

125kW, 1500Vdc String Inverter for North America



CPS SCH125KTL-AIO/US-600

The 125kW high power CPS three phase string inverter is designed for ground mount applications. The unit is a high performance, advanced and reliable inverter 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 125kW product ships with a non-separable Standard Wire-box, fully integrated with a DC disconnect switch. The Standard Wire-box includes touch safe positive polarity fusing for up to 20 strings. The CPS Flex Gateway enables communication, controls and remote product upgrades.

Key Features

- NFPA 70, 2017 compliant
- Touch safe DC Fuse holders adds convenience and safety
- CPS Flex Gateway enables remote FW upgrades
- Integrated DC disconnect switch
- 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 (CA Rule 21 certified)
- kVA Headroom yields 125kW @ 0.95PF
- Generous 1.5 DC/AC Inverter Load Ratio
- Selectable Max AC Apparent Power of 125/132kVA
- Standard 5 year warranty with extensions to 20 years



125KTL-AIO/US-600 Standard Wire-box



Model Name	CPS SCH125KTL-AIO/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 x1.25)	275A
Number of DC Inputs	20 PV source circuits, pos. fused
DC Disconnection Type	Load-break rated DC switch
DC Surge Protection	Type II MOV (with indicator/remote signaling), Up=2.5kV, In=10kA (8/20uS)
AC Output	
Rated AC Output Power	125kW
Max. AC Output Power ²	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	127.2A
Rated Output Frequency	60Hz
Output Frequency Range ³	57-63Hz
Power Factor	>0.99 (±0.8 adjustable)
Current THD	<3%
Max. Fault Current Contribution (1-cycle RMS)	41.47A
Max. OCPD Rating	200A
AC Surge Protection	Type II MOV (with indicator/remote signaling), Up=2.5kV, In=10kA (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 +113°F / +45°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 Flex Gateway (1 per 32 inverters)
Modbus Data Mapping	SunSpec/CPS
Remote Diagnostics / FW Upgrade Functions	Standard / (with Flex Gateway)
Mechanical	
Dimensions (WxHxD)	42.7x24.3x11.2in (1085x616x283.5mm)
Weight	158lbs / 72kg
Mounting / Installation Angle	15 - 90 degrees from horizontal (vertical, angled)
AC Termination	M8 Stud Type Terminal Block (Wire range: #6 - 500MCM AWG CU/AL, Lugs not supplied)
DC Termination ⁶	Screw Clamp Fuse Holder (Wire range: #12 - #6AWG CU) - Standard Wire-box
Fused String Inputs	15A or 20A fuses provided (SKU specific)
Safety	
Safety and EMC Standard	UL1741-SA-2016, CSA-C22.2 NO.107.1-01, IEEE1547a-2014; FCC PART15
Selectable Grid Standard	IEEE 1547a-2014, CA Rule 21, ISO-NE
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 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) Wire-box only includes fuses/fuseholders on the positive polarity, compliant with NEC 2017, 690.9 (C).