ADVANCED MANUAL NO.2
JAKKA CONTROL KIT 6

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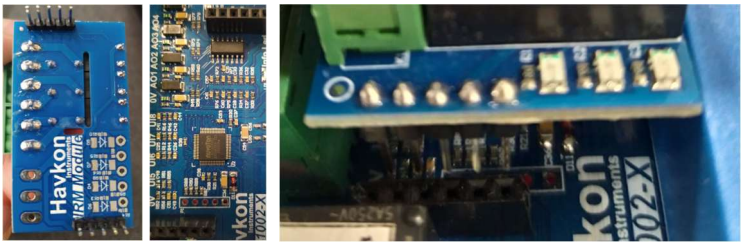
1. Frost Protection Function

Condensation occurs inside the unit where the outdoor air temperature is below 0°C. The heat exchanger can be damaged if condensation water freezes inside. The Control board changes fan speed periodically to protect against freezing.

Note: This function is active when the parameter 518 is 1 or 2.
1 means that the supply fan stops, and 2 means the supply fan speed gets lower by 1 step during the outdoor air temperature is below -3°C. The set temperature value is changeable on parameters 175 and 176.
Parameter 175 is the set value for entering the exchanger freeze, and parameter 176 is the set value for entering normal mode.

2. Pre-Heater Function

This function helps to protect the unit from freezing when the outdoor air temperature is too low. It runs due to the outdoor air temperature. The default step number of the pre-heater is 1.
If 2 steps are needed, the external DO switch module should be installed on the control board. The DO module can be mounted as shown below.



3. Boost Function

This function is used when a large amount of exhaust and fresh air is needed (at the time of using the kitchen/ bathroom / WC, etc.) while ventilation is still going on. There are 2 boost functions on the controller. One of them is on the control panel, the other one is on the control board:

1. The “Boost” function is activated by pressing on UP and Mod/OK buttons. After the unit runs at boost speed (maximum speed) and during the boost time (default 10 minutes), it begins to run at the speed value that is set before the boost function is activated.

2. There is one dry contact relay input on the control board. If the input is activated, the unit begins to run at “boost” speed. When activated input is passive again, the unit begins to run at the speed value that was set before the boost function is activated.

Note: Boost speed and boost time are changeable on parameters.

4. BMS Function

BMS Function enables the unit to be monitored on a central automation system.
Dry contact outputs: The DO Module should be installed on the control board. There are 2 dry contact outputs. Status and failure information of the unit can be monitored.

Dry contact input: Operation of the unit (on/off) can be done by dry contact input. The short circuit connection will be disconnected, and the BMS connection will be connected to the input according to the connection schema.

5. Cooling Coil Connection

The Cooling Coil can be connected to the DO3 connection as an option. For this purpose, the parameter settings should be as below:

Parameter 159 --> 1, (Post heater stage number)
Parameter 431 --> 3. (Cooling valve open/close relay number)

6. Heating Coil Connection

The Heating Coil can be connected to the DO2 connection as an option. For this purpose, the parameter settings should be as below;

Parameter 402 --> 21, (setting freeze thermostat)

7. Damper Connection

The Damper can be connected to the DO5 connection as an option. For this purpose, the parameter settings should be as below;

Parameter 154 --> 1, (Pre-heater stage number)
Parameter 424 -->5. (Out damper open relay number)

8. Proportional Rotary Connection

The Proportional Rotary control can be connected to the AO4 if the proportional cooling coil is not used. For this purpose, the parameter settings should be as below;

Parameter 453 -->0, (Cooling coil analog out connection)
Parameter 462 -->4. (Rotary analog out connection)

9. CO2 Control Function

The CO2 control can be added by connecting the CO2 sensor to the AI1. Also, for this purpose, the parameter settings should be as below;

Parameter 381 -->1, (CO2 control set)
Parameter 530 -->0, (Humidity control)
Parameter 114 -->1, (CO2 panel setting)
Parameter 38 --> 800 (CO2 set parameter).

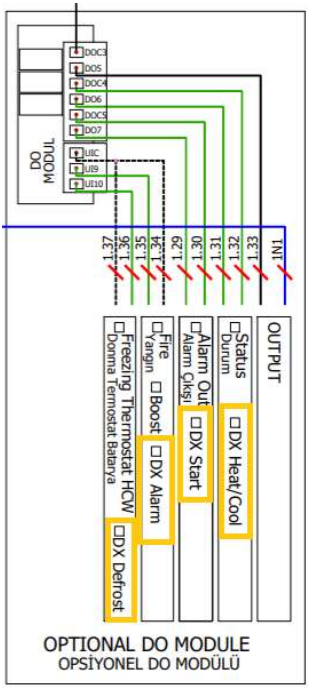
10. Humidity Control Function

The Humidity control can be added by connecting the Humidity sensor to the AI1. Also, for this purpose, the parameter settings should be as below;

Parameter 381 -->3, (Humidity control set)
Parameter 530 -->1, (Humidity control)
Parameter 321 -->25, (Humidity min value)
Parameter 332 -->155, (Humidity max value)
Parameter 114 -->3, (Humidity panel setting)
Parameter 39 -->50 (Humidity set parameter).

11. Dx Control Function

Using the DO Module Dx can be controlled by changing the parameters below;



Parameter 409 -->25, (DX Alarm)
Parameter 410 --> 26, (DX Defrost)
Parameter 438 --> 6, (DX Heat/Cool)
Parameter 437 --> 7, (DX Start)

The input signals should be dry contact. If not, a relay can be used to have a dry contact.
The output signals are also dry contact. If 230V is needed, DOC4 and DOC5 can be energized according to the output voltage needed.