Application Manual

FOR INDUSTRIAL CABINET AIR-CONDITIONER

(DC series)
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1. Foreword

1.1 Product description

This series of products are designed for communication or related industrial equipment applications of high-performance ac type air conditioning unit, cabinet internal devices suitable for heat, temperature sensitive, and inside and outside completely isolated applications;

Grid application scope: DC 48VDC (Power supply voltage range 42VDC-60VDC)

Warning: In the process of transportation, storage and use, must be in strict accordance with the instructions on the package to keep air conditioning placed vertically upward.

1.2 Conform to the standard

<table>
<thead>
<tr>
<th>Standard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GB/T 626.7-1998</td>
<td>Electromagnetic compatibility(EMC)</td>
</tr>
<tr>
<td>GB4706.1</td>
<td>Safety household and similar electrical appliance</td>
</tr>
<tr>
<td>GB4798.1</td>
<td>Environmental conditions existing in the application of electric and electronic products - storage</td>
</tr>
<tr>
<td>GB4798.2</td>
<td>Environmental conditions existing in the application of electric and electronic products - transport</td>
</tr>
<tr>
<td>GB4798.3</td>
<td>Environmental conditions existing in the application of electric and electronic products - use</td>
</tr>
<tr>
<td>CE</td>
<td>The third party certification</td>
</tr>
</tbody>
</table>
1.3 Technical Parameters

<table>
<thead>
<tr>
<th>Model</th>
<th>DC-300</th>
<th>DC-500</th>
<th>DC-800</th>
<th>DC-1000</th>
<th>DC-1500</th>
<th>DC-2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H mm</td>
<td>400</td>
<td>550</td>
<td>797</td>
<td>746</td>
<td>746</td>
<td>1070</td>
</tr>
<tr>
<td>W mm</td>
<td>250</td>
<td>319</td>
<td>385</td>
<td>446</td>
<td>446</td>
<td>421</td>
</tr>
<tr>
<td>D mm</td>
<td>160</td>
<td>175</td>
<td>165</td>
<td>200</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Refrigerating capacity</td>
<td>300W</td>
<td>800W</td>
<td>800W</td>
<td>1000W</td>
<td>1500W</td>
<td>2000W</td>
</tr>
<tr>
<td>Power supply V</td>
<td>DC -48V±20%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated, power W</td>
<td>100W</td>
<td>150W</td>
<td>250W</td>
<td>280W</td>
<td>390W</td>
<td>570W</td>
</tr>
<tr>
<td>System working pressure</td>
<td></td>
<td></td>
<td></td>
<td>HP 2.5Mpa / LP 1.6Mpa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refrigerant</td>
<td>R134a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IP level</td>
<td>IP55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noise dB(A)</td>
<td>&lt; 60 dB(A)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight kg</td>
<td>8</td>
<td>20</td>
<td>27</td>
<td>28</td>
<td>45</td>
<td>45</td>
</tr>
</tbody>
</table>

DC-300 dimension drawing & cutout drawing:

DC-500 dimension drawing & cutout drawing:
DC-800 dimension drawing & cutout drawing:

DC-1000 dimension drawing & cutout drawing:
DC-1500 dimension drawing & cutout drawing:

DC-2000 dimension drawing & cutout drawing:
2. Packing and Shipping

- Air conditioner use carton or wooden cases, the package includes Annex.
- The air conditioner during the transportation, please pay attention to the following matters.
- During Handling or transport, Air conditioner must be upward placed as excessive tilt and collision.
- Air conditioner is precision instrument, in handling or transport process, should be handled with care, package boxes do not step, prohibit standing or placing other heavy objects.
- During Handling or transporting, pay attention to moisture, water, rain.
- Make sure the package upright as shown in Figure 4-1 before you open the package, please check the packing belt is broken; the wooden box is damaged, deformed, wet.
- Use scissors or a knife dismantling packing belt, and then open the wooden box.
- After opening the package, please check the products according to the packing list.
3. Installation

3.1 Before Installation

You have to prepare the following tools before installation: cross screwdriver, slot type screwdriver, sealing strip, vice.

3.2 Schematic of Installation

3.3 Air Conditioner Installation

- Installation steps:

  1. Check attachments and tools
  2. Draw on the cabinet mounting cut-out map according to Figure, cut off the shadow part. Different models of air conditioner cabinet mounting cut-out maps refer to its specification.
  3. Stick the sealing damping block between cabinet and air conditioner.
  4. Fix the air conditioner into the cabinet.
5. Make water-proof protection.

6. The internal circulation air outlet and the obstacle keep at least 100mm distance, the outer circulation air outlet and the obstacle keep at least 500mm distance.

7. Please to install drain pipe on drain hole and fix with pipe hoop if you need.

• Double check lists after Installation:
  1. Don’t apply this unit in high oil, burning gas, explosive gas, strong corrosively condition, the ambient air must be under 55°C, and the humidity not higher than 95%.
  2. Make sure that the lean of the product no more than 3°.
  3. Make sure that the cabinet should be sealed well to avoid the cooling losing and avoid ambient moisture penetrate into cabinet, this will avoid produce more condensate water.
  4. Ensure that the product is up and running in upright 30 minutes.

3.4 Electrical Wiring

Does Electrical Wiring according to the manual before use the air conditioner; we suggested preferring to use cables in the attachments. You should call the After-sale Service Department of RIGAO, if you cannot sure the cable specification be made by your-self.

Electric wiring should follow below steps:

1. Make sure the power is cut off.

2. Connect the power cable and input terminal according to attached diagram.

3. Connect input terminal on power plug and tighten the screws.
4. Connect the other end of power cable to main power supply.

5. Connect communication cable to signal input terminal according to its definition.

6. Measure power input wire by multimeter to check whether there is a short circuit or an open circuit.

7. Measure signal input wire by multimeter to check whether there is a short circuit or an open circuit.

4. Operation

4.1 Operation interface

The display panel shows cabinet temperature under normal circumstance, and shows alarm code when there is a malfunction.

In the bottom is the status bar, different lamp represents different status.

You can check and set various parameters of air conditioner by the display panel (User Parameters).

4.2 Work state indicator

<table>
<thead>
<tr>
<th>Indicator light</th>
<th>Describe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Flashing when self diagnose or temperature setting mode</td>
</tr>
</tbody>
</table>
Lamp on when cooling

Lamp on when heating

Lamp on when external fan is running

Flashing when alarm

## 5. Maintenance

### 5.1 Prepare tools

<table>
<thead>
<tr>
<th>No.</th>
<th>Tools</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Multimeter</td>
<td>![Multimeter Image]</td>
</tr>
<tr>
<td>2</td>
<td>Cross screwdriver</td>
<td>![Cross Screwdriver Image]</td>
</tr>
<tr>
<td>3</td>
<td>Slotted screwdriver</td>
<td>![Slotted Screwdriver Image]</td>
</tr>
</tbody>
</table>

### 5.2 Routine maintenance

<table>
<thead>
<tr>
<th>No.</th>
<th>Check items</th>
<th>Check methods</th>
<th>Solution</th>
</tr>
</thead>
</table>
| 1   | Power line firm      | 1. Turn off the supply power.  
2. Pulled the power line, watch whether the line is loosening.  
3. Screw the screws on the power cord terminals with a screwdriver, watch whether the screw is loosening. | If there is a power line to loose or loosening, You should be used to tie tight power line; use a screwdriver to loose screw. |
| 2   | Voltage Stability    | Use the multimeter to measure air conditioner input voltage to watch whether the voltage is within normal range. | If the voltage is not within the normal range, Please turn off the power supply immediately. Power on the air conditioner until the supply voltage within normal range. |
### 6. Warranty

#### 6.1 Warranty period

The product guarantee period is **15 months** from product delivery date, or depends on agreement with the company.

#### 6.2 Warranty coverage

During the warranty period, all belong to the product itself quality problems caused by fault, the company will be free for you to repair; Household repair is required to provide the product label.

But by any of the following causes the failure does not belong to our warranty.

1) Out of the Warranty period
2) Cannot provide the product label (the product label is on the nameplate);
3) Because of the abnormal condition or environment, or the instructions specified in the inappropriate installation, maintenance or operation causes the fault;
4) Not caused by equipment failure, caused by user’s other equipment or software.
5) User changed or disassembles by their-selves, or maintained by the person
without authorization.

6) Caused by force majored such as fires, earthquakes, floods and other damage to the fault.

### 6.3 Disclaimer

The warranty is limited to the delivered products. Division I am irresponsible for any loss that may be derived by equipment failure.
Leading manufacturer of enclosure climate control units

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