

# Multifunction inverter

## AX M2

The devices in the AX M2 series with integrated MPPT solar charge controller are 3000W / 5000W multifunction inverters / PVchargers with the combined functions of an inverter as well as a solar and battery charging device. These inverters are suitable for standalone operation independent of mains supply via PV modules but can also be operated with electrical power from accumulators, generators or the public power supply grid.

If insufficient power is being supplied from the PV modules, the device automatically tops up the power level with battery current or, if the batteries are discharged completely, it switches over to the mains power grid. A network of three AX units can be configured for 3-phase operation.



### ■ Details



### ■ New Features:

- Zero (0 ms) transmission time to protect critical loads such as servers and ATMs
- Detachable LCD control module with multiple communication options
- Integrated Wi-Fi for mobile monitoring (app is available)



## ■ Characteristics

- PV inverter without mains power supply
- Island operation possible
- 3000, 5000W nominal load
- 24, 48VDC Battery voltage
- PV- / Battery charger with 3-stage charge
- Battery voltage thresholds can be adjusted individually
- Cold start function
- Several power sources
- Parallel operation by up to 9 inverters
- 3-phase operation is possible
- Sine-wave output
- Can be configured via LCD display or PC software
- Automatic reboot when mains power is restored
- Protection against excessive loads and temperatures as well as short circuits
- 24 months' warranty

## ■ Special features

- Power factor 1
- Integrated Wi-Fi for mobile monitoring (app is available)
- Compatible with BMS communication from various lithium battery manufacturers such as Pylontech
- Battery equalizing
- Integrated neutral-point emulation (VDE AR-E 2510-2)
- Installed MPPT solar charge controller for maximum performance from PV modules
- Intelligent fan control
- Removable LCD control module with multiple communication options

## ■ Specifications

Model		AX M2 3kVA, 24V	AX M2 5kVA, 48V	
<b>Power</b>	Power in VA / W	3000VA / 3000W	5000VA / 5000W	
	<b>AC input</b>	AC input voltage	230VAC	
<b>AC input</b>	AC input voltage range	110-280VAC		
	AC input frequency	50Hz/60Hz (automatic detection)		
	Power factor	>= 0.98 @ nominal voltage (100% load)		
	<b>Output</b>	AC Output voltage	230VAC ± 5%	
	Peak performance (5 seconds)	6000VA	10000VA	
<b>Output</b>	Output frequency	46~54Hz or 56~64Hz (normal mode) / 50Hz ± 0.1Hz or 60Hz ± 0.1Hz (battery mode)		
	Transfer time	0ms (AC > battery mode) / 4ms (Inverter > Bypass)		
	Wave form	Sine wave		
	Max. efficiency	93% @ normal mode, 90% @ battery mode		
	<b>Battery</b>	Battery voltage	24VDC	48VDC
<b>Battery</b>	Charging voltage max.	29.2VDC	58.4VDC	
	Overload protection	34VDC	66VDC	
	<b>Solar charger / AC charger</b>	Max. PV power	1500W	4000W
	Type	MPPT		
	Max. PV charging current	60A	80A	
<b>Solar charger / AC charger</b>	Max. AC charging current (adjustable)	60A	60A	
	Max. charging current (adjustable)	120A	140A	
	Effective operating range UOP	30 ~ 115VDC	60 ~ 115VDC	
	Max. input voltage UOCV	145VDC		
	<b>Communication</b>	RS232, DRY CONTACT, WI-FI, RS485, CAN, USB OTG		
<b>General data</b>	Size (HxWxD) in mm	525 x 303 x 140		
	Weight (in kg)	13	13,5	
	Humidity	5% - 95% non condensing		
	Operating temperature	0°C - 55°C		
	Storage temperature	-15°C - 60°C		
	Protection	IP20		
<b>Regulations / standards</b>	Safety	EN 61000-6-4: 2007+A1: 2011; EN 61000-6-2: 2005+AC: 2005		
	EMC	EN 62109-1:2010, EN 62109-2:2011		
	Certifications	CE		