

25kW 208V, 1000Vdc String Inverters for North America

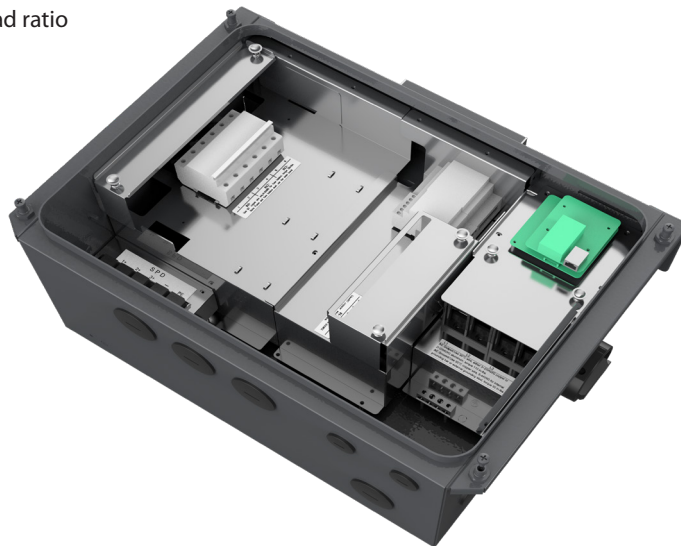
The 25kW (25kVA) CPS three-phase string inverters are designed for rooftop and carport applications. The units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiency at 97.0% peak and 96.5% CEC, wide operating voltages, broad temperature ranges and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 25KTL product ships with the Rapid Shutdown Wire-box, 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 the Tigo TS4-A-F/TS4-A-2F products and APS RSD-S-PLC/RSD-D products. The CPS FlexOM Gateway enables monitoring, controls and remote product upgrades.

Key Features

- NEC 2017/2020 PVRSS-certified rapid shutdown
- NEC 2017-compliant & UL-listed arc-fault circuit protection
- UL 1741-SB and IEEE 1547-2018 certified
- 15-90° mounting orientation for low-profile roof installs
- Optional FlexOM Gateway enables remote firmware upgrades
- Integrated AC & DC disconnect switches
- 3 MPPTs with 2 inputs each for maximum flexibility
- Copper and Aluminum compatible AC connections
- NEMA Type 4X outdoor rated, tough tested enclosure
- UL 1741-SA certified to CA Rule 21, including SA14 FW and SA15 VW
- Separable wire-box design for fast service
- Standard 10-year warranty with extensions to 20 years
- Generous 1.8 DC/AC inverter load ratio



CPS SCA25KTL-DO/US-208



SCA25KTL (208V) Rapid Shutdown Wire-box



Model Name	CPS SCA25KTL-DO/US-208
DC Input	
Max. PV power	45kW (17kW per MPPT)
Max. DC input voltage	1000Vdc
Operating DC input voltage range	200-950Vdc
Start-up DC input voltage / power	330V / 80W
Number of MPP trackers	3
MPPT voltage range @ PF>0.99	480-850Vdc
Max. PV short-circuit current (I _{sc} x 1.25)	135A (45A per MPPT)
Number of DC inputs	6 inputs, 2 per MPPT
DC disconnection type	Load-rated DC switch
DC surge protection	Type II MOV, 2800V _C , 20kA I _{TM} (8/20μS)
AC Output	
Rated AC output power @ PF>0.99	25kW
Max. AC apparent power (selectable)	25kVA
Rated output voltage	208Vac
Output voltage range ¹	183 - 228Vac
Grid connection type	3Φ / PE / N (neutral optional)
Max. AC output current @ 208Vac	69.5A
Rated output frequency	60Hz
Output frequency range ¹	57 - 63Hz
Power factor	>0.99 (±0.8 adjustable)
Current THD @ rated load	<3%
Max. fault current contribution (1 cycle RMS)	64.1A (0.92 PU)
Max. OCPD rating	125A
AC disconnection type	Load-break rated AC switch
AC surge protection	Type II MOV, 1240V _C , 15kA I _{TM} (8/20μS)
System and Performance	
Topology	Transformerless
Max. efficiency	97.0%
CEC efficiency	96.5%
Stand-by / night consumption	<3W
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	13,123.4ft / 4000m (derating from 9842.5ft / 3000m)
Audible noise	<60dBA @ 1m 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 10.24in. (1000 x 600 x 260mm)
Weight	Inverter: 123.5lbs/56kg; wire-box: 33lbs/15kg
Mounting / installation angle ⁴	15 to 90 degrees from horizontal (vertical or angled)
AC termination	M8 stud type terminal block (wire range: #6 - 3/0AWG CU/AL, lugs not supplied)
DC termination ⁵	Screw clamp, neg. busbar ⁵ wire range: #14 - #6AWG CU
Fused string inputs (2 per MPPT) ⁶	20A fuses provided (fuse values up to 30A acceptable)
Safety	
Certifications and standards	UL1741-SA/SB Ed. 3, UL1699B, UL1998, CSA-C22.2 NO.107.1-01, IEEE1547-2018, 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 range" and "output frequency range" may differ according to the specific grid standard.

2) Active power derating begins at 45°C when PF=1 and MPPT≥V_{min}, and at 50°C when PF=1 and MPPT≥700Vdc

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

7) Firmware version 4.0 or later required.