



**FULL DC INVERTER SYSTEMS
USER AND INSTALLATION MANUAL**

SDV6-EK

COMMERCIAL AIR CONDITIONERS SDV6

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Safety Precautions

Safety Warning


The Installation & Owner's Manual describes how to properly handle the product, prevent harm to others and prevent property losses, as well as how to use the product correctly and safely. Read the following carefully, make sure you understand the content (symbols and marks), and observe the precautions below.


Caution

Read the safety warnings carefully prior to installation.

Be sure to observe the important safety precautions provided below.





Meanings of labels:

 **Warning** Indicates that improper handling may lead to personal injury or material loss.

 **Caution** Indicates that the operations will be affected due to ignoring a precaution.

After the installation is completed, confirm that no errors occur during the trial run, and hand over the manual to the customer for safekeeping.

Icon description

Icon	Description	
	Prohibited. Information about what is specifically prohibited is provided using graphs or texts in the icon or nearby.	
	Mandatory. A specific mandatory requirement is provided using graphs or texts in the icon or nearby.	
 Warning	Commissioned installation	Ask your local dealer or professionals to install the product. Installation personnel must have relevant professional knowledge. Incorrect installation by non-professionals may lead to a fire, electric shock, or injury.
 Warning of Use	Prohibited	Do not use combustible paints to spray directly on the data converter as this may cause a fire.
	Prohibited	Do not handle the product with wet hands, and do not let water seep into the device. Otherwise, electric shock may occur.

Warning

- This unit must be installed by professional technicians. Users are not allowed to install the unit themselves; otherwise, personal injury or damage to the controller may occur.
 - Other electrical wiring work must be carried out by a professional technician according to the circuit diagram. All wiring work must comply with electrical safety specifications.
 - It is forbidden to modify the use and function of the product without authorization.
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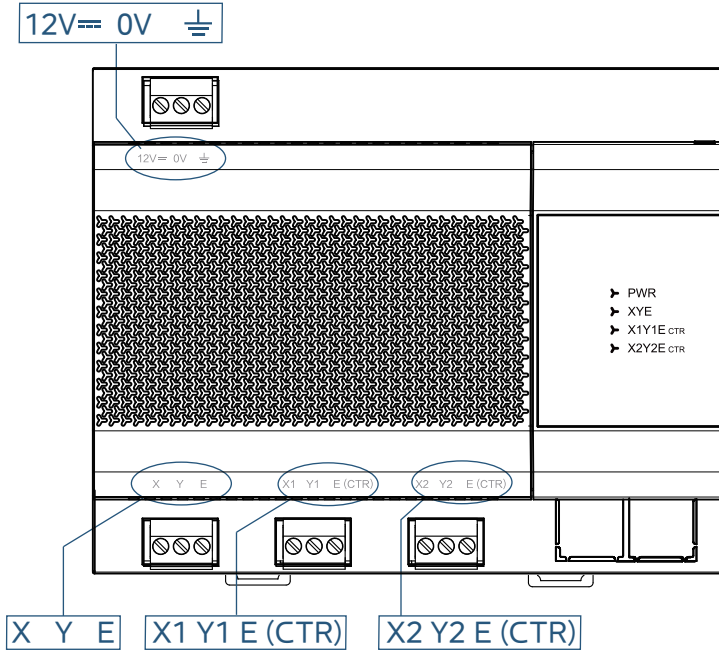
Caution

- Do not install the product in a location where flammable gas can easily leak. Any leakage within the vicinity of the device may cause a fire.
- The wiring must be compatible with controller current.
- Be sure to check the wiring before powering on the product. Never install the machine while the power is on.
- In the event of any malfunction, please contact a professional technician. DO NOT disassemble or repair the unit without authorization.
- This equipment is not suitable for places where children gather.

Product Description

SDV6-EK gateway (the "Gateway") should connect to the X,Y and E ports of the VRF system, and independent 2-way X, Y and Eports shall be extended to meet the application scenario where "the VRF system requires two centralized control platforms at the same time".

It is suitable for all SDV6 series units, that is, SDV6 ODUs and SDV6 IDUs.



Port	Function
12V 0V	12V DC power supply
X Y E	For connection with VRF systems; supports connecting to SDV6 VRF units in up to eight refrigerant systems (the maximum IDU quantity is 64). * Port X/Y/E of the gateway should be connected to port X/Y/E of an ODU, respectively. When multiple refrigerant systems are connected, the IDUs should use different addresses; this also applies to ODUs.
X1 Y1 E (CTR)	Extended X, Y and E ports, can connect to a product of a corresponding centralized control platform.
X2 Y2 E (CTR)	Extended X, Y and E ports, can connect to a product of a corresponding centralized control platform.

Indicator	Type	Status	Description
PWR	Power supply	Off	Power supply for the gateway disconnected or abnormal
		Steady on	Proper operation of power supply for the gateway
X Y E	X Y E communication status	Off/Steady on	Abnormal communication between the gateway and VRF units
		Blinking	Normal communication between the gateway and VRF units
X1 Y1 E _{CTR}	X1 Y1 E communication status	Off/Steady on	Abnormal communication between the gateway and the centralized control platform connected to the corresponding port
		Blinking	Correct data of the gateway and the centralized control platform connected to the corresponding port
X2 Y2 E _{CTR}	X2 Y2 E communication status	Off/Steady on	Abnormal communication between the gateway and the centralized control platform connected to the corresponding port
		Blinking	Correct data of the gateway and the centralized control platform connected to the corresponding port
Operating ambient temperature			-10°C to +50°C
Operating ambient humidity			RH 25% - RH 90%

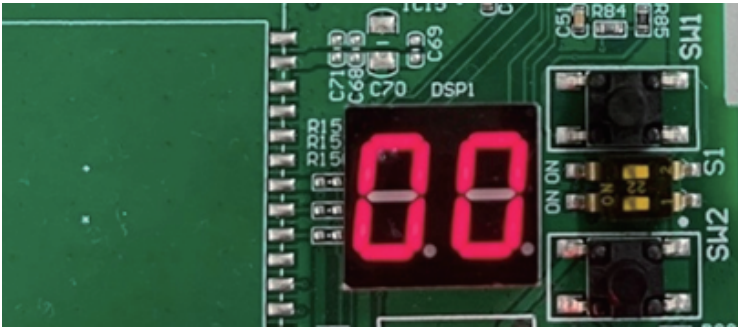
Debugging and Solutions

Debugging

Connect the X, Y and E ports on the ODU to those on the gateway. Power on the gateway. (*1)

(*1) When the refrigerant system is powered on, system detection will take some time. During this period, the gateway may obtain incorrect information about the refrigerant system. You are advised to connect with the gateway after the refrigerant system is stable (about 15 minutes after power-on, depending on the actual refrigerant system).

Open the top cover of the gateway. You can see a digital display:



Once powered on, the digital display shows the software version. After the software runs properly, the number of IDUs and ODUs are displayed alternately.

When the number of IDUs is displayed, the dot in the lower right corner of the digital display lights up.

When the number of ODUs is displayed, the dot in the lower right corner of the digital display does not light up.

Number of IDUs (Dot in the lower right corner of the digital display on)	Number of ODUs (Dot in the lower right corner of the digital display off)
	

Solutions

If the gateway does not detect the refrigerant system (both the number of IDUs and the number of ODUs displayed are 0), do as follows to check the communication between the gateway and the refrigerant system:

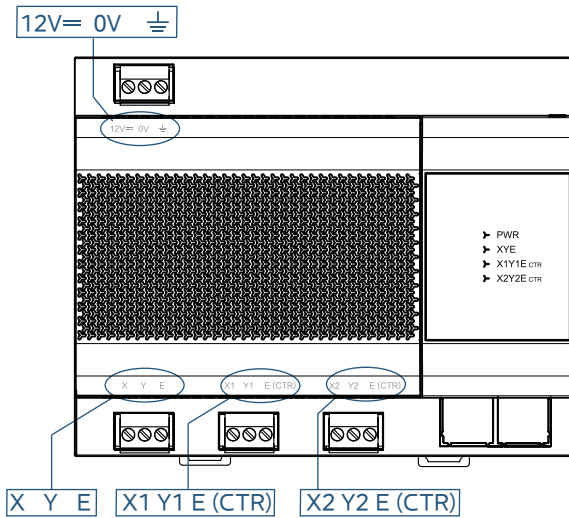
1. Check whether the refrigerant system is just powered on. After the refrigerant system stabilizes, check whether the gateway can detect the IDUs and ODUs. (about 15 minutes after power-on, depending on the actual refrigerant system)
2. Check whether the ports between the gateway and the refrigerant system are correct. The gateway should be connected to the ODUs through the X, Y, and E ports.
3. Check whether the wiring between the gateway and the refrigerant system is correct, and whether the X, Y, and E ports of the gateway are connected to the X, Y, and E ports of the ODU, respectively.
4. When multiple refrigerant systems are connected, check whether the IDUs use different addresses and whether the ODUs use different addresses.

If the gateway detects the refrigerant system, but the centralized control platform connected with the gateway fails to detect the system, do as follows to check the communication between the gateway and the centralized control platform:

1. Check whether the gateway has just detected the refrigerant system. The centralized control platform can detect the refrigerant system some time after the gateway detects the system. Try waiting a bit.
2. Check whether the ports between the gateway and the refrigerant system are correct. The gateway should be connected to the ODUs through the X, Y, and E ports.
3. Check whether the wiring between the gateway and the refrigerant system is correct, and whether the X, Y, and E ports of the gateway are connected to the X, Y, and E ports of the ODU, respectively.
4. When multiple refrigerant systems are connected, check whether the IDUs use different addresses and whether the ODUs use different addresses.

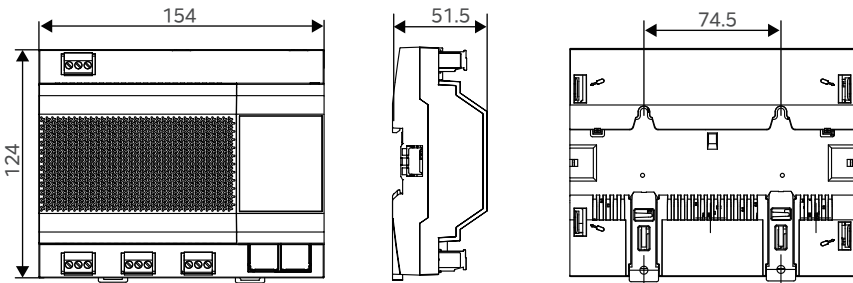
Installation Instructions

Product Introduction



Product Dimensions

Unit: mm



Installation Components

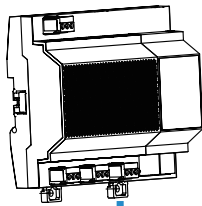
Please confirm that you have all the necessary parts.

No.	Description	Quantity	Remarks
1	Self-tapping screw	4	ST4*20
2	Plastic expansion pipe	4	For installing the controller onto the wall
3	3-pin black terminal	3	For communication
4	3-pin gray terminal	1	For connecting the power supply

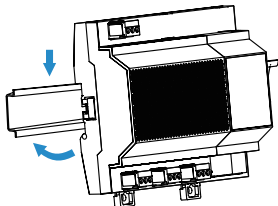
Installation Instructions

Installation Method

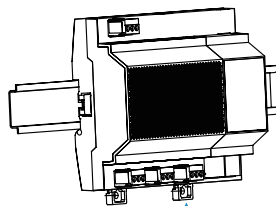
1. Installing the Guide Rail



Pull open the handle buckle

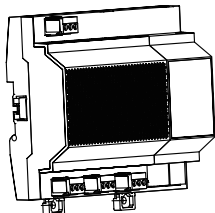


Snap fit the product on the guide rail



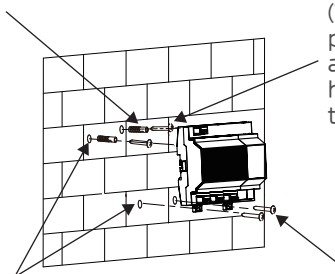
Close the handle buckle

2. Mounting the Device on the Wall



Pull open the handle buckle

Plastic expansion pipe



Philips head screw ST4*20
(This fixing screw is pre-inserted into the wall and the distance from the highest position of the nut to the wall is 5.5 mm)

Drill with a 6 mm drill bit, with a drill depth of no less than 30 mm

Philips head screw ST4*20

NOTE CONCERNING PROTECTION OF ENVIRONMENT



This product must not be disposed of via normal household waste after its service life, but must be taken to a collection station for the recycling of electrical and electronic devices. The symbol on the product, the operating instructions or the packaging indicate such disposal procedures. The materials are recyclable in accordance with their respective symbols. By means of re-use, material recycling or any other form of recycling old appliances you are making an important contribution to the protection of our environment. Please ask your local council where your nearest disposal station is located.

In case of quality problem or other please contact your local supplier or authorized service center.

Emergency number: 112

PRODUCER

SINCLAIR CORPORATION Ltd.
16 Great Queen Street
WC2B 5AH London
United Kingdom
www.sinclair-world.com

This product was manufactured in China (Made in China).

REPRESENTATIVE

SINCLAIR Global Group s.r.o.
Purkynova 45
612 00 Brno
Czech Republic

TECHNICAL SUPPORT

SINCLAIR Global Group s.r.o.
Purkynova 45
612 00 Brno
Czech Republic
Tel.: +420 800 100 285 | Fax: +420 541 590 124
www.sinclair-solutions.com | info@sinclair-solutions.com

