

Energy of the Future, Today

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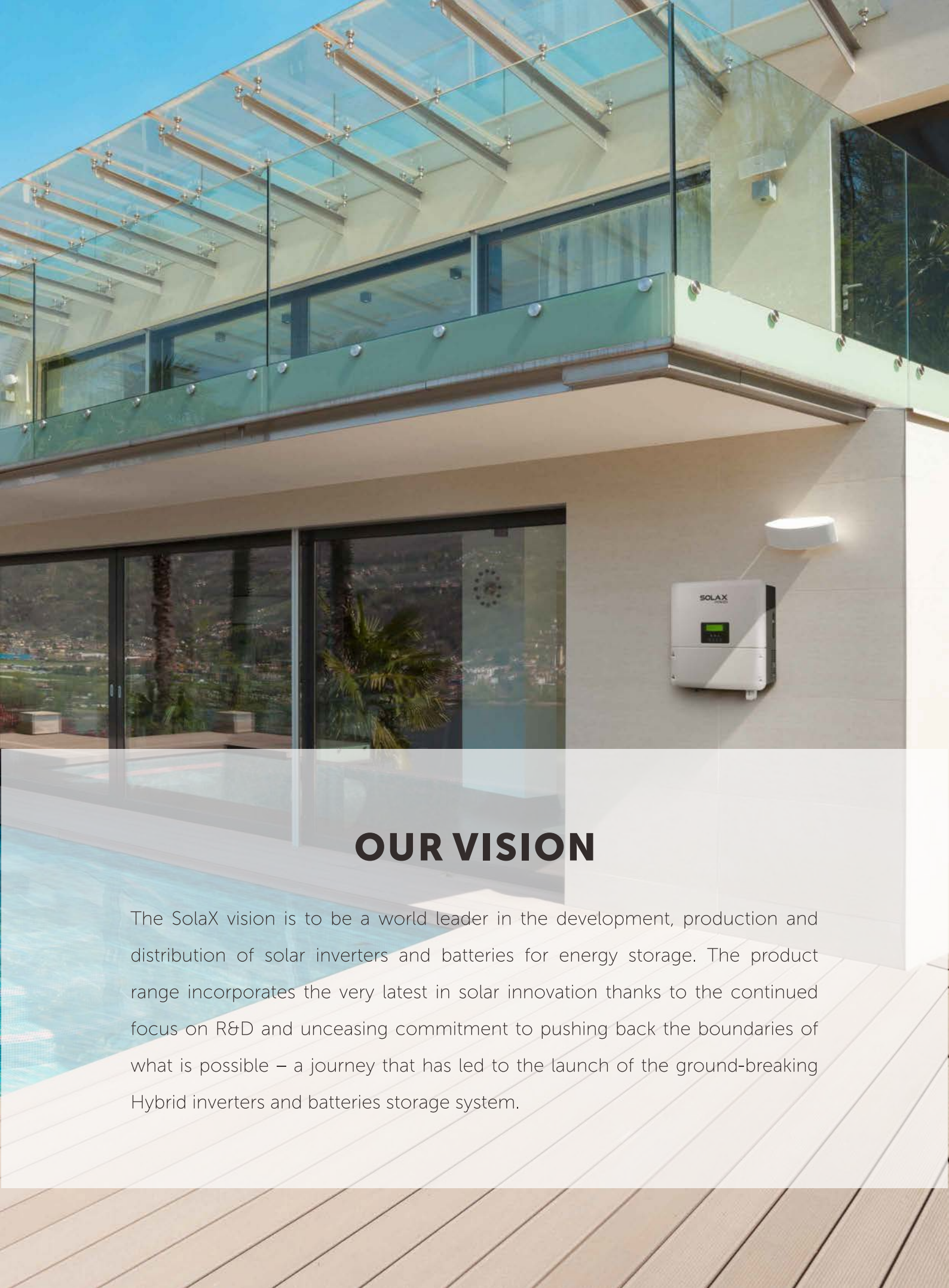
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SOLAX HYBRID INVERTER

ENERGY STORAGE SOLUTIONS

2019 Product Brochure



OUR VISION

The SolaX vision is to be a world leader in the development, production and distribution of solar inverters and batteries for energy storage. The product range incorporates the very latest in solar innovation thanks to the continued focus on R&D and unceasing commitment to pushing back the boundaries of what is possible – a journey that has led to the launch of the ground-breaking Hybrid inverters and batteries storage system.



Use More of Your Energy

Solar panels generate the most energy during the day when the sun is shining and when you and your family tend to use the least energy or have the lowest consumption levels. With ever increasing energy prices and the on-going phased feed-in tariff reductions, you must make the most out of your solar energy. The X-Hybrid is the heart of your optimised self-consumption system. It's a all-in-one device that manages your solar modules, batteries, electrical appliances and connection to the grid, helping you achieve complete control of your energy and using it as efficiently as possible.

For Everyone

Every household has its own energy requirements. That's why the X-Hybrid was developed to work with most of the market leading lithium-ion batteries available today all ranging in different sizes, enabling people to create a storage bank specifically tailored their energy needs. With storage options ranging from 4.5 kWh to 25.2 kWh, the X-Hybrid will power a detached house, a multi-family house or a small apartment.

Stay Protected

Electricity blackouts are quite rare and will only last for a few minutes, or hours at the most. Even so these outages are always unpredictable and can cause problems. With the X-Hybrid's built-in emergency power supply you are protected during these power cuts. The X-Hybrid will supply your household with stored energy during these power failures ensuring important devices can stay powered until the situation has been sorted.



Features:

- Increased self consumption
- Unbalanced output supported
- Generator interface
- Remote control function

SolaX Power is pleased to announce the launch of the X-Hybrid Three Phase commercial battery storage inverter. The 3-Phase includes inverters ranging in size from 5 to 10kW, and with the ability to install multiple inverters in parallel, scalable battery storage for commercial applications is now a reality. The inverter is equipped with a built-in EPS (Emergency Power Supply), has multiple communication options and can be controlled remotely.



X3-HYBRID HV (THREE PHASE)

X3-HYBRID-5.0T

X3-HYBRID-6.0T

X3-HYBRID-8.0T

X3-HYBRID-10.0T

INPUT (DC)

Max.recommended DC power[W]
Max.DC voltage[V]
Nominal DC operating voltage[V]
Max.input current[A]
Max. short circuit current[A]
No. of MPP trackers
Strings per MPP tracker

6000	8000	10000	13000
1000	1000	1000	1000
720	720	720	720
11/11	11/11	11/11	20/11
14/14	14/14	14/14	23/14
2	2	2	2
1	1	1	2/1

OUTPUT AC

Nominal AC power [VA]
Max. AC power [VA]
Rated grid voltage(AC voltage range) [V]
Rated grid frequency [Hz]
Nominal AC current [A]
Displacement power factor
Total harmonic distortion(THD, rated power) [%]
Load control

5000	6000	8000	10000
5000	6000	8000	10000
400/230;380/220	400/230;380/220	400/230;380/220	400/230;380/220
50/60	50/60	50/60	50/60
7.6	9.1	12.1	15.2
0.8 leading ... 0.8 lagging			
<2			
Yes (optional)			

INPUT AC

Nominal AC power[VA]
Rated grid voltage(AC voltage range)[V]
Rated grid Frequency[Hz]
Power factor

5000	6000	7000	7000
400/230;380/220			
50/60			
1			

OUTPUT DC (BATTERY)

Battery voltage range [V]
Recommended battery voltage [V]
Max.charging/discharging power [W]
Max.charging/discharging current [A]
Communication interfaces
Reverse connect protection

170-500			
200	240	320	400
6000	8000	10000	10000
25			
CAN/RS485			
Yes			

EPS OUTPUT (WITH BATTERY)

EPS rated power [VA]
EPS rated voltage [V], Frequency [Hz]
EPS rated current [A]
EPS peak power[W];Duration [s]
Switch time[s]
Total harmonic distortion(THD, linear load) [%]
Parallel operation

5000	6000	8000	10000
400/380, 50/60	400/380, 50/60	400/380, 50/60	400/380, 50/60
7.2	8.7	11.6	14.5
<7500,60	<9000,60	<12000,60	<15000,60
<1.5			
<3			
Being developed			

EFFICIENCY

MPPT efficiency [%]
Euro efficiency [%]
Max. efficiency [%]
Battery charge/discharge efficiency [%]

99.9			
97.0			
97.8			
97.0/96.0	97.0/96.0	97.5/96.5	97.5/96.5

POWER CONSUMPTION

Standby consumption [W]
Idle mode

<7
YES

STANDARD

Safety
EMC
Certification

IEC62109-1-2 / IEC62040
EN61000-6-1/EN61000-6-2/EN61000-6-3
VDE0126-1-1 A1:2012/VDE-AR-N4105/G83/AS4777/EN50438/CEI 0-21/VDE2510

ENVIRONMENT LIMIT

Protection class
Operating temperature range [°C]
Altitude[m]
Storage temperature[°C]
Noise emission(typical) [dB]
Over voltage category

IP65
-25~+60 (derating at+45)
<2000
-20~+60
<30
III (electric supply side), II (PV side)

DIMENSION AND WEIGHT

Dimensions(WxHxD) [mm]
Weight[kg]
Cooling concept
Topology
Communication
LCD display
Standard warranty [years]

457*654*228
40
Natural
Transformerless
Ethernet/Meter/WIFI (optional)/RF(optional)/DRM/USB/ISO alarm
Backlight 20*4 character
5-10



X1-HYBRID HV (SINGLE PHASE)

	X1-HYBRID-3.0T	X1-HYBRID-3.7T	X1-HYBRID-4.6T	X1-HYBRID-5.0T
INPUT (DC)				
Max.recommended DC power[W]	4000	5000	6000	6000
Max.DC voltage[V]	600	600	600	600
Nominal DC operating voltage[V]	360	360	360	360
Max.input current[A]	10/10	10/10	10/10	10/10
Max. short circuit current[A]	14/14	14/14	14/14	14/14
MPPT voltage range[V]	125-550	125-550	125-550	125-550
No. of MPP trackers	2	2	2	2
Strings per MPP tracker	1	1	1	1
OUTPUT AC				
Nominal AC power [VA]	3000	3680	4600	4999
Max. AC power [VA]	3000	3680	4600	4999
Rated grid voltage(AC voltage range) [V]	220/230/240(180 to 270)	220/230/240(180 to 270)	220/230/240(180 to 270)	220/230/240(180 to 270)
Rated grid frequency [Hz]	50/60	50/60	50/60	50/60
Nominal AC current [A]	13	16	20	21.7
Max. AC current [A]	14.4	16	21	21.7
Displacement power factor	0.8 leading ... 0.8 lagging			
Total harmonic distortion(THD, rated power) [%]	<2			
Load control	Yes (optional)			
OUTPUT DC (BATTERY)				
Battery voltage range [V]	85-400			
Recommended battery voltage [V]	300			
Max.charging/discharging power [W]	6000			
Max.charging/discharging current [A]	20			
Communication interfaces	CAN/RS485			
Reverse connect protection	Yes			
EPS OUTPUT (WITH BATTERY)				
EPS rated power [VA]	4000	4000	5000	5000
EPS rated voltage [V], Frequency [Hz]	230, 50/60	230, 50/60	230, 50/60	230, 50/60
EPS rated current [A]	17.4	17.4	21.7	21.7
EPS peak power[W];Duration [s]	6000,10	6000,10	8000,10	8000,10
Switch time[s]	<0.5			
Total harmonic distortion(THD, linear load) [%]	<2			
EFFICIENCY				
MPPT efficiency [%]	99.9			
Euro efficiency [%]	97.0			
Max. efficiency [%]	97.8			
Battery charge/discharge efficiency [%]	98.5 (PV-BAT) 97.0 (BAT-AC)			
POWER CONSUMPTION				
Standby consumption [W]	<7			
Idle mode	YES			
STANDARD				
Safety	IEC62109-1-2 / IEC62040			
EMC	EN61000-6-1/EN61000-6-2/EN61000-6-3			
Certification	VDE0126-1-1 A1:2012/VDE-AR-N4105/G83/G59/AS4777/EN50438/CEI0-21/VDE2510			
ENVIRONMENT LIMIT				
Protection class	IP65			
Operating temperature range [°C]	-20~+60 (derating at+45)			
Altitude[m]	<2000			
Storage temperature[°C]	-20~+60			
Noise emission(typical) [dB]	<40			
Over voltage category	III (electric supply side), II (PV side)			
DIMENSION AND WEIGHT				
Dimensions(WxHxD) [mm]	476*464*180			
Weight[kg]	27			
Cooling concept	Natural			
Topology	Transformerless			
Communication	Ethernet/Meter/WIFI (optional)/RF(optional)/DRM/USB/ISO alarm/Parallel operation			
LCD display	Backlight 20*4 character			
Standard warranty [years]	5-10			



X3-RETRO FIT (THREE PHASE)

Version: E,C
E:with EPS function
C:without EPS function

	X3-Fit-8.0		X3-Fit-10.0	
OUTPUT (AC)				
Nominal AC power[VA]	E Version	C Version	E Version	C Version
Max. apparent AC power[VA]	8000	8000	10000	10000
Rated grid voltage(AC voltage range)[V]	8000	8000	10000	10000
Rated grid Frequency[Hz]	400V/230VAC;380/220VAC			
Nominal AC current[A]	50/60			
Displacement power factor	12.2	12.2	15.15	15.15
Total harmonic distortion(THDi, rated power) [%]	0.8 leading to 0.8 lagging			
Parallel operation	<2			
Load control	Yes			
	Yes(optional)			
INPUT AC				
Nominal AC power[VA]	7000	7000	7000	7000
Rated grid voltage(AC voltage range)[V]	400/230;380/220			
Rated grid Frequency[Hz]	50/60			
Power factor	1			
BATTERY				
Battery voltage range[V]	170-500			
Max.charge/discharge current[A]	25			
Peak charge/discharge current[A]	30 (60S)			
Communication interfaces	CAN/ RS485			
Reverse connect protection	YES			
EPS OUTPUT(WITH BATTERY)				
EPS MAX power[VA]	8000	—	10000	—
EPS rated power[VA]	8000	—	10000	—
EPS rated voltage[V],Frequency[Hz]	400/380 50/60	—	400/380 50/60	—
EPS rated current[A]	11.6	—	14.5	—
EPS peak power[W], duration [s]	12000,60	—	15000,60	—
Switch time[s]	<1.5	—	<1.5	—
Total harmonic distortion(THDv, linear Load) [%]	<3	—	<3	—
On-grid parallel operation	Yes	—	Yes	—
Off-grid parallel operation	Being developed	—	Being developed	—
Changeover device	external	—	external	—
Three phases unbalanced	SUPPORT			
EFFICIENCY				
Max. Battery charge efficiency (GRID to BAT)	96			
Max. Battery discharge efficiency (BAT to AC)	96.5			
POWER CONSUMPTION				
Internal consumption(night) [W]	<7			
Idle mode	YES			
STANDARD				
Safety	IEC62109-1-2 / IEC62040/ AS3100			
EMC	EN 61000-6-1 / EN 61000-6-2 / EN 61000-6-3			
Certification	VDE 0126-1-1 A1:2012 / VDE-AR-N 4105 / G83 / AS4777 / EN50438 / CEI 0-21 /			
ENVIRONMENT LIMIT				
Protection class	IP65			
Operating temperature range[oC]	-20..... +60 (derating at +45)			
Humidity[%]	0~100 (non-condensing)			
Altitude[m]	<2000			
Storage temperature[oC]	-20..... +60			
Noise emission(typical)[dB]	<40			
Over voltage category	III(electric supply side), II(battery side)			
DIMENSION AND WEIGHT				
Dimensions(WxHxD) [mm]	457*654*228			
Weight [kg]	38			
Cooling concept	Natural			
Topology	Transformerless			
Communication	Ethernet, Meter, WIFI(optional), RF(optional), DRM, USB, ISO alarm			
LCD display	Backlight 20*4 character			
Button	Capacitive Touch Sense			
Standard warranty [year]	5			



Features:

- Natural Cooling, quiet and low maintenance
- Max Efficiency up to 97%
- Multiple protection:RCD, isolation,over voltage
over temperature, earth protection,short-circuit protection,etc
- Compatible with High-voltage batteries
- Transformerless design with software and hardware protection.



X1-AC (SINGLE PHASE)

	X1-AC-3.0	X1-AC-3.6	X1-AC-4.6	X1-AC-5.0
OUTPUT (AC)				
Nominal AC power [VA]	3000	3680	4600	4999
Max. apparent AC power [VA]	3000	3680	4600	4999
Rated grid voltage (range) [V]	220/230/240 (180 to 280)			230/240 (180 to 280)
Rated grid Frequency[Hz]	50/60			50/60
Nominal AC current[A]	13	16	20	21.7
Max. AC current[A]	13.6	16.8 (16 for G83)	21	21.7
Max. overcurrent protection[A]	45			
Displacement power factor	0.8 leading to 0.8 lagging			
THDi, rated power [%]	<2			
Load control	Optional			
INPUT AC				
Nominal AC power[VA]	3000	3680	4600	4999
Max. apparent AC power[VA]	3000	3680	4600	4999
Rated grid voltage(range)[V]	220/230/240 (180 to 280)			
Rated grid frequency[Hz]	50/60			
Nominal AC current[A]	13	16	20	21.7
Max.AC current[A]	13.6	16.8 (16 for G83)	21	21.7
Max. short current(Isc)[A]	45			
Displacement power factor	0.8 leading to 0.8 lagging			
BATTERY				
Battery type	Lithium/Lead-acid battery			
Battery voltage range[V]	70~400			
Recommended battery voltage[V]	300			
Rated charge/discharge current[A]	25			
Max. charge/discharge current[A]	35	35	35	35
Communication interfaces	CAN			
Reverse connect protection	Yes			
EFFICIENCY				
Max. efficiency	97.00			
Max. Battery charge efficiency (AC to BAT)(@full load) [%]	97.00			
Max. Battery discharge efficiency (BAT to AC)(@full load) [%]	97.00			
SAFETY & PROTECTION				
Over/under voltage protection	Yes			
DC isolation protection	Yes			
Grid protection	Yes			
DC injection monitoring	Yes			
Residual current detection	Yes			
Anti-islanding protection	Yes			
Over load protection	Yes			
Over heat protection	Yes			
General Data				
Dimension [W/H/D](mm)	430*341.5*143			
Dimension of packing [W/H/D](mm)	554*446*259			
Net weight [kg]	15.5	15.5	16.3	16.3
Gross weight [kg]	18.5	18.5	19.3	19.3
Installation	Wall-mounted			
Operating temperature range[°C]	-20~+60 (derating at 45)			
Storage temperature [°C]	-20~+60			
Storage/Operation relative humidity	0~100%, condensing			
Altitude [m]	≤2000			
Ingress Protection	IP65(for outdoor use)			
Protective Class	I			
Over Voltage Category	III(MAINS), I(DC)			
Pollution Degree	III			
Cooling	Natural			
Inverter Topology	Non-isolated			
Communication interface	RS485, Meter(optional), Wifi(optional), RF(optional), DRM, CAN, USB			
Certification	G83,G59			



X1-RETRO FIT (SINGLE PHASE)

Version: E,C,I
E:with EPS function
C:without EPS function
I:internal EPS function device

X1-FIT-3.7kW

X1-FIT-4.6kW

X1-FIT-5.0kW

OUTPUT (AC)	C Version	E Version	I Version	C Version	E Version	I Version	C Version	E Version	I Version
Nominal AC power[VA]		3680			4600			4999	
Max. apparent AC power[VA]		3680			4600			4999	
Rated grid voltage(AC voltage range)[V]		220/230/240 (180 to 270)			220/230/240 (180 to 270)			220/230/240 (180 to 270)	
Rated grid Frequency[Hz]		50/60			50/60			50/60	
Nominal AC current[A]		16			20			21.7	
Max. AC current[A]		16			21			21.7	
Displacement power factor		0.8 leading to 0.8 lagging			0.8 leading to 0.8 lagging			0.8 leading to 0.8 lagging	
THDi, rated power [%]		<2			<2			<2	
Load control		Being developed (optional)			Being developed (optional)			Being developed (optional)	
INPUT AC									
Nominal AC power[VA]		3680	7680		4600	9600		4999	9999
Max. AC current[A]		16	37.7		21	47		21.7	47.7
Rated grid voltage(AC voltage range)[V]		220/230/240 (180 to 270)			220/230/240 (180 to 270)			220/230/240 (180 to 270)	
Rated grid Frequency[Hz]		50/60			50/60			50/60	
Displacement power factor		0.8 leading to 0.8 lagging			0.8 leading to 0.8 lagging			0.8 leading to 0.8 lagging	
BATTERY									
Battery voltage range[V]		85-400			85-400			85-400	
Recommended battery voltage[V]		300			300			300	
Max.charge/discharge current[A]		20 (adjustable)			20 (adjustable)			20 (adjustable)	
Peak charge/discharge current[A]		30A,30S			30A,30S			30A,30S	
Communication interfaces		CAN/ RS485			CAN/ RS485			CAN/ RS485	
Reverse connect protection		YES			YES			YES	
EPS OUTPUT(WITH BATTERY)									
EPS MAX power[VA]	-	5000		-	6000		-	6000	
EPS rated power[VA]	-	4000		-	5000		-	5000	
EPS rated voltage[V],Frequency[Hz]	-	230, 50/60		-	230, 50/60		-	230, 50/60	
EPS rated current[A]	-	17.4		-	21.7		-	21.7	
EPS MAX current[A]	-	21.7		-	26		-	26	
EPS peak power[W], Duration [s]	-	6000, 10		-	8000, 10		-	8000, 10	
Switch time[s]	-	<0.5 <0.02		-	<0.5 <0.02		-	<0.5 <0.02	
Total harmonic distortion(THDv, linear Load) [%]	-	<2		-	<2		-	<2	
On-grid parallel operation	-	Yes		-	Yes		-	Yes	
Off-grid parallel operation	-	Being developed		-	Being developed		-	Being developed	
Changeover device	-	External Internal		-	External Internal		-	External Internal	
EFFICIENCY									
Max. Battery charge efficiency (AC to BAT)(@full load) [%]		95.60			95.60			95.60	
Max. Battery discharge efficiency (BAT to AC)(@full load) [%]		97.00			97.00			97.00	
POWER CONSUMPTION									
Internal consumption(Idle) [W]		<7			<7			<7	
Idle mode		YES			YES			YES	
STANDARD									
Safety					IEC62109-1 / -2 / IEC62040 /				
EMC					EN 61000-6-1 / EN 61000-6-2 / EN 61000-6-3				
Certification					VDE 0126-1-1 A1:2012 / VDE-AR-N 4105 / G83 / G59 / AS4777 / EN50438 / CEI 0-21 / VDE 2510				
ENVIRONMENT LIMIT									
Ingress protection					IP65				
Operating temperature range[°C]					-20..... +60 (derating at +45)				
Humidity[%]					0~95 (non-condensing)				
Altitude[m]					<2000				
Storage temperature[°C]					-20..... +60				
Noise emission(typical)[dB]					<40				
Over voltage category					III(electric supply side), II(battery side)				
DIMENSION AND WEIGHT									
Dimensions(WxHxD) [mm]					476*464*180				
Weight [kg]					26				
Cooling concept					Natural				
Topology					Transformerless				
Communication					Ethernet, Meter, WIFI(optional), RF(optional), DRM, USB, ISO alarm				
LCD display					Backlight 20*4 character				
Button					Capacitive Touch Sense				
Standard warranty [year]					5				



Plug & Play Wifi Monitoring

Monitor Your System Anywhere In The World



Monitor Over The World

Wherever you are in the world, as long as you have a wifi connection you can check up on your SolaX system. View its current production, money saved and even trees planted!



Accessible Via App Or Web

The SolaX Cloud is available via app or web browser, whichever you prefer. Our app can also be found in either the iOS or the Android store.



Battery Management

Use the SolaX Cloud to check the status of your battery. View live data and check the historical performance using a range of reporting tools.



Email Reporting

The SolaX Cloud will send you detailed email reports regarding your systems status, the intelligent cloud will pick up on any fault and ping an in-depth report to the specified email address.



Product Name	Pocket Wifi
Model	Pocket Wifi 2.0
Supply Voltage	+3.3V
Frequency	2.400~2.472GHz
Antenna Gain	3dB
Interface	UART/USART
Protocol	TTL
Wireless mode	802.11b/g/n
Degree of protection	IP 65
Dimension	82X40X24.5mm
Weight	<35g