



Owner's Manual

Original Instructions

LTE-DTU

Model:

IE60-33/CF2

Thank you for choosing this product. Please read this Owner's Manual carefully before operation and retain it for future reference. If you have lost the Owner's Manual, please contact the local agent or visit www.gree.com or send an email to global@gree.com.cn for the electronic version.

GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI

To Users

Thank you for selecting Gree's product. Please read this instruction manual carefully before installing and using the product, so as to master and correctly use the product. In order to guide you to correctly install and use our product and achieve expected operating effect, we hereby instruct as below:

- (1) This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
- (2) This instruction manual is a universal manual, some functions are only applicable to particular product. All the illustrations and information in the instruction manual are only for reference, and control interface should be subject to actual operation.
- (3) In order to make the product better, we will continuously conduct improvement and innovation. We have the right to make necessary revision to the product from time to time due to the reason of sales or production, and reserve the right to revise the contents without further notice.
- (4) For personal injury or property loss and damage caused by improper

operation such as improper installation and debugging, unnecessary maintenance, violation of related national laws and rules and industrial standard, and violation of this instruction manual, etc., we will bear no liability.

- (5) The final right to interpret for this instruction manual belongs to Gree Electric Appliances Inc. of Zhuhai.

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1 Safety Notices (Please be sure to abide)



Warning: If not abide strictly, it may cause severe damage to the unit or the people.



Note: If not abide strictly, it may cause slight or medium damage to the unit or the people.



This sign indicates that the operation must be prohibited. Improper operation may cause severe damage or death to people.



This sign indicates that the items must be observed. Improper operation may cause damage to people or property.



WARNING!

This product can't be installed at corrosive , inflammable or explosive environment or the place with special requirements, such as kitchen. Otherwise, it will affect the normal operation or shorten the service life of the unit, or even cause fire hazard or serious injury. As for above special places, please adopt special air conditioner with anti-corrosive or anti-explosion function .

2 User Notices

1. Prohibit installing LTE-DTU at damp place or the place with direct sunshine;
2. The installation position should be damp-proof and dust-proof. It's suggested to be installed on the electric control cabinet.
3. Do not operate the controller with wet hands;
4. Strong 4G signal should be guaranteed for the installation position of antenna;
5. Positive pole and negative pole of controller, and the wire connection between the communication wire and the power must be correct;
6. Do not knock, throw or frequently assemble or disassemble the wired controller;
7. The controller is applicable for CAN1 or CAN2 system. The communication distance must be within 1000m;
8. The antenna of controller must be 300mm or more away from the electric control board of the complete unit, avoiding interference to the complete unit.
9. The electromagnetic environment for the installation position must satisfy with the requirement of local directive.

10.Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

11. This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Cet équipement est conforme aux limites d'exposition aux radiations IC CNR-102 établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et votre corps.

3 Appearance of Controller

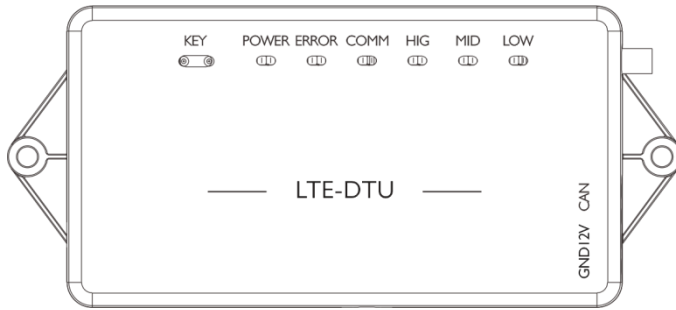


Figure 1 LTE-DTU schematic diagram



Figure 2 Antenna schematic diagram

4 Interface Instruction



- ① KEY button: Press it for reporting data.
- ② LOW: low signal indicator. The signal-receiving for the antenna at present is bad.
- ③ MID: low signal indicator. The signal-receiving for the antenna at present is ok.
- ④ HIG: high signal indicator. The signal-receiving for the antenna at present is excellent;
- ⑤ COMM: Communication indicator. It indicates it generating data now.
- ⑥ ERROR: Error indicator. It indicates current DTU communication is abnormal.
- ⑦ POWER: power indicator. It indicates current power is normal. It will be on after energization.

Remark:

1. User holds the KEY button for 5s and then the module will actively report the data. During this period, COMM indicator will flash;
2. These three signal indicators are mutually exclusive. Only one indicator is on at one time.
3. There are three statuses for the ERROR indicators. OFF indicates current communication is normal; Flash indicates it can't logon the internet; ON indicates the communication between DTU and the bus is abnormal.

5 Packing List

This controller contains below accessories. Please check them before installation.

LTE-DTU	1 set
Instruction manual	1 copy
Antenna and Antenna gain	1 piece and 2.5dBi
Tapping screw	2

6 Installation and Debugging for LTE-DTU

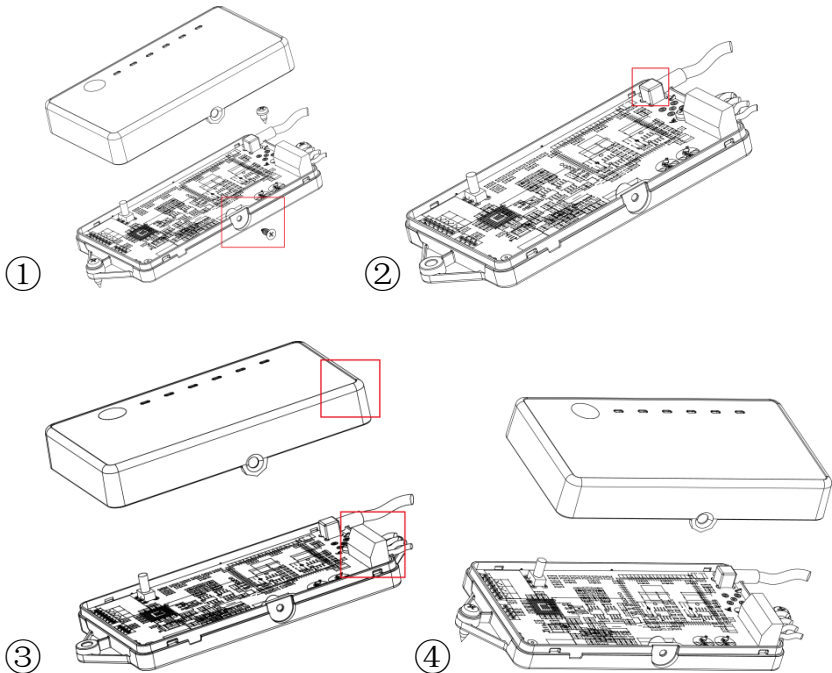
1. Installation requirement

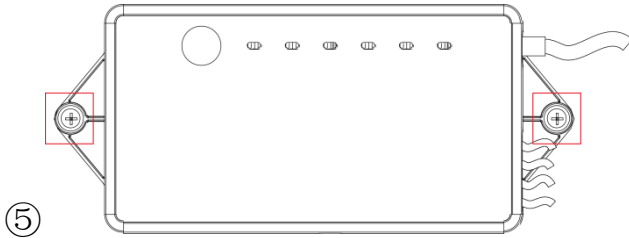
- a) Prohibit installing LTE-DTU at damp place.
- b) Prohibit installing LTE-DTU at the place with direct sunshine.
- c) Prohibit installing LTE-DTU at the place where is next to high-temperature objects and there is splashing water.
- d) Prohibit installing LTE-DTU at the place where the EMC is too high.
- e) Prohibit installing LTE-DTU at the place where is next to the electric control main board.
- f) Power: DC 12V, 500mA.

2. Installation

- a) Prepare a cross screwdriver.
- b) Twist off the screw and then open the front cover; see figure ①.

- c) Assemble antenna: Take out the antenna, connect the interface of brass terminal at one end of antenna with the J2 terminal on the main board, and then tighten the nuts. Please do aim at the wire core position when assembling the antenna. See figure ② .
- d) Lead out the antenna from the electric control cabinet, keeping away from other strong electricity or communication line.
- e) Connect the negative pole of power to “GND” terminal; connect the positive pole of power to “12V” terminal; see figure ③.
- f) Connect two wires of CAN communication terminal to these two ports under the “CAN” silk print respectively; See figure ③.
- g) Buckle the top cover and the bottom case together, and then tighten the screws; See figure ④.
- h) Fix the corresponding installation position of LTE-DTU in the electric control cabinet well with screws at the horizontal direction; See figure ⑤.
- i) Put through the power for test. Power indicator is on. Hold the button for 5s and then communication indicator will flash quickly, enter into data-reporting mode by KEY button and then it will be connected to the server.
- j) Exit from the data-reporting by KEY button: Under quick-flashing status, hold the KEY button for 5s to exit from the data-reporting by KEY button.





7 Troubleshooting

1. After putting through the power, power indicator is off. Check whether the power is connected inversely and whether the power supply is normal;
2. After putting through the power, ERROR indicator is flashing. Check whether the antenna is connected well, whether the wireless signal is low and whether SIM card is connected normally;
3. After putting through the power, ERROR indicator is on. Check whether the communication wire between LTE-DTU and the bus is connected normally;



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