Power Systems Solutions

CABINET AIR CONDITIONER

USER MANUAL

CC-AC-800-C

※ Read manual before the installation and use of the air conditioner.

※ Please keep manual for future reference.

Contents

1. Introduction

1.1 Preface

This manual demonstrates the correct methods of installation and use of the CC-AC800-C Cabinet Air Conditioner. Read the manual carefully before installation to ensure a long service life. After reading, please keep the manual safe for reference at any time.

1.2 Product summary

The Cabinet Air Conditioner is specifically designed to be panel mounted in outdoor communication cabinets. It is applicable where the cabinet internal heat is excessive for the sensitive internal electrical equipment.

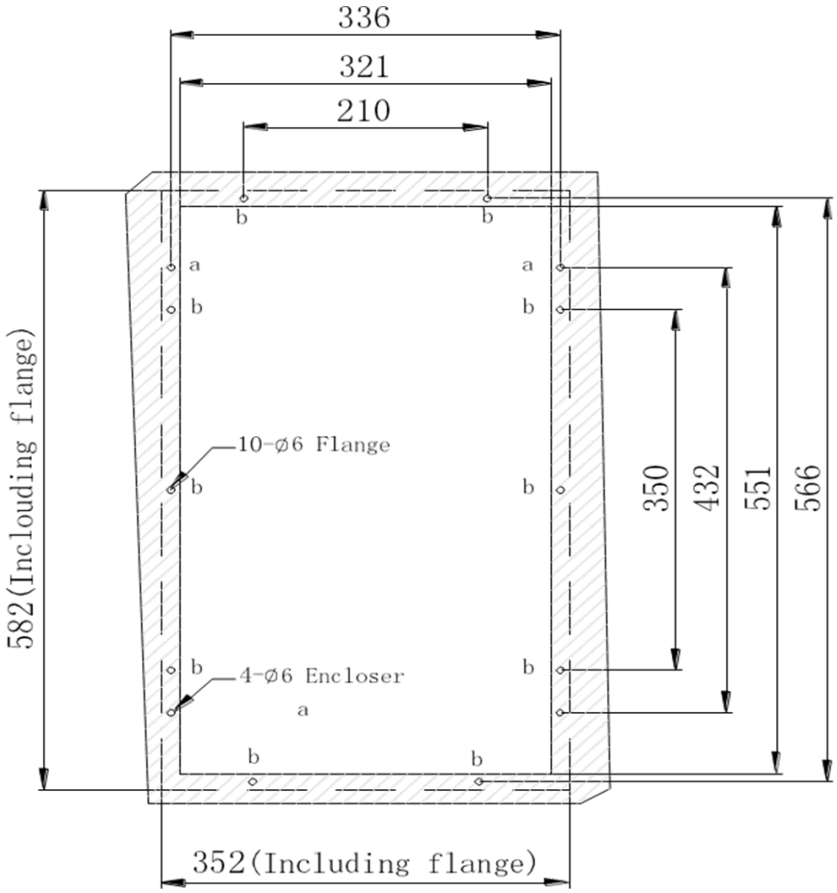
This product has multiple advantages including.

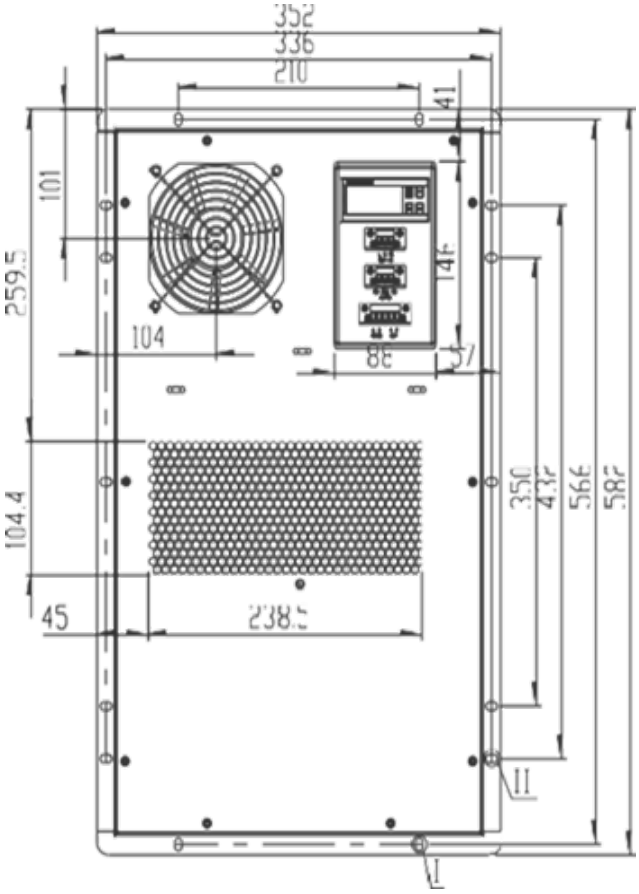
- High rate of reliability.
- Communicates externally.
- Start without complex debugging after powering up.
- IP55.
- Expels dangerous gasses optional.

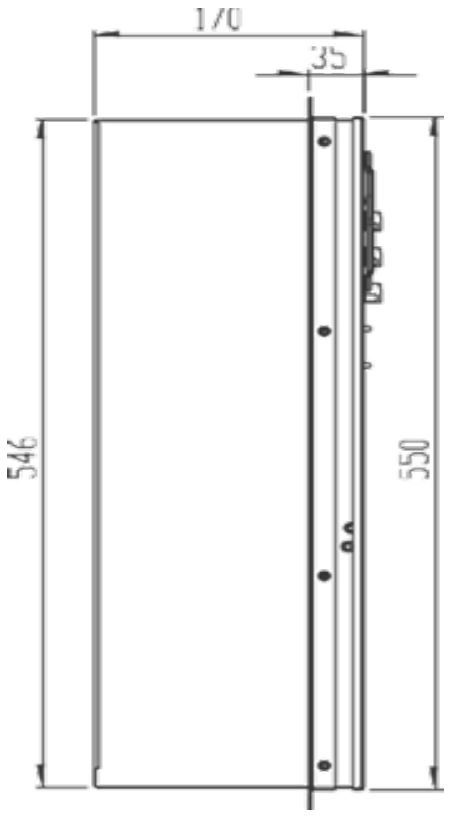
2. Product specifications

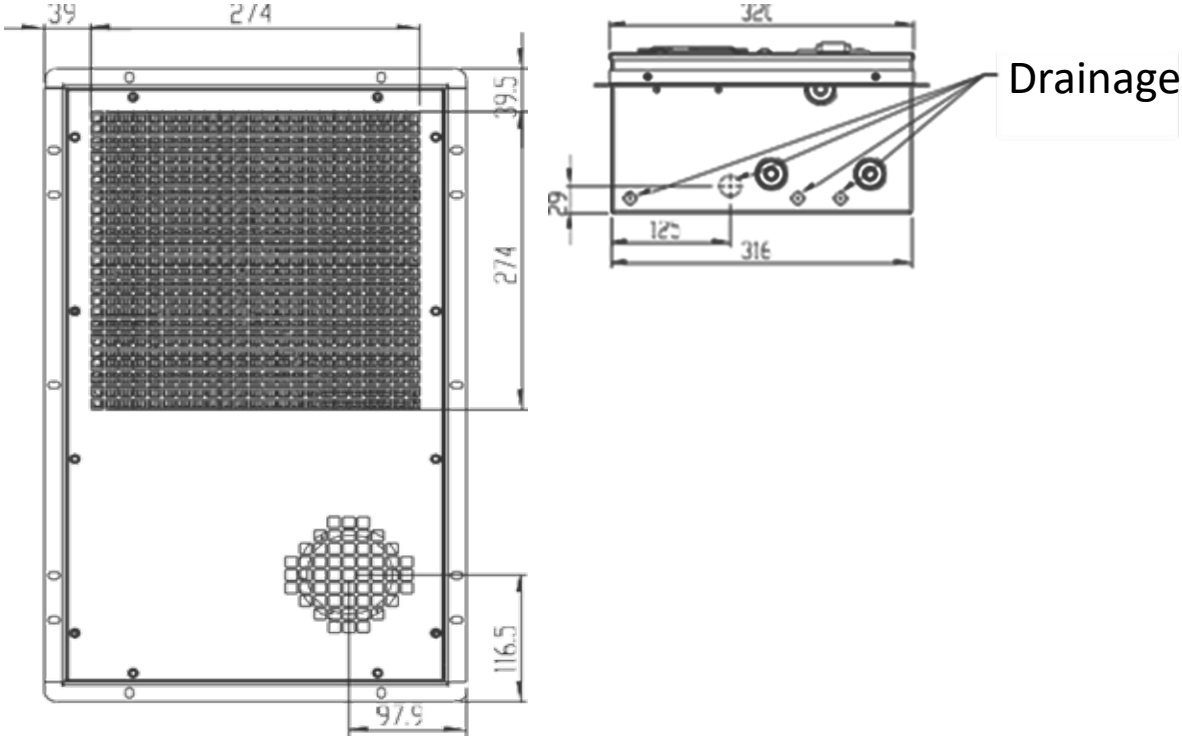
Model	-	CC-AC-800-C
Working Environment Temperature	˚C	-40 - +55
Rated Input Voltage	-	230VAC, 50Hz
Refrigerating Capacity	W	800
Rated Input Power	W	255
Rated Current	A	1.2
Heating Capacity (match)	W	500
Weight (including enclosure/no enclosure)	Kg	20
Noise Level	dB (A)	50
Dimensions (height*width*Depth)	Mm	550*320*170
Outline Dimension (including enclosure/no enclosure)	-	Figure1/figure2
Installation Diagram	-	Figure 5
Installation Method	-	Panel mounted micro inlay
IP Rating	-	IP55
Refrigerant	-	R134a
Surface Treatment	-	Electrostatic Coating (RAL7035)

3. Product dimensions and panel template.









3.2 Preparation Before Installation

- Keep Air Conditioner vertical during installation, ensure angle is less than 3˚
- Handle with care.
- Once packaging is removed ensure it is not damaged (if notable damage inform supplier before installation)
- Ensure all accessories are included (if missing accessories, notify supplier before installing)
- Slide Air Conditioner into pre-formed mounting hole.
- Secure firmly, ensuring seal is under pressure.

4. Factory settings and parameters

Air conditioner cooling parameters can be set via display or software (refrigeration starting and stopping temperature). The Air Conditioner will only start cooling when temperature inside exceeds the upper parameter and will stop when it is below the lower parameter.

Refrigeration Parameters

Parameter	Factory setting	Range
Refrigeration Starting Temperature (˚C)	24	(20 - 40)
Refrigeration Stopping Temperature (˚C)	20	(15 - 35)

Note: Refrigeration starting temperature ≥ Refrigeration stopping temperature +3 ˚C and above

4.2 Heating (Optional)

Air conditioner heating parameters can be set via display or backend software (refrigeration starting and stopping temperature). The Air Conditioner will only start heating when temperature inside is lower than the lower set parameter and will stop when it exceeds the upper parameter.

Heating Parameters

Parameter	Factory setting	Range
Heating Starting Temperature (˚C)	5	(-10 - 15)
Heating Stopping Temperature (˚C)	15	(0 - 20)

Note: Heating starting temperature ≤ Heating stopping temperature -3 ˚C and above

4.3 Emergency & dangerous gas-expelling fan (Optional)

When the set time limit is reached the Air Conditioner will expel dangerous gasses from the cabinet.

Hydrogen-Expelling Fan Parameter Setting

Parameter	Factory setting	Range	Unit
Hydrogen-Expelling Period	24	(0 – 72)	Hours
Hydrogen-Expelling Time	5	(0 – 10)	Min

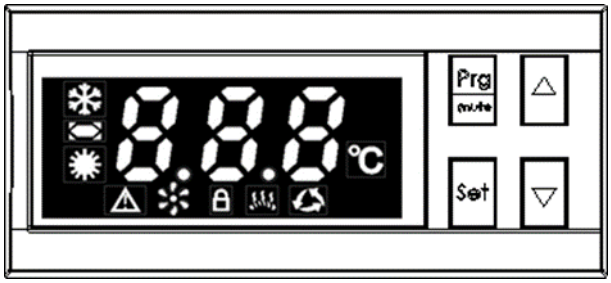
When the internal temperature reaches a set limit the emergency fan will turn on too ensure it cools the cabinet.

Emergency Fan Parameter Settings

Parameter	Factory setting	Range
Emergency Fan Working Temperature (˚C)	30	(30 – 60)
Emergency Fan Stopping Temperature (˚C)	50	(20 – 50)

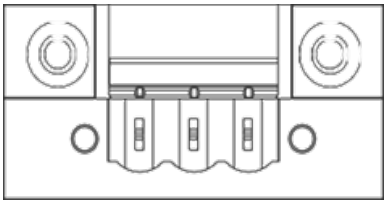
Note: emergency dangerous gas-expelling fan share one port

5.1 Digital Interface and control panel.



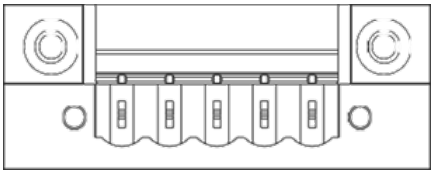
No.	Indicator and keys	Function	Function explanation
1		Air conditioner is cooling	Normal operation
2		Alarm	Fault
3		Power on	Normal operation
4		Fan	Normal operation fan operational
5	*-8.8.8*	Temperature/fault display	Shows temperature or malfunction symbol display
6	Prg/mute	Function key	Function selection key or backspace key (from lower line to upper line)
7	Set	Enter key	Enter parameter set
8	▲	Up key	Increase value, page up
9	▼	Down key	Decrease value, page down

5.2 Alarm contacts



NO COM NC

5.3 Extraction fan and external communications



A B 1 2

RS485 Fan

Outputs	Functions	
1	RS485	RS485+(A)
2	RS485	RS485+(B)
3	Blank	
4	Extraction fan	NO
5	Extraction fan	Com

6.1 Original start up and setting.

Once mounted securely into the panel and drainage pipe has been installed, plug into the mains.

To self-test, push **Prg/mute** and scroll to – **rSt** with the arrows. Push the **Set** and the unit will do a self-test. Push **Set** again to restore to normal.

6.2 Settings

To set up parameters push **Prg/mute** once and scroll to- **SEt** When **SEt** is displaying, push the **Set Button.** The parameter address will display as follows:

Code	**Name**	**Value**	**Unit**	**Factory setting**	**Definition**
F1	**Refrigeration starts**	**20 ~ 40**	**℃**	**24**	**Refrigeration starts**
F2	**Refrigeration stops**	**15 ~ 35**	**℃**	**20**	**Refrigeration stops**
F3	**Interior high temperature alarm**	**30 ~ 60**	**℃**	**30**	**Interior high temperature alarm**
F4	**Interior low temperature alarm**	**-45 ~ 10**	**℃**	**10**	**Interior low temperature alarm**
F5	**emergency fan starts**	**30 ~ 60**	**℃**	**30**	**emergency fan starts**
F6	**emergency fan stops**	**20 ~ 50**	**℃**	**50**	**emergency fan stops**

Once the perimeter address that needs changing is selected, push **Set.** This will display the present setting. By scrolling up or down to the desired setting, press **Set** to lock the desired setting in. Scroll to next address etc.

6.3 Faults

If the fault is displayed on the monitor. Press **Prg/mute** and scroll to **ALN,** then push **Set** and monitor the alarms with the scroll keys.

Fault code	**Fault name**	**Fault code**	**Fault name**
CF	Compressor fault	CS	Cabinet temperature sensor fault
HC	Temperature in cabinet is too high or too low	LP	System low pressure alarm
HP	System high pressure alarm		

6.4 Fault analysis and actions to be taken.

Fault	**Cause**	**Solution**
Cabinet Temperature high	1. **Condenser is jammed or frozen over.** 2. **Working temperature is too high.** 3. **Refrigeration system fault.** 4. **New equipment with large heating capacity.** 5. **Aircon settings.** 6. **False alarm by temperature sensor in cabinet**	**Regularly clean condenser heat exchanger.** **Reduce working temperature, or add sun shields.** **Re-evaluate heating capacity and adjust.** **Re-evaluate temperature set value and adjust.** **Change temperature sensor.** **If none of above work, contact PSS on service@pssdistributors.com.au**
Cabinet Temperature low	1. **Refrigeration system cannot be turned off.** 2.**False alarm due to faulty temperature sensor** 3. **Aircon settings.**	1. **Re-evaluate temperature settings.** 2. **Check connection between refrigeration system main control board and relay contact.** 3. **Change temperature sensor.**

System high pressure alarm	1. **Condenser is jammed frozen over.** 2. **External fan fault.** 3. **Unit not exhausting properly.** 4. **Too much refrigerant in system.** 5. **Environment temperature is too high.** 6. **Sensor fault.**	1. **Regularly clean condenser** 2.**Check/change condensing fan.** 3. **External cover air inlet and outlet should be separated well, make sure there is at 300 mm clearance.** 4. **Ask professional person to repair** 5. **Reduce working temperature by adding sun shields.** 6. **Change temperature sensor.**
Evaporator freezing up	1. **Air internally not flowing properly.** 2. **Air inlet and outlet is not obstructed.** 3. **Internal fan fault.** 4. **Refrigeration system cannot be turned off.** 5. **Sensor false alarm.**	1. **Make sure there is distance between internal recycling air inlet equipment.** 2. **Make sure internal recycling air inlet and outlet is not obstructed.** 3. **Change internal fan.** 4. **Check refrigeration system main control board and related electric.** 5. **Change temperature sensor**
Internal fan fault	1. **Internal fan stalled.** 2. **Internal fan damaged**	**Change internal fan**

External fan fault	1. **External fan stalled.** 2. **External fan damaged.**	**Change fan**
Heater fault	**Heater damaged**	**Change heater**
Compressor fault	1. **Condenser is jammed ice up.** 2. **Rough handling and impacted.**	1. **Regularly clean condenser heat exchanger.** 2. **Handle with care vertically.**

7. Maintenance

Regular inspection

- The air conditioner exhaust grill should be clear of dust and any other obstruction.
- Internal temperature is being regulated.
- Condenser is not frozen over.
- Fans are operating properly.
- There is no vibration when fans and compressor is running.
- It is recommended to service the unit every 6 months.