

100/125kW, 1500Vdc String Inverters for North America



CPS SCH100/125KTL-DO/US-600

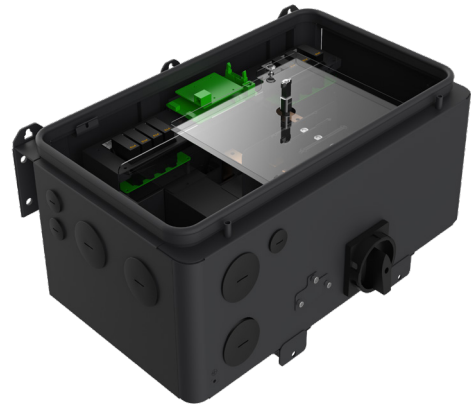
The 100 & 125kW high power CPS three-phase string inverters are designed for ground mount applications. The units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiency at 99.1% peak and 98.5% CEC, wide operating voltages, broad temperature ranges and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 100/125kW 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 Gateway enables communication, controls and remote product upgrades.

Key Features

- NFPA 70 and NEC compliant
- Touch safe DC Fuse holders adds convenience and safety
- CPS FlexOM Gateway enables remote firmware 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 enclosure
- Advanced Smart-Grid features (CA Rule 21 certified)
- kVA headroom yields 100kW @ 0.9PF and 125kW @ 0.95PF
- Generous 1.87 (100kW) and 1.5 (125kW) DC/AC inverter load ratios
- Separable wire-box design for fast service
- Standard 5-year warranty with extensions to 20 years



100/125KTL Standard Wire-box



100/125KTL Centralized Wire-box



Model Name	CPS SCH100KTL-DO/US-600	CPS SCH125KTL-DO/US-600
DC Input		
Max. PV power	187.5kW	
Max. DC input voltage	1500V	
Operating DC input voltage range	860-1450Vdc	
Start-up DC input voltage / power	900V / 250W	
Number of MPP trackers	1	
MPPT voltage range ¹	870-1300Vdc	
Max. PV input current (Isc x 1.25)	275A	
Number of DC inputs	20 PV source circuits, pos. & neg. fused with Standard Wire-box 1 input circuit, 1-2 terminations per pole, non-fused with 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	100kW	125kW
Max. AC output power ²	100kVA (111kVA @ PF>0.9)	125kVA (132kVA @ PF>0.95)
Rated output voltage	600Vac	
Output voltage range ³	528-660Vac	
Grid connection type ⁴	3Φ / PE / N (neutral optional)	
Max. AC output current @ 600Vac	96.2 / 106.8A	120.3 / 127.0A
Rated output frequency	60Hz	
Output frequency range ³	57-63Hz	
Power factor	>0.99 (±0.8 adjustable)	>0.99 (±0.8 adjustable)
Current THD	<3%	
Max. fault current contribution (1-cycle RMS)	41.47A	
Max. OCPD rating	200A	
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		
Topology	Transformerless	
Max. efficiency	99.1%	
CEC efficiency	98.5%	
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 +108°F / +42°C)	
Non-operating temperature range ⁵	-40°F to +158°F / -40°C to +70°C maximum	
Operating humidity	0-100%	
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 Gateway (1 per 32 inverters)	
Modbus data mapping	SunSpec / CPS	
Remote diagnostics / firmware upgrade functions	Standard / (with FlexOM Gateway)	
Mechanical		
Dimensions (W x H x D)	45.28 x 24.25 x 9.84in (1150 x 616 x 250mm) with Standard Wire-box 39.37 x 24.25 x 9.84in (1000 x 616 x 250mm) with Centralized Wire-box	
Weight	Inverter: 121lbs (55kg); Wire-box: 55lbs (25kg) with Standard Wire-box 33lbs (15kg) with Centralized Wire-box	
Mounting / installation angle	15 - 90 degrees from horizontal (vertical or angled)	
AC termination	M10 stud type terminal [3Φ] (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) with Standard Wire-box Busbar, M10 bolts (wire range: #1AWG - 500kcmil CU/AL [1 termination per pole], #1AWG - 300kcmil CU/AL [2 terminations per pole], lugs not supplied) with Centralized Wire-box	
Fused string inputs	20A fuses provided (fuse values up to 30A acceptable)	
Safety		
Certifications and standards	UL 1741-SA/SB Ed. 3, 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	
Smart-grid features	Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-VAR, Freq-Watt, Volt-Watt	
Warranty		
Standard ⁶	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>0.9 and 125kW 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.

6) 5-year warranty effective for units purchased after October 1st, 2019.

7) Firmware version 12.0 or later required.