Single Phase Hybrid Inverter

SUN-12/14/16K-SG01LP1-EU

- Colorful touch LCD, IP65 protection degree
- AC couple to retrofit existing solar system
- 16 — Max. 16 pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel
- 290 — Max. charging/discharging current of 290A
- 6 — 6 time periods for battery charging/discharging
- Support storing energy from diesel generator

Deye

Stock Code: 605117.SH

Technical Data

Model	SUN-12K-SG01LP1-EU	SUN-14K-SG01LP1-EU	SUN-16K-SG01LP1-EU
Battery Input Data			
Battery Type		Lead-acid or Lithium-ion	
Battery Voltage Range (V)		40-60	
Max. Charging Current (A)	220	250	290
Max. Discharging Current (A)	220	250	290
Charging Strategy for Li-ion Battery		Self-adaption to BMS	
Number of Battery Input		2	
PV String Input Data			
Max. PV Input Power (W)	15600	18200	20800
Max. PV Input Voltage (V)		500	
Start-up Voltage (V)		125	
MPPT Voltage Range (V)		150-425	
Rated PV Input Voltage (V)		370	
Max. Operating PV Input Current (A)		26+26+26	
Max. Input Short-Circuit Current (A)		44+44+44	
No. of MPP Trackers/ No. of Strings per MPP Tracker		3/2+2+2	
AC Input/Output Data			
Rated AC Input/Output Active Power (W)	12000	14000	16000
Max. AC Input/Output Apparent Power (VA)	13200	15400	17600
Rated AC Input/Output Current (A)	54.5/52.2	63.6/60.9	72.7/69.6
Max. AC Input/Output Current (A)	60/57.4	70/67	80/76.5
Max. Continuous AC Passthrough (grid to load) (A)		100	
Peak Power (off-grid) (W)		2 times of rated power, 10s	
Power Factor Adjustment Range		0.8 leading to 0.8 lagging	
Rated Input/Output Voltage/Range (V)		220/230 0.85Un-1.1Un	
Rated Input/Output Grid Frequency/Range(Hz)		50/45-55, 60/55-65	
Grid Connection Form		L+N+PE	
Total Current Harmonic Distortion THDi		<3% (of nominal power)	
DC Injection Current		<0.5% In	
Efficiency			
Max. Efficiency		97.6%	
Euro Efficiency		96.5%	
MPPT Efficiency		>99%	
Equipment Protection			
Integrated		DC Polarity Reverse Connection Protection, AC Output Overcurrent Protection AC Output Overvoltage Protection, AC Output Short Circuit Protection, Thermal Protection DC Terminal Insulation Impedance Monitoring, DC Component Monitoring, Ground Fault Current Monitoring Power Network Monitoring, Island Protection Monitoring, Earth Fault Detection, DC Input Switch Overvoltage Load Drop Protection, Residual Current (RCD) Detection, Surge protection level	
Surge Protection Level		TYPE II(DC), TYPE II(AC)	
Interface			
Communication Interface		RS485/RS232/CAN	
Monitor Mode		GPRS/WIFI/Bluetooth/4G/LAN(optional)	
General Data			
Operating Temperature Range (⟋)		-40 to +60°C, >45°C Derating	
Permissible Ambient Humidity		0-100%	
Permissible Altitude		2000m	
Noise (dB)		<50	
Ingress Protection(IP) Rating		IP 65	
Inverter Topology		Non-Isolated	
Over Voltage Category		OVC II(DC), OVC III(AC)	
Cabinet Size (WxHxD mm)		464×763×282 (Excluding Connectors and Brackets)	
Weight (kg)		52	
Type of Cooling		Intelligent Air Cooling	
Warranty		5 Years/10 Years the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy	
Grid Regulation		IEC 61727, IEC 62116, AS 4777.2, NRS 097	
Safety / EMC Standard		IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2	

Ningbo Deye Inverter Technology Co., Ltd.
Address: No. 26 South YongJiang Road, Daqi, Beilun, NingBo, Zhejiang, China. | Tel: +86 (0)574 86228841 | E-mail: market@deye.com.cn

V-TAC

Meaningful Innovation.

9.60kWh

Rack Mounting Lithium Battery

05 YEAR WARRANTY

TELECOM LITHIUM BATTERY

V-TAC.EU | VTACEXPORTS.COM

TÜV NORD CE RoHS

Rack Mounting Lithium Battery

LISTING DETAILS

Model No:	**VT-48200B**
SKU Code:	**11523**
EAN Code:	**3800157693578**

MASTER BOX PACKAGING

Qty Per Pallet:	**14pcs per pallet**
Net Weight :	**Approx. 81kg**
Product Size :	**445*244*500mm**

GENERAL DATA

Nominal Capacity	200Ah@0.2C, 25°C
Nominal Voltage	48.0V
Rated Charge Voltage	54.0V
Max Continuous Charge Current	100A@25°C
Discharge Cut-off Voltage	40.5V
Max Continuous Discharge Current	100A@25°C
Temperature Range of Charge	0°C- 60°C
Temperature Range of Discharge	-20°C- 60v
Allowed Humidit y Range	≤95%RH approx.
IP	IP 20

CONSTANT CURRENT DISCHARGE DATA / 25°C

Current/A End voltage/V	0.1C	0.2C	0.3C	0.4C	0.5C
	Hours				
45.0V	9.77	4.78	3.20	2.33	1.82
43.5 V	9.89	4.88	3.28	2.43	1.93
42.0V	10.01	5.00	3.35	2.46	1.98
40.5 V	10.06	5.06	3.40	2.54	2.00

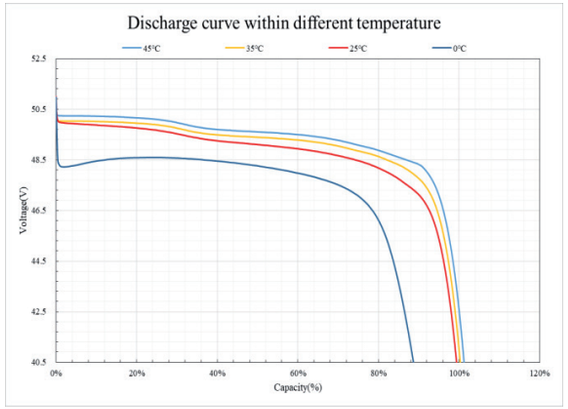
CONSTANT POWER DISCHARGE DATA / 25°C

Power/W End voltage/V	960	1920	2880	3840	4400
	Hours				
45.0V	9.75	4.76	3.18	2.31	1.80
43.5 V	9.87	4.85	3.25	2.40	1.90
42.0V	10.02	4.96	3.31	2.47	1.94
40.5 V	10.08	5.11	3.36	2.50	1.96

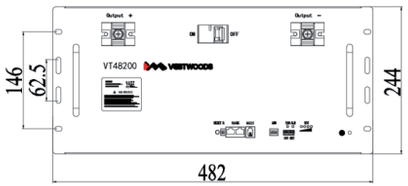
Rack Mounting Lithium Battery

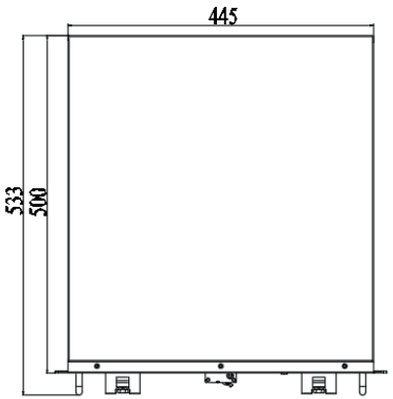
- High quality LFP cells
- High rate charge / discharge current @ 100A
- High efficiency between charge and discharge
- Multiple protection methodes based on patented
- BMS Intelligent anti-theft solution, LCD(optional)
- Modbus/CAN/SNMP V2/SNMP V3 (optional)

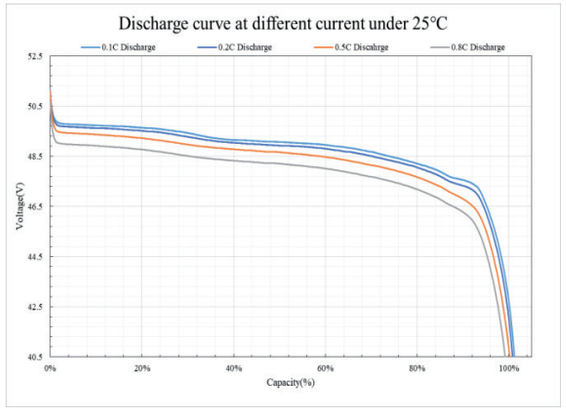
TECHNICAL CURVES



DRAWING







Tier1

BloombergNEF

YH SUNPRO POWER

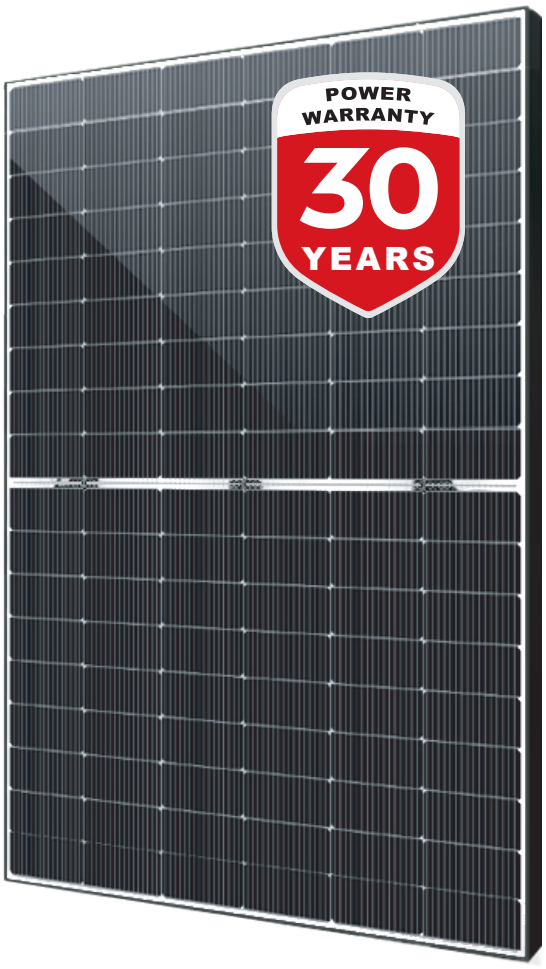
CLEAN ENERGY COUNCIL PV CYCLE ISO 9001 ISO 14001 SA 8000 ISO 45001 OHSAS 18001

M10 TOPCON BIFACIAL

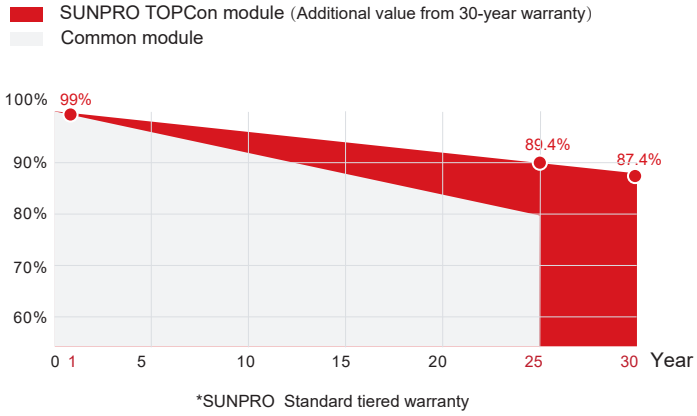
SPDGxxx-N108M10

410~440W

- Double glass
- Black frame
- Bifacial Transparent



25 Yr quality guarantee | 30 Yr power warranty



*SUNPRO Standard tiered warranty

WARRANTY & GUARANTEE

Linear output power guarantee
25 years: 89.4% power output
30 years: 87.4% power output

WITHSTAND STRONG

Snow load 5400Pa
Wind load 2400Pa

PID RESISTANCE

Power positive tolerance：0~+5W.
The attenuation probability of PID phenomenon is minimized through battery production technology optimization and material control

R&D AND PRODUCTION

Advanced production line. Bifaciality>80%,effectively improves backside power generation.The leading solar cell cutting process and multi busbar design with SUNPRO Technology.

HIGH EFFICIENCY

N-type , Components have better reliability and lower LID/LETID attenuation. Efficiency can reach 22.53%. Excellent low light performance. Higher power output under the conditions of haze, overcast, etc.

YHSUNPRO POWER

Electrical parameters at standard test conditions (STC:AM=1.5, 1000W/m² ,Cells Temperature25)

Typical type	410W	415W	420W	425W	430W	435W	440W
Max power(Pmax)	410	415	420	425	430	435	440
Max power voltage(Vmp)	31.25	31.37	31.49	31.64	31.79	31.94	32.09
Max power current(Imp)	13.12	13.23	13.34	13.44	13.53	13.62	13.72
Open circuit voltage(Voc)	37.94	38.04	38.13	38.24	38.34	38.43	38.53
Short circuit current(Isc)	13.85	13.96	14.07	14.16	14.25	14.34	14.43
Module Efficiency(%)	21.00	21.25	21.51	21.76	22.02	22.28	22.53
Max system voltage	DC 1500V (TÜV,UL)						
Maximum Series Fuse Rating	30A						

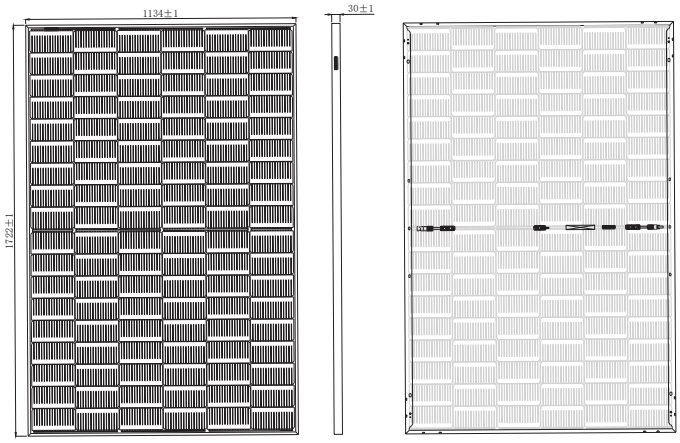
Electrical Characteristics with 15% Rear Side Power Gain
(Take 420W as an example)

Front power Pmax/W	410W	415W	420W	425W	430W	435W	440W
Total power Pmax/W	471.50	477.25	483.00	488.75	494.50	500.25	506
Max power voltage(Vmp)	31.25	31.37	31.49	31.64	31.79	31.94	32.09
Max power current(Imp)	15.09	15.21	15.34	15.45	15.56	15.66	15.77
Open circuit voltage(Voc)	37.94	38.04	38.13	38.24	38.34	38.43	38.53
Short circuit current(Isc)	15.93	16.05	16.18	16.28	16.39	16.49	16.59

Electrical parameters at NMOT test conditions
(Irradiance 800W/m²,Ambient Temperature 20°C,AM 1.5,Wind Speed 1m/s)

Typical type	410W	415W	420W	425W	430W	435W	440W
Max power(Pmax)	308	312	316	320	324	325	329
Max power voltage(Vmp)	29.4	29.5	29.6	29.7	29.9	29.80	29.90
Max power current(Imp)	10.49	10.58	10.67	10.75	10.84	10.91	11.00
Open circuit voltage(Voc)	35.7	35.8	35.9	36	36.1	36.00	36.10
Short circuit current(Isc)	11.16	11.25	11.34	11.41	11.48	11.56	11.63

DIMENSIONS AND STRUCTURE



Mechanical Data

Dimensions	1722x1134x30mm
Weight	23.3kg
Glass	(F) 2.0mm ultra clear embossed double layer colorless glass (B) 2.0mm semi-tempered glass
Output cables	4mm² , symmetrical lengths 1100mm
Connectors	MC4 compatible IP68
Cell type	Mono-Crystalline, N type Bifacial, 182x91mm
Number of cells	108cells(Half-Cell)

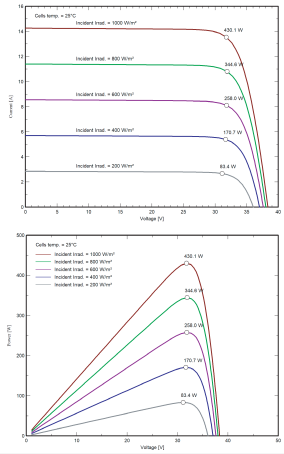
Temperature Characteristics

Temp.Coeff.of Isc(TK Isc)	0.045% / ℃
Temp.Coeff.of Voc(TK Voc)	-0.25%/℃
Temp.Coeff.of Pmax(TK Pmax)	-0.30%/℃
Operating temperature	-40~+85 ℃
Normal operating cell temperature	42±2℃

Packing Configuration

Container	40'HQ
Pieces per pallet	72
Pallets per container	13
Pieces per container	936

I-V CHARACTERISTICS AT DIFFERENT IRRADIATION



Tests, Certifications and Warranties

Standard tests	IEC 61215, IEC 61730, IEC 61701, IEC 62716, PPP 58042
System certs	ISO 9001, ISO14001, ISO45001
Certifications	TÜV, CE, CEC, UL, WEEE
Extreme wind and snow loads testing	Withstand extreme wind(2400 Pascal) and snow loads(5400 Pascal)
Power tolerance	0~+5W
Junction box	IP 68
Warranties	25 years product warranty and 30 years 87.4% of power

ADD.: QINGGANG TECHNOLOGICAL IND. ZONE, YUHUAN CITY, ZHEJIANG PROVINCE, CHINA
TEL: +86 0576-80730906 E-MAIL: info@sunpropower.com WEBSITE: www.sunpropower.com