

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

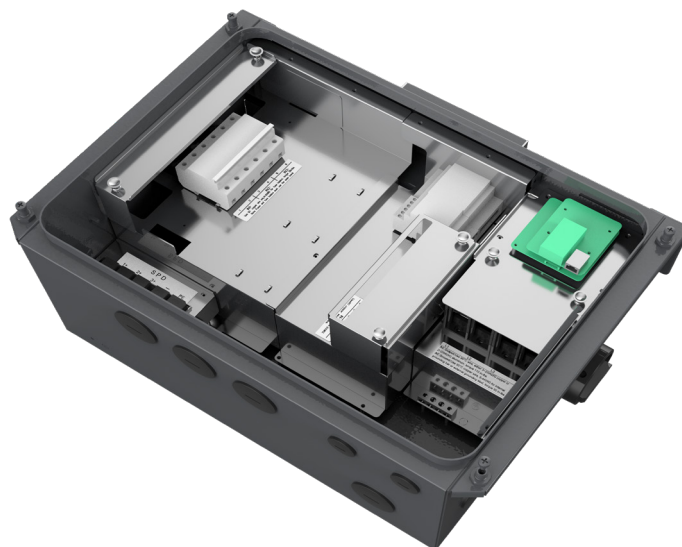
The 25kW (25kVA) CPS three phase string inverters are designed for rooftop and carport applications. The units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiency at 97.0% peak and 96.5% CEC, wide operating voltages, 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
- 15-90° Mounting orientation for low profile roof installs
- Optional FlexOM Gateway enables remote FW upgrades
- Integrated AC & DC disconnect switches
- 3 MPPT's with 2 inputs each for maximum flexibility
- Copper and Aluminum compatible AC connections
- NEMA Type 4X outdoor rated, tough tested enclosure
- UL1741 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  |
| <b>DC Input</b>                               |   |
| 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 (Isc 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 <sub>C</sub> , 20kA I <sub>TM</sub> (8/20μS)                       |
| <b>AC Output</b>                              |   |
| Rated AC Output Power @ PF>0.99               | 25kW  |
| Max. AC Apparent Power (Selectable)           | 25kVA   |
| Rated Output Voltage                          | 208Vac  |
| Output Voltage Range <sup>1</sup>             | 183 - 228Vac  |
| Grid Connection Type                          | 3Φ / PE / N (Neutral optional)  |
| Max. AC Output Current @208Vac                | 69.5A   |
| Rated Output Frequency                        | 60Hz  |
| Output Frequency Range <sup>1</sup>           | 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 <sub>C</sub> , 15kA I <sub>TM</sub> (8/20μS)                       |
| <b>System and Performance</b>                 |   |
| Topology                                      | Transformerless   |
| Max. Efficiency                               | 97.0%   |
| CEC Efficiency                                | 96.5%   |
| Stand-by / Night Consumption                  | <3W   |
| <b>Environment</b>                            |   |
| Enclosure Protection Degree                   | NEMA Type 4X  |
| Cooling Method                                | Variable speed cooling fans   |
| Operating Temperature Range <sup>2</sup>      | -22°F to +140°F / - 30°C to +60°C   |
| Non-Operating Temperature Range <sup>3</sup>  | 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  |
| <b>Display and Communication</b>              |   |
| 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 / FW Upgrade Functions     | Standard / (with FlexOM Gateway)  |
| <b>Mechanical</b>                             |   |
| Dimensions (HxWxD)                            | 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 <sup>4</sup>    | 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 <sup>5</sup>                   | Screw Clamp, Neg. Busbar <sup>5</sup> Wire range: #14 - #6AWG CU                      |
| Fused String Inputs (2 per MPPT) <sup>6</sup> | 20A fuses provided (Fuse values up to 30A acceptable)                                 |
| <b>Safety</b>                                 |   |
| Certifications and Standards                  | UL1741-SA Ed. 2, UL1699B, UL1998, CSA-C22.2 NO.107.1-01, IEEE1547, FCC PART15         |
| Selectable Grid Standard                      | IEEE 1547a2014, CA Rule 21, ISO-NE, HECO  |
| Smart-Grid Features                           | Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-VAR, Freq-Watt, Volt-Watt |
| <b>Warranty</b>                               |   |
| 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<sub>min</sub>, and at 50°C when PF=1 and MPPT V ≥ 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/fuseholders on the positive polarity, compliant with NEC 2017, 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 details.