

25kW 480V, 1000Vdc String Inverters for North America

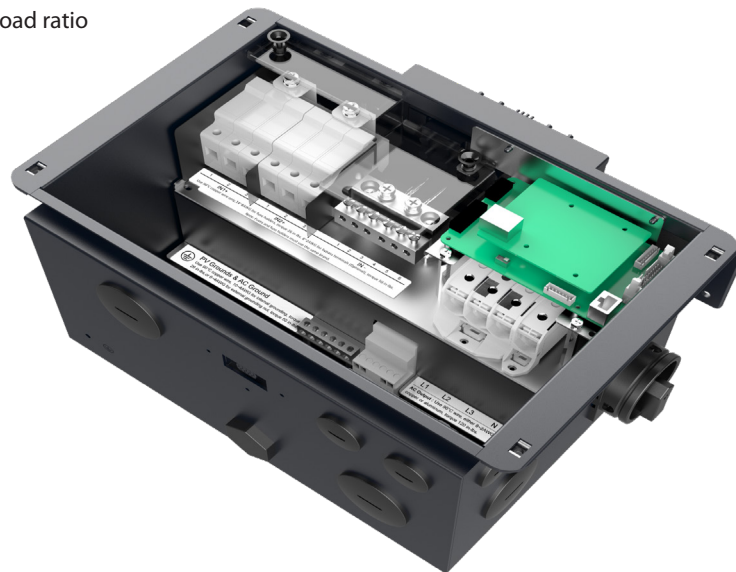
The 25kW-480V CPS three phase string inverter is designed for rooftop and carport applications. These units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiency at 98.5% peak and 98.0% CEC, wide operating voltages, broad temperature ranges and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 25kW-480V product ships with a 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.



CPS SCA25KTL-DO-R/US-480

Key Features

- NEC 2017/2020 PVRSS-certified rapid shutdown
- NEC 2017/2020-compliant & UL-listed arc-fault circuit protection
- 15-90° mounting orientation for low profile roof installs
- 15° tilt Inverter Rack Assembly available from CPS
- Optional FlexOM Gateway enables remote firmware upgrades
- Integrated AC & DC disconnect switches
- 2 MPPTs with 3 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 - SA18
- UL 1741-SB and IEEE 1547-2018 certified
- Separable wire-box design for fast service
- Standard 10-year warranty with extensions to 20 years
- Generous 1.5 DC/AC inverter load ratio



SCA25KTL (480V) Rapid Shutdown Wire-box



Model Name	CPS SCA25KTL-DO-R/US-480
DC Input	
Max. PV power	37.5kW (22kW 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	2
MPPT voltage range @ PF>0.99 ¹	560-850Vdc
Max. PV short-circuit current (I _{sc} x 1.25)	90A (45A/MPPT)
Number of DC inputs	6 inputs, 3 per MPPT
DC disconnection type	Load-rated DC switch
DC surge protection	Type II MOV, 1240V _C , 15kA I _{TM} (8/20μS)
AC Output	
Rated AC output power @ PF=1	25KW
Max. AC apparent power	25KVA
Rated output voltage	480Vac
Output voltage range ²	422 - 528Vac
Grid connection type	3Φ / PE / N (neutral optional)
Max. AC output current @ 480 Vac	30.5A
Rated output frequency	60Hz
Output frequency range ²	57 - 63Hz
Power factor	>0.99 (±0.8 adjustable)
Current THD @ rated load	<3%
Max. fault current contribution (1 cycle RMS)	31A (1.02 PU)
Max. OCPD rating	50A
AC disconnection type	Load-break rated AC switch
AC surge protection	Type II MOV, 1025V _C , 15kA I _{TM} (8/20μS)
System and Performance	
Topology	Transformerless
Max. efficiency	98.5%
CEC efficiency	98.0%
Stand-by / night consumption	<1W
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
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	<50dBA @ 1m
Display and Communication	
User interface and display	LED indicators, Wifi + APP
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)	Inverter: 15.95 x 15.75 x 7.87in (405 x 400 x 200mm) Wirebox: 10.24 x 15.75 x 7.87in (260 x 400 x 200mm)
Weight	Inverter: 48.5lbs/22kg; wire-box: 13.23lbs/6kg
Mounting / installation angle	15 to 90 degrees from horizontal (vertical or angled)
AC termination	Screw clamp (wire range: #8 - #2 AWG CU/AL)
DC termination ⁴	Screw clamp (wire range: #14 - #8AWG CU)
Fused string inputs (3 per MPPT) ⁵	20A fuses provided (fuse values up to 30A acceptable)
Safety	
Certifications and standards	UL1741-SA/SB Ed. 3, UL1699B, CSA-C22.2 NO.107.1-01, IEEE1547a-2014; FCC PART15
Selectable grid standard	IEEE 1547a-2014, IEEE 1547-2018 ⁶ , CA Rule 21, ISO-NE
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) See user manual for information regarding MPPT voltage range when operating at non-unity PF.

2) The "output voltage range" and "output frequency range" may differ according to the specific grid standard.

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

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

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

6) Firmware version 5.00 or later required.