

SH100/110CX

Preliminary

Multi-MPPT Commercial & Industrial Hybrid Inverter



SUPERIOR YIELD

- Up to 200 % PV oversizing
- 40 A x 10 MPPTs with 182 / 210 mm high-power PV modules
- PID Zero[®] anti-PID technology



ROBUST PERFORMANCE

- 150 % off-grid overload (10 s)
- Up to 200 A charge / discharge current
- Built-in ≤ 10 ms UPS level on / off-grid switching



FLEXIBLE APPLICATION

- Smart trading ready for intelligent TOU, dynamic pricing, and VPP participation
- DC coupled solution for new installation and retrofit upgrades



ACTIVE SAFETY

- AFCI 3.0, intelligent DC arc interrupter, with a detection range of 450 m
- Intelligent string-level protection switch & PV-to-Ground fault protection
- IP66, C5, and self-cleaning air ducts function



Type designation	SH100CX	SH110CX
Input (DC)		
Max. PV input power	200 kWp	220 kWp
Max. PV input voltage ¹⁾	1100 V	
Min. PV input voltage / Startup input voltage	180 V / 200 V	
Rated PV input voltage	600 V	
MPPT voltage range ²⁾	180 V - 1000 V	
No. of independent MPP inputs	10	
No. of PV strings per MPPT	2	
Max. PV input current	40 A * 10	
Max. DC short-circuit current	50 A * 10	
Max. current for DC connector	30 A	
Battery data		
Battery type	Lithium-ion battery	
Battery Voltage Range ³⁾	129 V - 880 V	
Communication	CAN	
Max. charge / discharge current ⁴⁾	200 A / 200 A	
Max. charge / discharge power	99.99 kW / 99.99 kW	110 kW / 110 kW
Input and output (AC)		
Max. AC power from grid ⁵⁾	160 kVA	
Rated AC output power	99.99 kW	110 kW
Max. AC output apparent power	99.99 kVA	110 kVA
Max. AC output current	144.3 A	158.8 A
Rated AC output current	144.3 A	158.8 A
Rated AC voltage	3 / N / PE, 220 V / 380 V, 230 V / 400 V	
AC voltage range	270 V - 480 V	
Rated grid frequency	50 Hz / 60 Hz	
Grid frequency range	45 Hz - 55 Hz / 55 Hz - 65 Hz	
Harmonic (THD)	< 3 % (at 400 V AC voltage and rated power)	
Power factor at rated power / Adjustable power factor	> 0.99 / 0.8 leading - 0.8 lagging	
Feed-in phases / AC connection	3 / 3 - N - PE	
Backup data		
Rated voltage	3 / N / PE, 220 V / 380 V, 230 V / 400 V	
Rated frequency	50 Hz / 60 Hz	
THDv (@ Linear load)	< 2 % (at rated power)	
Backup switch time	≤ 10 ms	
Rated output power	99.99 kW	110 kW
Peak load power	1.5 times of rated power, 10 s	
Efficiency		
Max. efficiency / European efficiency	98.3 % / 98 %	98.5 % / 98.2 %
Protection & function		
Grid monitoring	Yes	
DC reverse polarity protection	Yes	
AC short-circuit protection	Yes	
Leakage current protection	Yes	
DC switch	Yes	
Ground fault monitoring	Yes	
PV string current monitoring	Yes	
Arc fault circuit interrupter (AFCI)	Yes	
Surge protection	DC Type I+II / AC Type II	
PID zero	Yes	
Battery input reverse polarity protection	Yes	
General data		
Topology	Transformerless	
Degree of protection	IP66	
Protective class	Protective class I	
Overvoltage category	III[AC] ; II[PV] [BATTERY]	
Active anti-islanding method	Frequency shift	
Dimensions (W * H * D)	1095 mm * 795 mm * 360 mm	
Weight	≤ 128 kg	
Mounting method	Wall-mounting bracket	
Operating ambient temperature range	-30 °C ~ 60 °C	
Allowable relative humidity range (non-condensing)	0 - 100 %	
Corrosion	C5	
Cooling method	Smart forced air cooling	
Max. operating altitude	3000 m	
Noise (Typical)	≤ 65 dB (A)	
Grid compliance	IEC 62109-1 / -2, IEC 62477-1, IEC 62920, EN 55011, AS / NZS 4777.2:2020, IEC 61683, IEC 62116, IEC 61727, IEC 60068, IEC 61000-6-3, IEC 63027	
Interface		
Display	LED, Bluetooth + APP	
Communication with battery	CAN	
Communication with Logger	RS485	
Communication between Logger and iSolarCloud	4G / WLAN / Ethernet	
DI / DO	DI * 2 / DO * 3	
DC connection type	MC4 (Max. 6 mm²)	
AC connection type ⁶⁾	OT / DT terminal (Max. 300 mm²)	
Country of manufacture	China	

¹⁾ Input voltage exceeding the MPPT operating voltage range triggers inverter protection

²⁾ Please refer to the user manual for the full load MPPT voltage range

³⁾ Minimum battery voltage for black-start : 270 V

⁴⁾ Depending on the connected battery

⁵⁾ Max. AC power from grid would be 99.99kVA for SH100CX and 110kVA for SH110CX if inverter works without backup loads

⁶⁾ Please refer to the user manual for detail information

