

# Axpert VM II Off-Grid Inverter

## Operation without battery

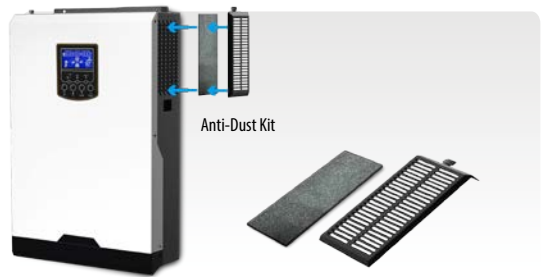


- Pure sine wave solar inverter
- Output power factor 1
- High PV input voltage range
- Inverter running without battery
- Built-in 80A MPPT solar charger
- Battery equalization function to optimize battery performance and extend lifecycle
- Built-in anti-dusk kit for harsh environment

OFF-GRID INVERTER

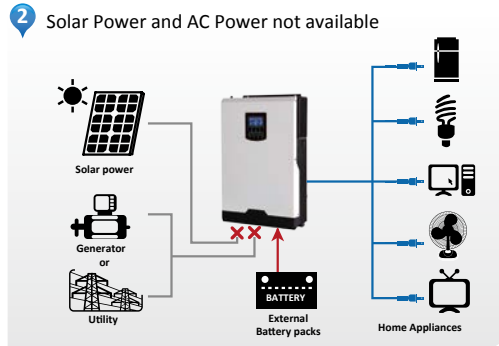
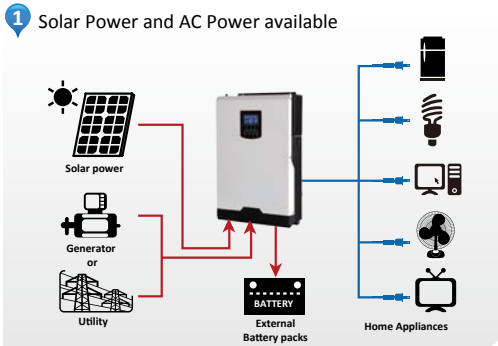
### Anti-Dust Kit

After installing this anti-dust kit, inverter will automatically detect this kit and activate internal thermal sensor to adjust internal temperature. By virtue of the dustproof design, it dramatically increases product reliability in harsh environment.

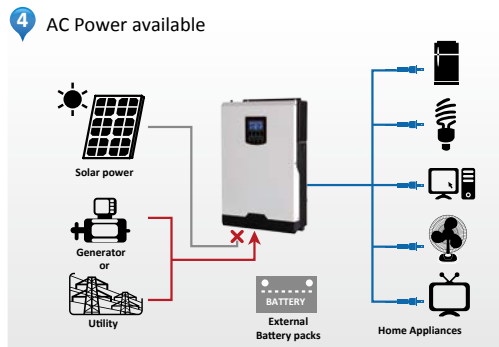
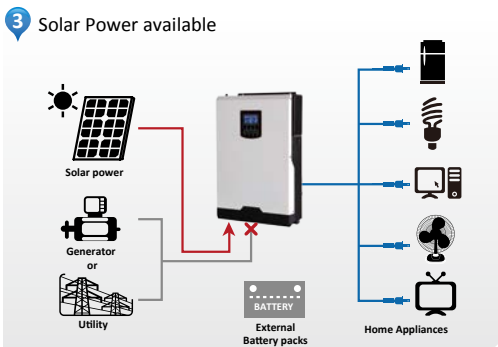


### System Diagram:

#### Operation with battery connected



#### Operation without battery connected



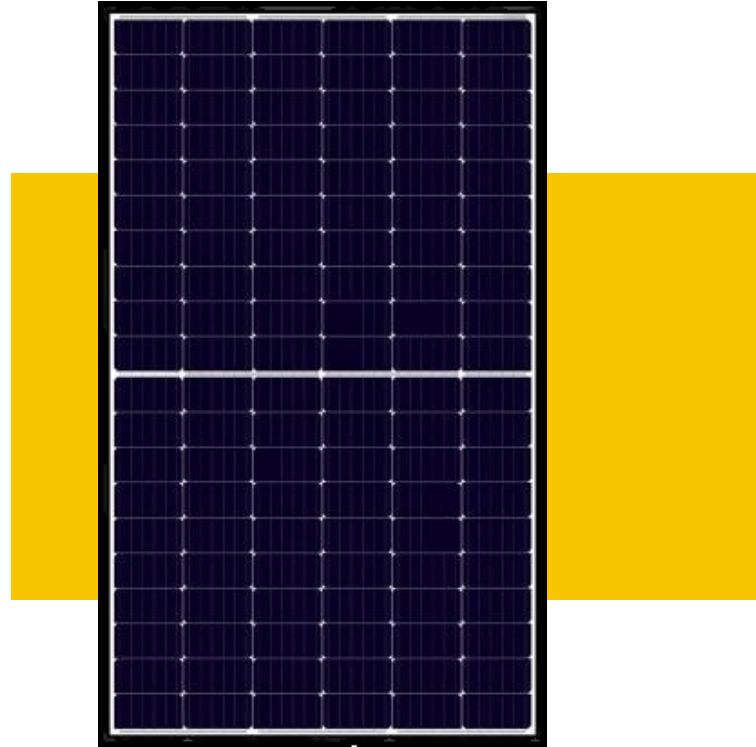
## Axpert VM II Off-Grid Inverter Selection Guide

MODEL	Axpert VM II 3000-24	Axpert VM II 5000-48
Rated Power	3000VA / 3000W	5000VA / 5000W
<b>INPUT</b>		
Voltage	230 VAC	
Selectable Voltage Range	170-280 VAC (For Personal Computers) ; 90-280 VAC (For Home Appliances)	
Frequency Range	50 Hz/60 Hz (Auto sensing)	
<b>OUTPUT</b>		
AC Voltage Regulation (Batt. Mode)	230VAC $\pm$ 5%	
Surge Power	6000VA	10000VA
Efficiency (Peak)	90% ~ 93%	
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)	
Waveform	Pure sine wave	
<b>BATTERY</b>		
Battery Voltage	24 VDC	48 VDC
Floating Charge Voltage	27 VDC	54 VDC
Overcharge Protection	33 VDC	63 VDC
<b>SOLAR CHARGER &amp; AC CHARGER</b>		
Maximum PV Array Open Circuit Voltage	500 VDC	500 VDC
Maximum PV Array Power	4000 W	5000 W
MPP Range @ Operating Voltage	120~450 VDC	120~450 VDC
Maximum Solar Charge Current	80 A	80 A
Maximum AC Charge Current	60 A	60 A
Maximum Charge Current	80 A	80 A
<b>PHYSICAL</b>		
Dimension, D x W x H (mm)	100 x 300 x 440	
Net Weight (kgs)	9	10
Communication Interface	USB/RS232	
<b>ENVIRONMENT</b>		
Humidity	5% to 95% Relative Humidity (Non-condensing)	
Operating Temperature	-10°C to 50°C	
Storage Temperature	-15°C to 60°C	








Product specifications are subject to change without further notice.

# MSMDxxxM6-60 166 M6 cells half cut

## 360W–380W



### KEY FEATURES

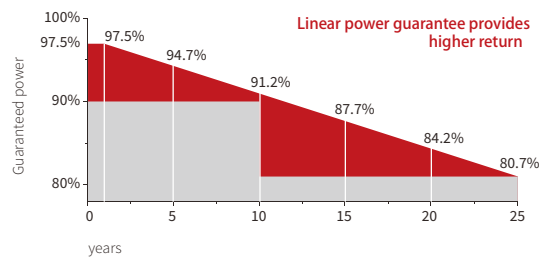
-  **Class A fire resistant** (industry standard class C)
-  Outstanding performance in low-light conditions
-  Low temperature coefficient (Pmax):  $-0.35\% / ^\circ\text{C}$
- +5W** 0~+5W positive tolerance - to assure high output
-  Lower internal current, lower hot spot temperature
-  Cell crack risk limited in small region, enhance the module reliability
- PID FREE** Excellent anti-PID module design, TÜV SÜD certified
-  Certified to withstand high wind loads (3600pa) and snow loads (8000pa)
-  Salt mist and ammonia corrosion resistant

### PRODUCT CERTIFICATES



### WARRANTY

- Our linear power guarantee
- Standard linear power guarantee



**15 years** Enhanced product guarantee on product and workmanship

**25 years** Linear power output warranty

# MSMDxxxM6-60

## ELECTRICAL CHARACTERISTICS

STC	360	365	370	375	380
Maximum Power at STC (Pmax)	360 W	365 W	370 W	375 W	380 W
Optimum Operating Voltage (Vmp)	33.9 V	34.1 V	34.3 V	34.5 V	34.7 V
Optimum Operating Current (Imp)	10.62 A	10.71 A	10.79 A	10.86 A	10.95 A
Open Circuit Voltage (Voc)	40.5 V	40.7 V	40.9 V	41.2 V	41.4 V
Short Circuit Current (Isc)	11.35 A	11.42 A	11.49 A	11.56 A	11.63 A
Module Efficiency	19.4%	19.7%	20.2%	20.5%	20.7%
Operating Module Temperature	-40 °C to +85 °C				
Maximum System Voltage	1500 V DC (IEC)				
Maximum Series Fuse Rating	20 A				
Power Tolerance	0/+5W				

STC: Irradiance 1000 W/m<sup>2</sup>, module temperature 25 °C, AM=1.5; Tolerances of Pmax, Voc and Isc are all within +/- 5%.

NMOT	360	365	370	375	380
Maximum Power at NMOT (Pmax)	270.7 W	274.3 W	278.2 W	282.1 W	286.5 W
Optimum Operating Voltage (Vmp)	31.6 V	31.8 V	32.0 V <td 32.2 V	32.4 V	
Optimum Operating Current (Imp)	8.56 A	8.48 A	8.69 A	8.76 A	8.84 A
Open Circuit Voltage (Voc)	38.4 V	38.5 V	38.7 V	38.9 V	39.1 V
Short Circuit Current (Isc)	9.04 A	9.10 A	9.17 A	9.24 A	9.31 A

NMOT: Irradiance 800 W/m<sup>2</sup>, ambient temperature 20 °C, AM=1.5, wind speed 1 m/s.

## TEMPERATURE CHARACTERISTICS

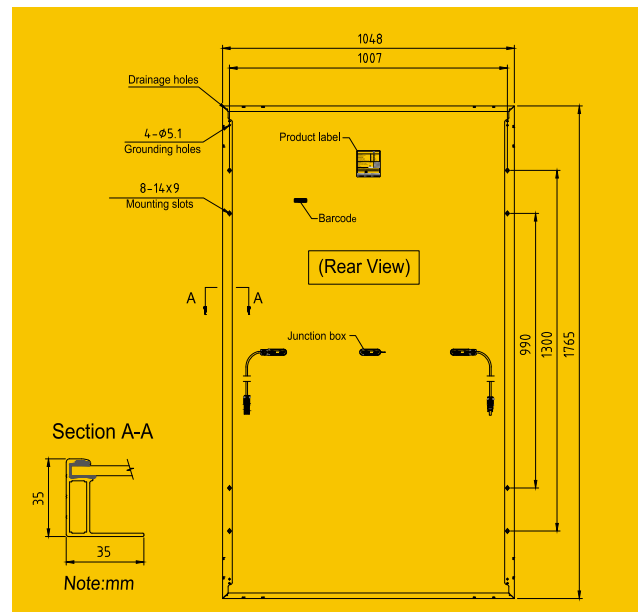
Nominal Module Operating Temperature (NMOT)	42±2°C
Temperature Coefficient of Pmax	-0.35 %/°C
Temperature Coefficient of Voc	-0.304 %/°C
Temperature Coefficient of Isc	0.050 %/°C

## MECHANICAL CHARACTERISTICS

Solar Cell	Monocrystalline silicon 166 mm (9BB)
No. of Cells	120 (6 × 20)
Dimensions	1765 x 1048 x 35 mm
Weight	20.0 kgs
Front Glass	3.2 mm
Frame	Anodized aluminium alloy
Junction Box	IP68 rated (3 bypass diodes)
Output Cables	4.0 mm <sup>2</sup> , symmetrical lengths (-) 1200 mm and (+) 1200 mm

## PACKING CONFIGURATION

Container	20' GP	40' HC
Pieces per pallet	30	30+1
Pallets per container	6	26
Pieces per container	180	806



## Current-Voltage & Power-Voltage Curve (370S)

