MAINTENANCE
# MAINTENANCE

## 1 TROUBLE TABLE

### 1.1 Main Control Malfunction

<table>
<thead>
<tr>
<th>No.</th>
<th>Error code</th>
<th>Malfunction name</th>
<th>Origin of malfunction signal</th>
<th>Control description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>E1</td>
<td>High pressure protection</td>
<td>High pressure switch</td>
<td>When outdoor unit detects the high pressure switch is cut off for 3s successively, high pressure protection will occur. All the loads (except the 4-way valve in heating mode) will be switched off. In this case, all the buttons and remote control signals except ON/OFF button will be disabled and cannot be recovered automatically. Switch off the unit or re-energize the unit after cutting off power to eliminate this protection.</td>
</tr>
<tr>
<td>2</td>
<td>E2</td>
<td>Freeze protection</td>
<td>Indoor evaporator temperature sensor</td>
<td>If detecting that the evaporator temperature is lower than protective temp. value after the unit has been running for a period of time under cooling or dry mode, the unit will report this fault, in which case the compressor and outdoor fan motor will be stopped. The unit will not run until evaporator temperature is higher than the protective temp. value and the compressor is stopped for 3min.</td>
</tr>
<tr>
<td>3</td>
<td>E3</td>
<td>Low pressure protection</td>
<td>Low pressure switch</td>
<td>If it is detected within 30s successively that the low-pressure switch is cut off under ON or standby state, the unit will report low pressure protection. If the fault occurs successively 3 times within 30min, the unit cannot be recovered automatically.</td>
</tr>
<tr>
<td>4</td>
<td>E4</td>
<td>Refrigerant lacking protection</td>
<td></td>
<td>If the unit reports system refrigerant lacking within 10min after turning on the unit, the unit will stop operation. If the fault occurs successively 3 times, the unit cannot be recovered automatically.</td>
</tr>
<tr>
<td>6</td>
<td>E6</td>
<td>Malfunction of indoor fan motor</td>
<td>Indoor fan motor</td>
<td>If the indoor unit does not receive signal from indoor fan motor for 30s successively when the fan motor is operating, indoor fan motor malfunction will be reported. In this case, the unit can automatically resume operation after stopping. If the malfunction occurs 6 times within one hour, the unit cannot be recovered automatically. Switch off the unit or re-energize the unit after cutting off power to eliminate this malfunction.</td>
</tr>
</tbody>
</table>

Table 1: Fault Display on Indoor Wired Controller
<table>
<thead>
<tr>
<th>No.</th>
<th>Error code</th>
<th>Malfunction name</th>
<th>Origin of malfunction signal</th>
<th>Control description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>E9</td>
<td>Full water protection</td>
<td>Water level switch</td>
<td>If cut-off of water level switch is detected for 8s successively once energized, the system will enter full water protection. In this case, switch off the unit and then switch it on to eliminate this malfunction.</td>
</tr>
<tr>
<td>10</td>
<td>F0</td>
<td>Malfunction of indoor ambient temperature sensor at air return port</td>
<td>Indoor ambient temperature sensor</td>
<td>If the indoor ambient temperature sensor is detected of open circuit or short circuit for 5s successively, indoor ambient temperature sensor malfunction will be reported. The unit can automatically resume operation after the malfunction disappears. If indoor ambient temperature sensor malfunction occurs in fan mode, only the error code is displayed and the indoor unit can work normally.</td>
</tr>
<tr>
<td>11</td>
<td>F1</td>
<td>Malfunction of evaporator temperature sensor</td>
<td>Evaporator temperature sensor</td>
<td>If the indoor evaporator temperature sensor is detected of open circuit or short circuit for 5s successively, evaporator temperature sensor malfunction will be reported. The unit can automatically resume operation after the malfunction disappears. If evaporator temperature sensor malfunction occurs in fan mode, only the error code is displayed and the indoor unit can work normally.</td>
</tr>
<tr>
<td>12</td>
<td>F2</td>
<td>Malfunction of condenser temperature sensor</td>
<td>Condenser temperature sensor</td>
<td>If the outdoor condenser temperature sensor is detected of open circuit or short circuit for 5s successively, condenser temperature sensor malfunction will be reported. The unit can automatically resume operation after the malfunction disappears. If condenser temperature sensor malfunction occurs in fan mode, only the error code is displayed and the indoor unit can work normally.</td>
</tr>
<tr>
<td>13</td>
<td>F3</td>
<td>Malfunction of outdoor ambient temperature sensor</td>
<td>Outdoor ambient temperature sensor</td>
<td>If the outdoor ambient temperature sensor is detected of open circuit or short circuit for 5s successively, outdoor ambient temperature sensor malfunction will be reported. The unit can automatically resume operation after the malfunction disappears. If outdoor ambient temperature sensor malfunction occurs in fan mode, only the error code is displayed and the indoor unit can work normally.</td>
</tr>
<tr>
<td>14</td>
<td>F4</td>
<td>Malfunction of discharge temperature sensor</td>
<td>Discharge temperature sensor</td>
<td>If the outdoor discharge temperature sensor is detected of open circuit or short circuit for 5s successively after the compressor has been operating for 3min, outdoor discharge temperature sensor malfunction will be reported. The unit can automatically resume operation after the malfunction disappears.</td>
</tr>
<tr>
<td>15</td>
<td>F5</td>
<td>Malfunction of wired controller temperature sensor</td>
<td>Wired controller</td>
<td>If the wired controller detects open circuit or short circuit of its temperature sensor for 5s successively, wired controller temperature sensor malfunction will be reported.</td>
</tr>
<tr>
<td>18</td>
<td>ee</td>
<td>Malfunction of outdoor drive memory chip</td>
<td>Outdoor drive board</td>
<td>If the memory chip of outdoor drive board is broken, the unit cannot be started. The unit cannot be recovered automatically. If the malfunction cannot be eliminated after switching off the unit and then energizing the unit for several times, please replace the outdoor drive board.</td>
</tr>
<tr>
<td>20</td>
<td>H3</td>
<td>Compressor overload protection</td>
<td>Compressor overload switch</td>
<td>If it is detected within 3s successively that the overload switch is cut off under ON or standby state, the unit will report overload protection. If the fault occurs successively 3 times, the unit cannot be recovered automatically. Switch off the unit or re-energize the unit after cutting off power to eliminate this protection.</td>
</tr>
<tr>
<td>No.</td>
<td>Error code</td>
<td>Malfunction name</td>
<td>Origin of malfunction signal</td>
<td>Control description</td>
</tr>
<tr>
<td>-----</td>
<td>------------</td>
<td>------------------</td>
<td>------------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>21</td>
<td>H4</td>
<td>Overload protection</td>
<td>Evaporator temperature, condenser temperature</td>
<td>If outdoor unit detects that the tube temperature is higher than protective temp. value, the unit will report overload protection. The unit will not restart operation until tube temperature is lower than the protective temp. value and the compressor is stopped for 3min. If the protection occurs over 6 times, the unit cannot be recovered automatically. Switch off the unit or re-energize the unit after cutting off power to eliminate this protection.</td>
</tr>
<tr>
<td>23</td>
<td>H6</td>
<td>Malfunction of outdoor fan motor</td>
<td>Outdoor fan motor</td>
<td>If the outdoor unit does not receive signal from outdoor fan motor for 30s successively when the fan motor is operating, outdoor fan motor malfunction will be reported. In this case, the unit can automatically resume operation after stopping. If the malfunction occurs 6 times within one hour, the unit cannot be recovered automatically. Switch off the unit or re-energize the unit after cutting off power to eliminate this malfunction.</td>
</tr>
<tr>
<td>32</td>
<td>U7</td>
<td>Direction changing malfunction of 4-way valve</td>
<td>4-way valve</td>
<td>After the compressor starts operation in heating mode, if the outdoor unit detects the difference between evaporator temperature and indoor ambient temperature is lower than the protective value for 10min successively, direction changing malfunction of 4-way valve will be reported and the outdoor unit will stop operation. The unit can automatically resume operation in the first two malfunctions. If the malfunction occurs 3 times, the unit cannot be recovered automatically. Switch off the unit or re-energize the unit after cutting off power to eliminate this malfunction.</td>
</tr>
<tr>
<td>35</td>
<td>P6</td>
<td>Communication malfunction between main control and drive</td>
<td>Communication between main control board and drive board</td>
<td>If the outdoor main control board does not receive data from drive board, communication malfunction between main control and drive will be reported. This malfunction can be eliminated automatically.</td>
</tr>
<tr>
<td>47</td>
<td>EE</td>
<td>Malfunction of outdoor main control memory chip</td>
<td>Outdoor main control board</td>
<td>If the memory chip of outdoor main control board is broken, the unit cannot be started. The unit cannot be recovered automatically. If the malfunction cannot be eliminated after switching off the unit and then energizing the unit for several times, please replace the outdoor main control board.</td>
</tr>
</tbody>
</table>
# 1.2 Description of Drive Malfunction
Main board dual 8 numeral tube Display Codes for Outdoor Unit of 24~60k

<table>
<thead>
<tr>
<th>Malfunction Item</th>
<th>Indoor Unit Display</th>
<th>Outdoor unit display of dual 8 numeral tube</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC busbar over-voltage protection</td>
<td>PH</td>
<td>PH</td>
</tr>
<tr>
<td>IPM or PFC over-temperature protection</td>
<td>P8</td>
<td>P8</td>
</tr>
<tr>
<td>Current sense circuit error</td>
<td>Pc</td>
<td>Pc</td>
</tr>
<tr>
<td>IPM or PFC temperature sensor error</td>
<td>P7</td>
<td>P7</td>
</tr>
<tr>
<td>Compressor current protection</td>
<td>P5</td>
<td>P5</td>
</tr>
<tr>
<td>DC busbar under-voltage protection</td>
<td>PL</td>
<td>PL</td>
</tr>
<tr>
<td>Compressor startup failure</td>
<td>Lc</td>
<td>Lc</td>
</tr>
<tr>
<td>Drive module reset</td>
<td>P0</td>
<td>P0</td>
</tr>
<tr>
<td>Compressor motor desynchronizing</td>
<td>H7</td>
<td>H7</td>
</tr>
<tr>
<td>Phase loss</td>
<td>Ld</td>
<td>Ld</td>
</tr>
<tr>
<td>Drive-to-main-control communication error</td>
<td>P6</td>
<td>P6</td>
</tr>
<tr>
<td>IPM protection</td>
<td>H5</td>
<td>H5</td>
</tr>
<tr>
<td>Compressor overload protection</td>
<td>H3</td>
<td>H3</td>
</tr>
<tr>
<td>AC current protection (input side)</td>
<td>PA</td>
<td>PA</td>
</tr>
<tr>
<td>Charging circuit error</td>
<td>PU</td>
<td>PU</td>
</tr>
<tr>
<td>PFC protection</td>
<td>HC</td>
<td>HC</td>
</tr>
<tr>
<td>DC fan error</td>
<td>H6</td>
<td>H6</td>
</tr>
<tr>
<td>Input AC voltage abnormality</td>
<td>PP</td>
<td>PP</td>
</tr>
<tr>
<td>Driving board memory chip error</td>
<td>ee</td>
<td>ee</td>
</tr>
</tbody>
</table>
2 FLOW CHART OF TROUBLESHOOTING

2.1 Troubleshooting Flow Chart of Main Control Malfunction

- E1 High Pressure Protection

- Check if the system high pressure is higher than 4.2 MPa (609 psig)
  - No
  - Yes

- Check if the liquid valve and gas valve of outdoor unit open completely
  - No
  - Yes

- Replace the high pressure switch
  - Yes
  - No

- Completely open the liquid valve and gas valve of outdoor unit
  - Replace the outdoor mainboard

- Check if the wiring of high pressure switch is correct
  - Yes
  - No

- Check if the high pressure switch works normally
  - Yes
  - No

- Reconnect wire according to the circuit diagram
  - Replace the high pressure switch

- Clear the obstacle at indoor and outdoor air outlet or air return port to ensure smooth air outlet

- Operate the unit in normal ambient temperature range specified in user’s manual
E2 Freeze Protection

Freeze protection is normal protection but not abnormal malfunction. If freeze protection occurs frequently during operation, please check if the indoor filter is with filth blockage or if the indoor air outlet is abnormal. The user is required to clean the filter, check the air outlet and air return pipe periodically to ensure smooth air return and air outlet.

E3 stands for three statuses:

1) Low pressure protection;
2) Refrigerant lacking protection;
3) Refrigerant recycling mode;
   1) If enter refrigerant recycling mode through special operation, the displayed E3 is not an error code. It will be eliminated when exiting refrigerant recycling mode.
   2) If you do not want to have refrigerant lacking protection, you can enter the debugging mode through wired controller and then cancel the refrigerant lacking protection mode.
**E4 Discharge Protection**

- **E4 protection**
  - Check if the discharge temperature around compressor discharge temperature sensor exceeds 115°C (239°F): Yes
  - Check if there is leakage in the system pipeline; weld the leakage point and recharge refrigerant after vacuum pumping and pressure retaining are passed: Yes
  - Check if the discharge temperature sensor is normal: No
  - Replace the discharge temperature sensor: Yes
  - Replace the outdoor main control board: No

**E6 Communication Malfunction**

- **Communication malfunction**
  - Check if the communication wire between indoor unit and outdoor unit is connected well: Yes
  - Check if there is open circuit in the communication wire between indoor unit and outdoor unit: No
  - Replace the communication wire: Yes
  - Replace the mainboard: No
  - Energize the outdoor unit: Yes
  - Check if the outdoor unit is energized: No
  - Replace the outdoor main control board: Yes
**E9 Full Water Protection**

- If the unit is installed with water pump:
  - No: Short circuit the full water protection interface on indoor mainboard according to the circuit diagram.
  - Yes: Check if the water pump works normally.

  - No: Replace the water pump.
  - Yes: Replace the full water switch or make sure the float of full water switch works normally.

**F0 Malfunction of Indoor Ambient Temperature Sensor**

- Malfunction of indoor ambient temperature sensor:
  - Check if the indoor ambient temperature sensor on mainboard is inserted on the needle stand correctly.
    - No: Correctly insert the temperature sensor on the needle stand.
    - Yes: Disconnect the temperature sensor and measure if its resistance is normal.

  - No: Replace the temperature sensor.
  - Yes: Replace the indoor mainboard.
F1 Malfunction of Evaporator Temperature Sensor

- **Malfunction of evaporator temperature sensor**

  - Check if the evaporator temperature sensor on mainboard is inserted on the needle stand correctly
  - Disconnect the temperature sensor and measure if its resistance is normal
  - Correctly insert the temperature sensor on the needle stand
  - Replace the indoor mainboard

F2 Malfunction of Condenser Temperature Sensor

- **Malfunction of condenser temperature sensor**

  - Check if the condenser temperature sensor on mainboard is inserted on the needle stand correctly
  - Disconnect the temperature sensor and measure if its resistance is normal
  - Correctly insert the temperature sensor on the needle stand
  - Replace the outdoor mainboard
◆ F3 Malfunction of Outdoor Ambient Temperature Sensor

Malfunction of outdoor ambient temperature sensor

Check if the outdoor ambient temperature sensor on mainboard is inserted on the needle stand correctly

Yes

Correctly insert the temperature sensor on the needle stand

No

Disconnect the temperature sensor and measure if its resistance is normal

Yes

Replace the temperature sensor

No

Replace the outdoor mainboard

◆ F4 Malfunction of Discharge Temperature Sensor

Malfunction of discharge temperature sensor

Check if the discharge temperature sensor on mainboard is inserted on the needle stand correctly

Yes

Correctly insert the temperature sensor on the needle stand

No

Disconnect the temperature sensor and measure if its resistance is normal

Yes

Replace the outdoor mainboard

No

Replace the temperature sensor
◆ F5 Malfunction of Wired Controller Temperature Sensor

Replace the wired controller.

◆ H6 Malfunction of Outdoor Fan Motor

Replace the outdoor mainboard.

◆ E8 Malfunction of Indoor Fan Motor

Replace the indoor mainboard.
2.2 Troubleshooting Flow Chart of Drive Malfunction

**Note:** For Outdoor Unit Drive (Inverter) by Single-phase Motor

- **P0 Drive module reset**
  - P7 IPM or PFC temperature sensor error
  - PA AC current protection (input side)
  - PC Current sense circuit error
  - HC PFC protection (42/48k/60k only)

![Troubleshooting Flow Chart]

- **P8 IPM or PFC over-temperature protection**

![Flow Chart Diagram]
◆ PH DC busbar over-voltage protection
◆ PL DC busbar under-voltage protection

PH or PL is displayed on the wired controller

PH or PL is displayed in the mainboard 88 indicating lamp

Is input voltage ranged from 185VAC to 264VAC?

Yes

Replace the mainboard. Does it work normally?

No

Replace the compressor

Work normally

Yes

No

Please cut off the power and notify the power company.

◆ P6 Drive-to-main-control communication error
◆ Lc Compressor Startup Failure

Lc is displayed on the wired controller

Lc is displayed in the mainboard 88 indicating lamp

Replace the mainboard. Does it work normally?

Yes

No

Replace the compressor

Work normally
- P5 Compressor current protection
- H7 Compressor motor desynchronizing
- H5 IPM protection
- Ld Phase loss

**PU Charging circuit error**

PU is displayed on the wired controller

PU is displayed in the mainboard 88 indicating lamp

Is the PFC wire tightened or is the sequence right?

Replace the mainboard

Tighten the PFC wire or adjust the sequence

Work normally

---

Replace the mainboard

Does it work normally?

Yes

No

Adjust the compressor phase sequence

Is the compressor phase sequence right?

Yes

No

Tighten the compressor wire terminals

Is the compressor wire terminals tightened?

Yes

No

Replace the mainboard

Does it work normally?

Yes

No

Replace the compressor

Work normally
- **ee driving board chip error**

  ee is displayed on the wired controller

  - Yes
    - Is the jumper loose?
      - Yes
        - Tighten the jumper
      - No
        - Replace the mainboard
        - Work Normally
    - No
      - Replace the mainboard

- **H6 DC fan error**

  H6 is displayed on the wired controller

  H6 is displayed in the mainboard 88 indicating lamp

  - Yes
    - Is the motor phase sequence right?
      - Yes
        - Work normally
      - No
        - Replace the outdoor fan
        - Does it work normally?
          - Yes
            - Work normally
          - No
            - Replace the outdoor fan
    - No
      - Is the Fan wire terminal loose?
        - Yes
          - Adjust the motor phase sequence
        - No
          - Tighten the fan wiring terminal
      - Replace the mainboard.

  - No
    - Replace the mainboard.
2.3 Interface

- Outdoor units Main Control Board

<table>
<thead>
<tr>
<th>NO.</th>
<th>SILK-SCREEN</th>
<th>INTERFACE</th>
<th>INTERFACE INSTRUCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AC-L</td>
<td>Live wire input</td>
<td>Live wire input</td>
</tr>
<tr>
<td>2</td>
<td>AC-N</td>
<td>Neutral wire input</td>
<td>Neutral wire input</td>
</tr>
<tr>
<td>3</td>
<td>PWR 1</td>
<td>Control power output[1- DC bus voltage, 3- GND]</td>
<td>Power supply interface to the drive 1-pin: DC bus voltage 3-pin: DC bus GND</td>
</tr>
<tr>
<td>6</td>
<td>CN3</td>
<td>Control power output[1-GND, 2-18V, 3-15V]</td>
<td>Power supply interface to the drive 1-pin: GND 2-pin: +18V 3-pin: +15V</td>
</tr>
<tr>
<td>7</td>
<td>COMM1</td>
<td>Communication line [1-3.3V, 2-TX, 3-RX, 4-GND]</td>
<td>Communication needle stand of main control drive 1-pin: +3.3V 2-pin: TXD</td>
</tr>
</tbody>
</table>
8  **CN2**  Communication line with 1-pin GND, 2-pin B and 3-pin A)  Communication needle stand with indoor unit 1-pin: GND, 2-pin: B, 3-pin: A

9  **CN1**  Communication line with 1-pin plus 12V, 2-pin B, 3-pin A and 4-pin GND  Communication interface (reserved): 1-pin: +12V, 2-pin: B, 3-pin: A, 4-pin: GND

10 **H-PRESS**  High pressure switch for fan speed adjustment  Pressure protection switch for fan speed adjustment

11 **HPP**  High pressure switch for system protection (obligate)  Interface of high pressure protection

12 **LPP**  Low pressure switch for system protection (obligate)  Interface of low pressure protection

13 **OVC-COMP**  Compressor overload protection  Interface of compressor overload protection

14 **T-SENSOR2**  1&2 pin: Tube sensor 3&4 pin: Ambient temperature 5&6 pin: Air discharge  1&2 pin: Case temperature sensor 3&4 pin: Ambient temperature sensor 5&6 pin: Discharge temperature sensor

15 **FA**  Electronic expansion valve line 1 to 4-pin: Drive impulse output; 5-pin: +12V;  Interface of electronic expansion valve: 1 to 4-pin: Drive impulse output; 5-pin: +12V;

16 **HEAT**  Compressor electrical heater  Compressor electric heating belt

17 **VA-1**  Chassis electrical heater  Chassis electric heating belt

18 **4V**  4-way valve  4-way valve

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**GUHD24NS3GO/GUHD36NS3GO**

(1). Driving Board

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![Diagram](image-url)
U-Match Series DC Inverter Service Manual

<table>
<thead>
<tr>
<th>No.</th>
<th>Printing</th>
<th>Interface Description</th>
<th>No.</th>
<th>Printing</th>
<th>Interface Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>L2_2</td>
<td>PFC induction wire (blue)</td>
<td>2</td>
<td>L1_1</td>
<td>PFC induction wire (brown)</td>
</tr>
<tr>
<td>3</td>
<td>N</td>
<td>Neutral wire input (white)</td>
<td>4</td>
<td>AC-L</td>
<td>Live wire input (red)</td>
</tr>
<tr>
<td>5</td>
<td>COMM/COMM1</td>
<td>Communication interface</td>
<td>6</td>
<td>JTAG1</td>
<td>(Reserved)</td>
</tr>
<tr>
<td>7</td>
<td>PWR</td>
<td>Control power input</td>
<td>8</td>
<td>DC-BUS1</td>
<td>Bus electric discharging interface</td>
</tr>
<tr>
<td>9</td>
<td>L2-1</td>
<td>PFC induction wire (yellow)</td>
<td>10</td>
<td>L1-2</td>
<td>PFC induction wire (white)</td>
</tr>
<tr>
<td>11</td>
<td>P-OUT</td>
<td>(Reserved)</td>
<td>12</td>
<td>G-OUT</td>
<td>(Reserved)</td>
</tr>
<tr>
<td>13</td>
<td>W</td>
<td>Compressor Phase W</td>
<td>14</td>
<td>V</td>
<td>Compressor Phase V</td>
</tr>
<tr>
<td>15</td>
<td>U</td>
<td>Compressor Phase U</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(2). Filtering Board

<table>
<thead>
<tr>
<th>No.</th>
<th>Printing</th>
<th>Interface Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>N-OUT1</td>
<td>Neutral wire output 1 (white)</td>
</tr>
<tr>
<td>3</td>
<td>L-OUT</td>
<td>Live wire output (red)</td>
</tr>
<tr>
<td>5</td>
<td>E2</td>
<td>(Reserved)</td>
</tr>
<tr>
<td>7</td>
<td>AC-N</td>
<td>Neutral wire input (white)</td>
</tr>
</tbody>
</table>

GUHD42NS3GO/GUHD48NS3GO/GUHD60NS3GO

(1). Drive Board:

- GUHD42NS3GO/GUHD48NS3GO/GUHD60NS3GO
### 2.4 IPM, PFC Testing Method

#### 2.4.1 Method of Testing IPM Module

1. Preparation before test: prepare a universal meter and turn to its diode option, and then remove the wires U, V, W of the compressor after it is powered off for one minute.

2. Testing Steps

   Step 1: put the black probe on the place P and the red one on the wiring terminal U, V, W respectively as shown in the following figure to measure the voltage between UP, VP and WP.

   Step 2: put the red probe on the place N and the black one on the wiring terminal U, V, W respectively as shown in the following figure to measure the voltage between N and U, V, W respectively.
as shown in the following figure to measure the voltage between NU, NV and NW.

(3) If the measured voltages between UP, VP, WP, NU, NV, NW are all among 0.3V-0.7V, then it indicates the IPM module is normal; If any measured value is 0, it indicates the IPM is damaged.

2.4.2 Method of Testing PFC Module Short Circuit

Note: Only for GUHD42NS3GO/GUHD48NS3GO/GUHD60NS3GO

(4) Preparation before test: prepare a universal meter and turn to its diode option, and then remove the wires L1-2, L2-1 after it is powered off for one minute.

(5) Testing Steps

Step 1: put the black probe on the place P and the red one on the wiring terminal L1-2, L2-1 respectively as shown in the following figure to measure the voltage between L1-2P and L2-1 P.

Step 2: put the red probe on the place N and the black one on the wiring terminal L1-2, L2-1 respectively as shown in the following figure to measure the voltage between N L1-2 and NL2-1.

(6) If the measured voltages between L1-2P, L2-1 P, N L1-2, NL2-1 are all among 0.3V-0.7V, then it indicates the PFC module is normal; If any measured value is 0, it indicates the PFC is damaged.

◆ GUHD24NS3GO/GUHD36NS3GO

![Diagram of PFC module short circuit test](image)
3 WIRING DIAGRAM

3.1 Outdoor unit

The actual wiring should always refer to the wiring diagram of the unit.

- Model: GUHD24NS3GO
◆ Model: GUHD36NS3GO

OUTDOOR UNIT

Model GUHD36NS3GO
- Enter the Power Supply for indoor unit and outdoor unit
- The power supply for outdoor units from outdoor unit

OUTDOOR UNIT

Model GUHD42NS3GO
- Enter the Power Supply for indoor unit and outdoor unit
- The power supply for outdoor units from outdoor unit

ELECTRIC COMPONENT POSITION MAP

Jumper cap needs to be connected if there is a jumper cap on unit's main board.
3.2 Indoor unit

The actual wiring should always refer to the wiring diagram of the unit.

3.2.1 Duct Type

Model: GFH24S3GI
◆ GFH24S3G1I

◆ Model: GFH36S3GI/GFH42S3GI/GFH48S3GI/GFH60S3GI
Model: GFH36S3G1I/GFH42S3G1I/GFH48S3G1I/GFH60S3GI