

## 4.9 Emergency Operation at Controller Malfunction

### ● Manually change

Following manually changing are required for emergency operation in the case of controller malfunction.

#### (1) Wiring change of controller

Change wiring to operate compressor, EFM and CFM.

Refer the details to paragraph 4.9.1.

Preparation parts: Shot circuit connector (fitted inside of controller)

#### (2) Fix the opening of EEV, EMV and DMV

Refer the details to paragraph 4.9.2 to 4.9.4.

Preparation parts: Emergency magnet (Parts No. 1896110)

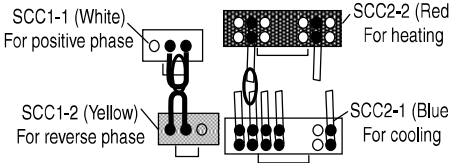
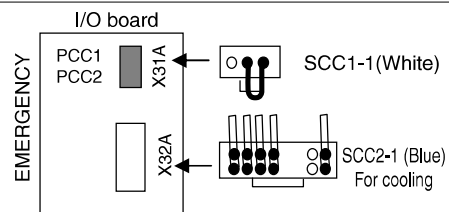
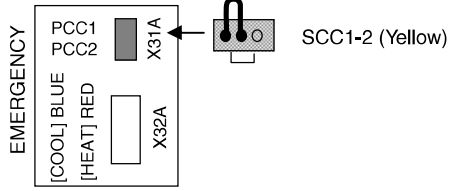
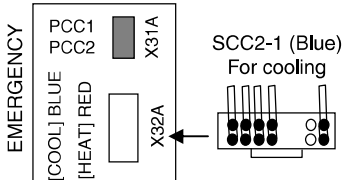
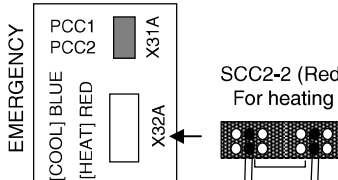
Note: Fixing of opening for EEV, EMV or DMV is applicable for emergency use when controller is normal and EEV, EMV or DMV coil is malfunction.

### ● Operation condition at emergency operation

Temperature can not be controlled. Turn the circuit breaker ON or OFF to maintain the target temperature manually.

| Operation Mode                   | Operation Condition   |
|----------------------------------|---|
| Cooling operation in frozen mode | Compressor: Continuous running with fixed speed.<br>EFM : Low Speed<br>CFM : High Speed<br>EEV, EMV, DMV: Fixed opening<br>LSV : Open |
| Heating operation                | EFM : High Speed  |

### 4.9.1 Wiring Change of Controller

|   |   |  |
|---|---|--|
| Preparation                                   | <p>① Turn circuit breaker OFF.</p> <p>② Disconnect power connector X24A (Black) located on I/O board. (To de-energized to CPU board.)<br/>Refer location of X24A to I/O board in paragraph 1.3.4.</p> <p>③ Remove short-circuit connectors fitted inside controller box. (Right figure)</p> |  |
|   |    |  |
|   | <p>④ Connect SCC1-1 (White) to X31A located on I/O board and SCC2-1 (Blue) to X32A for &lt;Cooling&gt;.<br/>Check the insertion direction of the connector.</p>   |    |
| Confirmation of power phase                   | <p>⑤ Turn circuit breaker ON.<br/>If the power supply is in reversed phase, condenser fan turns reverse.</p> <p>⑥ In the case of reversed phase, turn circuit breaker OFF and replace SCC1-1 (White) to SCC1-2 (Yellow).</p>  |  |
|   |   |  |
| Forcible operation of Compressor, EFM and CFM | <p>&lt;Cooling Operation&gt;<br/>Keep &lt;cooling operation&gt; as it is.</p>    | <p>&lt;Heating Operation&gt;<br/>1. Turn circuit breaker OFF.<br/>2. Replace SCC2-1 (Blue) to SCC2-2 (Red) for &lt;Heating&gt;.<br/>3. Turn circuit breaker ON.</p>  |
| Caution                                       | Recheck power supply phase when you operate again after the power is turned OFF.  |  |

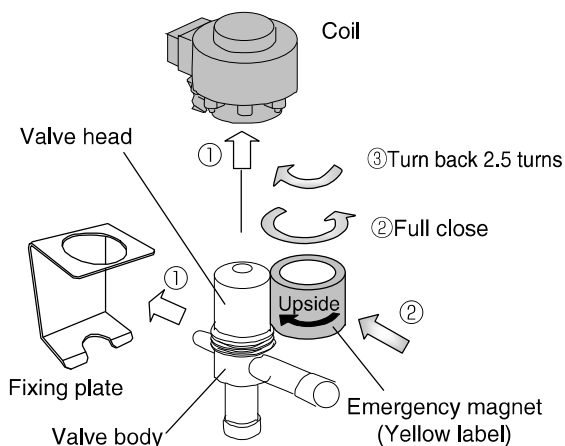
## 4.9.2 Fixing of EEV Opening

For the emergency operation when controller or EEV coil is malfunctioned, EEV opening is fixed using emergency magnet.

The fixing of opening is procedure with fully close first and turn back 2.5 turns using emergency magnet. (Approx. 20% opening)

Emergency magnet: Parts No.1896110.

- ① Disconnect connector X9A (Brown) on CPU board. (To de-energized to EEV coil)  
Refer the location of X9A to CPU board, in paragraph 1.3.4.
- ② Remove fixing plate and EEV coil.
- ③ Bring the emergency magnet into contact with valve head, turn the magnet counterclockwise to close fully. There is a small click sound when the valve is fully closed.  
(Approximate 7 turns from full open to full close.)
- ④ Then turn back 2.5 turns clockwise.
- ⑤ Install coil and fixing plate.



### Recommendation !!

To quick pull-down, it is recommended EEV opening to wider slightly. However, keep watching the operation, and close the valve opening if there is a frost around suction pipe due to the wet operation or the degree of super-heat becomes small.

### ATTENTION !!

Make sure to reconnect connector X9A (Brown) to the socket on CPU board when the operation returns to normal.

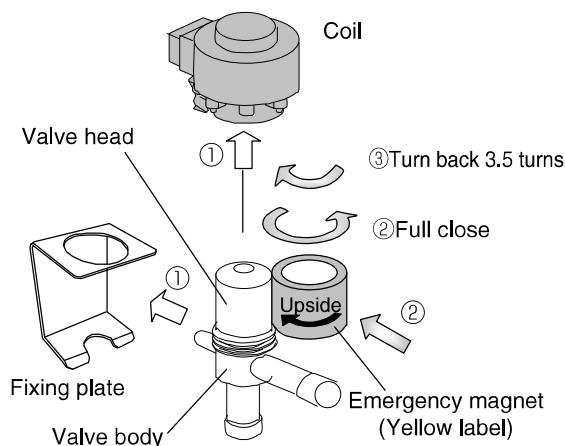
## 4.9.3 Fixing of EMV Opening

For the emergency operation when controller or EMV coil is malfunctioned, fix EMV opening using emergency magnet.

The fixing of opening is procedure with fully close once and turn back 3.5 turns using emergency magnet. (Approx. 40% opening)

Emergency magnet : Parts No.1896110.

- ① Disconnect connector X10A (White) on CPU board. (To de-energized EMV coil)  
Refer the location of X10A to CPU board, in paragraph 1.3.4.
- ② Remove fixing plate and EMV coil.
- ③ Bring the emergency magnet into contact with valve head, turn the magnet counterclockwise to close fully. There is a small click sound when the valve is fully closed.  
(Approximate 7 turns from full open to full close.)
- ④ Then turn back 3.5 turns clockwise.
- ⑤ Install coil and fixing plate.

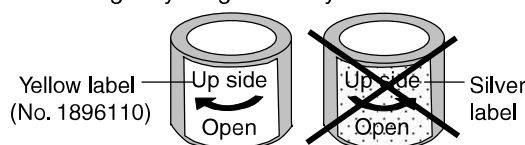


### ATTENTION !!

Make sure to reconnect connector X10A (White) to the socket on CPU board when the operation returns to normal.

### ATTENTION !!

Use emergency magnet with yellow label.

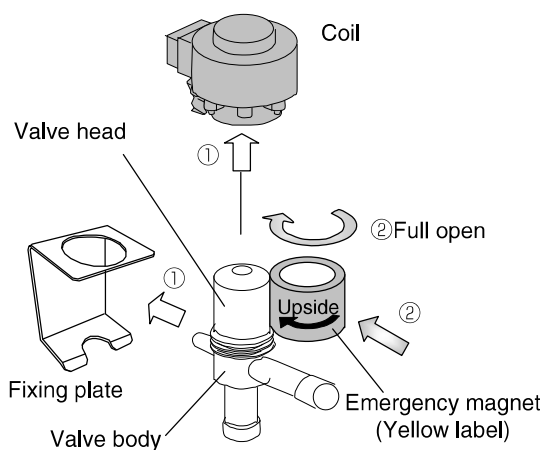


#### 4.9.4 Fixing of DMV Opening

For the emergency operation when controller or DMV coil is malfunctioned, fix DMV opening fully using emergency magnet.

Preparation : Emergency magnet Parts  
No.1896110.

- ① Disconnect connector X11A (Blue) on CPU board. (To de-energized to DMV coil)  
Refer the location of X11A to CPU board, in paragraph 1.3.4.
- ② Remove fixing plate and DMV coil.
- ③ Bring the emergency magnet into contact with valve head, turn the magnet clockwise to open fully. There is a small click sound when the valve is fully opened.  
(Approximate 10 turns from full close to full open.)
- ④ Install coil and fixing plate.



#### **ATTENTION !!**

Make sure to reconnect connector X11A (Blue) to the socket on CPU board when the operation returns to normal.