

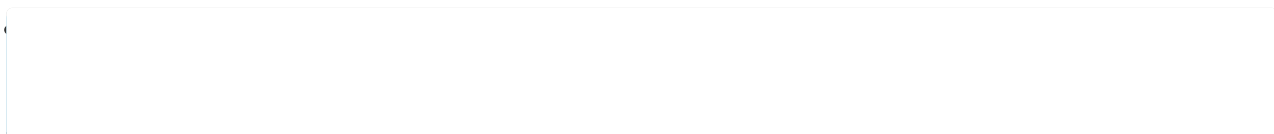
Capacity Control; Current Release Control - Toshiba RAS-13SKV2-E Service Manual

Split type

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Bookmarks



Item

4. Capacity

The cooling or heating capacity depending on the load is

control

adjusted.

According to difference between the setup value of temperature and the room temperature, the capacity is adjusted by the compressor revolution.

Remote controller

Set temp. (Ts)

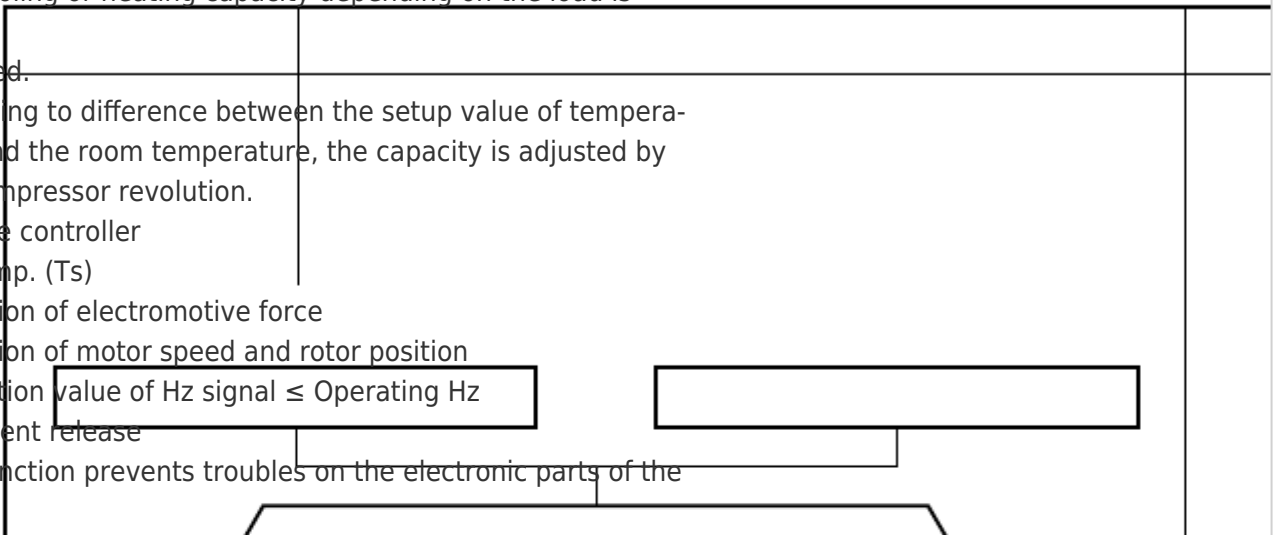
Detection of electromotive force

Detection of motor speed and rotor position

Correction value of Hz signal \leq Operating Hz

5. Current release

This function prevents troubles on the electronic parts of the control



compressor driving inverter.
 This function also controls drive circuit of the compressor speed so that electric power of the compressor drive circuit does not exceed the specified value.

Outdoor unit inverter main circuit control current
 Operating current \leq
 Setup value
 Low
 Capacity control continues.

Outdoor temp.
 45°C
 40°C
 16°C
 11°C

Operation flow and applicable data, etc

Ts -Ta
 Correction of Hz signal
 of compressor motor winding
 Inverter output change
 Commutation timing change
 Change of compressor speed
 Setup of current release point

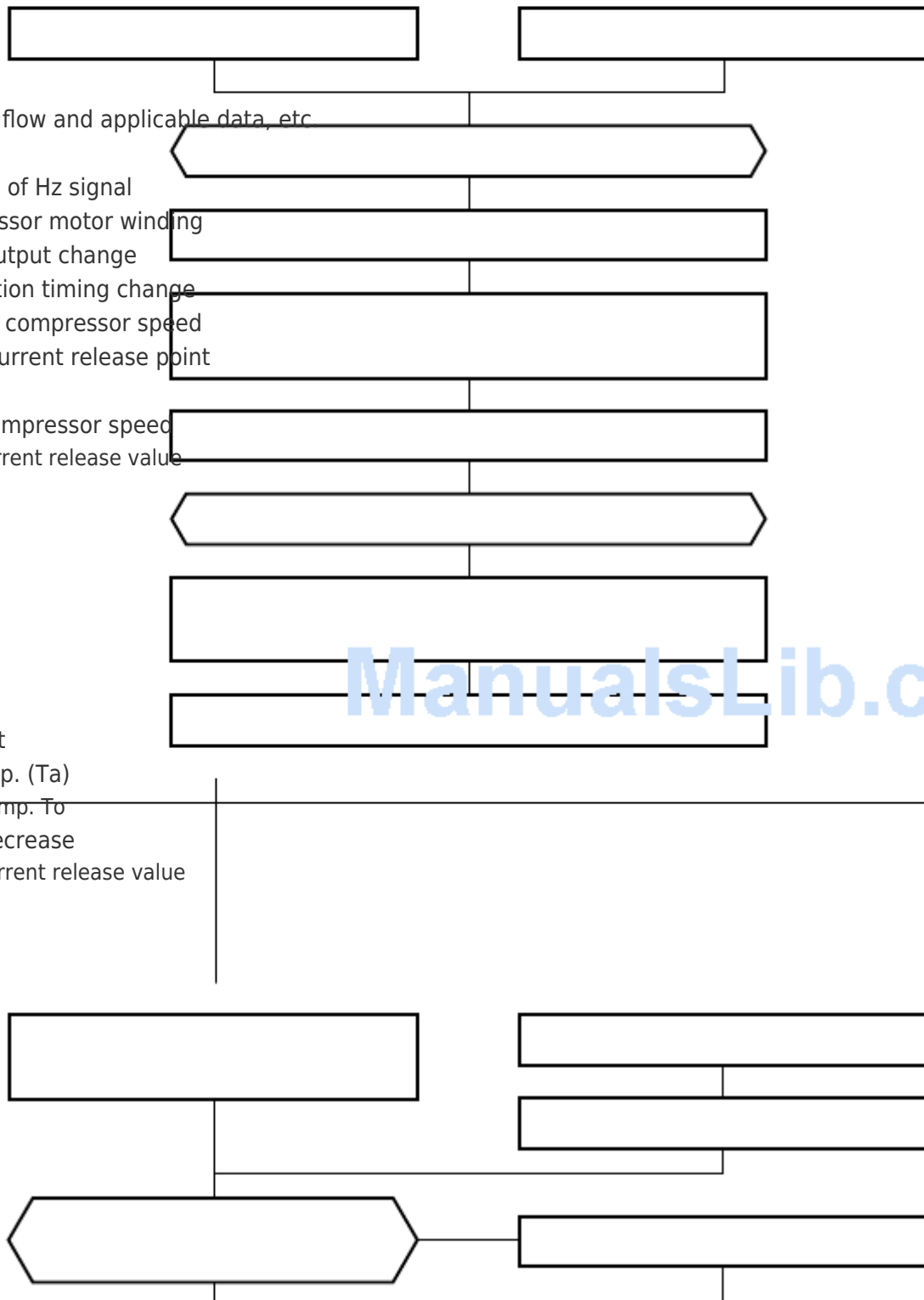
High
 Reduce compressor speed
 Cooling current release value

10SAV2-E
 3.97A
 44°C
 4.35A
 39°C
 6.30A
 15.5°C
 10.5°C

Indoor unit
 Room temp. (Ta)

Outdoor temp. To
 Current decrease
 Heating current release value

13SAV2-E
 16SAV2-A
 10SAV2-E
 4.27A
 6.45A
 6.30A
 4.88A
 6.75A
 6.30A
 8.47A
 6.30A
 6.30A
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FILE NO. SVM-10001

Description

1) The difference between set temperature on remote controller (Ts) and room temperature (Ta) is calculated.

2) According to the temperature difference, the correction value of Hz signal which determines the compressor speed is set up.

3) The rotating position and speed of the motor are detected by the electromotive force occurred on the motor winding with operation of the compressor.

4) According to the difference resulted from comparison of the correction value of Hz signal with the present operation Hz, the inverter output and the commutation timing are varied.

5) Change the compressor motor speed by outputting power to the compressor.

* The contents of control operation are same in cooling operation and heating operation

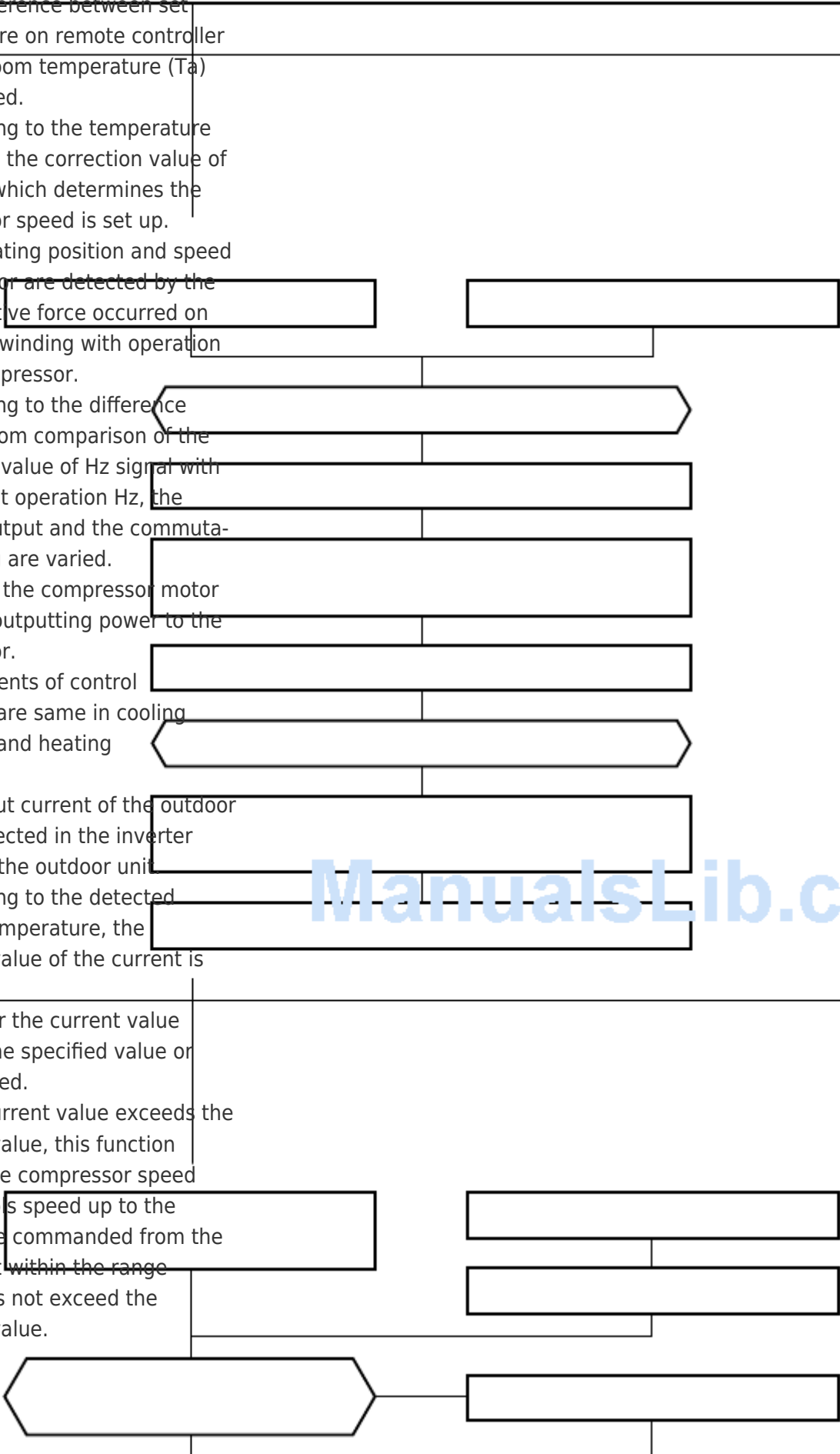
1) The input current of the outdoor unit is detected in the inverter section of the outdoor unit.

2) According to the detected outdoor temperature, the specified value of the current is selected.

3) Whether the current value exceeds the specified value or not is judged.

4) If the current value exceeds the specified value, this function reduces the compressor speed and controls speed up to the closest one commanded from the indoor unit within the range which does not exceed the specified value.

13SAV2-E
16SAV2-E
6.30A
7.72A



6.30A

9.22A

6.30A

10.80A

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