

200/250kW, 1500Vdc String Inverters for North America



SCH200/250K-T-US(480/600VAC)

Product Introduction

The 200 and 250 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 efficiency at 98.83% peak and 98.40% 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 200/250 kW products ship with the Standard or Centralized Wire-box, each fully integrated and separable with AC and DC disconnect switches. The Standard Wire-box includes touch-safe fusing for up to 30 strings. The CPS FlexOM Gateway enables communication, controls and remote product upgrades.

Key Features

- NFPA 70 and NEC compliant
- Touch-safe DC Fuse holders add convenience and safety
- CPS FlexOM Gateway enables remote firmware upgrades
- Integrated AC and DC disconnect switches
- 1MPPT with 30 fused inputs for maximum flexibility
- Copper- and Aluminum-compatible AC connections
- NEMA Type 4X outdoor rated enclosure
- Advanced Smart-Grid features (CA Rule 21 certified)
- kVA headroom yields 200 kW @ 0.95 PF and 250 kW @ 0.95 PF
- Generous 1.7 DC/AC inverter load ratios
- Separable wire-box design for fast service
- Standard 5-year warranty with extensions to 20 years

Model Name	SCH200K-T-US-480	SCH250K-T-US-600
DC Input		
Max. PV power	340kW consider 1.7 DC/AC ratio	425kW consider 1.7 DC/AC ratio
Max. DC input voltage	1500V	1500V
Operating DC input voltage range	860-1450Vdc	860-1450Vdc
Start-up DC input voltage / power	900V/250W	900V/250W
Number of MPP trackers	1	1
MPPT voltage range1	900-1300Vdc	900-1300Vdc
Max. PV short-circuit current (Isc x 1.25)	562.5A	
Number of DC inputs	Distributed version: 30 inputs Centralized version: 1 input circuit, 1-2 terminations per pole, non-fused	
DC Disconnection Type	Distributed version: load-rated DC switch Centralized version: DC breaker	
DC surge protection	Type II	
AC Output		
Rated AC output power	200kW	250kW
Max. AC output power2	210kVA (200kVA@0.95 power factor)	264kVA (250kVA@0.95 power factor)
Rated output voltage	480Vac	600Vac
Output voltage range3	423-528Vac	528-660 Vac
Grid connection type4	3Φ / PE / N (neutral optional)	
Max. AC output current @ 600 Vac	241A/253A	241A/254A
Rated output frequency	60 Hz	60 Hz
Output frequency range3	57-63 Hz	57-63 Hz
Power factor	>0.99 (±0.8 adjustable)	>0.99 (±0.8 adjustable)
Current THD	<3%	<3%
Max. OCPD rating	400A	400A
AC disconnection type	Load-rated AC switch	Load-rated AC switch
AC surge protection	Type II	Type II
System		
Topology	Transformerless	Transformerless
Max. efficiency	98.71%	98.83%
CEC efficiency	97.80%	98.40%
Standby / Night consumption	< 30W/< 30W	< 30W/< 30W
Environment		
Enclosure protection degree	NEMA Type 4X, C5L	
Cooling method	Variable speed cooling fans	
Operating temperature range	-22°F to +140°F / -30°C to +60°C (derating from +108°F / +42°C)	
Non-operating temperature range5	-40°F to +158°F / -40°C to +70°C maximum	
Operating humidity	0-95%	0-95%
Operating altitude	6561.68 ft / 2000 m (no derating)	6561.68 ft / 2000 m (no derating)
Audible noise	<80 dBA @ 1 m and 25°C	
Display and Communication		
User interface and display	LED indicators, Bluetooth + APP	
Inverter monitoring	Modbus RS485 / AC-PLC (optional)	
Site-level monitoring	CPS FlexOM Gateway (1 per 32 inverters)	
Modbus data mapping	SunSpec / CPS	
Remote diagnostics / firmware upgrade functions	Standard / (with FlexOM Gateway)	
Mechanical		
Dimensions (W x H x D)	Power head: 28.46x33x13.98in (723x840x355mm) Wring box: 23.11x33x13.98in (587x840x355mm)	Power head: 28.46x33x13.98in (723x840x355mm) Wring box: 23.11x33x13.98in (587x840x355mm)
Weight	Power head: 175.27lb(79.5kg) Wring box: 105.82lb(48kg)	Power head: 175.27lb(79.5kg) Wring box: 105.82lb(48kg)
Mounting / installation angle	Vertical	
AC termination	L1,L2, L3: either 500~750kcmil copper wire or 700~750 kcmil aluminum wire M12 lug type terminal (lugs not supplied), Screw clamp terminal[N](1/0 AWG CU/AL) PE: #3~2AWG CU	
	Standard version: Screw clamp fuse holder(wire range: #14-#8 AWG CU)	
DC termination	Basic verison: Busbar(consider AL wire), (wire range: ≤600 kcmil CU/AL [up to 2 terminations per pole]; lugs not supplied, need to use AL9CU)	
Fused string inputs	30 A fuses provided (fuse values up to 35 A acceptable)	
Safety		
Transformer compatibility	Wye can support the TT/TN-C/TN-S/TN-C-S, Delta cannot support Grounding system	