V-TAC
Meaningful Innovation.

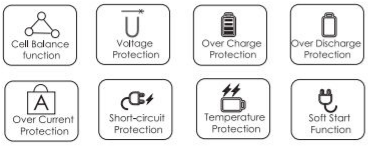
OHR-100

Rechargeable Li-ion Battery System

Smaller Footprint
higher energy density benefit from latest LFP technology

Expandable
Module design
Maximum 5.12kwh*12S*4P

Monitor
Real-time monitoring of battery charging and discharging, online system updates and maintenance



OHR-100

Technical Data

Technical specification	15KWH	20KWH	25KWH	30KWH	35KWH	40KWH	45KWH	50KWH	55KWH	60KWH
Installation Mode	Rackable									
Battery Type	LifePO4(LFP)									
Module Energy (kWh)	5.12									
Module Nominal Voltage (V)	51.2									
Module Capacity (Ah)	100									
System Model	OHR15K-100	OHR20K-100	OHR25K-100	OHR30K-100	OHR35K-100	OHR40K-100	OHR45K-100	OHR50K-100	OHR55K-100	OHR60K-100
Battery Module Qty InSeries (Optional)	3	4	5	6	7	8	9	10	11	12
System Nominal Voltage (V)	153.6	204.8	256.0	307.2	358.4	409.6	460.8	512.0	563.2	614.4
System Operating Voltage (V)	139.2~170.4	185.6~227.2	232.0~284.0	278.4~340.8	324.8~397.6	371.2~454.4	417.6~511.2	464.0~568.0	510.4~624.8	556.8~681.6
System Nominal Capacity (KWh)	15.36	20.48	25.60	30.72	35.84	40.96	46.08	51.20	56.32	61.44
Usable Capacity (KWh)	12.29	16.38	20.48	24.58	28.67	32.77	36.86	40.96	45.06	49.15
Dimension (mm)	580*584.5*1578						580*584.5*2162			
Weight (Kg)	207.6	253.1	298.6	344.1	389.6	435.1	496.0	541.5	587.0	632.5
Recommend Charge/Discharge Current (A)	50									
Communicaiton	CAN									
Ingress Protection	IP20									
Altitude	≤2000m									
Cycle Life	25±2°C,0.5C/0.5C,EOL70%≥6000									
Monitoring Parameters	System voltage,Current,cell voltage,cell temperature,module temperature									
SOC	Intelligent algorithm									
Working Temperature	0℃~45℃ Charge -10℃ ~55℃ Disharge									
Storage Temperature	0~35℃									

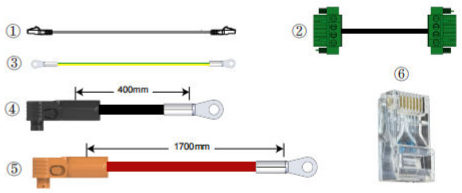
1. DC Usable Energy, test conditions: 80% DOD, 0.2C charge & discharge at 25℃. System usable energy may vary due to system configuration parameters.
2. The current is affected by temperature and SOC.
3. The warranty is due whichever reached first of warranty period or life cycle power.

System Components

Model	Description
OHR-HV100L	High voltage battery cluster control box

Operating Voltage	80~460Vdc
Nominal Charge/Discharge Current	DC 50A
Max Charge/Discharge Current	DC 100A
Operating Temperature Range	-10~55°C
Ingress Protection	IP20
Dimension (W/D/H)	520*542*140 mm
Weight Approximate	19.5kg

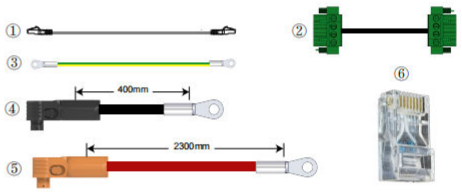
High voltage box Standard configuration:
①Communication cable
②Fan power cable
③Earthing wrie
④400mm power cable
⑤1700mm power cable
⑥120 Ω terminal resistance



OHR-HV100H	High voltage battery cluster control box

Operating Voltage	250~1000Vdc
Nominal Charge/Discharge Current	DC 50A
Max Charge/Discharge Current	DC 100A
Operating Temperature Range	-10~55°C
Ingress Protection	IP20
Dimension (W/D/H)	520*542*140 mm
Weight Approximate	19.5kg

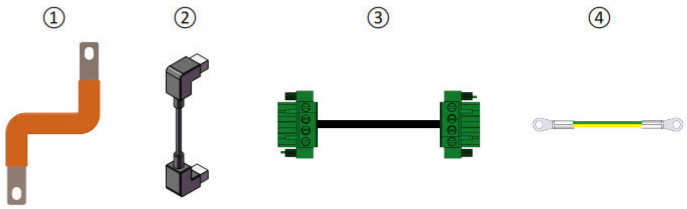
High voltage box Standard configuration:
①Communication cable
②Fan power cable
③Earthing wrie
④400mm power cable
⑤2300mm power cable
⑥120 Ω terminal resistance



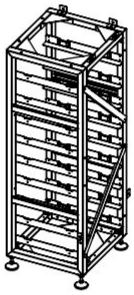
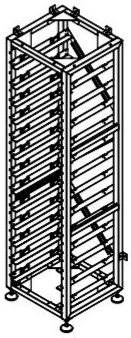
OHR-5K	Rechargeable Li-ion Battery Module

Battery Type	LiFePO4(LFP)
Rated Voltage	51.2Vdc
Rated Capacity	100Ah
Rated Energy	5.12kWh
Nominal Charge/Discharge Current	50A
Peak Discharge Current	100A
Charge Temperature	0°C~45°C
Discharge Temperature	-10°C~55°C
Storage Temperature	0°C~35°C
Ingress Protection	IP20
Dimension (W/D/H)	520*542*140mm
Weight Approximate	45.8kg

Battery module Standard configuration:
①Power copper bar
②Communication cable
③Fan power cable
④Earthing wire



System Components

Model	Description
PC5.0 (Optional)	Standard 5-meter Positive power cable connected to the positive pole of the external Inverter
4AWG Cable	
PC5.0 (Optional)	Standard 5-meter Negative power cable connected to the negative pole of the external Inverter
4AWG Cable	
COM Cable5.0 (Optional)	Standard 5-meter commumication cable connected to the external Inverter
	
OHR-3U-HRACK	Racks for 8pcs batteries and 1pc BMS
Dimension (W/D/H)	580*540*1587mm
Weight Approximate	48.6kg
	
OHR-3U-HRACK	Racks for 12pcs batteries and 1pc BMS
Dimension (W/D/H)	580*540*2162mm
Weight Approximate	62.5kg
	

Three Phase Hybrid Inverter

SUN-29.9/30/35K-SG01HP3-EU-BM3
SUN-40/50K-SG01HP3-EU-BM4

- 100% unbalanced output, each phase
- AC couple to retrofit existing solar system
- Max. 10 pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel
- Max. charging/discharging current of 100A
- High voltage battery, higher efficiency
- 6 time periods for battery charging/discharging
- Support storing energy from diesel generator

Deye

Stock Code: 605117.SH

Technical Data

Model	SUN-29.9K-SG01HP3 -EU-BM3	SUN-30K-SG01HP3 -EU-BM3	SUN-35K-SG01HP3 -EU-BM3	SUN-40K-SG01HP3 -EU-BM4	SUN-50K-SG01HP3 -EU-BM4
Battery Input Data					
Battery Type	Lithium-ion				
Battery Voltage Range (V)	160-800				
Max. Charging Current (A)	50+50				
Max. Discharging Current (A)	50+50				
Charging Strategy for Li-ion Battery	Self-adaption to BMS				
Number of Battery Input	2				
PV String Input Data					
Max. PV Input Power (W)	38870	39000	45500	52000	65000
Max. PV Input Voltage (V)	1000				
Start-up Voltage (V)	180				
MPPT Voltage Range (V)	150-850				
Rated PV Input Voltage (V)	600				
Max. Operating PV Input Current (A)	36+36+36			36+36+36+36	
Max. Input Short-Circuit Current (A)	55+55+55			55+55+55+55	
No. of MPP Trackers/ No. of Strings per MPP Tracker	3/2+2+2			4/2+2+2+2	
AC Input/Output Data					
Rated AC Input/Output Active Power (W)	29900	30000	35000	40000	50000
Max. AC Input/Output Apparent Power (VA)	29900	33000	38500	44000	55000
Rated AC Input/Output Current (A)	45.4/43.4	45.5/43.5	53.1/50.8	60.7/58	75.8/72.5
Max. AC Input/Output Current (A)	45.4/43.4	50/47.9	58.4/55.8	66.7/63.8	83.4/79.8
Max. Continuous AC Passthrough (grid to load) (A)	200				
Peak Power (off-grid) (W)	1.5 times of rated power, 10s				
Power Factor Adjustment Range	0.8 leading to 0.8 lagging				
Rated Input/Output Voltage/Range (V)	220/380V, 230/400V 0.85Un-1.1Un				
Rated Input/Output Grid Frequency/Range(Hz)	50/45-55, 60/55-65				
Grid Connection Form	3L+N+PE				
Total Current Harmonic Distortion THDi	<3% (of nominal power)				
DC Injection Current	<0.5% In				
Efficiency					
Max. Efficiency	97.60%				
Euro Efficiency	97.0%				
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)	≤65				
Ingress Protection(IP) Rating	IP 65				
Inverter Topology	Non-Isolated				
Over Voltage Category	OVC II(DC), OVC III(AC)				
Cabinet Size (WxHxD mm)	527×894×294 (Excluding Connectors and Brackets)				
Weight (kg)	80				
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, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G99, VDE-AR-N 4105				
Safety / EMC Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2				

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TW SOLAR

TWMNH

N-type Half-cell
Bifacial Module (54)

54HD495-515W

Certisolis

TIER 1 Bloomberg NEW ENERGY FINANCE

Residential Rooftop

15 YEAR Materials Warranty

30 YEAR Power Warranty

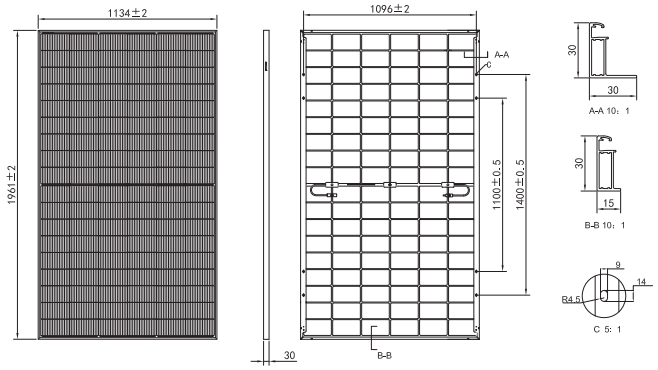
en.tongwei.com.cn

Learn More

TWMNH N-type Half-cell Bifacial Module (54)

54HD495-515W

DRAWINGS (Unit: mm)



ELECTRICAL CHARACTERISTICS (STC)

Module Type: TWMNH-54HDXXX					
Maximum Power: Pmax [W]	495	500	505	510	515
Open Circuit Voltage: Voc [V]	39.88	40.06	40.24	40.42	40.60
Short Circuit Current: Isc [A]	15.86	15.89	15.92	15.95	15.98
Voltage at Maximum Power: Vmp [V]	33.45	33.70	33.94	34.19	34.43
Current at Maximum Power: Imp [A]	14.80	14.84	14.88	14.92	14.96
Module Efficiency: η [%]	22.3	22.5	22.7	22.9	23.2

* STC: Irradiance 1000W/m², Cell Temperature 25℃, Air Mass1.5

ELECTRICAL CHARACTERISTICS (NMOT)

Maximum Power: Pmax [W]	374	378	381	385	389
Open Circuit Voltage: Voc [V]	37.97	38.14	38.31	38.48	38.65
Short Circuit Current: Isc [A]	12.80	12.83	12.85	12.88	12.90
Voltage at Maximum Power: Vmp [V]	31.30	31.56	31.73	31.96	32.21
Current at Maximum Power: Imp [A]	11.95	11.98	12.01	12.05	12.08

* NMOT: Irradiance 800W/m², Ambient Temperature 20℃, Air Mass1.5, Wind Speed 1m/s

Electrical characteristics with different rear side power gain

5%	Maximum Power: Pmax [W]	519	525	530	535	540
	Module Efficiency: η [%]	23.3	23.6	23.8	24.1	24.3
15%	Maximum Power: Pmax [W]	569	575	580	586	592
	Module Efficiency: η [%]	25.6	25.9	26.1	26.4	26.6
25%	Maximum Power: Pmax [W]	618	625	631	637	643
	Module Efficiency: η [%]	27.8	28.1	28.4	28.6	28.9

TEMPERATURE RATING

Temperature Coefficient of Pmax	-0.28%/℃
Temperature Coefficient of Voc	-0.24%/℃
Temperature Coefficient of Isc	+0.046%/℃
NMOT	45±2℃

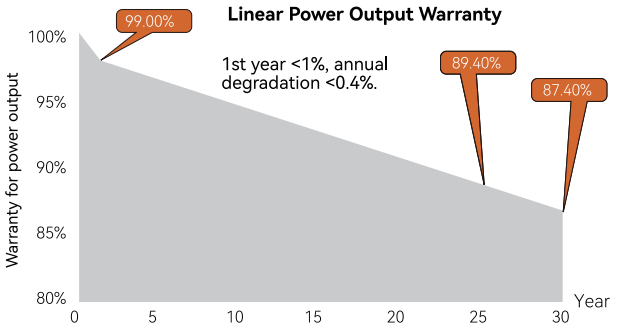
OPERATING PARAMETERS

Operating Temperature	-40℃~+85℃
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	30A
Power Output Tolerance	0~+3%

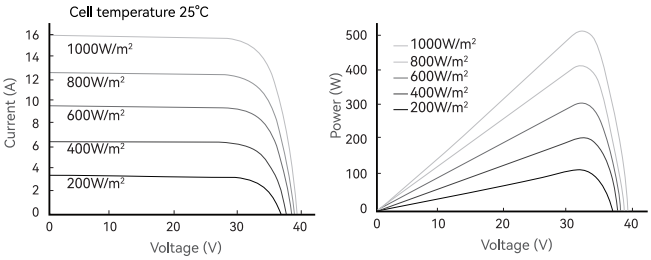
MECHANICAL PARAMETERS

Cell Type	TNC (N Type Monocrystalline Cell)
Cell Orientation	108[6×18]
Dimensions	1961±2×1134±2×30mm
Weight	27.4 kg
Front Glass	2.0mm AR coated heat strengthened glass
Rear Glass	2.0mm heat strengthened glass
Frame	Anodized aluminum alloy frame
Junction Box	IP68, 3 diodes
Cable	4.0mm²
Cable length	±1200mm, length can be customized
Wind/Snow load	2400Pa/5400Pa
Packaging	36pcs per pallet, 864pcs per 40'HC

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)

CE (Europe) CQC(China) TÜV NORD MCS (UK) KS (Korea) INMETRO (Brazil) JPEA (Japan) CEC (Australia) CSI (Italy)

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