

# Master FC400

**3:3** 30-125 kVA



ONLINE



Tower



Service  
1st start



## HIGHLIGHTS

- **Frequency Converter:  
50/60 Hz to 400 Hz**
- **Output voltage:  
208 V - 3 ph+N**
- **Galvanic isolation**
- **For naval, military and  
airport applications**
- **Battery backup on request**

Master FC400 series static Frequency Converters are available from 30 to 125 kVA, with 50 or 60 Hz input and 400 Hz output. The result of extensive experience acquired in the UPS industry, the Master FC400 series is distinguished by the use of technologically advanced components and for excellent reliability, ease of maintenance and ease of operation. The Master FC400 series uses double conversion technology (VFI SS 111 voltage and frequency independent compliant with IEC EN 62040-3), with an integrated output transformer to ensure the galvanic isolation of the load from mains disturbances under all conditions. The output voltage is 208 V three-phase (adjustable 200-215 V). Thanks to high frequency IGBT technology and

digital control, Master FC400 Frequency Converters are ideal for airport, military and marine applications.

### MINIMUM IMPACT ON MAINS - EASY SOURCE

The Master FC400 has been designed to minimise the impact on the mains or on the generator located upstream, thanks to the low harmonic content at the input and the progressive start of the rectifier. These features make the Master FC400 Frequency Converters especially compatible with generators.

### EASY INSTALLATION AND MAINTENANCE

The Master FC400 requires a small space for installation (only 0.64 m<sup>2</sup> for a 125 kVA model). The main assemblies of the UPS

can be easily accessed for maintenance, via the removable front panel. Fans located in the top of the UPS cabinet, eliminate the need for side or rear access and allow the UPS to be placed against a wall.

## APPLICATIONS

Master FC400 provides additional protection for a wide range of applications, including:

- Powering airplanes in airports
- Radar and flight-control systems
- Naval applications
- Military applications
- Power for test benches.

## BATTERY BACK-UP

MFC is also available as UPS with battery back-up on request.

## OPTIONS

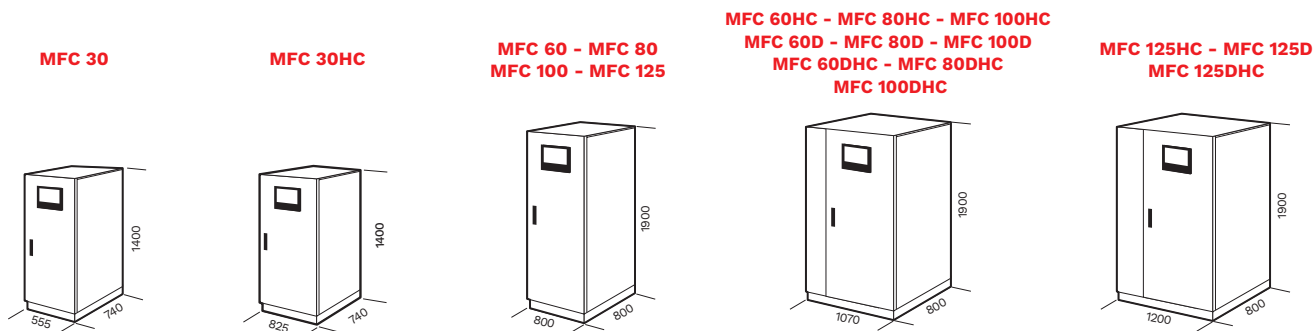
### SOFTWARE & ACCESSORIES

See Master MPS

### PRODUCT ACCESSORIES

Isolation transformer  
IP rating IP21, IP31/IP42 on request  
Parallel kit  
12 pulse rectifier version (D)  
5th or 11th harmonic filter (HC)  
Top Cable Entry cabinet

## DIMENSIONS



| MODELS                                              | MFC 30                                                                                                                                                                                                                                                                            | MFC 60       | MFC 80 | MFC 100 | MFC 125 |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------|---------|---------|
| INPUT                                               |                                                                                                                                                                                                                                                                                   |              |        |         |         |
| Rated voltage [V]                                   | 380 / 400 / 415 three-phase                                                                                                                                                                                                                                                       |              |        |         |         |
| Voltage tolerance [V]                               | 400 ±20% @ full load¹                                                                                                                                                                                                                                                             |              |        |         |         |
| Frequency [Hz]                                      | 45 - 65                                                                                                                                                                                                                                                                           |              |        |         |         |
| Current distortion                                  | <5% (HC Version)                                                                                                                                                                                                                                                                  |              |        |         |         |
| Soft start                                          | 0 - 100% in 120 s (selectable)                                                                                                                                                                                                                                                    |              |        |         |         |
| OUTPUT                                              |                                                                                                                                                                                                                                                                                   |              |        |         |         |
| Nominal power [kVA]                                 | 30                                                                                                                                                                                                                                                                                | 60           | 80     | 100     | 125     |
| Active power [kW]                                   | 24                                                                                                                                                                                                                                                                                | 48           | 64     | 80      | 100     |
| Number of phases                                    | 3 + N                                                                                                                                                                                                                                                                             |              |        |         |         |
| Rated voltage [V]                                   | 208¹ three-phase + N                                                                                                                                                                                                                                                              |              |        |         |         |
| Static stability                                    | ±1%                                                                                                                                                                                                                                                                               |              |        |         |         |
| Dynamic stability                                   | ±5%                                                                                                                                                                                                                                                                               |              |        |         |         |
| Voltage distortion                                  | <3% with linear load / <4% with non-linear load                                                                                                                                                                                                                                   |              |        |         |         |
| Frequency [Hz]                                      | 400                                                                                                                                                                                                                                                                               |              |        |         |         |
| Crest factor [I <sub>peak</sub> /I <sub>rms</sub> ] | 3:1                                                                                                                                                                                                                                                                               |              |        |         |         |
| Overload                                            | 110% for 60 min; 125% for 10 min; 150% for 1 min                                                                                                                                                                                                                                  |              |        |         |         |
| OVERALL SPECIFICATIONS                              |                                                                                                                                                                                                                                                                                   |              |        |         |         |
| Weight [kg]                                         | 265                                                                                                                                                                                                                                                                               | 450          | 535    | 540     | 560     |
| Dimensions (WxDxH) [mm]                             | 555x740x1400                                                                                                                                                                                                                                                                      | 800x800x1900 |        |         |         |
| Remote signals                                      | 1x opto insulated Input and 3x relays Outputs                                                                                                                                                                                                                                     |              |        |         |         |
| Auxiliary signals                                   | R.E.P.O. - External output switch                                                                                                                                                                                                                                                 |              |        |         |         |
| Communications                                      | Status LEDs - Graphic display - 2 slots for communications interface - 2x RS232                                                                                                                                                                                                   |              |        |         |         |
| Ambient temperature for the UPS                     | 0 °C - +40 °C (50 °C @ 75% load)                                                                                                                                                                                                                                                  |              |        |         |         |
| Recommended temp. for battery life                  | +20 °C - +25 °C                                                                                                                                                                                                                                                                   |              |        |         |         |
| Range of relative humidity                          | 5-95% non-condensing                                                                                                                                                                                                                                                              |              |        |         |         |
| Colour                                              | RAL 7035                                                                                                                                                                                                                                                                          |              |        |         |         |
| Noise level at 1 m [dBA ±2] ECO Mode                | 62 - 68                                                                                                                                                                                                                                                                           |              |        |         |         |
| IP rating                                           | IP20                                                                                                                                                                                                                                                                              |              |        |         |         |
| Standards                                           | European directives: LV 2014/35/EU low voltage Directive EMC 2014/30/EU electromagnetic compatibility Directive Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2; RoHS compliant Classification in accordance with IEC 62040-3 (Voltage frequency Independent) VFI - SS - 111 |              |        |         |         |
| Moving the UPS                                      | Pallet jack                                                                                                                                                                                                                                                                       |              |        |         |         |

<sup>1</sup> For wider tolerance conditions apply.