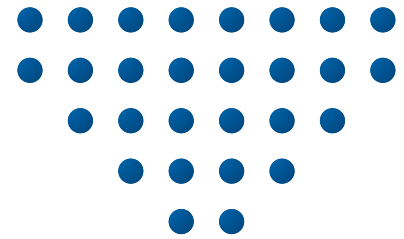


Frequency converter



OJ Air2
compatible

HVAC CONTROLS AND POWER

Reduced costs and greater reliability

OJ Air2 FC is a versatile frequency converter tailor-made for ventilation systems. With RS-485 Modbus communication, it is the perfect choice for a variety of ventilation systems.

Designed for direct mounting on standard AC motors, OJ Air2 FC is a compact and extremely robust solution. It can be quickly installed, requiring little space, and is very service friendly. Via Modbus, it can be fully integrated with the OJ Air2 system.

There is no need for external EMC filter or housing and no bothersome setup menus. We call it: "Plug & Play".

Simple and efficient energy savings

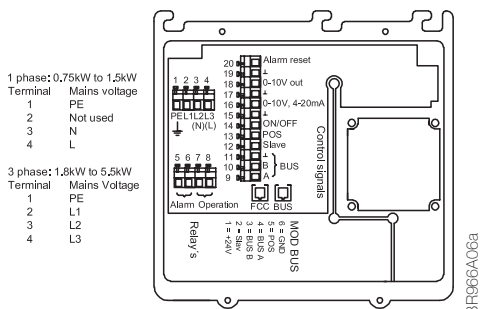
OJ Air2 FC is a simple, yet highly efficient, "Plug & Play" frequency converter specially designed to meet the ever increasing market demands for controls for simple AC motors, e.g. in ventilation systems, where considerable energy savings can be achieved with demand controlled operation. By reducing speed by 20%, energy consumption can be reduced by as much as 49%.

Monitoring with Modbus RS485

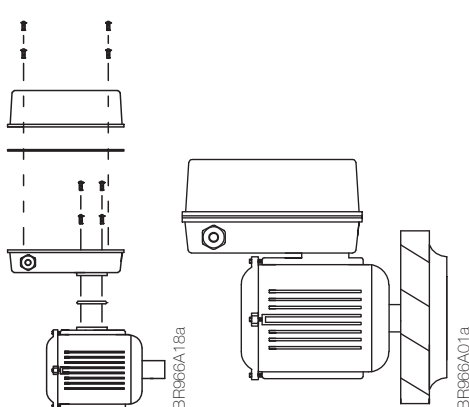
As standard, OJ Air2 FC can be controlled via Modbus RTU or a 0-10 V analogue signal. OJ Air2 FC is thus extremely versatile and can be fully integrated with highly complex or relatively simple ventilation systems.

Focus on robustness and reliability

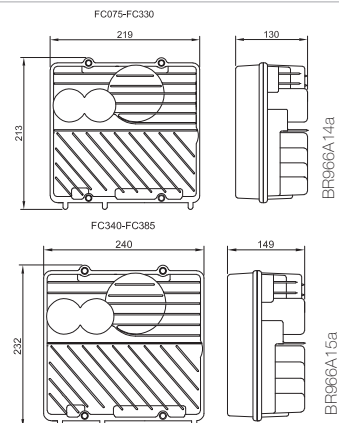
OJ Air2 FC has an IP54 aluminium housing and all components are moulded-in to prevent potentially damaging vibration within the frequency converter. OJ Air2 FC is designed to assure our customers exceptional reliability and reduced production and life-cycle costs.



Connection, terminals



Mounting on motor



Dimensions

INSTALLATION

OJ Air2 FC is designed to be fitted directly to the AC motor and screened cabling is not required. To ensure sufficient cooling of the frequency converter, active ventilation must always be provided to allow the removal of surplus heat. The frequency converter is thus designed to be installed in the ventilation system air flow.

OJ Air2 FC can be controlled either via RS485 Modbus RTU or via external operating signals for start/stop, 0-10 V DC for speed control and digital alarm signals from the frequency converter.

All external electrical connections can be safely and reliably made via the spring-loaded terminals of OJ Air2 FC. The upper and lower sections are linked by connectors, thus ensuring ease of installation and service.

Installation of Modbus cable

Modbus is connected to OJ Air2 FC via an RJ12 connector.

Connection of OJ Air2 hand terminal

OJ Air2 hand terminal is connected to OJ Air2 FC via an RJ12 connector.

OJ Air2 FC is equipped with:

- 2 x RJ45 connectors for connecting RS485 Modbus RTU
- 1 x digital input for resetting alarms
- 1 x digital input for start/stop of FC
- 1 x analogue input for speed control (0-10 V DC / 4-20 mA)
- 1 x digital relay output for alarm signal
- 1 x digital relay output for operating signal/feedback
- 1 x +10 V DC stabilised voltage output

PRODUCT PROGRAMME*

TYPE	PRODUCT
OJ-FC0.75	Frequency converter 0.75 kW / 1x230 V AC Top
OJ-FC110	Frequency converter 1.10 kW / 1x230 V AC Top
OJ-FC150	Frequency converter 1.50 kW / 1x230 V AC Top
OJ-FC322	Frequency converter 2.20 kW / 3x400 V AC Top
OJ-FC322-230	Frequency converter 2.20 kW / 3x230 V AC Top
OJ-FC330	Frequency converter 3.00 kW / 3x400 V AC Top
OJ-FC340	Frequency converter 4.00 kW / 3x400 V AC Top
OJ-FC355	Frequency converter 5.50 kW / 3x400 V AC Top
OJ-FCB075-30	Frequency converter 0.75 - 3.00 kW Base
OJ-FCB040-85	Frequency converter 4.00 - 8.50 kW Base

* FC for motor mounting top & base must be ordered separately.

TECHNICAL DATA – SIZES 0.75 kW - 1.5 kW

Supply voltage	1 x 230 V AC / -10/+15 %
Electrical connections	Max. 1.5 mm ² , spring-loaded terminals
Modbus connection	2 x RJ12 6/6 connectors
Modbus protocol	38.4 kBd, 1 start bit, 8 data bits, 1 stop bit
Max. frequency	10-200 Hz
Switch frequency	5-15 kHz
Digital inputs	2 x 3.3 kΩ, pull-up
Analogue inputs	1 x 0-10 V DC
Digital outputs	2 x relay outputs
Voltage outputs	1 x +10 V DC stabilised
Ambient operating temperature	-20 °C / +40 °C
Dimensions	190 x 170 x 110 mm
Modbus cable dimension	MPFK6S or similar
Enclosure	IP54
Weight	2500 g

TECHNICAL DATA – SIZES 2.2 kW - 5.5 kW

Supply voltage	3 x 400 V AC (3 x 230 V AC)
Electrical connections	Max. 1.5 mm ² , spring-loaded terminals
Modbus connection	2 x RJ12 6/6 connectors
Modbus protocol	38.4 kBd, 1 start bit, 8 data bits, 1 stop bit
Max. frequency	10-200 Hz
Switch frequency	5-15 kHz
Digital inputs	2 x internally supplied
Analogue inputs	1 x 0-10 V DC
Digital outputs	2 x relay outputs
Voltage outputs	1 x +10 V DC stabilised
Ambient operating temperature	-20 °C / +40 °C
Dimensions	250 x 200 x 135 mm
Modbus cable dimension	MPFK6S or similar
Enclosure	IP54
Weight	4000 g

CE MARKING

OJ AIR2 FC complies with the requirements of the following standards:

High voltage test	EN 60204-1
EMC emission	EN 61000-6-3:2001
EMC immunity	EN 61000-6-2:2001