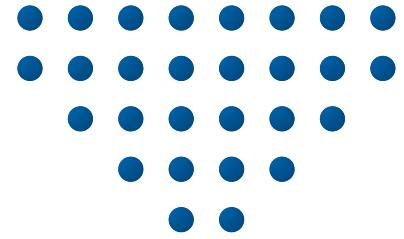


## Frequency converter



OJ Air2  
compatible

HVAC CONTROLS AND POWER

# Reduced costs and greater reliability

OJ FC-W 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.

OJ FC-W is very compact and exceptionally robust. The frequency converter is designed to be installed inside the air handling unit.

OJ FC-W is: quick to install, space-saving, service-friendly and, via Modbus, fully integrated with the OJ Air2 system.

There is no need for an external EMC filter or costly enclosure, and there are no bothersome setup menus. We call it "Plug & Play".

### Simple and efficient energy savings

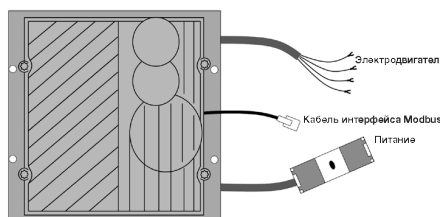
OJ FC-W is a simple, yet highly efficient, "Plug & Play" frequency converter specially designed to meet the market's increasing requirements on AC motor controls, e.g. in ventilation systems, where considerable energy savings can be achieved with demand controlled operation. By reducing speed by 20 %,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

### Control and monitoring via Modbus RS485

OJ FC-W is controlled and monitored via Modbus and can therefore be fully integrated with highly complex or relatively simple ventilation systems.

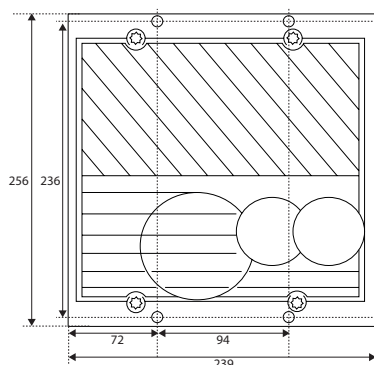
### Focus on robustness and reliability

OJ FC-W has an IP54 aluminium housing and all components are moulded-in to prevent potential damage from vibration within the frequency converter. OJ FC-W is designed to assure our customers superior reliability and reduced production and life-cycle costs.



Connection

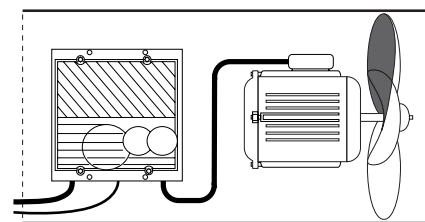
BR982B15a



Height  
0.75 – 3.3 kW : 36 + 78 mm (back + toppart)  
4.0 – 5.5 kW : 36 + 100 mm (back + toppart)

Dimensions

BR953A08a



Application

BR982B16b

## INSTALLATION

OJ FC-W consists of two parts: a base and a top. The base acts as a terminal box while the top is the actual frequency converter. The top and base are supplied pre-assembled, complete with ready fitted power cable, Modbus cable and screened motor cable in suitable lengths. The top and base are connected by means of pin connectors, providing maximum service friendliness.

To ensure that the frequency converter is sufficiently cooled, it must always be exposed to active ventilation so that surplus heat can be removed. The frequency converter is designed to be installed within the air flow of a ventilation system.

OJ FC-W is extremely robust thanks to its one-piece aluminium housing. It can thus be mounted directly on the fan console, for example, and is not damaged by vibration.

All external electrical connections can be safely and reliably made using the pre-fitted cables.

### Installation of Modbus cable

Modbus is connected to OJ FC-W via an RJ12 connector.

### OJ FC-W is equipped with:

1 x RJ45 connector for connecting RS485 Modbus RTU.

## TECHNICAL DATA – SIZES 0.75-1.5 KW

|                          |  |
|--------------------------|--|
| Supply voltage           | 1 x 230 V AC / -10/+15 %                         |
| Electrical connection    | max. 1.5 mm <sup>2</sup>                         |
| Modbus connection        | 1 x RJ12 6/6 connector                           |
| Modbus protocol          | 38.4 kBaud, 1 start bit, 8 data bits, 1 stop bit |
| Max. frequency           | 10-200 Hz  |
| Switching frequency      | 5-15 kHz   |
| Ambient temp., operation | -20 °C / +40 °C                                  |
| Dimensions               | 256 x 239 x 114 mm (w x h x d)                   |
| Modbus cable dimension   | MPFK6S or similar                                |
| Enclosure                | IP54   |
| Weight                   | 4600 g   |

## TECHNICAL DATA – SIZES 2.2-5.5 KW

|                          |  |
|--------------------------|--|
| Supply voltage           | 3 x 400 V AC (3 x 230 V AC) / -10/+15 %          |
| Electrical connection    | max. 1.5 mm <sup>2</sup>                         |
| Modbus connection        | 1 x RJ12 6/6 connector                           |
| Modbus protocol          | 38.4 kBaud, 1 start bit, 8 data bits, 1 stop bit |
| Max. frequency           | 10-200 Hz  |
| Switching frequency      | 5-15 kHz   |
| Ambient temp., operation | -20 °C / +40 °C                                  |
| Dimensions               | 256 x 239 x 137 mm (w x h x d)                   |
| Modbus cable dimension   | MPFK6S or similar                                |
| Enclosure                | IP54   |
| Weight                   | 5400 g   |

## PRODUCT PROGRAMME

|               |  |
|---------------|--|
| OJ-FC0.75W    | Frequency converter 0.75 kW / 1X230 V AC |
| OJ-FC110W     | Frequency converter 1.1 kW / 1x230 V AC  |
| OJ-FC150W     | Frequency converter 1.5 kW / 1x230 V AC  |
| OJ-FC322W     | Frequency converter 2.2 kW / 3x400 V AC  |
| OJ-FC322-230W | Frequency converter 2.2 kW / 3x230 V AC  |
| OJ-FC330W     | Frequency converter 3.0 kW / 3x400 V AC  |
| OJ-FC340W     | Frequency converter 4.0 kW / 3x400 V AC  |
| OJ-FC355W     | Frequency converter 5.5 kW / 3x400 V AC  |

## CE MARKING

OJ FC-W complies with the requirements of the following standards:

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