FRENIC-Mini
FRENIC-Eco
FRENIC-Multi

# User's Manual

## for RS-485 Communications Card

# Preface

The functions such as remote operation from the keypad and RS-485 communications can be expanded using the RJ-45 connector for connecting the keypad (modular jack) and RS-485 communications card (option) equipped on the inverter. This manual describes the functional expansion. For the handling of the inverter, see each User's Manual and Instruction Manual.

Please read through this user's manual to familiarize yourself with proper use. Improper handling or misuse may result in malfunction, shorter service life or failure.

This user's manual describes RS-485 communications function commonly used for FRENIC-Mini, FRENIC-Eco, and FRENIC-Multi (FRENIC series).

The following shows relevant documents. Use the documents according to your purpose.

## FRENIC-Mini

| Name | Description |
|---|---|
| User's Manual | Overview of FRENIC-Mini, how to operate the keypad, control block diagram, selection of peripherals, capacity selection, specifications, function codes, etc. |
| Catalog | Overview of FRENIC-Mini, features, specifications, outline drawing, options, etc. |
| Instruction Manual | Inspection at the time of product arrival, installation and wiring, how to operate the keypad, troubleshooting, maintenance and inspection, specifications, etc. |
| RS-485 communications card Installation Manual | Inspection at the time of arrival, how to install the product |

## FRENIC-Eco

| Name | Description |
|---|---|
| User's Manual | Overview of FRENIC-Eco, how to operate the keypad, control block diagram, selection of peripherals, capacity selection, specifications, function codes, etc. |
| Catalog | Overview of FRENIC-Eco, features, specifications, outline drawing, options, etc. |
| Instruction Manual | Inspection at the time of product arrival, installation and wiring, how to operate the keypad, troubleshooting, maintenance and inspection, specifications, etc. |
| RS-485 communications card Installation Manual | Inspection at the time of arrival, how to install the product |

FRENIC-Multi

| Name | Description |
|---|---|
| User's Manual | Overview of FRENIC-Multi, how to operate the keypad, control block diagram, selection of peripherals, capacity selection, specifications, function codes, etc. |
| Catalog | Overview of FRENIC-Multi, features, specifications, outline drawing, options, etc. |
| Instruction Manual | Inspection at the time of product arrival, installation and wiring, how to operate the keypad, troubleshooting, maintenance and inspection, specifications, etc. |
| RS-485 communications card Installation Manual | Inspection at the time of arrival, how to install the product |

These documents are subject to revision as appropriate. Obtain the latest versions when using the product.

## ■ Safety Precautions

Prior to installation, connection (wiring), operation, maintenance or inspection, read through this user's manual as well as the instruction and installation manuals to ensure proper operation of the product. Familiarize yourself with all information required for proper use, including knowledge relating to the product, safety information, and precautions.

This user's manual classifies safety precautions as shown below according to the severity of the accident that may occur if you fail to observe the precaution:

| | |
|---|---|
| ⚠ WARNING | Failure to heed the information indicated by this symbol may lead to dangerous conditions, possibly resulting in death or serious bodily injuries. |
| ⚠ CAUTION | Failure to heed the information indicated by this symbol may lead to dangerous conditions, possibly resulting in minor or light bodily injuries and/or substantial property damage. |

Failure to heed the information contained under the CAUTION title can also result in serious consequences. These safety precautions are of utmost importance and must be observed at all times.

| ⚠ CAUTION |
|---|
| The FRENIC-Mini/Eco is not designed for use in appliances and machinery on which lives depend. Consult Fuji before considering the FRENIC-Mini/Eco series of inverters for equipment and machinery related to nuclear power control, aerospace uses, medical uses or transportation. When the product is to be used with any machinery or equipment on which lives depend or with machinery or equipment which could cause serious loss or damage should this product malfunction or fail, ensure that appropriate safety devices and/or equipment are installed. |

**Wiring**

| ⚠ WARNING |
|---|
| - Before starting wiring, confirm that the power is turned OFF (open).<br>**An electric shock may result.** |

| ⚠ CAUTION |
|---|
| - The product cannot be connected directly to an RS-232C interface.<br>- Before connecting wiring to the RJ-45 connector (modular jack) for connecting the keypad, equipped on the inverter (FRENIC-Eco) or the RJ-45 connector (modular jack) on the RS-485 communications card (option) (FRENIC-Mini), confirm the wiring of the device to be connected. For further information, see "2.2 Connections" under Chapter 2 of this manual.<br>**Failure may result.** |

**Operation**

| ⚠ WARNING |
|---|
| - Note that the inverter starts to supply power to the motor and the motor runs upon resetting of an alarm with the operation command ON (closed).<br>**An accident may result.** |

# Table of Contents