250/275kW V2, 1500Vdc String Inverters for North America

CPS SCH275KTL-DO/US-800

The 250/275 kW 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 efficiencies, wide operating voltages, broad temperature ranges, and NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The SCH275KTL inverters include a selectable active power of either 250 kW or 275 kW (factory default) with 12 MPPTs and are available with either 36 fused PV string inputs or 24 unfused PV string inputs.

Key Features

- **Anti-PID function**
- **Reactive Power at Night function**
- Integrated DC disconnect switch
- Protection functions for enhanced reliability and safety
- Selectable max AC active power of 250 kW or 275 kW
- UL 1741-SA certified to CA Rule 21, including SA14-SA18
- 12 MPPTs with 36 fused inputs or 24 unfused inputs
- Copper and Aluminum compatible AC connections
- NEMA Type 4X outdoor rated, tough tested enclosure
- Full power capacity up to 42°C
- Standard 5-year warranty with extensions to 20 years
- UL 1741-SB and IEEE 1547-2018 certified

C SA US

FC This device complies with part 15 of the FCC Rules

© CHINT POWER SYSTEMS AMERICA 2026/8-MKT NA

Chint Power Systems America
1380 Presidential Drive, Suite 100, Richardson, TX 75081
Tel: 855-584-7168 Mail: AmericaSales@chintpower.com Web: www.chintpowersystems.com

Model Name	CPS SCH275KTL-DO/US-800-36 V2	CPS SCH275KTL-DO/US-800-24 V2
DC Input		
Max. DC input voltage range	1500 V	
Operating DC input voltage range	500-1450 Vdc	
Start-up DC input voltage / power	550 Vdc / 500 W	
MPPT voltage range for Pnom @ PF>0.99[1]	900-1300 Vdc	
Number of MPP trackers	12	
Max. PV input current (clipping point)	30 A per MPPT	
Production Limits	36.5 kW/MPPT or 275 kW total output	
Max. PV short-circuit current	600 A, 50 A per MPPT	
Number of DC inputs	36 fused inputs, 3 per MPPT	24 non-fused inputs
DC disconnection type	Load-rated DC switches	
DC surge protection	Type II	
AC Output		
Max AC output power (selectable[2]) @ PF>0.99	250 kW / 275 kW	
Max. AC apparent power	275 kVA	
Rated output voltage	800 Vac	
Output voltage range[3]	704-880 Vac	
Grid connection type	3-phase / PE	
Max. AC output current @ 800 Vac	198.5 A	
Rated output frequency	60 Hz	
Output frequency range[3]	57-63 Hz	
Power factor	>0.99 (±0.8 adjustable)	
Current TRD @ rated load	< 3%	
Max. OCPD rating	300 A	
AC surge protection	Type II	
System and Performance		
Max. efficiency	99.0%	
CEC efficiency	98.5%	
Night consumption[4]	< 7 W	
Environment		
Enclosure protection degree	NEMA 4X	
Cooling method	Variable speed cooling fans	
Operating temperature range	-22°F to 140°F / -30°C to 60°C (derate from 107°F / 42°C)	
Non-operating temperature range	-40°F to 140°F (-40°C to 60°C)	
Operating humidity	0-100%	
Operating altitude	8202 ft / 2500 m (no derating)	
Audible noise	< 80 dBA @ 1 m and 77°F (25°C)	
Display and Communication		
User interface and display	LED indicators, Wi-Fi and app	
Inverter communication	Modbus RS485	
Modbus data mapping	CPS	
Mechanical		
Dimensions (H × W × D)	27.2 × 41.3 × 15.7 (690 × 1050 × 400 mm)	
Weight	Inverter: 262 lbs (119 kg)	
Mounting / installation angle	Vertical installation	
AC termination	Stud type terminal (wire range: 4/0 AWG - 750 kcmil AL/CU, lugs not supplied)	
DC termination	36 fused input: screw clamp fuse holder (wire range #14-#8 AWG CU) 24 non-fused input: screw clamp terminal (wire range #14-#8 and #6-#4 AWG CU)[5]	
Fused string inputs (3 per MPPT)[6]	25 A fuses provided (values up to 30 A acceptable)	
Safety		
Certifications and standards	UL1741-SA/SB Ed.3, CSA-C22.2 NO.107.1-16, IEEE1547a-2014, IEEE 1547-2018; FCC PART 15	
Selectable grid standard	IEEE 1547a-2014, IEEE 1547-2018, CA Rule 21, ISO-NE	
Smart-grid features	Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-VAR, Freq-Watt, Volt-Watt	
Protection Functions		
Reactive Power at Night	Yes	
Anti-PID function	Yes	
Insulation resistance monitoring	Yes	
Onboard fault oscillography	Yes	
PV MPPT current monitoring	Yes	
Residual current monitoring	Yes	
Output short-circuit protection	Yes	
Output overvoltage protection	Yes	
Warranty		
Standard	5 years	
Extended terms	10, 15, and 20 years	

1) See user manual for information regarding MPPT voltage range when operating at non-unity PF.
2) Inverter is factory set to 275 kW by default. Contact CPS to enable the 250 kW setting.
3) The output voltage range and output frequency range may differ according to the specific grid standard.
4) Consumption may be higher when PID or reactive power at night functions are enabled.
5) One threaded hole per MPPT for connecting #6-#4 AWG CU.
6) Fused string inputs only applicable to the SCH275KTL 36-input model.