

OJ Air2 AHU control system



OJ-Air2FanIO

- Two pressure measurements
- Two temperature measurements
- Controls two dampers
- Controls one fan
- Controls adiabatic cooling
- QuickPlug™ installation

The OJ Air2 system has been specially designed to control air handling units and forms a complete control system where all components are fully integrated and optimised.

The OJ-Air2FanIO is specially designed for mounting in the fan section in an air handling unit. All functions for controlling fans, filter monitoring, temperature measurement and damper control are built-in.

The OJ-Air2FanIO minimises the internal cabling in the air handling unit and significantly reduces the risk of installation errors.

Safe commissioning

The only connections that are necessary between two sections in the air handling unit are a QuickPlug™ Modbus cable and a power cable for the fans. This makes troubleshooting significantly easier when assembling the sections, and the OJ-Air2Master even issues an alarm if anything is missing.

Full flexibility

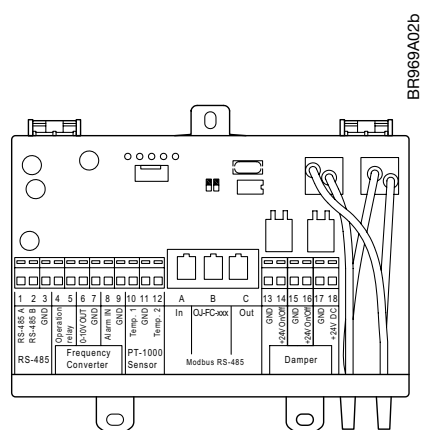
OJ-Air2FanIO functions will be configured in the OJ-Air2Master for the most efficient solution in the air handling unit. Where are the temperature sensors, filters, dampers and fans physically placed? Should pressure or flow be measured?

Simple installation

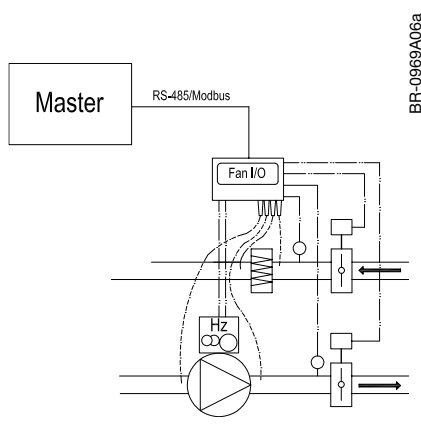
The OJ-Air2FanIO is connected to the OJ-Air2Master with QuickPlug™ Modbus, eliminating time-consuming installation faults and troubleshooting.

There is a built-in connector for connecting to other QuickPlug™ Modbus products from OJ Electronics, e.g. OJ Drives™ or an xTH transmitter.

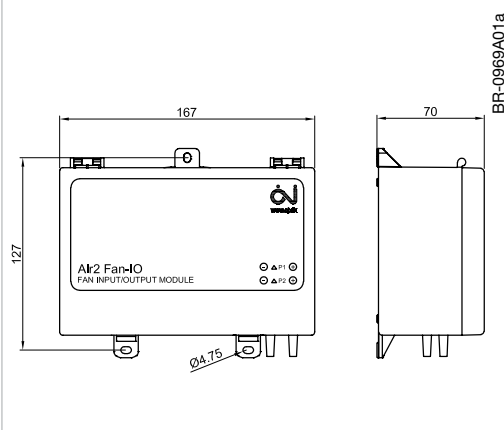




Connection



Application example



Dimensioned drawing

Adiabatic cooling

When the OJ-Air2Master is configured for adiabatic cooling, the semiconductor output in the OJ-Air2FanIO controls the associated valve so the cooling output is modulated.

Automatic 0-calibration

Pressure measurement in the OJ-Air2FanIO is based upon the same advanced technology as the PTH pressure transmitter program and delivers accurate measurements in the entire range. The OJ-Air2Master performs automatic 0-calibration of the pressure transmitters, and the accuracy is maintained year after year.

INSTALLATION

Installation of the OJ-Air2FanIO

The OJ-Air2FanIO is installed on a flat surface in the air handling unit nearby the fan. A typical placement would be in a corner of the fan section. OJ-Air2FanIO specifications are such that it tolerates being placed directly in the airflow. Power for the OJ-Air2FanIO is supplied via the QuickPlug™ Modbus cable.

Cable connections

Cables are connected to screw terminals for wires of max. 1.5 mm². OJ Air2 system components are connected via QuickPlug™ Modbus connections using a standard telecom cable, e.g. INEC TD6006, fitted with RJ12 connectors.

PRODUCT PROGRAMME

TYPE	PRODUCT
OJ-Air2FanIO	Double pressure transmitter with fan and damper interface
OJ-Air2Master	AHU controller
OJ-VD-xxxx	Fan drive, 0.5 to 15 kW
RHX2M-xxxx	Rotor controller with step motor
OJ-Air2Ext	I/O extension module
OJ-Air2Lon	LON extension module
xTH-xxxx	QuickPlug™ transmitters
ETF-xx98	PT1000 temperature sensors

TECHNICAL DATA

Supply voltage	24 V DC ±15% via QuickPlug™
Power consumption	< 2.5 VA
Electrical connection	max. 1.5 mm ² , spring terminals
QuickPlug™ Modbus	3 x RJ12 (6P6C)
Digital inputs	1 x internal pull-up
Digital outputs	1 x potential-free relay, 30 V DC 2 A 2 x semiconductor outputs +24 V DC max. 2 x 0.3 A
Analogue outputs	1 x 0-10 V DC 1 x +24 V DC max. 0.6 A incl. consumption for semiconductor outputs
Sensor inputs	2 x PT1000
Pressure transmitters	2 x 0 - 2500 Pa differential pressure
Accuracy	0.5% of measured value +/- 2.5 Pa
Pressure connectors	4 x Ø 6.2
Amb. operating temperature	-20/+40°C
Dimensions	169 x 139 x 71 mm
Enclosure	IP54, ABS HI 100 UV protection
Weight	320 g

CE marking

The OJ-Air2FanIO complies with the requirements of the following directives:

- EMC Directive
- EN 61000-6-2
- EN-61000-6-3