

Residential
Solar Storage Inverter

Product Brochure

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Residential Solar storage Inverter

Off-grid Inverter



Single Phase LV 3-12kW(48V)



Single Phase LV 1.5-3kW(24V)



Single Phase LV 1.5-6kW(48V)



Three Phase HV 10-20kW

Hybrid Inverter(Without LCD display)



Single Phase LV 3-6kW



Three Phase HV 5-20kW



Three Phase HV 22-50kW



Single Phase LV 5-12kW



Three Phase LV 5-12kW



Single Phase HV 5-12kW



Three Phase HV 5-12kW

Residential Solar storage Inverter

Off-grid Inverter



Single Phase LV 3-12kW(48V)



Single Phase LV 1.5-3kW(24V)



Single Phase LV 1.5-6kW(48V)



Three Phase HV 10-20kW

Hybrid Inverter(Without LCD display)



Single Phase LV 3-6kW



Three Phase HV 5-20kW



Three Phase HV 22-50kW



Single Phase LV 5-12kW



Three Phase LV 5-12kW



Single Phase HV 5-12kW



Three Phase HV 5-12kW

Residential Solar storage Inverter

Hybrid Inverter with LCD Display
(for Middle East, Africa, Asia market)



Single Phase LV 1.5-6kW(IP20)



Single Phase LV 3-6kW



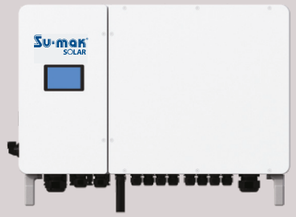
Three Phase LV 3-6kW



Single Phase LV 5-12kW



Three Phase LV 5-12kW



Three Phase HV 22-50kW

Split Phase Inverter



Split Phase HV 5-20kW



Split Phase Off-grid HV 5-20kW

Off-grid Inverter

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Hybrid Inverter without LCD Display

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Hybrid Inverter with LCD Display

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Split Phase Inverter

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Product Features

- **Max. Efficiency 97.5%**
  3-5% Higher than Average
- **190-460% Grid Input Power**
  60A-100A Grid Input Current
  Supplying to Loads & Charging
  Battery in Parallel
- **125-250% PV Input Power,**
  2-4MPPTs, PV Input Current
  18A, Higher Compatibility
  with PV Panel
- **5-years Standard Warranty**
- **Support 176-264V AC**
  Voltage Range
- **125-150% Overload**
- **Support 3 units in Parallel**
  (3-6kW only)
- **Compatble with**
  Lead-Acid/Gel/Lithium
  Battery
- **Smart Fan, Ultra Silence**
  Fan Running since 50%
  Rated Power Output

Model Name	Su-mak 3000SO	Su-mak 4000SO	Su-mak 5000SO	Su-mak 6000SO	Su-mak 8000SO	Su-mak 10000SO	Su-mak 12000SO
Off-grid Output							
Max. Output Power	3kVA	4kVA	5kVA	6kVA	8kVA	10kVA	12kVA
Output Voltage&Range	220Vac±10%						
Nominal Output Current	13.6A	18.2A	22.7A	27.2A	36.4A	45.4A	54.4A
Peak Power&Duration	4.5kVA(10s)	6kVA(10s)	8kVA(10s)	8kVA(10s)	12kVA(10s)	15kVA(10s)	15kVA(10s)
Grid Parameter							
Peak AC Input Current	60A				100A		
Max Load Power	8kW				16kW		
Nominal Grid Voltage	220Vac						
Grid Voltage Range	176-264V						
Nominal Grid Frequency	50/60Hz						
THDi	<3%						
PV Input							
Max. Input Power	6600W	8000W	9000W	9000W	14000W	18000W	18000W
Max. Input Voltage	500V						
Mppt Voltage Range	100-500V						
Number of MPPT	2				4		
Max. Input String Per MPPT	1						
Nominal Input Voltage	360V						
Starting Voltage	120V						
Max. Input Current	18A/18A				18A/18A/18A/18A		
Short-Circuit Current	22A/22A				22A/22A/22A/22A		
Battery Parameter							
Battery Type	Lithium-ion/Lead-Acid						
Nominal Battery Voltage	48V						
Battery Voltage Range	42-58V						
Max. Charging Voltage	58V						
Lead-Acid Charging Curve	3 stages						
Max. Charging Current	60A	80A	100A		200A		
Max. Discharging Current	60A	80A	100A	120A	200A		
Efficiency							
Max. Efficiency	97.40%		97.50%		97.40%	97.50%	
European Efficiency	97.20%		97.30%		97.20%	97.30%	
Max. Battery Charging/Discharging Efficiency	94.00%						
General Data							
Size(W*H*D)	360mm*470mm*114mm				400mm*620mm*210mm		
Weight	14kg				29kg		
Noise	<45dB(A)						
Operating Temperature	-25℃~ +60℃ (>55℃ Derating						
Cooling Method	Intelligent Air Cooling						
Parallel Units	3				1		
Warranty	5 years						
Ingress Protection Grade	IP20						
Communication Method	LED/LCD/WIFI/Bluetooth/RS485						
Communication Port	CAN + RS485						
Protection	Reverse Polarity Protection;Over Current/Voltage Protection; AC Short-circuit Protection; PV Ground Fault Monitoring; Over Temperature Protection						
Certification							
CE-LVD	EN 62109-2:2011, EN 62109-1:2010						
CE-EMC	EN 61000-6-1, EN 61000-6-2						



Max. Efficiency 97.5%, 3-5% Higher than Average

125-250% PV Input Power, PV Input Current 18A, Higher Compatbility with PV Panel

230-460% Grid Input Power, 30A Grid Input Current Supplying to Loads & Charging Battery in Parallel

3-years Standard Warranty

Support 176-264V AC Voltage Range

130-260% Overload >200% Generator Input

Mini-sized, Easier for Installation and Price-wise in Shipping

Support 6 Units in Parallel

Smart Fan, Ultra Silence Fan Running since 50% Rated Power Output

Model Name	Su-mak O1.5K-SOU-G2	Su-mak O2.2K-SOU-G2	Su-mak O3K-SOU-G2
Max. Output Power	1500VA	2200VA	3000VA
Output Voltage&Range	220V/230V/240Vac±10%		
Rated Output Current	6.8A	10A	13.6A
Peak Power & Duration	4kVA(10s)		
Max. Generator Input	6KVA		
Max. AC Input Current	30A		
Max. Load Power	4kW		
Max Output Power	1500W	2000W	3000kW
Rated Output Current	6.8A	10A	13.6A
On-Grid Voltage	220V/230V/240Vac		
Rated AC Frequency	45-55Hz/55-65Hz		
Grid Voltage Range	176-264V		
THDi	<3%		
Max. DC Input Power	3750W		
Rated DC Input Voltage	360V		
Input Voltage Range	60-500V		
MPPT Voltage Range	60-500V		
Starting Voltage	72V		
Numbers of MPPT	1		
Max. DC Input Current	18A		
Max. Short-circuit Current	22A		
Battery Type	Lithium-ion/Lead-Acid		
Rated Battery Voltage	24V		
Battery Voltage Range	21-29V		
Max. Discharge Current	125A		
Max. Charge Current	125A		
Charging Curve	3 stages		
Europe Efficiency	97.2%	97.3%	97.3%
Max.Efficiency	97.4%	97.5%	97.5%
Max. Battery Charging/Discharging Efficiency	94.0%		
Size(W*H*D)	315mm*280mm*80mm		
Weight	5.5kg		
Noise	<40dB(A)		
Operating Temperature	-25℃~ +60℃ (>55℃ Derating)		
Operating Altitude	4000m (>2000m Derating)		
Cooling Method	Intelligent Air Cooling		
Mornitoring	LCD/LED/APP/WIFI/Bluetooth		
Communication Port	CAN+RS485		
Protection	Over Current/Voltage Protection;AC Short-circuit Protection;Over Temperature Protection		
Parallel Capability	Max. 6 Units		
Ingress Protect Degree	IP20		
CE-LVD	EN 62109-2:2011 EN 62109-1:2010		
CE-EMC	EN61000-6-1, EN61000-6-2		



Product Features

- Max. Efficiency 97.5%, 3-5% Higher than Average
- 125-250% PV Input Power PV Input Current 18A-36A
- 230-460% Grid Input Power, 30A-60A Grid Input Current Supplying to Loads & Charging Battery in Parallel
- 3-years Standard Warranty
- Support 176-264V AC Voltage Range
- 130-260% Overload >200% Generator Input
- Mini-sized, Easier for Installation and Price-wise in Shipping
- Support 6 Units in Parallel
- Smart Fan, Ultra Silence Fan Running since 50% Rated Power Output

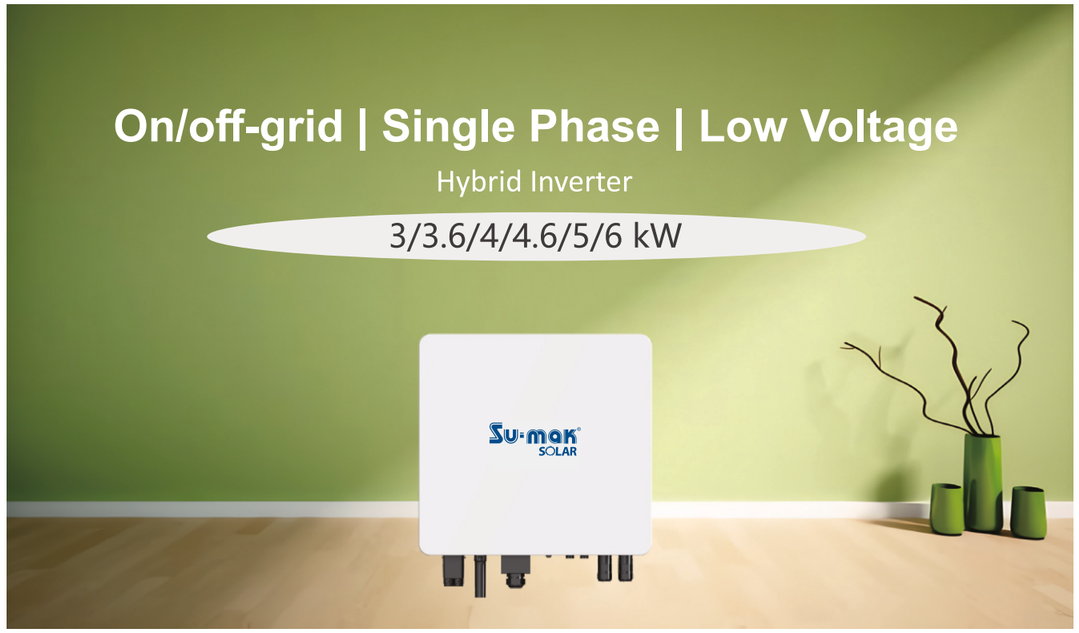
Model Name	Su-mak O1.5K-SOL-G2	Su-mak O2.2K-SOL-G2	Su-mak O3K-SOL-G2	Su-mak O4K-SOL-G2	Su-mak O5K-SOL-G2	Su-mak O6K-SOL-G2
Off-grid Output						
Max. Output Power	1500VA	2200VA	3000VA	4000VA	5000VA	6000VA
Output Voltage&Range	220V/230V/240Vac±10%					
Rated Output Current	6.8A	10A	13.6A	18.2A	22.7A	27.2A
Peak Power&Duration	4kVA(10s)			8kVA(10s)		
Max. Generator Input	6KVA			12KVA		
On-Grid Parameter						
Max. AC Input Current	30A			60A		
Max. Load Power	4kW			8kW		
On-Grid Voltage	220V/230V/240Vac					
Nominal AC Frequency	45-55Hz/55-65Hz					
Grid Voltage Range	176-264V					
THDi	<3%					
PV Input						
Max. DC Input Power	3750W			7500W		
Rated DC Input Voltage	360V					
Input Voltage Range	60-500V					
MPPT Voltage Range	60-500V					
Starting Voltage	72V					
Numbers of MPPT	1					
Max. DC Input Current	18A			36A		
Max. Short-circuit Current	22A			44A		
Battery Parameter						
Battery Type	Lithium-ion/Lead-Acid					
Rated Battery Voltage	48V					
Battery Voltage Range	42-58V					
Max. Discharge Current	62.5A			125A		
Max. Charge Current	62.5A			125A		
Charging Curve	3 stages					
Efficiency						
Europe Efficiency	97.2%	97.3%	97.3%	97.2%	97.3%	97.3%
Max.Efficiency	97.4%	97.5%	97.5%	97.4%	97.5%	97.5%
Max. Battery Charging/Discharging Efficiency	94.0%					
General Data						
Size(W*H*D)	315mm*280mm*80mm			345mm*305mm*98mm		
Weight	5.5kg			7kg		
Noise	<40dB(A)					
Operating Temperature	-25℃~ +60℃ (>40℃ Derating)					
Operating Altitude	4000m (>2000m Derating)					
Cooling Method	Intelligent Air Cooling					
Mornitoring	LCD/LED/APP/WIFI/Bluetooth					
Communication Port	CAN+RS485					
Protection	Over Current/Voltage Protection;AC Short-circuit Protection;Over Temperature Protection					
Parallel Capability	Max. 6 Units					
Ingress Protect Degree	IP20					
Certification						
CE-LVD	EN 62109-2:2011 EN 62109-1:2010					
CE-EMC	EN61000-6-1, EN61000-6-2					



Product Features

- **Support 100% Three Phase Unbalance**
- **SiC Technology 98.2% Efficiency**
- **2 Independent Battery Ports for Mixture Use of Old & New Battery**
- **<10ms On/Off-grid Switchover**
- **6 Units in Parallel**
- **150-200% PV Input Power**
- **200% Grid Input Power, 58A Grid Input Current Supplying to Loads & Charging Battery in Parallel**
- **Support Altitude 5000m(>3000m Derating)**
- **Support 184-276V Grid Voltage Range**

Model Name	Su-mak 10000TO	Su-mak 12000TO	Su-mak 15000TO	Su-mak 18000TO	Su-mak 20000TO
Off-grid Output					
Rated Output Power	10kW	12kW	15kW	18kW	20kW
Peak Power&Duration	11kVA(60s)	13.2kVA(60s)	16.5kVA(60s)	19.8kVA(60s)	22kVA(60s)
Rated Voltage	3/N/PE, 220/380Vac, 230/400Vac				
Rated Frequency	50/60Hz				
Rated Output Current	15A	18A	22.5A	27A	30A
Output THDu	<3%				
Grid Parameter					
Max. Input Power from Grid	20kW	24kW	30kW	36kW	40kW
Max. Input Current from Grid	29A	35A	44A	52A	58A
Rated Grid Voltage	3/N/PE, 220/380V, 230/400V, 240/415V				
Grid Voltage Range	184-276V/320-480V				
PV Input					
Max. Input Power	20000Wp	24000Wp	30000Wp	30000Wp	30000Wp
Max. Input Voltage	1000V				
Number of MPPT	2				
Max. Input String Per MPPT	2				
Mppt Voltage Range	130-960V				
Rated Input Voltage	600V				
Starting Voltage	200V				
Max. Input Current	25A/25A				
Short-Circuit Current	30A/30A				
Battery Parameter					
Battery Type	Lithium-ion/Lead-Acid/Sodium-ion				
Number of Battery Input	2				
Battery Voltage Range	125-800V				
Full Load Battery Voltage Range	210-800V	250-800V	300-800V	360-800V	400-800V
Battery Charging/Discharging Current	25A*2				
Peak Charging/Discharging Current-Duration	35A*2-60s				
Efficiency					
Max. Efficiency	98.20%				
European Efficiency	97.70%				
Max. Battery Charging/Discharging Efficiency	97.80%				
General Data					
Size(W*H*D)	573mm*509mm*219mm				
Weight	35kg				
Noise	<45dB(A)				
Operating Altitude	5000m (>3000m Derating)				
Operating Temperature	-25℃~ +60℃				
Cooling Method	Intelligent Air Cooling				
Ingress Protection Grade	IP65				
Mornitoring	LED/WIFI/4G/Bluetooth/RS485				
Communication Port	RS485/CAN/DRED/Dry contact/Parallel port				
Protection	DC Switch; AC Overvoltage Protection; AC Overcurrent Protection; AC Short Circuit Protection;Anti-islanding Protection; Residual Current Monitoring; PV Insulation Resistance Detection; Surge Protection:LEVEL II; Reverse Polarity Protection(PV&Battery):Lightning Protection				



Product Features

SiC Technology
Max.Efficiency 98%

Support 6 Units in
Parallel (Off-grid Mode)

150-200% PV Input Power
PV Input Current 18A

Natural Cooling
(Noise<25dB)

0ms (off-grid to on-grid)*
4ms (on-grid to off-grid)

Support Se﷟ng of 6 Charging/
Discharging Time Period

Without LCD/LED Display
Design, Higher Reliability

Support AC Couple

Self-owned APP,
Support Adding New Language

Model Name	Su-mak 3000S	Su-mak 3600S	Su-mak 4000S	Su-mak 4600S	Su-mak 5000S	Su-mak 6000S
Off-grid Output						
Rated Output Power	3000W	3600W	4000W	4600W	5000W	6000W
Rated Voltage	220V/230V/240V					
Rated Frequency	50/60Hz					
Rated Output Current	13.6A	16.4A	18.2A	20.8A	22.7A	27.2A
Output THDu	< 2%					
Peak Power&Duration	120%(10s)*					
On-grid Parameter						
Rated Output Power	3000W	3600W	4000W	4600W	5000W	6000W
Max. Output Current	13.6A	16.4A	18.2A	20.8A	22.7A	27.2A
Rated Grid Voltage	220V/230V/240V					
Max. Input Current from Grid	16.4A	22.7A		27.2A		
Grid Voltage Range	184-276V					
Frequency Range	45-65Hz					
PV Input						
Max. Input Power	6000Wp	7200Wp		8000Wp		9000Wp
Starting Voltage	95V					
Max.Input Voltage	600V					
MPPT Voltage Range	80-500V					
Number of MPPT	2					
Max. Input String Per MPPT	1					
Rated Input Voltage	360V					
Max. Input Current	18A/18A					
Battery Parameter						
Battery Type	Lithium-ion/Lead-Acid/Sodium-ion					
Rated Battery Voltage	51.2V					
Battery Voltage Range	42-58V					
Max. Charging Voltage	≤60V					
Battery Charging/Discharging Current	75A	85A		100A		
Efficiency						
Max. Efficiency	97.5%		97.8%		98.0%	
European Efficiency	97.2%		97.3%		97.5%	
Max. Battery Charging/Discharging Efficiency	95.2%					
General Data						
Size(W*H*D)	500mm*470mm*180mm					
Weight	21kg					
Noise	<25dB(A)					
Operating Temperature	-25℃~ +60℃ (>45℃ Derating					
Opera﷟onal Altitude	4000m (>3000m Derating)					
Cooling Method	Natural Cooling					
Ingress Protection Grade	IP65					
Mornitoring	LED/WIFI/4G/Bluetooth/RS485					
Communication Port	RS485/CAN/DRED/Dry contact/Parallel port					
Protection	DC Switch; AC Overvoltage Protection; AC Overcurrent Protection; AC Short Circuit Protection; Anti-islanding Protection; Residual Current Monitoring; PV Insulation Resistance Detection; Surge Protection:LEVEL II; Reverse Polarity Protection(PV&Battery]:Lightning Protection					
Certification						
CE-LVD	IEC 62109-1, IEC 62109-2, EN 62109-1, EN 62109-2, IEC 62477-1					
CE-EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 62920					
Grid	VDE-AR-N 4105, C10-11, G98/G99, CEI 0-21, EN50549, NRS 097-2-1, R25,UNE217001, UNE217002, NTS 2.1, PEA, MEA, NC RfG, AS/NZS 4777.2:2020+A1 IEC 62116:2014 IEC 61727:2024					

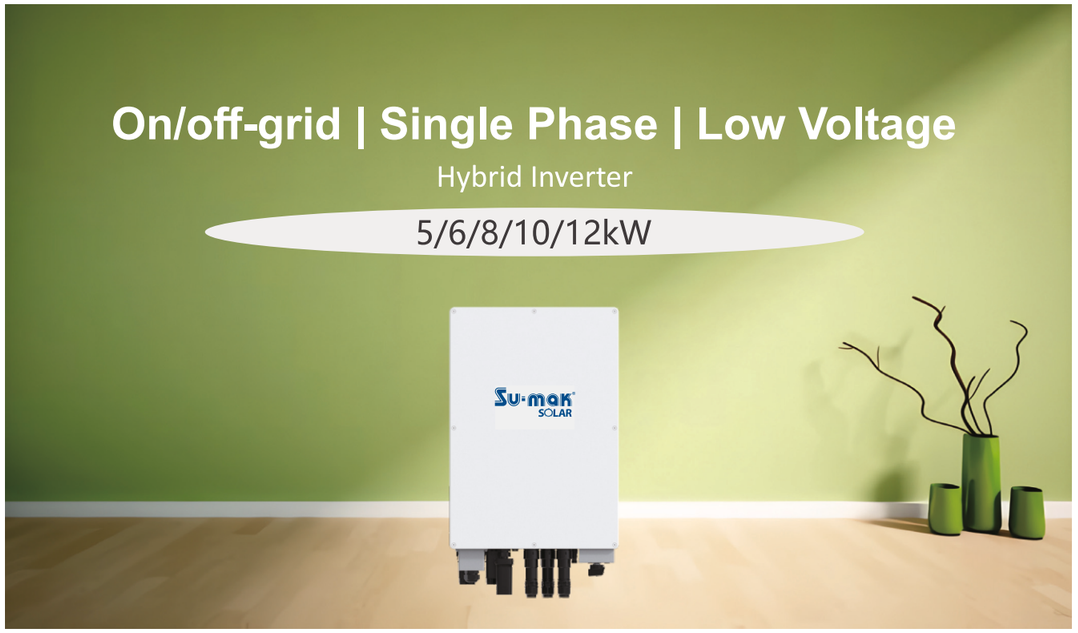
*Typical, Lab Condi﷟ons Only
*Overload output is dependent on sufficient PV and Battery energy



Product Features

- **Support 100% Three Phase Unbalance**
- **SiC Technology 98.2% Efficiency**
- **2 Independent Battery Ports for Mixture Use of Old & New Battery**
- **<10ms On/Off-grid Switchover**
- **SiC Technology Max.Efficiency 98.2%**
- **150-200% PV Input Power 6 Units in Parallel (Off-grid Mode)**
- **200% Grid Input Power, 58A Grid Input Current Supplying to Loads & Charging Battery in Parallel**
- **Support Altitude 5000m(>3000m Derating)**
- **Support AC Couple**

Model Name	Su-mak 5000T	Su-mak 6000T	Su-mak 8000T	Su-mak 10000T	Su-mak 12000T	Su-mak 15000T	Su-mak 18000T	Su-mak 20000T
Off-grid Output								
Rated Output Power	5kW	6kW	8kW	10kW	12kW	15kW	18kW	20kW
Peak Power&Duration	10kVA(60s)			11kVA(60s)	13.2kVA(60s)	16.5kVA(60s)	19.8kVA(60s)	22kVA(60s)
Rated Voltage	3/N/PE, 220/380Vac, 230/400Vac							
Rated Frequency	50/60Hz							
Rated Output Current	7.5A	9A	12A	15A	18A	22.5A	27A	30A
Output THDu	<3%							
On-grid Parameter								
Rated Output Power	5kW	6kW	8kW	10kW	12kW	15kW	18kW	20kW
Max. Input Power from Grid	10kW	12kW	16kW	20kW	24kW	30kW	36kW	40kW
Max. Input Current from Grid	15A	18A	24A	29A	35A	44A	52A	58A
Max. Output Current	8A	10A	13A	16A	20A	24A	29A	32A
Rated Grid Voltage	3/N/PE, 220/380V, 230/400V, 240/415V							
Grid Voltage Range	184-276V/320-480V							
PV Input								
Max. Input Power	10000Wp	12000Wp	16000Wp	20000Wp	24000Wp	30000Wp	30000Wp	30000Wp
Max. Input Voltage	1000V							
Number of MPPT	2							
Max. Input String Per MPPT	2							
MPPT Voltage Range	130-960V							
Rated Input Voltage	600V							
Starting Voltage	200V							
Max. Input Current	25A/25A							
Short-Circuit Current	30A/30A							
Battery Parameter								
Battery Type	Lithium-ion/Lead-Acid/Sodium-ion							
Number of Battery Input	2							
Battery Voltage Range	125-800V							
Full Load Battery Voltage Range	125-800V	125-800V	160-800V	210-800V	250-800V	300-800V	360-800V	400-800V
Battery Charging/Discharging Current	25A*2							
Peak Charging/Discharging Current-Duration	35A*2-60s							
Efficiency								
Max. Efficiency	98.20%							
European Efficiency	97.70%							
Max. Battery Charging/Discharging Efficiency	97.80%							
General Data								
Size(W*H*D)	573mm*509mm*219mm							
Weight	35kg							
Noise	<45dB(A)							
Operating Altitude	5000m (>3000m Derating)							
Operating Temperature	-25℃~ +60℃							
Cooling Method	Intelligent Air Cooling							
Ingress Protection Grade	IP65							
Mornitoring	LED/WIFI/4G/Bluetooth/RS485							
Communication Port	RS485/CAN/DRED/Dry contact/Parallel port							
Protection	DC Switch; AC Overvoltage Protection; AC Overcurrent Protection;AC Short Circuit Protection; Anti-islanding Protection; Residual Current Monitoring; PV Insulation Resistance Detection; Surge Protection:LEVEL II; Reverse Polarity Protection(PV&Battery):Lightning Protection							
Certification								
CE-LVD	IEC 62109-1, IEC 62109-2, EN 62109-1, EN 62109-2, IEC 62477-1							
CE-EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 62920							
Grid	VDE-AR-N 4105, C10-11, G98/G99, CEI 0-21, EN50549, PEA, MEA, IEC 62116, IEC 61727 NRS 097-2-1, AS 4777.2, R25,UNE217001, UNE217002, NTS 2.1, NC RfG							



Product Features

SiC Technology, Max.Efficiency 98.2%

2 Independent Battery Ports for Mixture Use of Old & New Battery

150%-360% PV Input Power, 3 MPPTs, PV Input Current 20A, Higher Compatbility with PV Panel

150-340% Grid Input Power, Max.18kW, Supplying to Loads & Charging Battery in Parallel

0ms (off-grid to on-grid)* 4ms (on-grid to off-grid)

165mm Ultra-thin, IP65 166-400% Overload

Executive Generator Port, Smart Monitoring Max.Generator Input Current 82A

Battery Current 250A, Battery Voltage 30-60V, Support Compability with Sodium-ion Battery

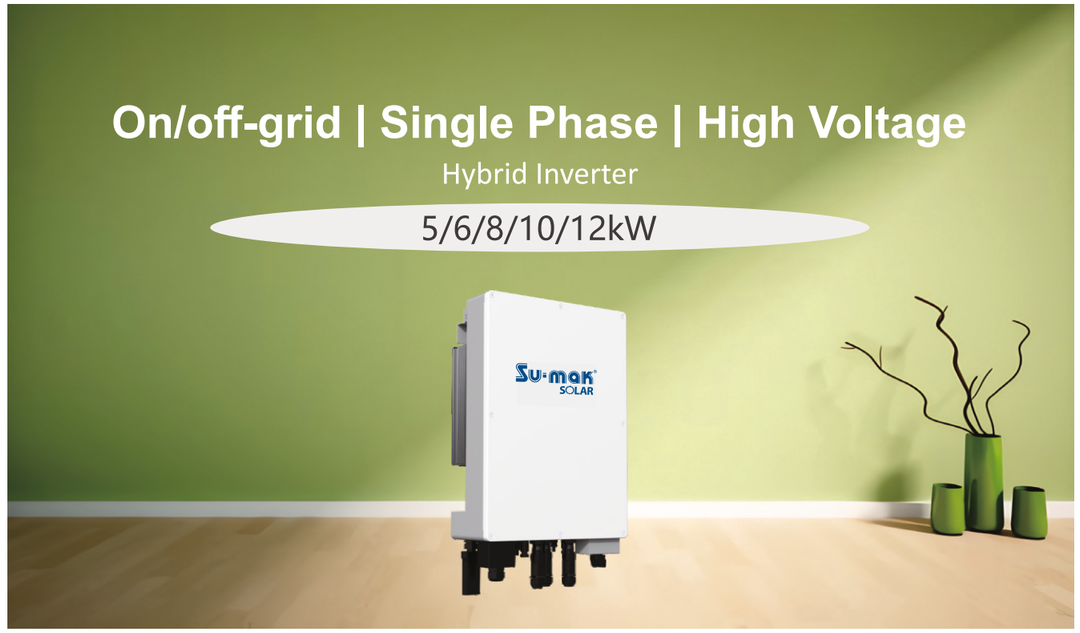
6 Units in Parallel (Off-grid Mode) AFCI/PID Function (Optional)

Model Name	Su-mak D5K-SL	Su-mak D6K-SL	Su-mak D8K-SL	Su-mak D10K-SL	Su-mak D12K-SL
Off-grid Output					
Rated Output Power	5kW	6kW	8kW	10kW	12kW
Max. Output Power	5.5kVA	6.6kVA	8.8kVA	11kVA	13.2kVA
Peak Power & Duration	20kVA(10s)*				
Max. Output Current	25A	30A	40A	50A	60A
Rated Output Voltage	L/N/PE, 220V/230V/240V				
Switching Time	<4ms*				
GEN Max. Current	82A				
GEN Voltage Range	185-276V(P2N)				
On-grid Parameter					
Rated Output Power	5kW	6kW	8kW	10kW	12kW
Max. Output Power	5.5kVA	6.6kVA	8.8kVA	11kVA	13.2kVA
Max. Output Current	25A	30A	40A	50A	60A
Max. Input Power	18kVA				
Grid Frequency	50/60±5Hz				
PV Input					
Max. Input Power	18KW				
Max. Input Voltage	800V				
Number of MPPT	3				
Max. Input String Per MPPT	1/1/1				
MPPT Voltage Range	130-800V				
Starting Voltage	140V				
Max. Input Current	20A/20A/20A				
Short-Circuit Current	24A/24A/24A				

Battery Parameter	
Battery Type	Lithium-ion/Lead-Acid/Sodium-ion
Number of Battery Input	2
Battery Voltage Range	30-60V
Battery Charging/Discharging Current	125A*2
Efficiency	
Max. Efficiency	98.20%
European Efficiency	97.70%
Max. Battery Charging/Discharging Efficiency	95.00%
General Data	
Size(W*H*D)	465mm*665mm*165mm
Weight	36kg
Noise	<45dB(A)
Operating Temperature	-25℃~ +60℃ (>45℃ Derating)
Operating Altitude	4000m(>3000m Derating)
Cooling Method	Intelligent Air Cooling
Ingress Protection Grade	IP65
Battery Topology	Isolation
Communication Port	RS485*1，Wi-Fi/4G dongle*1，DO*2，DRM*1
Protection	DC Switch; Reverse Polarity Protection; AC Overvoltage/Overcurrent/Short Circuit Protection; Anti-islanding Protection; Residual Current Monitoring; Insulation Resistance Detection; Surge Protection:DC Type II / AC Type III; AFCI(Optional); PID(Optional)
Certification	
CE-LVD	IEC62109-1&2, IEC62477-1
CE-EMC	EN61000-6-1, EN61000-6-2, EN61000-6-3,EN61000-6-4 EN 61000-4-16, EN 61000-4-18,EN 61000-4-29
Grid	VDE-AR-N 4105;VDE 0126-1-1 EN 50549-1;G98,G100; CEI 0-21;AS/NZS4777.2 NRS 097-2-1

* Overload output is dependent on sufficient PV and Battery energy

* Typical, Lab Condi◆ons Only

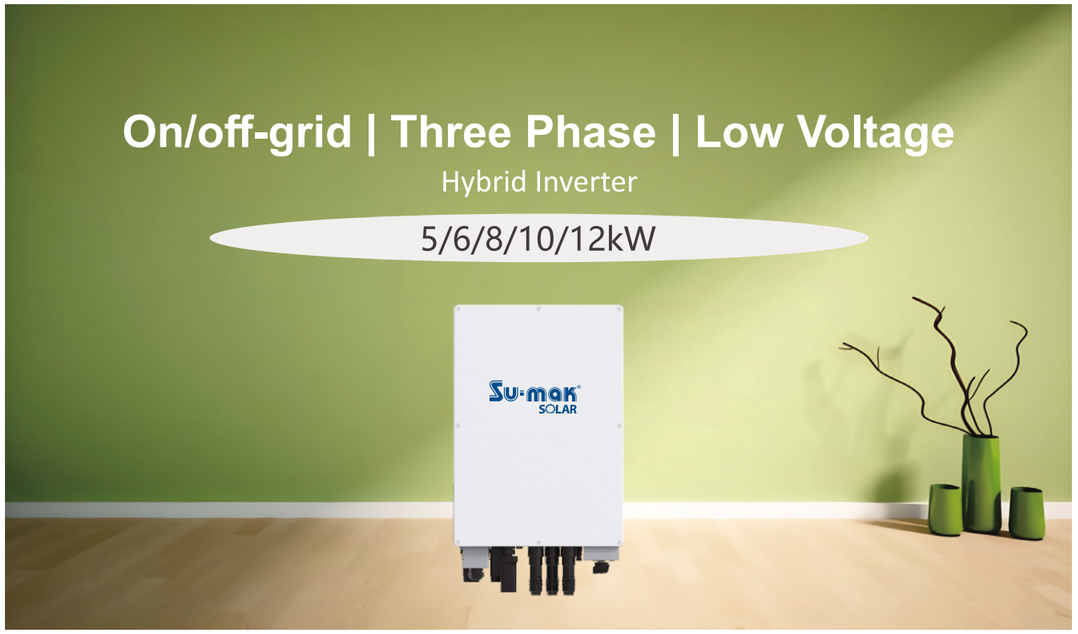


Product Features

- **SiC Technology Max. Efficiency 98.2%**
- **2 Independent Battery Ports for Mixture Use of Old & New Battery**
- **150%-360% PV Input Power, 3 MPPTs, PV Input Current 20A, Higher Compatbility with PV Panel**
- **150-340% Grid Input Power, Max.18kW, Supplying to Loads & Charging Battery in Parallel**
- **0ms (off-grid to on-grid)* 4ms (on-grid to off-grid)**
- **165mm Ultra-thin, IP65 166-400% Overload**
- **Executive Generator Port, Smart Monitoring Max.Generator Input Current 82A**
- **Compa﷽ble with Lead-Acid/Gel/Lithium Battery**
- **6 Units in Parallel (Off-grid Mode) AFCI/PID Function (Optional)**

Model Name	Su-mak D5K-SH	Su-mak D6K-SH	Su-mak D8K-SH	Su-mak D10K-SH	Su-mak D12K-SH
Off-grid Output					
Rated Output Power	5kW	6kW	8kW	10kW	12kW
Max. Output Power	5.5kVA	6.6kVA	8.8kVA	11kVA	13.2kVA
Peak Power&Duration	20kVA(10s)*				
Max. Output Current	25A	30A	40A	50A	60A
Rated Output Voltage	L/N/PE, 220V/230V/240V				
Switching Time	<4ms*				
GEN Max. Current	82A				
GEN Voltage Range	185-276V（P2N）				
On-grid Parameter					
Rated Output Power	5kW	6kW	8kW	10kW	12kW
Max. Output Power	5.5kVA	6.6kVA	8.8kVA	11kVA	13.2kVA
Max. Output Current	25A	30A	40A	50A	60A
Max. Input Power	18kWA				
Grid Frequency	50/60±5Hz				
PV Input					
Max. Input Power	18KW				
Max. Input Voltage	1000V				
Number of MPPT	3				
Max. Input String Per MPPT	1/1/1				
MPPT Voltage Range	130-960V				
Starting Voltage	140V				
Max. Input Current	20A/20A/20A				
Short-Circuit Current	24A/24A/24A				
Battery Parameter					
Battery Type	Lithium-ion/Lead-Acid/Sodium-ion				
Number of Battery Input	2				
Battery Voltage Range	125-800V				
Battery Charging/Discharging Current	25A*2				
Efficiency					
Max. Efficiency	98.20%				
European Efficiency	97.70%				
Max. Battery Charging/Discharging Efficiency	97.80%				
General Data					
Size(W*H*D)	400mm*575mm*165mm				
Weight	26kg				
Noise	<45dB(A)				
Operating Temperature	-25℃~ +60℃ (>45℃ Derating)				
Operating Altitude	4000m(>3000m Derating)				
Cooling Method	Intelligent Air Cooling				
Ingress Protection Grade	IP65				
Battery Topology	Non-Isolated				
Communication Port	RS485*1，Wi-Fi/4G dongle*1，DO*2，DRM*1				
Protection	DC Switch; Reverse Polarity Protection; AC Overvoltage/Overcurrent/Short Circuit Protection; Anti-islanding Protection; Residual Current Monitoring; Insulation Resistance Detection; Surge Protection:DC Type II / AC Type III; AFCI(Optional); PID(Optional)				
Certification					
CE-LVD	IEC62109-1&2, IEC62040-1				
CE-EMC	EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN 61000-4-16, EN 61000-4-18,EN 61000-4-29				
Grid	VDE-AR-N 4105, VDE 0126-1-1 EN 50549-1, G98, G100, CEI 0-21, AS/NZS4777.2 NRS 097-2-1				

*Overload output is dependent on sufficient PV and Battery energy
*Typical, Lab Condi﷽ons Only



Product Features

SiC Technology, Max. 98.2% Efficiency

2 Independent Battery Ports for Mixture Use of Old & New Battery

150%-360% PV Input Power, 3 MPPTs, PV Input Current 20A, Higher Compatbility with PV Panel

200-480% Grid Input Power, Max.24kW, Supplying to Loads & Charging Battery in Parallel

166-400% Overload

165mm Ultra-thin, IP65

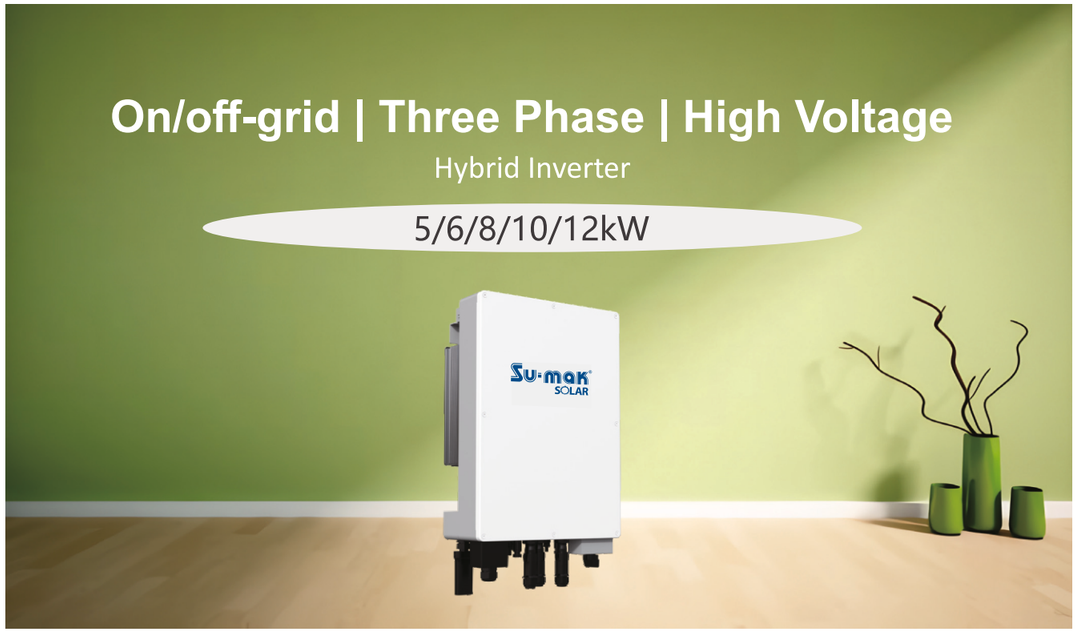
Executive Generator Port, Smart Monitoring Max. Generator Input Current 36.4A

Battery Current 250A, Battery Voltage 30-60V, Support Compability with Sodium-ion Battery

6 Units in Parallel (Off-grid Mode) AFCI/PID Function (Optional)

Model Name	Su-mak D5K-TL	Su-mak D6K-TL	Su-mak D8K-TL	Su-mak D10K-TL	Su-mak D12K-TL
Off-grid Output					
Rated Output Power	5kW	6kW	8kW	10kW	12kW
Max. Output Power	5.5kVA	6.6kVA	8.8kVA	11kVA	13.2kVA
Peak Power & Duration	20kVA(10s)*				
Max. Output Current	8.3A	10A	13.3A	16A	20A
Rated Output Voltage	3/N/PE, 220/380Vac, 230/400Vac				
Switching Time	<10ms				
GEN Max. Current	36.4A				
GEN Voltage Range	185-276V(P2N)				
On-grid Parameter					
Rated Output Power	5kW	6kW	8kW	10kW	12kW
Max. Output Power	5.5kVA	6.6kVA	8.8kVA	11kVA	13.2kVA
Max. Output Current	8.3A	10A	13.3A	16A	20A
Max. Input Power	24kVA				
Rated Voltage	3/N/PE, 220/380Vac, 230/400Vac				
Grid Voltage range	185-276V（P2N）				
Grid Frequency	50/60±5Hz				
PV Input					
Max. Input Power	18KW				
Max. Input Voltage	800V				
Number of MPPT	3				
Max. Input String Per MPPT	1/1/1				
MPPT Voltage Range	130-800V				
Starting Voltage	140V				
Max. Input Current	20A/20A/20A				
Short-Circuit Current	24A/24A/24A				
Battery Parameter					
Battery Type	Lithium-ion/Lead-Acid/Sodium-ion				
Number of Battery Input	2				
Battery Voltage Range	30-60V				
Battery Charging/Discharging Current	125A*2				
Efficiency					
Max. Efficiency	98.20%				
European Efficiency	97.70%				
Max. Battery Charging/Discharging Efficiency	95.00%				
General Data					
Size(W*H*D)	465mm*665mm*165mm				
Weight	36kg				
Noise	<45dB(A)				
Operating Temperature	-25℃~ +60℃ (>45℃ Derating)				
Operating Altitude	4000m(>3000m Derating)				
Cooling Method	Intelligent Air Cooling				
Ingress Protection Grade	IP65				
Battery Topology	Isolation				
Communication Port	LED/WIFI/4G/Bluetooth/RS485				
Protection	DC Switch; Reverse Polarity Protection; AC Overvoltage/Overcurrent/Short Circuit Protection; Anti-islanding Protection; Residual Current Monitoring; Insulation Resistance Detection; Surge Protection:DC Type II / AC Type III; AFCI(Optional); PID(Optional)				
Certification					
CE-LVD	IEC62109-1&2, IEC62040-1				
CE-EMC	EN61000-6-1, EN61000-6-2, EN61000-6-3,EN61000-6-4 EN 61000-4-16, EN 61000-4-18,EN 61000-4-29				
Grid	VDE-AR-N 4105;VDE 0126-1-1 EN 50549-1;G98,G100; CEI 0-21;AS/NZS4777.2 NRS 097-2-1				

*Overload output is dependent on sufficient PV and Battery energy



Product Features

SiC Technology, Max. 98.2% Efficiency

2 Independent Battery Ports for Mixture Use of Old & New Battery

150%-360% PV Input Power, 3 MPPTs, PV Input Current 20A, Higher Compatbility with PV Panel

200-480% Grid Input Power, Max.24kW, Supplying to Loads & Charging Battery in Parallel

166-400% Overload

165mm Ultra-thin, IP65

Executive Generator Port, Smart Monitoring Max.Generator Input Current 36.4A

Compa﷿ble with Lead-Acid/Gel/Lithium Battery

6 Units in Parallel (Off-grid Mode) AFCI/PID Function (Optional)

Model Name	Su-mak D5K-TH	Su-mak D6K-TH	Su-mak D8K-TH	Su-mak D10K-TH	Su-mak D12K-TH
Off-grid Output					
Rated Output Power	5kW	6kW	8kW	10kW	12kW
Max. Output Power	5.5kVA	6.6kVA	8.8kVA	11kVA	13.2kVA
Peak Power & Duration	20kVA(10s)*				
Max. Output Current	8.3A	10A	13.3A	16A	20A
Rated Output Voltage	3/N/PE, 220/380Vac, 230/400Vac				
Switching Time	<10ms				
GEN Max. Current	36.4A				
GEN Voltage Range	185-276V(P2N)				
On-grid Parameter					
Rated Output Power	5kW	6kW	8kW	10kW	12kW
Max. Output Power	5.5kVA	6.6kVA	8.8kVA	11kVA	13.2kVA
Max. Output Current	8.3A	10A	13.3A	16A	20A
Max. Input Power	24kVA				
Rated Voltage	3/N/PE, 220/380Vac, 230/400Vac				
Grid Voltage range	185-276V(P2N)				
Grid Frequency	50/60±5Hz				
PV Input					
Max. Input Power	18KW				
Max. Input Voltage	1000V				
Number of MPPT	3				
Max. Input String Per MPPT	1/1/1				
MPPT Voltage Range	130-960V				
Starting Voltage	140V				
Max. Input Current	20A/20A/20A				
Short-Circuit Current	24A/24A/24A				
Battery Parameter					
Battery Type	Lithium-ion/Lead-Acid/Sodium-ion				
Number of Battery Input	2				
Battery Voltage Range	125-800V				
Battery Charging/Discharging Current	25A*2				
Efficiency					
Max. Efficiency	98.20%				
European Efficiency	97.70%				
Max. Battery Charging/Discharging Efficiency	97.80%				
General Data					
Size(W*H*D)	400mm*575mm*165mm				
Weight	26kg				
Noise	<45dB(A)				
Operating Temperature	-25℃~ +60℃ (>45℃ Derating)				
Operating Altitude	4000m(>3000m Derating)				
Cooling Method	Intelligent Air Cooling				
Ingress Protection Grade	IP65				
Battery Topology	Non-isolated				
Communication Port	LED/WIFI/4G/Bluetooth/RS485				
Protection	DC Switch; Reverse Polarity Protection; AC Overvoltage/Overcurrent/Short Circuit Protection; Anti-islanding Protection; Residual Current Monitoring; Insulation Resistance Detection; Surge Protection:DC Type II / AC Type III; AFCI(Optional); PID(Optional)				
Certification					
CE-LVD	IEC62109-1&2, IEC62040-1				
CE-EMC	EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN 61000-4-16, EN 61000-4-18,EN 61000-4-29				
Grid	VDE-AR-N 4105, VDE 0126-1-1 EN 50549-1, G98, G100, CEI 0-21, AS/NZS4777.2 NRS 097-2-1				

*Overload output is dependent on sufficient PV and Battery energy



Product Features

SiC Technology, Max. Efficiency 98.6%

2 Independent Battery Ports for Mixture Use of Old & New Battery

150%-340% PV Input Power, 4 MPPTs, PV Input Current 40A, Higher Compatbility with PV Panel

200%-470% Grid Input Power, 150A Grid Input Current Supplying to Loads & Charging Battery in Parallel

150% Overload, AFCI Function(Optional)

Smaller Size, Easier for Installation and Price-wise in Shipping

Executive Generator Port, Smart Monitoring Max.Generator Input Current 150A

Battery Current 160A, High Adapability with Battery

6 Units in Parallel (Off-grid Mode)

Model Name	Su-mak L22K-TH	Su-mak L25K-TH	Su-mak L29.9K-TH	Su-mak L30K-TH	Su-mak L40K-TH	Su-mak L42.5K-TH	Su-mak L50K-TH
Off-grid Output							
Rated Output Power	22kW	25kW	29.9kW	30kW	40kW	42.5kW	50kW
Max. Apparent Power	24.2kVA	27.5kVA	29.9kVA	33kVA	44kVA	42.5kVA	55kVA
Rated Voltage	3L/N/PE, 220/380V; 230/400V						
Rated Frequency	50Hz/60Hz						
Rated Output Current	31.9A	36.3A	43.5A	43.5A	58A	61.6A	72.5A
Max. Output Current	35.1A	39.9A	43.5A	47.9A	63.8A	61.6A	79.8A
Peak Power & Duration	150%(10s)						
Generator Input Current	150A						
THDu	<3%						
On-grid Parameter							
Rated Output Power	22kW	25kW	29.9kW	30kW	40kW	42.5kW	50kW
Rated Grid Voltage	3L/N/PE, 220/380V; 230/400V						
Rated Grid Frequency	50Hz/60Hz						
Rated Output Current	31.9A	36.3A	43.5A	43.5A	58A	61.6A	72.5A
Grid Input Current	150A						
PV Input							
Max. DC Input Power	75000Wp						
Max.Input Voltage	1000V						
Rated Input Voltage	600V						
Starting Voltage	180V						
MPPT Voltage Range	150-850V						
Max. Input String Per MPPT	4/8						
Max. DC Input Current	4*40A						
Short-circuit Current	4*60A						
Battery Parameter							
Battery Type	Lithium-ion/Lead-Acid/Sodium-ion						
Battery Voltage Range	140-800V						
Max. Charing/Discharing Power	22kW	25kW	29.9kW	30kW	40kW	42.5kW	50kW
Max. Charing/Discharing Current	80A*2						
Number of Battery Input Ports	2						
Efficiency							
Max. Efficiency	98.6%						
European Efficiency/CEC Efficiency	97.97%						
Max. Battery Charging/Discharging Efficiency	98%						
General Data							
Size(W*H*D)	850mm*550mm*295mm						
Weight	88kg						
Noise	55dB(A)						
Operating Temperature	-25°C~+60°C						
Operating Altitude	4000m(>3000m Derating)						
Humidity Range	0-100%						
Ingress Protection Grade	IP66						
Cooling Method	Intelligent Air Cooling						
Monitoring	LED+Bluetooth+APP, WIFI/LAN/4G						
Communication Port	RS485*1, Internet/WIFI/4G, DO*2, DI*2, AI*1, AO*1, DRM*1						
DC Power	12VDC 2A						



Product Features

SiC Technology
Max. Efficiency 97.5%,
3-5% Higher than Average

125-250% PV Input Power
PV Input Current 18A-36A

230-460% Grid Input Power,
30A-60A Grid Input Current
Supplying to Loads & Charging
Battery in Parallel

3-years Standard Warranty
Support 6 Units in Parallel

Support 176-264V AC
Voltage Range

130-260% Overload
>200% Generator Input

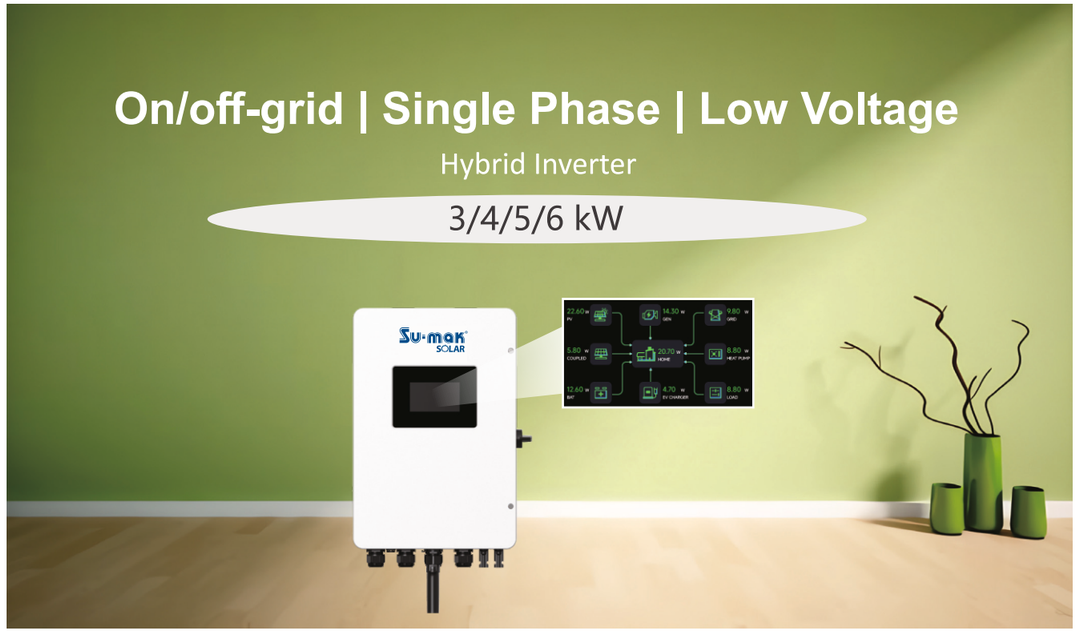
Mini-sized, Easier for Installation
and Price-wise in Shipping

0ms (off-grid to on-grid)*
4ms (on-grid to off-grid)

Smart Fan, Ultra Silence
Fan Running since 50% Rated
Power Output

Model Name	Su-mak O1.5K-SL-G2	Su-mak O2.2K-SL-G2	Su-mak O3K-SL-G2	Su-mak O4K-SL-G2	Su-mak O5K-SL-G2	Su-mak O6K-SL-G2
Off-grid Output						
Max. Output Power	1500VA	2200VA	3000VA	4000VA	5000VA	6000VA
Output Voltage&Range	220V/230V/240Vac±10%					
Rated Output Current	6.8A	10A	13.6A	18.2A	22.7A	27.2A
Peak Power&Duration	4kVA(10s)			8kVA(10s)		
Max. Generator Input	6KVA			12KVA		
On-Grid Parameter						
Max. AC Input Current	30A			60A		
Max. Load Power	4kW			8kW		
Max Output Power	1500VA	2200VA	3000VA	4000VA	5000VA	6000VA
Rated Output Current	6.8A	10A	13.6A	18.2A	22.7A	27.2A
On-Grid Voltage	220V/230V/240Vac					
Nominal AC Frequency	45-55Hz/55-65Hz					
Grid Voltage Range	176-264V					
THDi	<3%					
PV Input						
Max. DC Input Power	3750W			7500W		
Rated DC Input Voltage	360V					
Input Voltage Range	60-500V					
MPPT Voltage Range	60-500V					
Starting Voltage	72V					
Numbers of MPPT	1					
Max. DC Input Current	18A			36A		
Max. Short-circuit Current	22A			44A		
Battery Parameter						
Battery Type	Lithium-ion/Lead-Acid					
Rated Battery Voltage	48V					
Battery Voltage Range	42-58V					
Max. Discharge Current	62.5A			125A		
Max. Charge Current	62.5A			125A		
Charging Curve	3 stages					
Efficiency						
Europe Efficiency	97.2%	97.3%	97.3%	97.2%	97.3%	97.3%
Max.Efficiency	97.4%	97.5%	97.5%	97.4%	97.5%	97.5%
Max. Battery Charging/Discharging Efficiency	94.0%					
General Data						
Size(W*H*D)	315mm*280mm*80mm			345mm*305mm*98mm		
Weight	5.5kg			7kg		
Noise	<40dB(A)					
Operating Temperature	-25℃~ +60℃ (>40℃ Derating)					
Operating Altitude	4000m (>2000m Derating)					
Cooling Method	Intelligent Air Cooling					
Mornitoring	LCD/LED/APP/WIFI/Bluetooth					
Communication Port	CAN+RS485					
Protection	Over Current/Voltage Protection;AC Short-circuit Protection;Over Temperature Protection					
Parallel Capability	Max. 6 Units					
Ingress Protect Degree	IP20					
Certification						
CE-LVD	EN 62109-2:2011 EN 62109-1:2010					
CE-EMC	EN61000-6-1, EN61000-6-2					

* Typical, Lab Condi﷿ons Only



Product Features

200-400% Grid Input Power
54A Grid Input Current

Support 184-276V AC Voltage Range, Support 45-65Hz Frequency

150-200% PV Input Power
18A PV Current, 2 MPPTs

120-200% Overload

Smart Fan, Ultra Silence
6 Units in Parallel
(Off-grid Mode)

SiC Technology
Max. Efficiency 97.6%

0ms (off-grid to on-grid)*
4ms (on-grid to off-grid)

> 200% Generator Input Power
Executive Generator Port
Smart Monitoring

IP65, Smaller Size
Easier for Installation and
Price-wise in Shipping

Model Name	Su-mak S3K-SL-S	Su-mak S4K-SL-S	Su-mak S5K-SL-S	Su-mak S6K-SL-S
Off-grid Output				
Rated Output Power	3000W	4000W	5000W	6000W
Peak Power&Duration	7800W(10s)/9000W(1s)			
Rated Voltage	220V/230V/240V			
Rated Frequency	50/60Hz			
Rated Output Current	13.6A	18.2A	22.7A	27.2A
Output THDu	<2%			
Generator Input Current	54A			
On-grid Parameter				
Rated Output Power	3000W	4000W	5000W	6000W
Max. Output Current	13.6A	18.2A	22.7A	27.2A
Max. Input Current from Grid	54A			
Rated Grid Voltage	220V/230V/240V			
Grid Voltage Range	184-276V			
Frequency Range	45-65Hz			
PV Input				
Max. Input Power	9000Wp			
Starting Voltage	95V			
Max.Input Voltage	500V			
MPPT Voltage Range	80-500V			
Number of MPPT	2			
Max. Input String Per MPPT	1			
Rated Input Voltage	360V			
Max. Input Current	18A/18A			
Short-Circuit Current	22A/22A			
Battery Parameter				
Battery Type	Lithium-ion/Lead-Acid/Sodium-ion			
Rated Battery Voltage	51.2V			
Battery Voltage Range	30-60V			
Max. Charging Voltage	≤60V			
Battery Charging/Discharging Current	125A			
Efficiency				
Max. Efficiency	97.5%	97.6%	97.6%	
European Efficiency	97.2%	97.2%	97.2%	
Max. Battery Charging/Discharging Efficiency	94%			
General Data				
Size(W*H*D)	325mm*480mm*188.5mm			
Weight	21kg			
Noise	<45dB(A)			
Operating Temperature	-25℃~ +60℃ (>45℃ Derating			
Operating Altitude	4000m (>3000m Derating)			
Cooling Method	Intelligent Air Cooling			
Ingress Protection Grade	IP65			
Mornitoring	LCD/APP/WIFI/Bluetooth/4G/LAN			
Communication Port	RS485/CAN/DO/Parallel port			
Protection	DC Switch; AC Overvoltage Protection; AC Overcurrent Protection; AC Short Circuit Protection;Anti-islanding Protection; Residual Current Monitoring; Surge Protection:LEVEL II; Reverse Polarity Protection(PV&Battery]:Lightning Protection			
Certification				
CE-LVD	IEC 62109-1, IEC 62109-2, EN 62109-1, EN 62109-2, IEC 62477-1			
CE-EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 62920			

*Typical, Lab Condi﷽ons Only



Product Features

13.8kW Grid Input Power
60A Grid Input Current

Support 184-264V AC
Voltage Range

110% PV Input Power
18A PV Current, 2 MPPTs

110% Overload

Smart Fan, Ultra Silence
SiC Technology

6 Units in Parallel

0ms (off-grid to on-grid)*
4ms (on-grid to off-grid)

60A Generator Input Current
Executive Generator Port
Smart Monitoring

IP65, Smaller Size
Easier for Installation and
Price-wise in Shipping

Model Name	Su-mak E8K-SL-S
Off-grid Output	
Rated Output Power	8kW
Overload Output Power	8.8kW(60s)
Rated Output Frequency	50/60Hz
Output Voltage Range	230 ± 2%V
Output Frequency Range	± 0.2Hz
Output THDu	<2%
Switching Time	≤10ms
On-grid Parameter	
Max. Output Power	8kW
Max. Output Current	34.8A
Max. Input Current from Grid	60A
Rated Grid Voltage	230 ± 2%V
Grid Voltage Range	184-264V
Frequency Range	50/60Hz
PV Input	
Max. Input Power	9000Wp
Starting Voltage	80V
Rated nput Voltage	360V
Number of MPPT	2
Max. Input Current	18A
Input Voltage Range	65-500V
Battery Parameter	
Battery Type	Lithium-ion/Lead-Acid/Sodium-ion
Rated Battery Voltage	51.2V
Battery Voltage Range	30-60V
Max. Charging/Discharging Power	8kW
Battery Charging/Discharging Current	135A
General Data	
Size(W*H*D)	380mm*480mm*198mm
Weight	22.5kg
Noise	<45dB(A)
Operating Temperature	-25℃~ +60℃ (>45℃ Derating
Operating Altitude	4000m (>3000m Derating)
Cooling Method	Intelligent Air Cooling
Ingress Protection Grade	IP65
Mornitoring	LCD/APP/WIFI/Bluetooth/4G/LAN
Communication Port	RS485/CAN/DO/Parallel port
Protection	DC Switch; AC Overvoltage Protection; AC Overcurrent Protection; AC Short Circuit Protection;Anti-islanding Protection; Residual Current Monitoring; Surge Protection:LEVEL II; Reverse Polarity Protection(PV&Battery]:Lightning Protection
Certification	
CE-LVD	IEC 62109-1, IEC 62109-2, EN 62109-1, EN 62109-2, IEC 62477-1
CE-EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 62920

*Typical, Lab Condi◆ons Only



Product Features

- 133-160% Overload Smart Fan, Ultra Silence
- SiC Technology
- 24kW PV Input Power 36A PV Current, 2 MPPTs
- Support 184-276V AC Voltage Range, Support 45-65Hz Frequency
- 6 Units in Parallel
- IP65, Smaller Size Easier for Installation and Price-wise in Shipping
- Executive Generator Port, Smart Monitoring Max. Generator Input Current 80A
- 0ms (off-grid to on-grid)* 4ms (on-grid to off-grid)
- 153-184% AC Input Power

Model Name	Su-mak E10K-SL-S	Su-mak E12K-SL-S
Off-grid Output		
Rated Output Power	10kW	12kW
Peak Power&Duration	16kW-10s(BAT+PV)	
Output Voltage Range	230 ± 2% V	
Rated Frequency	50/60Hz	
Rated Output Current	43.5A	52.2A
THDu	<2%	
On-grid Parameter		
Rated Output Power	10kW	12kW
Max. Output Current	43.5A	52.2A
Generator Input Current	80A	
Rated Grid Voltage	230V	
Grid Voltage Range	184-276V	
Rated Input Frequency	50/60 Hz	
PV Input		
Max. Input Power	24000Wp	
Starting Voltage	95V	
Max.Input Voltage	500V	
MPPT Voltage Range	80-500V	
Number of MPPT	2	
Max. Input String Per MPPT	2	
Rated Input Voltage	360V	
Max. Input Current	36A/36A	
Short-Circuit Current	44A/44A	

Battery Parameter	
Battery Type	Lithium-ion/Lead-Acid/Sodium-ion
Rated Battery Voltage	51.2V
Battery Voltage Range	30-60V
Max. Battery Charging/ Discharging Current	240A
Efficiency	
Max. Efficiency	98.8%
European Efficiency	97.8%
Max. Battery Charging/Discharging Efficiency	95%
General Data	
Size(W*H*D)	400mm*528mm*244mm
Noise	<45dB(A)
Weight	29.5kg
Operating Temperature	-25℃~ +60℃ (40-55℃ Derating
Operating Altitude	≤4000m
Cooling Method	Intelligent Air Cooling
Ingress Protection Grade	IP65
Mornitoring	LCD/APP/WIFI/Bluetooth/4G/LAN
Communication Port	RS485/CAN/DO/Parallel port
Protection	DC Switch; AC Overvoltage Protection; AC Overcurrent Protection; AC Short Circuit Protection;Anti-islanding Protection; Residual Current Monitoring; Surge Protection:LEVEL II; Reverse Polarity Protection(PV&Battery):Lightning Protection
Certification	
CE-LVD	IEC 62109-1, IEC 62109-2, EN 62109-1, EN 62109-2, IEC 62477-1
CE-EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 62920

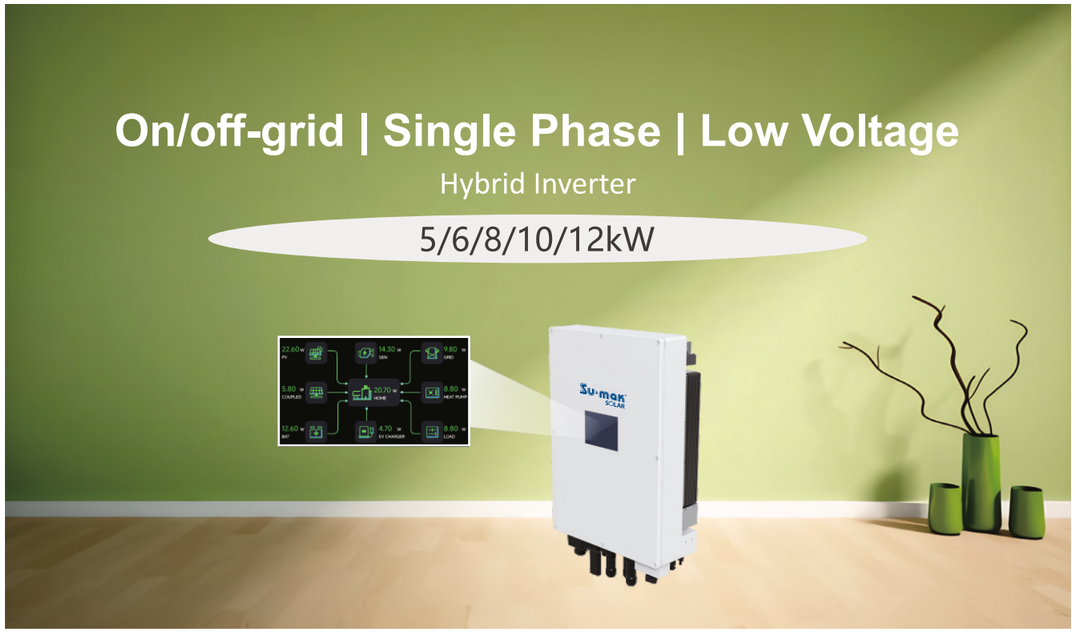


Product Features

- 200-400% Grid Input Power
- Support 185-276V AC Voltage Range, Support 45-65Hz Frequency
- 150-200% PV Input Power 20A PV Current, 2 MPPTs
- 200-400%-10s Overload
- Smart Fan, Ultra Silence 6 Units in Parallel (Off-grid Mode)
- SiC Technology Max. Efficiency 97.6%
- <10ms On/Off-grid Switchover
- > 200% Generator Input Power Executive Generator Port Smart Monitoring
- IP65, Smaller Size Easier for Installation and Price-wise in Shipping

Model Name	Su-mak C5K-TL-S	Su-mak C6K-TL-S	Su-mak C8K-TL-S	Su-mak C9K-TL-S
Off-grid Output				
Rated Output Power	5kW	6kW	8kW	9kW
Peak Power&Duration	5.5kVA	6.6kVA	8.8kVA	9kVA
Max. Output Current	7.6/7.2A	9.1/8.7A	12.1/11.6A	13.6/13A
Peak Power & Duration	14kW-10s*			
Rated Voltage	3/N/PE, 220/380Vac, 230/400Vac			
Frequency	50/60Hz			
THDu	<3%			
Switching Time	<10ms			
GEN Max. Current	18.2A			
GEN Voltage Range	185-276V(P2N)			
On-grid Parameter				
Rated Output Power	5kW	6kW	8kW	9kW
Max. Output Power	5.5kWA	6.6kWA	8.8kWA	9kWA
Rated Output Current	7.6/7.2A	9.1/8.7A	12.1/11.6A	13.6/13A
Max. Grid Input Current	15.2A	18.2A	21.2A	21.2A
Rated Grid Voltage	3/N/PE, 220/380Vac, 230/400Vac			
Grid Voltage range	185-276VĕP2NĎ			
Grid Frequency	50/60±5Hz			
Thdi	<3%			
PV Input				
Max. DC Input Power	10kWp	12kWp	14kWp	14kWp
Starting Voltage	140V			
Max.Input Voltage	800V			
MPPT Voltage Range	130V-800V			
MPPT Numbers	2			
Strings Per MPPT	1/1			
Max. DC Input Current	20A/20A			
Max. Short-circuit Current	24A/24A			
Battery Parameter				
Battery Type	Lithium-ion/Lead-acid/Sodium-ion			
Number of Battery Input	1			
Battery Voltage Range	30-60V			
Max. Chg&Dchg Current	125A			
Efficiency				
Max. Efficiency	97.80%			
European Efficiency	97.30%			
Max. Battery Chg&Dchg Efficiency	95.00%			
General Data				
Size(W*H*D)	380*500*180mm			
Weight	25kg			
Noise	<45dB(A)			
Operating Temperature	-25℃~ +60℃ (>45℃ Derating			
Operating Altitude	4000m (>3000m Derating)			
Battery Topology	Isolation			
Cooling Method	Intelligent Air Cooling			
Ingress Protection Grade	IP65			
Communication Port	[illegible] dongle*1			
Protection	DC Switch Reverse Polarity Protection AC Overvoltage/Overcurrent/Short Circuit Protection Anti-islanding Protection Residual Current Monitoring Insulation Resistance Detection Surge ProtectionDC Type II / AC Type III Battery Reverse Protection			
Certification				
Safety Regula◆on	IEC62109-1&2, IEC62040-1			
EMC	EN61000-6-1, EN61000-6-2, EN61000-6-3,EN61000-6-4 EN 61000-4-16, EN 61000-4-18,EN 61000-4-29			

* Overload output is dependent on sufficient PV and Battery energy



Product Features

SiC Technology, Max.Efficiency 98.2%

2 Independent Battery Ports for Mixture Use of Old & New Battery

150-360% Grid Input Power, Max. 60A Grid Input Current Supplying to Loads & Charging Battery in Parallel

Support 185-276V AC Voltage Range 166-400% Overload

150%-200% PV Input Power, 3 MPPTs, PV Input Current 20A, Higher Compatbility with PV Panel

0ms (off-grid to on-grid)* 4ms (on-grid to off-grid)

Smart Fan, Ultra Silence Fan Running since 50% Rated Power Output

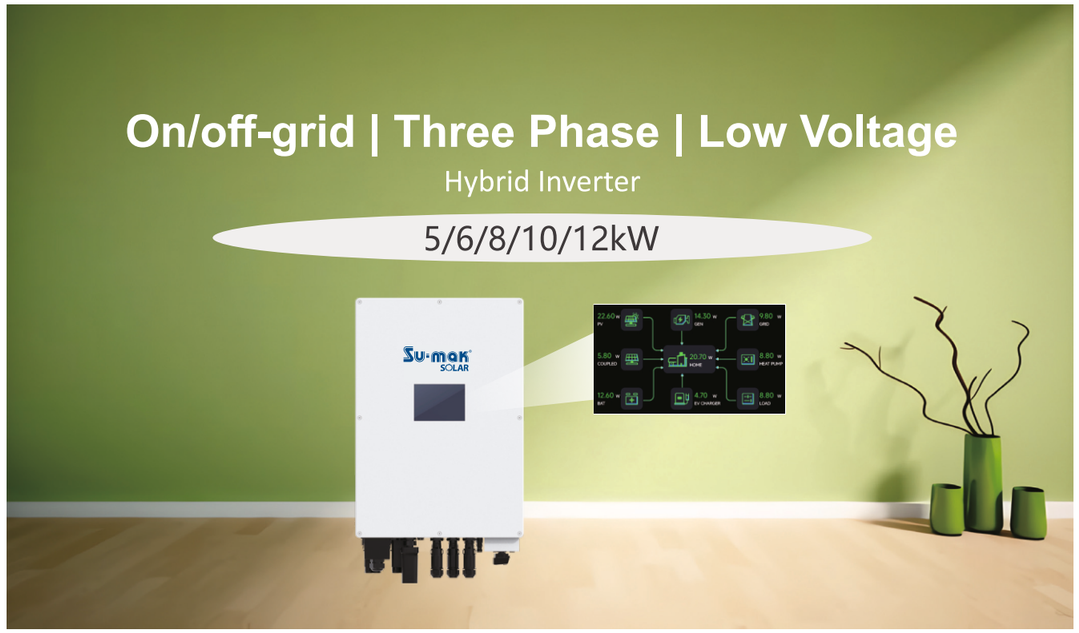
Executive Generator Port, Smart Monitoring Max.Generator Input Current 80A

165mm Ultra-thin, IP65 6 Units in Parallel (Off-grid Mode)

Model Name	Su-mak D5K-SL-S	Su-mak D6K-SL-S	Su-mak D8K-SL-S	Su-mak D10K-SL-S	Su-mak D12K-SL-S
Off-grid Output					
Rated Output Power	5kW	6kW	8kW	10kW	12kW
Max. Output Power	5.5kVA	6.6kVA	8.8kVA	11kVA	13.2kVA
Peak Power & Duration	20kVA(10s)*				
Max. Output Current	25A	30A	40A	50A	60A
Rated Output Voltage	L/N/PE, 220V/230V/240V				
Switching Time	<4ms*				
GEN Max. Current	82A				
GEN Voltage Range	185-276V(P2N)				
On-grid Parameter					
Rated Output Power	5kW	6kW	8kW	10kW	12kW
Max. Output Power	5.5kVA	6.6kVA	8.8kVA	11kVA	13.2kVA
Max. Output Current	25A	30A	40A	50A	60A
Max. Input Power	18kVA				
Grid Frequency	50/60±5Hz				
PV Input					
Max. Input Power	18KW				
Max. Input Voltage	800V				
Number of MPPT	3				
Max. Input String Per MPPT	1/1/1				
MPPT Voltage Range	130-800V				
Starting Voltage	140V				
Max. Input Current	20A/20A/20A				
Short-Circuit Current	24A/24A/24A				

Battery Parameter	
Battery Type	Lithium-ion/Lead-Acid/Sodium-ion
Number of Battery Input	2
Battery Voltage Range	30-60V
Battery Charging/Discharging Current	125A*2
Efficiency	
Max. Efficiency	98.20%
European Efficiency	97.70%
Max. Battery Charging/Discharging Efficiency	95.00%
General Data	
Size(W*H*D)	465mm*665mm*175mm
Weight	36kg
Noise	<45dB(A)
Operating Temperature	-25℃~ +60℃ (>45℃ Derating)
Operating Altitude	4000m(>3000m Derating)
Cooling Method	Intelligent Air Cooling
Ingress Protection Grade	IP65
Battery Topology	Isolation
Communication Port	RS485*1，Wi-Fi/4G dongle*1，DO*2，DRM*1
Protection	DC Switch; Reverse Polarity Protection; AC Overvoltage/Overcurrent/Short Circuit Protection; Anti-islanding Protection; Residual Current Monitoring; Insulation Resistance Detection; Surge Protection:DC Type II / AC Type III; AFCI(Optional); PID(Optional)
Certification	
CE-LVD	IEC62109-1&2, IEC62477-1
CE-EMC	EN61000-6-1, EN61000-6-2, EN61000-6-3,EN61000-6-4 EN 61000-4-16, EN 61000-4-18,EN 61000-4-29
Grid	VDE-AR-N 4105;VDE 0126-1-1 EN 50549-1;G98,G100; CEI 0-21;AS/NZS4777.2 NRS 097-2-1

* Overload output is dependent on sufficient PV and Battery energy
* Typical, Lab Condi﷿ons Only



Product Features

- **SiC Technology, Max. Efficiency 98.2%**
- **2 Independent Battery Ports for Mixture Use of Old & New Battery**
- **150-360% Grid Input Power, Max.24kW, Supplying to Loads & Charging Battery in Parallel**
- **Support 185-276V AC Voltage Range**
- **150%-200% PV Input Power, 3 MPPTs, PV Input Current 20A, Higher Compatbility with PV Panel**
- **166-400% Overload**
- **6 Units in Parallel (Off-grid Mode)**
- **Executive Generator Port, Smart Monitoring Max.Generator Input Current 80A**
- **165mm Ultra-thin, IP65**

Model Name	Su-mak D5K-TL-S	Su-mak D6K-TL-S	Su-mak D8K-TL-S	Su-mak D10K-TL-S	Su-mak D12K-TL-S
Off-grid Output					
Rated Output Power	5kW	6kW	8kW	10kW	12kW
Max. Output Power	5.5kVA	6.6kVA	8.8kVA	11kVA	13.2kVA
Peak Power & Duration	20kVA(10s)*				
Max. Output Current	8.3A	10A	13.3A	16A	20A
Rated Output Voltage	L/N/PE, 220V/230V/240V				
Switching Time	<10ms				
GEN Max. Current	36.4A				
GEN Voltage Range	185-276V(P2N)				
On-grid Parameter					
Rated Output Power	5kW	6kW	8kW	10kW	12kW
Max. Output Power	5.5kVA	6.6kVA	8.8kVA	11kVA	13.2kVA
Max. Output Current	8.3A	10A	13.3A	16A	20A
Max. Input Power	24kVA				
Rated Voltage	3/N/PE, 220/380Vac, 230/400Vac				
Grid Voltage range	185-276V（P2N）				
Grid Frequency	50/60±5Hz				
PV Input					
Max. Input Power	18KW				
Max. Input Voltage	800V				
Number of MPPT	3				
Max. Input String Per MPPT	1/1/1				
MPPT Voltage Range	130-800V				
Starting Voltage	140V				
Max. Input Current	20A/20A/20A				
Short-Circuit Current	24A/24A/24A				
Battery Parameter					
Battery Type	Lithium-ion/Lead-Acid/Sodium-ion				
Number of Battery Input	2				
Battery Voltage Range	30-60V				
Battery Charging/Discharging Current	125A*2				
Efficiency					
Max. Efficiency	98.20%				
European Efficiency	97.70%				
Max. Battery Charging/Discharging Efficiency	95.00%				
General Data					
Size(W*H*D)	465mm*665mm*175mm				
Weight	36kg				
Noise	<45dB(A)				
Operating Temperature	-25℃~ +60℃ (>45℃ Derating)				
Operating Altitude	4000m(>3000m Derating)				
Cooling Method	Intelligent Air Cooling				
Ingress Protection Grade	IP65				
Battery Topology	Isolation				
Communication Port	LED/WIFI/4G/Bluetooth/RS485				
Protection	DC Switch; Reverse Polarity Protection; AC Overvoltage/Overcurrent/Short Circuit Protection; Anti-islanding Protection; Residual Current Monitoring; Insulation Resistance Detection; Surge Protection:DC Type II / AC Type III; AFCI(Optional); PID(Optional)				
Certification					
CE-LVD	IEC62109-1&2, IEC62040-1				
CE-EMC	EN61000-6-1, EN61000-6-2, EN61000-6-3,EN61000-6-4 EN 61000-4-16, EN 61000-4-18,EN 61000-4-29				
Grid	VDE-AR-N 4105;VDE 0126-1-1 EN 50549-1;G98,G100; CEI 0-21;AS/NZS4777.2 NRS 097-2-1				

*Overload output is dependent on sufficient PV and Battery energy



Product Features

- **SiC Technology, Max. Efficiency 98.6%**
- **2 Independent Battery Ports for Mixture Use of Old & New Battery**
- **150%-340% PV Input Power, 4 MPPTs, PV Input Current 40A, Higher Compatbility with PV Panel**
- **200%-470% Grid Input Power, 150A Grid Input Current Supplying to Loads & Charging Battery in Parallel**
- **150% Overload, AFCI Function(Optional)**
- **Smaller Size, Easier for Installation and Price-wise in Shipping**
- **Executive Generator Port, Smart Monitoring Max.Generator Input Current 150A**
- **Battery Current 160A, High Adapability with Battery**
- **6 Units in Parallel (Off-grid Mode)**

Model Name	Su-mak L22K-TH-S	Su-mak L25K-TH-S	Su-mak L29.9K-TH-S	Su-mak L30K-TH-S	Su-mak L40K-TH-S	Su-mak L42.5K-TH-S	Su-mak L50K-TH-S
Off-grid Output							
Rated Output Power	22kW	25kW	29.9kW	30kW	40kW	42.5kW	50kW
Max. Apparent Power	24.2kVA	27.5kVA	29.9kVA	33kVA	44kVA	42.5kVA	55kVA
Rated Voltage	3L/N/PE, 220/380V; 230/400V						
Rated Frequency	50Hz/60Hz						
Rated Output Current	31.9A	36.3A	43.5A	43.5A	58A	61.6A	72.5A
Max. Output Current	35.1A	39.9A	43.5A	47.9A	63.8A	61.6A	79.8A
Peak Power & Duration	150%(10s)						
Generator Input Current	150A						
THDu	<3%						
On-grid Parameter							
Rated Output Power	22kW	25kW	29.9kW	30kW	40kW	42.5kW	50kW
Rated Grid Voltage	3L/N/PE, 220/380V; 230/400V						
Rated Grid Frequency	50Hz/60Hz						
Rated Output Current	31.9A	36.3A	43.5A	43.5A	58A	61.6A	72.5A
Grid Input Current	150A						
PV Input							
Max. DC Input Power	75000Wp						
Max.Input Voltage	1000V						
Rated Input Voltage	600V						
Starting Voltage	180V						
MPPT Voltage Range	150-850V						
Max. Input String Per MPPT	4/8						
Max. DC Input Current	4*40A						
Short-circuit Current	4*60A						
Battery Parameter							
Battery Type	Lithium-ion/Lead-Acid/Sodium-ion						
Battery Voltage Range	140-800V						
Max. Charing/Discharing Power	22kW	25kW	29.9kW	30kW	40kW	42.5kW	50kW
Max. Charing/Discharing Current	80A*2						
Number of Battery Input Ports	2						
Efficiency							
Max. Efficiency	98.6%						
European Efficiency/CEC Efficiency	97.97%						
Max. Battery Charging/Discharging Efficiency	98%						
General Data							
Size(W*H*D)	850mm*550mm*295mm						
Weight	88kg						
Noise	55dB(A)						
Operating Temperature	-25°C~+60°C						
Operating Altitude	4000m(>3000m Derating)						
Humidity Range	0-100%						
Ingress Protection Grade	IP66						
Cooling Method	Intelligent Air Cooling						
Monitoring	LED+Bluetooth+APP, WIFI/LAN/4G						
Communication Port	RS485*1, Internet/WIFI/4G, DO*2, DI*2, AI*1, AO*1, DRM*1						
DC Power	12VDC 2A						



Product Features

SiC Technology, Max. 97.6% Efficiency

2 Independent Battery Ports for Mixture Use of Old & New Battery

160% -300% Overload

200% Grid Input Power, Max.48kW

Max. 200% PV Input Power, Max.36A PV Current, 4 MPPTs

Battery Current 100A, High Compatbility to Battery

180mm Ultra-thin Small Size, Easier for Installation and Price-wise in Shipping

> 200% Generator Input Power, Executive Generator Port, Smart Monitoring

IP66/NEMA 4X Protection Grade AFCI Function(Optional)

Model Name	Su-mak U5K-PH	Su-mak U6K-PH	Su-mak U8K-PH	Su-mak U10K-PH	Su-mak U12K-PH	Su-mak U15K-PH	Su-mak U20K-PH
Off-grid Output							
Rated Output Power	5kW	6kW	8kW	10kW	12kW	15kW	20kW
Rated Output Current	21A	25A	33.5A	41.7A	50A	62.5A	83.5A
Max. Output Power	5.5kVA	6.6kVA	8.8kVA	11kVA	13.2kVA	16.5kVA	22kVA
Peak Power&Duration*	15kVA(10s)	18kVA(10s)	24kVA(10s)	30kVA(10s)	32kVA(10s)	32kVA(10s)	32kVA(10s)
Rated Frequency	50Hz/60Hz						
GEN Input Power	48kW						
GEN Port Current	200A						
Off-grid Switching Time	<8ms						
On-grid Parameter							
Rated Output Power	5kW	6kW	8kW	10kW	12kW	15kW	20kW
Rated Output Current	21A	25A	33.5A	41.7A	50A	62.5A	83.5A
Rated Grid Voltage	120V/240V/208V （240V/208V Single phase support）						
Input Current from Grid	200A						
PV Input							
Max. PV Input Power	10kWp	12kWp	16kWp	20kWp	24kWp	30kWp	30kWp
Starting Voltage	95V						
MPPT Voltage Range	80-500V						
Numbers of MPPT	4						
Numbers of String Per MPPT	1/1/1/1	1/1/1/1	1/1/1/1	1/1/1/1	1/1/1/1	2/2/1/1	2/2/2/2
Max. MPPT Input Current	18A	18A	18A	18A	18A	36/36/18/18A	36A
MPPT Short-circuit Current	22A	22A	22A	22A	22A	44/44/22/22A	44A

Battery Parameter	
Battery Type	Lithium-ion/Lead-acid/Sodium-ion(Optional)
Battery Voltage Range	80-480V
Battery Charging/Discharging Current	50A*2
Efficiency	
Max. Efficiency	97.6%
CEC Efficiency	97.2%
PV Charge to Battery	97.7%
Max. Battery Charging/Discharging Efficiency	96.6%
General Data	
Size(W*H*D)	31.5*18.5*7.1 in/800*470*180 mm
Weight	105 lb/48 kg
Operating Temperature	-13~140°F/-25~60℃(>104°F/40℃ Derating)
Operating Altitude	4000m (>3000m Derating)
Protection Grade	IP66/NEMA 4X
Communication Port	WIFI/LAN/4G/Bluetooth
Battery Communication Port	CAN*2/RS485*2
ATS Function	Builmt-in
Protection	DC SwitchGround Fault DetectionPV Quick Shutdown ControlPV Arc Fault Detection PV Input Lightning ProtectionPV Reverse Polarity ProtectionBattery Reverse Protection Surge ProtectionDC Type II /AC Type IIAC Grid Input Circuit Breaker
Certification	
UL	UL 1741, CSA 22.2 No. 107-01, UL 1998, UL1699B
FCC	FCC part15 CLASS B
Grid	UL1741 SB, California Rule 21, HECO Rule 14, IEEE 1547, IEEE 1547.1

*Overload output is dependent on sufficient PV and Battery energy



Product Features

- SiC Technology, Max. 97.6% Efficiency
- 2 Independent Battery Ports for Mixture Use of Old & New Battery
- 160% -300% Overload
- 200% Grid Input Power, Max.48kW
- Max. 200% PV Input Power, Max.36A PV Current, 4 MPPTs
- Battery Current 100A, High Compatbility to Battery
- 180mm Ultra-thin Small Size, Easier for Installation and Price-wise in Shipping
- > 200% Generator Input Power, Executive Generator Port, Smart Monitoring
- IP66/NEMA 4X Protection Grade AFCI Function(Optional)

Model Name	Su-mak U5K-POH	Su-mak U6K-POH	Su-mak U8K-POH	Su-mak U10K-POH	Su-mak U12K-POH	Su-mak U15K-POH	Su-mak U20K-POH
Off-grid Output							
Rated Output Power	5kW	6kW	8kW	10kW	12kW	15kW	20kW
Rated Output Current	21A	25A	33.5A	41.7A	50A	62.5A	83.5A
Peak Power&Duration	110% for long term，160% (10s)*						
Rated Frequency	50Hz/60Hz						
GEN Input power	48kW						
GEN Input current	200A						
Off-grid Switching Time	<10ms						
On-grid Parameter							
Rated Grid Voltage	120V/240V/208V （240V/208V Single phase support）						
Input Power from Grid	48kW						
Input Current from Grid	200A						
PV Input							
Max. PV Input Power	10000Wp	12000Wp	16000Wp	20000Wp	24000Wp	30000Wp	30000Wp
Starting Voltage	95V						
MPPT Voltage Range	80-500V						
Numbers of MPPT	4						
Numbers of String Per MPPT	1/1/1/1	1/1/1/1	1/1/1/1	1/1/1/1	1/1/1/1	2/2/1/1	2/2/2/2
Max. MPPT Input Current	18A	18A	18A	18A	18A	36/36/18/18A	36A
MPPT Short-circuit Current	22A	22A	22A	22A	22A	44/44/22/22A	44A
Battery Parameter							
Battery Type	Lithium-ion/Lead-acid						
Battery Voltage Range	80-480V						
Battery Charging/Discharging Current	50A*2						
Efficiency							
Max. Efficiency	97.6%						
CEC Efficiency	97.2%						
PV Charge to Battery	97.7%						
Max. Battery Charging/Discharging Efficiency	96.6%						
General Data							
Size(W*H*D)	31.5*18.5*7.1 in/800*470*180 mm						
Weight	105 lb/48 kg						
Operating Temperature	-13~140°F/-25~60℃(>104°F/40℃ Derating)						
Operating Altitude	4000m (						
Protection Grade	IP66/NEMA 4X						
Communication Port	WIFI/LAN/4G/Bluetooth						
Battery Communication Port	CAN*2/RS485*2						
ATS Function	Built-in						
Protection	DC Switch;Ground Fault Detection;PV Quick Shutdown Control;PV Arc Fault Detection; PV Input Lightning Protection;PV Reverse Polarity Protection;Battery Reverse Protection; Surge ProtectionDC Type II /AC Type II;AC Grid Input Circuit Breaker						
Certification							
UL	UL 1741, CSA 22.2 No.107-01,UL 1998 UL1699B						
FCC	FCC Part 15: 2021						

*Overload output must include sufficient PV output