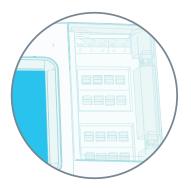
Connect to the communication terminals on the HVAC equipment:

**HVAC outdoor or indoor** 



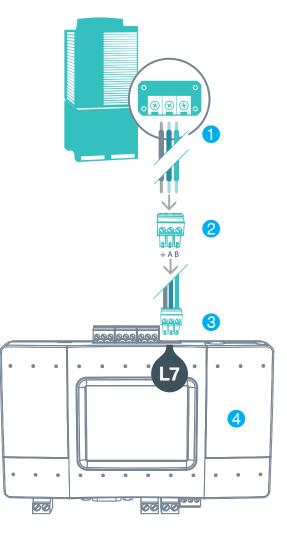
Viitsubishi Heavy Max. 128 indoor units

- Connecting to the line plug Secure the cables in the L7 line plug.
- 3 Plugging to the CoolMasterNet Insert the plug in to the CoolMasterNet 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** — on L7

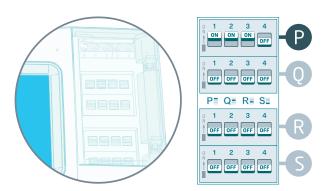
1 HVAC Communication Terminals

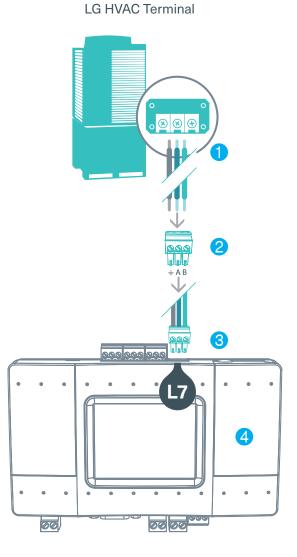
Connect to the communication terminals on the HVAC equipment:

**HVAC outdoor** 



- Connecting to the line plug Secure the cables in the L7 line plug.
- 3 Plugging to the CoolMasterNet Insert the plug in to the CoolMasterNet L7 socket
- 4 Check DIP Switches are set correctly
  Dip switches setup for VRF HVAC system on L7





### **HVAC Gree VRF** — on L7

1 HVAC Communication Terminals

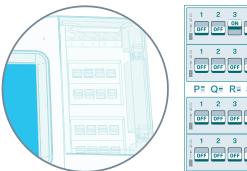
Connect to the communication terminals on the HVAC equipment:

HVAC outdoor only

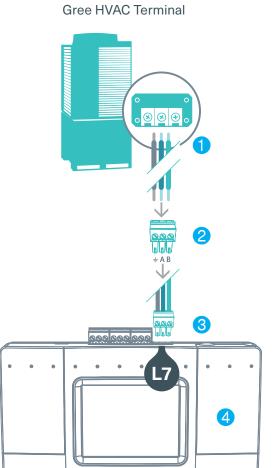


Max. 16 indoor units

- Connecting to the line plug Secure the cables in the L7 line plug.
- 3 Plugging to the CoolMasterNet Insert the plug in to the CoolMasterNet L7 socket
- 4 Check DIP Switches are set correctly Dip switches setup for VRF HVAC system on L7







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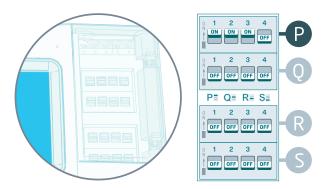
### **HVAC Midea VRF** — on L7

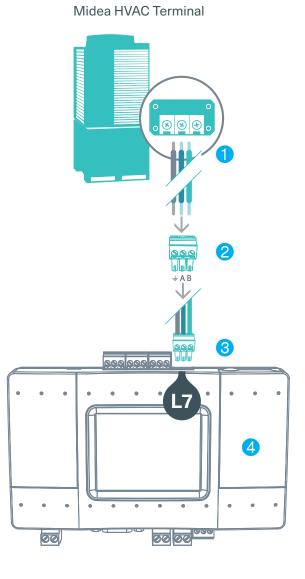
1 HVAC Communication Terminals

Connect to the communication terminals on the HVAC equipment:



- 2 Connecting to the line plug Secure the cables in the L7 line plug.
- 3 Plugging to the CoolMasterNet
  Insert the plug in to the CoolMasterNet L7
  socket
- 4 Check DIP Switches are set correctly
  Dip switches setup for VRF HVAC system on L7





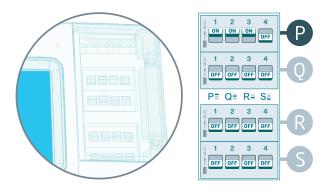
## **HVAC Samsung VRF** — on L7

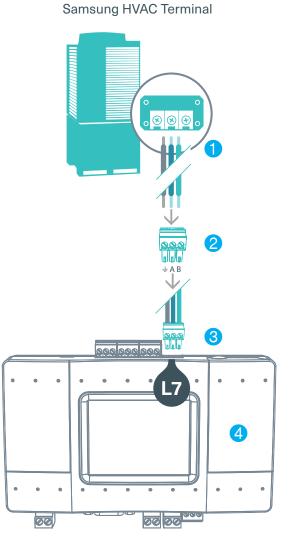
1 HVAC Communication Terminals

Connect to the communication terminals on the HVAC equipment:



- Connecting to the line plug Secure the cables in the L7 line plug.
- Plugging to the CoolMasterNet Insert the plug in to the CoolMasterNet L7 socket
- 4 Check DIP Switches are set correctly
  Dip switches setup for VRF HVAC system on L7





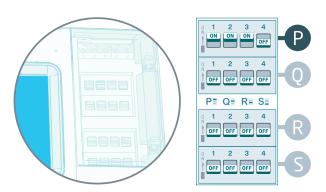
### **HVAC Trane VRF** — on L7

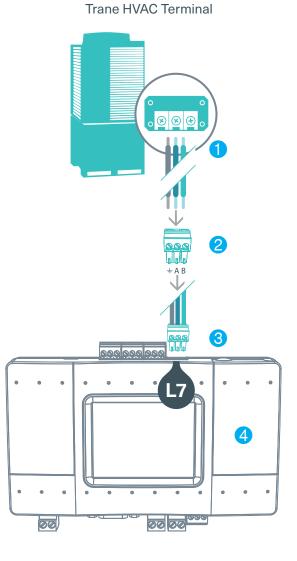
1 HVAC Communication Terminals

Connect to the communication terminals on the HVAC equipment:



- 2 Connecting to the line plug Secure the cables in the L7 line plug.
- Plugging to the CoolMasterNet Insert the plug in to the CoolMasterNet L7 socket
- 4 Check DIP Switches are set correctly
  Dip switches setup for VRF HVAC system on L7





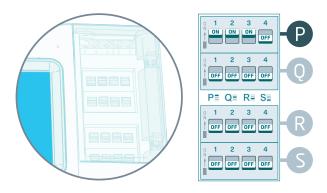
## HVAC Trane (US) VRF — on L7

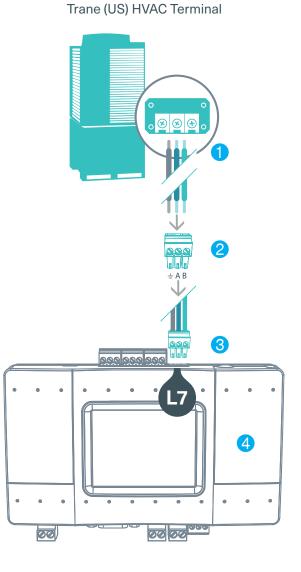
1 HVAC Communication Terminals

Connect to the communication terminals on the HVAC equipment:



- Connecting to the line plug Secure the cables in the L7 line plug.
- 3 Plugging to the CoolMasterNet Insert the plug in to the CoolMasterNet L7 socket
- 4 Check DIP Switches are set correctly
  Dip switches setup for VRF HVAC system on L7





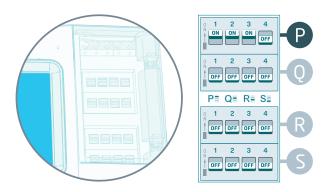
### HVAC Kentatsu VRF — on L7

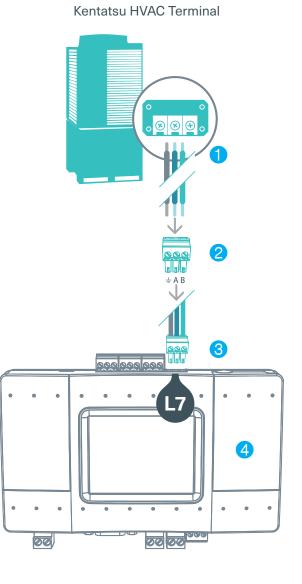
1 HVAC Communication Terminals

Connect to the communication terminals on the HVAC equipment:



- 2 Connecting to the line plug Secure the cables in the L7 line plug.
- 3 Plugging to the CoolMasterNet
  Insert the plug in to the CoolMasterNet L7
  socket
- 4 Check DIP Switches are set correctly
  Dip switches setup for VRF HVAC system on L7





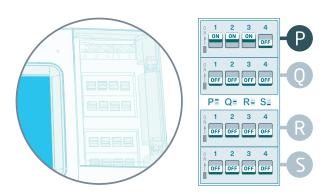
## HVAC Chigo VRF — on L7

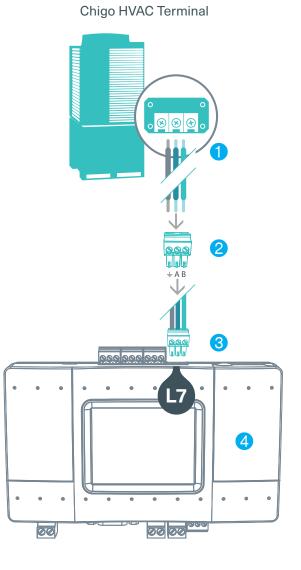
1 HVAC Communication Terminals

Connect to the communication terminals on the HVAC equipment:



- 2 Connecting to the line plug Secure the cables in the L7 line plug.
- 3 Plugging to the CoolMasterNet Insert the plug in to the CoolMasterNet L7 socket
- 4 Check DIP Switches are set correctly
  Dip switches setup for VRF HVAC system on L7





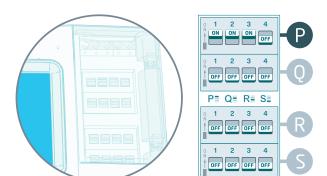
### **HVAC Blue Star VRF** — on L7

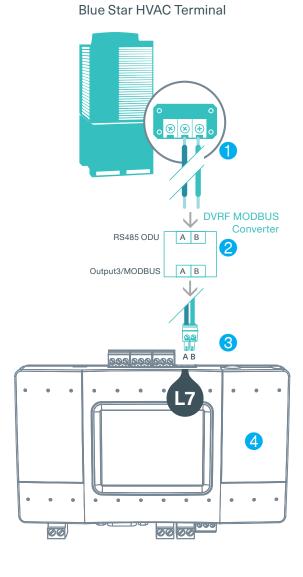
1 HVAC Communication Terminals

Connect to the communication terminals on the HVAC equipment:



- 2 Connect DVRF Modbus Converter Secure the cables from Outdoor in RS485 Secure cables in Output 3 / Modbus to CoolMasterNet.
- 3 Plugging to the CoolMasterNet Insert the plug in to the CoolMasterNet L7 socket
- 4 Check DIP Switches are set correctly
  Dip switches setup for VRF HVAC system on L7





### HVAC Gree GMV5 VRF — on L8

1 HVAC Communication Terminals

Connect to the communication terminals on the HVAC equipment:

HVAC outdoor only

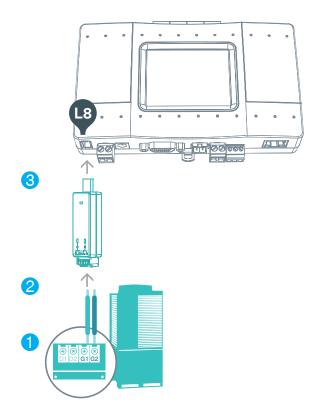


2 Connecting to the CMNET-GR-GMV5

CoolAutomation USB Network Interface (CMNET-GR-GMV5) adapter is required for connecting up to two Gree GMV5 VRF lines. This adapter includes a CAN bus 120  $\Omega$  resistor.

- 3 Plugging to the CoolMasterNet Insert the plug in to the CoolMasterNet L8 (USB)
- 4 Check DIP Switches are set correctly Dip switches setup for GMV5 VRF HVAC system on L8.





Gree GMV5 HVAC Terminal

## HVAC Fujitsu VRF — on L8

1 HVAC Communication Terminals
Connect to the communication terminals
on the HVAC equipment:

HVAC communication terminal names:

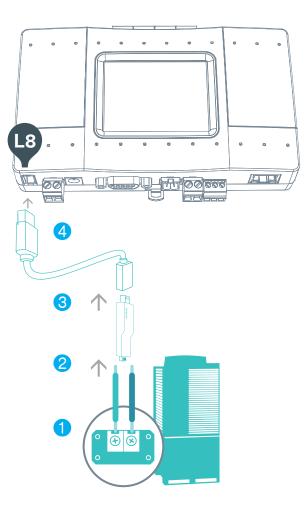


2 Connecting to the Echelon adapter



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 CoolMasterNet L8
  Insert the USB cable in to the L8 USB host.



Fujitsu HVAC Terminal

### **HVAC Rheem VRF** — on L8

1 HVAC Communication Terminals

Connect to the communication terminals on the HVAC equipment:

**HVAC** communication terminal names:

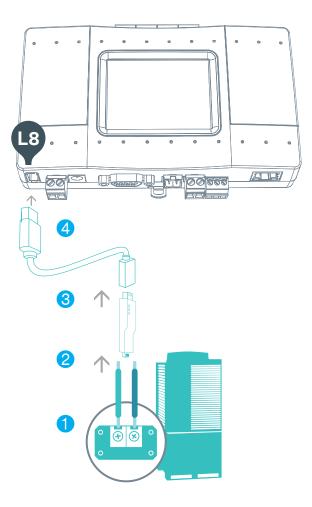


2 Connecting to the Echelon adapter



Echelon U10 USB Network Interface (TP/FT-10)adapter is required for connecting to Rheem 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 CoolMasterNet L8 Insert the USB cable in to the L8 USB host.



Rheem HVAC Terminal

### **HVAC Rheem VRF** — on L8

#### 1 HVAC Communication Terminals

Connect to the communication terminals on the HVAC equipment:

HVAC communication terminal names:

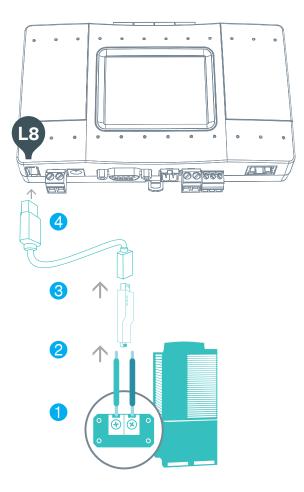


2 Connecting to the Echelon adapter



Echelon U10 USB Network Interface (TP/FT-10)adapter is required for connecting to Rheem 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 CoolMasterNet L8
  Insert the USB cable in to the L8 USB host.

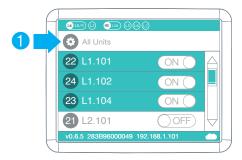


Rheem HVAC Terminal

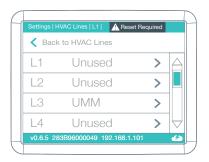
## How to change the brand of a specific line

When in need to change the HVAC brand type on a specific line, please follow the below procedure on CoolMasterNet screen:

1 Go to Settings

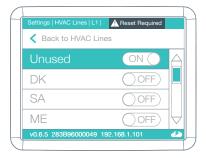


2 Select the HVAC Line you want to configure





3 Configure the HVAC line type







- 4 Make sure the DIP switches are set properly for the brand (according to the details in the brand relevant section above).
- 5 You will also have a red warning message if DIP switch are set
- 6 Reset is required to make change effective

## CoolMasterNet installation complete

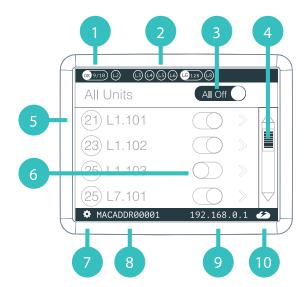


To download the latest firmware www.coolautomation.com/support/coolmasternet Firmware update FAQ www.coolautomation.com/support/faq/coolmasternet

#### CoolMasterNet Unit screen

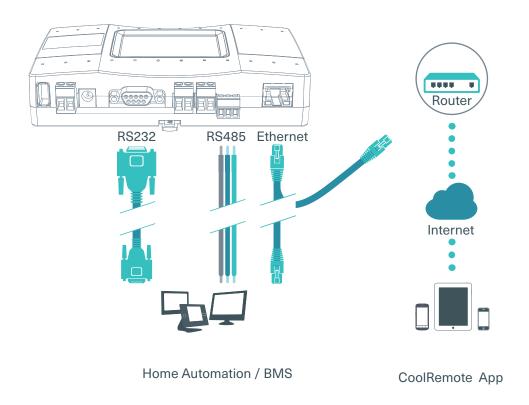
After successful installation, units screen will show all the detected indoor units and their statuses.

- 1 Active HVAC line (DK 9/10) (Groups/Units)
- 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)
- Service settings button
- 8 CoolMasterNet MAC address
- OcolMasterNet IP address
- CoolRemote connectivity status
  - Connected Communicating
  - Connected Idle
  - Disconnected with error code

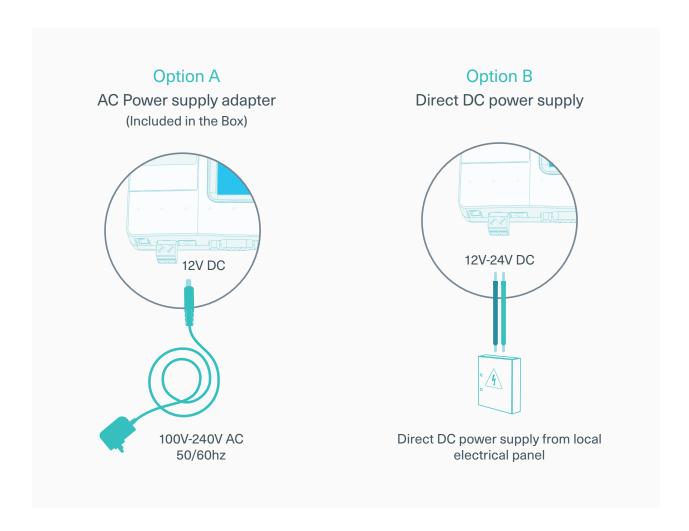


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## Home Automation, BMS & CoolRemote



## **Power Supply**



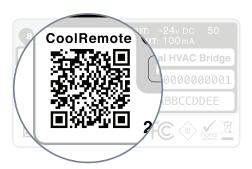
## 





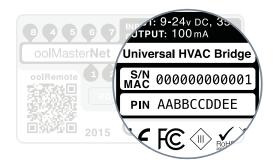
Please connect the device to the Internet for successful registration and setup

#### Option A - Automatic



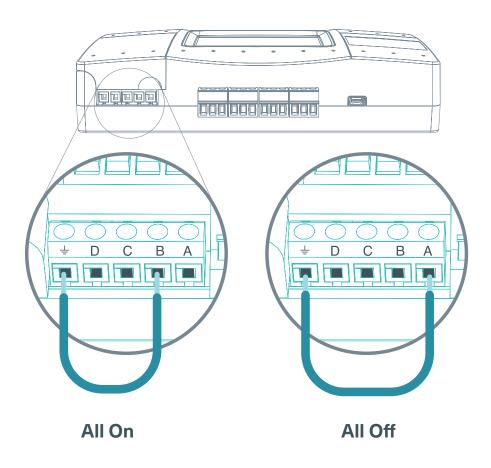
- 1 Scan the QR code from the type label to auto fill-in all the CoolMasterNet details forCoolRemote App.
- Register your user-name (email) and password to remotely control & monitor all your HVAC units.

#### Option B - Manual

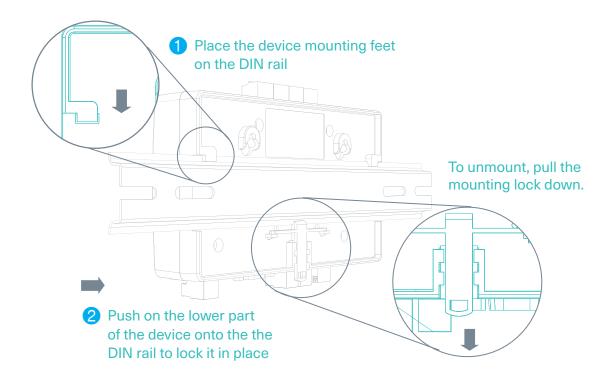


- Oo to: https://coolremote.net/register
- Enter CoolMasterNet S/N number and PIN code, printed on the sticker.
- 3 Register your user-name (email) and password to remotely control & monitor all your HVAC units.

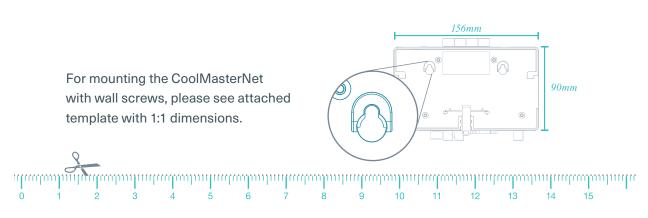
## All On/Off operation by external signal



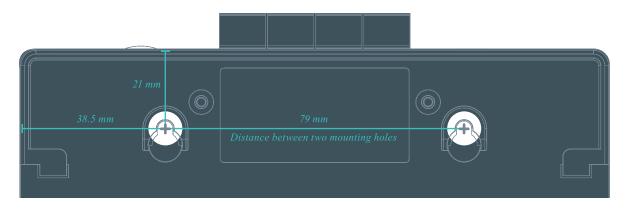
## Mounting on a DIN rail



## Mounting on a wall



1:1 SCALE MOUNTING TEMPLATE FOR WALL SCREWS



## **Quick Start with your CoolMasterNet**

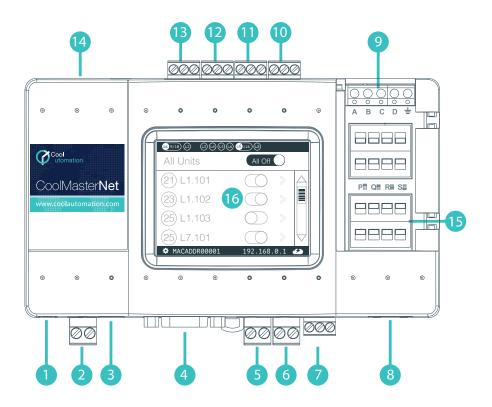


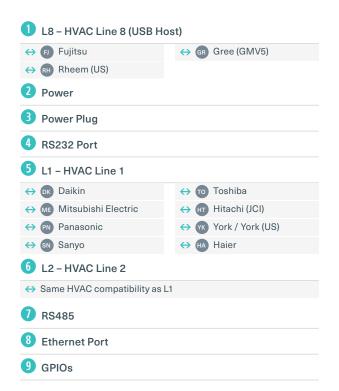
# **START HERE**

www.coolautomation.com/quickstart

Scan the code and go to the link above to get started with CoolMasterNet Quick installation guide.

## **Getting to Know your CoolMasterNet**







## Need more help?

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



**HVAC Control Made Simple**