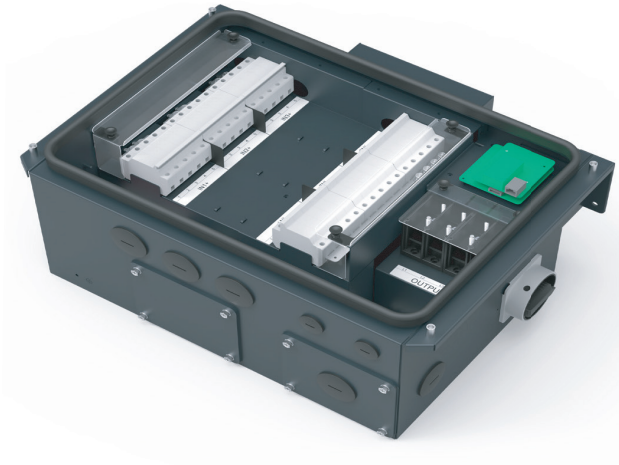
50/60kW, 1000Vdc String Inverters for North America

The 50 & 60kW (55 & 66kVA) medium power CPS three phase string inverters are designed for ground mount, large 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 98.8% peak and 98.5% 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 50/60kW products ship with either the standard wire-box or the H4 style wire-box, each fully integrated and separable with touch safe fusing, monitoring, and AC and DC disconnect switches. The CPS Flex Gateway enables monitoring, controls and remote product upgrades.

CPS SCA50KTL-DO/US-480
CPS SCA60KTL-DO/US-480

Key Features

- 55 & 66kVA rating allows max rated Active Power @±0.91PF
- NEC 2014/17 compliant & UL listed Arc-Fault circuit protection
- 0-90° Mounting orientation for lay flat roof installs
- Touch safe DC Fuse holders adds convenience and safety
- Optional Flex Gateway enables remote FW upgrades
- Integrated AC & DC disconnect switches
- Optional factory installed H4 connectors
- 3 MPPT's with 5 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
- Separable wire-box design for fast service
- Standard 10 year warranty with extensions to 20 years
- Generous 1.5 DC/AC Inverter Load Ratio



50/60kW Standard Wire-box

50/60kW H4 Wire-box

This device complies with part 15 of the FCC Rules

Chint Power Systems America
7060 Koll Center Parkway, Suite 318 Pleasanton, CA 94566
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Model Name	CPS SCA50KTL-DO/US-480	CPS SCA60KTL-DO/US-480
DC Input		
Max. PV Power	75kW (30kW per MPPT)	90kW (33kW 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[1]	480-850Vdc	540-850Vdc
Max. PV Short-Circuit Current (Isc x 1.25)	204A (68A per MPPT)	
Number of DC Inputs	15 inputs, 5 per MPPT	
DC Disconnection Type	Load rated DC switch	
DC Surge Protection	Type II MOV, 2800V_C, 20kA I_{TM} (8/20μS)	
AC Output		
Rated AC Output Power @ PF>0.99 to ±0.91[2]	50kW	60kW
Max. AC Apparent Power	55kVA	66kVA
Rated Output Voltage	480Vac	
Output Voltage Range[3]	422 - 528Vac	
Grid Connection Type	3Φ / PE / N (Neutral optional)	
Max. AC Output Current @480Vac	66.2A	79.4A
Rated Output Frequency	60Hz	
Output Frequency Range[3]	57 - 63Hz	
Power Factor	>0.99 (±0.8 adjustable)	
Current THD @ Rated Load	<3%	
Max. Fault Current Contribution (1 Cycle RMS)	64.1A	
Max. OCPD Rating	110A	125A
AC Disconnection Type	Load rated AC switch	
AC Surge Protection	Type II MOV, 1240V_C, 15kA I_{TM} (8/20μS)	
System and Performance		
Topology	Transformerless	
Max. Efficiency	98.8%	
CEC Efficiency	98.5%	
Stand-by / Night Consumption	<1W	
Environment		
Enclosure Protection Degree	NEMA Type 4X	
Cooling Method	Variable speed cooling fans	
Operating Temperature Range[4]	-22°F to +140°F / - 30°C to +60°C[4]	
Non-Operating Temperature Range[5]	No low temp minimum to +158°F / +70°C maximum[5]	
Operating Humidity	0 to 100%	
Operating Altitude	13123.4ft / 4000m (derating from 9842.5ft / 3000m)	
Audible Noise	<60dBA @ 1m and 25°C	
Display and Communication		
User Interface and Display	LCD+LED	
Inverter Monitoring	SunSpec, Modbus RS485	
Site Level Monitoring	CPS Flex Gateway (1 per 32 inverters)	
Modbus Data Mapping	CPS	
Remote Diagnostics / FW Upgrade Functions	Standard / (with Flex Gateway)	
Mechanical		
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[6]	0 to 90 degrees from horizontal (vertical, angled, or lay flat)[6]	
AC Termination[7]	M8 Stud Type Terminal Block (Wire range: #6 - 3/0AWG CU/AL[7], Lugs not supplied)	
DC Termination	Screw Clamp Fuse Holder (Wire range: #14 - #6AWG CU), Optional H4 (Amphenol)	
Fused String Inputs (5 per MPPT)	15A fuses provided (Fuse values up to 30A acceptable)	
Safety		
Certifications and Standards	UL1741SA-2016, UL1699B, CSA-C22.2 NO.107.1-01, IEEE1547a-2014; FCC PART15	
Selectable Grid Standard and SRD	IEEE1547a-2014, CA Rule 21	
Smart-Grid Features	Voltage-RideThru, Frequency-RideThru, Soft-Start, Volt-Var, Frequency-Watt, Volt-Watt	
Warranty		
Standard	10 years	
Extended Terms	15 and 20 years	

1) See user manual for further information regarding MPPT Voltage Range when operating at non-unity PF.
2) Active Power Derating begins; at PF=±0.91 to ±0.8
3) The "Output Voltage Range" and "Output Frequency Range" may differ according to the specific grid standard.
4) Active Power Derating begins; at 40℃ when PF=±0.9 and MPPT ≥Vmin, at 45℃ when PF=1 and MPPT ≥Vmin, and at 50℃ when PF=1 and MPPT V ≥ 700Vdc
5) See user manual for further requirements regarding non-operating conditions.
6) Shade Cover accessory required for installation angles of 75 degrees or less.
7) AL requires bi-metallic compression lug or bi-metallic adapter.

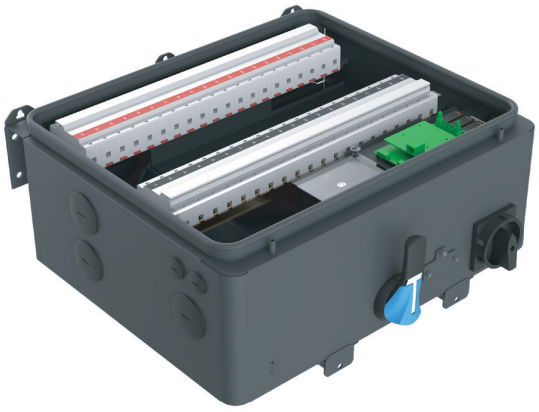
100/125kW, 1500Vdc String Inverters for North America

CPS SCH100/125KTL-DO/US-600

The 100 & 125kW medium 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 99.0% peak and 98.5% 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 100/125kW products ship with the standard wire-box, each fully integrated and separable with touch safe fusing, monitoring, and AC and DC disconnect switches. The CPS Flex Gateway enables communication, controls and remote product upgrades.

Key Features

- NEC 2014/17 compliant & UL listed Arc-Fault circuit protection
- Touch safe DC Fuse holders adds convenience and safety
- CPS Flex Gateway enables remote FW upgrades
- Integrated AC & DC disconnect switches
- 1 MPPT with 16 and 20 inputs for maximum flexibility
- Copper and Aluminum compatible AC connections
- NEMA Type 4X outdoor rated, tough tested enclosure
- Advanced Smart-Grid features (CA Rule 21 compatible)
- kVA Headroom yields 100kW @ 0.9PF and 125kW @ 0.95PF
- Generous 1.5 DC/AC Inverter Load Ratio
- Separable wire-box design for fast service
- Standard 10 year warranty with extensions to 20 years



100/125kW Standard Wire-box

100/125kW Centralized Wire-box

intertek 4004522
Conforms to UL Std. 1741
Cert.to CSA Std.C22.2 No.107.1-01

This device complies with part 15 of the FCC Rules

Chint Power Systems America
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Model Name	CPS SCA100KTL-DO/US-600	CPS SCA125KTL-DO/US-600
DC Input		
Max. PV Power	150kW	187.5kW
Max. DC Input Voltage	1500V	
Operating DC Input Voltage Range	860-1450Vdc	
Start-up DC Input Voltage / Power	900V / 250W	
Number of MPP Trackers	1	
MPPT Voltage Range	870-1300Vdc	
Max. PV Input Current (Isc x1.25)	220A	275A
Number of DC Inputs	16 inputs	20 inputs
DC Disconnection Type	Load rated DC switch	
DC Surge Protection	Type II MOV, Up=2.5kV , In=20kA(8/20us)	
AC Output		
Rated AC Output Power	100kW	125kW
Max. AC Output Power[1]	100kVA (111KVA @ PF>0.9)	125kVA (132KVA @ PF>0.95)
Rated Output Voltage	600Vac	
Output Voltage Range[2]	528-660Vac	
Grid Connection Type[3]	3Φ / PE / N (Neutral optional)	
Nominal AC Output Current @600Vac	106.9A	127.2A
Rated Output Frequency	60Hz	
Output Frequency Range[2]	57-63Hz	
Power Factor	>0.99 (±0.8 adjustable)	>0.99 (±0.8 adjustable)
Current THD	<3%	
AC Disconnection Type	Load rated AC switch (Standard Wire-box only)	
AC Surge Protection	Type II MOV, Up=2.5kV , In=20kA(8/20us)	
System		
Topology	Transformerless	
Max. Efficiency	99.0%	
CEC Efficiency	98.5%	
Stand-by / Night Consumption	<2W	
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 (derating from +113°F / +45°C)	
Non-Operating Temperature Range[4]	-40°F to +158°F / -40°C to +70°C maximum[4]	
Operating Humidity	0-100%	
Operating Altitude	8202ft / 2500m (no derating)	
Audible Noise	<65dBA@1m and 25°C	
Display and Communication		
User Interface and Display	LED Indicators, WiFi + APP	
Inverter Monitoring	Modbus RS485, PLC Option (Standard Wire-box only)	
Site Level Monitoring	CPS Flex Gateway (1 per 64 inverters)	
Modbus Data Mapping	SunSpec/CPS	
Remote Diagnostics/FW Upgrade Functions	Standard	
Mechanical		
Dimensions (WxHxD)	45.28x24.25x9.84in (1150x616x250mm) with Standard Wire-box 39.37x24.25x9.84in (1000x616x250mm) with Centralized Wire-box	
Weight	Inverter: 121lbs / 55kg; Wire-box: 55lbs / 25kg (standard); 33lbs / 15kg (centralized)	
Mounting/Installation Angle	15 - 90 degrees from horizontal (vertical, angled)	
AC Termination[5]	M8 Stud Type Terminal Block (Wire range: #6 - 3/0AWG CU/AL[5], Lugs not supplied)	
DC Termination	Screw Clamp Fuse Holder (Wire range: #12 - #6AWG CU) - Standard Wire-box Busbar, M8 PEMserts (Wire range: #1AWG - 250kcmil CU/AL, Lugs not supplied) - Centralized Wire-box	
Fused String Inputs	20A fuses provided (Fuse values of 15/25/30A available)	
Safety		
Safety and EMC Standard	UL1741SA-2016[6], UL1699B, CSA-C22.2 NO.107.1-01, IEEE1547a-2014; FCC PART15	
Grid Standard[6]	IEEE 1547a-2014, CA Rule 21[6]	
Smart-Grid Features	Voltage-RideThru, Frequency-RideThru, Soft-Start, Volt-Var, Frequency-Watt	
Warranty		
Standard	10 years	
Extended Terms	15 and 20 years	

1) "Max. AC Apparent Power" rating valid within MPPT voltage range and temperature range of -30°C to +40°C (-22°F to +104°F) for 100KW PF ≥0.9 and 125KW PF ≥0.95
2) The "Output Voltage Range" and "Output Frequency Range" may differ according to the specific grid standard.
3) Wye neutral-grounded, Delta may not be corner-grounded.
4) See user manual for further requirements regarding non-operating conditions.
5) AL requires bi-metallic compression lug or bi-metallic adapter.
6) Certifications Pending.

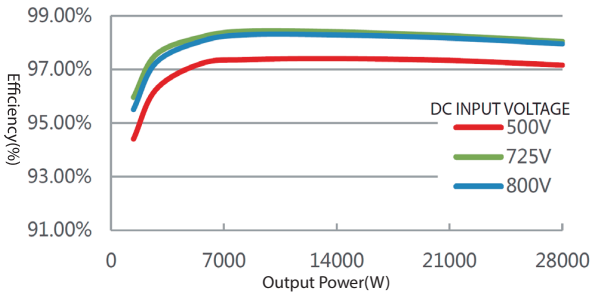
23/28kW, 1000Vdc String Inverters for North America

The medium power series of grid-tied, transformerless inverters help to accelerate the use of 1000Vdc and three phase string architecture for commercial and small ground mount utility applications. An NRTL approved, cost effective alternative to central inverters enabling BoS cost savings, high harvest performance and modular design building blocks. These models provide up to 98.6% conversion efficiency and wide operating window of 300-900Vdc and dual MPPT's for maximum cash-flow generation.

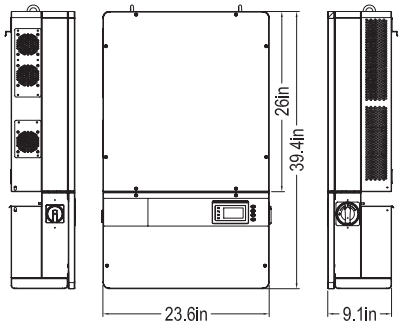
CPS SCA23KTL-DO/US-480
CPS SCA28KTL-DO/US-480

Efficiency Curve

CPS SCA28KTL-DO/US-480



Dimensions



High Efficiency

- Maximum efficiency of 98.6%, CEC efficiency of 98%
- 3-level technology and enhanced control mechanism to achieve high efficiency over wide load range
- 2 MPPTs to achieve higher system efficiency
- Transformerless design

High Reliability

- "Electrolyte-free design" for improved long-term reliability
- Standard warranty: 10 years, extension up to 20 years
- Advanced thermal design, with variable speed fans
- Ground-fault detection and interruption circuit
- AFCI Integrated (per UL1699B)

C SP US

This device complies with part 15 of the FCC Rules

Broad Adaptability

- NEMA 4X (IP65) rated for outdoor applications
- Utility interactive controls: Active power derating, reactive power control
- Separable wiring box design for fast service
- Integrated DC & AC disconnect switches
- Wide MPPT range for flexible string sizing
- 1000V Max. DC input voltage for flexible configuration
- 15 - 90 degree from horizontal installation angle

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Model Name	CPS SCA23KTL-DO/US-480	CPS SCA28KTL-DO/US-480
DC Input		
Max. PV Power	31kW (15.5kW per MPPT)	38kW (19kW per MPPT)
Max. DC Input Voltage	1000Vdc	
Operating DC Input Voltage Range	240-950Vdc	
Start-up DC Input Voltage / Power	330V / 300W	
Number of MPP Trackers	2	
MPPT Voltage Range	480-800Vdc	500-800Vdc
Max. PV Short-Circuit Current (Isc x 1.25)	82A (41A per MPPT)	96A (48A per MPPT)
Number of DC Inputs	8 inputs, 4 per MPPT	
DC Disconnection Type	Load rated DC switch	
DC Surge Protection	Type II MOV, 2000V_C,10kA I_{TM} (8/20μS)	
AC Output		
Rated AC Output Power	23kW	28kW
Max. AC Apparent Power	23kVA	28kVA
Rated Output Voltage	480Vac	
Output Voltage Range[1]	422 - 528Vac	
Grid Connection Type	3Φ / PE / N	
Nominal AC Output Current @480Vac	27.7A	33.7A
Rated Output Frequency	60Hz	
Output Frequency Range[1]	57 - 63Hz	
Power Factor	>0.99 (±0.8 adjustable)	
Current THD @ Rated Load	<3%	
Max. Fault Current Contribution (1 Cycle RMS)	69.6A	
AC Disconnection Type	Load rated AC switch	
AC Surge Protection	Type II MOV, 1500V_C,10kA I_{TM} (8/20μS)	
System and Performance		
Topology	Transformerless	
Max. Efficiency	98.6%	
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 (derating from +113°F / +45°C)	
Non-Operating Temperature Range[2]	No low temp minimum to +158°F / +70°C maximum	
Operating Humidity	0 to 95%, non-condensing	
Operating Altitude	13123.4ft / 4000m (derating from 6561.7ft / 2000m)	
Audible Noise	<50dBA @ 1m and 25°C	
Display and Communication		
User Interface and Display	LCD+LED	
Inverter Monitoring	Modbus RS485	
Site Level Monitoring	Up to 32 inverters per network	
Modbus Data Mapping	CPS	
Remote Diagnostics	Standard	
Mechanical		
Dimensions (HxWxD)	Inverter: 26 x 23.6 x 9.1in. (660 x 600 x 230mm); Wire-box 13.4 x 23.6 x 9.1in. (340 x 600 x 230mm)	
Weight	Inverter: 104lbs/47kg; Wire-box: 20lbs/9kg	
Mounting / Installation Angle[3]	15 to 90 degrees from horizontal	
AC Termination	Screw Clamp Terminal Block (Wire range: #14 - 1/0AWG CU/AL)	
DC Termination	Screw Clamp Fuse Holder (Wire range: #14 - #6AWG CU)	
Fused String Inputs (4 per MPPT)	15A fuses provided (Fuse values up to 30A acceptable)	
Safety		
Certifications and Standards	UL1741-2010, UL1699B, CSA-C22.2 NO.107.1-01, IEEE1547; FCC PART15	
Selectable Grid Standard	IEEE 1547-2003	
Warranty		
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) See user manual for further requirements regarding non-operating conditions.
3) Shade Cover accessory required for installation angles of 75 degrees or less.

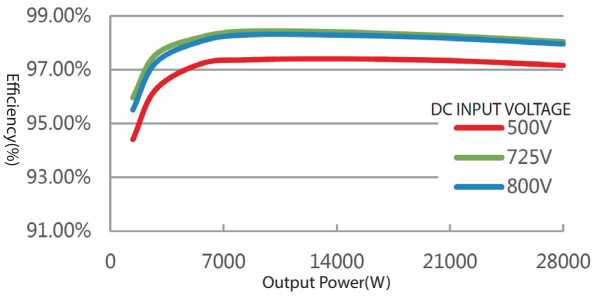
36kW, 1000Vdc String Inverters for North America

The medium power series of grid-tied, transformerless inverters help to accelerate the use of 1000Vdc and three phase string architecture for commercial and small ground mount utility applications. An NRTL approved, cost effective alternative to central inverters enabling BoS cost savings, high harvest performance and modular design building blocks. These models provide up to 98.5% conversion efficiency and wide operating window of 240-950Vdc with dual MPPT's for maximum energy harvest.

CPS SCA36KTL-DO/US-480

Efficiency Curve

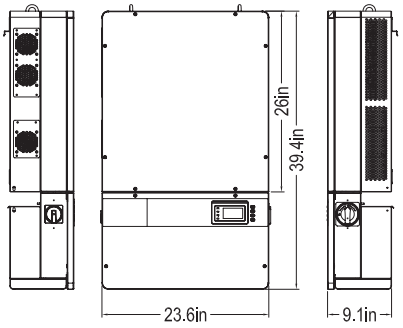
CPS SCA36KTL-DO/US-480



High Efficiency

- Maximum efficiency of 98.5%, CEC efficiency of 98%
- 3-level technology and enhanced control mechanism to achieve high efficiency over wide load range
- 2 MPPTs to achieve higher system efficiency
- Transformerless design

Dimensions



High Reliability

- Standard warranty: 10 years, extension up to 20 years
- Advanced thermal design, with variable speed fans
- Ground-fault detection and interruption circuit
- AFCI Integrated (per UL1699B)
- UL1741 SA Certified to CA Rule 21

C SA US

FC This device complies with part 15 of the FCC Rules

Broad Adaptability

- NEMA 4X (IP65) rated for outdoor applications
- Utility interactive controls: Active power derating, reactive power control
- Separable wiring box design for fast service
- Integrated DC & AC disconnect switches
- Wide MPPT range for flexible string sizing
- 1000V Max. DC input voltage for flexible configuration
- 15 - 90 degree from horizontal installation angle
- AC output terminal compatible with AL/CU wire

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Model Name	CPS SCA36KTL-DO/US-480
DC Input	
Max. PV Power	54kW (27kW per MPPT)
Max. DC Input Voltage	1000Vdc
Operating DC Input Voltage Range	240-950Vdc
Start-up DC Input Voltage / Power	320V / 80W
Number of MPP Trackers	2
MPPT Voltage Range	540-800Vdc
Max. PV Short-Circuit Current (Isc x 1.25)	125A (62.5A per MPPT)
Number of DC Inputs	10 inputs, 5 per MPPT
DC Disconnection Type	Load rated DC switch
DC Surge Protection	Type II MOV, 2000V_C,10kA I_{TM} (8/20μS)
AC Output	
Rated AC Output Power	36kW
Max. AC Apparent Power	36kVA
Rated Output Voltage	480Vac
Output Voltage Range[1]	422 - 528Vac
Grid Connection Type	3Φ / PE / N (Neutral optional)
Nominal AC Output Current @480Vac	43.5A
Rated Output Frequency	60Hz
Output Frequency Range[1]	57 - 63Hz
Power Factor	>0.99 (±0.8 adjustable)
Current THD @ Rated Load	<3%
Max. Fault Current Contribution (1 Cycle RMS)	73.2A
AC Disconnection Type	Load rated AC switch
AC Surge Protection	Type II MOV, 1500V_C,10kA 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 (derating from +113°F / +45°C)
Non-Operating Temperature Range[2]	No low temp minimum to +158°F / +70°C maximum
Operating Humidity	0 to 95%, non-condensing
Operating Altitude	13123.4ft / 4000m (derating from 6561.7ft / 2000m)
Audible Noise	<50dBA @ 1m and 25°C
Display and Communication	
User Interface and Display	LCD+LED
Inverter Monitoring	Modbus RS485
Site Level Monitoring	Up to 32 inverters per network
Modbus Data Mapping	CPS
Remote Diagnostics	Standard
Mechanical	
Dimensions (HxWxD)	Inverter: 26 x 23.6 x 9.1in. (660 x 600 x 230mm); Wire-box 13.4 x 23.6 x 9.1in. (340 x 600 x 230mm)
Weight	Inverter: 121lbs/55kg; Wire-box: 24lbs/11kg
Mounting / Installation Angle[3]	15 to 90 degrees from horizontal
AC Termination	Screw Clamp Terminal Block (Wire range: #14 - 1/0AWG CU/AL)
DC Termination	Screw Clamp Fuse Holder (Wire range: #14 - #6AWG CU)
Fused String Inputs (5 per MPPT)	15A fuses provided (Fuse values up to 30A acceptable)
Safety	
Certifications and Standards	UL1741SA-2016, UL1699B, CSA-C22.2 NO.107.1-01, IEEE1547; FCC PART15
Selectable Grid Standard and SRD	IEEE 1547-2003, CA Rule 21
Smart-Grid Features	Voltage-RideThru, Frequency-RideThru, Soft-Start, Volt-Var, Frequency-Watt, Volt-Watt
Warranty	
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) See user manual for further requirements regarding non-operating conditions.
3) Shade Cover accessory required for installation angles of 75 degrees or less.