

100kW, 1500Vdc/480Vac String Inverters for North America



CPS SCH100KTL-DO/US-480

The 100kW high power CPS three phase string inverters are designed for ground mount applications with 480Vac service voltage. The units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiencies, wide operating voltages, broad temperature ranges and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 100kW products ship with the Standard or Centralized Wire-box, each fully integrated and separable with AC and DC disconnect switches. The Standard Wire-box includes touch safe fusing for up to 20 strings. The CPS FlexOM solution enables communication, controls and remote product upgrades.

Key Features

- NFPA 70, NEC 2017 compliant
- Touch safe DC Fuse holders adds convenience and safety
- CPS FlexOM Gateway enables remote FW upgrades
- Integrated AC & DC disconnect switches
- 1 MPPT with 20 fused inputs for maximum flexibility
- Copper and Aluminum compatible AC connections
- NEMA Type 4X outdoor rated, tough tested enclosure
- Advanced Smart-Grid features
- Full power capacity up to 45°C
- Generous DC/AC Inverter Load Ratios
- Separable wire-box design for fast service
- Standard 5 year warranty with extensions to 20 years



100KTL Standard Wire-box



100KTL Centralized Wire-box

Model Name	CPS SCH100KTL-DO/US-480
DC Input	
Max. DC Input Voltage	1500Vdc
Operating DC Input Voltage Range	700-1450Vdc
Start-up DC Input Voltage / Power	100W
Number of MPP Trackers	1
MPPT Voltage Range @ PF>0.99 ¹	870-1300Vdc
Max. PV Input Current (Isc x1.25)	275A
Number of DC Inputs	20 PV source circuits, pos. & neg. fused (Standard Wire-box) 1 PV output circuit, 1-2 terminations per pole, non-fused (Centralized Wire-box)
DC Disconnection Type	Load-rated DC switch
DC Surge Protection	Type II MOV (with indicator/remote signaling), up=2.5kV, In=20kA (8/20uS)
AC Output	
Rated AC Output Power @ PF>0.99	100kW
Max. AC Apparent Power ²	100kVA (105.3kVA @ PF>0.95)
Rated Output Voltage	480Vac
Output Voltage Range ³	423-528Vac
Grid Connection Type ⁴	3-Phase / PE / N (Neutral Optional)
Max. AC Output Current @480Vac	120.3A/126.7A
Rated Output Frequency	60Hz
Output Frequency Range ³	57 - 63Hz
Power Factor	>0.99 (±0.8 adjustable)
Current THD @ Rated Load	<3%
Max. Fault Current Contribution (1 Cycle RMS)	41.47A
Max. OCPD Rating	150A
AC Disconnection Type	Load-rated AC switch
AC Surge Protection	Type II MOV (with indicator/remote signaling), up=2.5kV, In=20kA (8/20uS)
System and Performance	
Topology	Transformerless
Max. Efficiency	98.7%
CEC Efficiency	98.0%
Stand-by / Night Consumption	<4W
Environment	
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 ⁵	No low temp minimum to +158°F / +70°C maximum
Operating Humidity	0 to 100%
Operating Altitude	8202ft / 2500m (no derating)
Audible Noise	<65dBA @ 1m and 25°C
Display and Communication	
User Interface and Display	LED indicators, WiFi + APP
Inverter Monitoring	Modbus RS485
Site Level Monitoring	CPS FlexOM (1 per 32 inverters)
Modbus Data Mapping	SunSpec / CPS
Remote Diagnostics / FW Upgrade Functions	Standard / (with FlexOM Gateway)
Mechanical	
Dimensions (WxHxD)	45.28x24.25x9.84in (1150x616x250mm) with Standard Wire-box 39.37x24.25x9.84in (1000x616x250mm) with Centralized Wire-box
Weight	Inverter: 121lbs / 55kg; Wire-box: 55lbs / 25kg (Standard Wire-box) 33lbs / 15kg (Centralized Wire-box)
Mounting / Installation Angle	15 - 90 degrees from horizontal (vertical or angled)
AC Termination	M10 Stud Type Terminal [3Ø] (Wire range: 1/0AWG – 500kcmil CU/AL, Lugs not supplied) Screw Clamp Terminal Block [N] (#12 – 1/0AWG CU/AL)
DC Termination	Screw Clamp Fuse Holder (Wire range: #12 - #6AWG CU) - Standard Wire-box Busbar (Wire range: #1AWG - 250kcmil CU/AL, Lugs not supplied) - Centralized Wire-box
Fused String Inputs	20A fuses provided (Fuse values of 15A or 20A acceptable)
Safety	
Certifications and Standards	UL1741-SA-2016, CSA-22.2 NO.107.1-01, IEEE1547a-2014, FCC PART15
Selectable Grid Standard	IEEE 1547a-2014, CA Rule 21, ISO-NE, HECO Rule 14H
Smart-Grid Features	Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-Var, Freq-Watt, Volt-Watt
Warranty	
Standard	5 Years
Extended Terms	10, 15, and 20 Years

1) See user manual for further information regarding MPPT Voltage Range when operating at non-unity PF

2) "Max. AC Apparent Power" rating valid within MPPT voltage range and temperature range of -30°C to +40°C (-22°F to +104°F) for 100kW @ PF >0.95

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

4) Wye neutral-grounded, Delta may not be corner-grounded.

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