

350 kW, 1500 Vdc String Inverters for North America



CPS SCH350KTL-DO/US-800

The CPS 350 kW three-phase string inverters are designed for large-scale 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 SCH350KTL inverters are rated for 350 kW. Each inverter includes 15 MPPTs and is available with 30 unfused PV string inputs. The CPS FlexOM solution enables communication, controls and remote product upgrades.

Key Features

- CPS FlexOM Gateway enables remote firmware upgrades
- Integrated DC disconnect switches
- Protection functions for enhanced reliability and safety
- UL 1741-SB and IEEE 1547-2018 certified
- Supported comm protocols (Modbus RTU, TCP/IP, PLC, CAN)
- 15 MPPTs with 30 unfused inputs
- Copper and Aluminum compatible AC connections
- NEMA Type 4X outdoor rated, tough tested enclosure
- Full power capacity up to 45°C
- PID mitigation and reactive power at night functions included

Model Name	SCH350KTL-DO/US-800
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
Full power MPPT voltage range (@ 113°F / 45°C PF>0.99 ¹)	880-1300 Vdc
Number of MPP trackers	15
Max. operating current per MPPT	40 A per MPPT
Production limits	48 kW/MPPT or 350 kW total output
Max. PV short-circuit current	975 A, 65 A per MPPT
Number of DC inputs	30 non-fused inputs, 2 per MPPT
DC disconnection type	Load-rated DC switches
DC surge protection	Type II
AC Output	
Max AC output power (selectable) @ PF>0.99	350 kW
Max. AC apparent power	350 kVA
Rated output voltage	800 Vac
Output voltage range ²	680-880 Vac
Grid connection type	3-phase / PE
Max. AC output current @ 800 Vac	253 A
Rated output frequency	60 Hz
Output frequency range ²	57-63 Hz
Power factor	>0.99 (±0.8 adjustable)
Current TRD @ rated load	< 3%
Max. fault current contribution (1 cycle RMS)	373.65 A
Max. OCPD rating	400 A
AC surge protection	Type II
System and Performance	
Max. efficiency	99.00%
CEC efficiency	98.50%
Night consumption ³	< 15 W
Environment	
Enclosure protection degree	NEMA 4X
Cooling method	Variable speed cooling fans
Operating temperature range ⁴	-22°F to 140°F / -30°C to 60°C (derate from 113°F / 45°C)
Non-operating temperature range	-40°F to 158°F / -40°C to 70°C
Operating humidity	0-100%
Operating altitude	13123.4 ft / 4000 m
Audible noise	≤ 82 dBA @ 1 m and 77°F (25°C)
Display and Communication	
User interface and display	LED indicators, Bluetooth, and app
Inverter communication method	Modbus RS485 / PLC ⁵ / CAN
Remote communication	CPS FlexOM (up to 32 inverters per Gateway)
Modbus data mapping	SunSpec / CPS
Remote diagnostics / firmware upgrade functions	Standard / (with FlexOM Gateway)
Mechanical	
Dimensions (H × W × D)	31.9 × 41.6 × 15.75 (810 × 1057 × 400 mm)
Weight	315.3 lb (143 kg)
Mounting / installation angle	75-90 degrees from horizontal (vertical or angled)
AC termination	M12 lug type terminal block (wire range: 4/0 AWG - 750 kcmil AL/CU)
DC termination	Screw clamp terminal (wire range #14-#8 and #6-#4 AWG CU) ⁶
Safety	
Certifications and standards	UL1741-SA/SB Ed. 3, CSA-C22.2 NO.107.1-16, IEEE 1547-2018, FCC PART 15, UL 1998, IEEE 2030.5
Selectable grid standard	IEEE 1547-2018, CA Rule 21, ISO-NE, HECO
Smart-grid features	Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-VAR, Freq-Watt, Volt-Watt
Protection Functions	
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) The output voltage and frequency ranges may differ according to the specific grid standard.

3) Consumption may be higher when PID or reactive power at night functions are enabled.

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

5) CPS AC-PLC Kit required for AC PLC communication.

6) One threaded hole per MPPT for connecting #6 - #4 AWG CU.

Q.PEAK DUO ML-G12S SERIES



660 - 680 Wp | 132 Cells
21.9% Maximum Module Efficiency

MODEL Q.PEAK DUO ML-G12S.3/BFG Q.PEAK DUO ML-G12S.7/BFG
Q.PEAK DUO ML-G12S.d/BFG



Highest Power Class Module

With the new G12, Qcells heralds the next generation of solar modules' enabling more power generation than ever before.



Bifacial energy yield gain of up to 20%

Bifacial Q.ANTUM solar cells make efficient use of light shining on the module rear-side for radically improved LCOE.



Low electricity generation costs

Q.ANTUM DUO technology with optimized module layout to boost module power and improve LCOE.



A reliable investment

Double glass module design enables extended lifetime with 12-year product warranty and improved 30-year performance warranty¹.



Enduring high performance

Long-term yield security with Anti LID and Anti PID Technology², Hot-Spot Protect.



Frame for versatile mounting options

High-tech aluminum alloy frame protects from damage, enables use of a wide range of mounting structures and is certified regarding IEC for high snow (5400 Pa) and wind loads (2600 Pa)³.



Innovative all-weather technology

Optimal yields, whatever the weather with excellent low-light and temperature behavior.

¹ See data sheet on rear for further information.

² APT test conditions according to IEC/TS 62804-1:2015 method B (-1500 V, 168h) including post treatment according to IEC 61215-11 Ed. 2.0 (CD)

³ See Installation Manual for instructions

The ideal solution for:



Ground-mounted solar power plants



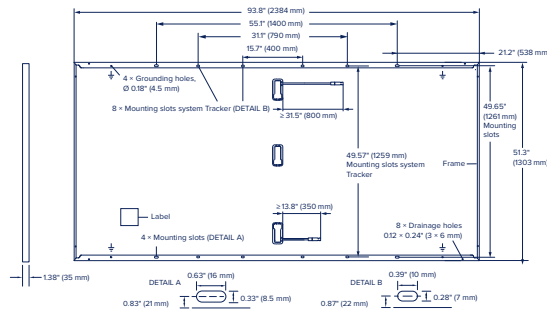
Solar power plants with tracker



Q.PEAK DUO ML-G12S SERIES

Mechanical Specification

Format	93.8 in × 51.3 in × 1.38 in (including frame) (2384 mm × 1303 mm × 35 mm)
Weight	84.2 lbs (38.2 kg)
Front Cover	0.08 in (2.0 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	0.08 in (2.0 mm) semi-tempered glass
Frame	Anodized aluminum
Cell	6 × 22 monocrystalline Q.ANTUM solar half cells
Junction box	2.09-3.98 × 1.26-2.36 × 0.59-0.71 in (53-101 mm × 32-60 mm × 15-18 mm), Protection class IP68, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥ 31.5 in (800 mm), (-) ≥ 13.8 in (350 mm)
Connector	Stäubli MC4; Stäubli MC4-Evo2; - IP68



Electrical Characteristics

POWER CLASS	660	665	670	675	680
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MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC¹ (POWER TOLERANCE +5 W/-0 W)

Minimum			BSTC*		BSTC*		BSTC*		BSTC*		BSTC*	
	Power at MPP ¹	P _{MPP} [W]	660	721.9	665	727.4	670	732.9	675	738.4	680	743.8
	Short Circuit Current ¹	I _{SC} [A]	18.36	20.10	18.39	20.13	18.42	20.16	18.45	20.20	18.48	20.23
	Open Circuit Voltage ¹	V _{OC} [V]	45.68	45.84	45.70	45.86	45.72	45.88	45.74	45.90	45.76	45.92
	Current at MPP	I _{MPP} [A]	17.39	19.03	17.45	19.09	17.51	19.16	17.56	19.22	17.62	19.28
	Voltage at MPP	V _{MPP} [V]	37.94	37.94	38.11	38.10	38.27	38.26	38.43	38.42	38.59	38.58
	Efficiency ¹	η [%]	≥ 21.2		≥ 21.4		≥ 21.6		≥ 21.7		≥ 21.9	

Bifaciality of P_{MPP} and I_{SC} 70% ± 5% • Bifaciality given for rear side irradiation on top of STC (front side) • According to IEC 60904-1-2

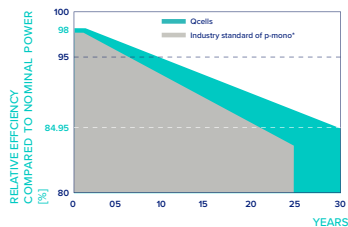
¹Measurement tolerances P_{MPP} ± 3%; I_{SC}, V_{OC} ± 5% at STC: 1000 W/m²; *at BSTC: 1000 W/m² + φ × 135 W/m², φ = 72%, 25 ± 2 °C, AM 1.5 according to IEC 60904-3

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT²

Power at MPP	P _{MPP} [W]	496.9	500.7	504.4	508.2	512.0
Short Circuit Current	I _{SC} [A]	14.79	14.81	14.84	14.86	14.89
Open Circuit Voltage	V _{OC} [V]	43.20	43.22	43.24	43.26	43.28
Current at MPP	I _{MPP} [A]	13.67	13.73	13.78	13.83	13.88
Voltage at MPP	V _{MPP} [V]	36.34	36.48	36.62	36.75	36.89

¹Measurement tolerances P_{MPP} ± 3%; I_{SC}, V_{OC} ± 5% at STC: 1000 W/m², 25 ± 2 °C, AM 1.5 according to IEC 60904-3 • ²800 W/m², NMOT, spectrum AM 1.5

Qcells PERFORMANCE WARRANTY

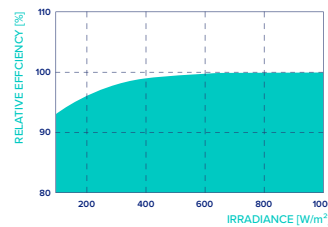


At least 98% of nominal power during first year. Thereafter max. 0.45% degradation per year. At least 93.95% of nominal power up to 10 years. At least 84.95% of nominal power up to 30 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Qcells sales organization of your respective country.

*Standard terms of guarantee for the 5 PV companies with the highest production capacity in 2021 (February 2021)

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²).

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I_{SC}	α	[%/K]	+0.04	Temperature Coefficient of V_{OC}	β	[%/K]	-0.27
Temperature Coefficient of P_{MPP}	γ	[%/K]	-0.34	Nominal Module Operating Temperature	NMOT	[°F]	108 ± 5.4 (42 ± 3 °C)

Properties for System Design

Maximum System Voltage	V _{sys} [V]	1500	PV module classification	Class II
Maximum Series Fuse Rating	[A DC]	35	Fire Rating based on ANSI/UL 61730	TYPE 29 ⁴
Max. Push Load³, Test/Design	[lbs/ft ²]	113 (5400 Pa)/75 (3600 Pa)	Permitted Module Temperature on Continuous Duty	-40°F up to +185°F (-40°C up to +85°C)
Max. Pull Load³, Test/Design	[lbs/ft ²]	54 (2600 Pa)/36 (1730 Pa)		

³ See Installation Manual for instructions

⁴ New Type is similar to Type 3 but with metallic frame

Qualifications and Certificates

UL 61730, CE-compliant,
IEC 61215:2016,
IEC 61730:2016,
U.S. Patent No. 9,893,215
(solar cells)



Qcells pursues minimizing paper output in consideration of the global environment.

Note: Installation instructions must be followed. Contact our technical service for further information on approved installation of this product.
*Contact your Qcells Sales Representative for details regarding the module's eligibility to be Buy American Act (BAA) compliant.

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qcells



nextracker™

NX Horizon™



NX Horizon™ is the world's most chosen solar tracking system, deployed and contracted on over 75 gigawatts of solar capacity as of March 2023. NX Horizon's unrivaled combination of integrated hardware and software is the gold standard for the utility-scale solar industry. It is known for its robust design, ease of installation, field-proven weather durability, and LCOE-optimized performance.

Pioneering independent-row technology

NX Horizon's patented independent row, self-powered tracking system provides reliable performance across the widest range of site conditions. Simple, robust hardware, including self-aligning module rails and vibration-proof fasteners, enables rapid installation and long life without maintenance. Mechanically balanced rows minimize tracking power requirements and pair with a time-proven drive & control system for maximum durability and uptime. NX Horizon's decentralized architecture with intelligent communications supports layout adaptability, flexible construction and commissioning sequencing, and advanced tracker functionality with over-the-air updates.

Proven resilience

NX Horizon is designed to withstand extreme weather, proven season after season, with hundreds of systems around the world. Nextracker's in-house project-engineering services configure and optimize NX Horizon to suit the unique combination of weather and climate for each project site. Based on the industry's most comprehensive wind analysis and field testing, NX Horizon is hardened against failures by robust structural design, the industry's best damping system, and advanced stowing functionality. In the event of hail, NX Horizon offers a 60° stow position, rapid rotation and UPS backup to maximize module survivability, even in the event of a grid outage. Additional software, hardware and support is available with NX Horizon Hail Pro™, for maximum capability and readiness in severe hail regions. NX Horizon is inherently tolerant of flooding with drive and control components 4-5' above grade. Flood-stowing functions to protect panels are available.

Highlights

8 years in a row

Global Market Share Leader

75 GW

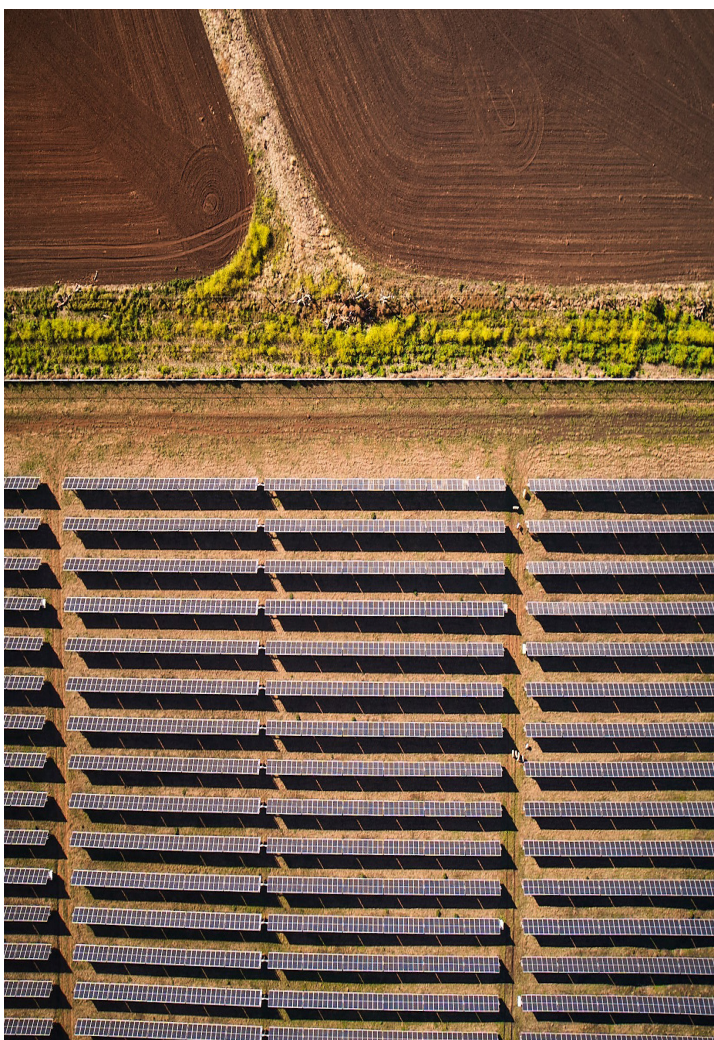
Delivered on 6 Continents

Best-in Class

Software Ecosystem and
Global Services

Up to 4% more energy

Using TrueCapture yield
optimization software



Optimized for the lowest LCOE

Compared with conventional tracking systems, NX Horizon delivers Levelized Cost of Energy (LCOE) reductions of up to 7% by maximizing energy generation and driving the lowest possible project CAPEX and OPEX.

With pre-assembled components, no drive linkages, no AC wiring, self-aligning rails, and available XTR terrain-following upgrades, NX Horizon is fundamentally faster to install, requiring less construction labor, less grading, and less total project capital cost.

Projects with NX Horizon enjoy open-row access for efficient vegetation management and panel cleaning. Compared with linked row systems, NX Horizon cuts mowing costs by up to 55% and cleaning costs by up to 73%.

To boost energy generation and revenue, NX Horizon comes equipped with a unique design optimized for bifacial modules. In addition, TrueCapture yield optimization software is available, delivering IE-validated annual energy gains using unique algorithms for different module technologies, site terrain and diffuse light conditions.

GENERAL AND MECHANICAL	
Architecture	Horizontal single-axis, independent row, independently balanced
Configuration	1x module in portrait
Tracking range of motion	Options for ±60° or ±50°. Steeper stowing angles available with Hail Pro
Row Size	Configurable per module type, string length and site layout
Array Height	Rotation axis elevation, 1.3 to 1.8 m / 4'3" to 5'10"
Drive type	High accuracy slew gear
Modules supported	All utility-scale crystalline and thin-film modules
Bifacial optimization	High-rise mounting rails, bearing & driveline gaps, round torque tube
Structural connections	Engineered fastening system, vibration-proof
Materials	Galvanized steel; other coatings available
Foundations	Complete range of foundation solutions available
Slope	Up to 15% N-S and 15% E-W
Ground coverage ratio (GCR)	No specific limit Typical range 25-45%
Operating temperature range	SELF POWERED: -30°C to 55°C (-22°F to 131°F) AC POWERED: -40°C to 55°C (-40°F to 131°F) Cold Pak upgrades available
Wind speed	Configurable up to 240 kph (150 mph) 10m, 3-second gust
Wind protection	Intelligent wind stowing with symmetric damping system

ELECTRONICS AND CONTROLS	
Solar tracking method	Astronomical algorithm with backtracking standard. TrueCapture™ available for enhanced energy yield
Tracker controller	Self-Powered Controller (SPC) with integrated inclinometer and UPS
Motor	Brushless DC
Power supply	SELF POWERED: Standalone smart solar power AC POWERED: Customer-provided 120-277 VAC circuit
Communications	Network control units (NCUs) at inverter pads/skids, self-powered weather stations, centralized data hub, encrypted Zigbee wireless mesh communications
Defensive stowing functions	Wind, hail, hurricane, snow, flood, loss of grid power
Operator interface	NX Navigator advanced HMI available, with SCADA integration
SERVICE, WARRANTY, AND STANDARDS	
Tracker engineering & PE stamped design package	Standard
Foundation engineering & PE stamped design package	Available
Onsite construction support & commissioning service	Available
Warranty	10-year structural, 5-year drive and controls standard; extended warranty available
Codes and standards	UL 3703 / UL 2703 / IEC 62817 / CSA

