

Axpert VM II Premium Off-Grid Inverter

OFF-GRID INVERTER



- Pure sine wave solar inverter
- Reserved communication port for BMS
- Wide PV input range, starts from 30VDC for 1.2K/2.5K/3K-24V models
- Battery independent design
- Maximum charging current 100A
- Battery equalization function to optimize battery performance and extend lifecycle
- Built-in anti-dust kit

Axpert VM II Premium Off-Grid Inverter Selection Guide

MODEL	Axpert VM II Premium 1.2K	Axpert VM II Premium 2.5K	Axpert VM II Premium 3K-24V	Axpert VM II Premium 3K-48V	Axpert VM II Premium 5K
Rated Power	1200VA/1200W	2500VA/2500W	3000VA/3000W	3000VA/3000W	5000VA/5000W
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)	230VAC ± 5%				
Surge Power	2400VA	5000VA	6000VA	6000VA	10000VA
Efficiency (Peak)	93%				
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)				
Waveform	Pure sine wave				
BATTERY					
Battery Voltage	12 VDC	24 VDC			48 VDC
Floating Charge Voltage	13.5 VDC	27 VDC			54 VDC
Overcharge Protection	16 VDC	32 VDC			63 VDC
SOLAR CHARGER & AC CHARGER					
Solar Charger Type	MPPT				
Maximum PV Array Open Circuit Voltage	350 VDC		450 VDC		500 VDC
Maximum PV Array Power	2000W		3000W		5000W
Maximum PV Input Current			13A		18A
MPP Range @ Operating Voltage	30 ~ 300 VDC (30 ~ 60VDC with battery connected)		30 ~ 400 VDC (30 ~ 60VDC with battery connected)		60 ~ 400 VDC 120 ~ 450VDC
Maximum Solar Charge Current			100 A		100A
Maximum AC Charge Current		80A		60A	100A
Maximum Charge Current			100A		100A
PHYSICAL					
Dimension, D x W x H (mm)	90 x 288 x 357		110 x 288 x 390	90 x 288 x 357	120 x 300 x 440
Net Weight (kgs)	6.5	7.0	7.2	7.0	10
Communication Interface	RS232/RS485, optional WiFi				
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.



TWMNH

N-type Half-cell
Bifacial Black Frame Module (48)

48HD435-455W

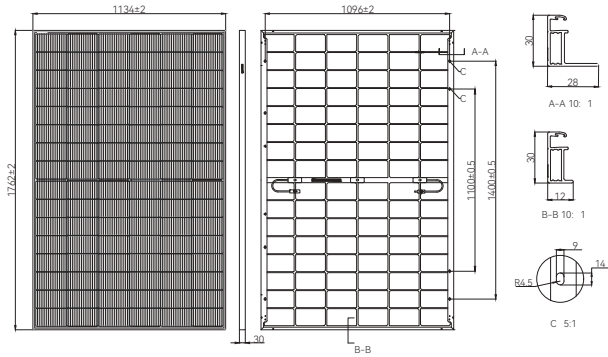


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DRAWINGS (Unit: mm)



MECHANICAL PARAMETERS

Cells	TNC (N Type Monocrystalline Cell)
Cell Orientation	96[6×16]
Dimension	1762±2×1134±2×30mm
Weight	20.9kg
Front Glass	1.6mm high transmittance, AR tempered glass
Rear Glass	1.6mm semi-tempered glass
Frame	Anodized aluminum alloy black frame
Junction Box	IP68, 3 diodes
Output Cable	4.0mm ²
Cable Length	±1200mm, length can be customized
Wind/Snow Load	2400Pa/5400Pa
Packaging	36pcs per pallet, 936pcs per 40'HC

ELECTRICAL CHARACTERISTICS (STC)

Module Type: TWMNH-48HDXXX

Maximum Power: Pmax [W]	435	440	445	450	455
Open Circuit Voltage: Voc [V]	34.49	34.67	34.85	35.03	35.21
Short Circuit Current: Isc [A]	15.90	15.95	16.00	16.05	16.10
Voltage at Maximum Power: Vmp [V]	29.54	29.72	29.90	30.08	30.26
Current at Maximum Power: Imp [A]	14.73	14.81	14.89	14.97	15.04
Module Efficiency: η [%]	21.8	22.0	22.3	22.5	22.8

* STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass1.5, Measuring Tolerance: ±3%

ELECTRICAL CHARACTERISTICS (NMOT)

Maximum Power: Pmax [W]	327	331	335	338	342
Open Circuit Voltage: Voc [V]	32.77	32.94	33.11	33.28	33.45
Short Circuit Current: Isc [A]	12.84	12.88	12.92	12.96	13.00
Voltage at Maximum Power: Vmp [V]	27.51	27.68	27.88	27.96	28.18
Current at Maximum Power: Imp [A]	11.89	11.96	12.02	12.09	12.14

* NMOT: Irradiance 800W/m², Ambient Temperature 20°C, Air Mass1.5, Wind Speed 1m/s

ELECTRICAL CHARACTERISTICS (Rear Power Gain)

5%	Maximum Power: Pmax[W]	456	462	467	472	477
	Module Efficiency: η [%]	22.8	23.1	23.4	23.6	23.9
15%	Maximum Power: Pmax[W]	500	506	511	517	523
	Module Efficiency: η [%]	25.0	25.3	25.6	25.9	26.2
25%	Maximum Power: Pmax[W]	543	550	556	562	568
	Module Efficiency: η [%]	27.2	27.5	27.8	28.1	28.4

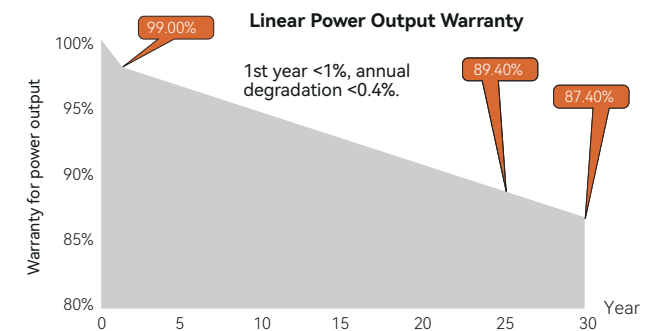
TEMPERATURE PARAMETERS

Temperature Coefficient (Pmax)	-0.30%/°C
Temperature Coefficient (Voc)	-0.25%/°C
Temperature Coefficient (Isc)	+0.046%/°C
NMOT	45±2°C

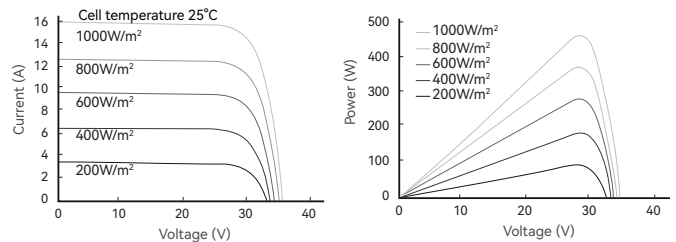
MAXIMUM RATINGS

Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	30A
Power Output Tolerance	0~+5W
Maximum Bifaciality	80±10%

WARRANTY



I-V CURVE



CERTIFICATIONS

Quality Management System and Product Certification

- ISO 9001: 2015/Quality management system
- ISO 14001: 2015/Environmental management system
- ISO 45001: 2018/Occupation health safety management system
- ISO 50001: 2018/Energy management system
- IEC 62941: 2019/Quality system for PV module manufacturing
- IEC 61215/61730, IEC 62804(PID), IEC 61701(Salt), IEC 62716 (Ammonia), IEC 60068-2-68(Sand)

