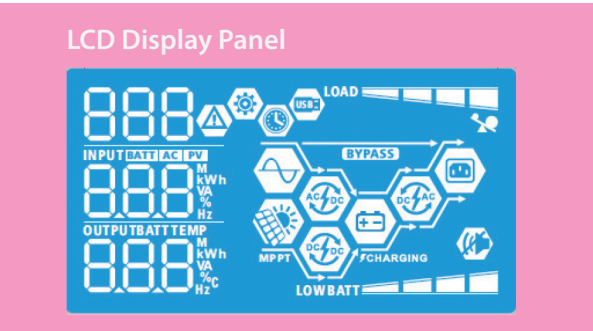


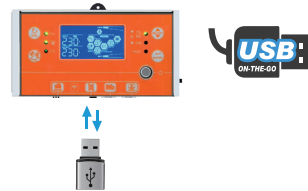
Axpert VM III TWIN Off-Grid Inverter

20220001 P1.9.5-23.0



- Dual outputs for smart load management**
 There are two outputs available. The second output can be scheduled on/off, setting cut-off voltage or SOC and discharging time via LCD setting. It facilitates users smart load control.
- Maximum PV input current 27A**
 Designed with 27A PV input current, Axpert VM III TWIN is compatible to the market trend of increased Imp in solar panel.

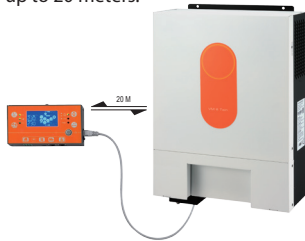
- Supports USB On-the-Go function**
 VM III TWIN series supports USB On-the-Go function to facilitate data upload/download.



- Wide PV input voltage range 60VDC ~ 450VDC**
 Now, Axpert VM III TWIN allows wide PV input voltage range from 60VDC to 450VDC. This features allow less solar panel required in the system and save space.

- Reserved communication port (RS-485, CAN-BUS or RS-232) for BMS**
 This third generation inverter is reserved communication port for BMS. For the detailed information, please contact sales directly.

- Detachable LCD control module with various communications**
 This detachable LCD control module can be turned to remote panel. Users can install the LCD panel in accessible area away from inverter up to 20 meters.

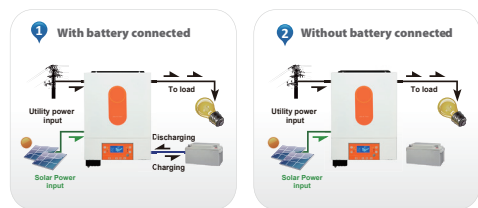


- Battery equalization extends lifecycle**
 This inverter charger is built in battery equalization function. This function will help remove sulfation to optimize battery performance and even extend lifecycle.

- Integrated WiFi interface with Mobile App**
 VM III TWIN series is integrated WiFi interface ready for mobile monitoring. Mobile monitoring can be carried out through mobile applications in both iOS and Android. Users can track the history of the unit information such as energy generation and change parameter settings timely.



- Battery independency**
 Inverter can keep supplying power to the loads from PV energy or the grid without battery connected.



- User-friendly LCD operation**
 Users can easily set up or change the charging current, output source and charger source prioritization through LCD control panel to optimize inverter performance.



- Replaceable fan design**
 VM III TWIN series is designed with replaceable fan. It will simplify the maintenance and reduce the maintenance cost.



Axpert VM III TWIN Off-Grid Inverter Selection Guide

MODEL	Axpert VM III TWIN 4K	Axpert VM III TWIN 6K
RATED POWER	4000VA/4000W	6000VA/6000W
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 \pm 10%	
Surge Power	8000VA	12000VA
Efficiency (Peak)	90% ~ 93%	
Transfer Time	10 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	
Maximum PV Array Power	5000W	6000W
MPP Range @ Operating Voltage	60 ~ 450 VDC	60 ~ 450 VDC
Maximum PV Array Open Circuit Voltage	500 VDC	500 VDC
Maximum PV Input Current	27A	
Maximum Solar Charge Current	120A	120A
Maximum AC Charge Current	100A	100A
Maximum Charge Current	120A	120A
PHYSICAL		
Dimension, D x W x H (mm)	115 x 300 x 435	
Net Weight (kgs)	9	10
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.

Hi-MO X6 Scientist (V2)

LR5-72HTH 590~600M

- Suitable for Distribution Market
- Simple design embodies modern style
- Highest efficiency with the best energy generation performance
- Better product warranty, better service



15-year Warranty for
Materials and Processing



25-year Warranty for Extra
Linear Power Output

Complete System and Product Certifications

IEC 61215, IEC 61730, UL 61730

ISO9001:2015: ISO Quality Management System

ISO14001: 2015: ISO Environment Management System

ISO45001: 2018: Occupational Health and Safety

IEC62941: Guideline for module design qualification and type approval

LONGI



23.2%
MAX MODULE
EFFICIENCY

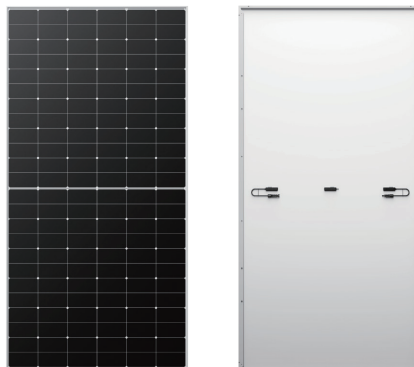
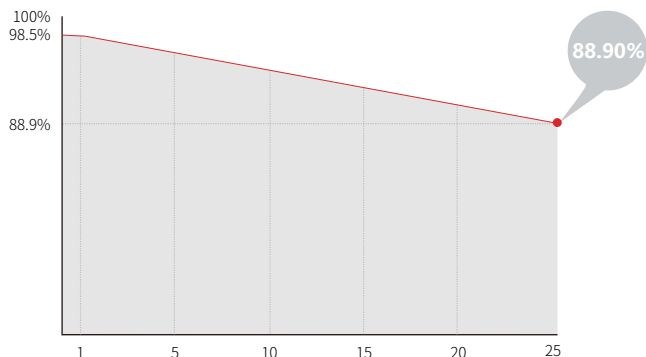
0~3%
POWER
TOLERANCE

<1.5%
FIRST YEAR
POWER DEGRADATION

0.40%
YEAR 2-25
POWER DEGRADATION

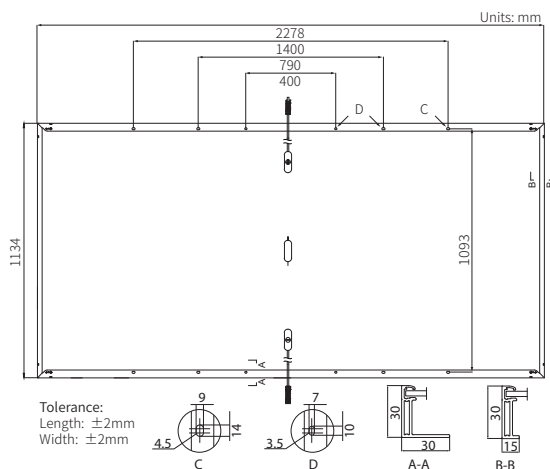
Additional Value

25-Year Power Warranty



Mechanical Parameters

Cell Orientation	144 (6×24)
Junction Box	IP68
Output Cable	4mm ² , +400, -200mm/±1400mm length can be customized
Glass	Single glass, 3.2mm coated tempered glass
Frame	Anodized aluminum alloy frame
Weight	27.2kg
Dimension	2278×1134×30mm
Packaging	36pcs per pallet / 180pcs per 20' GP / 720pcs per 40' HC



Electrical Characteristics

STC : AM1.5 1000W/m² 25°C

NOCT : AM1.5 800W/m² 20°C 1m/s

Test uncertainty for Pmax: ±3%

Module Type	LR5-72HTH-590M		LR5-72HTH-595M		LR5-72HTH-600M	
	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	590	441	595	445	600	448
Open Circuit Voltage (Voc/V)	52.51	49.30	52.66	49.44	52.81	49.58
Short Circuit Current (Isc/A)	14.33	11.57	14.40	11.63	14.46	11.68
Voltage at Maximum Power (Vmp/V)	44.36	40.48	44.51	40.62	44.66	40.75
Current at Maximum Power (Imp/A)	13.31	10.90	13.37	10.97	13.44	11.00
Module Efficiency(%)	22.8		23.0		23.2	

Operating Parameters

Operational Temperature	-40°C ~ +85°C
Power Output Tolerance	0 ~ 3%
Voc and Isc Tolerance	±3%
Maximum System Voltage	DC1500V (IEC/UL)
Maximum Series Fuse Rating	25A
Nominal Operating Cell Temperature	45±2°C
Protection Class	Class II
Fire Rating	UL type 1 or 2 IEC Class C

Mechanical Loading

Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

Temperature Ratings (STC)

Temperature Coefficient of Isc	+0.050%/°C
Temperature Coefficient of Voc	-0.230%/°C
Temperature Coefficient of Pmax	-0.290%/°C

LIO II-4810 is Lithium-ion battery module specially designed for energy storage system with 48V system

- Lithium Iron Phosphate (LFP) cell guarantees safety and reliability
- Easy to install on the floor
- Suitable for wide range of inverters with 48V system



Compact size and Lightweight
Built-in Lithium Iron Phosphate (LFP) cell with less space and weight.



Fast charging
Battery module can be fully charged in shorter time.

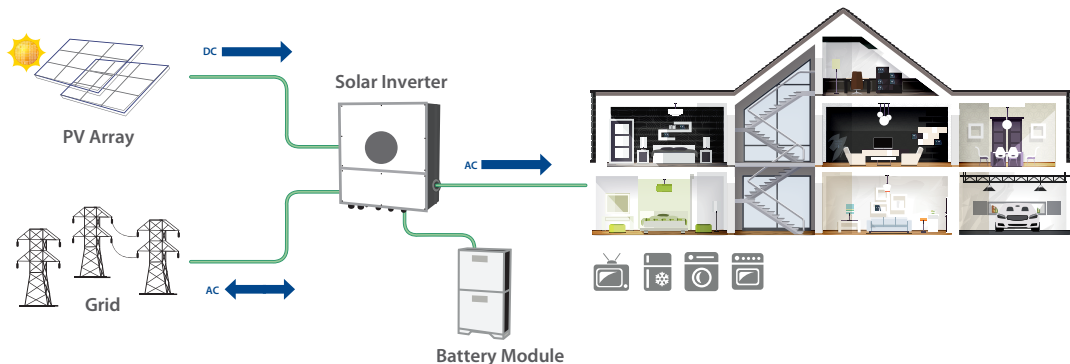


Modular design for easy scalable
Battery module can be easily stacked and added for energy expansion.

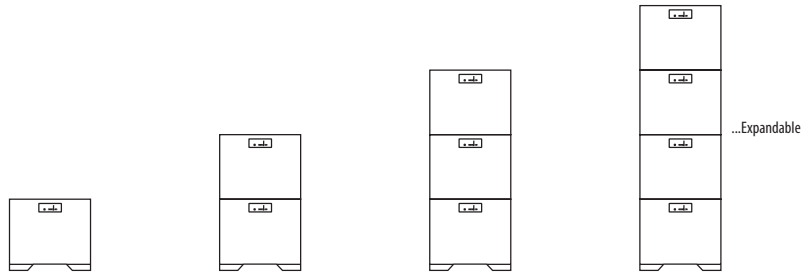


Maximum Lifecycle
8000 cycles is for 60% DOD with >50% capacity
2000 cycles is for 90% DOD with >80% capacity

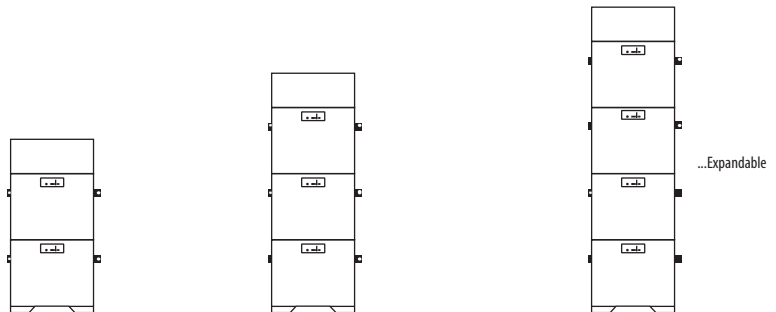
System Diagram



Technical Selection Guide



Battery Module	LIO II-4810 (5 kWh, 51.2V)			
Battery Cell Technology	Lithium Iron Phosphate			
Applicable Inverter Rating	≤ 5.6 kW			
Number of Module	1	2	3	4
Usable Energy	5 kWh	10 kWh	15 kWh	20 kWh
Rated Discharging Current	150 A	150 A	150 A	150 A
Peak Discharging Current	192 A, 1 min	192 A, 1 min	192 A, 1 min	192 A, 1 min
Nominal Voltage	51.2 V	51.2 V	51.2 V	51.2 V
Operating Voltage	40 -56 VDC	40 -56 VDC	40 -56 VDC	40 -56 VDC
Charging Current	100A Max, 30A Default	100A Max, 30A Default	100A Max, 30A Default	100A Max, 30A Default
Dimension, D x W x H (mm) without feet	185 x 540 x 420	185 x 540 x 840	185 x 540 x 1260	185 x 540 x 1680
Net Weight (kg)	48	96	144	192



Battery Module	LIO II-4810 (5 kWh, 51.2V)		
Battery Cell Technology	Lithium Iron Phosphate		
Applicable Inverter Rating	6 kW ~ 12 kW		
Number of Module	2	3	4
Number of PDU Module	1	1	1
Usable Energy	10 kWh	15 kWh	20 kWh
Rated Discharging Current	300 A	300 A	300 A
Peak Discharging Current	384 A, 1 min	384 A, 1 min	384 A, 1 min
Nominal Voltage	51.2 V	51.2 V	51.2 V
Operating Voltage	40 - 56 VDC	40 - 56 VDC	40 - 56 VDC
Dimension, D x W x H (mm) without feet	185 x 540 x 1040	185 x 540 x 1460	185 x 540 x 1880
Net Weight (kg)	102	150	198

General Specification

Operation Temperature	Charge	0°C~50 °C
	Discharge	0°C~50 °C
Storage Temperature (At 50% SOC and specified temp, recoverable capacity in % vs time / 50%)	< 18 months:	-20°C~25 °C
	< 3 months:	25°C~45 °C
	< 1 months:	45°C~60 °C
	20°C ± 5 °C is the recommended storage temperature	
IP Protection	IP20	
Communication	RS485 port (RJ45), CAN	
Certifications	UN38.3, IEC 62619	

Product specifications are subject to change without further notice.



TS4-A-O

Ottimizzatore FV a livello di modulo

TS4-A-O (Ottimizzazione) è la soluzione avanzata add-on che aggiunge caratteristiche Smart ai moduli FV tradizionali per ottenere la massima affidabilità, migliorando il rendimento di impianti sottoperformanti o rendendo Smart le nuove installazioni.

TS4-A-O supporta moduli FV di potenza fino a 700Wp.

Funzionalità incluse



Ottimizzazione per il miglior rendimento energetico e la massima flessibilità di progettazione



Spegnimento automatico o manuale



Monitoraggio a livello di modulo per il rilevamento della produzione e per la gestione del parco impianti

Facilità di Installazione

Fissabile alla cornice del modulo o al sistema di montaggio

Smart Commissioning

Configurazione e messa in funzione realizzabili da dispositivo Android/iOS



TS4-A-O DATI TECNICI

Specifiche Ambientali

Intervallo della Temperatura Operativa -40°C to +70°C (-40°F to +158°F)

Classe di Protezione IP68

Altitudine Massima 2000m

Specifiche Meccaniche

Dimensioni W=138.4mm, L= 139.7mm, H= 22.9mm

Peso 520g

Specifiche Elettriche

Massima Tensione in Ingresso (V_{OC} alla temperatura più bassa) 80V

Intervallo di Tensione 16 - 80V

Corrente Massima 15A

Potenza Massima 700W

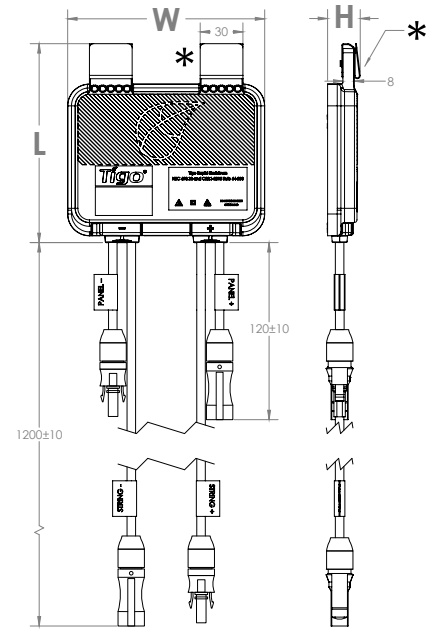
Lunghezza Cavo di Uscita 1.2m (standard)

Connettori MC4, EVO2

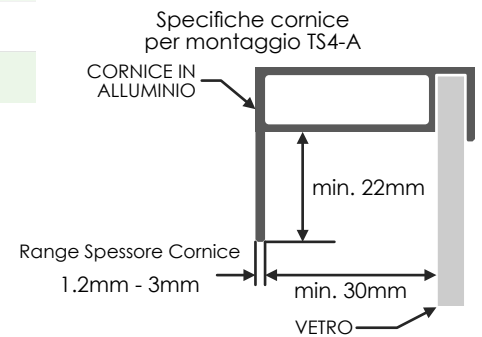
Tipo di Comunicazione Wireless

Potenza Fusibile Raccomandata 30A

CCA e TAP necessari per funzioni di monitoraggio e sicurezza con TS4-A-O.



*Clip rimovibili per montaggio su struttura



NOTA PER L'ORDINE

Part Number	Descrizione
461-00252-32	1000V TÜV, 1.2m cable, MC4
461-00261-32	1500V TÜV, 1.2m cable, EVO2

Per informazioni commerciali:

sales@tigoenergy.com

Per informazioni sui prodotti:

tigoenergy.com/products

Per informazioni tecniche:

support.tigoenergy.com

Per informazioni aggiuntive e assistenza alla selezione dei prodotti, si prega di utilizzare il configuratore online all'indirizzo

tigoenergy.com/design

