Axpert Ultra Off-Grid Inverter

- Dual outputs for smart load management
- Two independent AC power sources connected and switched automatically
- Built-in current transformer sensor to meet self-consumption application
- Support external BTS (Battery Temperature Sensor) detection
- Built-in power status lighting indicators
- Built-in 2.8" colored LCD with slide operation
- Built-in Wi-Fi for mobile monitoring and OTA firmware upgrade
- Supports USB On-the-Go function
- Reserved communication port for BMS (RS485, CAN-BUS or RS232)
- Support optional GFCI, Rapid shutdown, AFCI detections
- Parallel operation with 6 units

Axpert Ultra Off-Grid Inverter Selection Guide

MODEL	Axpert Ultra 8K	Axpert Ultra 11K
RATED POWER	8000VA/8000W	11000VA/11000W
PARALLEL CAPABILITY	YES, 6 units	
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	16000VA	22000VA
Efficiency (Peak)	93%	
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)	
Waveform	Pure sine wave	
BATTERY		
Battery Voltage	48 VDC	
Floating Charge Voltage	54 VDC	
Overcharge Protection	63 VDC	
SOLAR CHARGER & AC CHARGER		
Solar Charger Type	MPPT	
Maximum PV Array Power	10000W (5000W x 2)	12000W (6000W x 2)
MPPT Range @ Operating Voltage	90 ~ 450 VDC	
Maximum PV Array Open Circuit Voltage	500 VDC	
Maximum PV Input Current	27A x 2 (MAX 40A)	
Maxmum Solar Charge Current	150A	150A
Maximum AC Charge Current	120A	150A
Maximum Charge Current	150A	150A
PHYSICAL		
Dimension, D x W x H (mm)	145 x 438 x 553.6	
Net Weight (kgs)	18.4	
Communication Interface	USB/RS232/RS485/WiFi/Dry-contact/BTS Support optional GFCI, Rapid shutdown, AFCI detection	
External Current Sensor Port	Yes, built-in current transformer sensor	
OPERATING ENVIRONMENT		
Humidity	5% to 95% Relative Humidity(Non-condensing)	
Operating Temperature	-10°C to 50°C	
Storage Temperature	-15°C to 60°C	
STANDARD		
Compliance Safety	CE	

Product specifications are subject to change without further notice.

DYNESS

A48100

This 4.8kWh LFP module supports both floor-standing and wall-mounted installations. It is equipped with OTA function for remote upgrade and monitoring.
Up to 30 modules in parallel, it can meet various needs of users and enable flexible expansion.

APP Monitoring (optional)
Real-time monitoring
& Remote upgrade available

Module Design
Flexible expansion

Various Mounting Methods
Wall-mounted,
floor-standing and stacked

High Safety LFP
Cell level monitoring and balancing

Wide Compatibility
Matching with leading inverters

Technical Specifications

Model	A48100
Battery Type	LiFePO4
Nominal Battery Energy	4.8kWh
Nominal Capacity	100Ah
Nominal Voltage	48V
Operating Voltage	42 ~ 54V
Recomended Charge & Discharge C Rate	0.5C
Recommended Charge/Discharge Current	50A
Max Continous Charge/Discharge Current	75A
Peak Power Charge/Discharge Current	100A (15s)
Depth of Discharge (DOD)	90%
Net Weight	45kg
Dimension[W*D*H]	504*597*155 mm
Charging Temp. Range	0~55°C
Discharging Temp. Range	-20~55°C
Communication	CAN/RS485/RS232
Cycle Life[1]	≥6000 Cycles
Protection Level	IP20
Expansion	Up to 30 units in parallel
Pros	Can be used in both off-grid and hybrid setups, compact design
Certification & Safety Standard	UN38.3/CE-EMC/IEC62619/IEC60730/CEI-021/GOST-R/UKCA
Compatible Inverters	SMA/Victron/Ingeteam/Delios/Goodwe/Solis /Deye/SAJ/Voltronic/Sungrow etc.

[1]Test conditions: 0.2C Charging/Discharging, @25°C, 90% DOD

www.dyness.com
sales@dyness-tech.com

TW SOLAR

High Power Output
Low LCOE

Maximum Power
455W+

TWMNH

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

48HD435-455W

Certisolis

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Residential Rooftop

25 YEAR Materials Warranty

30 YEAR Power Warranty

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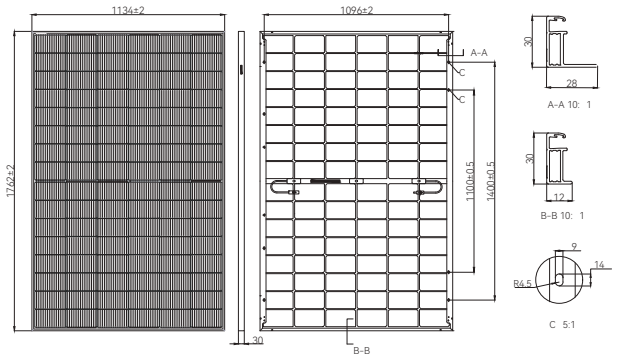
Learn More

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

48HD435-455W

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	4.0mm²
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℃, 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℃, 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

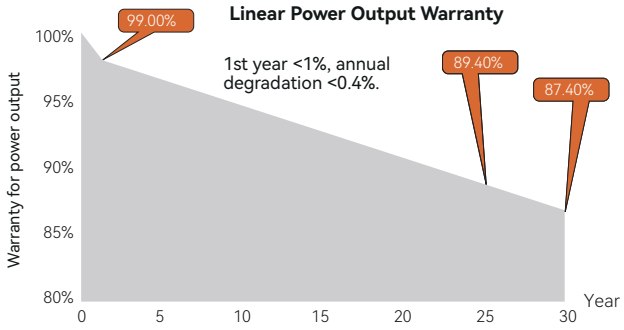
TEMPERATURE PARAMETERS

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

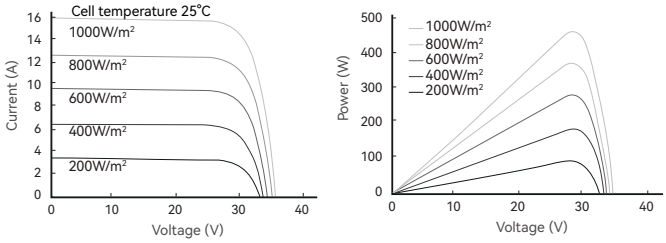
MAXIMUM RATINGS

Operational Temperature	-40℃~+85℃
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)

CE (Europe) CQC(China) TÜV NORD MCS (UK) KS (Korea) INMETRO (Brazil) JPEA (Japan) CEC (Australia) CSI (Italy)

Email: sales@tongwei.com **Website:** en.tongwei.com.cn **Add:** No.588, Middle Section Tianfu Avenue, High-Tech Zone, Chengdu, China (Sichuan) Pilot Free Trade Zone **Tel:** +86 02860666455