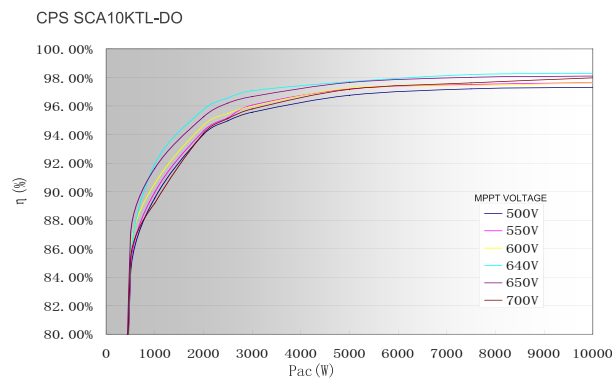


8/10/12kW Three Phase Grid-tied PV Inverters

Chint Power has been long dedicated to the research and development of PV inverters with a growing reputation from the domestic to the international markets. As a result of our continuous improvement efforts, Chint Power introduces the new range of three-phase units: 8kW, 10kW, 12kW PV inverters!

This inverter series is suitable for a variety of applications, from large residential to commercial rooftops and utility scale PV systems. With the features of concise design and high reliability of the former generation, these inverters offer an improved performance on the conversion efficiency of reaching up to 98.2%. The internal DC switch further improves the safety and reliability of the products.

Efficiency Curve



High Efficiency

- Max. efficiency of 98.2%
- Euro efficiency of 97.6%
- ≥99.9% MPPT efficiency
- Space vector PWM

High Reliability

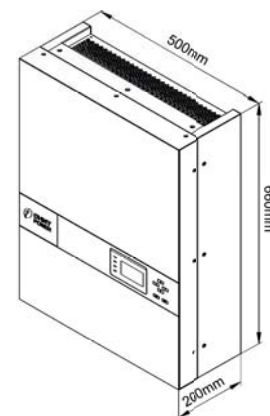
- Integrated DC switch
- GFCI embedded
- Comprehensive protection functions
- Design for reliability
- 5 years standard warranty; optional additional 15 years



CPS SCA8KTL-DO
 CPS SCA10KTL-DO
 CPS SCA12KTL-DO

Broad Adaptability

- Wide MPPT range
- 2 MPP Trackers
- Multiple communication interface
- IP65 protection degree, outdoor application
- Multi-language
- 3rd Party Monitoring 



Dimensions

| Model Name | CPS SCA8KTL-DO | CPS SCA10KTL-DO | CPS SCA12KTL-DO |
|--|--|-----------------|-----------------|
| DC Input | | | |
| Nominal DC Input Power | 8.2kW | 10.3kW | 12.3kW |
| Max. DC Input Power | 8.8kW | 11kW | 13.2kW |
| Max. DC Input Voltage | 1000Vdc | | |
| Operating DC Input Voltage Range | 250-860Vdc | | |
| Start-up DC Input Voltage / Power | 320V/150W | | |
| Nominal DC Input Voltage | 600V | | |
| MPPT Voltage Range | 320-800Vdc | 320-800Vdc | 380-800Vdc |
| Number of MPP Trackers | 2 | | |
| Number of DC Inputs (strings) | 2x2 | | |
| Max. Input Current | 17A/MPPT | | |
| Max. Input Current per string | 17A | | |
| DC Disconnection Type | Embedded switch | | |
| PV Array Configuration | Floating | | |
| AC Output | | | |
| Rated AC Output Power | 8kW | 10kW | 12kW |
| Max. AC Output Power | 8kW | 10kW | 12kW |
| Rated Output Voltage | 400Vac | | |
| Output Frequency Range | - | | |
| Output Voltage Range | 320-460Vac* | | |
| Grid Connection Type | 3Φ/N/PE | | |
| Max AC Output Current | 16A | 16A | 19.2A |
| Rated Output Frequency | 50Hz/60Hz | | |
| Power Factor | >0.99 (±0.9 adjustable) | | |
| Current THD | <3% | | |
| AC Disconnection Type | - | | |
| System | | | |
| Topology | Transformerless | | |
| Max. Efficiency | 98.1% | | |
| Euro Efficiency | 97.5% | 97.7% | 97.7% |
| Stand-by / Night Consumption | <7W / <0.3W | | |
| Environment | | | |
| Protection Degree | IP65 | | |
| Cooling | Variable speed cooling fans | | |
| Operating Temperature Range | -25°C to +60°C | | -25°C to +60°C |
| Operating Humidity | 0-95%, non-condensing | | |
| Operating Altitude | 4000m | | |
| Display and Communication | | | |
| Display | LCD+LED | | |
| Communication | Standard: RS485, USB; Option: Ethernet, Zigbee | | |
| Mechanical Data | | | |
| Dimensions (WxHxD) (mm) | 500x660x200 | | |
| Weight (kg) | 38 | 38 | 40 |
| Safety | | | |
| Safety and EMC Standards (In progress) | LVD: 2006/95/EC EMC: 2004/108/EC, IEC/EN 62109-1: 2010, IEC/EN 62109-2: 2011; IEC/EN61000-6-2: 2005, IEC/EN61000-6-3: 2007 | | |
| Grid Standards (In progress) | VDE AR-N-4105/VDE 0126-1-1/A1; RD1699;CEI-021; G83/1/1; G59/2 | | |

* The Output Voltage Range value may change according to different grid codes.

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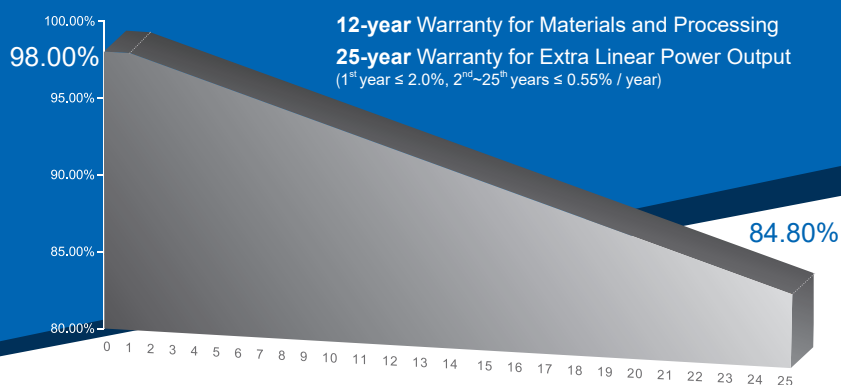
AstroSemi™

Incredible Power for Small Body

445W~455W

Monocrystalline PV Module

CHSM72M-HC Series (166)



KEY FEATURES

- OUTPUT POSITIVE TOLERANCE**
 Guaranteed 0~+5W positive tolerance ensures power output reliability.
- INNOVATIONAL HALF-CELL TECHNOLOGY**
 Improves the module output, decreases the risk of micro-crack, enhances the module reliability.
- INNOVATIVE PERC CELL TECHNOLOGY**
 Excellent cell efficiency and output.
- REDUCE SHADOW LOSS**
 Effectively reduces the effect of shadow on the module surface.
- REDUCE INTERNAL MISMATCH LOSS**
 Reduces mismatch loss and improves output.
- PASSED HAIL TEST**
 Certified to hail resistance: ice ball size (d=25mm) and ice ball velocity (v=23m/s).
- Anti PID RESISTANCE**
 Excellent PID resistance at 96 hours (@85°C /85%) test, and also can be improved to meet higher standards for the particularly harsh environment.

COMPREHENSIVE CERTIFICATES



First solar company which passed the TUV Nord IEC/TS 62941 certification audit.

For Global Market



ASTRONERGY
A CHNT COMPANY

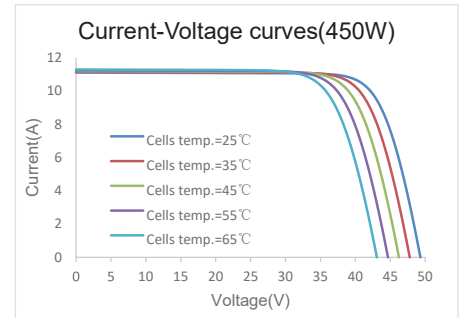
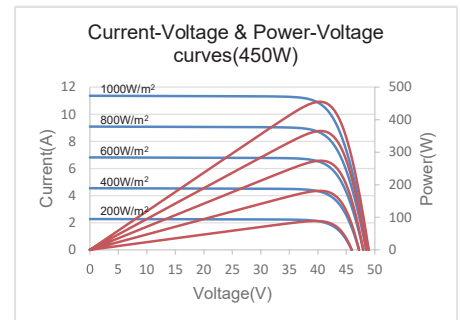
ELECTRICAL SPECIFICATIONS

| | | | |
|---|---------------------|----------|----------|
| STC rated output (P_{mpp})* | 445 Wp | 450 Wp | 455 Wp |
| Rated voltage (V_{mpp}) at STC | 41.05 V | 41.32 V | 41.51 V |
| Rated current (I_{mpp}) at STC | 10.84 A | 10.89 A | 10.96 A |
| Open circuit voltage (V_{oc}) at STC | 48.80 V | 49.05 V | 49.35 V |
| Short circuit current (I_{sc}) at STC | 11.30 A | 11.37 A | 11.44 A |
| Module efficiency | 20.1% | 20.4% | 20.6% |
| Rated output (P_{mpp}) at NMOT | 330.8 Wp | 334.5 Wp | 338.2 Wp |
| Rated voltage (V_{mpp}) at NMOT | 38.12 V | 38.37 V | 38.55 V |
| Rated current (I_{mpp}) at NMOT | 8.68 A | 8.72 A | 8.78 A |
| Open circuit voltage (V_{oc}) at NMOT | 45.70 V | 45.94 V | 46.22 V |
| Short circuit current (I_{sc}) at NMOT | 9.10 A | 9.16 A | 9.22 A |
| Temperature coefficient (P_{mpp}) | - 0.35%/°C | | |
| Temperature coefficient (I_{sc}) | +0.04%/°C | | |
| Temperature coefficient (V_{oc}) | - 0.28%/°C | | |
| Nominal module operating temperature (NMOT) | 44±2°C | | |
| Maximum system voltage (IEC/UL) | 1500V _{DC} | | |
| Number of diodes | 3 | | |
| Junction box IP rating | IP 68 | | |
| Maximum series fuse rating | 20 A | | |

STC: Irradiance 1000W/m², Cell Temperature 25°C, AM=1.5

NMOT: Irradiance 800W/m², Ambient Temperature 20°C, AM=1.5, Wind Speed 1m/s

CURVE



MECHANICAL SPECIFICATIONS

| | |
|--------------------------------|--|
| Outer dimensions (L x W x H) | 2108 x 1048 x 35 mm |
| Frame technology | Aluminum, silver anodized |
| Module composition | Glass / EVA / Backsheet (white) |
| Front glass thickness | 3.2 mm |
| Cable length (IEC/UL) | Portrait: 350 mm Landscape: 1300 mm |
| Cable diameter (IEC/UL) | 4 mm ² / 12 AWG |
| ① Maximum mechanical test load | 5400 Pa (front) / 2400 Pa (back) |
| Fire performance (IEC/UL) | Class C (IEC) or Type 1 (UL) |
| Connector type (IEC/UL) | MC4 compatible |

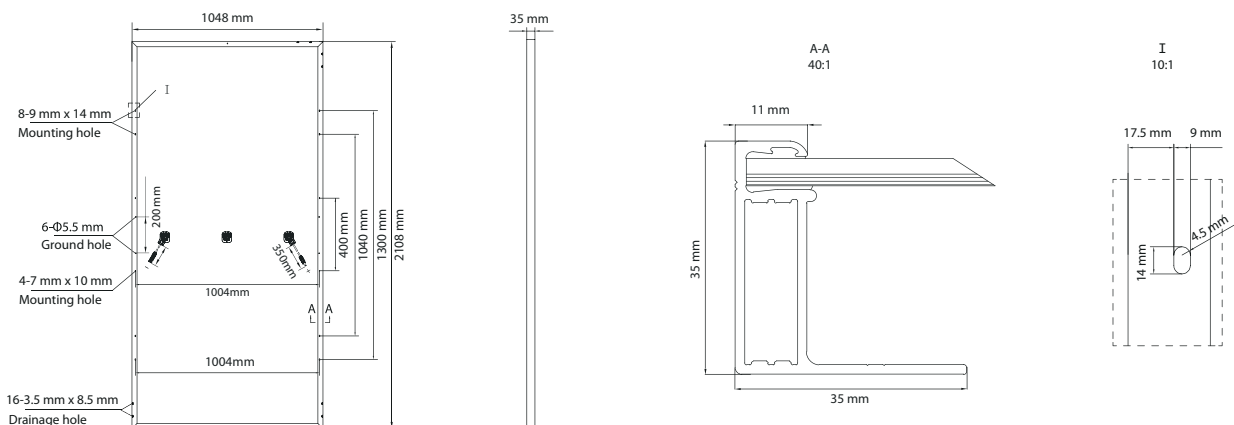
① Refer to Astronergy crystalline installation manual or contact technical department.
Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.

PACKING SPECIFICATIONS

| | |
|--|--------------|
| ① Weight (module only) | 24.0 kg |
| ② Packing unit | 31 pcs / box |
| Weight of packing unit (for 40'HQ container) | 791 kg |
| Number of modules per 40'HQ container | 682 pcs |

① Tolerance +/- 1.0kg
② Subject to sales contract

MODULE DIMENSION DETAILS

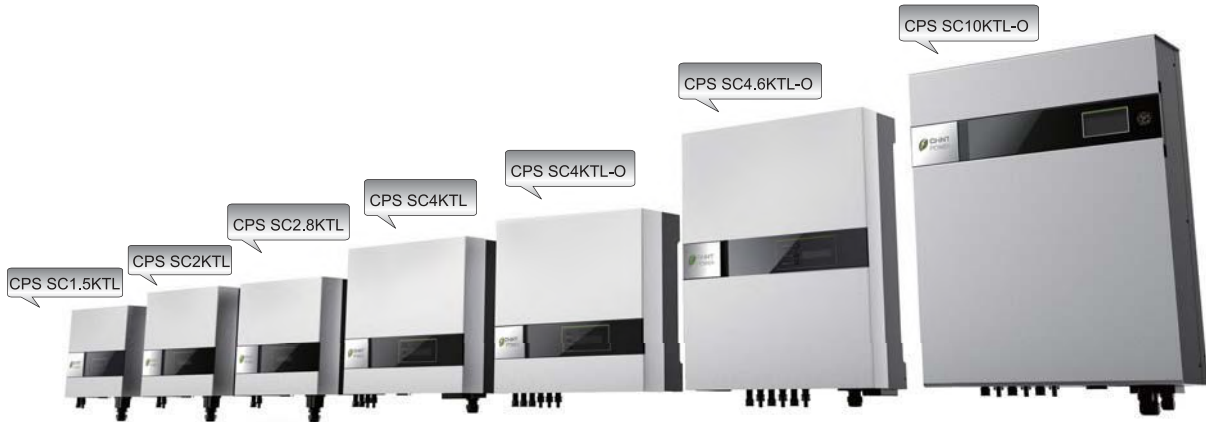


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<http://energy.chint.com>

Astronergy 05-2020

1.5-10kW Grid-tied PV Inverters



CPS SC series grid-tied PV inverters can be flexibly utilized in different types of residential rooftops, commercial rooftops and some utility systems. Efficiency levels up to 96.5% grant customers high returns of power production.

Convection cooling design (except SC10KTL-O), comprehensive protection functions and advanced thermal design provide the whole system high reliability. The friendly interface and plug & play features make the installation and maintenance easy and fast.


Robust

- Convection, no fan required (except SC10TKL-O)
- Internal GFCI
- Comprehensive protection functions
- 5 years standard warranty; optional additional 15 years

Flexible

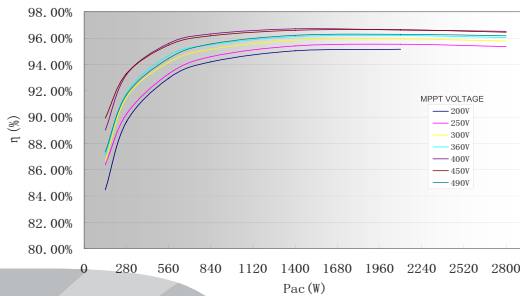
- Transformerless design
- Plug & Play
- 1 to 3 MPP Trackers
- Easy operation
- Wide MPPT range

Smart

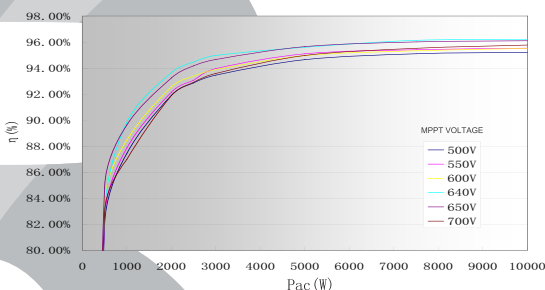
- Local / Remote monitoring access
- Integrated datalogger (SC10KTL-O)
- Multi-language
- 3rd Party Monitoring 

Efficiency Curve

CPS SC2.8KTL



CPS SC10KTL-O



| Model Name | CPS SC1.5KTL | CPS SC2KTL | CPS SC2.8KTL | CPS SC4KTL | CPS SC4KTL-O | CPS SC4.6KTL-O | CPS SC10KTL-O |
|----------------------------------|---|-------------|--------------|-------------|--------------------|----------------|---|
| DC Input | | | | | | | |
| Nominal DC Input Power | 1.5kW | 2kW | 2.8kW | 4kW | 4kW | 4.6kW | 10kW |
| Max. DC Input Power | 1.74kW | 2.29kW | 3.12kW | 4.58kW | 4.58kW | 3.95kW/MPPT | 5.5kW/MPPT |
| Max. DC Input Voltage | 450Vdc | 500Vdc | 500Vdc | 500Vdc | 500Vdc | 750Vdc | 800Vdc |
| Operating DC Input Voltage Range | 100-450Vdc | 100-500Vdc | 100-500Vdc | 100-500Vdc | 100-500Vdc | 100-750Vdc | 245-720Vdc |
| Start-up DC Input Voltage | 120Vdc | | | | | | 260Vdc |
| Nominal DC Input Voltage | 360Vdc | 400Vdc | 400Vdc | 400Vdc | 400Vdc | 600Vdc | 640Vdc |
| MPPT Voltage Range | 200-405Vdc | 250-450Vdc | 250-450Vdc | 250-450Vdc | 250-450Vdc | 450-750Vdc | 320-720Vdc |
| Number of MPP Trackers | 1 | 1 | 1 | 1 | 1 | 3 | 3 |
| Number of DC Inputs (strings) | 1 | 1 | 1 | 2 | 3 | 1x3 | 1x3 |
| Max. Input Current | 8.9A | 10A | 13A | 20A | 20A | 8.5A/MPPT | 13A/MPPT |
| Max. Input Current per String | 8.9A | 10A | 13A | 20A | 20A | 8.5Ax3 | 13Ax3 |
| PV Array Configuration | Floating | | | | | | |
| AC Output | | | | | | | |
| Rated AC Output Power | 1.5kW | 2kW | 2.8kW | 4kW | 4kW | 4.6kW | 10kW |
| Max. AC Output Power | 1.65kW | 2.2kW | 3kW | 4.4kW | 4.4kW | 5kW | 11kW |
| Rated Output Voltage | 230Vac | | | | | | 400Vac |
| Output Voltage Range | 187-262Vac* | | | | | | 320-460Vac* |
| Grid Connection Type | 1 Φ | | | | | | 3 Φ |
| Max AC Output Current | 7.9A | 10.5A | 14.3A | 20A | 20A | 25.5A | 17.5A |
| Rated Output Frequency | 50Hz | | | | | | |
| Output Frequency Range | 47.5-50.2Hz* | | | | | | |
| Power Factor | >0.99 | | | | | | |
| Current THD | <3% | | | | | | |
| System | | | | | | | |
| Topology | Transformerless | | | | | | |
| Max. Efficiency | 95% | 96% | 96% | 96% | 96% | 96% | 96.5% |
| Euro Efficiency | 94% | 95% | 95% | 95% | 95% | 94% | 95% |
| Stand-by / Night Consumption | <7W / <0.1W | | | | | | |
| DC/AC surge suppressor | Type II | | | | | | |
| Environment | | | | | | | |
| Protection Degree | IP43 | IP43 | IP43 | IP43 | IP65 | IP65 | Classis: IP65 Fan: IP55 |
| Cooling | Convection | | | | | | Force air cooling, variable fan speed |
| Operating Temperature Range | -20°C to +55°C | | | | | | |
| Operating Humidity | 0-95%, non condensing | | | | 0-100%, condensing | | 0-95%, non condensing |
| Operating Altitude | 2000m without derating | | | | | | |
| Display and Communication | | | | | | | |
| Display | LCD+LED | | | | | | Graphic Display |
| Communication | Standard: RS232 / Optional: RS485 | | | | | | |
| Mechanical Data | | | | | | | |
| Dimensions (WxHxD) (mm) | 320x271x126 | 355x304x125 | 355x304x135 | 429x367x126 | 440x390x137 | 436x535x133 | 453x583x155 |
| Weight (kg) | 9.7 | 12.7 | 13.4 | 17.7 | 19.7 | 27.95 | 37 |
| Safety | | | | | | | |
| Safety and EMC Standards | DIN EN 50178 (4.98) (VDE0160) (IEC62103) EN 61000-6-(2005) / EN61000-6-3 (2007) LVD: 2006/95/EC EMC: 2004/108/EC | | | | | | |
| Grid Standards | VDE0126-1-1, ENEL, DK5940, G83, G59 | | | | | | |

* The Output Frequency Range value may change according to different grid codes.

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