

# MANUAL for JAKKA PRO CONTROLLER

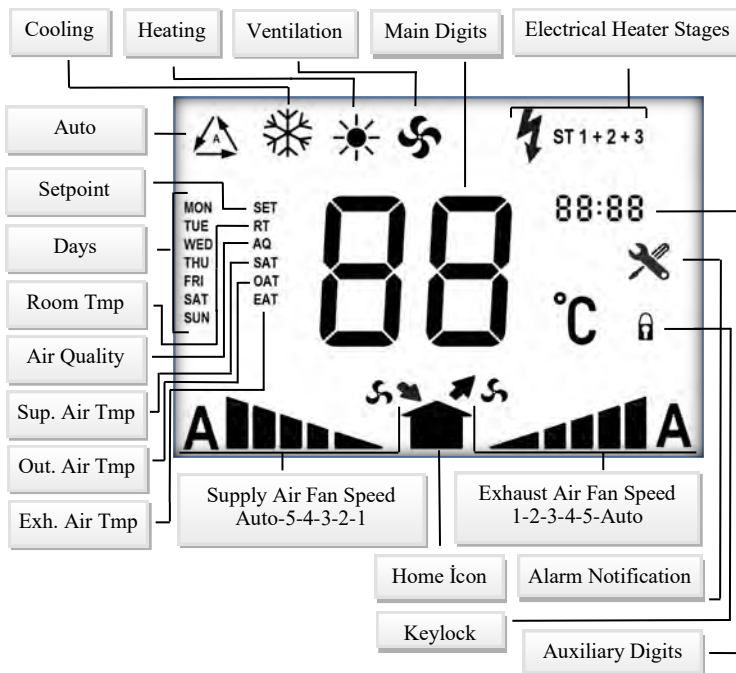
## KEYPAD AND PANEL DESCRIPTIONS



- On/Off Key
- Mode Key
- Fan Key
- Increment/Decrement Key

### WARNING !!

Parts that need to be considered in the screen shots are taken into the circle. Please notice the screenshots.



## 1. ON—OFF OPERATIONS

Use the key to Opening/Closing operations. When pressing the button once, the device will switch on or off.



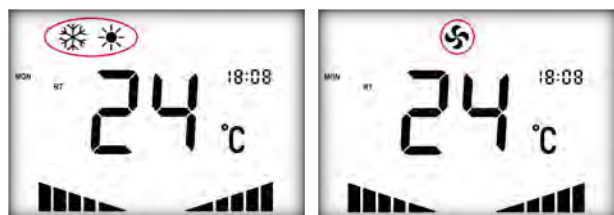
Off Position

On Position

## 2. OPERATION MODE SETTINGS

While the device is in the On Position, operation mode can be changed with key.

*Note: The active mode icon flashes on the panel.*



Heating or Cooling Mode

Ventilation Mode

## 3. SETPOINT SETTING



Setpoint Setting

Use the and keys to adjust the setpoint. If the keys are pressed one time, setpoint will be changed 1 °C. Use the key to increase the setpoint, use the key to decrease the setpoint. Setting range 5 °C—30 °C.

## 4. MONITORING DIFFERENT TEMPERATURES

The sensor values, which is measured by main controller, are displayed alternately on the panel. In this application "Room Temperature, Supply Air Temperature, Outdoor Air Temperature, Exhaust Air Temperature" sensors can be measured by main controller.

**Note 1:** If Room Temperature Sensor is not connected to main controller, Temperature Sensor value of the panel is measured.

**Note 2:** Supply Air Temperature and Room Temperature value are measured by same input. If user wants to get the Supply Air Temperature value, ChangeReturntoSupply parameter ( Service Menu 11. parameter, BMS 344. parameter ) must be set to "1". After doing this changing, room temperature value is measured by panel.

**Note 3:** If Outdoor Air Temperature Sensor is connected and necessary settings are made, electrical heater is controlled by the Outdoor Air Temperature. Electrical Heater control is performed by the Return Air Temperature sensor value by default.

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Room Temperature



Outdoor Air Temperature



Supply Air Temperature




Exhaust Air Temperature


## 5. FAN SPEED SETTINGS

Fan speed can be set to one of **1-2-3-4-5-Auto** values.

### Supply Air Fan Speed Setting :

When pressing the **FAN** key once, Supply Air Fan icon  flashes on the panel. While icon flashing, fan speed can be changed by **▲** and **▼** key.

### Exhaust Air Fan Speed Setting :

When pressing the **FAN** key twice, Exhaust Air Fan icon  flashes on the panel. While icon flashing, fan speed can be changed by **▲** and **▼** key.

**Note:** When one of the heating or cooling mode is selected, automatic fan speed is activated. If the automatic fan speed is selected, fans operates according to the "Air Quality or Carbon Dioxide Sensor" value. If sensor is not connected, fan speed is decreased to a minimum value.



Supply Speed Setting



Exhaust Speed Setting

## 6. FAN LOGIC SETTING

While the device is in the On position, if pressing **FAN** key for 5 seconds, fan logic is changed.



**Continuous Fan** : Displayed as "Cont" on the panel. Fans will work as long as the device is in the On position. ( Default )



**Auto Fan** : Displayed as "Auto" on the panel. Fans will be active while heating or cooling. In other cases the fan output is closed.

## 7. CLOCK SETTINGS

When pressing the **MODE** key for 6-7 seconds, hour digit flashes on the panel. While digit flashing, hour can be changed by **▲** and **▼** key.

**MODE** key is pressed once again, minute digit flashes on the panel. While digit flashing, minute can be changed by **▲** and **▼** key.



Hour Setting



Minute Setting

## 8. SCHEDULE OPERATIONS

After setting minutes, to enter the schedule menu, press the **MODE** key one times.

While in the "On" or "OF" menu, hour can be changed by **▲** and **▼** key.

1. Press **MODE** key to enter the "On" menu. Hour can be changed by **▲** and **▼** key. "On" menu shows the opening day and time.

2. Press **MODE** key to enter the "OF" menu. Hour can be changed by **▲** and **▼** key. "OF" menu shows the closing day and time.

Press **MODE** key (one or more times) to select the schedule day.

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"On" Menu



"OF" Menu

## 9. ALARMS

### 9.1 AL:01 FAN CONTACT ALARM (NC)



All outputs are closed except Status Out and Bypass Damper Off. The Panel locked. Contact must be in the closed position to eliminate the alarm.

### 9.2 AL:02 HUMIDITY SENS. CONTACT ALARM (NO)



Fans run at maximum speed during alarm. The Panel locked. The device resumes normal operation. Contact must be in the opened position to eliminate the alarm.

### 9.3 AL:03 FIRE CONTACT ALARM (NO)



If contact is in the closed position or Room Temperature > SetFireAlarmTemp (BMS 343., Service Menu 44. parameter), alarm happens.

Supply air fan is closed, Exhaust air fan runs at maximum speed. All outputs are closed except Status Out and Entrance Damper. The Panel locked. Eliminating the alarm and disconnect the power of the device to return to normal operation.

**Note 1:** After the device restarted, press together **MODE** and **▲** button until unlock the device.

**Note 2:** SetFireAlarmTemp parameter default value: 50 °C

### 9.4 AL:04 AIR FILTER ALARM (NO)



If contact is in the closed position or when device worked up to the AirFilterTimerLimit, alarm happens. Device is continuing normal operation during alarm.

If the Alarm number is 04 (AL:04) and the air filter alarm is caused by AirFilterTimerAlarm, the related parameter (BMS 331., Service Menu 8. parameter) must be set to 0 to reset the alarm.

### 9.5 AL:05 ELEC. HEATER OVER HEAT ALARM (NC)



If contact is in the opened position, alarm happens. Electrical heater outputs are closed. Fans run at maximum speed. The Panel locked. Contact must be in the closed position to eliminate the alarm.

### 9.6 AL:06 OUTDOOR TEMP. SEN. FROST ALARM

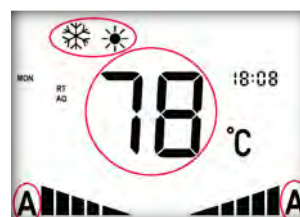


If Outdoor Air Temperature < -8 and Exhaust Air Temperature <= 2 alarm happens. Electrical Heater 1. stage opens during alarm.

When Exhaust Air Temperature > 2 and time passed up to the OutdoorTempFrostOutTimerLimit (BMS 331. parameter), alarm is eliminating.

## 10. SPECIAL CONTROL FUNCTIONS

### 10.1 AIR QUALITY OR CO2 CONTROL



0-10V air quality or CO2 sensor must be connected properly. Operation mode must be set to other than ventilation (heating or cooling) and fan speed must be set to Auto.

When these conditions are met, the fan speed is controlled according to the air quality or CO2 sensor value.

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## 10.2 ELECTRICAL HEATER CONTROL

- 1. Controlled Depending on Room Temperature :**  
Electrical heater is controlled by sensor on the panel or return air temperature sensor. Control is active without any adjustment. ( Default Control Type )
- 2. Controlled Depending on Outdoor Temperature:** If outdoor temperature value less than value set in the service menu, the heater stages is activated.  
**Note: Control according to the outdoor air temperature to be active, parameter settings must be made of appropriate. (See. Service Menu Operations)**

## 10.3 BYPASS DAMPER CONTROL

The working conditions of the bypass damper is as follows;

Fan Mode;

Bypass damper is always closed.

Heating Mode;

1. Outdoor Air Temp. < Room Temp. + 3 and Setpoint < Room Temp. + 2 and Outdoor Air Temp. > 15 °C damper is open,
2. Outdoor Air Temp. > Room Temp. - 3 and Setpoint > Room Temp. - 2 and Outdoor Air Temp. < 35 °C damper is open, closed in the other conditions

Cooling Mode;

1. Outdoor Air Temp. > Room Temp. + 3 and Setpoint > Room Temp. - 2 and Outdoor Air Temp. < 32 °C damper is open,
2. Outdoor Air Temp. < Room Temp. - 3 and Setpoint < Room Temp. - 2 and Outdoor Air Temp. > 10 °C damper is open, closed in the other conditions

## 10.4 ENTRANCE DAMPER CONTROL

Fresh air and/or exhaust air damper motors are controlled. Damper motor is controlled considering the necessary delays ( The device On/Off moments, alarm moments... ).

One relay output reserved into for damper. If there are more damper motor, must be connected in parallel.

**Note : Damper motor must be in the On/Off and spring return property.**

## 10.5 REMOTE CONTROL

The remote On/Off function. This contact can be used to control the device via building automation/PLC/ External Switches.

To use this feature, selected scenario must be contain remote control contact.

## 11. SERVICE MENU OPERATIONS

### 11.1 MENU DESCRIPTION

While the device is in the Off Position, press together **MODE** and ▼ key for 5 seconds.

In the service menu “Main Parameter” is replaced by the **MODE** and **FAN** keys.

“Auxiliary Parameter” is replaced by the ▲ and ▼ keys.



Main Parameter



Auxiliary Parameter

### 11.2 PASSWORD PARAMETER

While the device is in the Off Position, press together **MODE** and ▼ key for 5 seconds.

To make changes in the parameters, password must be entered as “137”, to 99. parameter.



Firstly, “Main Parameter” must be replaced as 99, by the **MODE** and **FAN** keys. Secondly, “Auxiliary Parameter” must be replaced as 137, by the ▲ and ▼ keys.

Otherwise, made changes won't be saved.

**Note: This process is part of the entry to the Service Menu and must be applied in all entries.**

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## 11.3 BMS ADDRESS SETTING



After logging into the service menu, using the **MODE** and **FAN** keys, select the 00 parameter. Use the **▲** key to increase the address, use the **▼** key to decrease the address. Setting range 0-247.

## 11.4 SETPOINT LIMIT OPERATIONS



**Minimum Limit:** Firstly, "Main Parameter" must be replaced as 2, by the **MODE** and **FAN** keys. Secondly, "Auxiliary Parameter" can be selected in the range of 5-35 °C, by the **▲** and **▼** keys. **(Default value: 05 °C)**



**Maximum Limit:** Firstly, "Main Parameter" must be replaced as 3, by the **MODE** and **FAN** keys. Secondly, "Auxiliary Parameter" can be selected in

the range of 5-35 °C, by the **▲** and **▼** keys. **(Default value : 30 °C)**

**Note 1: Minimum Limit can not be greater than maximum limit.**

**Note 2: Maximum Limit can not be lower than minimum limit.**

## 11.5 ELECTRICAL HEATER CONTROL SETTINGS

Electrical heater can be controlled according to the two different temperature value.

**01 : Controlled Depending on Room Temperature :** Electrical heater is controlled by the sensor on the panel or return air temperature sensor. Control is active without any adjustment. ( Default )

**02 : Controlled Depending on Outdoor Temperature:** Electrical heater is controlled according to the "Outdoor Air Temperature Sensor" connected on the main controller. Enter the service menu to activate the control according to the outdoor air temperature.



**Outdoor Control Activate:** Firstly, "Main Parameter" must be replaced as "9", by the **MODE** and **FAN** keys. Secondly, "Auxiliary Parameter" must be replaced as "2", by the **▲** and **▼** keys.

Control Activate



### Setpoint Setting:

Firstly, "Main Parameter" must be replaced as "10", by the **MODE** and **FAN** keys.

Secondly, "Auxiliary Parameter" must be selected in the range of 0-20 °C, by the **▲** and **▼** keys.



**(Default value : 15 °C)**

**Note: If outdoor air temperature value lower than value set in the service menu, the heater stages is activated.**

## 11.6 DATE SETTINGS



1. Firstly, "Main Parameter" must be replaced as 12, by the **MODE** and **FAN** keys. Secondly, "Auxiliary Parameter" must be set to the desired day value.



2. Firstly, "Main Parameter" must be replaced as 13, by the **MODE** and **FAN** keys. Secondly, "Auxiliary Parameter" must be set to the desired month value.



3. Firstly, "Main Parameter" must be replaced as 14, by the **MODE** and **FAN** keys. Secondly, "Auxiliary Parameter" must be set to the desired year value.

**Note: When the specified steps are correctly completed, device will choose day of week correctly.**

## 11.7 FACTORY DEFAULT

This parameter used to correct changes made by mistake.

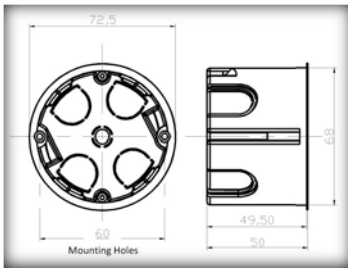


Firstly, "Main Parameter" must be replaced as 15, by the **MODE** and **FAN** keys. Secondly, "Auxiliary Parameter" must be replaced as 1, by the **▲** and **▼** keys.

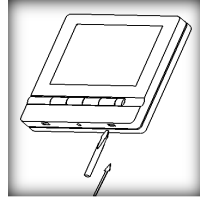
When the device returned factory defaults, parameter value is set to "0" automatically. **(Default value = 0)**

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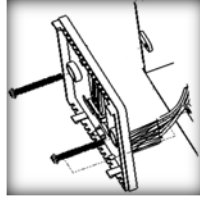
## 12. MOUNTING INFORMATION



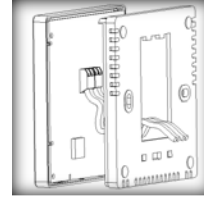
1) Use standart junction box.  
Hole distance must be 60mm  
center to center.  
Use 68mm hole saw.



2) Remove the  
front panel  
using a thin-  
blade flat  
screwdriver.



3) Secure the  
rear panel by  
screwing screws.  
Necessary  
screws are in the  
box.

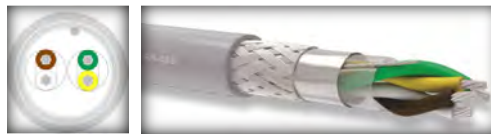
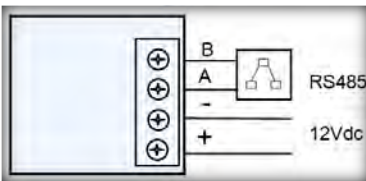


4) Make the  
cable connecti-  
ons as shown  
below to termi-  
nals on the front  
panel.

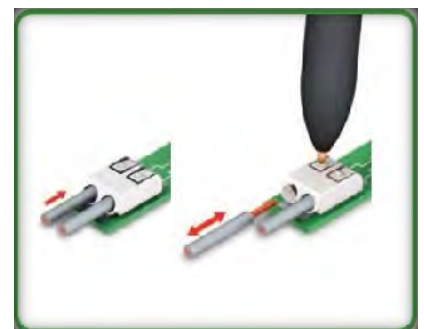


5) Attach the clip  
at the top first,  
and then attach  
the clip at the  
bottom.

## 13. CONTROL PANEL CABLE CONNECTIONS



(2 x 2 x 0,34...0,75mm<sup>2</sup>)  
Shielded, Twisted Pair, RS485 Data Com-  
munication Cable must be used.



*Note : Press the terminal buttons with  
the help of a fine-tipped pen as shown  
in the figure. Don't apply extreme  
pressure.*

**NOTE: DON'T USE THE SCREWDRIVER**