

# 36kW, 1000Vdc String Inverters for North America

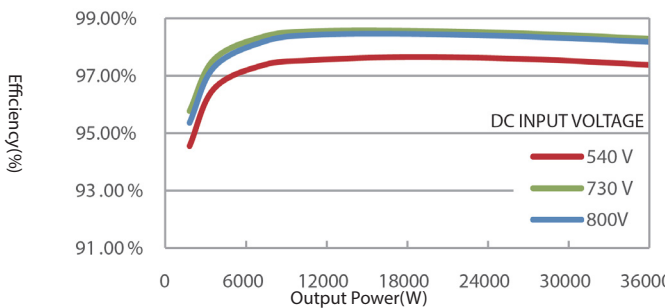
The 36kW medium power CPS three phase inverter has been designed for small commercial rooftop, ground mount, and carport applications. Featuring dual MPPTs, 98.5% peak efficiency, and a wide operating window, the CPS 36kW performs well across a variety of applications. This inverter includes; a separable wiring box with generous wiring space to reduce installation time, the ability to mount the inverter 15-90 degrees from horizontal allowing greater design options, and integrated AC and DC disconnects as standard features. The CPS FlexOM Gateway enables monitoring and controls necessary in today's PV systems.



CPS SCA36KTL-DO/US-480

## Efficiency Curve

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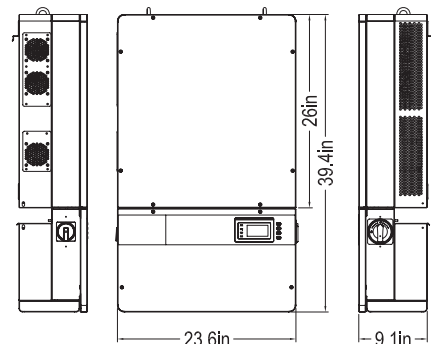
## High Efficiency

- Maximum efficiency of 98.5%, CEC efficiency of 98%
- 3-level technology and enhanced control mechanism to achieve high efficiency over wide load range
- 2 MPPTs to achieve higher system efficiency
- Transformerless design

## High Reliability

- Standard warranty: 10 years, extension up to 20 years
- Advanced thermal design, with variable speed fans
- Ground-fault detection and interruption circuit
- AFCI Integrated (per UL1699B)
- UL1741 SA Certified to CA Rule 21

## Dimensions



## Broad Adaptability

- NEMA 4X (IP65) rated for outdoor applications
- Utility interactive controls: Active power derating, reactive power control
- Separable wiring box design for fast service
- Integrated DC & AC disconnect switches
- Wide MPPT range for flexible string sizing
- 1000V Max. DC input voltage for flexible configuration
- 15 - 90 degree from horizontal installation angle
- AC output terminal compatible with AL/CU wire



Model Name	CPS SCA36KTL-DO/US-480
<b>DC Input</b>	
Max. PV Power	54kW (27kW per MPPT)
Max. DC Input Voltage	1000Vdc
Operating DC Input Voltage Range	240-950Vdc
Start-up DC Input Voltage / Power	320V / 80W
Number of MPP Trackers	2
MPPT Voltage Range	540-800Vdc
Max. PV Short-Circuit Current (Isc x 1.25)	125A (62.5A per MPPT)
Number of DC Inputs	10 inputs, 5 per MPPT
DC Disconnection Type	Load rated DC switch
DC Surge Protection	Type II MOV, 2000V <sub>C</sub> , 10kA I <sub>TM</sub> (8/20μS)
<b>AC Output</b>	
Rated AC Output Power	36kW
Max. AC Apparent Power	36kVA
Rated Output Voltage	480Vac
Output Voltage Range <sup>1</sup>	422 - 528Vac
Grid Connection Type	3Φ / PE / N (Neutral optional)
Max. AC Output Current @480Vac	43.5A
Rated Output Frequency	60Hz
Output Frequency Range <sup>1</sup>	57 - 63Hz
Power Factor	>0.99 (±0.8 adjustable)
Current THD @ Rated Load	<3%
Max. Fault Current Contribution (1 Cycle RMS)	73.2A (1.68 PU)
AC Disconnection Type	Load rated AC switch
AC Surge Protection	Type II MOV, 1500V <sub>C</sub> , 10kA I <sub>TM</sub> (8/20μS)
<b>System and Performance</b>	
Topology	Transformerless
Max. Efficiency	98.5%
CEC Efficiency	98.0%
Stand-by / Night Consumption	<1W
<b>Environment</b>	
Enclosure Protection Degree	NEMA Type 4X
Cooling Method	Variable speed cooling fans
Operating Temperature Range	-22°F to +140°F / - 30°C to +60°C (derating from +113°F / +45°C)
Non-Operating Temperature Range <sup>2</sup>	No low temp minimum to +158°F / +70°C maximum
Operating Humidity	0 to 100%
Operating Altitude	13,123.4ft / 4000m (derating from 6561.7ft / 2000m)
Audible Noise	<50dBA @ 1m and 25°C
<b>Display and Communication</b>	
User Interface and Display	LCD+LED
Inverter Monitoring	Modbus RS485
Site Level Monitoring	CPS FlexOM Gateway (1 per 32 inverters)
Modbus Data Mapping	CPS
Remote Diagnostics / FW Upgrade Functions	Standard / (with FlexOM Gateway)
<b>Mechanical</b>	
Dimensions (HxWxD)	Inverter: 26 x 23.6 x 9.1in. (660 x 600 x 230mm); Wire-box 13.4 x 23.6 x 9.1in. (340 x 600 x 230mm)
Weight	Inverter: 121lbs/55kg; Wire-box: 24lbs/11kg
Mounting / Installation Angle <sup>3</sup>	15 to 90 degrees from horizontal (vertical or angled) <sup>3</sup>
AC Termination	Screw Clamp Terminal Block (Wire range: #14 - 1/0AWG CU/AL)
DC Termination	Screw Clamp Fuse Holder (Wire range: #14 - #6AWG CU)
Fused String Inputs (5 per MPPT) <sup>4</sup>	20A fuses provided (Fuse values up to 30A acceptable) <sup>4</sup>
<b>Safety</b>	
Certifications and Standards	UL1741SA-2016, UL1699B, CSA-C22.2 NO.107.1-01, IEEE1547; FCC PART15
Selectable Grid Standard	IEEE 1547-2003, CA Rule 21, ISO-NE
Smart-Grid Features	Voltage-RideThru, Frequency-RideThru, Soft-Start, Volt-Var, Frequency-Watt, Volt-Watt
<b>Warranty</b>	
Standard	10 years
Extended Terms	15 and 20 years

1) The "Output Voltage Range" and "Output Frequency Range" may differ according to the specific grid standard.

2) See user manual for further requirements regarding non-operating conditions.

3) Shade Cover accessory required for installation angles of 75 degrees or less.

4) Fuse values above 20A have additional spacing requirements. See user manual for further details.