



# MITSUBISHI

## TRANSISTORIZED INVERTER

### Radio noise filter

### < FR-BIF(-H) >

Thank you for choosing the Mitsubishi transistorized inverter option unit.

This instruction manual gives handling information and precautions for use of this equipment. Incorrect handling may cause an unexpected fault. Before using the equipment, please read this manual carefully to use the equipment to its optimum.

Please forward this manual to the end user.

#### Safety Precautions

- ⚠ As the capacitor is charged with high voltage for some time after power-off, it is dangerous to touch.
- ⚠ Any person who is involved in wiring or inspection of this equipment should be fully competent to do the work.
- ⚠ Do not subject the cables to scratches, excessive stress, heavy loads or pinching. Otherwise, you may get an electric shock.
- ⚠ Apply only the voltage specified in the instruction manual to each cable of this option. Otherwise damage etc. may occur.
- ⚠ Ensure that the cables are connected to the correct terminals. Otherwise failure may occur.
- ⚠ While power is on or for some time after power-off, do not touch the inverter and this option as they will be extremely hot. Doing so can cause burns.
- ⚠ Do not drop this option, or subject it to impact
- ⚠ Do not connect the radio noise filter to the inverter output side.
- ⚠ When mounting this option, leave clearance from other equipment and enclosure walls to release heat.
- ⚠ Mount this option on a nonflammable wall without any holes.  
Mounting it to or near flammable material may cause a fire.
- ⚠ This option has a limited life span. It is recommended to exchange this option when exchanging the inverter.

A radio noise filter is used to suppress radio noise emitted from the inverter power supply side.

#### 1. Model

- FR-BIF . . . . . For the 200V class inverter
- FR-BIF-H . . . . . For the 400V class inverter

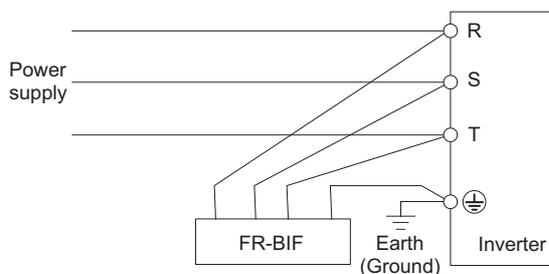
#### 2. Specification

- 1) Capacity Can be used for any inverter capacity.
- 2) Voltage 200/200/220V 50/60/60Hz(400/400/440V 50/60/60Hz)
- 3) Mass 0.1kg
- 4) Heat generated 4W or less
- 5) Improvement effect Greater effect at 10MHz or less.  
Note that its effect differs according to regions (intensity of radio wave).
- 6) Surrounding air temperature -10°C to 50°C

### 3. Connecting method

Connect the radio noise filter to the input side of the inverter.

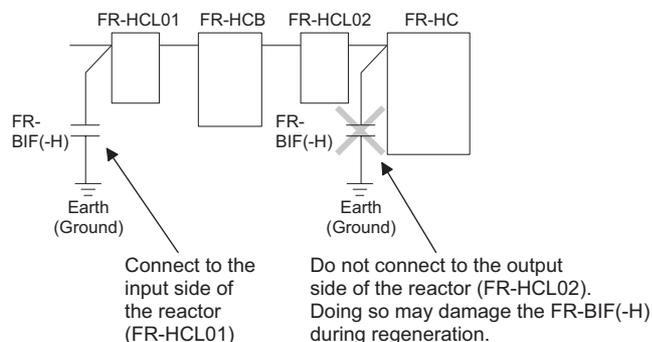
- 1) Wire directly to the input terminal of the inverter.
- 2) Wire to the earth (ground) terminal of the inverter.



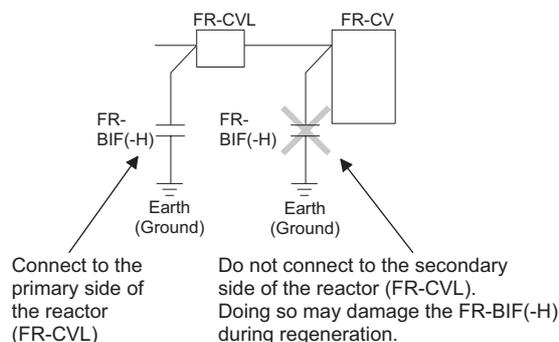
### 4. Instructions for connection

- 1) A long connection cable will reduce the effect.
- 2) About 4mA (8mA for the 400V class) of leakage currents flow in the inverter. (Leakage currents equivalent to one phase of three phase three wires  $\Delta$  connection cable)
- 3) Never connect the radio noise filter to the output terminal of the inverter. Doing so will damage the radio noise filter.
- 4) If the radio noise filter is connected when the control circuit is connected to a power supply separately from the main circuit, turning off the power while the motor is running will lead to the "E.UVT" fault. In this case, connect the radio noise filter to the input side of the magnetic contactor.
- 5) When connecting the radio noise filter to the high power factor converter (FR-HC) and power regeneration converter (FR-CV), incorrect connection may damage the radio noise filter during regeneration. Connect it to the correct position as shown below.

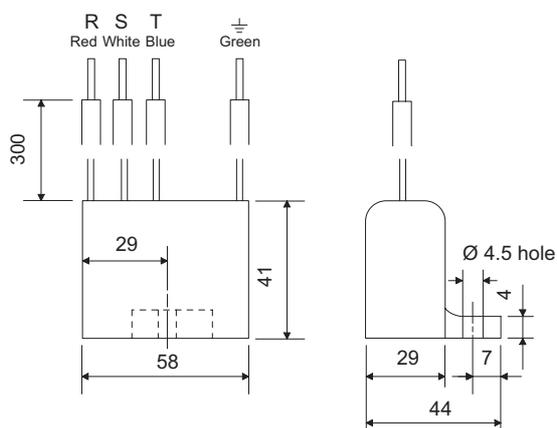
· Connection to the FR-HC



· Connection to the FR-CV



### 5. Outline dimension drawing



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