

HVAC FLOOR HEATING CONTROLS & POWER ELECTRIC FLOOR HEATING HYDRONIC







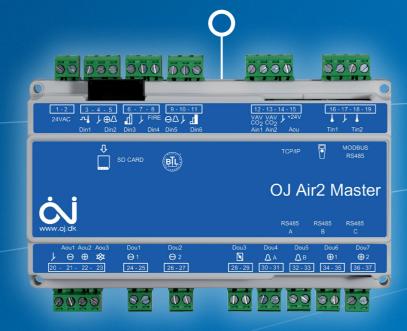
full control from one provider

### OJ Air2 Master

The OJ Air2 controller was developed specifically for ventilation systems – which is evident from details such as the attractive user interface.



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# PICK WHAT YOU WANT

At OJ Electronics, we have spent four decades providing and perfecting control for air handling units. So we know that different settings require different things. With OJ Air2, you can get it all.

**GET IT ALL IN ONE PLACE** 

The OJ Air2 range makes your air handling unit more efficient, more effective and easier to handle for everyone involved. What is more, you can get everything you need from the OJ Air2 series: everything fits perfectly together.

The OJ Electronics range is about choice, too. If you want the full benefit of sophisticated control and simple handling, you can install the complete range in your system. But you can also scale your system to match project specifications, picking out specific products and control features to give your clients exactly the level of functionality and control they need.

# **OUR DEVELOPERS WORK FOR YOU**

Innovation should be driven by real needs – responding to real-life challenges. That is why we always invite customers to tell us what they would like to see in their AHU control. And we use our four decades of experience to regularly update all solutions as new technology and new customer input becomes available.

That's how we – and you – stay on the cutting edge of AHU control. Recent examples include rotary heat exchanger drive and OJ Air Cloud<sup>®</sup>. You still benefit from our engineers' development work after installation: new software features are released regularly.

# Drive

The OJ Air2 range includes drives developed specifically with air handling units in mind. These drives offer continuous operation from -40° to +50°.



### **Touchscreen interface with no secrets**

The new OJ Air2 HMI-35T unit is a major upgrade for OJ Air2 – offering logical and intuitive menus.





# **PLUG & PLAY**

All elements in the OJ Air2 range fit together perfectly: the QuickPlug™ Modbus technology makes cabling and installation a breeze. But the Plug & Play philosophy goes further than that: With OJ Air2 controls inside, your air handling unit is in itself transformed into a single preinstalled Plug & Play-unit for remarkably easy installation on-site.



# **ENERGY SAVINGS**

Energy savings have dual benefits: saving money while helping to save the planet.

The OJ Air2 controls minimise energy consumption in many ways, e.g. through efficient interaction with heat pumps. Most recently, our work with adiabatic cooling reflects our ongoing dedication to bringing you energy savings.



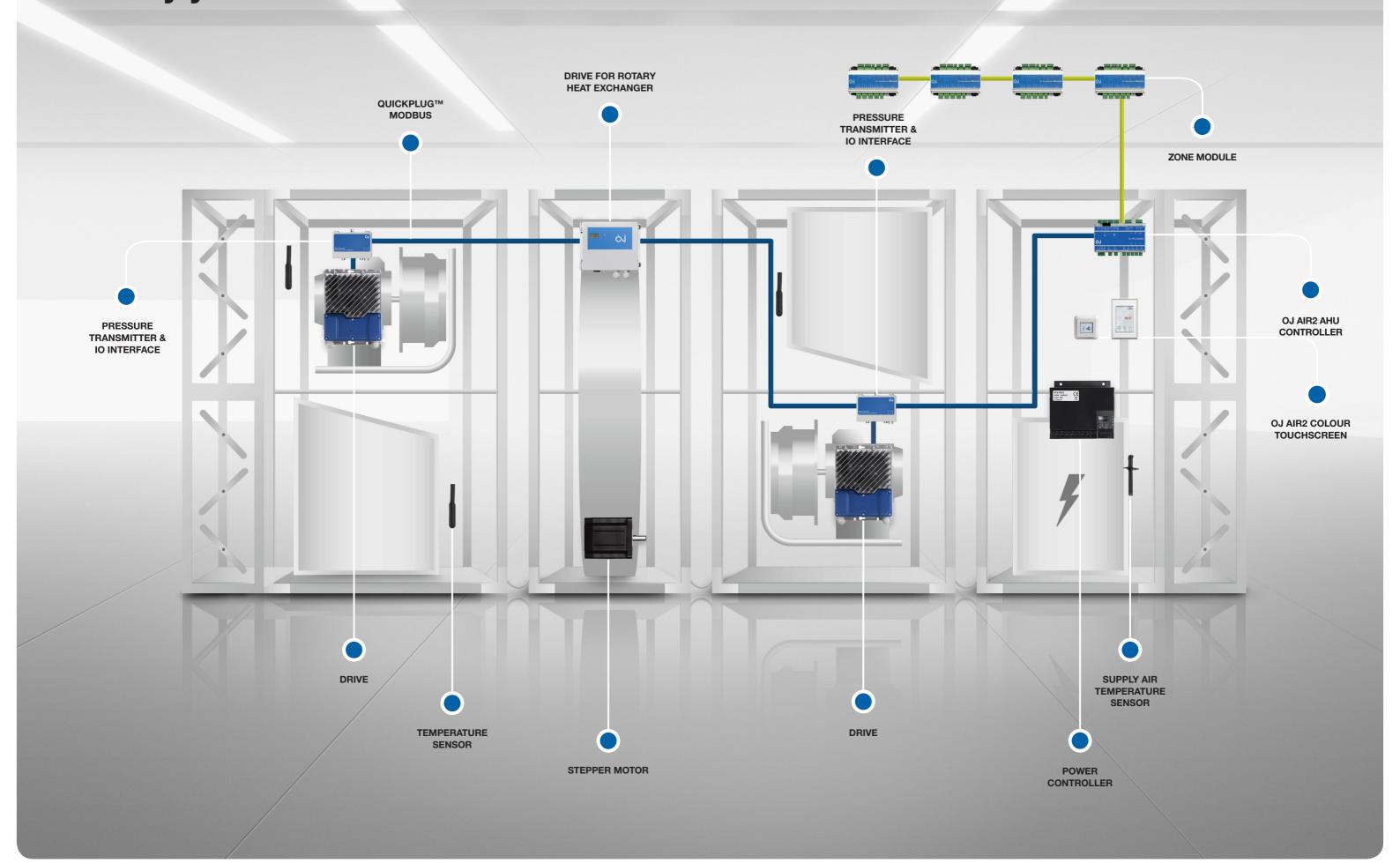
# **RELIABLE SOLUTION**

At OJ Electronics, we have specialised in AHU control for many years. We know how important it is for our clients that their systems just keep working – and with an OJ Air2 solution, they do. Not only are all the components of superior, lasting quality; they also fit together perfectly in ways that allow them to handle every situation.

# Complete control. The way you want it.

The OJ Air2 range is very extensive – it needs to be to give you everything you need for full AHU control. In fact, it allows you to choose between millions of possible applications. The individual pieces are obviously very

diverse, but still share certain characteristics – such as easy installation, much simpler cabling with QuickPlug™ Modbus technology, and intuitive operation.



# Tick the boxes you want. And you're done.

The OJ Air2 web interface comes pre-programmed with all the functions your system needs - including, for example, five different forms of heat recovery. All you need to do to set up your system is to tick the boxes next to the functions you want - the software takes care of the rest. Nothing could be simpler.

# **UP TO FOUR USER LEVELS**

# - FROM EXPERT ADJUSTMENTS TO DAILY OPERATION

The built-in web interface enables system administrators to set up to four user levels, allowing you to control who has access to what functions. We usually say that everyday users learn the functions they need in a few minutes, installers learn all they need to know in an hour, service crew in a day - and factory specialists gain full insight in just two days. You decide who gets to do what; sample levels are shown below.

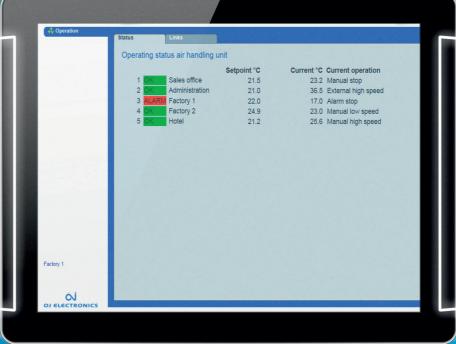
# **SAVING COSTS ON CONNECTIVITY**

The OJ Air2 range is designed for truly simple connectivity: Small and medium-sized plants can be managed using just the built-in web interface, which means you won't need to spend anything at all on BMS integration. For larger plants, integration in custom-made building management system is supported by built-in connectivity protocols.

To make things even easier, OJ Air2 also supports the OJ Air Cloud SCADA system. This keeps everyone updated in real time, allowing for easy troubleshooting and planning: what you see, they see. You also get open API functionality, allowing you to create your own user interfaces for large-scale systems.

The result? Low BMS integration costs – and efficient performance.









As a system designer, the user-friendly web interface lets you configure your AHU at the factory simply by ticking the relevant boxes and saving a file containing your customised application and system parameters.



Installers have access to performing final on-site checks and tests - and to setting user-specific parameters such as energy optimisation as well as fan, temperature and humidity control.



The built-in web interface gives you an instant overview of the current operation status of your OJ Air2 units: a green highlight means everything is fine, while a red highlight warns you of any alarms. Links give easy access to each individual system - simply click to enter the webpage for the relevant system. Up to five units are listed as standard; more can be added on demand.



Facility managers operate the system via the web 
Users at this level have access to system overinterface or touchscreen display. The user-friendly views and component status data, allowing design gives them all the control they need to ensure maximum comfort and minimum energy consumption.



them to instantly identify any components in need of service, check the situation and take efficient steps to remedy it.

**KNOW** HOW **CREATES** 

> system configuration the way you want it

Choosing OJ Air2 for your air handling units gives you a wide range of control options. Here we list only the basics; even more are available on request. With OJ Air2 equipment inside, each unit that leaves your factory can be uniquely yours – adapted to your clients' specific needs, legislative requirements, etc.

# **CUSTOMISED FEATURES? TALK TO US**

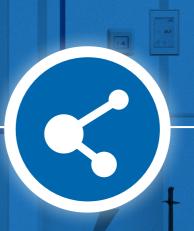
We are always happy to create customised features for our clients, including features for private-label solutions, so if you have special requirements please do not hesitate to contact us. We can help you assess whether such customisation is feasible – and how to achieve what you want to do













# FAN CONTROL

# **TEMPERATURE** CONTROL

# **HUMIDITY** CONTROL

# OJ AIR CLOUD®

# CONNECTIVITY

# **ENERGY SAVINGS**

# Constant pressure VAV

- True constant flow CAV
- Extract Air slave Supply Air slave
- Constant VOC/CO2
- Fan optimiser
- Fan optimiser slave
- OJ GreenZone™ zone control
- OJ GreenZone™ slave
- Constant motor speed
- High-speed setpoint
- Medium-speed setpoint
- Low-speed setpoint
- Outdoor temperature

- Constant supply air • Constant extract air
- Constant room temperature
- Constant supply air/extract air difference
- Recirculation

- Steam humidification
- Dehumidification
- Dew point controlled dehumidification
- Easy troubleshooting
- What you see, they see
- Better, cheaper support
- Be (even better!) prepared
- Modbus TCP-IP
- Modbus RTU (RS-485)
- BacNet TCP-IP
- Heat recovery
- Cold recovery
- Summer night cooling
- Free cooling
- Adiabatic cooling
- Central heat pump interface
- Decentral heat-pump interface
- Modulated recirculation
- Enthalpy-controlled recirculation
- CO<sub>2</sub>-controlled recirculation • Summer/winter compensation
- CO<sub>2</sub> control
- PIR sensor control
- Scheduler
- Fan speed reduction

# **Product overview**

The OJ Air2 range covers everything you need to get full control of your air handling units. Pick the specific items you need – or combine them all for unbeatable plug'n'play control.

### OJ AIR2 MASTER

Handling all communication into and out of the system, the OJ Air2 Master is a flexible controller specifically designed for ventilation systems. Naturally, it has various interfaces for peripheral units, sensors, pumps and valves, and the master's built-in web server has a uniquely simple, attractive user interface for optimum energy consumption control.

- Specifically designed for ventilation systems
- Built-in web server with simple and intelligent interface
- Highly reliable
- QuickPlug™ Modbus
- Native BMS interface



A cloud-based SCADA system for AHU and ventilation control. With OJ Air Cloud®, all users have full access to the same, fully updated data, making remote support, diagnostics and troubleshooting simpler and easier than ever.

- Easy troubleshooting
- What you see, they see
- Better, cheaper support
- Be (even better!) prepared



# OJ AIR2-HMI35T - COLOUR TOUCH DISPLAY

A 3.5" colour touch display designed for effortless operation of the OJ Air2 AHU controller. The display is connected to OJ Air2 via Modbus, and can be mounted directly on the AHU or be detached for handheld operation. Two main menus: everyday operation and a password-protected installer menu.

- Intuitive interface
- Colour touch screen
- Detachable
- QuickPlug™ Modbus



# OJ AIR2-HMI-20T USER INTERFACE

These compact interfaces give everyday users simple control. Users can adjust the temperature setpoint and fan speed via the intuitive touchscreen panel. Installation is very simple: the unit clicks in place in seconds.

- Colour touchscreen
- Easy QuickPlug™ Modbus installation
- No DIP switch setting required
- User-friendly, intuitive operation
- Allows users to choose fan speed and temperature setpoint
- Shows current temperature, ventilation setting and alarm



### OJ DV

Developed specifically for ventilation applications, the OJ DV control fan speed with great efficiency. Designed for mounting inside or outside the airflow, they are maintenance-free and extremely durable. The range comprises 13 output variants (from 0.5 to 15 kW) fitted inside five different housings to match any rooftop fan, plug fan, or AHU application.

- Specially designed for fans
- -40 to +50 degrees
- 0.5 to 15kW
- QuickPlug™ Modbus



### DRHX - DRIVE FOR ROTARY HEAT EXCHANGER

The stepper motor system gives you accurate, silent control of rotary heat exchangers. For use with conventional and advanced systems

- Sensorless rotation monitor
- Sensorless closed loop control
- RS485 Modbus and 0-10V control
- QuickPlug™ Modbus
- Even torque throughout the entire 1-250 rpm speed range



### OJ AIR2 FAN IO

The OJ Fan IOs measure air flow and monitor filter status. They can also control various sensors, fans and actuators for heating and cooling systems or dampers.

- Dual pressure transmitter
- Dual temperature sensor input
- Dual damper outputs
- Drive interface
- QuickPlug™ Modbus



### OJ AIR2 EXT - I/O EXTENSION

The OJ Air2 EXT-series comprise two different extension modules. Specially designed for ventilation systems, they come equipped with both digital and analogue inputs and outputs, allowing you to design more complex and energy-efficient ventilation systems. Particularly suitable for large and complex ventilation systems.

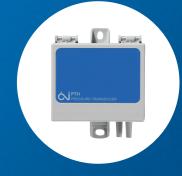
- Specifically designed for ventilation systems
- Both analogue and digital inputs and outputs
- QuickPlug™ Modbus
- Fully integrated in OJ Air2
- Extend to suit your application



### TRANSMITTERS AND SENSORS

The extensive range of sensors offer reliable, accurate monitoring for swift and efficient system responses.

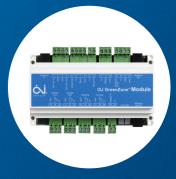
- Pressure transmitters
- Humidity transmitters
- Air-quality transmitters
- Temperature transmitters
- PT-1000 temperature sensors



# OJ ZONE MODULE-A

The OJ Zone Module-A is used in conjunction with standard 0-10V dampers and valves. Use Zone Module-M or MP for even more advanced control. Up to four Zone Modules can be connected directly the OJ-Air2 Master.

- Standard 0–10V signals
- Controls air quality and temperature
- QuickPlug™ Modbus installation
- Automatic configuration





# OJ ELECTRONICS A/S

# **HEADQUARTERS**

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