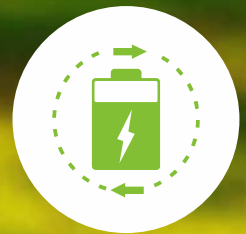


PRODUCT BROCHURE

Solar & Energy Storage



HYBRID INVERTER

LXP 3K/3.6K/4K/4.6K/5K Hybrid



HIGH PERFORMANCE

Up to **66A** Charge/Discharge current of battery

Up to **3600W** Charge/Discharge power of grid



ENHANCE UPS

Seamless switching within **0.01s** with stronger back-up output

Up to **10** units in parallel of UPS Mode



EASY TO USE

Schedulable working modes, easy installation and setting

With smaller size and lighter weight **20kg**



REMOTE MONITORING & MAINTENANCE

Remote monitoring and upgrade



OPTIMIZED HEAT CONTROL

Much better heat dissipation, and much lower derating



SAFER OPERATION

Protected connection area, multiple protection devices



IP65 PROTECTION

Designed for both outdoor and indoor installation

“

*Free Remote Monitoring
and Management*

”

Solar Input	3K	3.6K	4K	4.6K/5K
Max. DC Input Power	6600W	7000W	7000W	8000W
Nominal DC Input Voltage	360V.d.c	360V.d.c	360V.d.c	360V.d.c
DC Input Voltage Range	100 - 550V.d.c	100 - 550V.d.c	100 - 550V.d.c	100 - 550V.d.c
MPPT Voltage Range	120 - 500V.d.c	120 - 500V.d.c	120 - 500V.d.c	120 - 500V.d.c
Start-up Voltage	140V.d.c	140V.d.c	140V.d.c	140V.d.c
MPPT Number	2	2	2	2
Max. DC Input Current	12.5A/12.5A	12.5A/12.5A	12.5A/12.5A	12.5A/12.5A

Battery Input/Output				
Compatible Battery Type	Lithium-ion/Lead-Acid	Lithium-ion/Lead-Acid	Lithium-ion/Lead-Acid	Lithium-ion/Lead-Acid
Nominal Battery Voltage	48V.d.c	48V.d.c	48V.d.c	48V.d.c
Battery Voltage Range	40 - 60V.d.c	40 - 60V.d.c	40 - 60V.d.c	40 - 60V.d.c
Max. Charge/Discharge Current	66A/66A	66A/66A	66A/66A	66A/66A
Max. Charge/Discharge Power	3600W/3600W	3600W/3600W	3600W/3600W	3600W/3600W
Charging Curve	3 stages	3 stages	3 stages	3 stages
Max. Charge Voltage	59V	59V	59V	59V
Capacity of Battery	2-20kWh	2-20kWh	2-20kWh	2-20kWh

AC Input/Output				
Nominal AC Output Power	3000W	3600W	4000W	4600W/5000W
Max. AC Output Power	3000VA	3600VA	4000VA	4600VA/5000VA
Max. AC Output Current	15A	16A	20A	25A
Nominal AC Voltage	230V.a.c	230V.a.c	230V.a.c	230V.a.c
AC Voltage Range	180 - 270V.a.c	180 - 270V.a.c	180 - 270V.a.c	180 - 270V.a.c
Nominal AC Frequency	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz
AC Frequency Range	45 - 55Hz / 55 - 65Hz	45 - 55Hz / 55 - 65Hz	45 - 55Hz / 55 - 65Hz	45 - 55Hz / 55 - 65Hz
Power Factor	Adjustable 0.8 overexcited to 0.8 underexcited			
THDI	<3%	<3%	<3%	<3%

UPS Output - with Battery				
UPS Max. Output Power without Solar	3600W	3600W	3600W	3600W
UPS Max. Output Power with Solar	5000W	5000W	5000W	5000W
UPS Nominal Output Voltage	230V.a.c	230V.a.c	230V.a.c	230V.a.c
UPS Nominal Output Frequency	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz
UPS Nominal Output Current	13A	13A	13A	13A
Peak Power	4500W, 30s	4500W, 30s	4500W, 30s	4500W, 30s
THDV	<5%	<5%	<5%	<5%
Switching Time	<0.01s	<0.01s	<0.01s	<0.01s

Efficiency				
Europe Efficiency	97.5%	97.5%	97.5%	97.5%
Max. Efficiency	97.9%	97.9%	97.9%	97.9%
Battery Charge/Discharge Efficiency	94.5%	94.5%	94.5%	94.5%

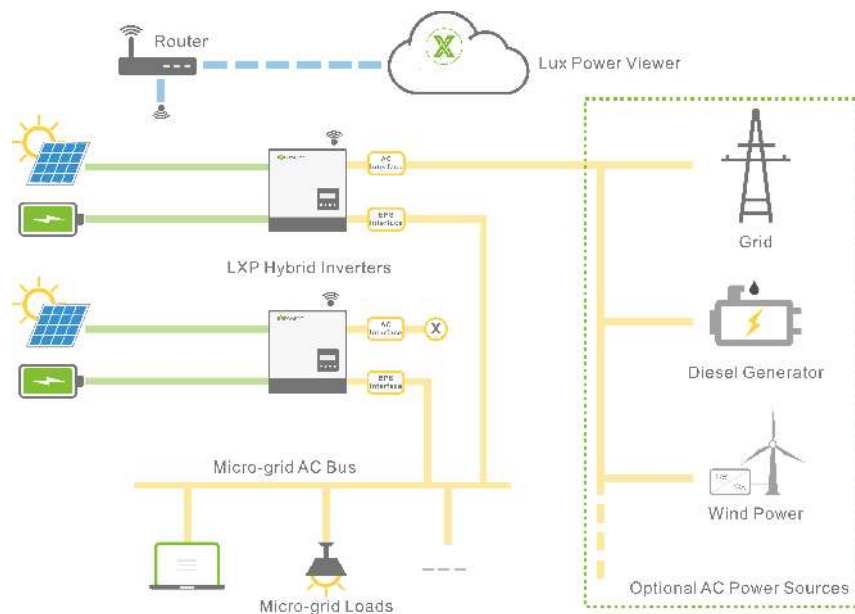
Protection				
Reverse Polarity Protection	Yes	Yes	Yes	Yes
Over Current/Voltage Protection	Yes	Yes	Yes	Yes
Anti-islanding Protection	Yes	Yes	Yes	Yes
AC Short-circuit Protection	Yes	Yes	Yes	Yes
Leakage Current Protection	Yes	Yes	Yes	Yes
Ground Fault Monitoring	Yes	Yes	Yes	Yes
Grid Monitoring	Yes	Yes	Yes	Yes
Ingress Protect Degree	IP65 / NEMA4X	IP65 / NEMA4X	IP65 / NEMA4X	IP65 / NEMA4X
DC Switch	Yes	Yes	Yes	Yes

General Data				
Dimensions (W/H/D)	455 / 476 (565) / 181	455 / 476 (565) / 181	455 / 476 (565) / 181	455 / 476 (565) / 181
Weight	20 kg	20 kg	20 kg	20 kg
Topology	Tranformerless (solar), HF (Battery)	Tranformerless (solar), HF (Battery)	Tranformerless (solar), HF (Battery)	Tranformerless (solar), HF (Battery)
Cooling Concept	Natural Convection	Natural Convection	Natural Convection	Natural Convection
Relatively Humidity	0-100%	0-100%	0-100%	0-100%
Operating Temperature Range	-25 - 60 °C	-25 - 60 °C	-25 - 60 °C	-25 - 60 °C
Altitude	<2000m	<2000m	<2000m	<2000m
Noise Emission	<25dB	<25dB	<25dB	<25dB
Standby Consumption	<5W	<5W	<5W	<5W
Display & Communication Interfaces	LCD, RS485, Wi-Fi, Ethernet	LCD, RS485, Wi-Fi, Ethernet	LCD, RS485, Wi-Fi, Ethernet	LCD, RS485, Wi-Fi, Ethernet

Certification & Approvals	
	AS 4777, VDE-AR-N4105, VDE0126, G83, G59, EN50438, EIO-21 IEC62109-1-2, IEC62040, EN61000-6-1, EN61000-6-2, EN61000-6-3

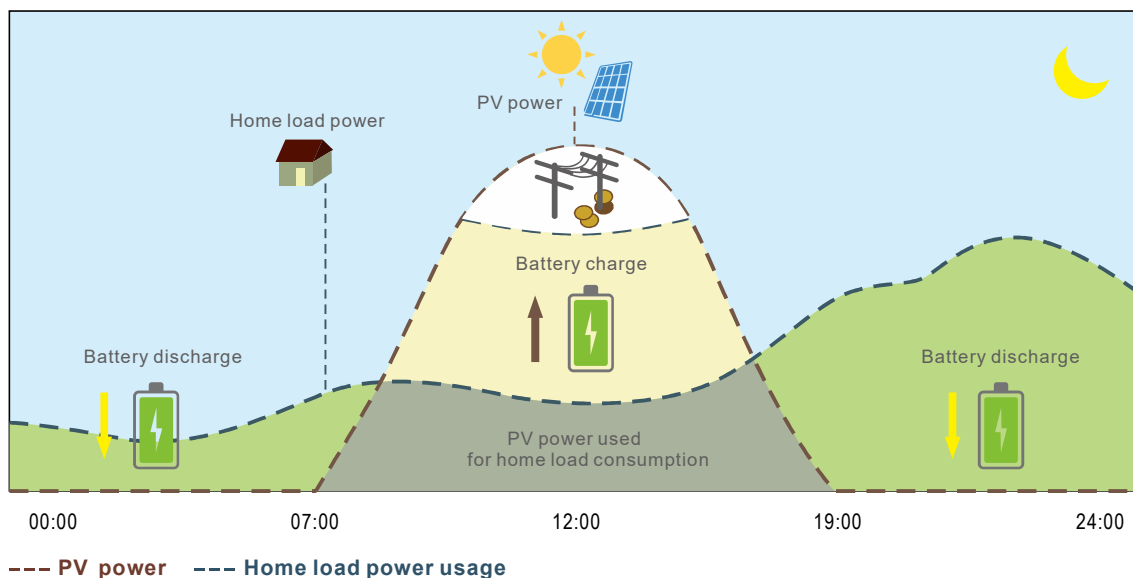
System Connection

A newly designed solar and energy storage hybrid inverter, capable to install in on-grid solar, off-grid solar and back-up systems. LXP Hybrid enables a programable and schedulable smart solar energy storage system to help increase your solar energy self-consumption rate, protect your home appliances from grid shortage, and balance your energy usage strategy to save energy bill.



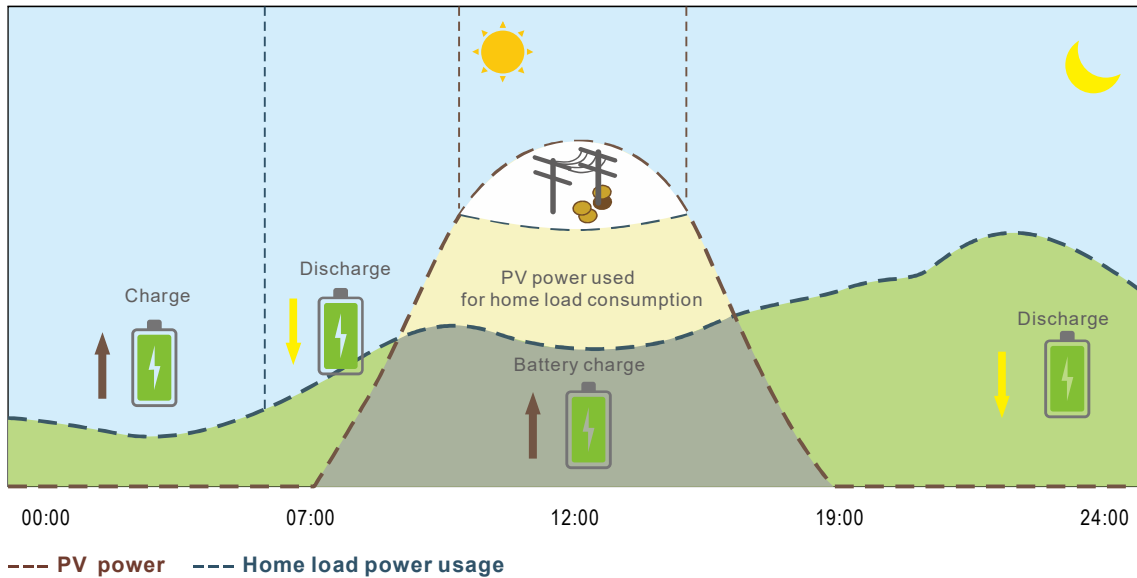
Self Consumption

Under Self Use mode the energy generated by PV will be mainly used by local loads, and rest will be stored in the battery, excessive power will be feed back into the grid. This is the default mode which will increase the self consumption rate and reduce the energy bill significantly



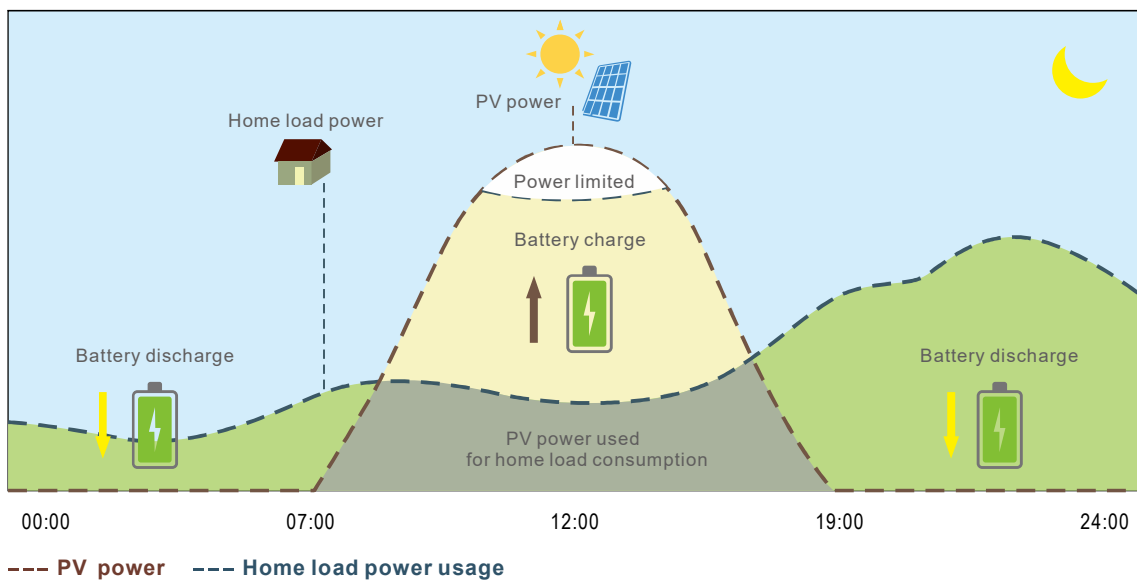
Force Time Use

This mode suits for situation where the price difference of energy is big. User can set the charging and discharging time and priority of energy use under Force Time Use mode. The user can also choose whether to charge the battery using grid power if the regulations permitted.



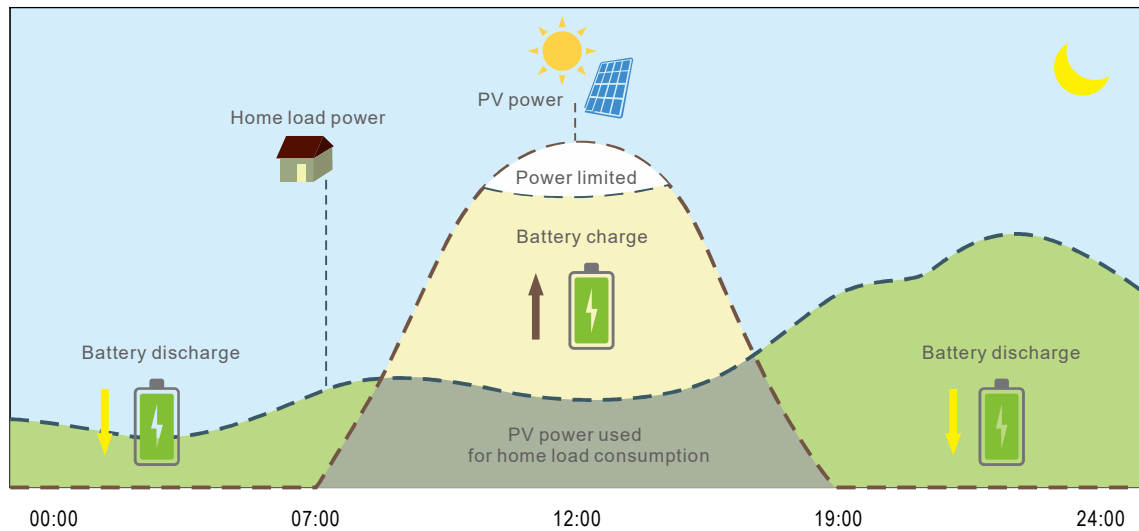
Zero Export

If there is regulations to limit the export power of a on-grid PV system, you could choose this mode to limit the export rate of your system's output to the grid.



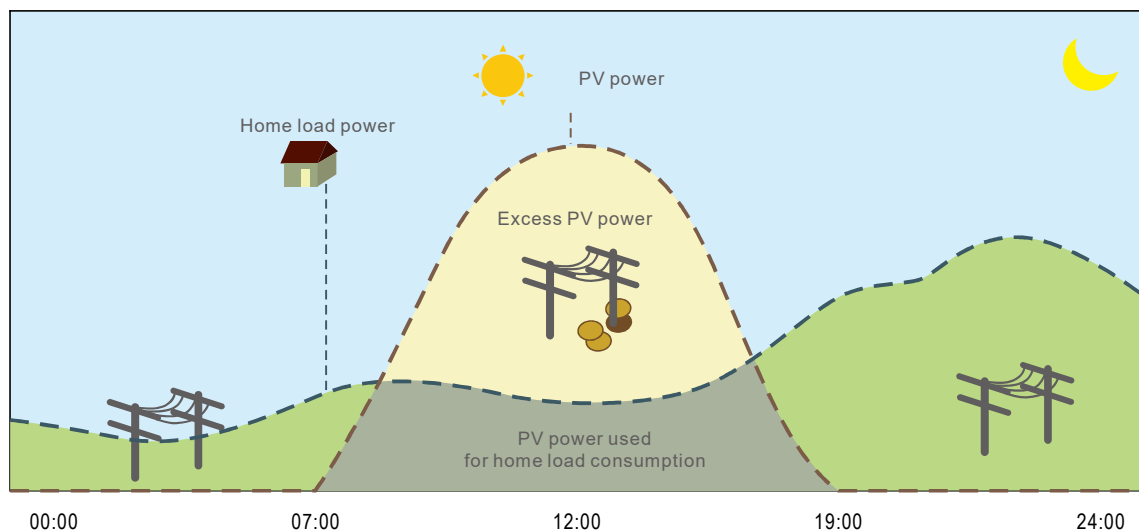
Offgrid Working Mode

If enabled UPS function, once the grid is protected accidentally, the UPS mode will be automatically and seamlessly activated to ensure your important loads keep working without any black out. Due to the specially designed function, it can support the system to work as a back-up power system or off-grid system. Offgrid working mode can also work when there is only PV.

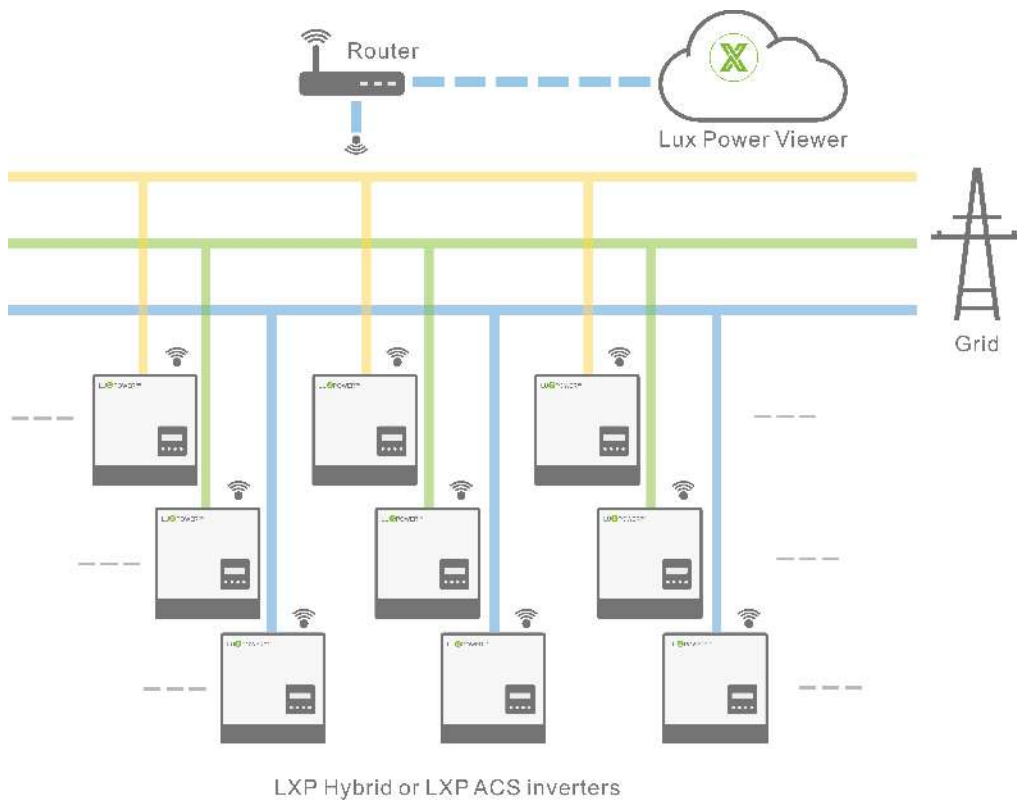


Run Without Battery

An interesting solution based on LXP Hybrid for new solar installations, without a battery but leave full interfaces ready for energy storage retrofitting, user could retrofit the on-grid solar system to solar battery system simply by adding an energy storage battery and plugging into the reserved interfaces. Now you've get a fresh new idea when install solar.

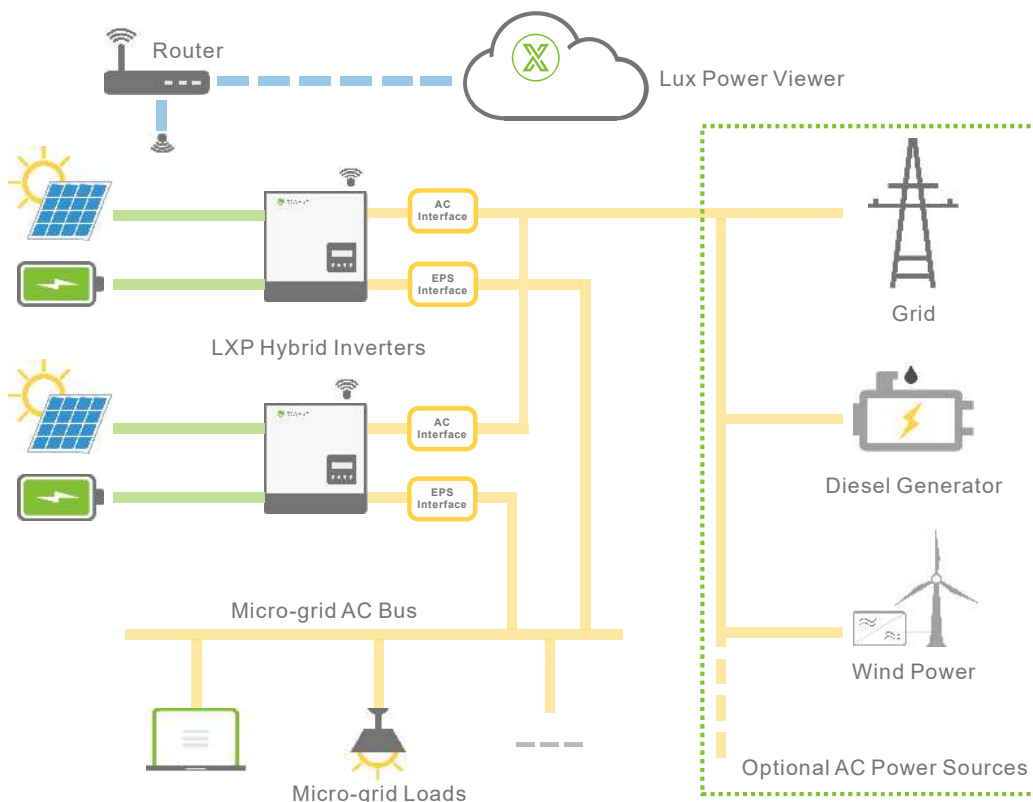


Paralleling Extensions



- Paralleling LXP inverters in one phase to extend the single phase system capacity for either hybrid or AC coupled energy storage applications.
- Paralleling LXP inverters (single phase inverters) to build a three phase system for either hybrid or AC coupled energy storage applications.
- Smart paralleling algorithm enable multiple configurable working modes under on-grid, off-grid or micro-grid applications.

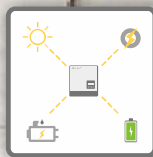
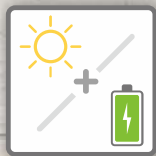
Micro-grid Systems



- Capable with micro-grid applications with various AC power sources
- Multiple configuration available to various applications of micro-grid solution
- Support multiple type of loads, Such as air conditioner, refrigerator
- Flexible programmable working modes, support scheduling on system operation
- System extendable
- Support purely off-grid installation

HYBRID US-Model

LXP-US 3K/4K/5K Hybrid



“

*Brilliant choice for
hybrid solar energy
storage system*

”

Solar Input	3K US	4K US	5K US
Max. DC Input Power	6000W	7000W	8000W
Nominal DC Input Voltage	360V.d.c	360V.d.c	360V.d.c
DC Input Voltage Range	100 - 550V.d.c	100 - 550V.d.c	100 - 550V.d.c
Full-load MPPT Voltage Range	235 - 500V.d.c	245 - 500V.d.c	255 - 500V.d.c
Start-up Voltage	140V.d.c	140V.d.c	140V.d.c
MPPT Number	2	2	2
Max. DC Input Current	12.5A/12.5A	12.5A/12.5A	12.5A/12.5A

Battery Input/Output			
Compatible Battery Type	Lithium-ion/Lead-Acid	Lithium-ion/Lead-Acid	Lithium-ion/Lead-Acid
Nominal Battery Voltage	48V.d.c	48V.d.c	48V.d.c
Battery Voltage Range	40 - 60V.d.c	40 - 60V.d.c	40 - 60V.d.c
Max. Charge/Discharge Current	66A/66A	66A/66A	66A/66A
Max. Charge/Discharge Power	3600W/3600W	3600W/3600W	3600W/3600W
Charging Curve	3 stages	3 stages	3 stages
Max. Charge Voltage	59V	59V	59V
Capacity of Battery	2-20kWh	2-20kWh	2-20kWh

AC Input/Output			
Nominal AC Output Power	3000W	4000W	5000W
Max. AC Charge Input Power	3600W	3600W	3600W
Max. AC Output Current	15A	20A	25A
Nominal AC Output Current	12.5A	17A	21A
Max. AC Charge Input Current	15A	17A	17A
Default AC Voltage	240V Split phase	240V Split phase	240V Split phase
Optional AC Voltage Type	208V/240V Single phase	208V/240V Single phase	208V/240V Single phase
Optional AC Voltage Range	183-229V/211-264V	183-229V/211-264V	183-229V/211-264V
Nominal AC Frequency	50/60Hz	50/60Hz	50/60Hz
AC Frequency Range	45-55Hz/55-65Hz	45-55Hz/55-65Hz	45-55Hz/55-65Hz
Power Factor	>0.99@rated power 0.8lagging-0.8 leading Adjustable		
THDI	<3%	<3%	<3%

UPS Output - with Battery			
UPS Max. Output Power without Solar	3600W	3600W	3600W
UPS Max. Output Power with Solar	5000W	5000W	5000W
UPS Nominal Output Voltage	240V	240V	240V
UPS Opt Voltage Type	120V/208V/240V	120V/208V/240V	120V/208V/240V
UPS Nominal Output Frequency	60Hz	60Hz	60Hz
UPS Nominal Output Current	13A	13A	13A
Peak Power	4500W, 30s	4500W, 30s	4500W, 30s
THDV	<3%@R-load	<3%@R-load	<3%@R-load
Switching Time	<0.01s	<0.01s	<0.01s

Efficiency			
Europe Efficiency	96.5%	96.5%	96.5%
Max. Efficiency	97.5%	97.5%	97.5%
Battery Charge/Discharge Efficiency	96%/94.5%	96%/94.5%	96%/94.5%

Protection			
Reverse Polarity Protection	Yes	Yes	Yes
Over Current/Voltage Protection	Yes	Yes	Yes
Anti-islanding Protection	Yes	Yes	Yes
AC Short-circuit Protection	Yes	Yes	Yes
Leakage Current Protection	Yes	Yes	Yes
Ground Fault Monitoring	Yes	Yes	Yes
Grid Monitoring	Yes	Yes	Yes
Ingress Protect Degree	IP65 / NEMA4X	IP65 / NEMA4X	IP65 / NEMA4X
DC Switch	Yes	Yes	Yes
Arc Detection	External Box	External Box	External Box

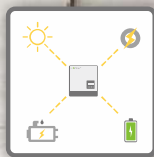
General Data			
Dimensions (W/H/D)	455 / 476 (565) / 181	455 / 476 (565) / 181	455 / 476 (565) / 181
Weight	20 kg	20 kg	20 kg
Topology	Transformerless (solar), HF (Battery)	Transformerless (solar), HF (Battery)	Transformerless (solar), HF (Battery)
Cooling Concept	Natural Convection	Natural Convection	Natural Convection
Relative Humidity	0-100%	0-100%	0-100%
Operating Temperature Range	-25 - 60 °C	-25 - 60 °C	-25 - 60 °C
Altitude	<2000m	<2000m	<2000m
Noise Emission	<25dB	<25dB	<25dB
Standby Consumption	<5W	<5W	<5W
Display & Communication Interfaces	LCD, LED, RS485, Wi-Fi, CAN	LCD, LED, RS485, Wi-Fi, CAN	LCD, LED, RS485, Wi-Fi, CAN

Certification & Approvals	AS 4777, VDE-AR-N4105, VDE0126, G83, G59 IEC62109-1-2, IEC62040, EN61000-6-1, EN61000-6-2, EN61000-6-3		
---------------------------	---	--	--

HYBRID HB-Model

LXP-HB 3K/4K/5K Hybrid

90-450V
Battery voltage



“

*Brilliant choice for
hybrid solar energy
storage system*

”

Solar Input	3K HB	4K HB	5K HB
Max. DC Input Power	6000W	7000W	8000W
DC Input Voltage Range	90-550V.d.c	90-550V.d.c	90-550V.d.c
Grid Full-load MPPT Voltage	150 - 500V.d.c	200 - 500V.d.c	250- 500V.d.c
Start-up Voltage	120V.d.c	120V.d.c	120V.d.c
MPPT Number	2	2	2
String per MPPT	1/1	1/1	1/1
Max. DC Input Current	11A/11A	11A/11A	11A/11A

Battery Input/Output	3K HB	4K HB	5K HB
Compatible Battery Type	Lead-Acid, Li-on etc.	Lead-Acid, Li-on etc.	Lead-Acid, Li-on etc.
Nominal Battery Voltage	250V.d.c	250V.d.c	250V.d.c
Battery Voltage Range	90 - 450V.d.c	90 - 450V.d.c	90 - 450V.d.c
Max. Charge/Discharge Current	20A/20A	20A/20A	20A/20A
Max. Charge/Discharge Power	5000W/5000W	5000W/5000W	5000W/5000W
Charging Curve	3-stages	3-stages	3-stages

AC Input/Output	3K HB	4K HB	5K HB
Nominal AC Input/Output Power	3000W	4000W	5000W
Nominal AC Charge Power	1500W	2000W	2500W
Nominal AC Input/ Output Current	13A	17.5A	21.7A
Max. AC Input/ Output Current	16.5A	22A	27A
Nominal AC Voltage	230V	230V	230V
Optional AC Voltage Range	183~264V	183~264V	183~264V
Nominal AC Frequency	50/60Hz	50/60Hz	50/60Hz
AC Frequency Range	45-55Hz/55-65Hz	45-55Hz/55-65Hz	45-55Hz/55-65Hz
Power Factor	>0.99@rated power 0.8lagging-0.8 leading Adjustable		
THDI	<3%	<3%	<3%

UPS Output - with Battery	3K HB	4K HB	5K HB
UPS Nominal Power	3000W	4000W	5000W
UPS Nominal Voltage	230Vac	230Vac	230Vac
UPS Opt Voltage Type	120/208/240Vac	120/208/240Vac	120V/208V/240Vac
UPS Nominal Frequency	50/60Hz	50/60Hz	50/60Hz
UPS Nominal Current	13A	17.5A	21.7A
Peak Power	3800W, 30s	5000W, 30s	6200W, 30s
THDV	<3%@R-load	<3%@R-load	<3%@R-load
Switching Time	<0.01s	<0.01s	<0.01s

Efficiency	3K HB	4K HB	5K HB
MPPT Efficiency	>99%	>99%	>99%
Europe Efficiency	96.3%	96.5%	96.3%
Max. Efficiency	97.5%	97.5%	97.5%
Max. Charge/Discharge Efficiency	97%/96.6%	97%/96.6%	97%/96.6%

Protection	3K HB	4K HB	5K HB
Reverse Polarity Protection	Yes	Yes	Yes
Over Voltage,Over Current	Yes	Yes	Yes
Anti-islanding Protection	Yes	Yes	Yes
AC Short-circuit Protection	Yes	Yes	Yes
Leakage Current Protection	Yes	Yes	Yes
Ground Fault Monitoring	Yes	Yes	Yes
Grid Monitoring	Yes	Yes	Yes
Ingress Protect Degree	IP65	IP65	IP65
DC Switch	Integrated	Integrated	Integrated

General Data	3K HB	4K HB	5K HB
Dimensions (W/H/D)	455 / 476 / 181	455 / 476 / 181	455 / 476 / 181
Weight	18 kg	18 kg	18 kg
Topology	Transformerless	Transformerless	Transformerless
Cooling Concept	Natural Convection	Natural Convection	Natural Convection
Relatively Humidity	0-100%	0-100%	0-100%
Altitude	<2000m	<2000m	<2000m
Noise Emission	<25dB	<25dB	<25dB
Standby Consumption	<10W	<10W	<10W
Display/Communication Interface	LCD/LED/RS485/ Wi-Fi/ CAN	LCD/LED/RS485/ Wi-Fi/ CAN	LCD/LED/RS485/ Wi-Fi/ CAN
Standard Warranty	5years	5years	5years

Certification & Approvals AS 4777, VDE-AR-N4105, VDE0126, G83, G59
IEC62109-1-2, IEC62040, EN61000-6-1, EN61000-6-2, EN61000-6-3

AC COUPLED ESS INVERTER

HIGH PERFORMANCE



Up to **70A** Charge/Discharge current of battery

Up to **3600W** Charge/Discharge power of grid

Up to **96%** Efficiency of Charge/Discharge With High Frequency Isolation

ENHANCE UPS



Seamless switching within **0.01s** with stronger back-up output

Up to **36kW** capacity of UPS in parallel

EASY TO USE



Schedulable working modes, easy installation and setting

REMOTE MONITORING & MAINTENANCE



Remote monitoring and upgrade

OPTIMIZED HEAT CONTROL



Much better heat dissipation, and much lower derating

SAFER OPERATION



Protected connection area, multiple protection devices

IP65 PROTECTION



Designed for both outdoor and indoor installation

LXP 3600 ACS

AC coupled energy storage inverter, specially designed for retrofitting solar system. By simply install an AC coupled energy storage system based on this inverter at the AC output of on-grid solar system, you could retrofit your existed on-grid solar system to a solar energy storage system and increase the solar self-consumption rate, enhanced UPS back-up function and reduce energy bill.

Battery Input/Output

3.6K ACS

Compatible Battery Type	Lithium-ion, Lead-Acid etc.
Nominal Battery Voltage	48V.d.c
Max. Charging Voltage(V)	< =60 V(Configurable)
Max. Charge/Discharge Current	70A /70A
Battery Capacity(Ah)	> 100Ah
Charging Mode for Li-Ion Battery	Self-adaption to BMS
Charging for Lead-acid Battery	3-stage adaptive with maintenance
Battery Back Feed Current	0A

AC Input/Output

Nominal AC Output Power to Utility	3600VA
Max. AC Output Power to Utility	3600VA
Max. AC Power from Utility	5980VA
Max. AC Output Current to Utility	16A
Max. AC Current From Utility	26A
Nominal Output Voltage	220/230V.a.c
AC Voltage Range	180 - 270V.a.c
Nominal AC Frequency	50Hz/60Hz
AC Over Current Protection	31A
Power Factor	1 (adjustable 0.8leading -0.8lagging)
THDI	<3%
AC Over Voltage Category	Category III

UPS Output

Max. Output Power	3600VA
Nominal Output Voltage	230V.a.c
Nominal Output Frequency	50Hz / 60Hz
Max. Output Current	16A
Peak Power	4500VA, 30s
THDV(linear load)	<3%
Switching Time	<0.01s
Back-up Over Current Protection	31A

Efficiency

Max. Charge/Discharge Efficiency	96%
----------------------------------	-----

Protection

Reverse Polarity Protection	Yes
Over Current/Voltage Protection	Yes
Anti-islanding Protection	Yes
AC Short-circuit Protection	Yes
Leakage Current Protection	Yes
Ground Fault Monitoring	Yes
Grid Monitoring	Yes
Ingress Protection Degree	IP65 / NEMA4X

General Data

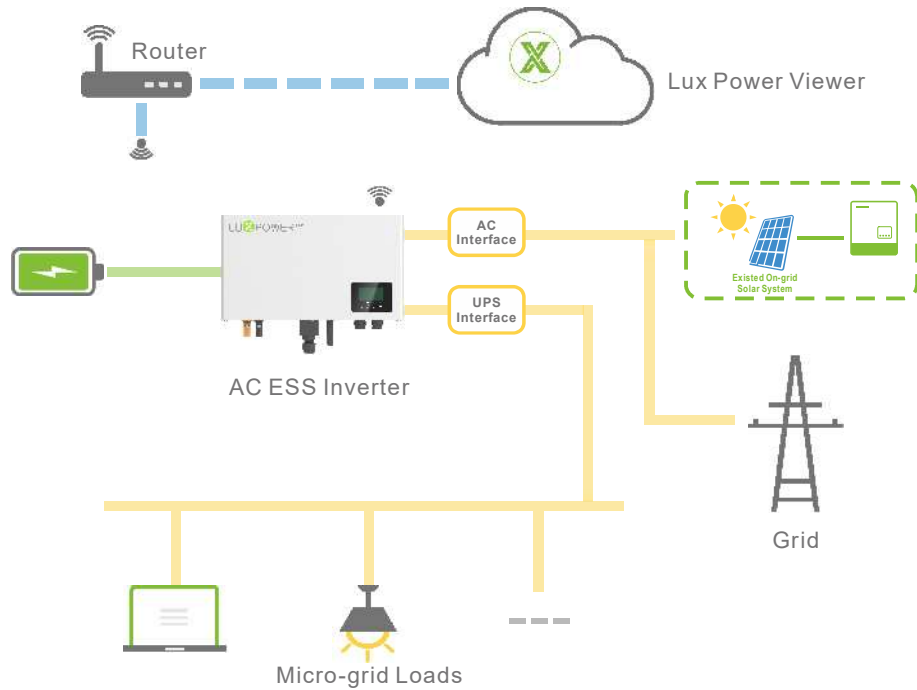
Dimension (W/H/D)	565 / 324 / 171
Weight	15.6 kg
Topology	HF
Cooling Concept	Natural Convection
Relatively Humidity	100%
Altitude	<2000m
Noise Emission	<25dB
Standby Consumption	<5W
Display & Communication Interfaces	LCD, LED, RS485, Wi-Fi, CAN

Certification & Approvals

G83, G100, CE
EN61000-6-3

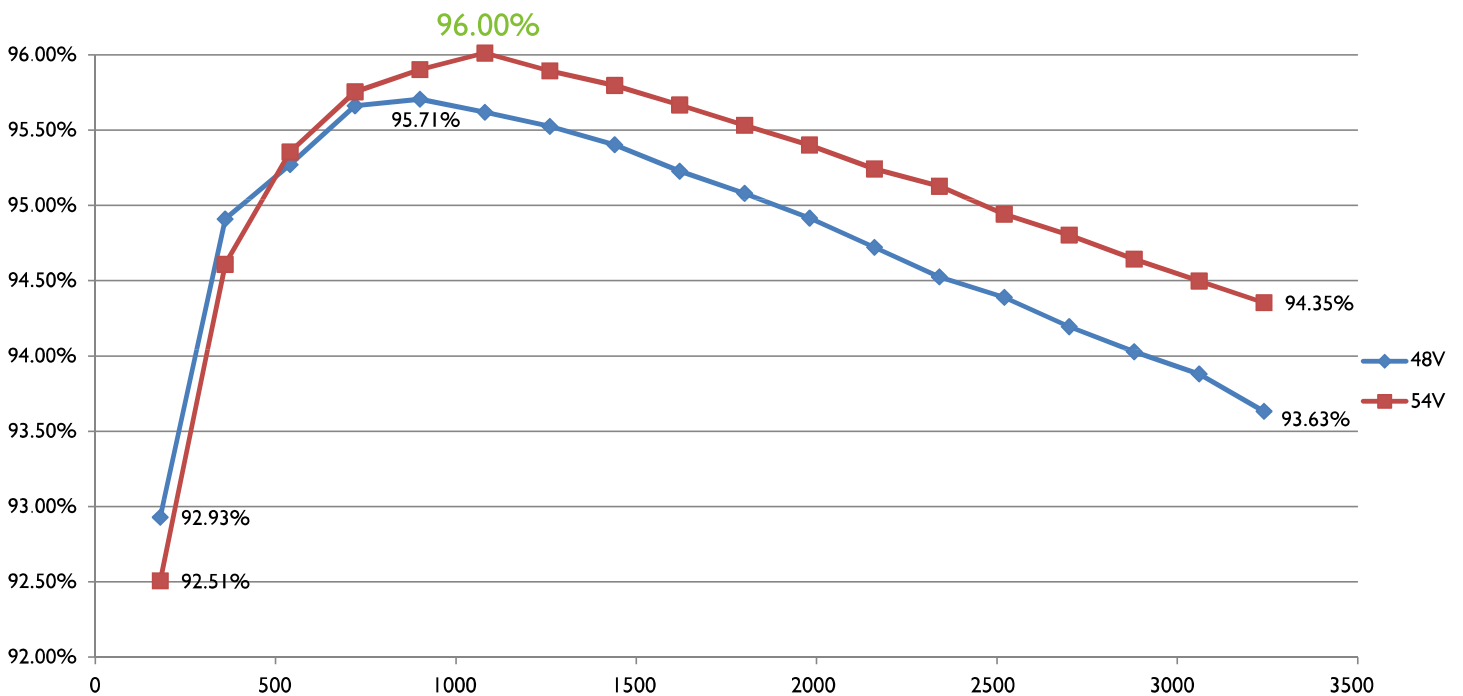
System Connection

To retrofit existed on-grid solar system to solar energy storage hybrid system could not be easier than install a LXP AC series inverter coupled on AC side with a battery pack.



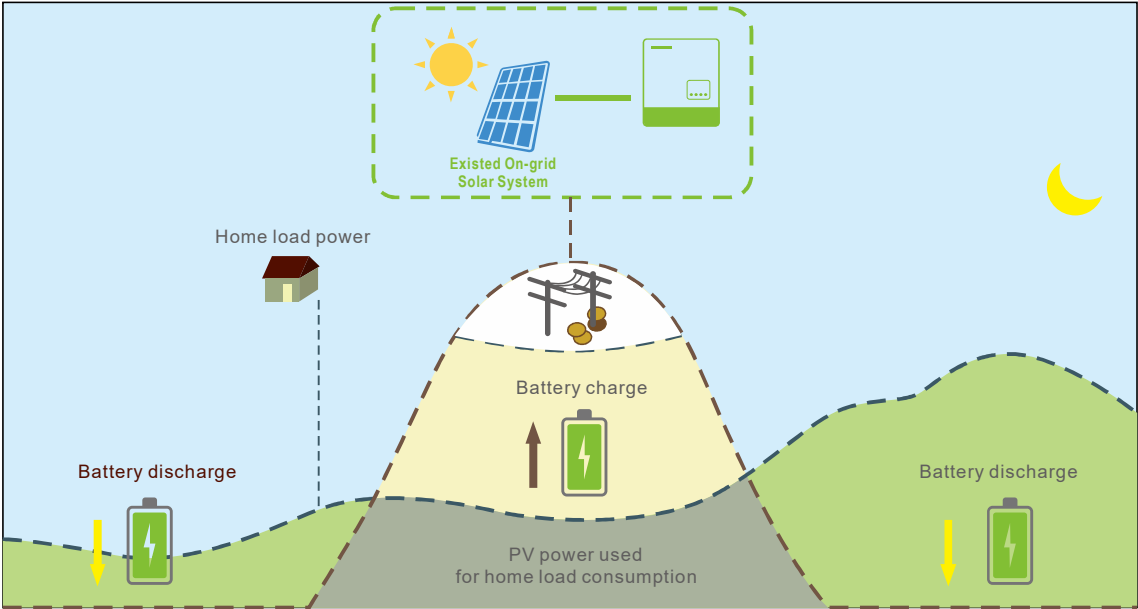
Charge/Discharge Efficiency Cuv

Discharge & Charge Efficiency @230Vac 50Hz



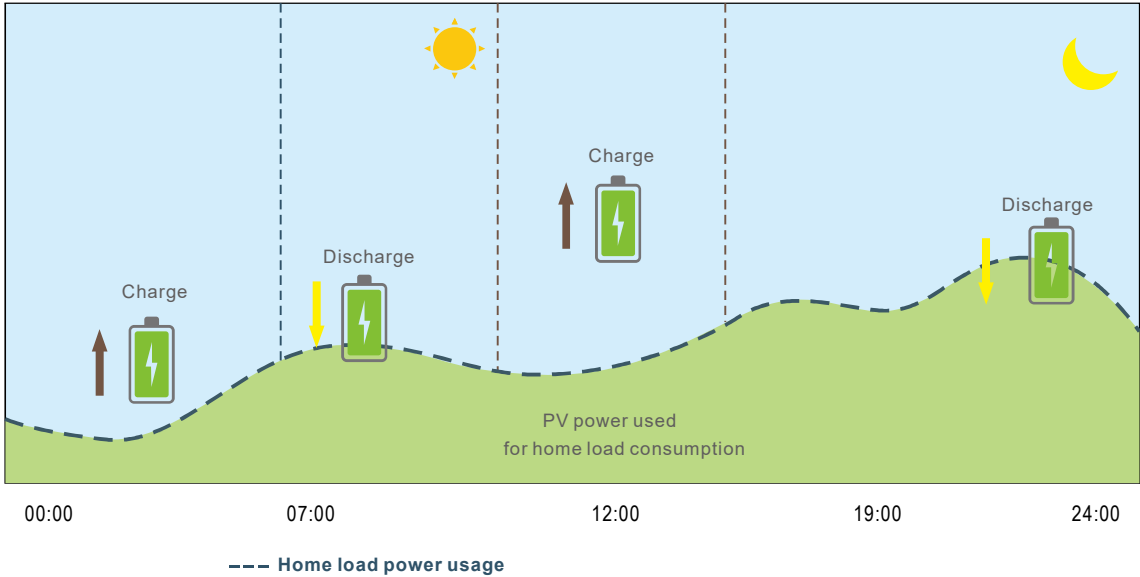
Self Consumption

Under Self Use mode, AC coupled inverter will detect the power of on-grid inverter generated, which will be used by local loads first, and rest will be stored in the battery by using AC coupled inverter, excessive power will be feed back into the grid. This is the default mode which will increase the self consumption rate and reduce the energy bill significantly



Force Time Use

This mode suits for situation where the price difference of energy is big. User can set the charging and discharging time and priority of energy use under Force Time Use mode. The user can also choose whether to charge the battery using grid power if the regulations permitted.



Intelligent Monitor System

Network architecture

