

Battery Storage

PGEM



10 years warranty



Ultra safe LFP material



Short circuit protection



Flexible remote upgrade



Wide range inverter compatibility



Parallel up to 32 modules



1C rate continuous charge/discharge



Multi protection to avoid over discharge



Smart BMS management for longer lifespan



Active balancing charging, low self consumption

Model	PGEM
Cell Type	LFP
Rated Energy	5.12kWh
Rated Capacity	100Ah
Rated Voltage	51.2V
Charge Voltage	56.5V
Max. Charge/Discharge Current	100A
Discharge Peak Current	105A / 15s, 150A / 0.5s
Parallel	Up to 32 units parallelable w/o extra device needed, slave battery drops offline or come back alive does not affect system running
IP Level	IP20
Dimension (W*H*D)	428*640*166mm / 16.9*25.2*6.5 in
Weight	58kg / 127.9lbs
Communication	CAN/RS485
Compatible Inverter	Victron, Luxpower, Deye, Voltronic, SMA Goodwe, Growatt, Sofar, Solark, SRNE, Must
Humidity	5%~85% RH (No condensation)
Work Temperature	-20 ~ +55 °C
Storage Temperature	-10 ~ +35 °C
Remote Maintenance	Flexible remote upgrade, Original firmware backup to prevent upgrade failure
Warranty *	10 years, 6000 cycles
Certification	CE UN38.3; IEC62619
Protection	Overcharge/discharge/current/voltage/temperature protection Short circuit protection, Reverse connection protection Charge balance, Low SOC protection

@25°C, 90% DOD. 0.5C testing condition

ECO HYBRID

Single-Phase

SNA 12K

- 2 MPPTs with 4 strings, Max. 24kW PV input
- Max. charging and discharging current: 250A
- Off-grid application for high demand with 12kW output power
- Dual AC output ports for multiple load connections
- Separate GEN port
 - Up to 19.2kW Gen/AC coupling input
 - Auto generator start and stop control
- Integrated Design with Load and Battery Breaker
- PV or AC or Generator wake up battery



Specification

INPUT (PV DC)		SNA 12K
Max. PV array power (W)		24000 (12000/12000)
Rated PV input voltage (V)		320
Number of independent MPPT inputs		2/(2:2)
PV input voltage range (V)		100-480
MPPT voltage range (V)		120-385
Start-up voltage (V)		100
Max. PV input current per MPPT (A)		35/35
Max. PV short-circuit current input per MPPT (A)		44/44
Battery		
Compatible battery type		Lithium-ion/Lead-Acid
Rated battery voltage (V)		48/51.2
Battery voltage range (V)		46.4-60/38.4-60
Max. charging / discharging current (A)		250
Max. charging / discharging power (W)		12000
Force wake up battery from PV and Grid function		YES
Grid		
Rated AC voltage (V)		230
Acceptable Input Voltage Range (V)		90~280
Rated AC frequency (Hz)		60/50
Rated AC input current (A)		100
Rated AC input power (W)		24000
PF		0.99
THDI		<5%
Max. continuous AC passthrough current(A)		100
UPS		
Rated output power (W)		12000
Rated output voltage (V)		230
Rated output current (A)		50
Rated output frequency (Hz)		50/60
Surge power, duration		2Pn, 5s
Switching time (UPS)		<10ms@Single and Parallel
Wave form		Sine wave
THDV		3%
GEN		
Acceptable input voltage range		230
Max. AC input voltage (V)		280
Max. AC input current (A)		63
Rated input frequency		50Hz/60Hz (Auto detection)
Transfer time		<10ms@Single; <20ms@Parallel
THDV		<3%
Overload protection		5s@≥150% load /10s@110%~150% load
Efficiency		
Max. efficiency		93.5%
Max. charging / discharging efficiency		93.0%
Max. MPPT efficiency		99.0%
Protection		
PV reverse polarity protection(Y/N)		YES
Over current / voltage protection(Y/N)		YES
AC Short-circuit current protection(Y/N)		YES
Grid monitoring(Y/N)		YES
DC switch(Y/N)		YES
DC / AC Surge protection Type III		YES
Battery reverse polarity protection(Y/N)		YES
General		
Dimensions (W*H*D mm)		530*830*150mm(17.72*25.59*5.9inch)
Weight		40kg/88.2lbs
Ingress protection rating		IP20
Operating environment temperature range(°C)		0~45
Storage temperature range(°C)		-15~60
Relative humidity		5% ~ 95%
Display & Communication interface		LCD+RGB, RS485 / Wifi / CAN
Warranty		2 years
Cooling method		Smart cooling
Topology on AC / Battery side		Transformer-less / Transformer
Altitude (m)		<2000
Noise emission (typical)		<50dB
Standard & Certification		
CE		

X-HALF CUT N-TYPE serie TOPCon +

435/460_{Wp}
 Power

TOPCon +
 Technology Innovation

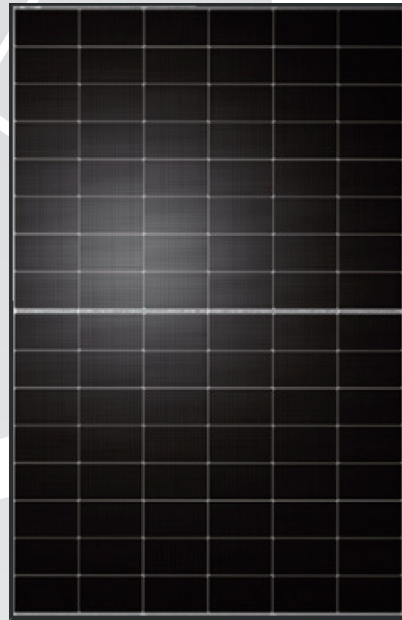
Bifacciale

23.01%
 Efficienza

2400Pa
 carico del vento

5400Pa
 carico di neve

-0.29%/°C
 Coefficiente di temperatura



L'innovazione tecnologica X-HALF CUT N-Type serie TOPCON prevede l'introduzione di un sottile strato di ossido tra i contatti metallici e il wafer di silicio, che apporta significativi miglioramenti all'efficienza di conversione delle celle e alle prestazioni di generazione di energia.

Garanzia lineare:

- **30 anni garanzia lineare**
- **99%** alla fine del **1°** anno
- **87,4%** alla fine del **30°** anno

Garanzia di prodotto:

- **15 anni garanzia lineare**

CONFORME A

| UNI9177 | PV CYCLE | CE |

UNI EN ISO 9001:2015
 UNI EN ISO 14001:2015
 UNI EN ISO 45001:2018

| Sistema di gestione della Qualità
 | Sistema di gestione ambientale
 | Sistema di gestione per la salute e sicurezza sul lavoro

DATI ELETTRICI (STC)		XMHCTV3435BFD-GBW+H	XMHCTV3440BFD-GBW+H	XMHCTV3445BFD-GBW+H	XMHCTV3450BFD-GBW+H	XMHCTV3455BFD-GBW+H	XMHCTV3460BFD-GBW+H
Tensione circuito aperto (Voc)		35.40 V	35.60 V	35.80 V	36.00 V	36.20 V	36.40 V
Tensione a Pmax (Vmp)		30.00 V	30.20 V	30.40 V	30.60 V	30.80 V	31.10 V
Corrente di corto circuito (Isc)		15.46 A	15.52 A	15.58 A	15.64 A	15.70 A	15.76 A
Corrente a Pmax (Imp)		14.50 A	14.57 A	14.64 A	14.71 A	14.77 A	14.83 A
Potenza di picco (Pmax)		435 Wp	440 Wp	445 Wp	450 Wp	455 Wp	460 Wp
Efficienza modulo		21.77%	22.02%	22.27%	22.52%	22.77%	23.01%
Tolleranza di potenza in uscita		0 ~ + 5 W					
Tensione massima di sistema		1500 V					
Portata fusibile in serie		30 A					
Temperatura d'esercizio		- 40°C ~ +85°C					

* STC: Irraggiamento 1000 w/m2, Temperatura celle 25°C, AM= 1.5

Tolleranza misura elettrica e potenza d'uscita ±3%.

PARAMETRI DI GENERAZIONE DI POTENZA SU ENTRAMBI I LATI (GUADAGNO POSTERIORE)

			457.00 Wp	462.00 Wp	467.00 Wp	473.00 Wp	478.00 Wp	483.00 Wp
5%	Potenza di Picco (Pmax)		457.00 Wp	462.00 Wp	467.00 Wp	473.00 Wp	478.00 Wp	483.00 Wp
	Efficienza modulo (%)		22.90%	23.10%	23.40%	26.60%	23.90%	24.10%
15%	Potenza di Picco (Pmax)		500.30 Wp	506.00 Wp	511.80 Wp	517.50 Wp	523.30 Wp	539.00 Wp
	Efficienza modulo (%)		25.00%	25.30 %	25.60%	25.90%	26.20%	26.40%
25%	Potenza di Picco (Pmax)		543.80 Wp	550.00 Wp	556.30 Wp	562.50 Wp	568.80 Wp	575.00 Wp
	Efficienza modulo (%)		27.20%	27.50%	27.80%	28.20%	28.50%	28.70%

COEFFICIENTE DI TEMPERATURA

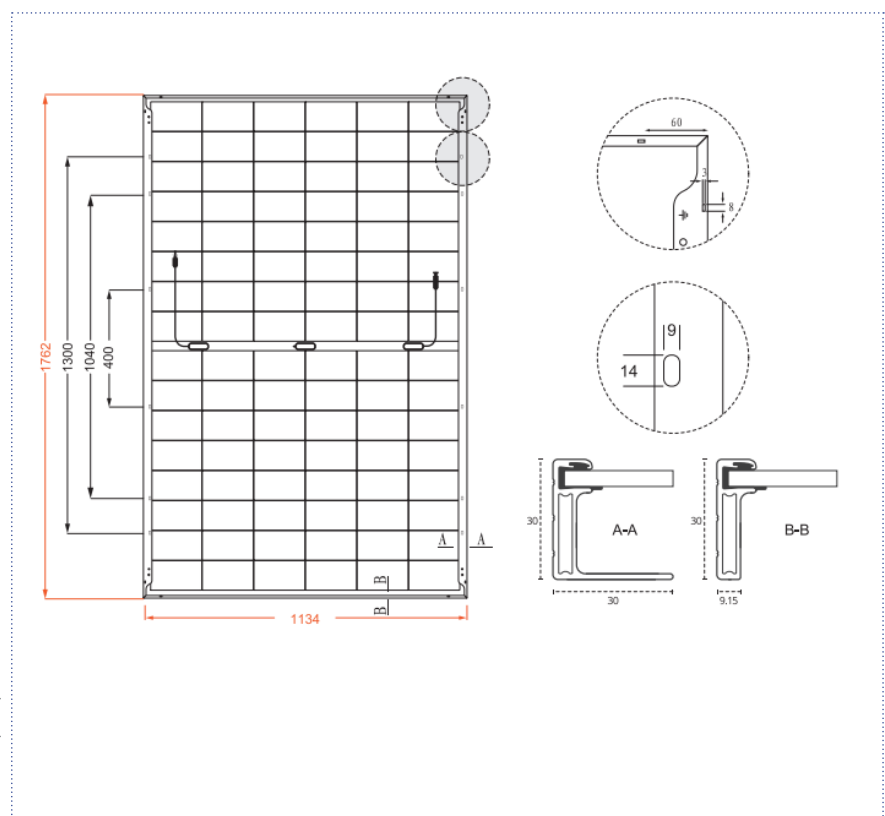
NOCT	45°C±2°C
Pmax Coefficiente di temperatura	-0.290%/ °C
Voc Coefficiente di temperatura	-0.250%/ °C
Isc Coefficiente di temperatura	0.046% / °C

CARATTERISTICA MECCANICA

Maximum Load	5400 Pa / 2400 Pa
Dimensioni (mm)	1762 x 1134 x 30
Peso (Kg)	23.90
Tipo di cella	N type Bifacial Mono
N. celle	96 (6*16)
Bifaccialità	80±5%

PACKING

Pallet per container	36 pcs
Moduli per container 40'HQ	936 pcs



INFORMAZIONI GENERALI

Vetro Frontale	2,0 mm vetro semi temperato
Vetro Posteriore	2,0 mm vetro smaltato
Cornice	Lega in alluminio anodizzato
Junction Box	IP68, 3 Bypass Diodes
Cavo di uscita - Connettori	4.0mm², cavo 1250mm, con connettori compatibili MC4

Sunerg Solar S.r.l. si riserva il diritto di apportare modifiche ai dati tecnici del prodotto senza preavviso. I dati tecnici del modulo, nonostante siano inseriti con la massima attenzione, possono contenere errori o imprecisioni non imputabili a Sunerg Solar S.r.l.