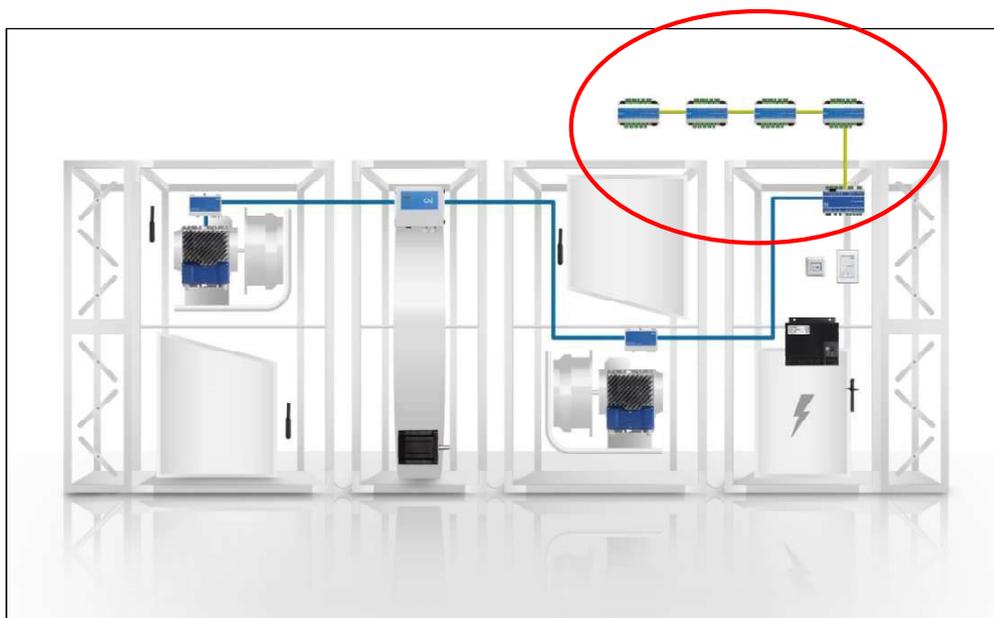


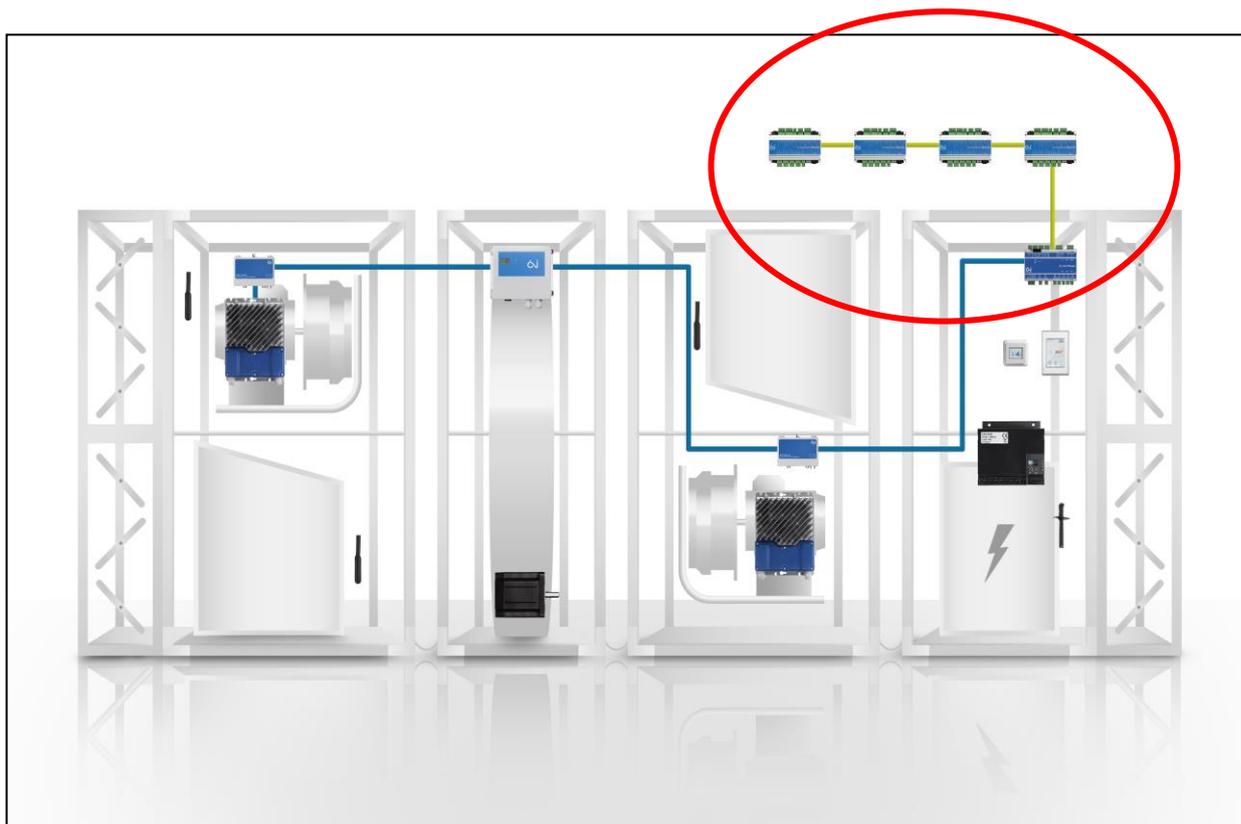


EXcon zone control

Control for up to 4 individual zones



OJ-Air2 / 4-Zones included in the OJ-Air2Master



From SW. 4.19 the OJ-Air2 system includes zone control for up to 4 individual zones

- Control up to four VAV* zones directly from a single AHU, controlled from **OJ-Air2Master** system.
- Ideal for smaller-scale set-ups where different rooms have different indoor climate requirements – e.g. a car workshop, which have 4 rooms:

*VAV=Variable Air Volume
CAV=Constant Air Volume

- The workshop
- The office
- The warehouse
- The showroom

- Individual demand controlled indoor climate
- This 4 rooms do have fully individual setpoints and requirement for the temperature, humidity CO2 level and different time schedules.

About OJ Air2

The OJ Air2 range of AHU controls makes air handling units more efficient, more effective and easier to handle for everyone involved. The very extensive range includes everything required for full AHU control –master units, drives, touchscreen interfaces, sensors, pressure transmitters etc. – allowing systems designers to create millions of possible configurations. The individual elements do all share OJ hallmarks such as easy installation, much simpler cabling with QuickPlug™ Modbus technology and intuitive operation. Find more informations on www.ojelectronics.com

Electrical installation

Information for the electrical installation and connections in the zones and of the Zone Modules you find in the instruction (*booklet*) which follows together with the Zone Module.

3 different models

Zone Modules are produced and delivered in 3 different models depending on the communication platform to the actuators in the VAV zones:

Zone Module A = Analog 0-10V signals for the actuators

Zone Module M = Modbus communication for the actuators

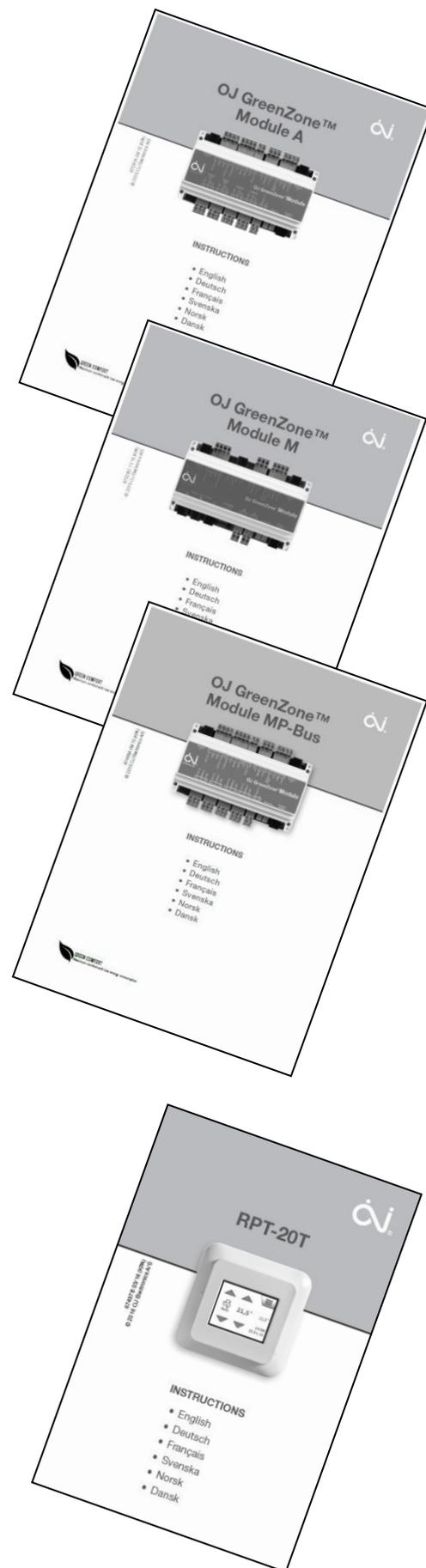
Zone Module MP = MP-bus communication for the actuators

NOTE!

It is possible to make a mix of the 3 models and types within the same installation group.

RPT-20T = Modbus room panel;

Touch display with integrated room temperature sensor.



Manuals on this page can be downloaded from:

www.ojelectronics.com

Electrical installation

In the "Instructions" illustrated on previous page, common for the Zone Modules is, that in a standard **OJ Green Zone** system, they all are connected to an Green Zone Master. Different from the description in the "Instructions" on previous page, is that in this **4-Zone solution**, the Zone Modules are connected to the OJ-Air2Master.

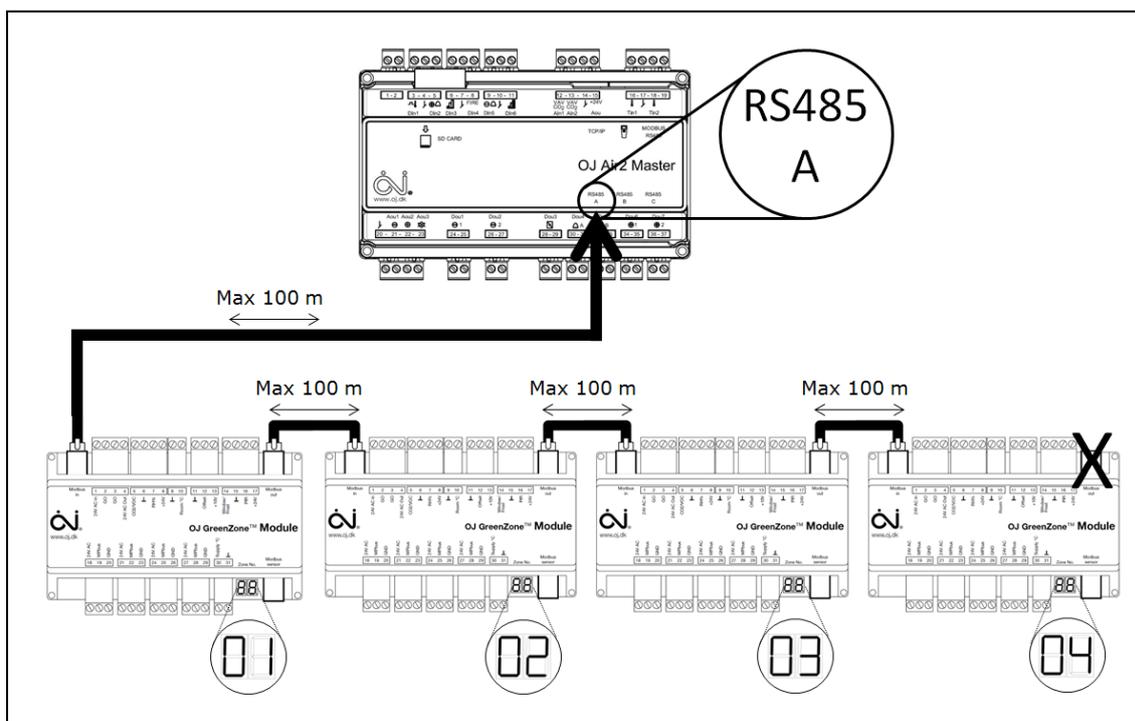


In the **OJ-Air2/4-Zone system** the functionality which, in a traditional **OJ Green Zone** system is made in the **OJ-Green-Zone-Master**, is from SW 4.19, integrated in the **OJ-Air2Master**.

Meaning that the Modbus to the Zone Modules are still, like in an traditional OJ Green Zone system, connected together in daisy chain – but the first Zone Module are now connected to the OJ-Air2 Master **port "A"**.

The addressing of the Zone Modules is made automatic by the OJ-Air2 Master when power-up the system and addressing is always:

- **First Zone Module in the daisy chain, seen from the OJ-Air2Master: First Zone Module = Address 1; Next in the chain = Address 2; Next in the chain = Address 3; and so on.....**
- **The actual address of the Zone Module, is displayed on the 2 x 7-segment display.**



***Only daisy chain connection between Zone Modules allowed.
NOTE! NO star connections allowed.***

Electrical connection in the zones

All electrical connection in the individual Zones, like connecting:

- VAV damper actuators
- Cooling and heating valves
- Humidity sensor (HTH)
- VOC/CO2 sensor (VTH)
- Supply air and room temperature sensor (PT-1000)
- Room touch panel (RPT-20T)

- is installed according to the "Instruction" on previous page.

Display read outs

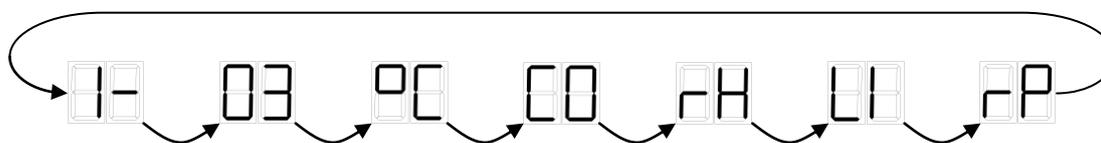
OJ Zone Module is equipped with a 2-digit display
 The display indicates various things as shown in table below.
 The display alternates (flashes) between the activated functions and readouts.

Sample:

If the Zone Module is configured as follows:

- Connected to OJ-Air2Master
- Allocated zone no. 3 by OJ-Air2Master
- Temperature control is activated
- VOC/CO2 sensor is detected and CO2 control is activated
- Humidity sensor (HTH-6202) is detected and humidity control is activated
- Limit sensor temp. is detected and duct temperature control (min./max.) is activated
- A combined temperature/humidity sensor (HTH-6202) is installed in the exhaust duct
- A RPT-20T is installed

The display will swap between this displaying's:



Display read outs	Comments
9-	Zone section number (address) not yet allocated by the OJ-Air2Master
99	Zone number (address) not yet allocated by the OJ-Air2Master
1-	Actual OJ Zone Module is integrated in zone section 1 (Interval:1-1)
03	Shows the actual number (address) of the Zone Module (interval: 1-4)
90	Temperature sensor connected correctly (inlet, exhaust or room sensor)
00	CO2 sensor connected correctly (exhaust or room sensor)
rH	Humidity sensor (HTH-XXXX) connected correctly (exhaust or room sensor)
rP	RPT-20T room touch panel installed and detected from the Zone Module
01	Limit (°C) sensor in the supply air VAV duct installed and detected from the Zone Module
50	Short circuit detected in the sensor measuring loop
50	Software update is ongoing – wait...

Installer settings

Autodetect

In general

All installer settings is made from the WEB pages on the OJ-Air2Master.

When a Zone Modules is connected

As soon as the OJ-Air2Master detects a Zone Module or more on the Modbus port "A", the Zone Module will automatic be configured on the Modbus and assigned an address.

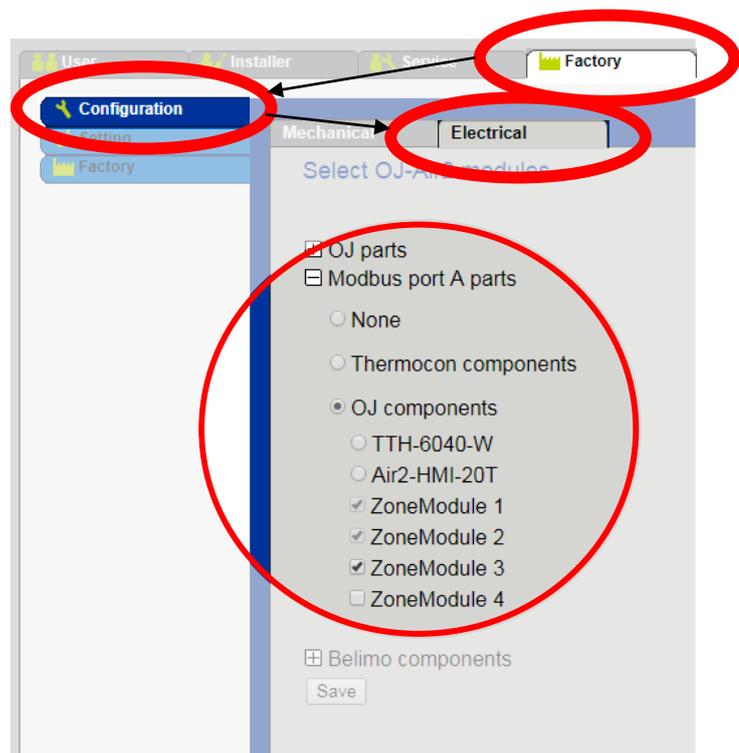
The connected Zone Modules will automatic be selected under:

"**Factory > Configuration > Electrical**" and under **Modbus port "A"** parts –

If you want to check: Login to the WEB page on the OJ-Air2Master using:

User name: **FACTORY** (*Caps On*)

Password: **OJ.DK** (*Caps On*)



Installer settings

In general

Now we reach the setup programming of the connected zones.

Connected Zone Modules and components will automatically be detected from the Zone Module and selected under the setup window. Analog (0-10V) damper actuators must be selected manually.

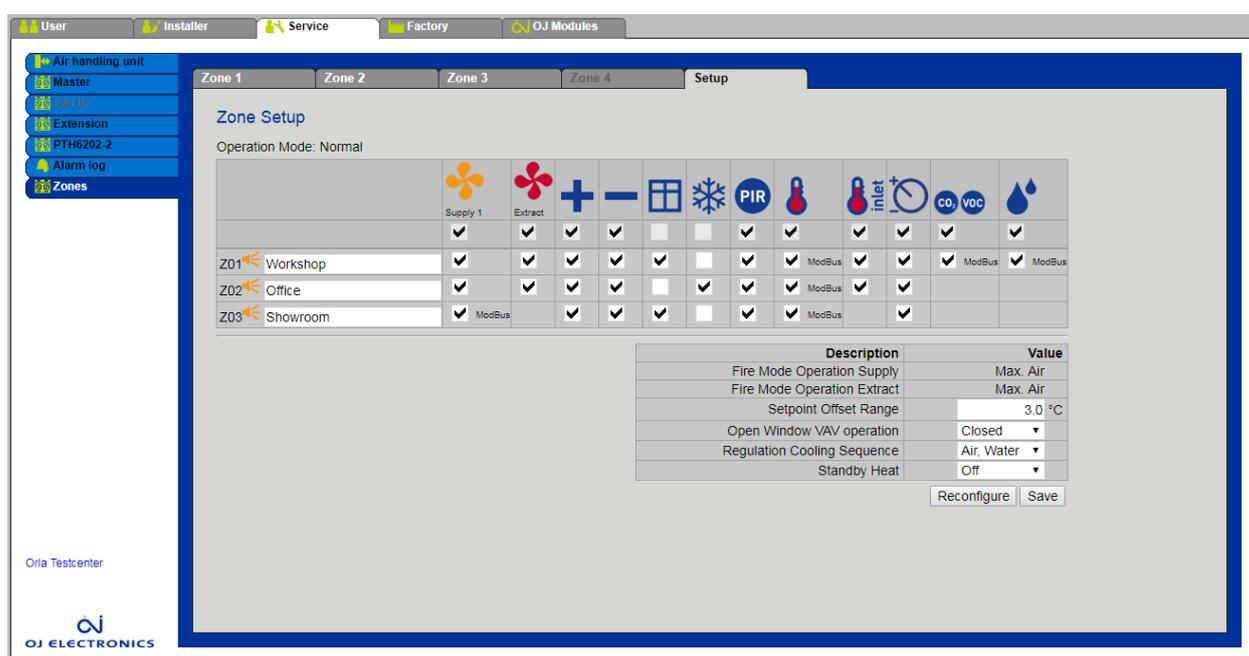
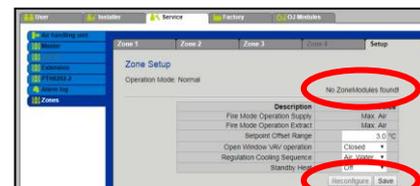
When to use the "Reconfigure" button..?

Only if you add or remove a Zone Module to/from the system, you must reconfigure the system by pressing the "Reconfigure" button.

After pressing the "Reconfigure" button, the "Reconfigure" button will be greyed out (*up to 1 minute*) and you must wait until the "Reconfigure" button again is returned back to "normal".

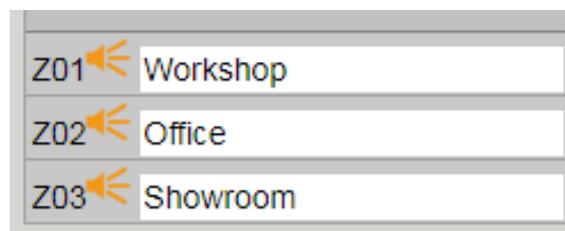
During the reconfigure process, the page will display:

"No Zone Modules found" – see fig. > > > > > > > > > > > > >



Give a name to the zone

- ✓ Here it is possible to give a saying name to the individual zones.
- ✓ The name is allowed to contain up to 19 characters (*Numbers & letters*)
- ✓ In this sample we connected 3 ZoneModules, that´s why only 3 zones are displayed here in this sample.



NOTE! Press "Save" after any change on this page, to save and download to the Zone Module..

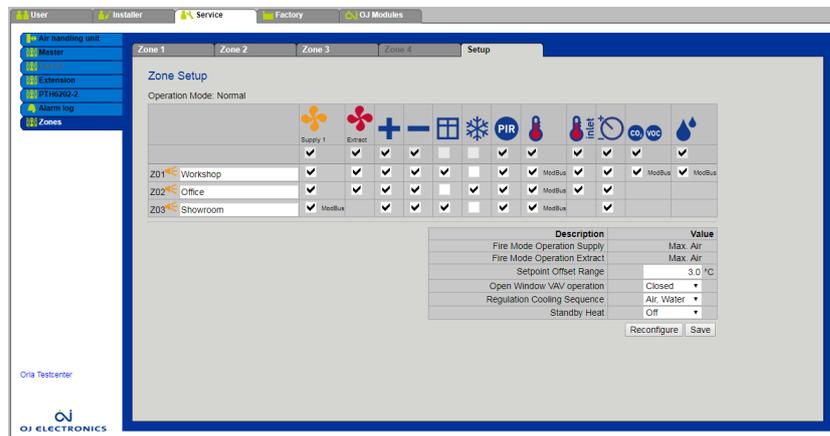
The "Yellow Speaker" symbol

- ✓ The "Yellow Speaker" symbol between the "Z01" and the name is a tool for the service guy.
- ✓ Normal the ZoneModules is installed above the sealing and therefore it might be difficult to find the ZoneModules after installation and the sealing has been placed.
- ✓ By pressing the "Speaker" symbol, ZoneModules will give 3 times "Beep", "Beep", "Beep" – and the service guy will be able to find the installed Zone Module over the sealing, just listening and identify from where the "Beeps" sound comes.



...to be continued next page...

Installer settings



More info on check markings of the individual components in the zones: See next page..

NOTE! Press "Save" after any change on this page, to save and download to the Zone Module..

Setting the zone functionality

Fire Mode Operation Supply

In case of fire detection, it is possible here to select which position the supply air VAV damper must take.

- ✓ Closed: The VAV damper is closed
- ✓ Open: The VAV damper is open

Fire Mode Operation Extract

In case of fire detection, it is possible here to select which position the extract air VAV damper must take.

- ✓ Closed: The VAV damper is closed
- ✓ Open: The VAV damper is open

Setpoint offset range

If an potentiometer offset is used in the room, it is possible to set the maximum offset range

- ✓ 3°C: The offset range is +/- 3°C
- ✓ 5°C: The offset range is +/- 5°C

Open Window VAV operation

If a window contact is used, it is possible to select what position the VAV must take when the window is opened

- ✓ Normal: VAV damper continues auto control mode
- ✓ Closed: VAV dampers are closed if a window is opened

Regulation Cooling Sequence

Select the sequence of the cooling mode

- ✓ Air, Water: By cooling demand: First open the VAV damper and then the cooling valve
- ✓ Water, Air: By cooling demand: First open the cooling valve and then the VAV damper

Standby Heat

Select the mode of the standby heating when the AHU is stopped

- ✓ **Off**
 - If the heating source is via air flow in the VAV system
 - Heating is off and can be overruled by heating coil frost protection input
- ✓ **Frost protection**
 - If the room heat source is radiator or floor heating
 - Room temperature control loop will protect the room from freezing by using setpoint +5°C
- ✓ **Setpoint**
 - If the room heat source is heat panel or floor heating
 - Room temperature control loop will continue according to setpoint in WEB or RPT-20T

Description	Value
Fire Mode Operation Supply	Max. Air
Fire Mode Operation Extract	Max. Air
Setpoint Offset Range	3.0 °C
Open Window VAV operation	Closed ▼
Regulation Cooling Sequence	Air, Water ▼
Standby Heat	Off ▼

Reconfigure Save

Configuring the zones

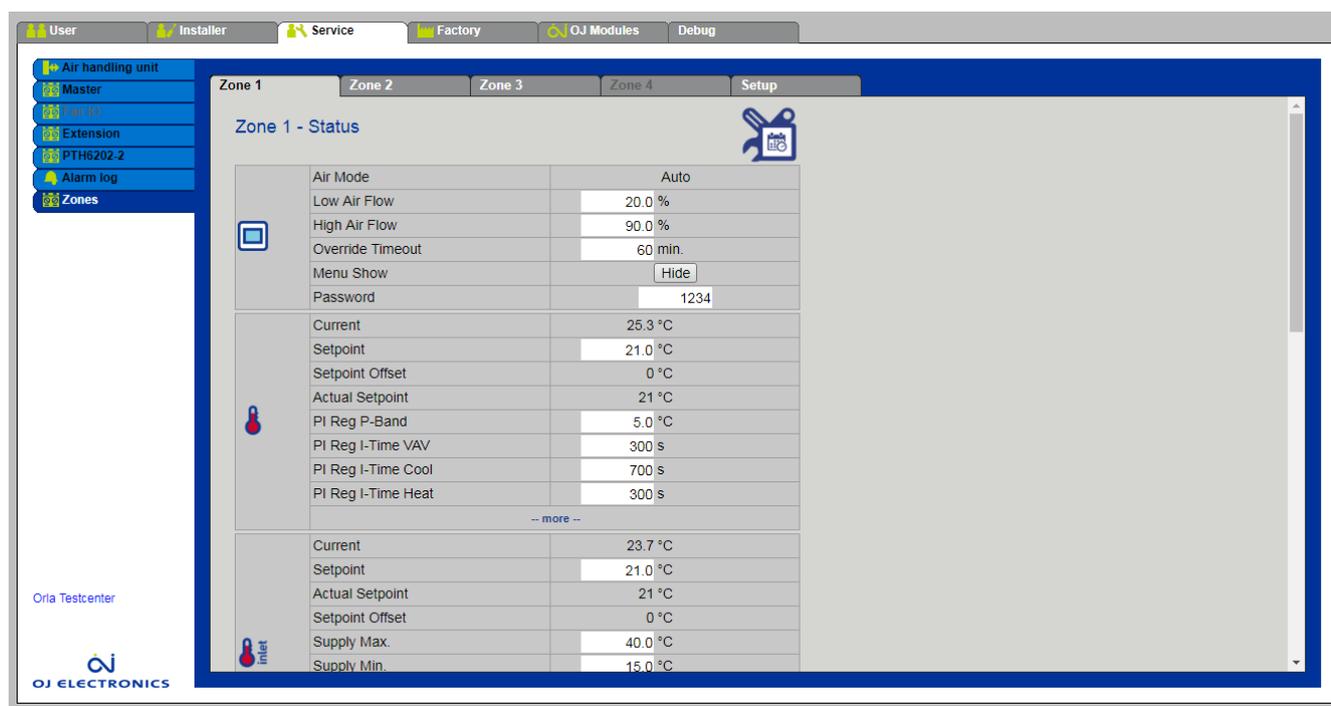
NOTE!

The checkmark in first line, is a common checkmark so you can select all Zones using one checkmark.

 <p>Supply 1</p> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> ModBus	<p>Select "Supply" if an VAV damper is connected on to the actual zone. If a Modbus actuator is detected, "Modbus" will be displayed to indicate that this VAV actuator is a Modbus actuator. MP-Bus will be displayed if a MP-Bus actuator is detected. Only check mark will be displayed if this VAV actuator is a 0-10V actuator.</p>	 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<p>Select "PIR" if a PIR sensor is connected on to the actual zone. When the PIR sensor see movements, the zone will switch to Supply Min. Air Flow acc. to the setpoint under PIR:</p> <table border="1" data-bbox="1002 421 1533 472"> <thead> <tr> <th>PIR</th> <th>Current</th> <th>Not Active</th> </tr> </thead> <tbody> <tr> <td></td> <td>Supply Min. Air Flow</td> <td>33 m³/h</td> </tr> </tbody> </table> <p>If no movements detected in more than 10 minutes, the zone will go into normal operation.</p>	PIR	Current	Not Active		Supply Min. Air Flow	33 m ³ /h
PIR	Current	Not Active							
	Supply Min. Air Flow	33 m ³ /h							
 <p>Extract</p> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<p>Select "Extract" if an VAV damper is connected on to the actual zone. If a Modbus actuator is detected, "Modbus" will be displayed to indicate that this VAV actuator is a Modbus actuator. MP-Bus will be displayed if a MP-Bus actuator is detected. Only check mark will be displayed if this VAV actuator is a 0-10V actuator.</p>	 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> ModBus <input checked="" type="checkbox"/> ModBus <input checked="" type="checkbox"/> ModBus	<p>Select "Room sensor" if an room sensor is connected on to the actual zone. If RPT-20T is detected, "Modbus" will be displayed to indicate that this sensor is a Modbus sensor.</p>						
 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<p>Select "Heating coil" if an heating coil is installed in the actual zone. If a Modbus actuator is detected, "Modbus" will be displayed to indicate that this valve actuator is a Modbus actuator. MP-Bus will be displayed if a MP-Bus actuator is detected.</p>	 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<p>Select "Inlet air sensor" if an supply air duct sensor is connected on to the actual zone. <i>("Inlet" is the same as "Supply")</i></p>						
 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<p>Select "Cooling coil" if an cooling coil is installed in the actual zone. If a Modbus actuator is detected, "Modbus" will be displayed to indicate that this valve actuator is a Modbus actuator. MP-Bus will be displayed if a MP-Bus actuator is detected.</p>	 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<p>Select "+/- offset temperature" if an offset temperature selector is connected on to the actual zone. This offset selector is a potentiometer, connected on the terminals</p>						
 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<p>Select "Window contact" if an window contact is installed in the actual zone. An open window = open contact, will put the actual zone in standby mode. It is possible to select either "Window" function or "Frost" function.</p>	 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> ModBus	<p>Select "VOC/CO2" if an VOC/CO2 sensor is connected on to the actual zone. If a Modbus sensor like VTH-6202 is detected, "Modbus" will be displayed to indicate that this sensor is a Modbus sensor.</p>						
 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>Select "Frost thermostat" if an frost thermostat is installed on the water based heating coil, in the actual zone. An open contact, will put the actual zone in to frost protection mode. Closed contact = OK.. It is possible to select either "Window" function or "Frost" function.</p>	 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> ModBus	<p>Select "Humidity sensor" if an humidity sensor is connected on to the actual zone. If a Modbus sensor like HTH-6202 is detected, "Modbus" will be displayed to indicate that this sensor is a Modbus sensor.</p>						

NOTE! Press "Save" after any change on this page, to save and download to the Zone Module.

Settings in the zones



Auto configure function

What is displayed on the page depends on which actuators and sensor types are installed in the zone concerned. All sensors and actuators will automatically be displayed when electrical connected to the Zone Module. So the displayed window(s) **on the next pages**, depends on the connected sensors and actuators. By analog Zone Modules (Zone Module (A)) it is a smaller amount of values which will be displayed.

Setpoints for room temperature (°C), CO₂ (ppm) and humidity (RF%) can be changed and saved by clicking on the "Save" button at the bottom of the page. If the setpoints are exceeded, the PI controllers will increase the setpoint of the VAV dampers. P and I are factory set and need not normally be changed. If faster control is required, P-band and I-time can be reduced.

If the VAV damper setpoint is unstable, increase P-band and I-time.

OJ-RPT20-T 2" touch panel (optional)

If an OJ-RPT20-T is connected to a zone, a few additional parameters will be visible in the zone setup, see next page.

Low/High Air Flow

If low or high air flow is selected on the touch panel, the air flow will be controlled according to this value.

This air flow will be maintained until the override timeout has elapsed.

Override Timeout

If low or high air flow is activated, the system will return to Auto mode after the override timeout has elapsed. Setting range: min. 10 minutes, max. 90 minutes.

Menu Show

Hides/shows the Menu button on the RPT20-T touch panel.

Password

Most parameters in the Setup menu of the RPT20-T touch panel are password protected. The password must consist of 4 digits, each between 1 and 6.



Further informations for the RPT-20T

For further information of the RPT-20T, look in the instructions which was delivered in the same packaging together with the RPT-20T. Find more informations on www.ojelectronics.com

Settings in the zones

• RPT-20T Room panel

	<p>Air mode: Actual status Auto, Low, High, Stop</p> <p>Low Air Flow: Actual Air Flow</p> <p>High Air Flow: Actual Air Flow</p> <p>Override Timeout: When changing status from the RPT-20T, this status will be kept activated in selected time.</p> <p>Menu Show: Show menu in the RPT-20T</p> <p>Password: Set and change password RPT-20T</p>
--	--

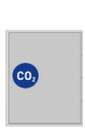
• Room settings (Temperature)

	<ul style="list-style-type: none"> • Current: Actual room temperature • Setpoint: Setpoint set from WEB or RPT-20T • Setpoint Offset: Actual setpoint offset (+/- °C) • Actual Setpoint: Actual setpoint (°C) • PI Reg P-Band: Temperature P-Band • PI Reg I-Time VAV: I-Time VAV • PI Reg I-Time Cool: I-Time Cooling mode • PI Reg I-Time Heat: I-Time Heating mode
--	---

• Supply air settings (Temperature)

	<ul style="list-style-type: none"> • Current: Actual supply air temperature • Setpoint: Setpoint set from WEB or RPT-20T • Actual Setpoint: Actual setpoint (°C) • Setpoint Offset: Actual setpoint offset (+/- °C) • Supply Max.: Supply max. inlet temp. • Supply Min.: Supply min. inlet temp. • PI Reg P-Band: Temperature P-Band • PI Reg I-Time VAV: I-Time VAV • PI Reg I-Time Cool: I-Time Cooling mode • PI Reg I-Time Heat: I-Time Heating mode
--	---

• VOC/CO2 (ppm)

	<ul style="list-style-type: none"> • Current: Actual room air VOC/CO2 • Setpoint: Setpoint set from WEB • PI Reg P-Band: VOC/CO2 P-Band • PI Reg I-Time: I-Time VOC/CO2
--	---

• Humidity (%rh)

	<ul style="list-style-type: none"> • Current: Actual room air humidity • Setpoint: Setpoint set from WEB • PI Reg P-Band: Humidity P-Band • PI Reg I-Time: I-Time Humidity
--	--

Air Mode	Auto
Low Air Flow	20.0 %
High Air Flow	90.0 %
Override Timeout	60 min.
Menu Show	Hide
Password	1234
Current	26.1 °C
Setpoint	21.0 °C
Setpoint Offset	0.0 °C
Actual Setpoint	21.0 °C
PI Reg P-Band	7.0 °C
PI Reg I-Time VAV	50 s
PI Reg I-Time Cool	700 s
PI Reg I-Time Heat	300 s
Current	23.2 °C
Setpoint	21.0 °C
Actual Setpoint	21 °C
Setpoint Offset	0 °C
Supply Max.	40.0 °C
Supply Min.	15.0 °C
PI Reg P-Band	7.5 °C
PI Reg I-Time VAV	300 s
PI Reg I-Time Cool	700 s
PI Reg I-Time Heat	300 s
Current	450 ppm
Setpoint	800 ppm
PI Reg P-Band	750 ppm
PI Reg I-Time	1250 s
Current	34.9 % RH
Setpoint	70.0 % RH
PI Reg P-Band	7.5 % RH
PI Reg I-Time	1250 s

....to be continued next page....

• **Supply air settings (Flow)**



- **Setpoint:** Actual setpoint in %
- **Setpoint:** Actual setpoint in m3/h
- **Current position:** Actuator pos. in % open
- **Current position:** Actuator pos. in ° angle
- **Current flow:** Actual flow in % of max.
- **Current flow:** Actual flow in m3/h
- **Nominal flow:** Read out from the actuator
- **Min. Air flow:** Setpoint min. air flow
- **Max. Air flow:** Setpoint max. air flow
- **Override:** Setpoint override position (&Enable)
- **Testrun:** Press "Start" to test the actuator
- **Adaption:** Press "Start" to run adaption
- **Serial number:** Read out serial number

Setpoint	100.0 %
Setpoint	100 m3/h
Current Position	100.0 %
Current Position	80 °
Current Flow	0.0 %
Current Flow	0 m3/h
Nominal Flow	100 m3/h
Min. Air Flow	70 m3/h
Max. Air Flow	100 m3/h
Override	0.0 % <input type="checkbox"/> Enable
Testrun	<input type="button" value="Start"/>
Adaption	<input type="button" value="Start"/>
-- more --	
Setpoint	100.0 %
Setpoint	100 m3/h
Current Position	100.0 %
Current Position	80 °
Current Flow	0.0 %
Current Flow	0 m3/h
Nominal Flow	100 m3/h
Min. Air Flow	70 m3/h
Max. Air Flow	100 m3/h
Override	0.0 % <input type="checkbox"/> Enable
Testrun	<input type="button" value="Start"/>
Adaption	<input type="button" value="Start"/>
-- more --	
 Current	Not Active
 Supply Min. Air Flow	0 m3/h
 Current	Not Active
 Current	Closed

• **Extract air settings (Flow)**



- **Setpoint:** Actual setpoint in %
- **Setpoint:** Actual setpoint in m3/h
- **Current position:** Actuator pos. in % open
- **Current position:** Actuator pos. in ° angle
- **Current flow:** Actual flow in % of max.
- **Current flow:** Actual flow in m3/h
- **Nominal flow:** Read out from the actuator
- **Min. Air flow:** Setpoint min. air flow
- **Max. Air flow:** Setpoint max. air flow
- **Override:** Setpoint override position (&Enable)
- **Testrun:** Press "Start" to test the actuator
- **Adaption:** Press "Start" to run adaption
- **Serial number:** Read out serial number

• **PIR (Movement detector)**



- **Current:** Active / Not active – 10 min efterløb..!!!!
- **Supply Min. Air Flow:** Setpoint min. flow
NOTE! When the zone is in "Auto" and the PIR detects activity in the room, the volume will switch to the setpoint "**Min. Air Flow**".
 When the PIR detects no more movement in the room, there is an after run time of **10 minutes** and the room will go back to "Auto".

• **Frost** (The digital input: "Frost/Window", can be used as either "Frost" or "Window")



- **Current:** Actual status of the frost protection

• **Window** (The digital input: "Frost/Window", can be used as either "Frost" or "Window")



- **Current:** Actual status of the Window (Open/Closed)

• **Heating coil**



- **Setpoint:** Calculated position open (%)
- **Current position:** Act. position open (%)
- **Current position:** Act. position open (°)
- **Override:** Setpoint override position (&Enable)
- **Testrun:** Press "Start" to test the actuator
- **Adaption:** Press "Start" to run adaption
- **Serial number:** Read out serial number

• **Cooling coil**



- **Setpoint:** Calculated position open (%)
- **Current position:** Act. position open (%)
- **Current position:** Act. position open (°)
- **Override:** Setpoint override position (&Enable)
- **Testrun:** Press "Start" to test the actuator
- **Adaption:** Press "Start" to run adaption
- **Serial number:** Read out serial number

Setpoint	0.0 %
Current Position	0.0 %
Current Position	0 °
Override	0.0 % Enable
Testrun	Start
Adaption	Start
Override Operation	None
Serial Number	01442-40024-000-136
-- less --	
Setpoint	100.0 %
Current Position	10 %
Current Position	9 °
Override	0.0 % Enable
Testrun	Start
Adaption	Start
Override Operation	None
Serial Number	01442-40024-000-136
-- less --	
Save Copy	

Press "Save" when finished selections and settings.

Copy function

- If several rooms are to have the same settings, it is possible to copy the settings from the completed zone to the others.
- Click on the "Copy" button at the bottom of the page (see figure).
- All settings for the zone concerned are copied to the entered zone number.
- In the example in figure, clicking "Copy" will overwrite the setpoints in Section 1 "Zone 1" and "Zone 2" with the values from Zone 3.

Not Active

Copy Zone Configuration

Copy From: Section 1 Zone 3

Copy To: Section 1 Zone 2

Section 1 Zone 1

Cancel Copy

NOTE!

"Section 1" cannot be changed.
All Zones are in "Section 1"

Setting the time schedulers

In general

Now we reach the time to set the schedulers for operation mode in the individual zones. Each zone has his own scheduler time programme.

The scheduler is divided into 4 slots where it is possible to select 4 different temperature settings, in 4 individual time slot during one day (24h).

There are 3 pre-programmed schedulers for each zone. It is possible to make timers using the same programme each and every day of the week, individual time schedulers each week day and same time schedulers for 5 working days of the week and another time scheduler for the weekends.

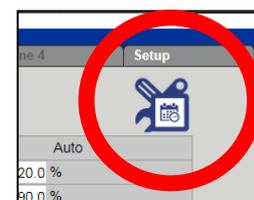


Fig. 1

How to set the scheduler:

Go to the zone you want to see or change the time scheduler programme (Zone 1, 2, 3 & 4)

Press the "Tool & Scheduler" (see fig. 1) symbol in the right corner

Select if you want to make a scheduler programme that:

- Is the same for each and every day of the week (see fig. 2)
- Is the same for weekdays and for weekends (see fig. 3)
- Have individual scheduler programmes for each weekday (fig. 4)

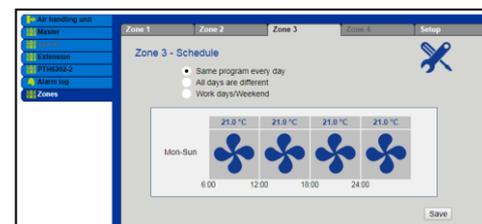


Fig. 2

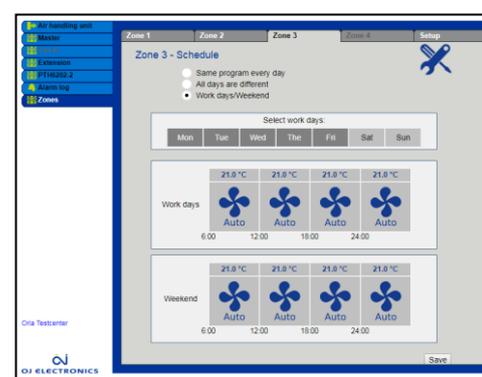
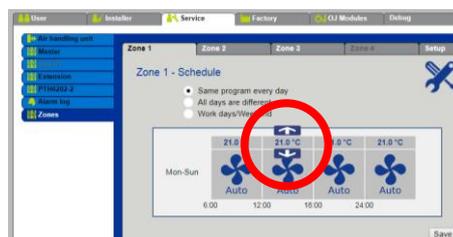


Fig. 3

Changing temperature setpoint in the time slot:

- Click the temp. digits
- Click the arrow (Up/Down)
- Press "Save"



Changing scheduler time slot

- Click the time digits
- Click the arrow (Up/Down)
- Press "Save"



Change operation mode in the time slot

- Click the fan symbol
- Click more for changing status
- Press "Save"

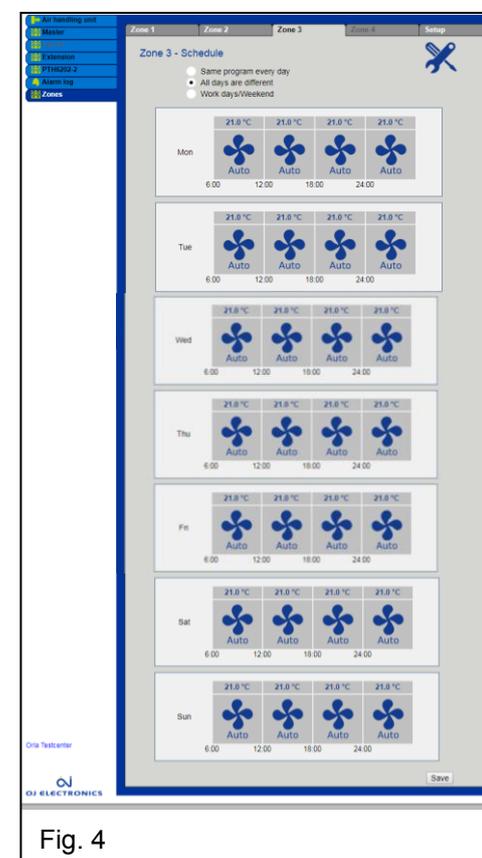
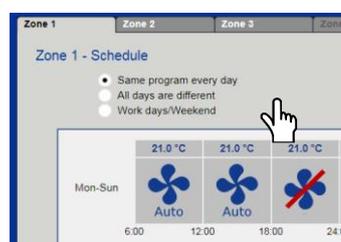
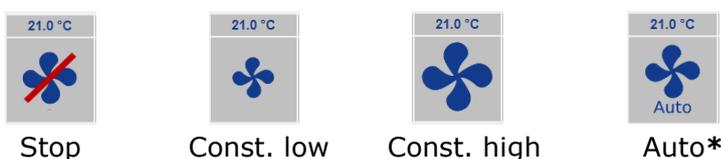


Fig. 4



***Auto** = VAV air volume will be controlled according to the setpoints (°C, %rh, CO2)

Configuring the OJ-Air2Master

Setting the fan control mode

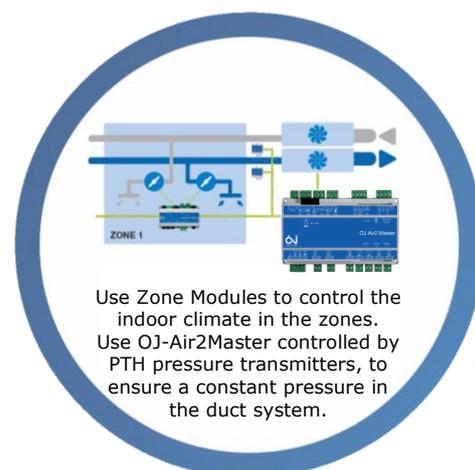
In general

Every single Zone Module in the system, do control the air volume in the connected zone via their own VAV dampers. By cooling demand in the zone, the Zone Module will higher the air volume to the room.

If an humidity sensor and/or an VOC sensor is connected to the Zone Module, these also will higher the air volume to the room if there is a demand for dehumidify or too high VOC content.

If heating and/or cooling coils are installed in the VAV supply air duct and connected to the Zone Module, the heating/cooling valve will open by demand.

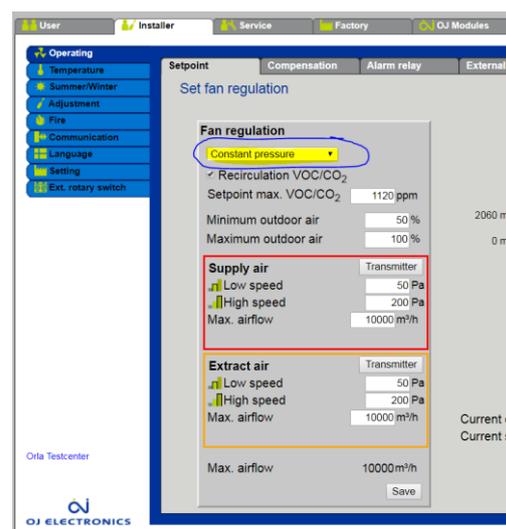
If only a room sensor like RPT-20T is installed, the VAV dampers will increase the air volume by cooling demand and decrease to minimum air volume by heating demand. The radiator heating system will then take care of the heating in the room.



Prepare the air handling unit to handle the zone control system.

Set fan regulation.

To make the air handling (AHU) unit able always to deliver the correct air volume for the zones, you must select **“Constant pressure”** under “Installer > Operating > Setpoint” and select pressure setpoints that matches the demand for the zones and the zone duct system.

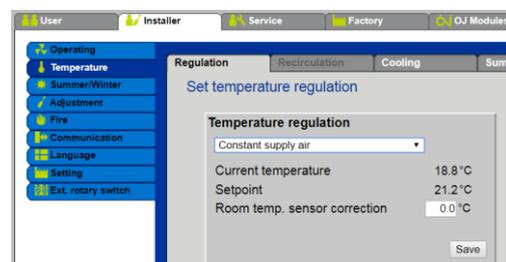


Set temperature regulation.

To make the AHU able always to deliver the correct temperature, you must under:

“Installer > Temperature > Regulation” select between:

- ✓ “Constant supply air”
- ✓ “Constant extract air”
- ✓ “Constant room ”



Summer night cooling (Free cooling)

If summer night cooling is selected and activated in the OJ-Air2 Master, all Zone VAV dampers will open in the time while summer night cooling is active.

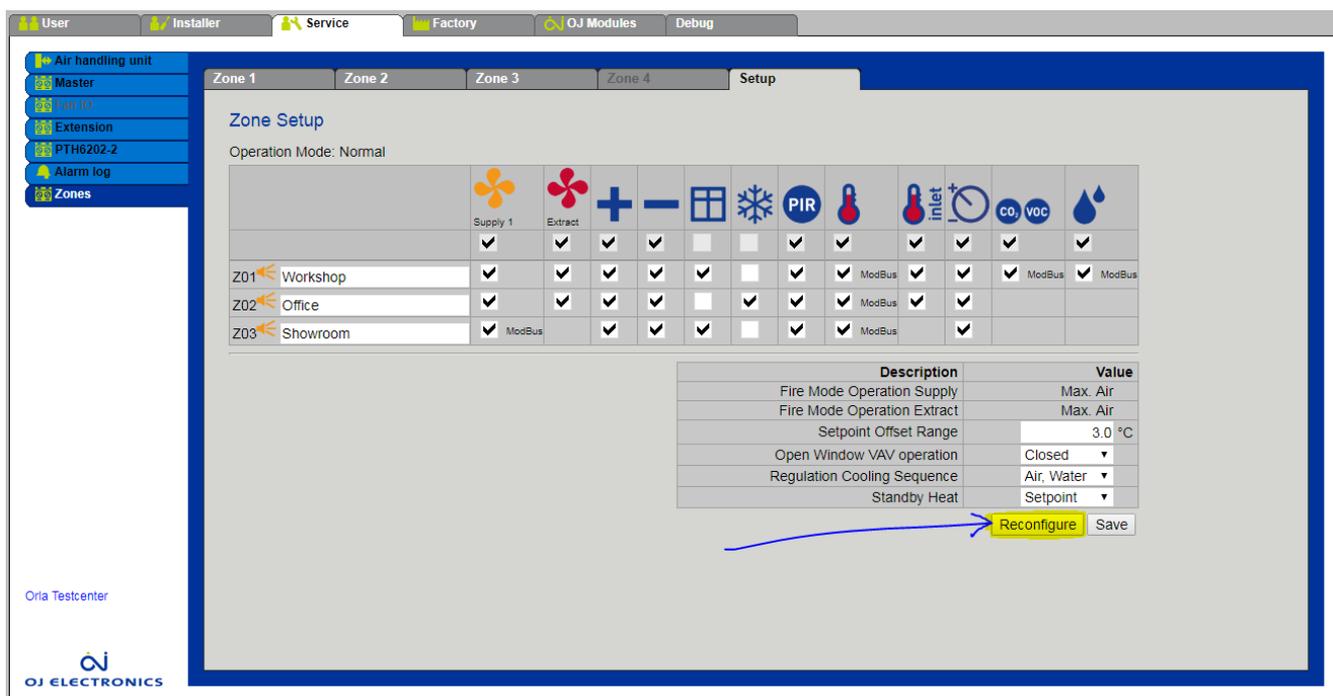
Description summer night cooling under **index 5 / Installer**.

Service

How to replace a defective Zone Module

If a Zone Module has gone broken and needs to be replaced, you must make a reconfiguration of the setup..

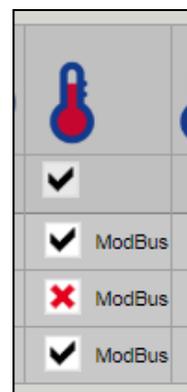
1. Power off the defective Zone Module
2. Build out the defective Zone Module
3. Build in the new Zone Module
4. Secure that all electrical connections are proper reassembled
5. Power up the new Zone Module
6. Press "Reconfigure"
7. Wait until all Zone Modules again are displayed correct on the "Setup page"



The screenshot shows the 'Zone Setup' interface. At the top, there are tabs for 'Zone 1', 'Zone 2', 'Zone 3', 'Zone 4', and 'Setup'. The 'Setup' tab is active. Below the tabs, there's a 'Zone Setup' section with 'Operation Mode: Normal'. A table lists components for each zone (Z01, Z02, Z03). The components include Supply 1, Extract, a plus sign, a minus sign, a square, a snowflake, PIR, a red circle with a white cross, a red circle with a white dot, a clock, CO, VOC, and a water drop. Each component has a checkmark or a red cross indicating its status. Below the table is a 'Description' table with columns for 'Description' and 'Value'. The 'Description' table includes: Fire Mode Operation Supply (Max. Air), Fire Mode Operation Extract (Max. Air), Setpoint Offset Range (3.0 °C), Open Window VAV operation (Closed), Regulation Cooling Sequence (Air, Water), and Standby Heat (Setpoint). At the bottom right, there are 'Reconfigure' and 'Save' buttons. A blue arrow points to the 'Reconfigure' button.

Communication error

If a red cross is displayed instead of the checkmark, the communication to this component is broken.

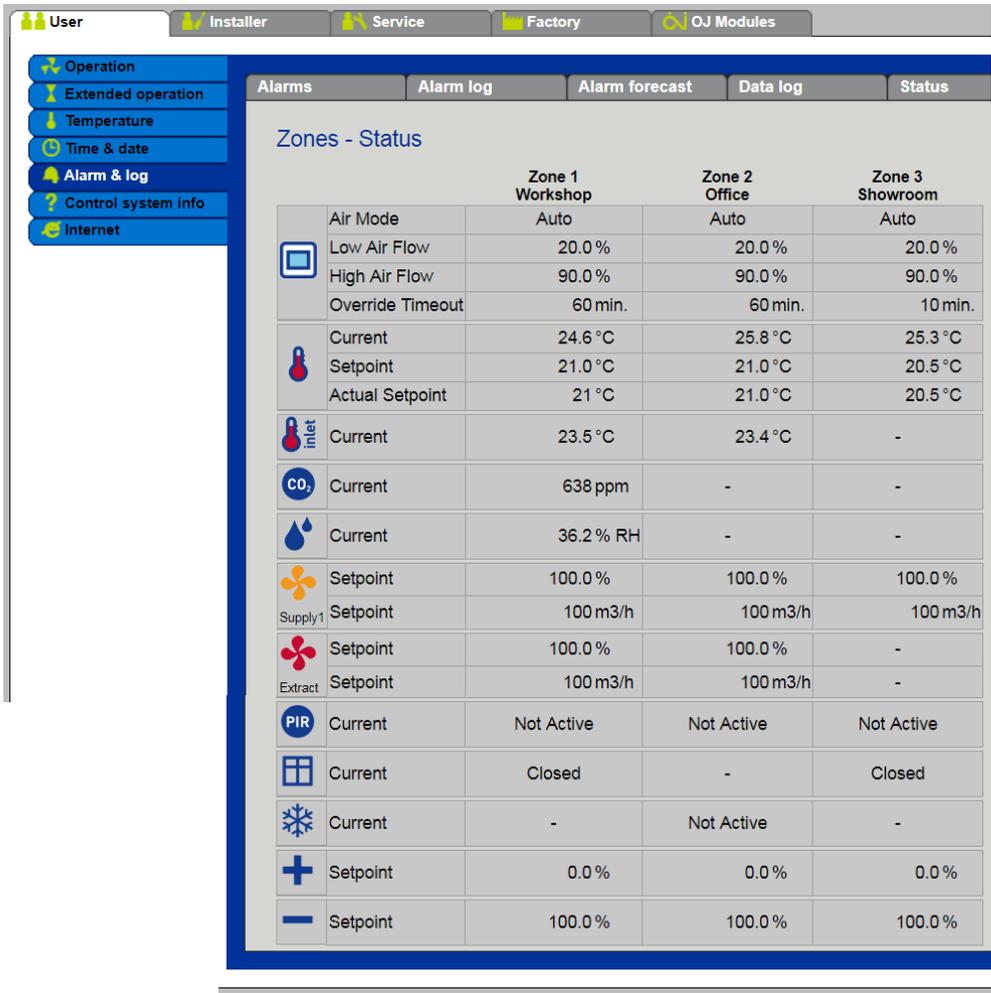


User interface (Read out)

Under the user level: "User > Alarm & Log > Zones" – all actual values will be displayed.

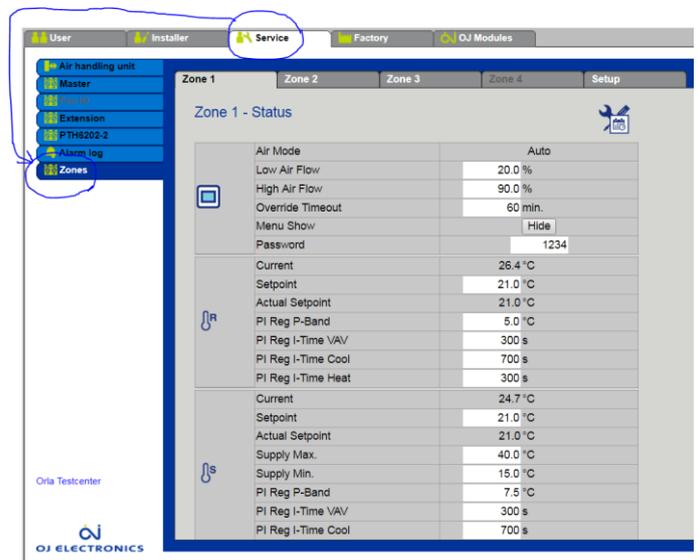
NOTE! It is not possible to change values from user level.

All user setting is done from the RPT-20T room touch display.



Zones - Status				
	Zone 1 Workshop	Zone 2 Office	Zone 3 Showroom	
Air Mode	Auto	Auto	Auto	
Low Air Flow	20.0 %	20.0 %	20.0 %	
High Air Flow	90.0 %	90.0 %	90.0 %	
Override Timeout	60 min.	60 min.	10 min.	
Current	24.6 °C	25.8 °C	25.3 °C	
Setpoint	21.0 °C	21.0 °C	20.5 °C	
Actual Setpoint	21 °C	21.0 °C	20.5 °C	
Current	23.5 °C	23.4 °C	-	
Current	638 ppm	-	-	
Current	36.2 % RH	-	-	
Setpoint	100.0 %	100.0 %	100.0 %	
Supply1	100 m3/h	100 m3/h	100 m3/h	
Setpoint	100.0 %	100.0 %	-	
Extract	100 m3/h	100 m3/h	-	
Current	Not Active	Not Active	Not Active	
Current	Closed	-	Closed	
Current	-	Not Active	-	
Setpoint	0.0 %	0.0 %	0.0 %	
Setpoint	100.0 %	100.0 %	100.0 %	

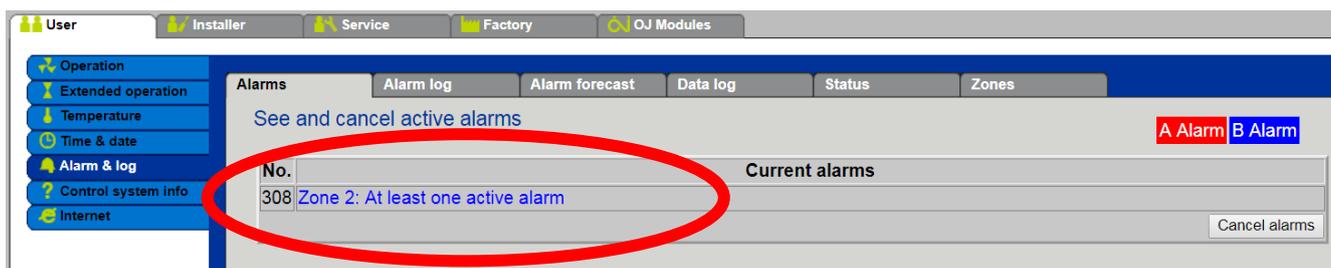
If no **RPT-20T** room touch display installed, the user setting are to be done from the **Service level**



Zone 1 - Status	
Air Mode	Auto
Low Air Flow	20.0 %
High Air Flow	90.0 %
Override Timeout	60 min.
Menu Show	Hide
Password	1234
Current	26.4 °C
Setpoint	21.0 °C
Actual Setpoint	21.0 °C
PI Reg P-Band	5.0 °C
PI Reg I-Time VAV	300 s
PI Reg I-Time Cool	700 s
PI Reg I-Time Heat	300 s
Current	24.7 °C
Setpoint	21.0 °C
Actual Setpoint	21.0 °C
Supply Max.	40.0 °C
Supply Min.	15.0 °C
PI Reg P-Band	7.5 °C
PI Reg I-Time VAV	300 s
PI Reg I-Time Cool	700 s

Alarms

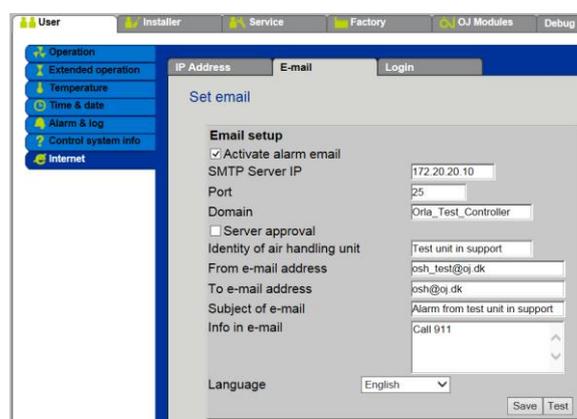
All alarm from the Zone Modules will be displayed on the alarm tab under "User > Alarm & Log":



On the "Alarm tab", alarms from the Zones will be displayed as "Common alarms":

Sending out alarms to e-mail address

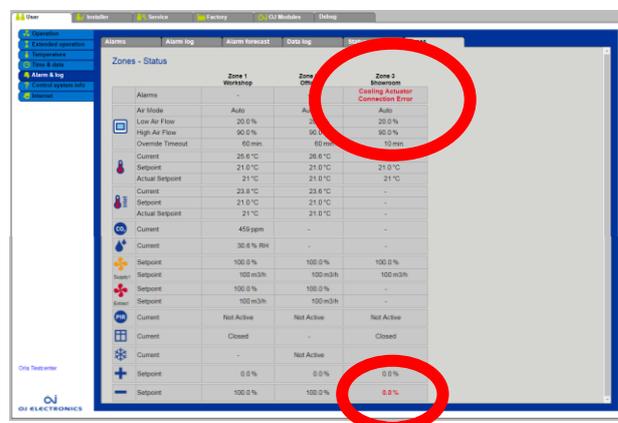
This alarm will be handled according to the standard handling procedure – meaning if the E-mail setup has been made, the alarm will be send to the e-mail address like setup under "Set email".



To find out which alarm is triggered in the individual Zones, all alarm from the Zone Modules will be displayed in the status window under User level:

User > Alarm & Log > Zones

Alarms are indicated with the alarm text written in red and the actual level is also now in red

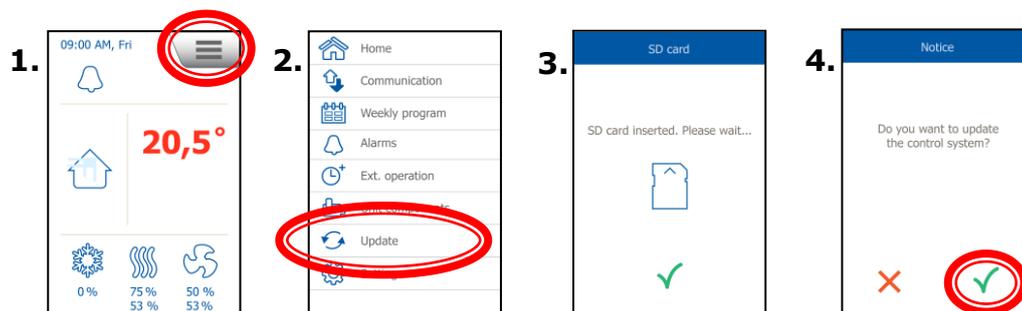


Software update

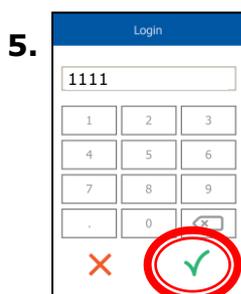
In general

SW update in the Zone Modules and RPT-20T are made from the OJ-Air2Master.

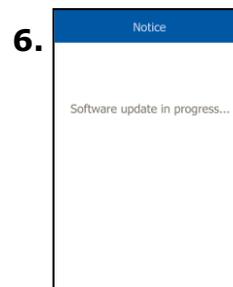
- Connect the power supply to the OJ Air2Master and power-on.
- Connect the OJ Air2-HMI-35T to the OJ-Air2Master in the plug marked:
- See if the HMI terminal powers up and light up in the display
- Place the SD-card in the card reader in the OJ Air2 Master
- The SD-card must be put into the controller like on this picture
- When the card is placed correctly in the card reader, use the OJ Air2-HMI-35T to activate the update process:



Give in PIN-code: 1111

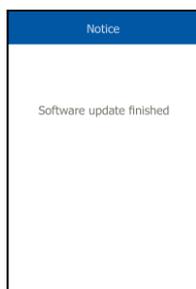


Update will now start...>

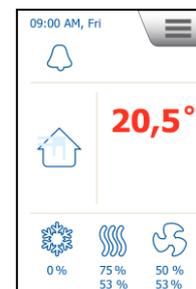


It is important to let the update process be completed before you press the touch display again, if not there is a risk to destroy the functionality of controller.

Wait until the update is completed and the display shows.....>>>



The display will automatic jump to the start screen when the Master is ready to operate..>>>



OJ-Air2 and Zone software is now updated and ready to use...



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www.exhausto.com