

DL5.0C

DL5.0C is designed for residential and small commercial applications, with up to 50 units in parallel and an energy range from 5.12 kWh to 256 kWh. It supports 1C discharge rate. With high cycle times and a long lifespan, it ensures worry-free electricity consumption.



Flexible Expansion

Up to 50 units in parallel, 5.12kWh--256kWh capacity



1C Discharge

Simultaneously supplying power to multiple loads, no need to worry about power outages



Automatic Self-heating

-20°C to 55°C operating temperature (optional)



Easy Installation

Support wall-mounted, floor-mounted, stacked and rack-mounted installations, high space utilization



Long-term Reliability

LFP cells, 6000+ cycles, 10 years warranty



All-round Safety

Short-circuit lockout, surge-resistant, safe and reliable

Model	DL5.0C
Battery Type	LiFePO ₄
Nominal Battery Energy	5.12 kWh
Nomina Capacity	100Ah
Nominal Voltage	51.2V
Operating Voltage	44.8~57.6V
Recomended Charge & Discharge C Rate	0.5C
Maximum Discharge Crate	1C
Recommended Charge/Discharge Current	50A
Max. Charge/Discharge Current	Charge 75A Discharge 100A
Peak Discharge Current	110A(15s)
Depth of Discharge (DOD)	90%
Net Weight	54kg
Dimension[W/D/H](mm)	558/545/150
Charging Temp. Range	0~55°C/-20~55°C (with heating function)
Discharging Temp. Range	-20~55°C
Communication	CAN/RS485/RS232
Cycle Life *	≥6000 Cycles
Protection Level	IP20
WIFI Module	Optional
Expansion	Up to 50 units in parallel
Certification & Safety Standard	UN38.3/CE-EMC/IEC62619/CEI-021/GOST-R
Compatible Inverterst	SMA/Schneider/Victron energy/Ingeteam/Solis/GoodWe/Growatt/Soplanet/Luxpower/DEYE etc.

* Test conditions: 0.2C Charging & Discharging. @25°C, 90% DOD



ECO HYBRID

Single-Phase

SNA 12K

- 2 MPPTs with 4 strings, Max. 24kW PV input
- Max. charging and discharging current: 250A
- Off-grid application for high demand with 12kW output power
- Dual AC output ports for multiple load connections
- Separate GEN port
 - Up to 19.2kW Gen/AC coupling input
 - Auto generator start and stop control
- Integrated Design with Load and Battery Breaker
- PV or AC or Generator wake up battery



Specification

INPUT (PV DC)		SNA 12K
Max. PV array power (W)		24000 (12000/12000)
Rated PV input voltage (V)		320
Number of independent MPPT inputs		2/(2:2)
PV input voltage range (V)		100-480
MPPT voltage range (V)		120-385
Start-up voltage (V)		100
Max. PV input current per MPPT (A)		35/35
Max. PV short-circuit current input per MPPT (A)		44/44
Battery		
Compatible battery type		Lithium-ion/Lead-Acid
Rated battery voltage (V)		48/51.2
Battery voltage range (V)		46.4-60/38.4-60
Max. charging / discharging current (A)		250
Max. charging / discharging power (W)		12000
Force wake up battery from PV and Grid function		YES
Grid		
Rated AC voltage (V)		230
Acceptable Input Voltage Range (V)		90~280
Rated AC frequency (Hz)		60/50
Rated AC input current (A)		100
Rated AC input power (W)		24000
PF		0.99
THDI		<5%
Max. continuous AC passthrough current(A)		100
UPS		
Rated output power (W)		12000
Rated output voltage (V)		230
Rated output current (A)		50
Rated output frequency (Hz)		50/60
Surge power, duration		2Pn, 5s
Switching time (UPS)		<10ms@Single and Parallel
Wave form		Sine wave
THDV		3%
GEN		
Acceptable input voltage range		230
Max. AC input voltage (V)		280
Max. AC input current (A)		63
Rated input frequency		50Hz/60Hz (Auto detection)
Transfer time		<10ms@Single; <20ms@Parallel
THDV		<3%
Overload protection		5s@≥150% load /10s@110%~150% load
Efficiency		
Max. efficiency		93.5%
Max. charging / discharging efficiency		93.0%
Max. MPPT efficiency		99.0%
Protection		
PV reverse polarity protection(Y/N)		YES
Over current / voltage protection(Y/N)		YES
AC Short-circuit current protection(Y/N)		YES
Grid monitoring(Y/N)		YES
DC switch(Y/N)		YES
DC / AC Surge protection Type III		YES
Battery reverse polarity protection(Y/N)		YES
General		
Dimensions (W*H*D mm)		530*830*150mm(17.72*25.59*5.9inch)
Weight		40kg/88.2lbs
Ingress protection rating		IP20
Operating environment temperature range(°C)		0~45
Storage temperature range(°C)		-15~60
Relative humidity		5% ~ 95%
Display & Communication interface		LCD+RGB, RS485 / Wifi / CAN
Warranty		2 years
Cooling method		Smart cooling
Topology on AC / Battery side		Transformer-less / Transformer
Altitude (m)		<2000
Noise emission (typical)		<50dB
Standard & Certification		
CE		



High Power Output
Low LCOE

Maximum Power
515W+

TWMNH

N-type Half-cell
Bifacial Module (54)

54HD495-515W

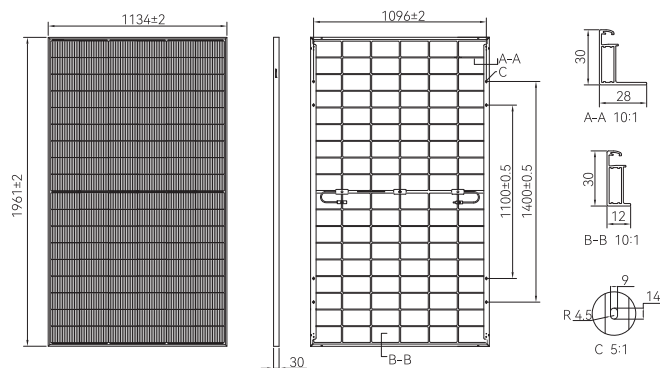


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DRAWINGS (Unit: mm)



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°C, 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°C, 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%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	+0.046%/°C
NMOT	45±2°C

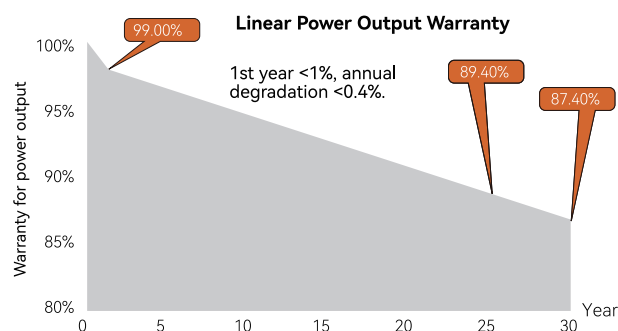
OPERATING PARAMETERS

Operating Temperature	-40°C~+85°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	30A
Power Output Tolerance	0~+3%
Bifaciality	80±5%

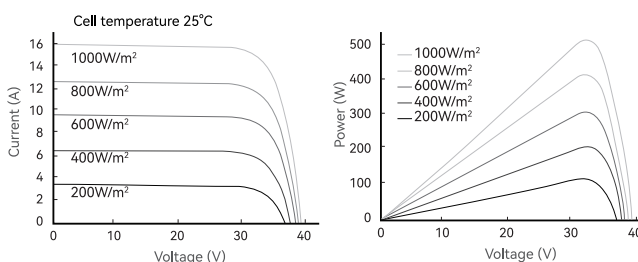
MECHANICAL PARAMETERS

Cell Type	TNC (N Type Monocrystalline Cell)
Cell Orientation	108[6×18]
Dimensions	1961±2×1134±2×30mm
Weight	27.0kg
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	4.0mm ²
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)

