



CoolMasterNet

Universal HVAC Bridge

Quick Installation Guide



Cool
Automation
Experts in HVAC
Integration and Controls

Need more help?

Visit us <http://coolautomation.com/support>

Email us support@coolautomation.com

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.

The CoolMasterNet can be damaged or may 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.

Corroding copper pipes or soldered parts may result in refrigerant leakage.

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 handled.

Operating the CoolMasterNet in such conditions can cause a fire.

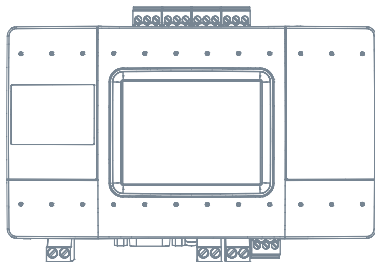
e) High temperature area or directly flamed point.

Heating and/or fire can occur.

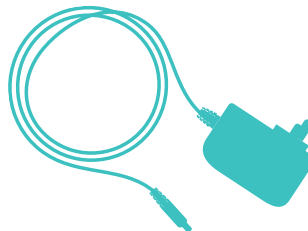
f) Moist area, where there is exposure to water.

If water enters the inside of the CoolMasterNet, it may cause electric shock and electrical components may fail.

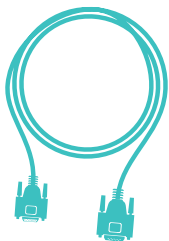
What's In the Box



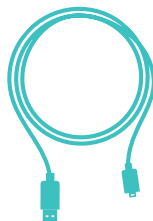
CoolMasterNet



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

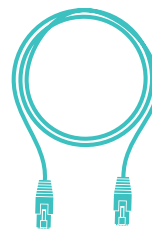


1 RS232 DB9
Male to Female
cable



1 USB-Mini USB
cable

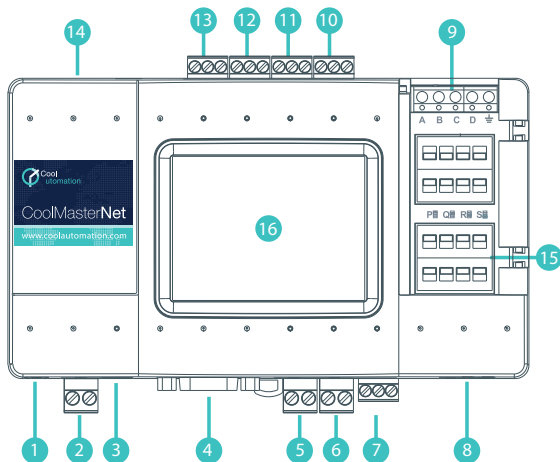
Optional



1 Ethernet
cable

Universal HVAC bridge for the integration of Home Automation / BMS and HVAC.

CoolMasterNet



1 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

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

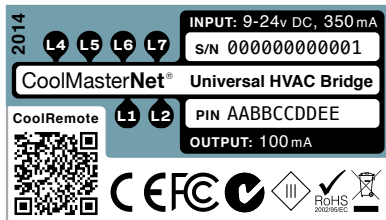
16 LCD Touch Screen

Preconfigured CoolMasterNet

Type label

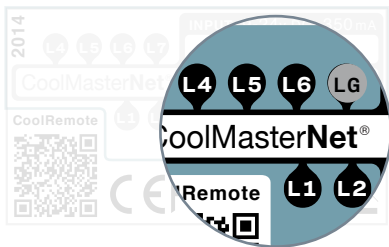
This label uniquely identifies the manufacturer's configuration of CoolMasterNet.

Located on the back of the enclosure.



Type label with Configuration sticker

A preconfigured label example:
configured for LG **LG** on L7



Configuration stickers for HVAC line L1

Sticker for identifying the configuration of the CoolMasterNet on L1.

- DK** Daikin **PRO**
- ME** Mitsubishi Electric **PRO**
- PH** Panasonic (Sanyo)
- TO** Toshiba
- HT** Hitachi **PRO**
- PRO** Optional Support for service and diagnostics functions.

Configuration stickers for HVAC line L7

Sticker for identifying the configuration of the CoolMasterNet on L7.

- LG** LG
- MH** Mitsubishi Heavy
- GR** Gree
- SM** Samsung

HVAC connectivity — on L1

1 HVAC Communication Terminals

Connect to the communication terminals on the HVAC equipment:

HVAC communication terminal's names*

F1		DK Daikin
F2		
M1		ME Mitsubishi
M2		Electric
U1		PN Panasonic (Sanyo)
U2		
U1		TO Toshiba
U2		
1		HT Hitachi
2		

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

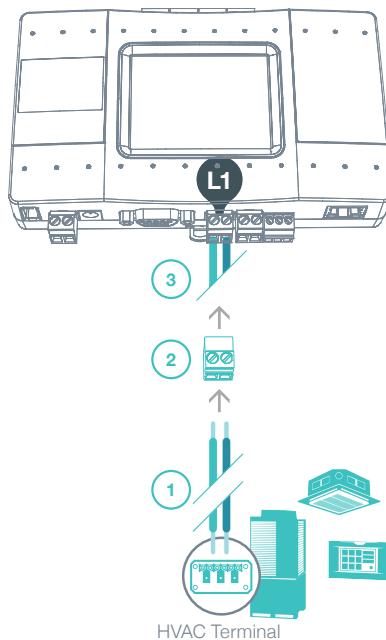
** Line polarity is interchangeable

2 Connecting to the line plug

Secure the cables in the L1 line plug.

3 Plugging to the CoolMasterNet

Insert the plug into the CoolMaster L1 socket



How to connect CoolMasterNet to HVAC

HVAC connectivity — on L7

1 HVAC Communication Terminals

Connect to the communication terminals on the HVAC:

HVAC communication terminal's names

InterA		LG	LG*
InterB			
A		MH	Mitsubishi
B			Heavy
U1		GR	Gree*
U2			
R1		SM	Samsung
R2			

* For **LG**, **Gree** and **Samsung** systems the connection is at outdoor equipment only.

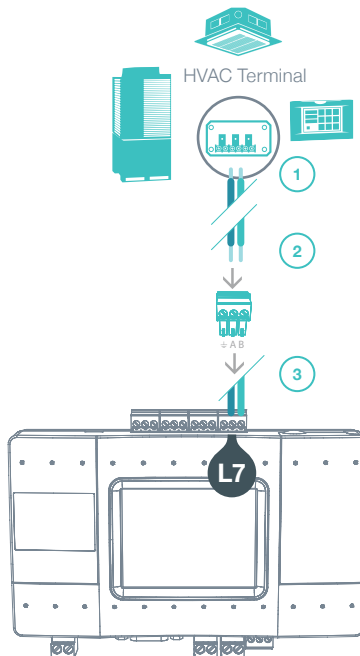
** Line polarity is interchangeable

2 Connecting to the line plug

Secure the cables in the L7 line plug.

3 Plugging to the CoolMasterNet

Insert the plug into the CoolMaster L7 socket.

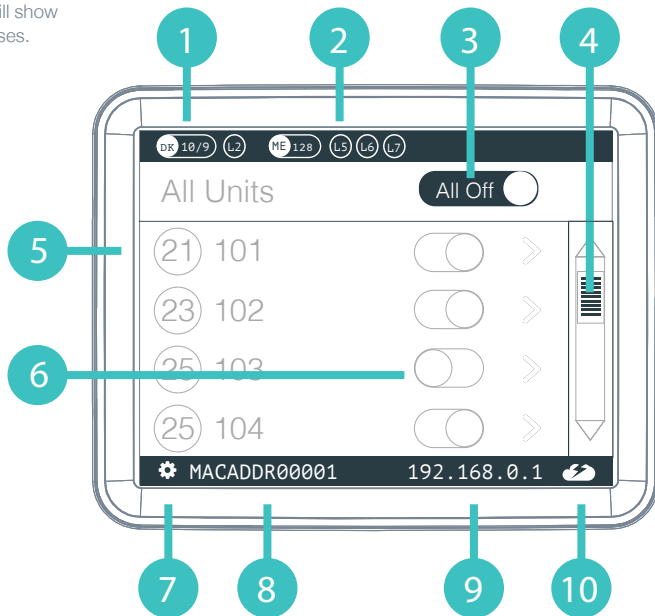


CoolMasterNet Installation complete

CoolMasterNet Unit screen

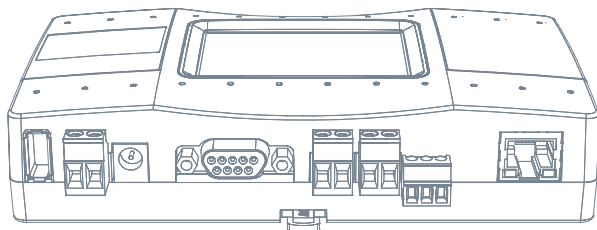
After successful installation, units screen will show all the detected indoor units and their statuses.

- 1 Active System line
 - 2 Inactive System line
 - 3 All ON/OFF operation button
 - 4 Scrollbar
 - 5 Connected indoor unit with it's address and SetPoint temperature indication.
 - 6 Indoor unit operation button (on/off)
 - 7 Service settings button
 - 8 CoolMasterNet MAC address
 - 9 CoolMasterNet internal network IP
 - 10 CoolRemote connectivity status
- Connected
 - Disconnected
 - Connection error with error code



How to connect CoolMasterNet to Home Automation and BMS systems

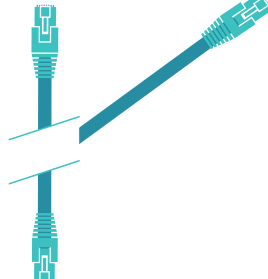
Home Automation, BMS & CoolRemote



RS232



RS485



Ethernet



Home Automation / BMS



Router



Internet



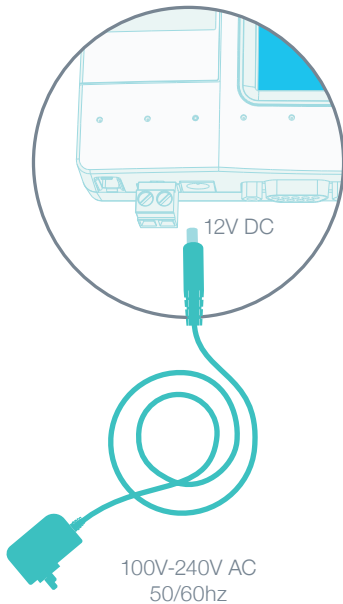
CoolRemote App

How to connect CoolMasterNet to Power supply

Power Supply

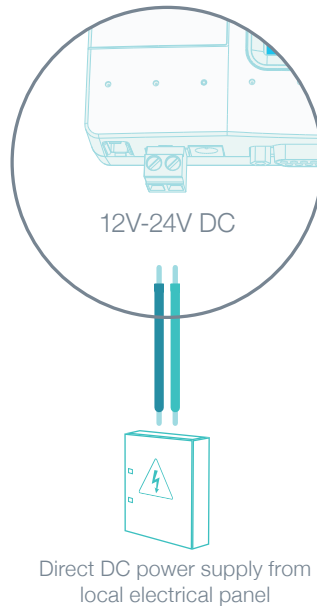
Option A

AC Power supply adapter
(Included in the Box)



Option B

Direct DC power supply



CoolRemote App

Option A

Scan the QR code from the type label
To auto fill-in all the CoolMasterNet details for
CoolRemote App.



1 You will be redirected to
<https://coolremote.net/register>

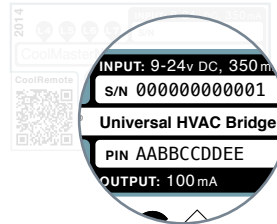
2 Enter your username and password
to remotely control & monitor all your
HVAC units.

Use it on multiple devices:



Option B

Enter the details manually on the Type Label sticker
located on the type label is the SN and the PIN code for
CoolRemote App.



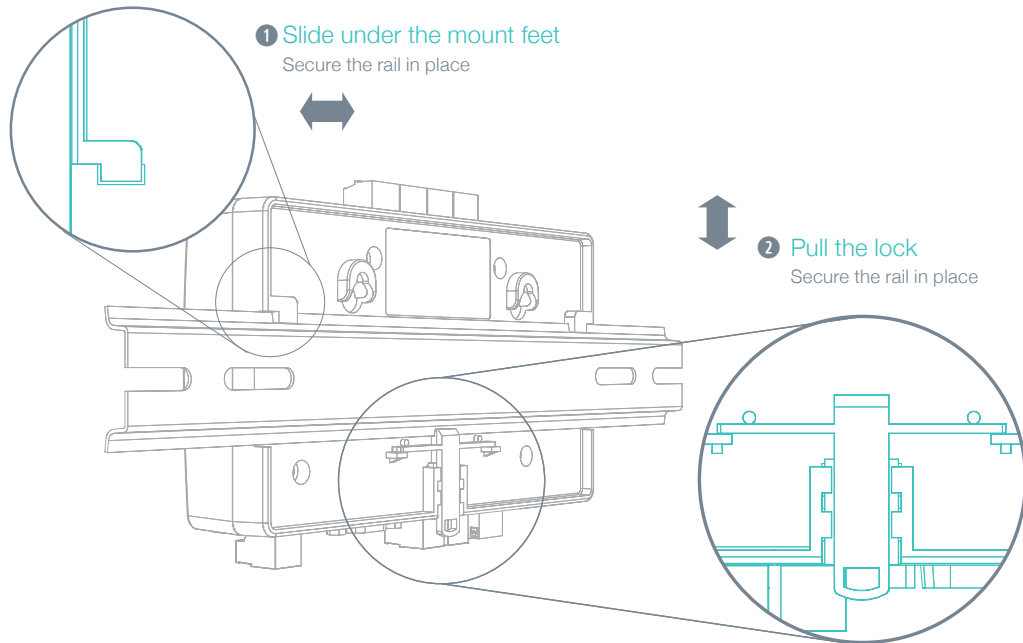
1 Go to:
<https://coolremote.net/register>

2 Enter CoolMasterNet SN number
and PIN code.

3 Enter your username and password
to remotely control & monitor all your
HVAC units.

How to mount on a DIN rail

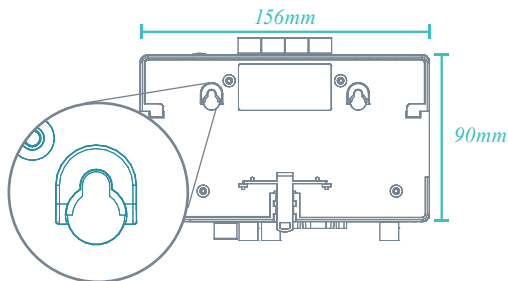
Mounting on DIN rail



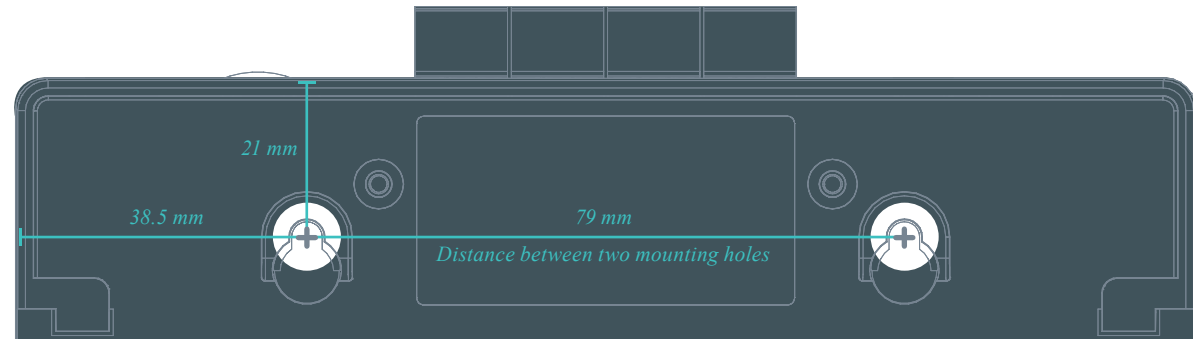
How to mount with screws

Mounting on wall

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



1:1 scale mounting template for wall screws



Non-VRV HVAC configuration

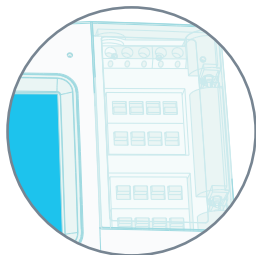


Changing the dip switches, while DC voltage is present on L1, may damage the CoolMasterNet.

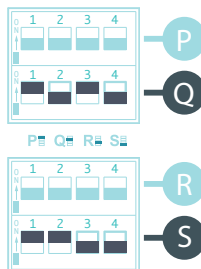
For Daikin/Mitsubishi Electric non-VRV/VRF equipment, DC voltage supply by CoolMasterNet might be required for proper operation.

Make sure CoolMasterNet is disconnected from power.

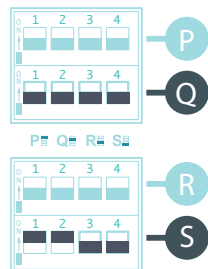
- 1 **Measure DC voltage** on HVAC communication line L1
- 2 **If no DC voltage.** Change the dip switches as shown below
- 3 **Turn ON** the power for CoolMasterNet



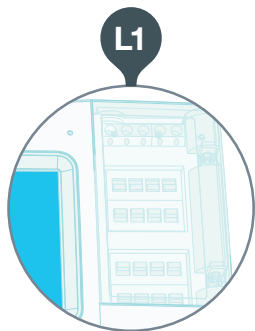
Daikin Non-VRV



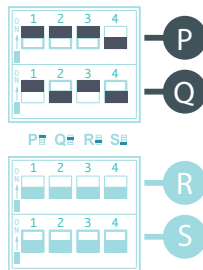
Mitsubishi Non-VRV



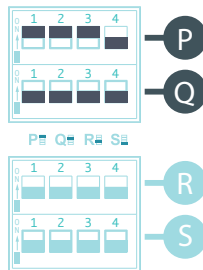
Appendix: Dip Switches setup for VRV/VRF HVAC system on L1
HVAC systems setup on L1



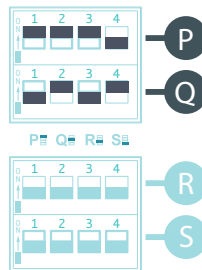
Daikin



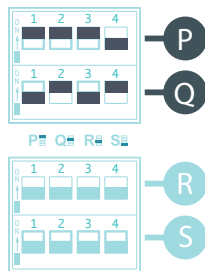
Mitsubishi Electric



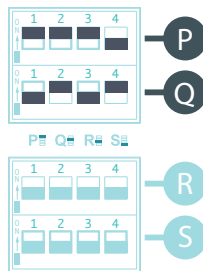
Toshiba



Panasonic (Sanyo)

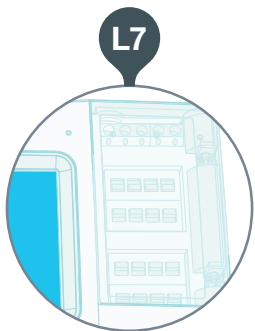


Hitachi

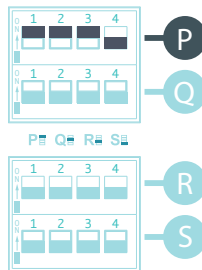


Appendix: Dip Switches setup for VRV/VRF HVAC system on L7

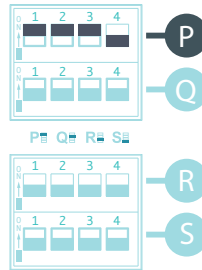
HVAC systems setup on L7



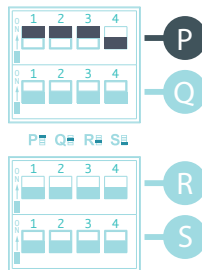
LG



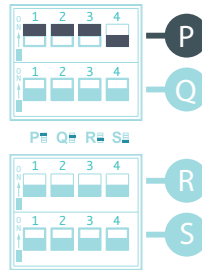
Mitsubishi Heavy



Gree



Samsung



All On, all Off operation by external signal

