

LCD KEYPAD

(C1-OPT-LCD)

INSTRUCTION MANUAL

Customer service center : 1544-5011

The user manual is designed for users with basic knowledge of electronic devices.

Precautions

Keep this manual close to the handler responsible for the operation and maintenance inspection. Be sure to familiarize yourself with the handling manual before performing an inspection, and use it correctly according to the instructions of the instrument's knowledge, safety information, precautions, operation, and handling methods. Always observe the various specifications in the handbook. Also, perform the correct inspection and repair to prevent the failure.

Warranty for the unit

The warranty period for the delivery product is one year after delivery to the designated place of the order. In the event of a failure under normal use within the product specifications in accordance with this manual, the defect shall be replaced or repaired free of charge. However, the warranty will be void if the fault is due to;

- (1) In case of unfair treatment and use by the consumer;
- (2) If the cause of failure is due to a reason other than the product supplied,
- (3) In case of modifications or repairs other than suppliers;
- (4) In case the supplier is not responsible for other natural disasters or disasters;

In addition, the warranty is for the inverter only, any damage caused to other equipment by malfunction of the inverter is not covered by the warranty.

Repair cost

Any repairs after the warranty period (Warranty period is 12 months after installation or 18 months after manufactured when the installation date is unidentified. However, the guarantee term may vary on the sales term) will be paid. In addition, even during the warranty period, repairs for reasons other than the above warranty coverage and investigation into the cause of failure will be treated as a charge.

Please contact your place of purchase or service center – please refer to the list of back cover.

Questions on Unit

If you have any questions regarding damage to the unit, unknown parts or for general inquiries, please contact service center with the following information.

- (1) Date of purchase
- (2) Company name of purchase
- (3) Manufacturing number (MFG. No.)
- (4) Failure details (as detailed as possible)

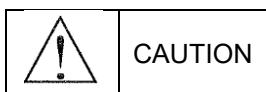
General Safety Information

A SAFETY INSTRUCTION (MESSAGE) INCLUDES A HAZARD ALERT SYMBOL AND A SIGNAL WORD, DANGER OR CAUTION. EACH SIGNAL WORD HAS THE FOLLOWING MEANING:

THIS SYMBOL IS THE "SAFETY ALERT SYMBOL." IT OCCURS WITH EITHER OF TWO SIGNAL WORDS: DANGER OR CAUTION, AS DESCRIBED BELOW.



: INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, CAN RESULT IN SERIOUS INJURY OR DEATH.



: INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, CAN RESULT IN MINOR TO MODERATE INJURY, OR SERIOUS DAMAGE TO THE PRODUCT.

THE SITUATION DESCRIBED IN THE CAUTION MAY, IF NOT AVOIDED, LEAD TO SERIOUS RESULTS. IMPORTANT SAFETY MEASURES ARE DESCRIBED IN CAUTION (AS WELL AS DANGER), SO BE SURE TO OBSERVE THEM.



CAUTION

- Be sure to install the unit on flame resistant material such as metal.
- Be sure not to place anything highly flammable in the vicinity.
- Do not carry unit by top cover, always carry by supporting base of unit.
- Be sure not to let foreign matter enter VFD such as cut wire refuse, spatter from welding, iron refuse, wire, dust, etc.
- Be sure to install inverter in a place which can support the weight according to the specifications in the text. (Chapter 2. Installation)
- Be sure to install the unit on a perpendicular wall which is not subject to vibration
- Be sure not to install and operate a VFD which is damaged or has parts which are missing.
 - Be sure to install the inverter in an area which is not exposed to direct sunlight and is well ventilated. Avoid environments which tend to be high in temperature, high in humidity or to have condensation, as well as places with dust, corrosive gas, explosive gas, highly flammable gas, grinding-fluid mist, salt damage, etc



CAUTION

- Be sure to ground the unit.
Electrical wiring work should be carried out by qualified electricians.
- Do the wiring work by an electrician.
There is a possibility of electric shock and fire.
- Check the input power OFF before wiring.
There is a possibility of electric shock and fire.
- Be sure to attach the main body and wire it.
There are concerns of electric shock and injury.

FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 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.

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form.

1. Specification & Dimension

1.1 Specification

1) Inverter connection

- ① communication speed : 9600 bps
- ② communication method : MODBUS 485 communication
- ③ connection terminals : RJ-45(external expansion connection), 8PIN(inverter connection), 4PIN(DEBUG terminal)^{(*)1}

(*)1) RJ-45 is not for ethernet connection, and DEBUG terminal cannot be used by user

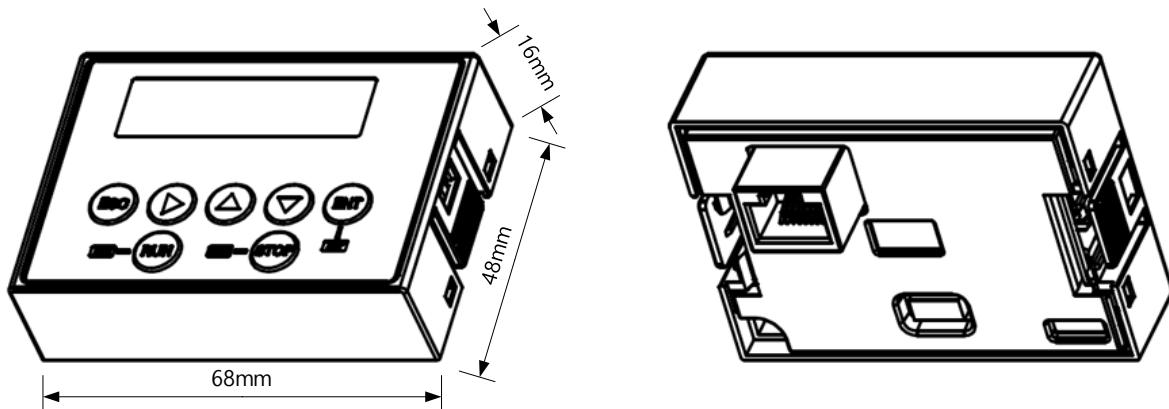
2) Power specification

- ① input voltage : 5V
- ② current consumption : 210mA

3) Bluetooth

- ① Bluetooth v4.2 Specification (Low Energy Single mode)
- ② 2.4 GHz ISM Band(2.402GHz~2.480GHz), GFSK modulation, TDMA/TDD Frequency Hopping (included AES encryption circuit)
- ③ Single ended RF interface
- ④ 1Mbps Data Rate

1.2 Dimension



2. Keypad operation

2.1 keypad description

LCD monitor

Displays the frequency, motor current, motor rotation speed, and alarm content settings.

When setting the output frequency monitor on the initial screen, it is as follows.

- Stop state: Flashing F01 (output frequency set value)

- Run status: Stop flashing and display the current output frequency

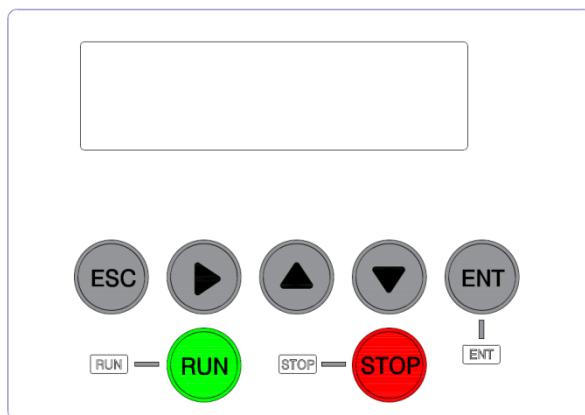
ESC key

Use to cancel data changes

SHIFT (Right key)

When changing data, you can change it by data digit using the shift key.

Move 10 increments when used within the parameter group.



UP/DOWN key (Arrow)

Change the frequency and settings.

ENT key

Key that is accessed or stored when entering parameters and data.

ENT lamp

It turns on when the parameter data is changeable.

RUN lamp

Turned on during the PWM output and when the operation command is entered.

RUN key

To start the operation. It does not operate when terminal operation is selected.

STOP lamp

If the inverter is stationary, it will be lit.

STOP key

To stop the operation and disarm the alarm. Valid for selection of either operator or terminal.

You can select valid/invalid when operating the terminal in b15.

Figure 4-1 LCD Keypad description

Initial Keypad Display Description

On initial power application, a monitor is displayed to output the output frequency when the inverter is operated.

In the Display Settings group, you can set the parameters that you want to display on Line 1, Line 2.