

# V-TAC

Meaningful Innovation.

# 9.60kWh

# Rack Mounting Lithium Battery

**05** YEAR  
WARRANTY

## TELECOM LITHIUM BATTERY



V-TAC.EU

| VTACEXPORTS.COM

TUV NORD

CE RoHS

## 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 Humidity Range ≤95%RH approx.

IP IP 20

## CONSTANT CURRENT DISCHARGE DATA / 25°C

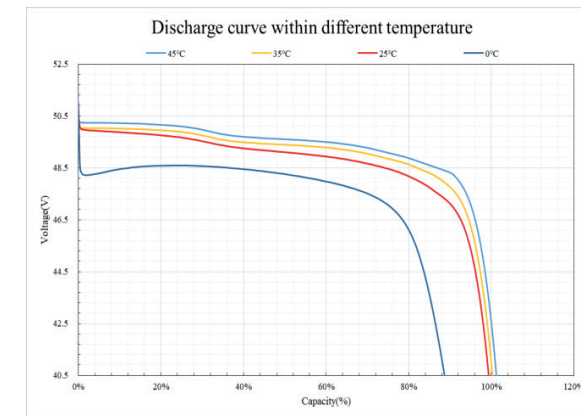
Current/A End voltage/V	0.1C	0.2C	0.3C	0.4C	0.5C
	Hours				
45.0V	9.77	4.78	3.20	2.33	1.82
43.5 V	9.89	4.88	3.28	2.43	1.93
42.0V	10.01	5.00	3.35	2.46	1.98
40.5 V	10.06	5.06	3.40	2.54	2.00

## CONSTANT POWER DISCHARGE DATA / 25°C

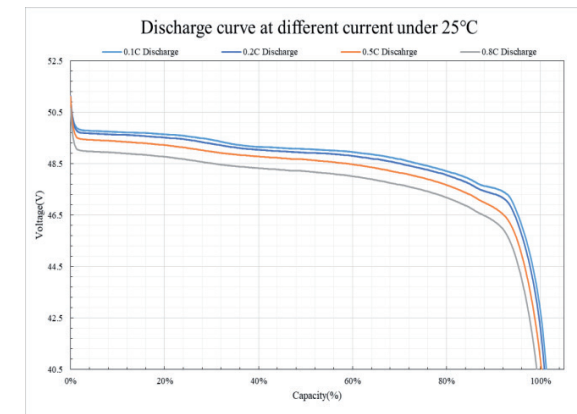
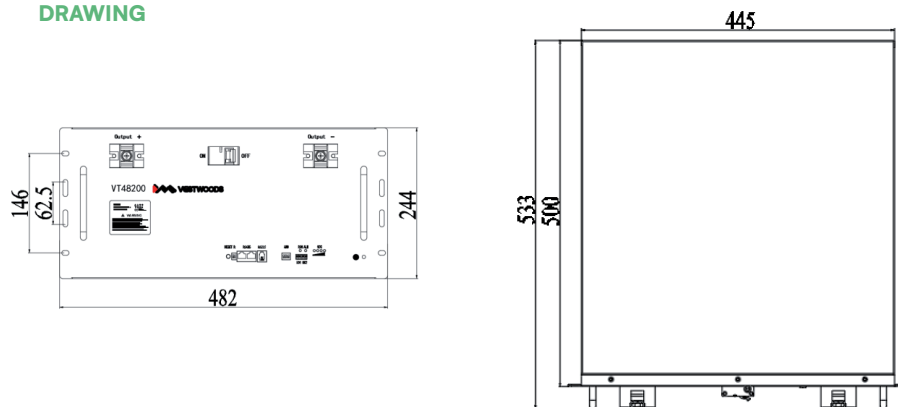
Power/W End voltage/V	960	1920	2880	3840	4400
	Hours				
45.0V	9.75	4.76	3.18	2.31	1.80
43.5 V	9.87	4.85	3.25	2.40	1.90
42.0V	10.02	4.96	3.31	2.47	1.94
40.5 V	10.08	5.11	3.36	2.50	1.96

- 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



## S6-EH1P(3-8)K-L-PLUS

# Solis Single Phase Low Voltage Energy Storage Inverters

**New** PLUS model provides solutions for demanding power scenarios

### Features:

- Generator-compatible to extend backup duration during grid power outage
- Multiple inverters can operate together to form a microgrid
- Supports dual backup ports for intelligent control of critical and non-critical loads
- 10 seconds of 200% overload capability
- Automatic switchover time is <4ms, providing seamless transitions from grid to backup
- Ensures excellent power supply stability, keeping the load unaffected by a weak grid or generator supply fluctuations

### Models:

S6-EH1P3K-L-PLUS / S6-EH1P3.6K-L-PLUS

S6-EH1P5K-L-PLUS / S6-EH1P6K-L-PLUS

S6-EH1P8K-L-PLUS



# DATASHEET

# S6-EH1P(3-8)K-L-PLUS

Models	3K	3.6K	5K	6K	8K
<b>Input DC (PV side)</b>					
Recommended max. PV array size	6 kW	7.2 kW	10 kW	12 kW	16 kW
Max. usable PV input power	4.8 kW	5.76 kW	8 kW	9.6 kW	12.8 kW
Max. input voltage	500 V				
Rated voltage	330 V				
Start-up voltage	90 V				
MPPT voltage range	90-435 V				
Max. input current	16 A / 16 A				32 A / 32 A
Max. short circuit current	20 A / 20 A				40 A / 40 A
MPPT number/Max. input strings number	2/2				2/4
<b>Battery</b>					
Battery type	Li-ion / Lead-acid				
Battery voltage range	40-60 V				
Max. charge / discharge power	3 kW	3.6 kW	5 kW	6 kW	8 kW
Max. charge / discharge current	70 A	80 A	112 A	135 A	190 A
Communication	CAN/RS485				
<b>Output AC (Grid side)</b>					
Rated output power	3 kW	3.6 kW	5 kW	6 kW	8 kW
Max. apparent output power	3 kVA	3.6 kVA	5 kVA	6 kVA	8 kVA
Operation phase	L/N/PE				
Rated grid voltage	220 V / 230 V				
Rated grid frequency	50 Hz / 60 Hz				
Rated grid output current	13.7 A / 13.1 A	16.4 A / 15.7 A	22.8 A / 21.8 A	27.3 A / 26.1 A	36.4 A / 34.8 A
Max. output current	13.7 A / 13.1 A	16.4 A / 15.7 A	22.8 A / 21.8 A	27.3 A / 26.1 A	36.4 A / 34.8 A
Power factor	>0.99 (0.8 leading - 0.8 lagging)				
THDi	<2%				
<b>Input AC (Grid side)</b>					
Input voltage range	187-253 V				
Max. input current	21 A	25 A	32 A	40 A	50 A
Frequency range	45-55 Hz / 55-65 Hz				
<b>Output AC (Back-up)</b>					
Rated output power	3 kW	3.6 kW	5 kW	6 kW	8 kW
Max. apparent output power	2 times of rated power, 10 s				
Back-up switch time	<4 ms				
Rated output voltage	L/N/PE, 220 V / 230 V				
Rated frequency	50 Hz / 60 Hz				
Rated output current	13.7 A / 13.1 A	16.4 A / 15.7 A	22.8 A / 21.8 A	27.3 A / 26.1 A	36.4 A / 34.8 A
Max. AC Passthrough current	35 A	35 A	40 A	40 A	50 A
THDv (@linear load)	<2%				
<b>Efficiency</b>					
Max. efficiency	96.2%				
EU efficiency	96.1%				
BAT charged by PV/AC Max. efficiency	95.3%/93.9%				
BAT discharged to AC Max. efficiency	93.8%				
<b>Protection</b>					
Ground fault monitoring	Yes				
DC reverse-polarity protection	Yes				
Integrated AFCI 2.0	Optional				
Protection class/Over voltage category	I / II (PV and BAT), III (MAINS and BACKUP and GEN)				
<b>General Data</b>					
Dimensions (W*H*D)	335*560*227 mm				
Weight	21.6 kg				22.2 kg
Topology	High frequency isolation (for battery)				
Operating ambient temperature range	-40 ~ +60°C				
Ingress protection	IP66				
Cooling concept	Natural convection			Intelligent redundant fan-cooling	
Max. operation altitude	3000 m				
Grid connection standard	NRS 097-2-1, IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530, MEA, PEA, NBR 16149, NBR 16150				
Safety/EMC standard	IEC/EN 62109-1/-2, EN 61000-6-2/-3				
<b>Features</b>					
DC connection	MC4 plug (PV port) / Terminal Block (BAT port)				
AC connection	Terminal Block				
Display	LCD + Bluetooth + APP				
Communication	RS485, CAN, Optional: Wi-Fi, GPRS, LAN				



# TWMNH

N-type Half-cell  
Bifacial Black Frame Module (48)

## 48HD435-455W

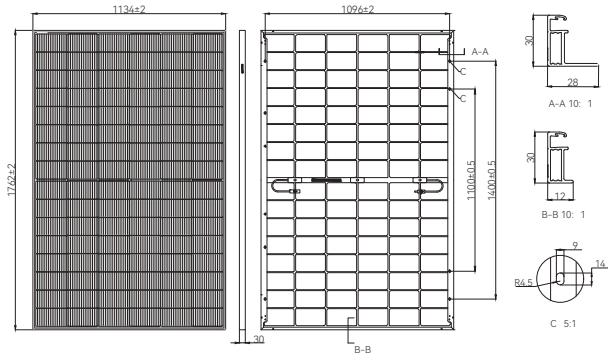


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Learn More

**DRAWINGS (Unit: mm)**



**MECHANICAL PARAMETERS**

Cells	TNC (N Type Monocrystalline Cell)
Cell Orientation	96[6×16]
Dimension	1762±2×1134±2×30mm
Weight	20.9kg
Front Glass	1.6mm high transmittance, AR tempered glass
Rear Glass	1.6mm semi-tempered glass
Frame	Anodized aluminum alloy black frame
Junction Box	IP68, 3 diodes
Output Cable	4.0mm <sup>2</sup>
Cable Length	±1200mm, length can be customized
Wind/Snow Load	2400Pa/5400Pa
Packaging	36pcs per pallet, 936pcs per 40'HC

**ELECTRICAL CHARACTERISTICS (STC)**

Module Type: TWMNH-48HDXXX

Maximum Power: Pmax [W]	435	440	445	450	455
Open Circuit Voltage: Voc [V]	34.49	34.67	34.85	35.03	35.21
Short Circuit Current: Isc [A]	15.90	15.95	16.00	16.05	16.10
Voltage at Maximum Power: Vmp [V]	29.54	29.72	29.90	30.08	30.26
Current at Maximum Power: Imp [A]	14.73	14.81	14.89	14.97	15.04
Module Efficiency: η [%]	21.8	22.0	22.3	22.5	22.8

\* STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass1.5, Measuring Tolerance: ±3%

**ELECTRICAL CHARACTERISTICS (NMOT)**

Maximum Power: Pmax [W]	327	331	335	338	342
Open Circuit Voltage: Voc [V]	32.77	32.94	33.11	33.28	33.45
Short Circuit Current: Isc [A]	12.84	12.88	12.92	12.96	13.00
Voltage at Maximum Power: Vmp [V]	27.51	27.68	27.88	27.96	28.18
Current at Maximum Power: Imp [A]	11.89	11.96	12.02	12.09	12.14

\* NMOT: Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, Air Mass1.5, Wind Speed 1m/s

**ELECTRICAL CHARACTERISTICS (Rear Power Gain)**

5%	Maximum Power: Pmax[W]	456	462	467	472	477
	Module Efficiency: η [%]	22.8	23.1	23.4	23.6	23.9
15%	Maximum Power: Pmax[W]	500	506	511	517	523
	Module Efficiency: η [%]	25.0	25.3	25.6	25.9	26.2
25%	Maximum Power: Pmax[W]	543	550	556	562	568
	Module Efficiency: η [%]	27.2	27.5	27.8	28.1	28.4

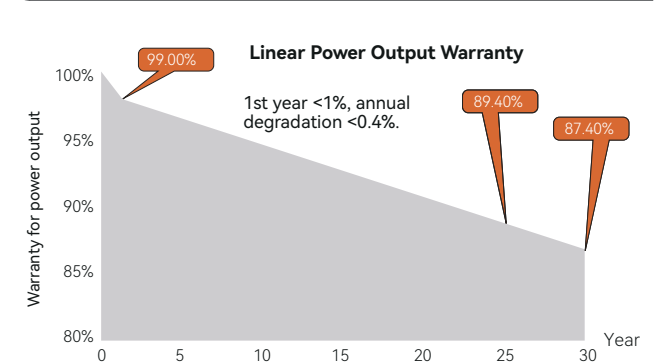
**TEMPERATURE PARAMETERS**

Temperature Coefficient (Pmax)	-0.30%/°C
Temperature Coefficient (Voc)	-0.25%/°C
Temperature Coefficient (Isc)	+0.046%/°C
NMOT	45±2°C

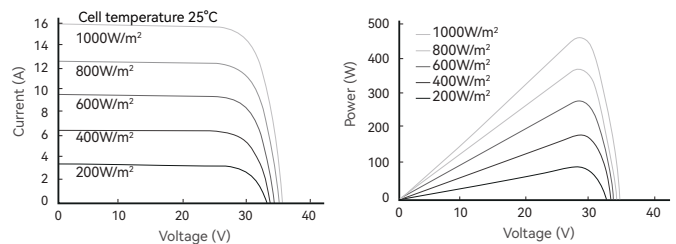
**MAXIMUM RATINGS**

Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	30A
Power Output Tolerance	0~+5W
Maximum Bifaciality	80±10%

**WARRANTY**



**I-V CURVE**



**CERTIFICATIONS**

**Quality Management System and Product Certification**

- ISO 9001: 2015/Quality management system
- ISO 14001: 2015/Environmental management system
- ISO 45001: 2018/Occupation health safety management system
- ISO 50001: 2018/Energy management system
- IEC 62941: 2019/Quality system for PV module manufacturing
- IEC 61215/61730, IEC 62804(PID), IEC 61701(Salt), IEC 62716 (Ammonia), IEC 60068-2-68(Sand)

