

ONYX ULTRA 6KW

DUAL MPPT PV INPUT 9KW

IP65 HYBRID INVERTER

ON-GRID / OFF-GRID



5 YEARS **REPLACEMENT WARRANTY**

& LIFETIME FREE SERVICE WARRANTY

Terms & Conditions Apply



**Built-in
CT Function**

To meet self consumption
Application



**Reset
ON/OFF Button**

You can Reset and ON/OFF
manually



**Sync with
Generator**

Auto Start



**Parallel in
Single & Three Phase**

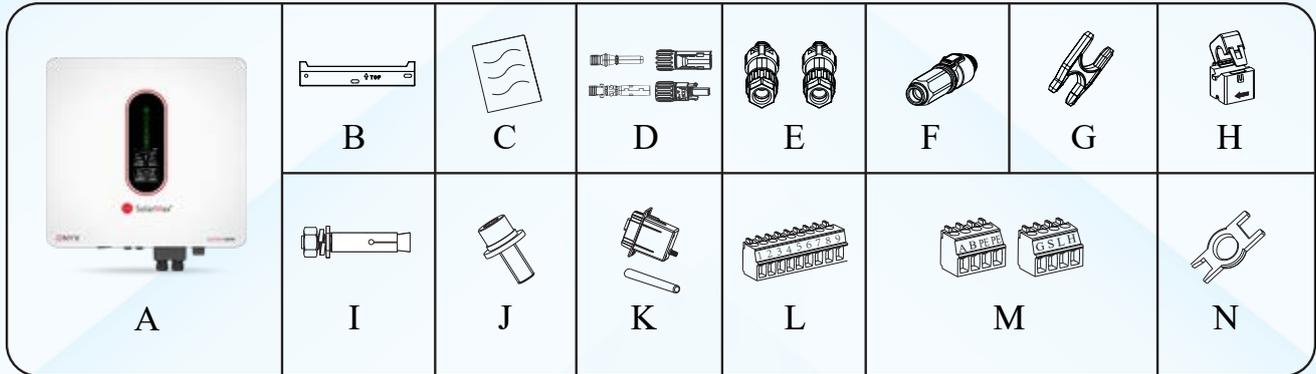
Parallel Function Built-in



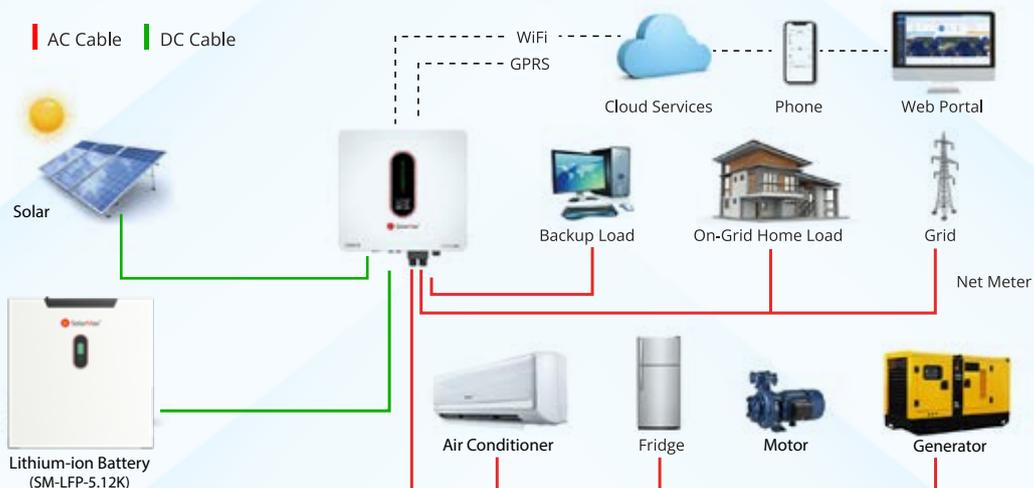
**LED Indication &
LCD Display**

For real time status

Inside the Box



SN.	Quantity	Description
A	1	Inverter
B	1	Mounting Bracket
C	1	File Package
D	2/2	PV Terminal Connector Group(PV+/PV-); N/A for AC Couple
E	2 1	AC Connectors (Load/Gen) Grid Connector
F	2	Battery Connector
G	1	Removal Tool for Grid/Load-Gen Connector
H	1	CT
I	3	M12 Expansion Screws
J	1	M6 Security Screw
K	1	Wifi Dongle
L	1	9-Pins Terminal
M	2	4-Pins Terminal
N	1	Removal Tool for PV Connector



Model	SM-ONYX-UL-6KW
Input (PV)	
MAX PV Power (W)	9000W
Max PV Voltage (V)	550VDC
Max input current (input A/input B) (A)	30A (15A + 15A)
Max short current (input A/input B) (A)	40A (20A + 20A)
Start operating voltage (V)	90VDC
MPPT voltage range (V)	70-520VDC
No.of MPPT trackers	2
String per MPP tracker	1
Input (BATTERY)	
Compatible battery type	Lithium-ion / Lead-acid
Nominal battery voltage (V)	48VDC
Battery voltage range (V)	40-60VDC
Max. charge/discharge current (A)	120A / 120A
Max. charge/discharge power (W)	6000W / 6000W DUAL
Charging curve	3 Stages / Equalization
Lithium battery charge curve	Self-adaption to BMS
Output (Grid)	
Nominal AC output power (W)	6000W DUAL
Max. AC output apparent power (VA)	6000W DUAL
Max.AC output power (PF=1) (W)	6000W DUAL
Max. AC output current (A)	27.2A
Rated AC voltage (V)	220VAC
AC voltage range (V)	150-300VAC (adjustable)
Rated grid frequency (Hz)	50Hz / 60Hz
AC frequency range (Hz)	45-55Hz / 55-65Hz (adjustable)
Grid connection	Single Phase
THDI	<3%
Output (Back up)	
Nominal output voltage (V)	230VAC
Nominal output frequency (Hz)	50 / 60Hz
Nominal output power (W)	6000W
Nominal output current (A)	26A
Transfer time (ms)	10(typ) / 20(max)
THDV	<3% @100% R Load
Protection	
Protection category	Class I
DC switch	Support
Anti-islanding protection	Support
AC overcurrent protection	Support
AC short circuit protection	Support
DC reverse connection	Support
Surge Arrester	DC Type III, AC Type III
Insulation detection	Support
Leakage current protection	Support
PV overvoltage category	II
AC overvoltage category	III
Efficiency	
Max.Efficiency (PV to AC)	>97.3%
Max.Efficiency (BAT to AC)	>94.0%
MPPT Efficiency	>99.0%
General	
Max. operation altitude (m)	4000
Noise emission (dB)	<35
Ingress protection degree	IP65
Operating temperature range	-25~60
Relative humidity (%)	0~100
Cooling concept	Natural Cooling
Mounting	Wall bracket
Dimensions (W*H*D)	515mm*450mm*175mm
Weight	25Kg
PV connection way	MC4/H4
Battery connection way	Dedicated DC connector
AC connection way (grid & back up)	Dedicated AC connector
HMI & COM	
Display	
Communication interface	RS485/CAN (for BMS), RS485, USB, DRM/RS485 (for Meter), Bluetooth, Wifi, Optional: GPRS/Ethernet
Certification	
Grid	VDE-AR-N4105, IEC 61727/62116, AS 4777.2, EN 50549-1
Safety	IEC62109-1&2, IEC62040-1, IEC62477-1
Warranty (years)	5 Years

Product specifications are subject to change without further notice.