MWI-Scirocco wind generator converter

General specifications

MWI - Scirocco dedicated Wind generator converter

The MWI-Scirocco multimode wind inverter represents the state of the art for residential and commercial applications of small power wind systems.
Thanks to innovative technology solutions the Sciroco's dedicated unit deliver up to 5200W of continuous output power in an extremely compact and attractive package.
The performance is at the top of the market, with efficiency and Eoltec's integrated power control algorithm that allows the transfer of the maximum available power from the wind rotor under any circumstances.
The lightweight construction allows easy installation
The unit works in stand-alone as well as in grid-tied mode. It can be connected to a storage battery, to a backup genset and to an optional supplementary photovoltaic field.
The unique split-phase output inverter guarantees that the same unit can operate worldwide with 230V single-phase or 115V split-phase systems, 50 or 60Hz, thus maximizing inventory flexibility and expediting time to market.
The fully integrated digital control ensures completely automatic operation with full data available by serial link to interface the system.

Key features of the MWI family include:

- Very compact design: 5.2kW of continuous output power in a box just 515mm x 685mm x 88mm
- High efficiency: up to 92% from renewable source to AC load
- True Sine Wave Output, 230V single-phase or 115V split-phase, 50Hz or 60Hz
- Grid connected operation according to the most important international standards
- LCD Display on the front panel to monitor and set the main parameters
- RS232 serial link for remote communication
- Designed for maximum reliability and useful life
- Lightweight and robust construction, IP21 protection degree (NEMA 2 type enclosure)

Model Ordering Code

Model Number	Output Power	Battery Voltage
MWI-5200-48	5200W	48Vdc

Model Summary

Operation modes
The same unit works in Stand-Alone and Grid-connected modes.

Source characteristics
Wind turbine: Scirocco permanent magnet synchronous generator, 300Vac max (5700W max. input power)
Photovoltaic array: max 420Vdc
Source Protections: MOVs and Gas Arresters
Optimum Power regulation algorithm:
Scirocco's dedicated algorithm

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Storage characteristics
Battery voltage:
- 48V, charging current 110A max.

Battery type:
- Valve regulated Lead Acid (VRLA, a.k.a. "sealed")
- Flooded Lead Acid

Efficiency, max (battery charger): 97%

Backup Genset characteristics
Voltage, nominal: 230Vac single-phase or 115Vac split-phase
Voltage, range: +/- 10%
Max battery charging current from genset: 30A (48V battery)

Output characteristics

Voltage, nominal: 230Vac single-phase or 115Vac split-phase
Frequency: programmable, 50 or 60 Hz, factory preset
Voltage, regulation:

- Grid connected mode: follows grid
- Stand-Alone mode: +/- 1%

Total Harmonic Distortion: pure sine wave, according to IEEE 519
Continuous maximum Output power: 5200W (peak 10kW)
Efficiency, max (WT to battery): 97%
Efficiency, max (from renewable source to grid): 92%
Output Protections: consistent with regulations

- Lighting strikes by means of thermally protected MOVs and Gas Arresters Overcurrent and short circuits
- Over/Under voltage
- Over/Under frequency
- Anti-islanding

Control Interfaces

User Display: advanced backlight alphanumeric LCD display with keypad for system status and daily energy harvest.
RS232 data interface to a PC.

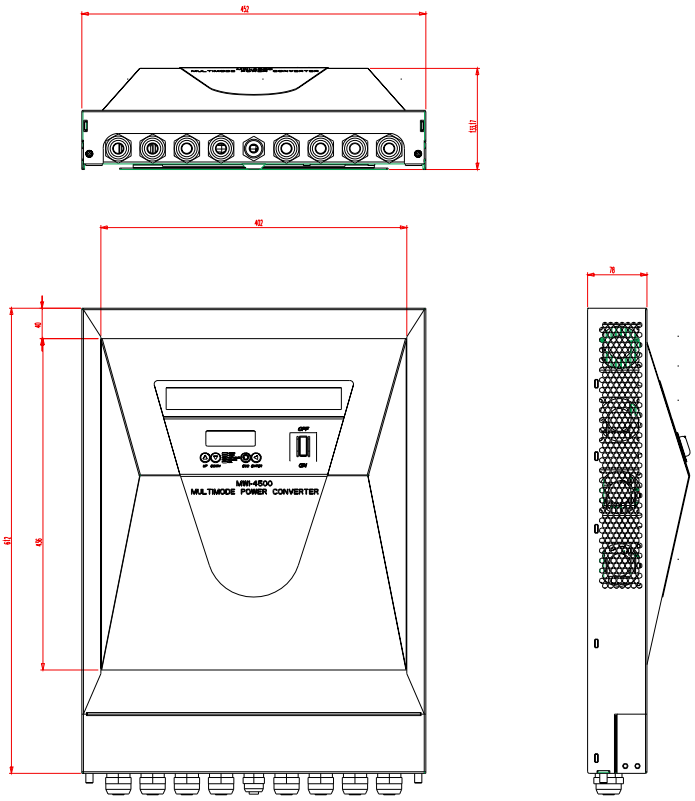
General characteristics

Size (Width x Height x Depth): 515 mm x 685 mm x 88mm
Weight: 24kg
Protection grade: IP21 (NEMA 2 type enclosure)
Operating temperature: -25 to +45°C
Elevation: 4000m no derating
Humidity: 0-100% condensing

Applicable Standards

- CE certification
- EN 50081
- EN 50082
- EN 61000: Electromagnetic compatibility
- IEC 61683: Photovoltaic systems – Power conditioners – procedure for measuring the efficiency
- IEC 61727: Photovoltaic (PV) systems – Characteristics of the utility interface
- IEEE 929
- IEEE 1547
- IEEE 519
- UL 1741
- NEC 690
- VDE 0126
- CEI 11-20 IV Edition
- DK 5950: ENEL regulation

Mechanical drawings



Full installation diagram - 230Vac output