## El kit solar 5 para viviendas aisladas 3000/6000 esta indicado para viviendas con nevera, tv, iluminación y lavadora en frío.

Este kit solar aislada 5 3000/5600 con baterías de gel es un sistema de 48v que dispone de un inversor de 5000w de potencia nominal. El kit solar tiene baterías de gel que no tienen mantenimiento y permanecen cargadas incluso después de largos periódos de no habitar la vivienda por lo que es ideal para viviendas de temporada.

Un ejemplo de utilización de consumos del kit solar seria:

- Nevera A+ 200kwh año a diario

- Lavadora ciclo frio 2 veces por semana

- Microondas puntualmente

- Bomba de agua 1cv 60 minutos diarios

- television led 32 pulgadas (80w)  6 horas

- ordenador portátil

## Todos nuestros kits solares vienen con el regulador de carga y el inversor configurado para la baterías del kit

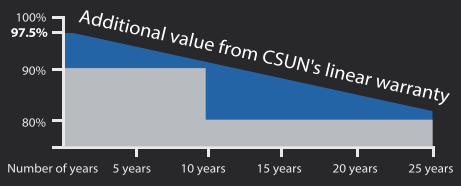
Nos interesa que el kit solar de aislada funcione perfectamente y nuestros clientes no tengan problemas en las baterías, normalmente el punto mas crítico de la instalación solar. Por eso programamos nuestras propias curvas de carga en todos los inversores híbridos y reguladores de los kits solares para la batería que adquiere el cliente. De esta forma solo tiene que preocuparse de conectarlo sin tener que programar nada, ya lo hacemos nosotros para sacar la maxima duración de sus baterías.

# Galaxy Series
## Conventional Modules

The power output shall not be less than 97.5% of the minimum power output stated in the product data sheet in the first year of the product's life cycle. The loss of power output shall not exceed 0.7% per year thereafter, ending with 80.7% in the 25th year.

CSUN  Standard warranty

CSUN's NEW linear performance warranty




# CSUN345 -72P

**High efficiency PERC tech for esthetic applications**

Module Fire Performance:Type 1 (UL 1703)
Fire Resistance Rating:Class C (IEC 61730)

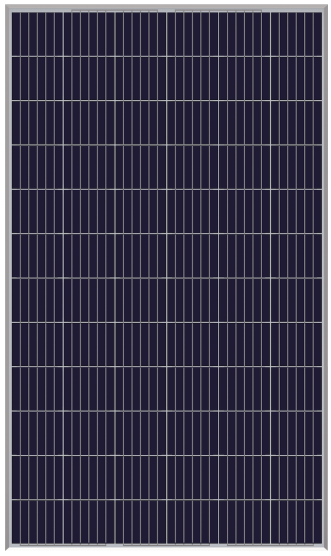
CSUN345-72P  CSUN340-72P
CSUN335-72P  CSUN330-72P

**17.78%**
Module efficiency

**345 W**
Highest power output

**10 yeras**
Material &workmanship warranty

**25 yeras**
Linear power output warranty



- Industry leading conversion efficiency
- Certificated to withstand wind (2400 Pa) and snow load (5400 Pa)
- Positive tolerance offer
- Excellent performance under weak light condition
- Passed salt mist & ammonia corrosion, blowing sand and hail testing
- Good temperature coefficient enables better output in hot climates

* Note: All specifications, warranties, certifications about module of „CSUN" series also apply to that of „SST".

All information and data are subject to change without notice and are provided without liability.

www.csun-solar.com


Version 4/2019

## Electrical Characteristics at Standard Test Conditions (STC)

| Module Type | CSUN345-72P | CSUN340-72P | CSUN335-72P | CSUN330-72P |
|---|---|---|---|---|
| Maximum Power - Pmpp (W) | 345 | 340 | 335 | 330 |
| Positive Power Tolerance | 0~3% | 0~3% | 0~3% | 0~3% |
| Open Circuit Voltage - Voc (V) | 46.5 | 46.3 | 46.2 | 46.1 |
| Short Circuit Current - Isc (A) | 9.60 | 9.50 | 9.37 | 9.28 |
| Maximum Power Voltage - Vmpp (V) | 38.2 | 38.1 | 37.9 | 37.8 |
| Maximum Power Current - Impp (A) | 9.04 | 8.94 | 8.84 | 8.75 |
| Module Efficiency | 17.78% | 17.52% | 17.26% | 17.01% |

Electrical data relates to standard test conditions (STC) : irradiance 1000W /m² ; AM 1.5 ; cell temperature 25°C measuring uncertainty of power is within ±3%. Certified in accordance with IEC61215, IEC61730-1/2 and UL 1703

## Electrical Characteristics at Nominal Operating Cell Temperature (NOCT)

| Module Type | CSUN345-72P | CSUN340-72P | CSUN335-72P | CSUN330-72P |
|---|---|---|---|---|
| Maximum Power - Pmpp (W) | 251 | 247 | 244 | 243 |
| Maximum Power Voltage - Vmpp (V) | 42.9 | 42.7 | 42.6 | 42.6 |
| Maximum Power Current - Impp (A) | 7.73 | 7.65 | 7.55 | 7.48 |
| Open Circuit Voltage - Voc (V) | 35.1 | 35.0 | 34.9 | 34.8 |
| Short Circuit Current - Isc (A) | 7.16 | 7.09 | 7.00 | 6.99 |

Electrical data relates to nominal operating cell temperature (NOCT): irradiance 800W /m²; wind speed 1 m/s ; cell temperature 45°C; ambient temperature 20°C measuring uncertainty of power is within ±3%.

## Temperature Characteristics

| | |
|---|---|
| Voltage Temperature Coefficient | -0.292%/K |
| Current Temperature Coefficient | +0.045%/K |
| Power Temperature Coefficient | -0.408%/K |

## Maximum Ratings

| | |
|---|---|
| Maximum System Voltage (V) | 1000&1500 |
| Series Fuse Rating (A) | 20 |
| Reverse Current Overload (A) | 27 |

## Mechanical Characteristics

| | |
|---|---|
| Dimensions | 1956 × 992 × 40 mm |
| Weight | 22 kg |
| Frame | Anodized aluminum profile |
| Front glass | Toughened low iron glass, 3.2 mm |
| Cell Encapsulation | EVA (Ethylene-Vinyl-Acetate) |
| Back Sheet | Composite film |
| Cells | 6x12 polycrstalline solar cells ( 5 BB 156.75 × 156.75 mm) |
| Junction Box | Rated current ≥13 A, IP ≥ 67 , TUV & UL |
| Cable | Length 900 mm, 1 × 4 mm² |
| Connector | Compatiable with MC4 |

## Packaging

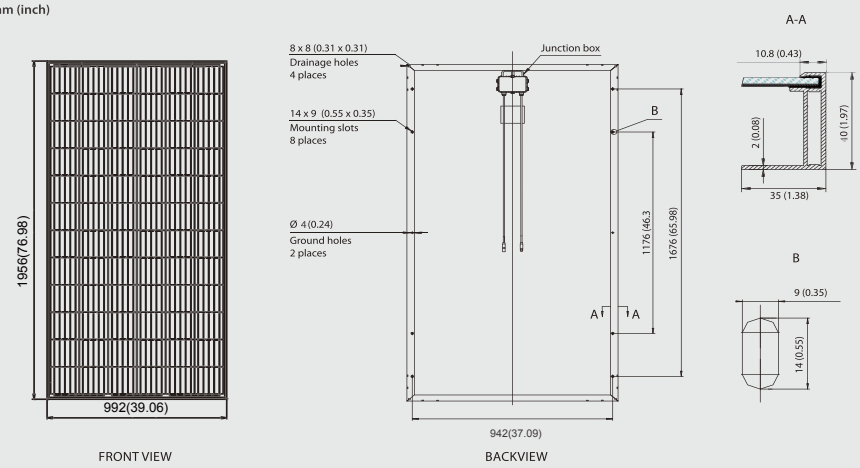
| | |
|---|---|
| Container 20' | 260 pcs. |
| Container 40' | 624 pcs. |
| Container 40'HC | 672 pcs. |

## System Design

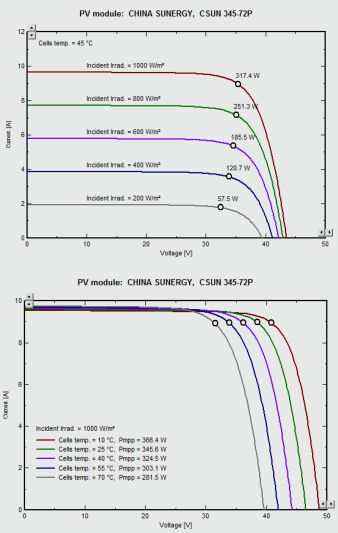
| | |
|---|---|
| Temp. Range | -40°C to + 85°C |
| Hail | Max. diameter of 25mm with impact speed of 23m/s |
| Max. Capacity | Snow 5400 Pa, wind 2400 Pa |
| Application Class | A |
| Safety Class | II |

## Dimensions

Note: mm (inch)

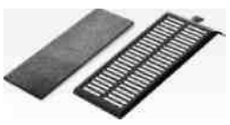



## IV-Curves



# INVERSOR/CARGADOR AXPERT-V PARA FOTOVOLTAICA AISLADA


- Inversor solar de onda senoidal pura
- Carga de alta intensidad seleccionable
- Amplio rengo de entrada DC
- Entrada de AC seleccionable para electrodomésticos y para ordenadores
- Prioridad entrada AC/solar programable via display LCD
- Compatible con entrada de grupo electrógeno o red
- Auto re-arme mientras AC se esté recuperando
- Protección contra sobrecarga y cortocircuitos
- Cargador de batería inteligente de 4 etapas para carga de baterías optimizada
- Función de arranque en frío

Kit anti-polvo (opcional). El inversor detectará automáticamente si se ha instalado este Kit y activa el sensor de temperatura interna. Gracias al diseño anti-polvo el inversor mejora drásticamente su fiabilidad en los ambientes más adversos.

## Gama de modelos inversores Axpert-V

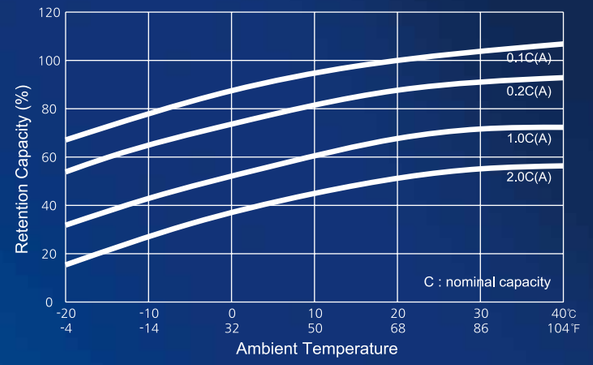
| MODELO | Axpert VP1000-12 | Axpert VP2000-24 | Axpert VP3000-24 | Axpert VM3000-24 | Axpert VM3000-24 Plus | Axpert VP5000-48 | Axpert VM5000-48 |
|---|---|---|---|---|---|---|---|
| Potencia nominal | 1000VA/800W | 2000VA/1600W | 3000VA / 2400W | | | 5000VA / 4000W | |
| **ENTRADA** | | | | | | | |
| Voltaje | 230 VAC | | | | | | |
| Rango volt. seleccionable | 170-280 VAC (Para ordenadores); 90-280 VAC (Para electrodomésticos) | | | | | | |
| Rango frecuencia | 50 Hz/60 Hz (Detección automática) | | | | | | |
| **SALIDA** | | | | | | | |
| Regulación voltaje AC (modo batería) | 230VAC ± 5% | | | | | | |
| Potencia pico | 2000VA | 4000VA | 6000VA | | | 10000VA | |
| Eficiencia (Pico) | 90% - 93% | | | | | | |
| Tiempo transferencia | 10 ms (Para ordenadores); 20 ms (Para electrodomésticos) | | | | | | |
| Forma de onda | Onda senoidal pura | | | | | | |
| **BATERIA** | | | | | | | |
| Voltaje batería | 12VDC | 24 VDC | | | | 48 VDC | |
| Voltaje carga flotación | 13.5 VDC | 27 VDC | | | | 54 VDC | |
| Protección sobrevoltaje | 16VDC | 32 VDC | | | | 63 VDC | |
| **REGULADOR SOLAR & CARGADOR AC** | | | | | | | |
| Tipo regulador solar | PWM | PWM | PWM | MPPT | | PWM | MPPT |
| Voltaje máximo FV circuito abierto | 50 VDC | 80 VDC | 80 VDC | 102 VDC | 145 VDC | 105 VDC | 145 VDC |
| Máxima potencia FV | 600 W | 1200W | 1200 W | 1000W | 1500W | 2400 W | 3000 W |
| Rango MPP @ voltaje operativo | N/A | N/A | N/A | 30 ~ 80 VDC | 30-115 VDC | N/A | 60-115 VDC |
| Máxima potencia carga Solar | 50 A | 50 A | 50 A | 40 A | 60 A | 50 A | 60 A |
| Máxima potencia carga AC | 20 A | 20 A | 25A | | 60 A | | |
| Máxima potencia de carga | 50 A | 50 A | 70A | 60A | 120A | 110A | 120A |
| **DIMENSIONES** | | | | | | | |
| Dimensión, P x W x H (mm) | 88x225x315 | | 100x334x285 | | 100x300x440 | | |
| Peso neto (kgs) | 5.0 | 5.5 | 6.4 | 6.6 | 11 | 11 | 13 |
| Puerto comunicaciones | USB/RS232 | | | | | | |
| **ENTORNO OPERATIVO** | | | | | | | |
| Humedad | 5% to 95% Humedad relativa (sin condensación) | | | | | | |
| Temp. funcionamiento | -10°Cto50°C | | | | | | |
| Temp. almacenamiento | -15°Cto60°C | | | | | | |

Las especificaciones pueden cambiar sin previo aviso

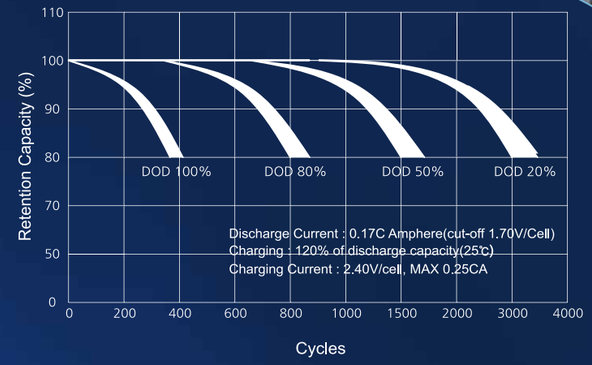
# CYNETIC GC Gel Carbon

Gel Carbon batteries are true maintenance-free sealed batteries engineered specifically to satisfy the need for frequent deep cycles from photovoltaic (PV) and energy storage applications. We are confident that our technology-intensive, long-lasting, and environment friendly SG Series batteries will provide stability and efficiency for your everyday renewable energy needs.

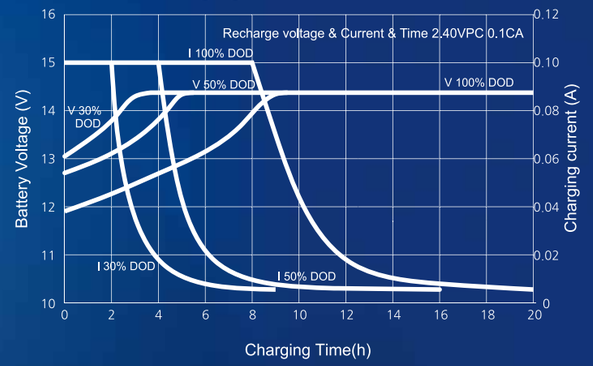

## Effect of temperature on capacity



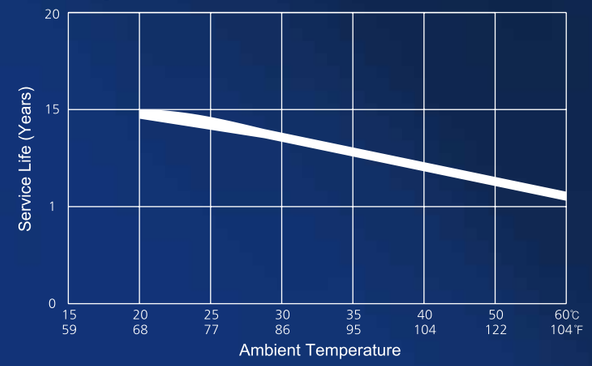

## Cycle life characteristic




## DOD % vs Recharging time curve




## Floating life characteristics




**UltraPress™ Grid Technology.**
Patent pending grid compressing technology which increases the density of the lead grain of the grids. The grain density is typically 400% greater than that of the conventional casting method. This up-to-date grid technology enables our batteries to survive even the toughest deep discharge and PSoC applications.

**TxPure™ GEL Technology**
Application of refined pure thixotropic colloidal silica GEL technology to battery electrolyte has greatly increased the cycle life by both preventing plate stratification and providing extra temperature protection against heat and cold. Gel provides more ability to deep cycle aplications and better recovery after deep dischargue

**SealFlex™ Anti Explosion Filter**
Patent pending proprietary cap filtering and sealing technology. Battery cell caps are sealed simultaneously using specially designed o-rings and explosion filters to prevent leakage and gassing more effectively than ever before.

**MicroCarbon™**
In every battery, proprietary micro carbon additive is used in the active material for both positive and negative plates to enhance charge acceptance and cycle endurance. ActiveCarbon™ works to strengthen charge pathways to improve performance consistency and enhance performance at partial state of charge (PSoC) environment.

**Fahrenheit-Schutz™ Heat Protection Case**
Specially formulated heat and flame resistant polypropylene case material is used to effectively block ambient heat thus preventing heat related malfunctions such as thermal runaway. This proprietary high rigidity case material has heat deflection rating of 140˚C and complies to RoHs Compliant EU Directive 2002/95/EC. Additional UL94-V0 protection option also available.

## 12 Voltage GC Series Battery Specifications

| Battery Type | (V) | Nominal Capacity | | | | Dimension | | | | | | | | Approx. Weight | | Terminal type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 100H | 20H | 10H | 5H | Length | | Width | | Height | | T.Height | | | | |
| | | Final V.P.C | | | | (mm) | (inch) | (mm) | (inch) | (mm) | (inch) | (mm) | (inch) | (Lb) | (kg) | (S) |
| | | (1.80) | (1.80) | (1.75 | (1.70) | | | | | | | | | | | |
| GC 95H | 12 | 95 | 80 | 76 | 70 | 368 | 14.49 | 172 | 6.77 | 210 | 8.27 | 219 | 8.62 | 59.4 | 27 | N |
| GC 120H | 12 | 120 | 100 | 95 | 87 | 368 | 14.49 | 172 | 6.77 | 210 | 8.27 | 219 | 8.62 | 66 | 30 | N |
| GC 140H | 12 | 140 | 120 | 114 | 104 | 368 | 14.49 | 172 | 6.77 | 210 | 8.27 | 219 | 8.62 | 72.6 | 33 | N |
| GC 180H | 12 | 180 | 150 | 143 | 131 | 522 | 20.55 | 240 | 9.45 | 215 | 8.46 | 221 | 8.70 | 103.4 | 45 | N |
| GC 235H | 12 | 235 | 200 | 190 | 174 | 522 | 20.55 | 240 | 9.45 | 215 | 8.46 | 221 | 8.70 | 126.4 | 58 | N |
| GC 250H | 12 | 250 | 220 | 210 | 191 | 522 | 20.55 | 240 | 9.45 | 215 | 8.46 | 221 | 8.70 | 131.2 | 60 | N |