COOLAUTOMATION

THE INTERNET OF CLIMATE

Quick Installation Guide

CoolMasterNet

HVAC Bridge

Version 3.5

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 onsequence.

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.

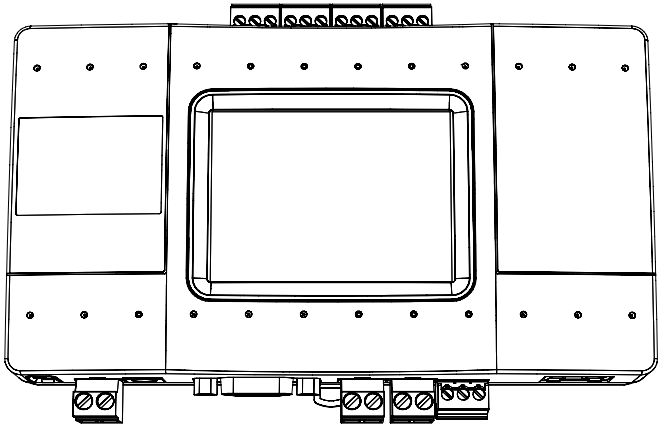
d) Where flammable gas may leak, where there is carbon fiber or ignitable dust suspensions in the air, or where volatile flammable such as thinner or gasoline are handle Operating the **CoolMasterNet** in such conditions can cause a fire.

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

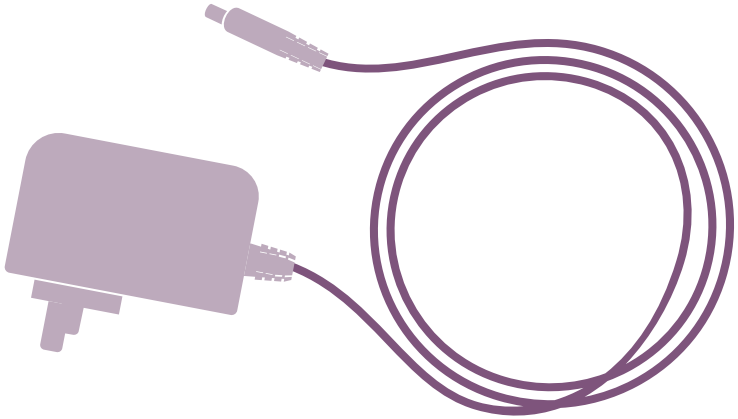
f) Moist area, where there is exposure to water. If water enters the inside of the **CoolMasterNet**, it may cause electric shock and electrical components may fail.

Contents

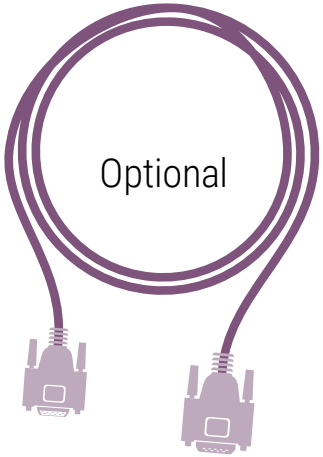
What's in the box



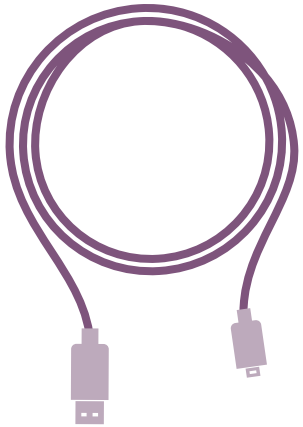
CoolMasterNet



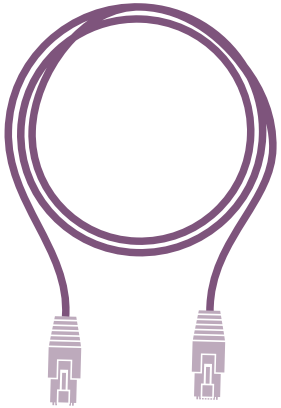
AC Power supply adapter
100V-240V 50/60hz to 12V



1 RS232 DB9
Male to Female
cable

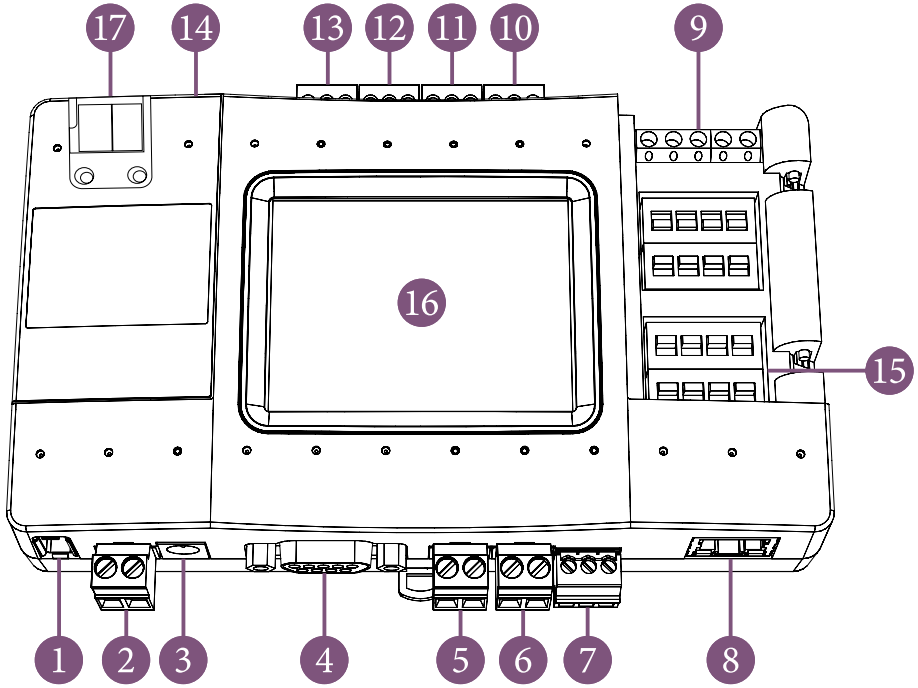


1 USB-Mini USB
cable



1 Ethernet
cable

CoolMasterNet

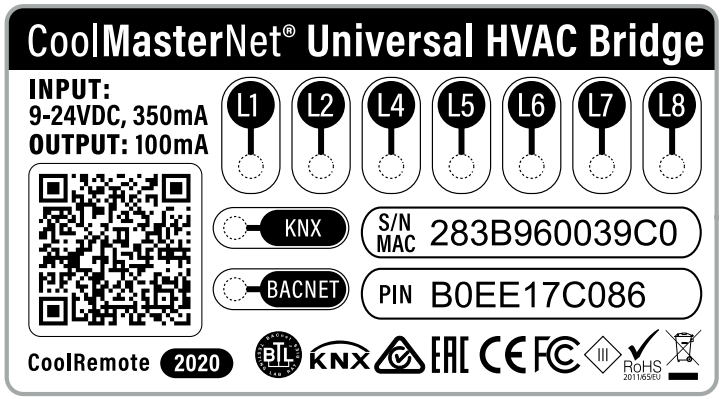


1. L8 - HVAC Line 8 (USB Host)
2. Power
3. Power Plug
4. RS232 Port
5. L1 - HVAC Line 1
6. L2 - HVAC Line 2
7. L3 - RS485
8. Ethernet Port
9. GPIOs
10. L7 - HVAC Line 7
11. L6 - HVAC Line 6
12. L5 - HVAC Line 5
13. L4 - HVAC Line 4
14. USB Device Port
15. DIP Switches P, Q, R, S
16. LCD Touch Screen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

Preconfigured CoolMasterNet

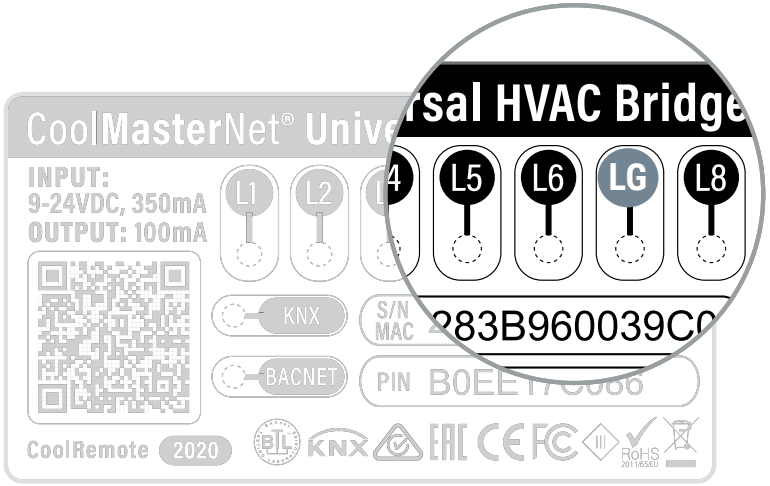
Type label

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 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

HVAC Daikin VRV

1 HVAC Communication Terminals

HVAC **outdoor** connection

F1
F2

DK Daikin **
Max. 64 indoor units

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

* Polarity is not required on the HVAC communication line.

** Centralized (group) address required.

2 Connecting to the line plug

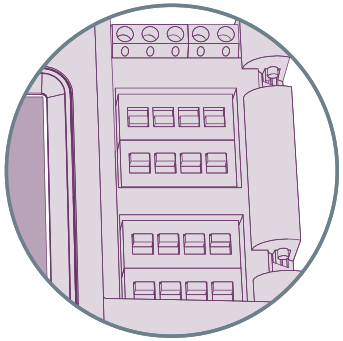
Secure the cables in the L1 line plug.

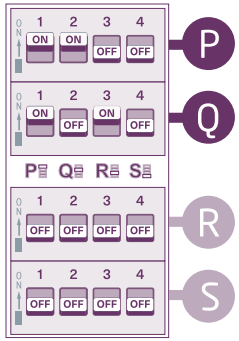
3 Plugging to the CoolMasterNet

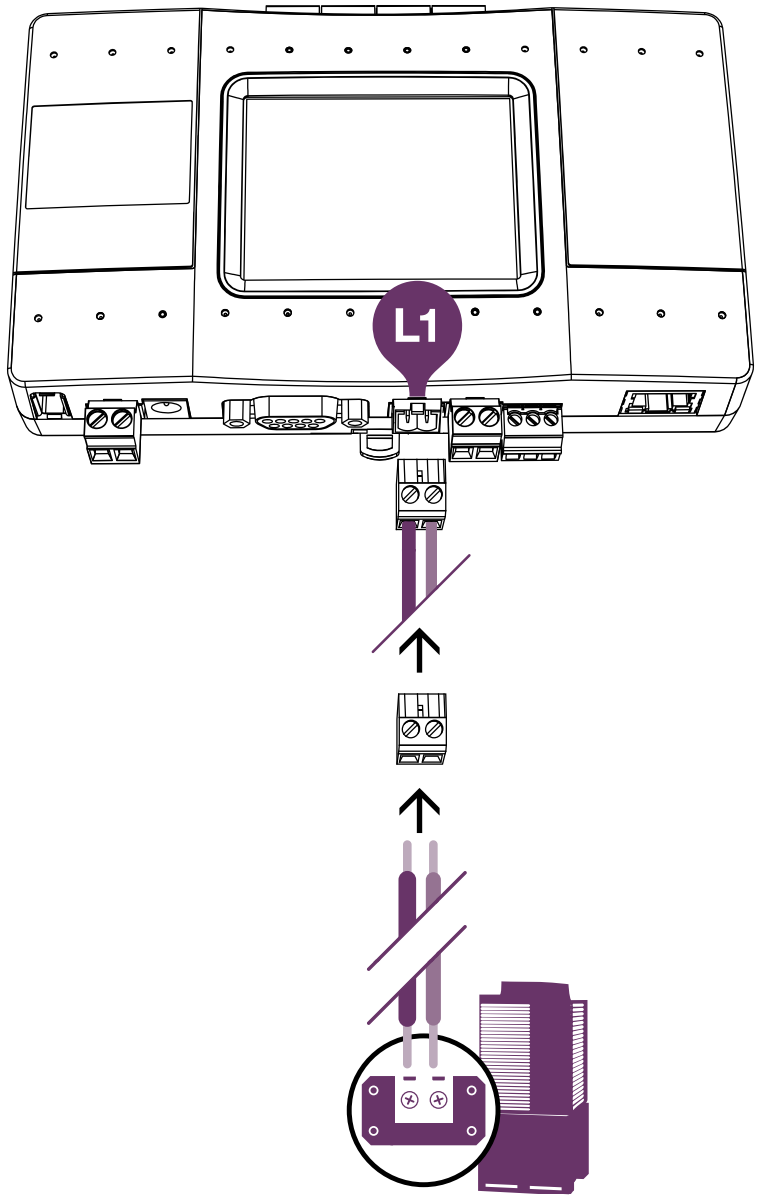
Insert the plug in to the CoolMasterNet L1 socket.

4 Check DIP Switches are set correctly

Dip switches setup for VRV HVAC system on L1.







Daikin HVAC Terminal

HVAC Daikin Non-VRV

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 HVAC Communication Terminals

HVAC **Indoor** connection

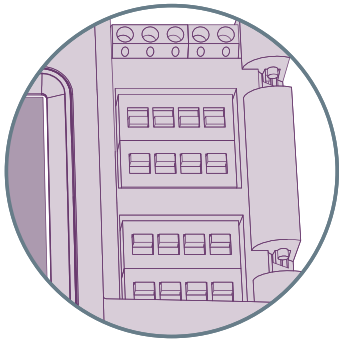
F1
F2

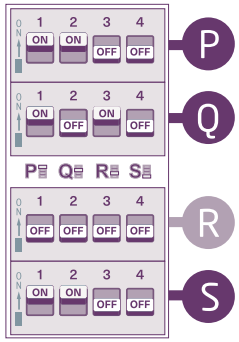
DK Daikin **
Max. 64 indoor units

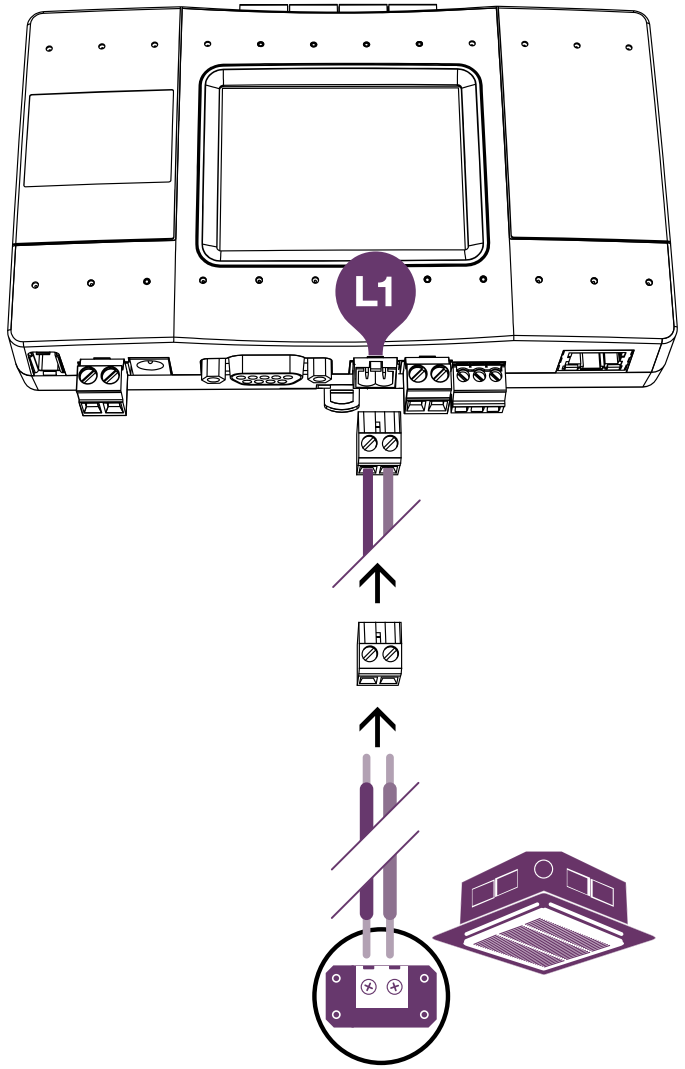
* Polarity is not required on the HVAC communication line.
** Centralized (group) address required.

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 CoolMasterNet 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 CoolMasterNet L1 socket.







Daikin Non-VRV HVAC Terminal

HVAC Mitsubishi Electric VRF

1 HVAC Communication Terminals

HVAC **outdoor** connection

M1
M2

ME Mitsubishi Electric
Max. 50 indoor units

* 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

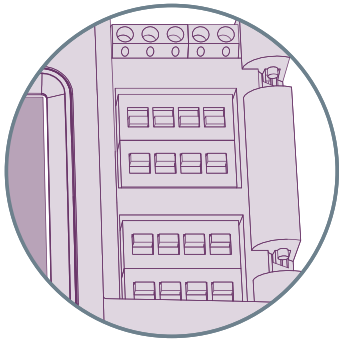
Secure the cables in the L1 line plug.

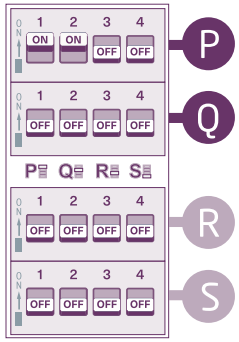
3 Plugging to the CoolMasterNet

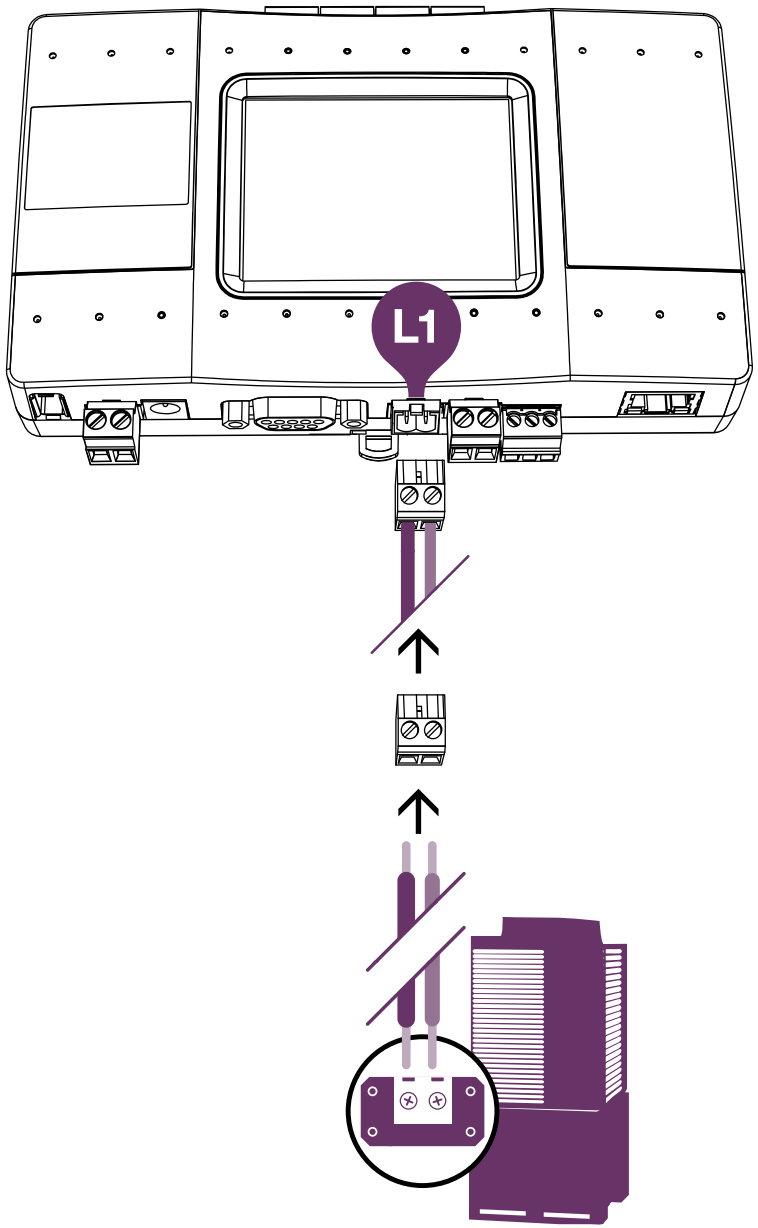
Insert the plug in to the CoolMasterNet L1 socket.

4 Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L1.







Mitsubishi Electric HVAC Terminal

HVAC Mitsubishi Electric Non-VRF

Changing the dip switches (S), 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. **HVAC Communication Terminals**

   HVAC **Indoor** connection

   M1
   M2
   ME Mitsubishi Electric
   Max. 50 indoor units

   * 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:

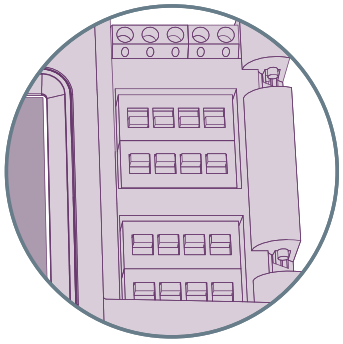
   Go to settings ⚙ ➡ Go to HVAC lines ➡ Go to L1 ➡ Go to DC Out turn on

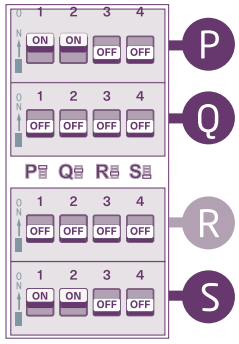
   ON

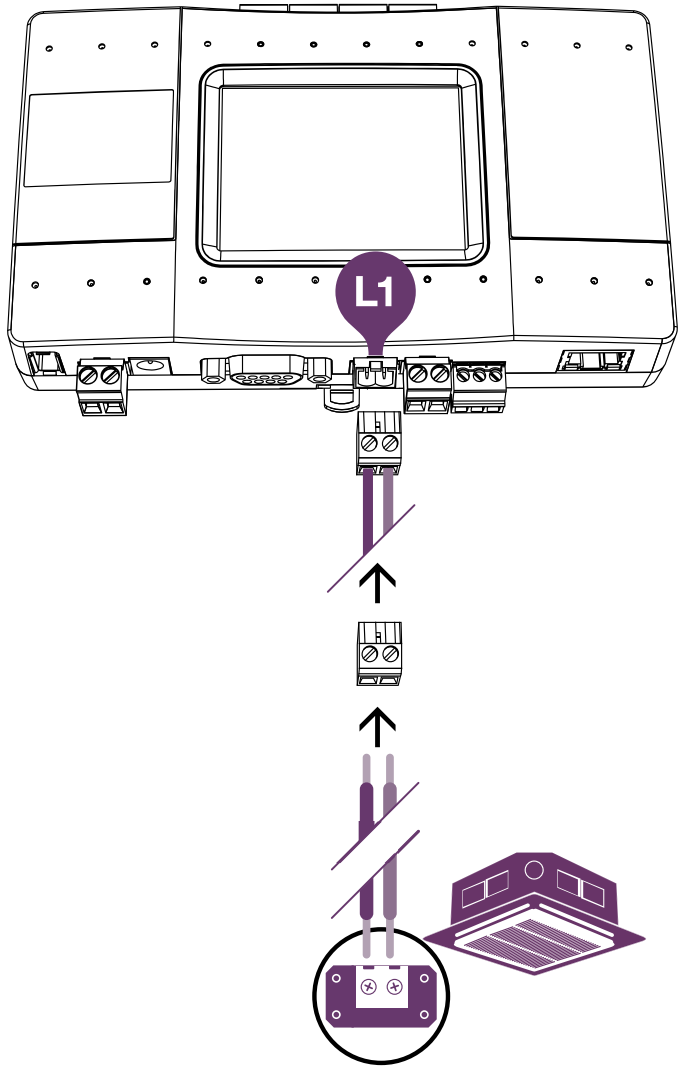
4. **Turn ON the power** for CoolMasterNet and **connect** it to HVAC line.

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 CoolMasterNet L1 socket.







Mitsubishi Non-VRF HVAC Terminal

HVAC Panasonic/Sanyo VRF

1 HVAC Communication Terminals

HVAC **outdoor** connection

U1		PN Panasonic / Sanyo Max. 64 indoor units
U2		

* 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

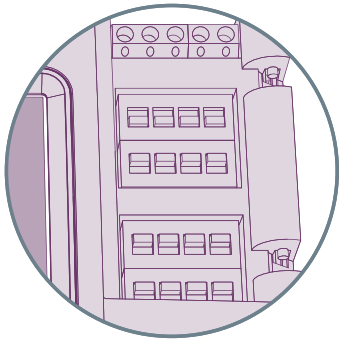
Secure the cables in the L1 line plug.

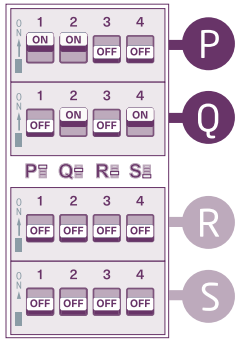
3 Plugging to the CoolMasterNet

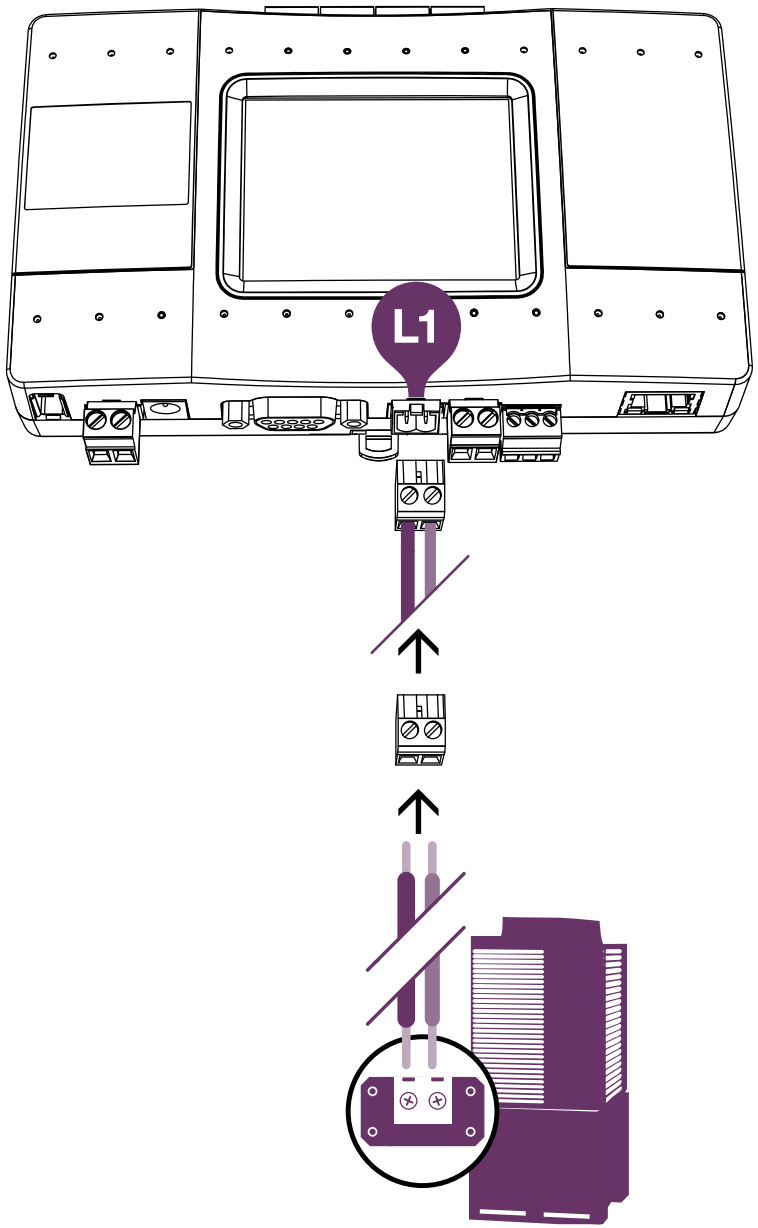
Insert the plug in to the CoolMasterNet L1 socket.

4 Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L1.







Panasonic / Sanyo HVAC Terminal

HVAC Toshiba VRF

1 HVAC Communication Terminals

HVAC **outdoor** connection

U1
U2

TO Toshiba
Max. 64 indoor units

* 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

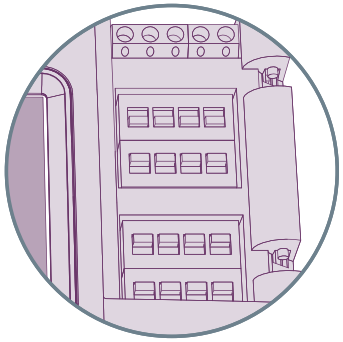
Secure the cables in the L1 line plug.

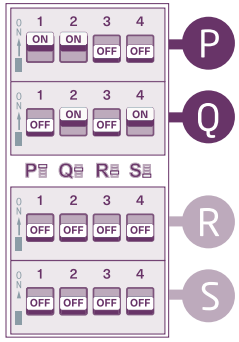
3 Plugging to the CoolMasterNet

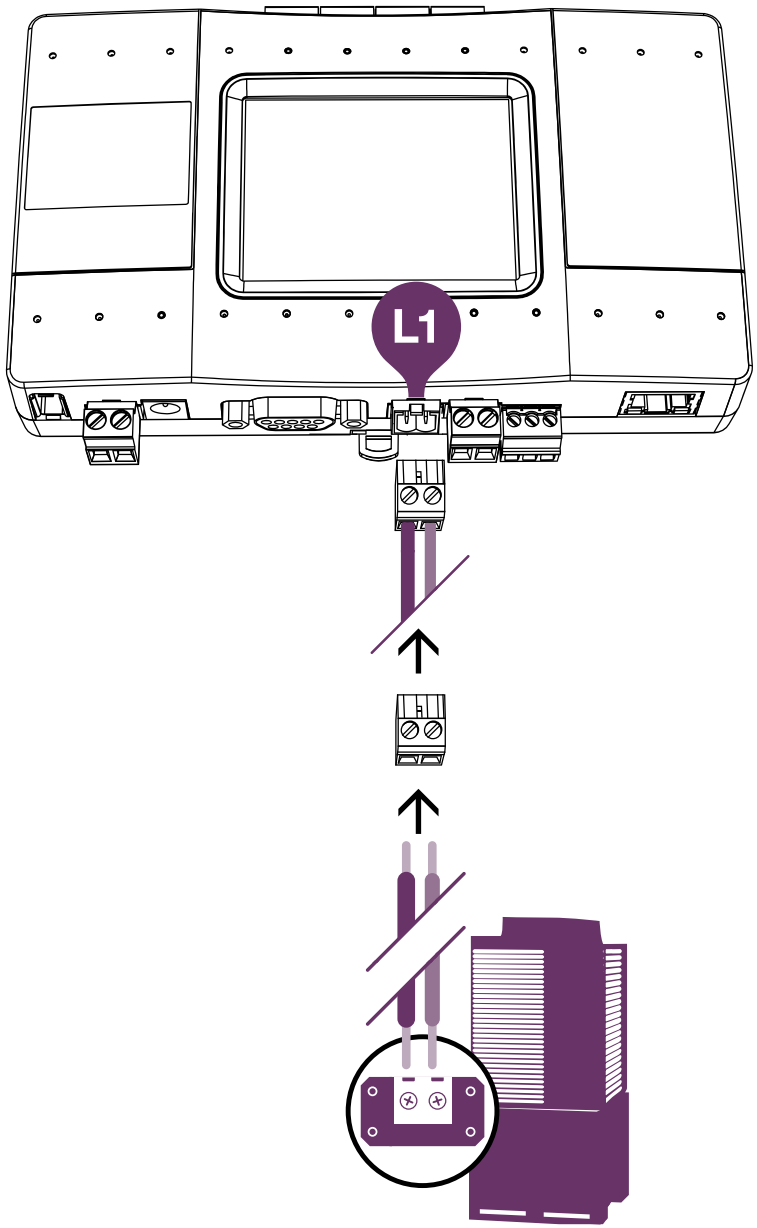
Insert the plug in to the CoolMasterNet L1 socket.

4 Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L1.







Toshiba HVAC Terminal

HVAC Hitachi VRF

1 HVAC Communication Terminals

HVAC **outdoor** connection

1
2

HT Hitachi
Max. 160 indoor units

* 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

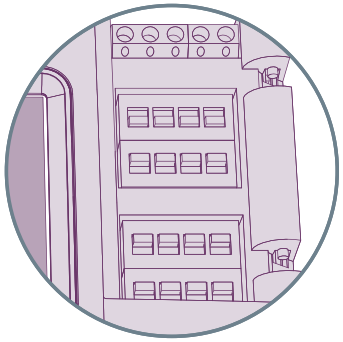
Secure the cables in the L1 line plug.

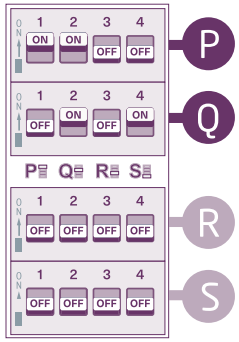
3 Plugging to the CoolMasterNet

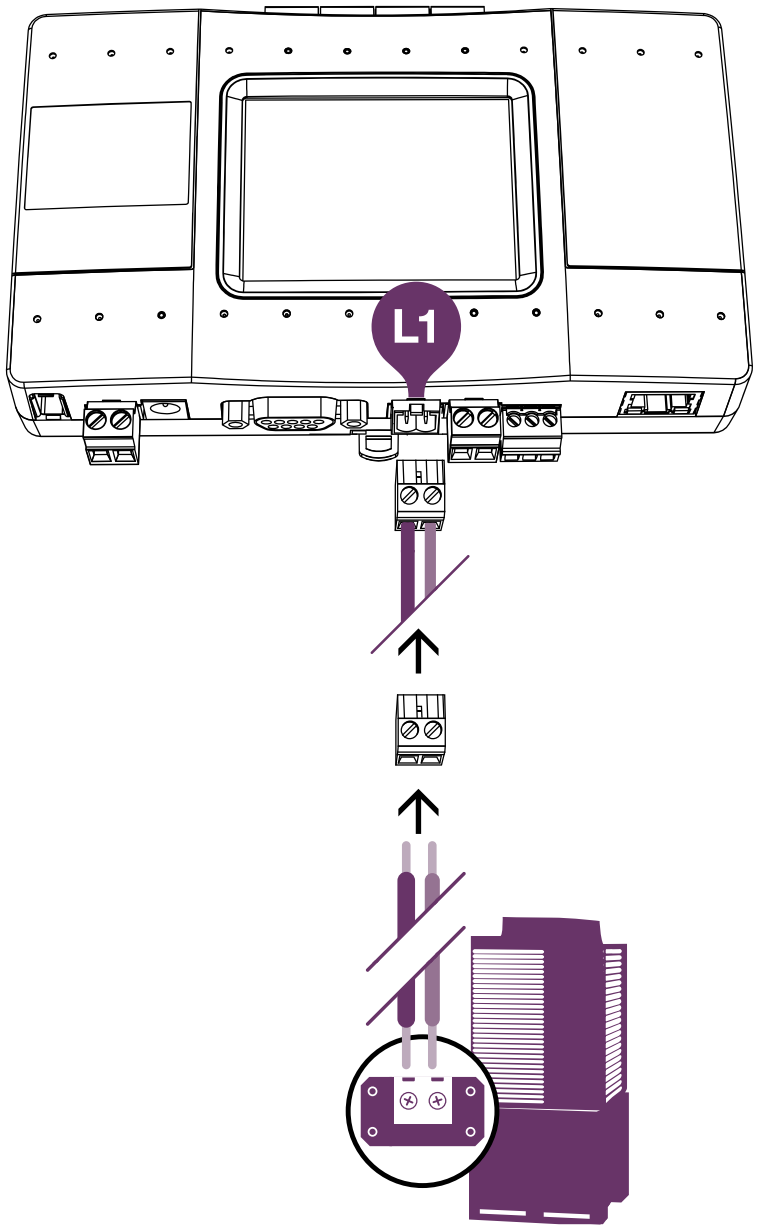
Insert the plug in to the CoolMasterNet L1 socket.

4 Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L1.







Hitachi HVAC Terminal

HVAC Haier VRF

1 HVAC Communication Terminals

HVAC **outdoor** connection

P
Q

HA Haier
Max. 64 indoor units

* 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

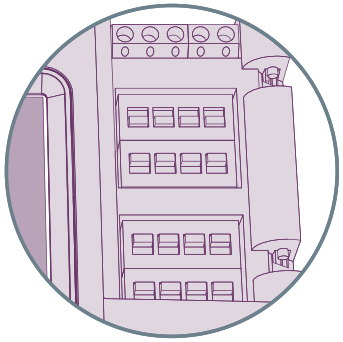
Secure the cables in the L1 line plug.

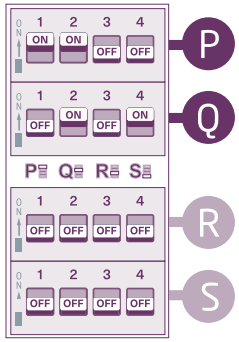
3 Plugging to the CoolMasterNet

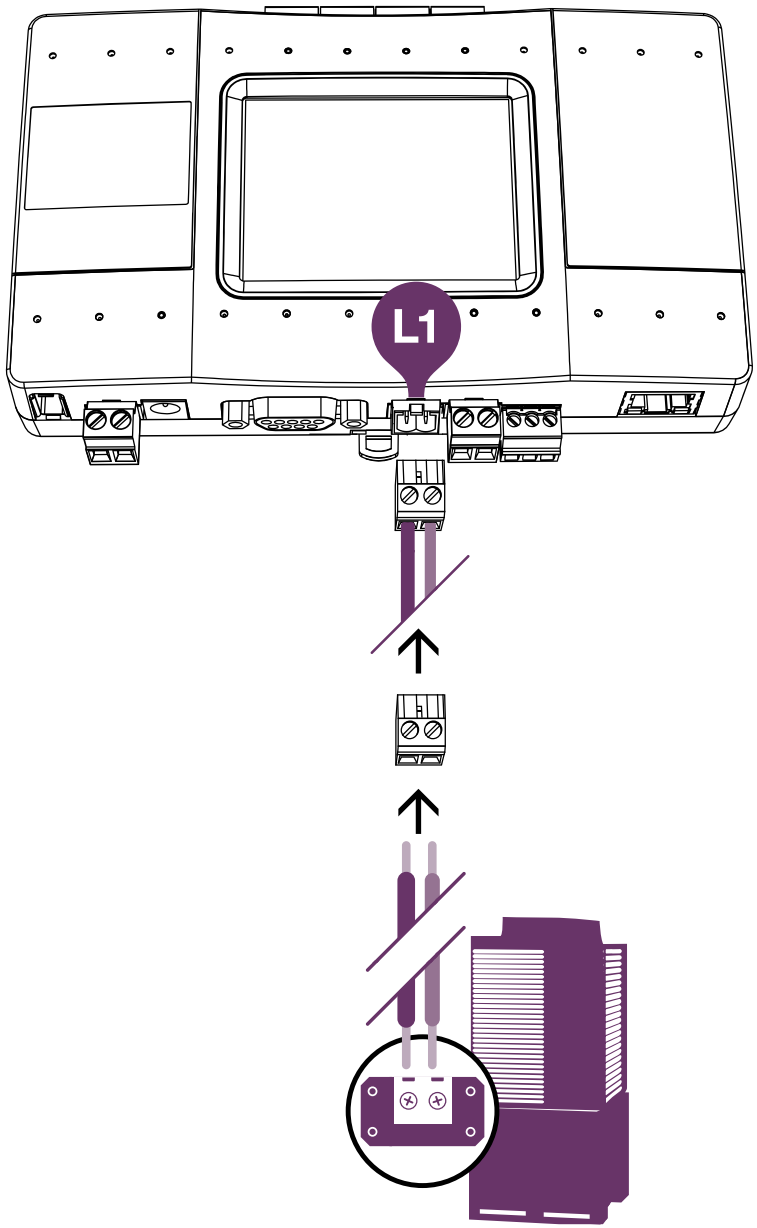
Insert the plug in to the CoolMasterNet L1 socket.

4 Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L1.





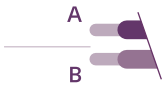


Haier HVAC Terminal

HVAC Mitsubishi Heavy VRF

1 HVAC Communication Terminals

HVAC **outdoor** connection



MH Mitsubishi Heavy
Max. 128 indoor units

2 Connecting to the line plug

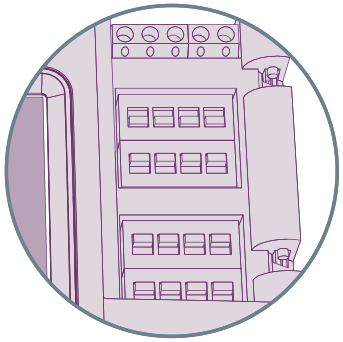
Secure the cables in the L7 line plug.

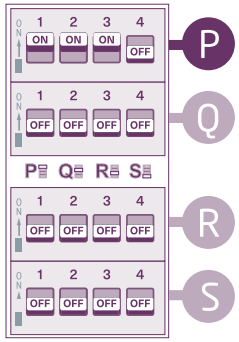
3 Plugging to the CoolMasterNet

Insert the plug in to the CoolMasterNet L7 socket.

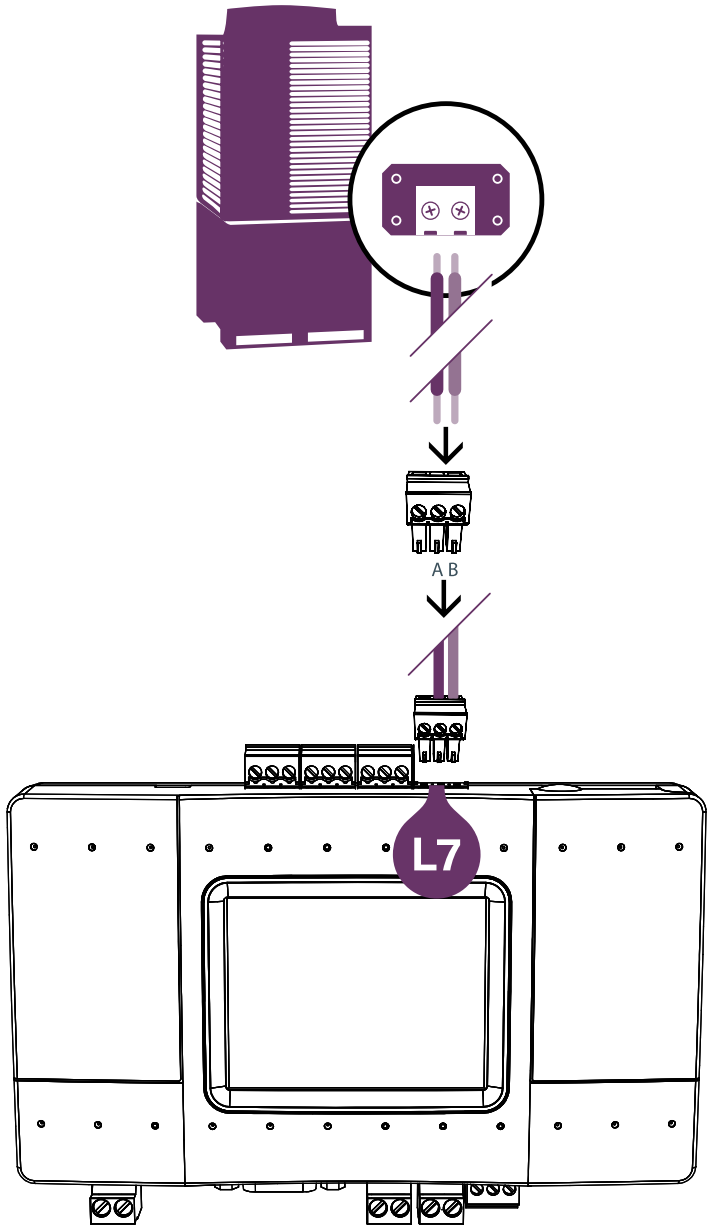
4 Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L7.





Mitsubishi Heavy HVAC Terminal



HVAC LG VRF

1 HVAC Communication Terminals

HVAC **outdoor** connection

Cent A	
Cent B	LG Max. 128 indoor units
-	

2 Connecting to the line plug

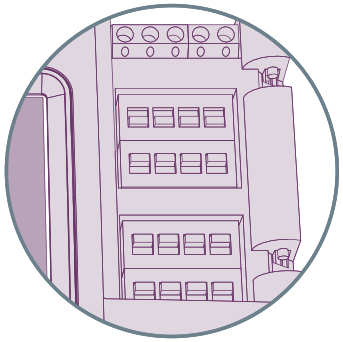
Secure the cables in the L7 line plug.

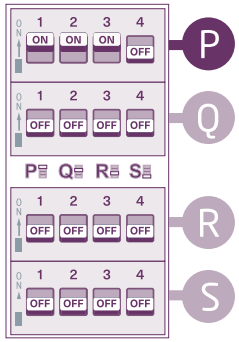
3 Plugging to the CoolMasterNet

Insert the plug in to the CoolMasterNet L7 socket.

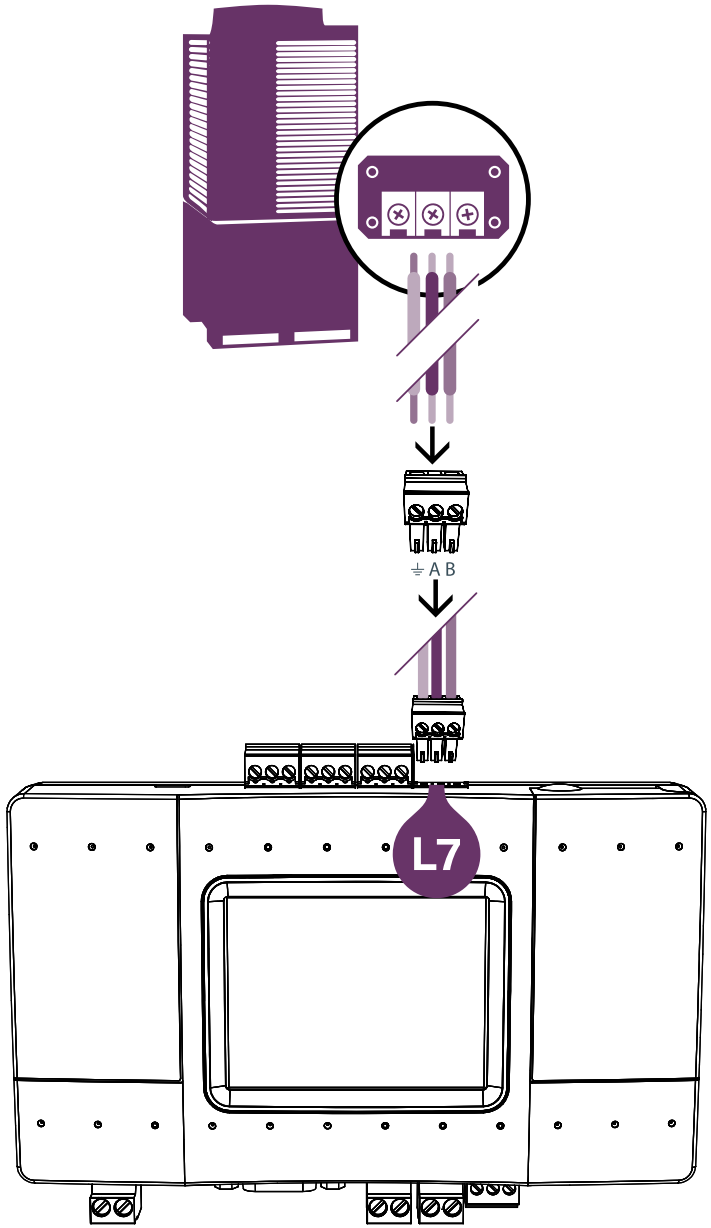
4 Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L7.





LG HVAC Terminal



HVAC AUX VRF

1 HVAC Communication Terminals

HVAC **outdoor** connection

A

B

AUX

AUX
Max. 64 indoor units

2 Connecting to the line plug

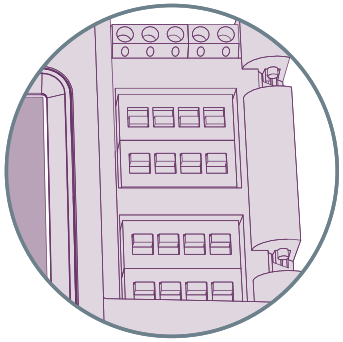
Secure the cables in the L7 line plug.

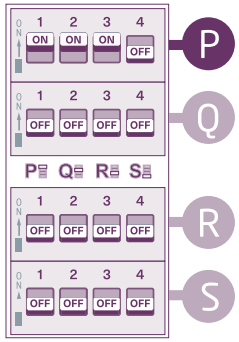
3 Plugging to the CoolMasterNet

Insert the plug in to the CoolMasterNet L7 socket.

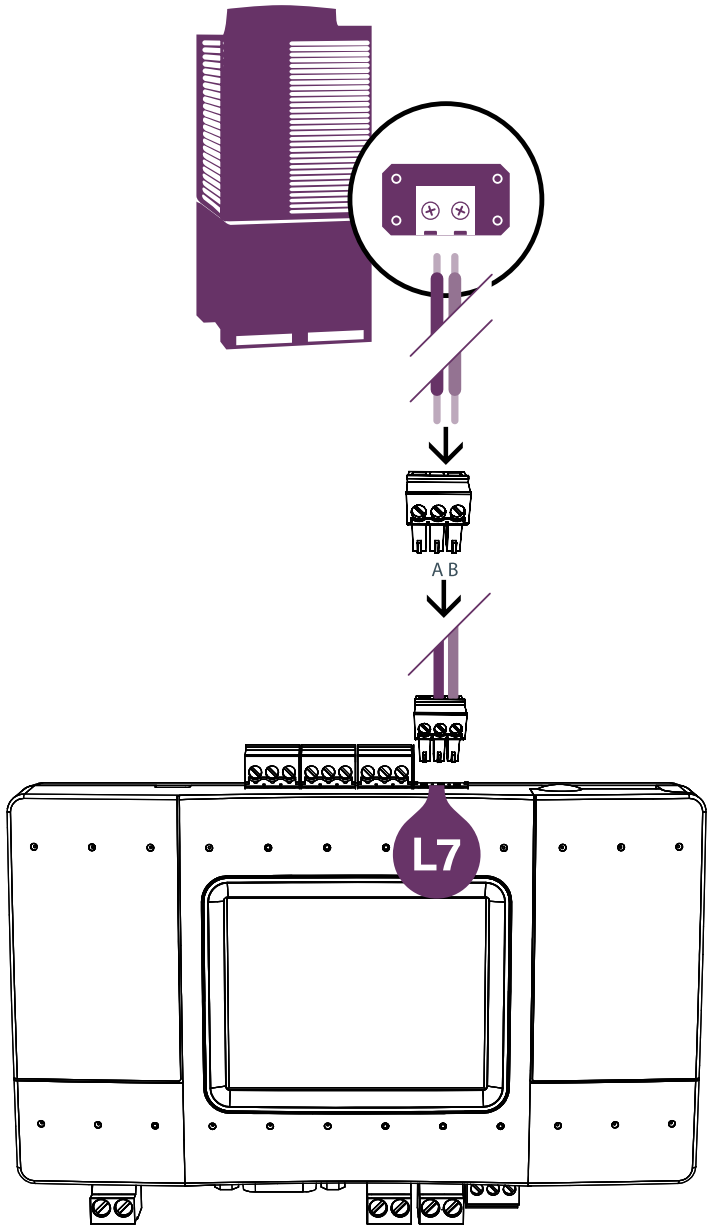
4 Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L7.





AUX HVAC Terminal



HVAC Gree/GMV4 VRF

1 HVAC Communication Terminals

HVAC **outdoor** connection

G1		GR Gree
G2		Max. 16 indoor units

2 Connecting to the line plug

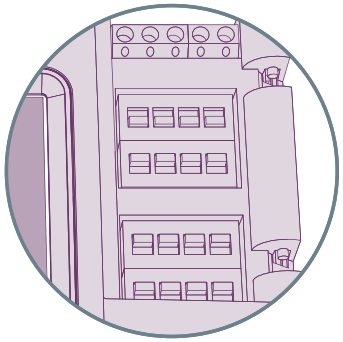
Secure the cables in the L7 line plug.

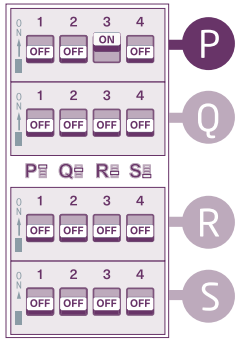
3 Plugging to the CoolMasterNet

Insert the plug in to the CoolMasterNet L7 socket.

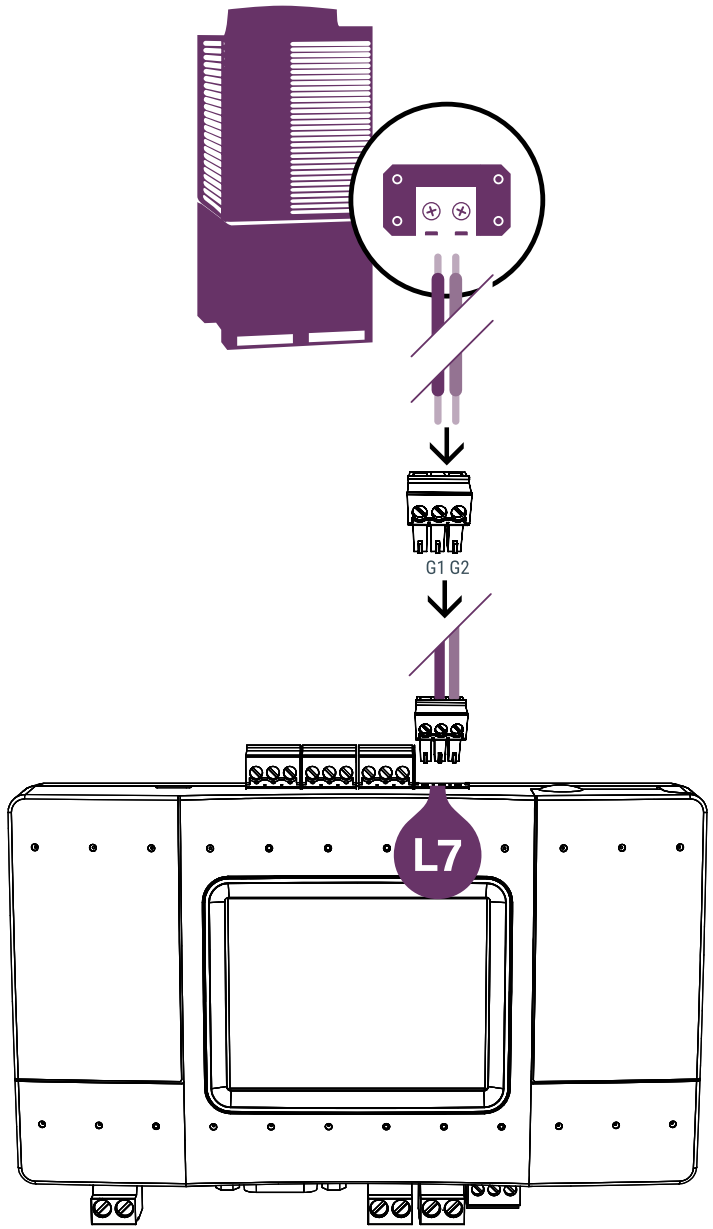
4 Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L7.





Gree HVAC Terminal



HVAC Midea VRF

1 HVAC Communication Terminals

HVAC **outdoor** connection

X
Y
E

MD **Midea**
Max. 64 indoor units

2 Connecting to the line plug

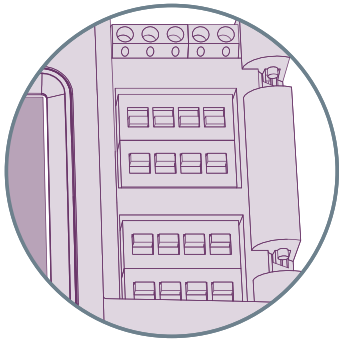
Secure the cables in the L7 line plug.

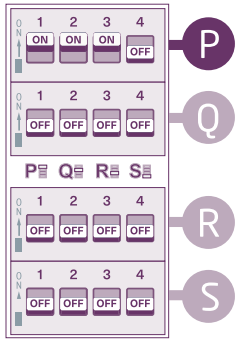
3 Plugging to the CoolMasterNet

Insert the plug in to the CoolMasterNet L7 socket.

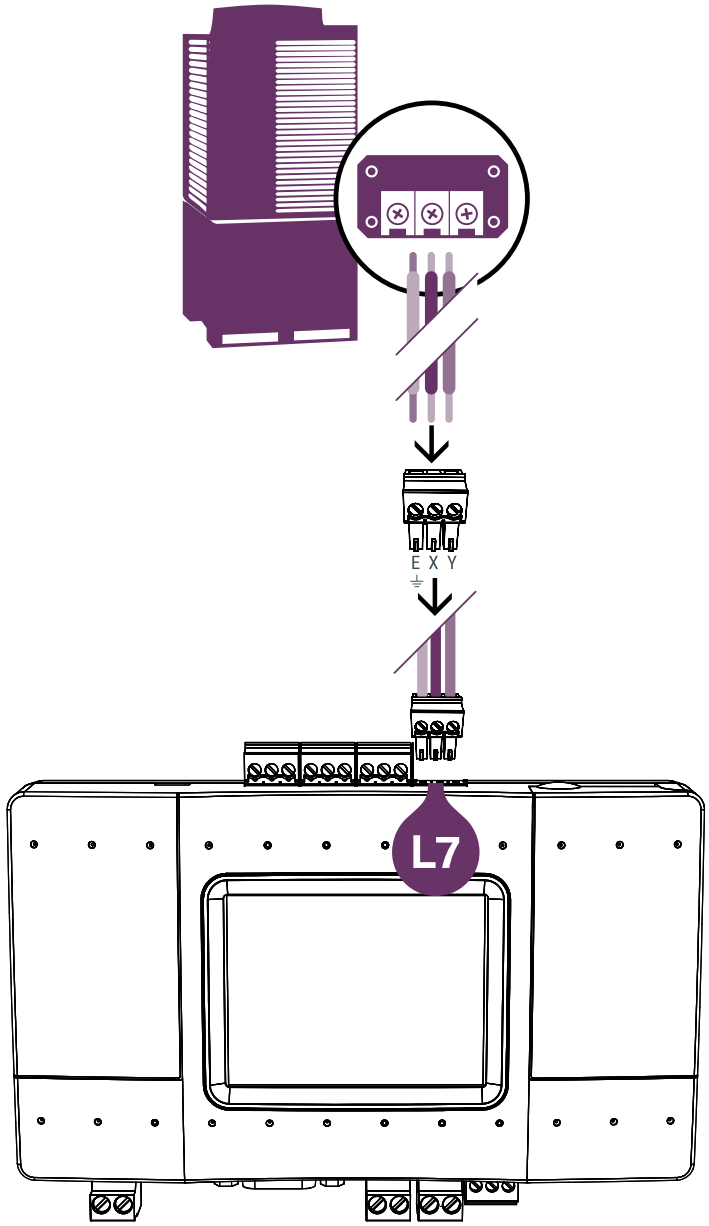
4 Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L7.





Midea HVAC Terminal



HVAC Samsung VRF

1 HVAC Communication Terminals

HVAC **outdoor** connection

R1
R2

SM **Samsung**
Max. 64 indoor units

2 Connecting to the line plug

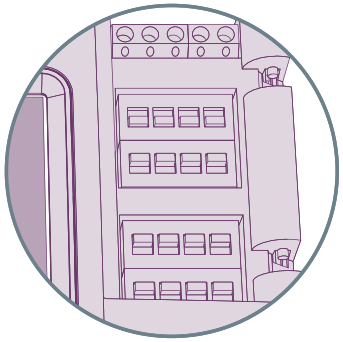
Secure the cables in the L7 line plug.

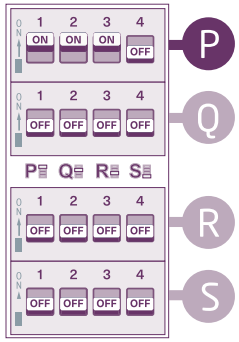
3 Plugging to the CoolMasterNet

Insert the plug in to the CoolMasterNet L7 socket.

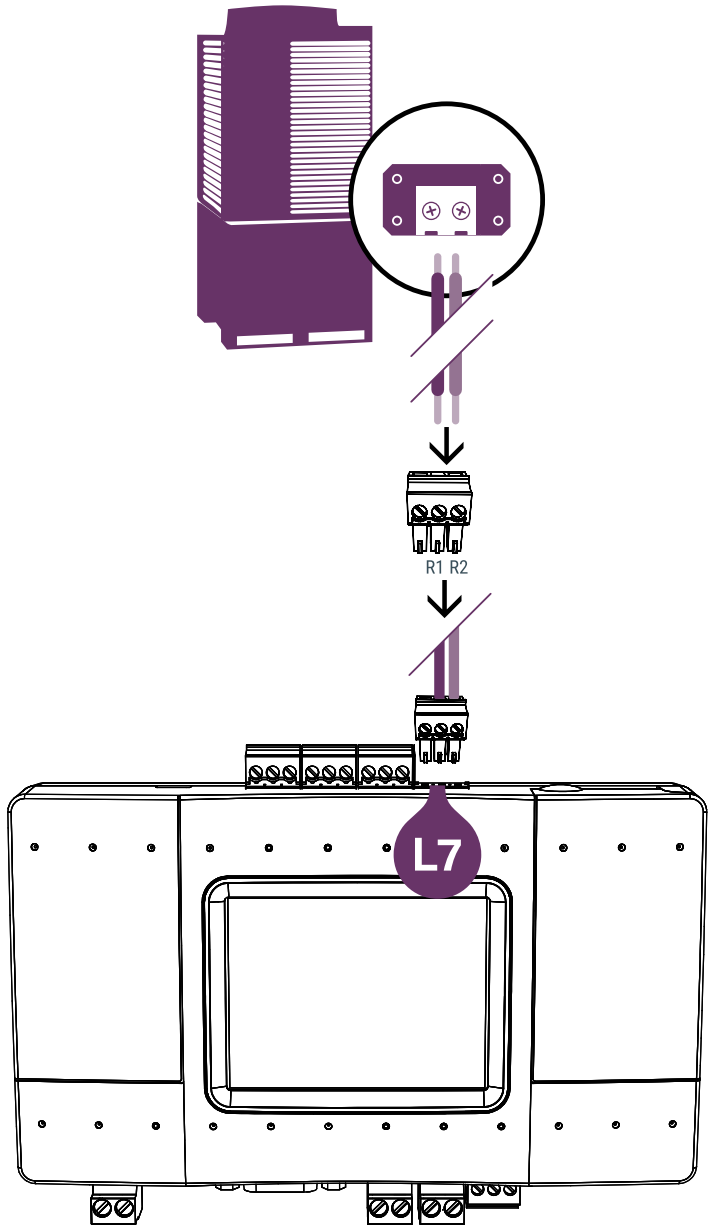
4 Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L7.





Samsung HVAC Terminal



HVAC Chigo VRF

1 HVAC Communication Terminals

HVAC **outdoor** connection

X
Y
E

CH **Chigo**
Max. 64 indoor units

2 Connecting to the line plug

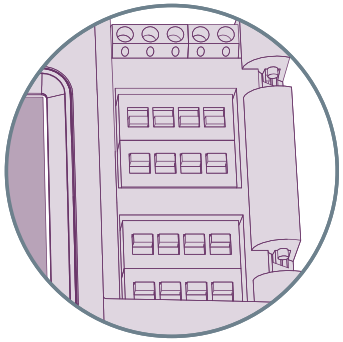
Secure the cables in the L7 line plug.

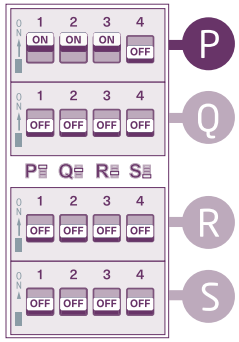
3 Plugging to the CoolMasterNet

Insert the plug in to the CoolMasterNet L7 socket.

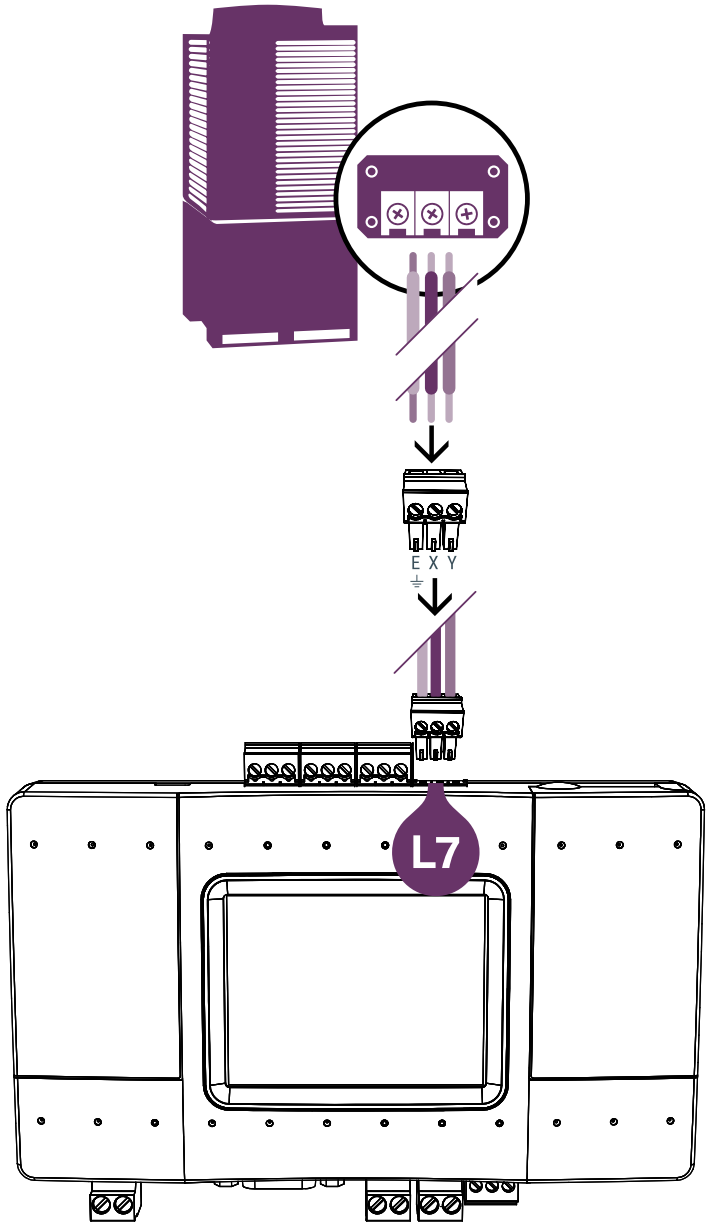
4 Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L7.





Chigo HVAC Terminal



HVAC Blue Star VRF

1 HVAC Communication Terminals

HVAC **outdoor** connection

A2
B2

BS **Blue Star**
Max. 255 indoor units

2 Connect DVRF Modbus Converter

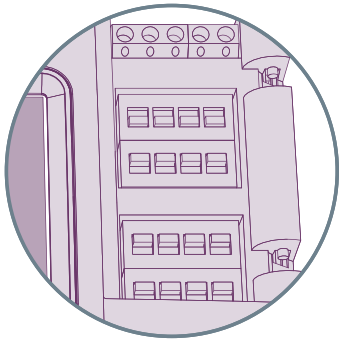
Secure the cables from Outdoor in RS485
Secure cables in Output 3 / Modbus to CoolMasterNet.

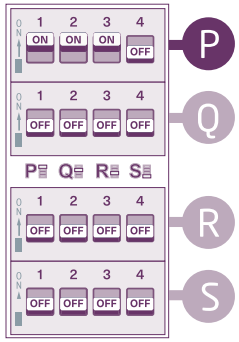
3 Plugging to the CoolMasterNet

Insert the plug in to the CoolMasterNet L7 socket.

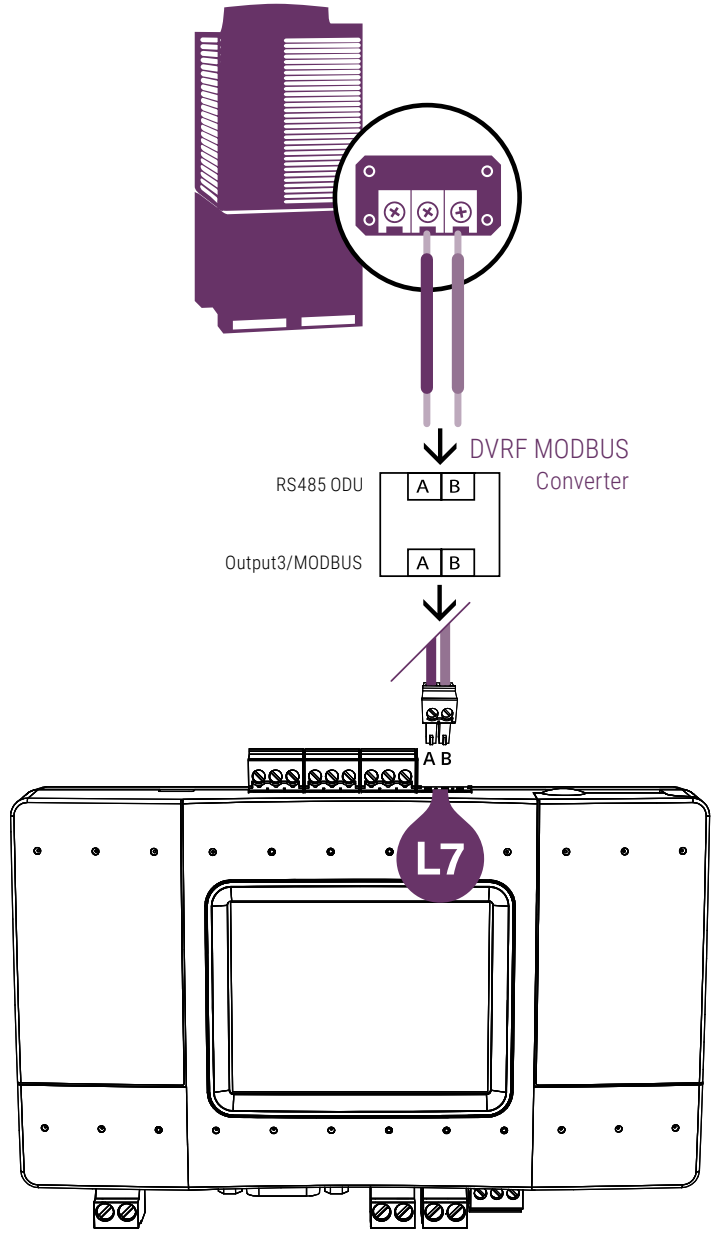
4 Check DIP Switches are set correctly

Dip switches setup for VRF HVAC system on L7.





Blue Star HVAC Terminal



HVAC Gree GMV5, GMV6 VRF

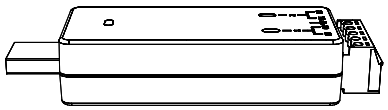
1 HVAC Communication Terminals

HVAC **outdoor** connection

G1

G2

GR **Gree GMV5 GMV6**
Max. 64 indoor units



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)

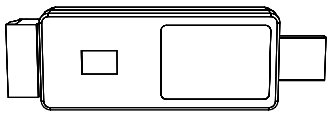
This adapter includes a CAN bus 120 Ω resistor.

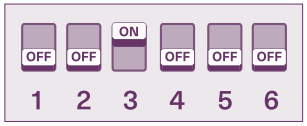
3 Plugging to the CoolMasterNet

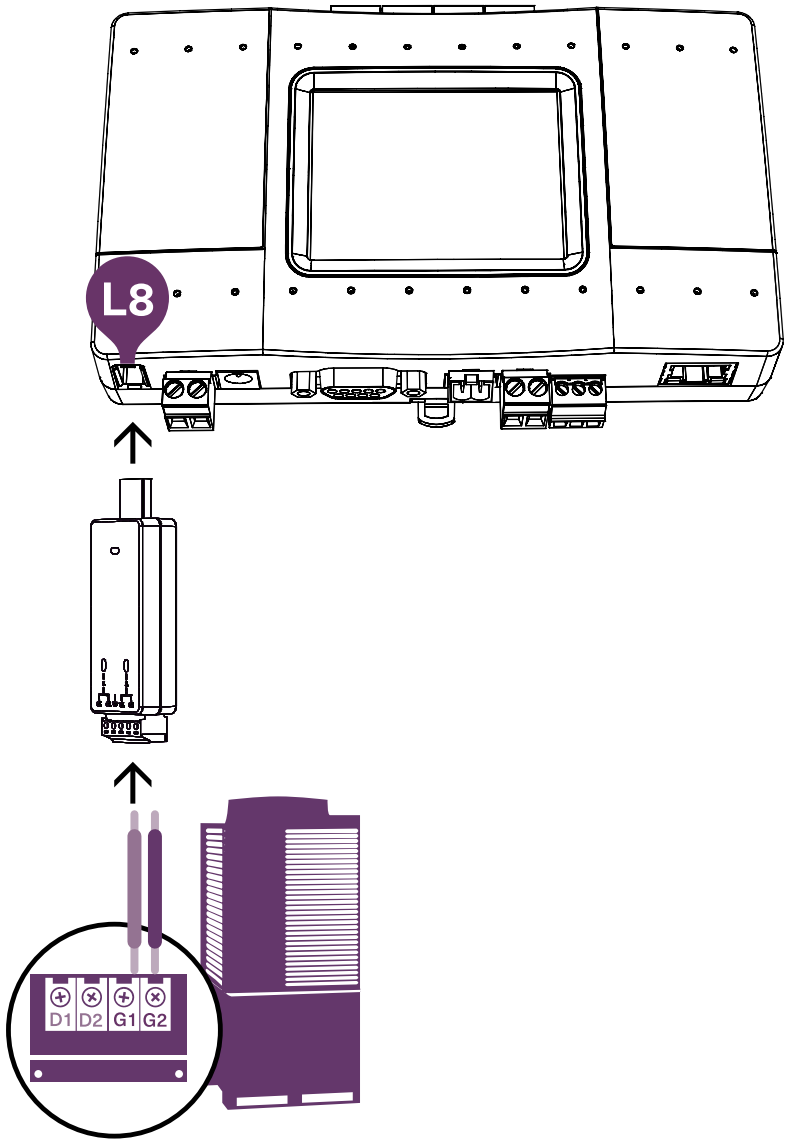
Insert the plug in to the CoolMasterNet L8 (USB).

4 Check DIP Switches are set correctly

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







Gree GMV5/6 HVAC Terminal

HVAC Fujitsu VRF

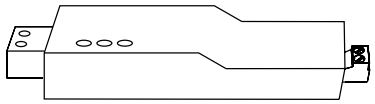
1 HVAC Communication Terminals

HVAC **outdoor** connection

X1
X2

FJ **Fujitsu**
Max. 128 indoor units

2 Connecting to the Echelon adapter



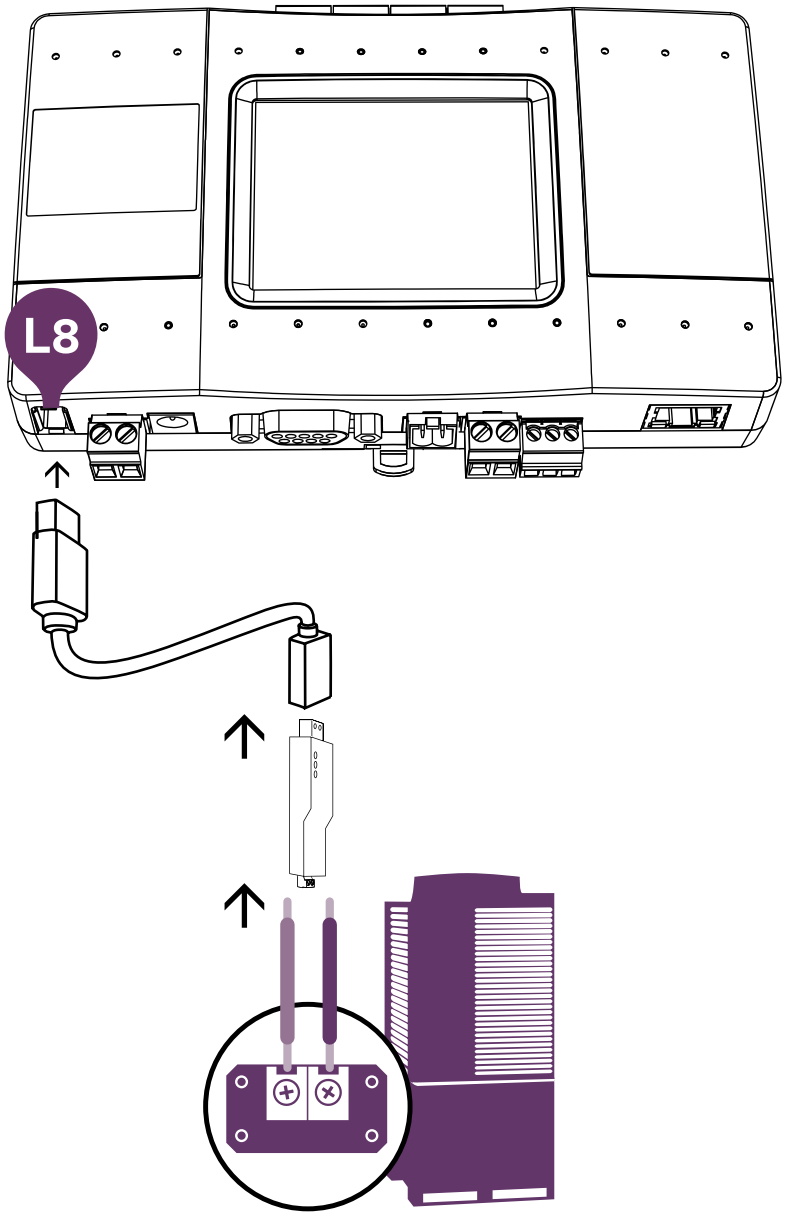
Echelon U10 USB Network Interface (TP/FT-10) adapter is required for connecting to Fujitsu VRF. (Not supplied by CoolAutomation)

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.

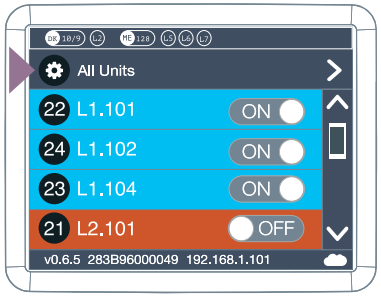


Fujitsu HVAC Terminal

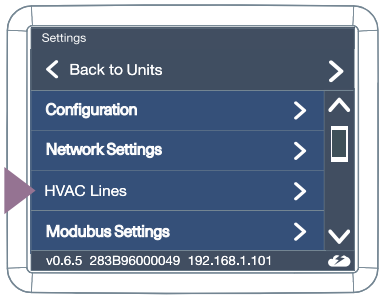
How to change the brand of a specific line

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

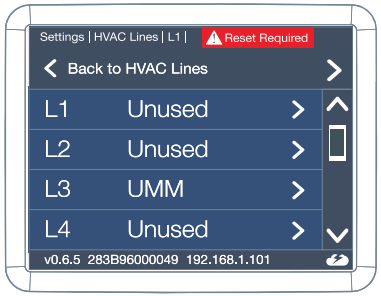
1 Go to Settings

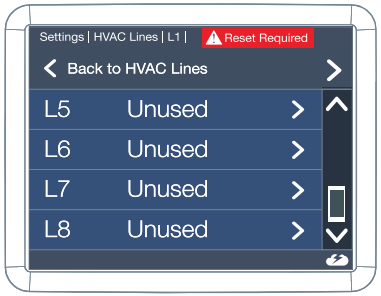


2 Go to HVAC Line

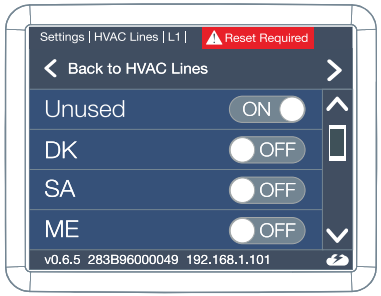


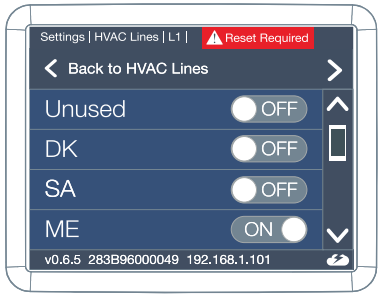
3 Select the HVAC Line you want to configure

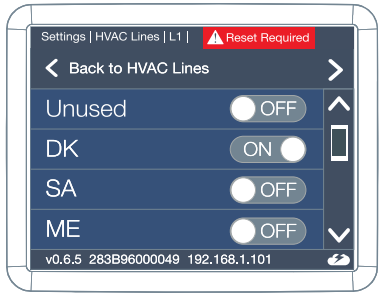




4 Configure the HVAC line type







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

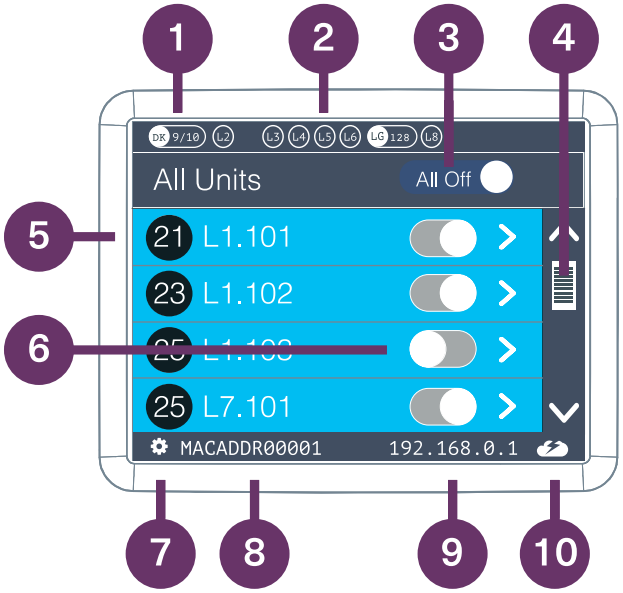
7 Reset is required to make the change

CoolMasterNet installation complete

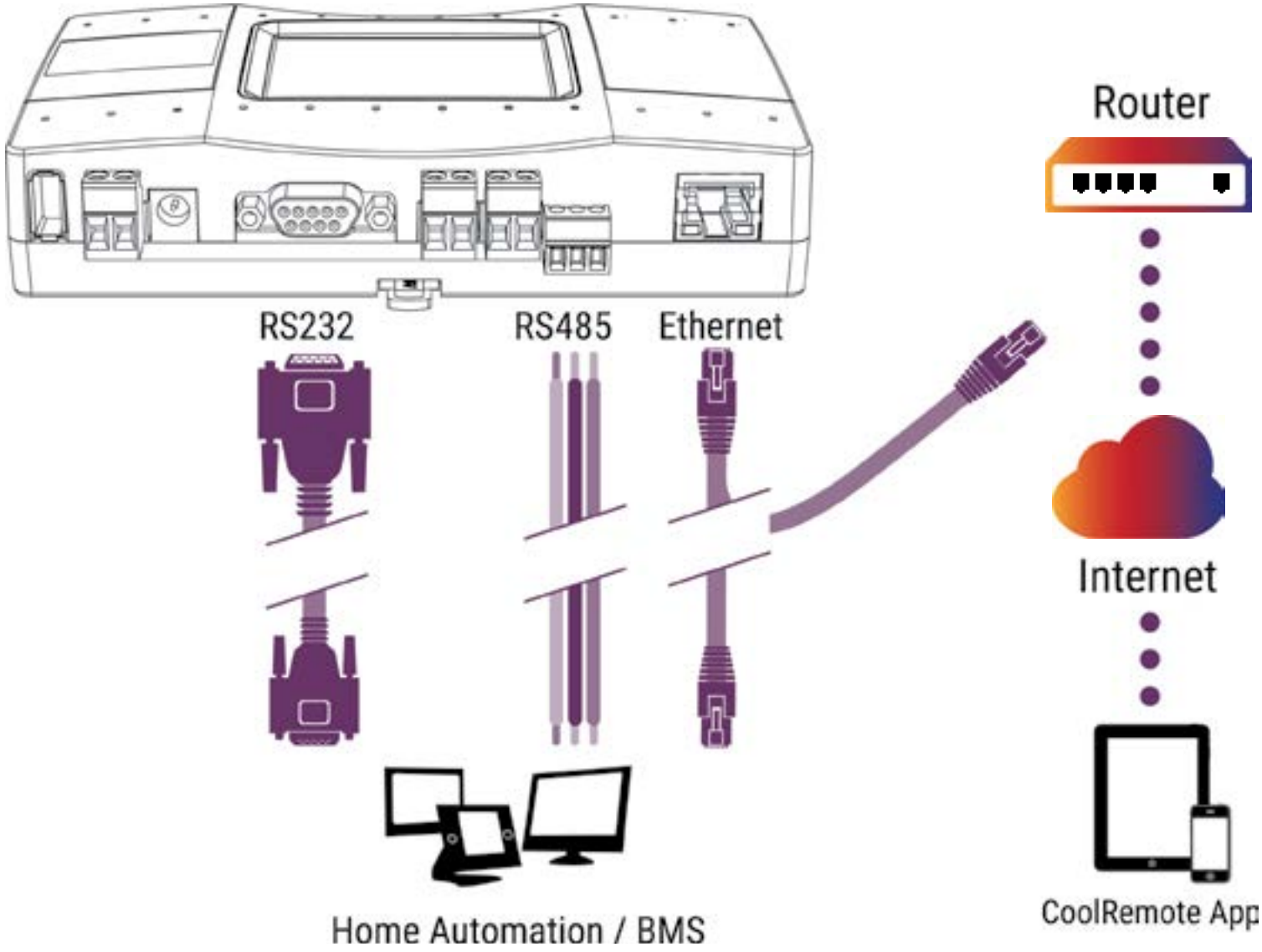
CoolMasterNet Unit screen

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. CoolMasterNet MAC address
9. CoolMasterNet IP address
10. CoolRemote connectivity status
    - Connected - Communicating
    - Connected - Idle
    - Disconnected - with error code



Home Automation, BMS & CoolRemote App

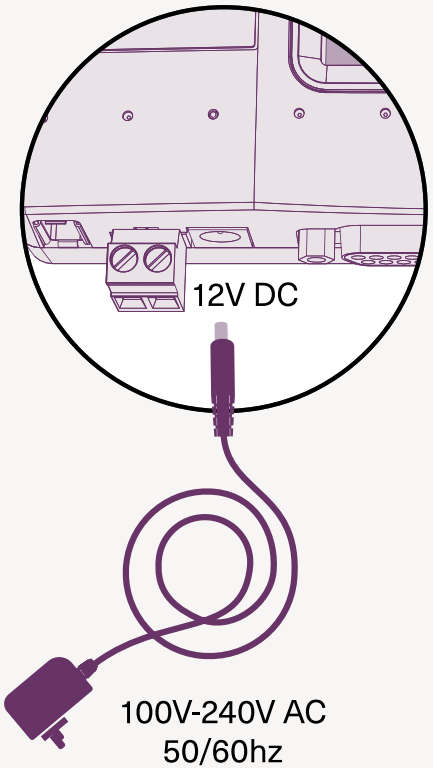


Power Supply

Option A

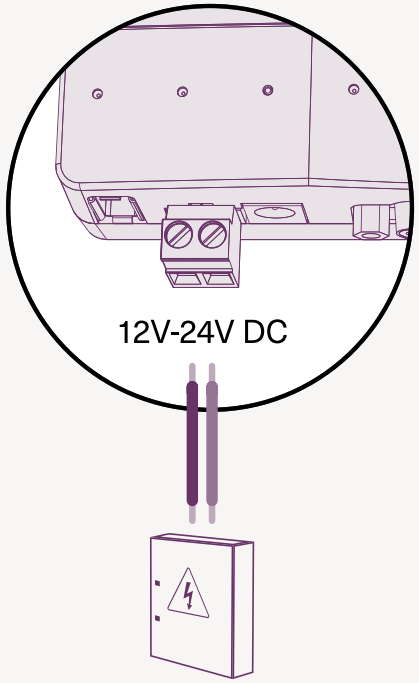
AC Power supply adapter

(Included in the Box)



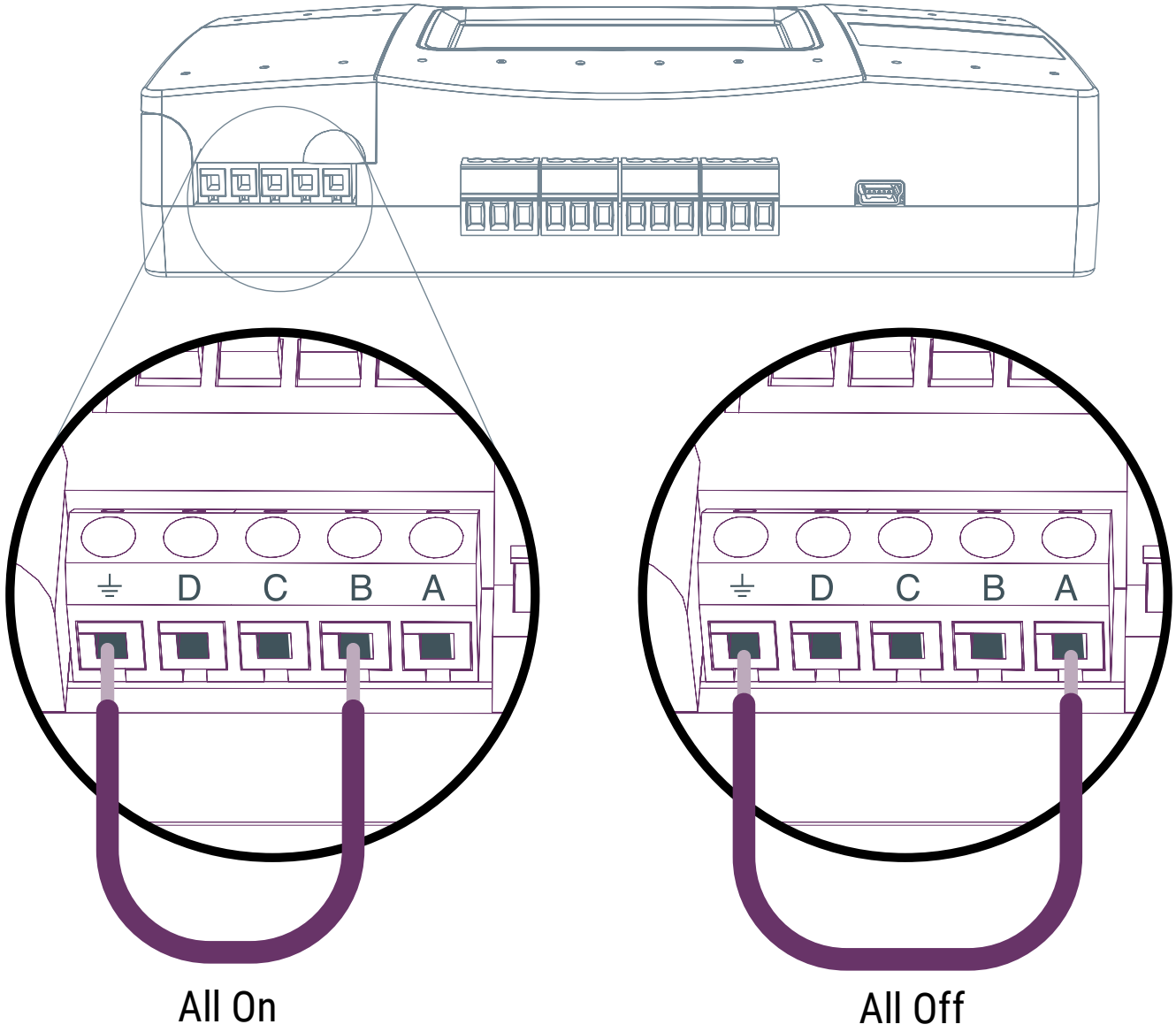
Option B

Direct DC power supply

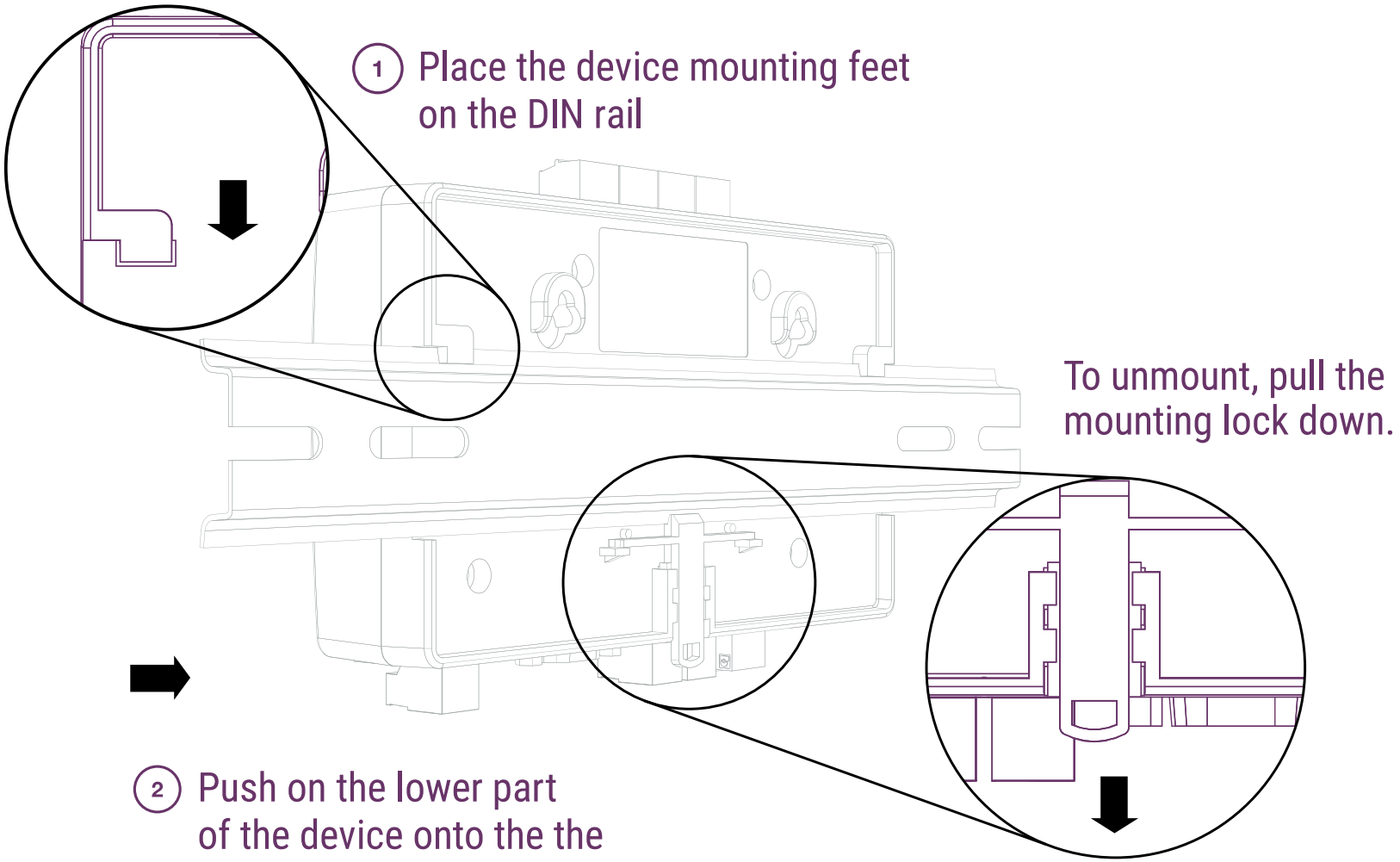


Direct DC power supply from local electrical panel

All On/Off operation by external signal

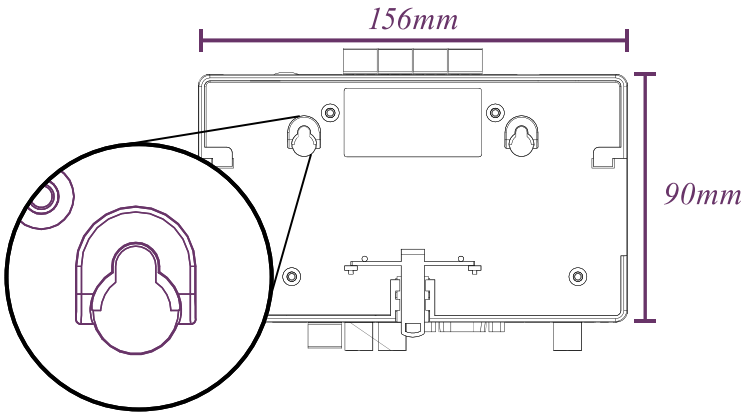


Mounting on a DIN rail

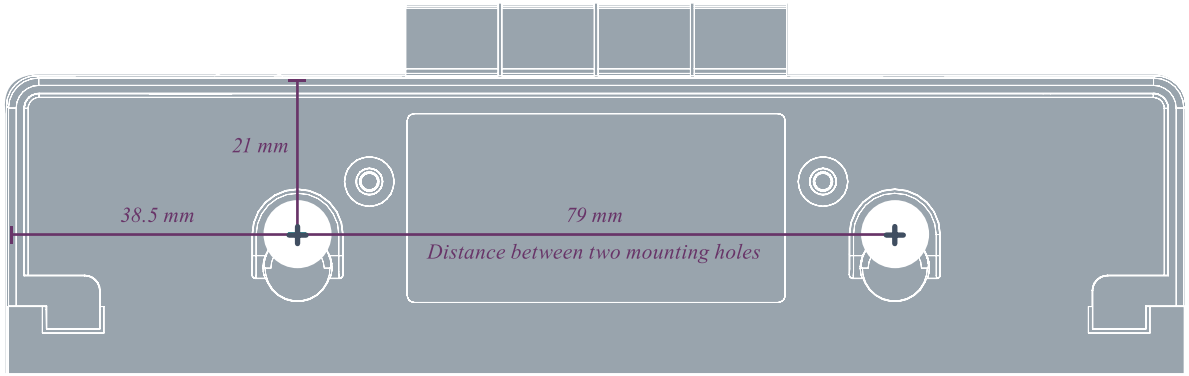


Mounting on a wall

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



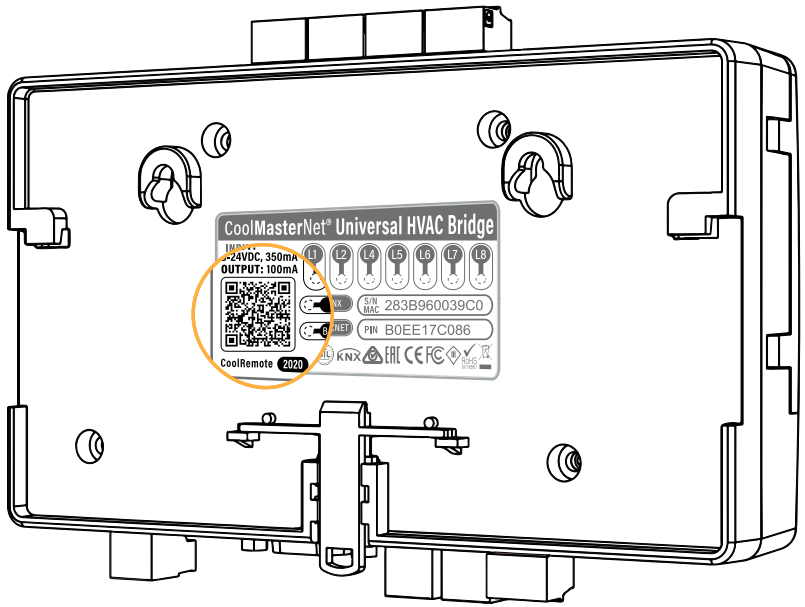
1:1 SCALE MOUNTING TEMPLATE FOR WALL SCREWS



Online Documentation and Support

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

- Online Documentation
- Registration to the CoolRemote App
- Support



Need more help?

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

COOLAUTOMATION

THE INTERNET OF CLIMATE