

36 kW V2, 1000 Vdc String Inverters for North America

The new, V2 version of the 36 kW (36 kVA) CPS three-phase string inverter is designed for rooftop and carport applications. The units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiency at 98.8% peak and 97.4% CEC, wide operating voltages, broad temperature ranges and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications.

CPS 36KTL V2 ships with either the Standard wire-box or the Rapid Shutdown wire-box, each fully integrated and separable with touch-safe fusing, monitoring, and AC and DC disconnect switches. The integrated PLC transmitter in the Rapid Shutdown Wire-box enables PVRSS certified module-level rapid shutdown when used with APS RSD-S-PLC/RSD-D products. The CPS FlexOM Gateway enables monitoring, controls and remote product upgrades.



CPS SCA36KTL-DO/US-480

Key Features

- NEC 2017/2020 PVRSS certified for rapid shutdown
- NEC-compliant & UL listed arc-fault circuit protection
- 15-90° mounting orientation for low-profile roof installs
- Optional FlexOM Gateway enables remote firmware upgrades
- Integrated AC and DC disconnect switches
- Copper- and Aluminum-compatible AC connections
- 3 MPPTs with 5 inputs each for maximum flexibility
- NEMA Type 4X outdoor rated enclosure
- UL 1741-SA certified to CA Rule 21, including SA8-SA18 VW
- UL 1741-SB and IEEE 1547-2018 certified
- Separable wire-box design for fast service
- Standard 10-year warranty with extensions up to 20 years



36/50/60KTL Standard Wire-box



36/50/60KTL Rapid Shutdown Wire-box



Model Name	CPS SCA36KTL-DO/US-480
DC Input	
Max. PV power	61.2 kW (22.4 kW per MPPT)
Max. DC input voltage	1000 Vdc
Operating DC input voltage range	200-950 Vdc
Start-up DC input voltage / power	330 V / 80 W
Number of MPP trackers	3
MPPT voltage range @ PF>0.99	400-850 Vdc
Max. PV short-circuit current (Isc x 1.25)	204 A (68 A per MPPT)
Number of DC inputs	15 inputs, 5 per MPPT
DC disconnection type	Load-rated DC switch
DC surge protection	Type II MOV
AC Output	
Rated AC output power @ PF>0.99	36 kW
Max. AC apparent power (selectable)	36 kVA
Rated output voltage	480 Vac
Output voltage range ¹	422 - 528 Vac
Grid connection type	3Φ / PE / N (neutral optional)
Max. AC output current @ 480 Vac	43.5 A
Rated output frequency	60 Hz
Output frequency range ¹	57 - 63 Hz
Power factor	>0.99 (±0.8 adjustable)
Current THD @ rated load	<3%
Max. fault current contribution (1 cycle RMS)	73.2 A (1.68 PU)
Max. OCPD rating	125 A
AC disconnection type	Load-break rated AC switch
AC surge protection	Type II MOV
System and Performance	
Topology	Transformerless
Max. efficiency	98.8%
CEC efficiency	97.4%
Stand-by / night consumption	<3 W
Environment	
Enclosure protection degree	NEMA Type 4X
Cooling method	Variable speed cooling fans
Operating temperature range ²	-22°F to +140°F / - 30°C to +60°C
Non-operating temperature range ³	No low temp minimum to +158°F / +70°C maximum
Operating humidity	0 to 100%
Operating altitude	13123 ft / 4000 m (derating from 9843 ft / 3000 m)
Audible noise	<60 dBA @ 1 m and 25°C
Display and Communication	
User interface and display	LCD + LED
Inverter monitoring	SunSpec, Modbus RS485
Site-level monitoring	CPS FlexOM Gateway (1 per 32 inverters)
Modbus data mapping	CPS
Remote diagnostics / firmware upgrade functions	Standard / (with FlexOM Gateway)
Mechanical	
Dimensions (H x W x D)	39.4 x 23.6 x 10.24 in (1000 x 600 x 260 mm)
Weight	Inverter: 123.5 lbs (56 kg); Wire-box: 33 lbs (15 kg)
Mounting / installation angle ⁴	15 to 90 degrees from horizontal (vertical or angled)
AC termination	M8 stud type terminal block (wire range: #6 - 3/0 AWG CU/AL; lugs not supplied)
DC termination ⁵	Screw clamp, neg. busbar (RSD version ⁵) wire range: #14 - #6 AWG CU
Fused string inputs (5 per MPPT) ⁶	20 A fuses provided (fuse values up to 30 A acceptable)
Safety	
Certifications and standards	UL 1741-SA/SB Ed. 3, UL 1699B, UL 1998, CSA-C22.2 NO.107.1-01, IEEE 1547-2018, FCC PART15
Selectable grid standard	IEEE 1547a-2014, IEEE 1547-2018 ⁷ , CA Rule 21, ISO-NE, HECO
Smart-grid features	Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-VAR, Freq-Watt, Volt-Watt
Warranty	
Standard	10 years
Extended terms	15 and 20 years

1) The output voltage and frequency ranges may differ according to the specific grid standard.

2) Active power derating begins at 45°C when PF=1 and MPPT≥Vmin, and at 50°C when PF=1 and MPPT≥700 Vdc.

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

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

5) RSD wire-box only includes fuses and fuse holders on the positive polarity, compliant with NEC 2017/2020 Section 690.9(C).

6) Fuse values above 20 A have additional spacing requirements or require the use of the Y-Comb Terminal Block. See the user manual for further details.

7) Firmware version 18.0 or later required.