INVERTER INSTALLATION AND PRECAUTIONS

1. Select cables of recommended gauge size to ensure that the voltage drop will be 2% or less.

2. If the wiring distance is long between the inverter and motor, the voltage drop in the main circuit will cause the motor torque to decrease especially at a low speed.

3. The following table shows a selection example for the wiring length of 20 m at the ND rating. When using the inverter with the LD rating, refer to the FR-E800 Instruction Manual.

Please forward this Safety Guideline to the end user.

INVERTER SAFETY GUIDELINE

2. INSTALLATION AND WIRING

2.1 Removal and reinstallation of covers

(a) Check the position of the hooks on the rear of the cover.

(b) Pull out the cover along the guides in the direction shown by the arrow in the illustration.

(c) Remove the screw and cover the hook of the cover back into the marks and press the cover behind the wiring.

(d) Push the cover into the hooks on the rear of the cover.

Removal of the wiring cover

(1) Open the manual switch of the inverter.

(2) Press the cover into the hooks on the rear of the cover.

Reinstallation of the wiring cover

(3) Close the position of the hooks on the rear of the cover.

(4) Insert the hooks on the rear of the cover into the cover along the guides.

2.2 Main circuit terminal layout and wiring to power supply and motor

(a) Three-phase 200/380 V class.

(b) Connect the motor to terminals U, V, and W. The motor rotates counterclockwise when viewed from the motor load side when the forward rotation switch (signal) turns ON.

2.3 Applicable cables and wiring length

Thermocouples and other cables must be laid away from the wiring that carries high voltage. The voltage drop must be kept within 2% or less of the rated voltage. The wiring length of 20 m is shown in the table below.

For details, refer to the FR-E800 Instruction Manual (Maintenance). The PDF manual can also be downloaded from the Mitsubishi Electric FA Global Website.

2.4 Terminal connection diagram

2.5 Details on the main circuit terminals and the control circuit terminals

2.6 Control circuit terminal layout

3.1 Components of the operation panel

Start/Stop key

PU operation mode

Parameter setting mode

Monitor mode

STOP/RESET key

4. PARAMETERS

5. LIST OF FAULT DISPLAYS
The following explains the details of the motor overload protection.

When using the electronic thermal relay function as motor overload protection, set the rated motor current in Pr. 9 = 100% setting of inverter rating x 1.2. The operation range for transistor protection is 20 Hz to 20 Hz.

When using the Mitsubishi Electric constant-torque motor, set LD 1 to 10 Hz.

1) Set one of "10, 13, 15, 16, 50, or 53" in Pr. 8. (This setting is for connecting to the inverter output terminal. For connection to the auxiliary output terminal, set LD 1 to 0.5 Hz.)

Wire the earth terminal independently. (Do not connect two or more cables to one terminal.)

• Use the cable whose size is indicated in Section 2.3 at the surrounding air temperature up to 40°C. • If conditions are different from the above, consult the nearest Mitsubishi Electric representative.

For installation in Canada, branch circuit protection must be provided in accordance with the Canadian Electrical Code and any applicable provincial codes.

For installation in Mexico, branch circuit protection must be provided in accordance with the National Electrical Code and any applicable state/provincial codes.

In Canada and Mexico, we recommend using a UL listed power supply capacity at the power supply side impedance (including those of the inverter and cables).

The following table shows the minimum values for the product in the U.S. and Canada. The values in the table are valid for the product with the highest power consumption. The values are obtained by considering all possible combinations of the parameters. The values are obtained by considering all possible combinations of the parameters.

The power supply capacity varies with the value of the power supply side impedance (including those of the input reactor and cables).

The power supply capacity varies with the value of the power supply side impedance (including those of the input reactor and cables).