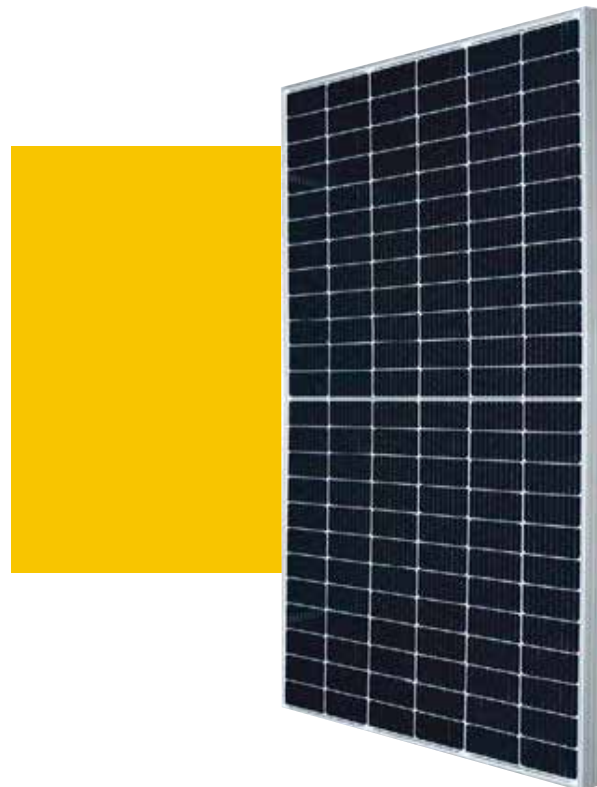









MSMDxxxM6-72

166 M6 cells half cut

440W-460W



KEY FEATURES

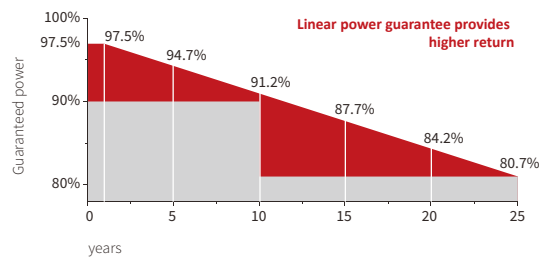
-  **Class A fire resistant (industry standard class C)**
-  **Outstanding performance in low-light conditions**
-  **Low temperature coefficient (Pmax): -0.35 % / °C**
- +5W** 0~+5W positive tolerance - to assure high output
-  **Lower internal current, lower hot spot temperature**
-  **Cell crack risk 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

MSMDxxxM6-72

ELECTRICAL CHARACTERISTICS

STC	440	445	450	455	460
Maximum Power at STC (Pmax)	440 W	445W	450 W	455 W	460 W
Optimum Operating Voltage (Vmp)	41.0 V	41.2 V	41.4 V	41.6 V	41.8 V
Optimum Operating Current (Imp)	10.74 A	10.81 A	10.87 A	10.94 A	11.0 A
Open Circuit Voltage (Voc)	48.8 V	49.0 V	49.2 V	49.4 V	49.6 V
Short Circuit Current (Isc)	11.47A	11.54 A	11.61 A	11.68 A	11.75A
Module Efficiency	19.9%	20.1%	20.3 %	20.5%	20.7%
Operating Module Temperature	-40 °C to +85 °C				
Maximum System Voltage	1500 V DC				
Maximum Series Fuse Rating	(IEC)				
Power Tolerance	20 A				

STC: Irradiance 1000 W/m², module temperature 25 °C, AM=1.5; Tolerances of Pmax, Voc and Isc are all within +/- 5%. 0/+5W

NMOT	440	445	450	455	460
Maximum Power at NMOT (Pmax)	331.2 W	335.0 W	338.2 W	342.5 W	346.3W
Optimum Operating Voltage (Vmp)	38.3 V	38.5 V	38.7 V	38.9 V	39.1 V
Optimum Operating Current (Imp)	8.65 A	8.59 A	8.74 A	8.80 A	8.86 A
Open Circuit Voltage (Voc)	46.6 V	46.8 V	47.0 V	47.2 V	47.4 V
Short Circuit Current (Isc)	9.14 A	9.19 A	9.22 A	9.27 A	9.33 A

NMOT: Irradiance 800 W/m², ambient temperature 20 °C, AM=1.5, wind speed 1 m/s.

TEMPERATURE CHARACTERISTICS

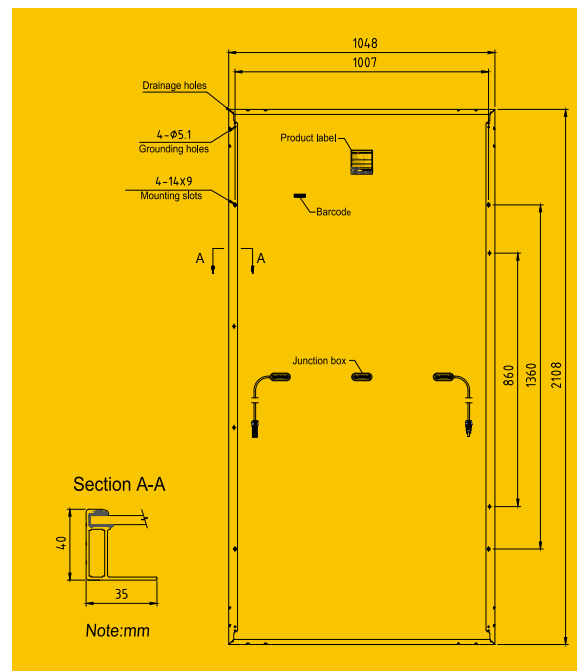
Nominal Module Operating Temperature (NMOT)	42±2°C
Temperature Coefficient of Pmax	-0.35 %/°C
Temperature Coefficient of Voc	-0.304 %/°C
Temperature Coefficient of Isc	0.050 %/°C

MECHANICAL CHARACTERISTICS

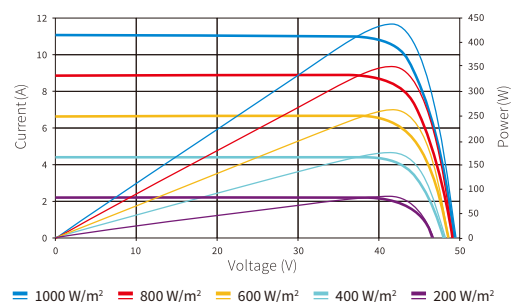
Solar Cell	Monocrystalline silicon 166 mm (9BB)
No. of Cells	144 (6 × 24)
Dimensions	2108 x 1048 x 40 mm
Weight	24 kgs
Front Glass	3.2 mm tempered glass
Frame	Anodized aluminium alloy
Junction Box	IP68 rated (3 bypass diodes)
Output Cables	4.0 mm ² , symmetrical lengths (-) 1400 mm and (+) 1400 mm

PACKING CONFIGURATION

Container	20' GP	40' HC
Pieces per pallet	26	26+1
Pallets per container	5	22
Pieces per container	130	594



Current-Voltage & Power-Voltage Curve (445S)





Residential BESS

US5000



Safety

Multi-protection from self developed BMS



Optimal Electricity Cost

Long cycle life and superior performance



Compact Size & East Installation

Module design help for quick installation



Easy to Scale Up

Be workable to be parallel based on 48V



Compatibility

Compatible with Tier 1 inverter brands

PYLON

SPECIFICATION



Module

US5000

US5000-B

Basic Parameters

Nominal Voltage (Vdc)		48	48
Nominal Capacity(Wh)		4800	4800
Depth of discharge (%)		95	95
Usable Capacity(Wh)		4560	4560
Dimension(mm)		442*420*161	442*420*161
Weight (Kg)		38	39
Discharge Voltage (V)		44.5 ~ 53.5	44.5 ~ 53.5
Charge Voltage (V)		52.5 ~ 53.5	52.5 ~ 53.5
Charge/Discharge Current (A)	Recommend	75	75
Charge/Discharge Current(A)	Max.	120@15min	120@15min
Charge/Discharge Current (A) 2	Peak 2	200@15sec	200@15sec
Communication		RS485, CAN	RS485, CAN
Configuration (max. in 1 battery group)		16pcs	16pcs
Working Temperature	Charge	0°C ~55°C	0°C ~55°C
Working Temperature	Discharge	-10°C ~55°C	-10°C ~55°C
Shelf Temperature		-20°C ~60°C	-20°C ~60°C
Short current/duration time		<4000A/2ms	<4000A/2ms
Cooling type		Natural	Natural
Breaker		No	Yes
IP rating of enclosure		IP20	IP20
Humidity		5% ~ 95%(RH) No Condensation	5% ~ 95%(RH) No Condensation
Altitude(M)		<4000	<4000
Certification		IEC / CE / UN38.3/UL	IEC / CE / UN38.3/UL
Design life		15+ Years (25°C/77°F)	15+ Years (25°C/77°F)
Cycle Life		>6,000 25°C	>6,000 25°C
Reference to standards)		IEC62619, IEC63056,CE, UN38.3,UL1973, UKCA	IEC62619, IEC63056,CE, UN38.3,UL1973, UKCA,CEC

Axpert VM IV Off-Grid Inverter



- Customizable status LED ring with RGB lights
- Touchable button with 4.3" colored LCD
- Built-in Wifi for mobile monitoring (App is available)
- Supports USB On-the-Go function
- Data log events stored in the inverter
- Reserved communication port (RS485, CAN-BUS or RS232) for BMS
- Battery independent design
- Battery equalization extends lifecycle
- User-friendly LCD operation
- Enhanced charging power
- Built-in anti-dust kit

User-programmable RGB lighting for different operation mode

Three lighting effects



- Cycling**
Quickly scrolling with a color of your choice in a continuous circular motion
- Wheel**
Illuminates with twinkling lights in a color of your choice
- Chasing**
Radiates your selected color upward from the bottom of the ring

Axpert VM IV Off-Grid Inverter Selection Guide

MODEL	Axpert VM IV 3600-24	Axpert VM IV 5600-48
Rated Power	3600VA/3600W	5600VA/5600W
INPUT		
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)	
OUTPUT		
AC Voltage Regulation (Batt. Mode)	230 VAC ± 5%	
Surge Power	7200VA	11200VA
Efficiency (Peak)	90% ~ 93%	
Transfer Time	15 ms (For Personal Computers) ; 20 ms (For Home Appliances)	
Waveform	Pure sine wave	
BATTERY		
Battery Voltage	24 VDC	48 VDC
Floating Charge Voltage	27 VDC	54 VDC
Overcharge Protection	33 VDC	63 VDC
SOLAR CHARGER & AC CHARGER		
Solar Charger Type	MPPT	MPPT
Maximum PV Array Power	4000 W	6000 W
MPPT Range @ Operating Voltage	120 ~ 450 VDC	
Maximum PV Array Open Circuit Voltage	500 VDC	
Maximum Solar Charge Current	120 A	120 A
Maximum AC Charge Current	100 A	100 A
Maximum Charge Current	120 A	120 A
PHYSICAL		
Dimension, D x W x H (mm)	115 x 300 x 400	
Net Weight (kgs)	9.0	10.0
Communication Interface	USB/RS232/RS485/WiFi/Dry-contact	
OPERATING ENVIRONMENT		
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.