

The 1st priority power of the system is always the PV power, then 2nd and 3rd priority power will be the battery bank or grid according to the settings. The last power backup will be the Generator if it is available.

### 7. Limitation of Liability

In addition to the product warranty described above, the state and local laws and regulations provide financial compensation for the product's power connection (including violation of implied terms and warranties). The company hereby declares that the terms and conditions of the product and the policy cannot and can only legally exclude all liability within a limited scope.

### 8. Datasheet

Battery Type Battery Voltage Range(V) Max. Charging Current(A) Max. Charging Current(A) Max. Discharging Current(A) Max. Discharging Curve  Battery Voltage Range(V) Max. Charging Current(A) Max. Discharging Current(A) Max. Discharging Curve  Battery Voltage Range(V) Max. Discharging Curve  Battery Voltage Renge(V) Max. Discharging Curve  Battery Voltage Renge(V) Max. De Input Power(W) Max. De Input Power(W) Max. De Input Power(W) MPPT Range(V) MPPT Range(V) MPPT Range(V) MPPT Range(V) MPPT Range(V) MPPT Trackers Mo. of MPPT Trackers No. of Strings Per MPPT Tracker Max. De Input Power(W) Max. Ac Output Data Max. Ac Output Data Max. Ac Output Power(W) Max. Ac Output Power(W) Max. Ac Output Rated Current(A) Max. Ac Continuous Ac Passthrough(A) Max. Continuous Ac Passthrough(A) Max. De Three Phase  Three Phase	Model	SUN-8K-SG04LP3	SUN-10K-SG04LP3	SUN-12K-SG04LP3
Battery Voltage Range(V)  Max. Charging Current(A)  Max. Discharging Current(A)  Max. Discharging Current(A)  Charging Curve  3 Stages / Equalization  External Temperature Sensor  Charging Strategy for Li-lon Battery  PV String Input Data  Max. DC Input Power(W)  PV Input Voltage(V)  Start-up Voltage(V)  PV Input Current(A)  No. of MPPT Trackers  No. of Strings Per MPPT Tracker  Rated AC Output Data  Rated AC Output Data  Rated AC Output Power(W)  PACOUTPUT Power(W)  PACOUTPUT Power(W)  RAC Output Rated Current(A)  AC Output Rated Current(A)  Max. AC Current(A)  Max. Continuous AC Passthrough(A)  Output Frequency and Voltage  Grid Type  Three Phase	Battery Input Date			
Max. Charging Current(A)         190A         210A         240A           Max. Discharging Current(A)         190A         210A         240A           Charging Curve         3 Stages / Equalization           External Temperature Sensor         Optional           Charging Strategy for Li-lon Battery         Self-adaption to BMS           PV String Input Data           Max. DC Input Power(W)         10400W         13000W         15600W           PV Input Voltage(V)         550V (150V~800V)         550V         550V           MPPT Range(V)         200V-650V         550V         550	Battery Type		Lead-acid or Li-lon	
Max. Discharging Current(A)  190A  210A  240A  Charging Curve  3 Stages / Equalization  External Temperature Sensor  Charging Strategy for Li-lon Battery  PV String Input Data  Max. DC Input Power(W)  10400W  13000W  15600W  PV Input Voltage(V)  MPPT Range(V)  Start-up Voltage(V)  PV Input Current(A)  No. of MPPT Trackers  No. of Strings Per MPPT Tracker  Rated AC Output Data  Rated AC Output and UPS Power(W)  Rated AC Output Power(W)  Rated AC Output Rated Current(A)  AC Output Rated Current(A)  Max. AC Current(A)  AC Output Rated Current(A)  Max. AC Current(A)  Max. AC Current(A)  Max. AC Current(A)  12A  15A  18A  Max. AC Current(A)  Max. AC Current(A)  18A  23A  27A  Max. Continuous AC Passthrough(A)  Output Frequency and Voltage  Grid Type  Three Phase	Battery Voltage Range(V)		40-60V	
Charging Curve  External Temperature Sensor Charging Strategy for Li-lon Battery  PV String Input Data  Max. DC Input Power(W) PV Input Voltage(V)  Start-up Voltage(V)  For Input Current(A)  No. of MPPT Trackers  No. of Strings Per MPPT Tracker  Rated AC Output Data  Rated AC Output Power(W)  Rated Current(A)  Rated Courput Power(W)  Rated Current(A)  Rated Courput Rated Current(A)  Rated Current(A)  Rated Current(A)  Rated Current(A)  Rated Courput Rated Current(A)  Rated Courput Rated Current(A)  Rated Current(A)  Rated Current(A)  Rated Current(A)  Rated Courput Ra	Max. Charging Current(A)	190A	210A	240A
External Temperature Sensor Charging Strategy for Li-lon Battery  PV String Input Data  Max. DC Input Power(W) PV Input Voltage(V) MPPT Range(V) Start-up Voltage(V) PV Input Current(A) No. of MPPT Trackers No. of Strings Per MPPT Tracker Rated AC Output Data  Rated AC Output Power(W) Rated AC Output Power(W) Rated AC Output Power(W) Rated AC Output Rated Current(A) Rate	Max. Discharging Current(A)	190A	210A	240A
Self-adaption to BMS	Charging Curve		3 Stages / Equalization	
## PV String Input Data    Max. DC Input Power(W)	External Temperature Sensor		Optional	
Max. DC Input Power(W)         10400W         13000W         15600W           PV Input Voltage(V)         550V (150V~800V)           MPPT Range(V)         200V-650V           Start-up Voltage(V)         150V           PV Input Current(A)         13A+13A         26A+13A           No. of MPPT Trackers         2           No. of Strings Per MPPT Tracker         1+1         2+1           AC Output Data         8000         10000         12000           Max. AC Output and UPS Power(W)         8000         11000         13200           Peak Power(off grid)         2 times of rated power, 10 S           AC Output Rated Current(A)         12A         15A         18A           Max. AC Current(A)         18A         23A         27A           Max. Continuous AC Passthrough(A)         50/60Hz; 230/400Vac (Three phase)           Grid Type         Three Phase	Charging Strategy for Li-lon Battery		Self-adaption to BMS	
PV Input Voltage(V) 550V (150V~800V)  MPPT Range(V) 200V-650V  Start-up Voltage(V) 150V  PV Input Current(A) 13A+13A 26A+13A 26A+13A  No. of MPPT Trackers 2  No. of Strings Per MPPT Tracker 1+1 2+1 2+1  AC Output Data  Rated AC Output and UPS Power(W) 8000 10000 12000  Max. AC Output Power(W) 8800 11000 13200  Peak Power(off grid) 2 times of rated power, 10 S  AC Output Rated Current(A) 12A 15A 18A  Max. AC Current(A) 18A 23A 27A  Max. Continuous AC Passthrough(A) 50A  Output Frequency and Voltage 50/60Hz; 230/400Vac (Three phase)  Grid Type Three Phase	PV String Input Data			
MPPT Range(V) 200V-650V  Start-up Voltage(V) 150V  PV Input Current(A) 13A+13A 26A+13A 26A+13A  No. of MPPT Trackers 2  No. of Strings Per MPPT Tracker 1+1 2+1 2+1  AC Output Data Rated AC Output and UPS Power(W) 8000 10000 12000  Max. AC Output Power(W) 8800 11000 13200  Peak Power(off grid) 2 times of rated power, 10 S  AC Output Rated Current(A) 12A 15A 18A  Max. AC Current(A) 18A 23A 27A  Max. Continuous AC Passthrough(A) 50A  Output Frequency and Voltage 50/60Hz; 230/400Vac (Three phase)  Grid Type Three Phase	Max. DC Input Power(W)	10400W	13000W	15600W
Start-up Voltage(V)	PV Input Voltage(V)		550V (150V~800V)	
PV Input Current(A) 13A+13A 26A+13A 26A+13A 26A+13A No. of MPPT Trackers 2  No. of Strings Per MPPT Tracker 1+1 2+1 2+1 2+1  AC Output Data Rated AC Output and UPS Power(W) 8000 10000 12000  Max. AC Output Power(W) 8800 11000 13200  Peak Power(off grid) 2 times of rated power, 10 S  AC Output Rated Current(A) 12A 15A 18A  Max. AC Current(A) 18A 23A 27A  Max. Continuous AC Passthrough(A) 50A  Output Frequency and Voltage 50/60Hz; 230/400Vac (Three phase)  Grid Type Three Phase	MPPT Range(V)	200V-650V		
No. of MPPT Trackers   2     2+1   2+1   2+1     2+1	Start-up Voltage(V)		150V	
No. of Strings Per MPPT Tracker 1+1 2+1 2+1  AC Output Data Rated AC Output and UPS Power(W) 8000 10000 12000  Max. AC Output Power(W) 8800 11000 13200  Peak Power(off grid) 2 times of rated power, 10 S  AC Output Rated Current(A) 12A 15A 18A  Max. AC Current(A) 18A 23A 27A  Max. Continuous AC Passthrough(A) 50A  Output Frequency and Voltage 50/60Hz; 230/400Vac (Three phase)  Grid Type Three Phase	PV Input Current(A)	13A+13A	26A+13A	26A+13A
AC Output Data  Rated AC Output and UPS Power(W) 8000 10000 12000  Max. AC Output Power(W) 8800 11000 13200  Peak Power(off grid) 2 times of rated power, 10 S  AC Output Rated Current(A) 12A 15A 18A  Max. AC Current(A) 18A 23A 27A  Max. Continuous AC Passthrough(A) 50A  Output Frequency and Voltage 50/60Hz; 230/400Vac (Three phase)  Grid Type Three Phase	No. of MPPT Trackers		2	
Rated AC Output and UPS Power(W)         8000         10000         12000           Max. AC Output Power(W)         8800         11000         13200           Peak Power(off grid)         2 times of rated power, 10 S           AC Output Rated Current(A)         12A         15A         18A           Max. AC Current(A)         18A         23A         27A           Max. Continuous AC Passthrough(A)         50A           Output Frequency and Voltage         50/60Hz; 230/400Vac (Three phase)           Grid Type         Three Phase	No. of Strings Per MPPT Tracker	1+1	2+1	2+1
Max. AC Output Power(W)         8800         11000         13200           Peak Power(off grid)         2 times of rated power, 10 S           AC Output Rated Current(A)         12A         15A         18A           Max. AC Current(A)         18A         23A         27A           Max. Continuous AC Passthrough(A)         50A           Output Frequency and Voltage         50/60Hz; 230/400Vac (Three phase)           Grid Type         Three Phase	AC Output Data			
Peak Power(off grid)  AC Output Rated Current(A)  Max. AC Current(A)  Max. AC Current(A)  Max. Continuous AC Passthrough(A)  Output Frequency and Voltage  Grid Type  Three Phase	Rated AC Output and UPS Power(W)	8000	10000	12000
AC Output Rated Current(A)  12A  15A  18A  Max. AC Current(A)  18A  23A  27A  Max. Continuous AC Passthrough(A)  50A  Output Frequency and Voltage  50/60Hz; 230/400Vac (Three phase)  Grid Type  Three Phase	Max. AC Output Power(W)	8800	11000	13200
Max. AC Current(A)  Max. Continuous AC Passthrough(A)  Output Frequency and Voltage  Grid Type  18A  23A  27A  50A  50/60Hz; 230/400Vac (Three phase)  Three Phase	Peak Power(off grid)	2 times of rated power, 10 S		
Max. Continuous AC Passthrough(A) 50A  Output Frequency and Voltage 50/60Hz; 230/400Vac (Three phase)  Grid Type Three Phase	AC Output Rated Current(A)	12A	15A	18A
Output Frequency and Voltage 50/60Hz; 230/400Vac (Three phase)  Grid Type Three Phase	Max. AC Current(A)	18A	23A	27A
Grid Type Three Phase	Max. Continuous AC Passthrough(A)	50A		
••	Output Frequency and Voltage	50/60Hz; 230/400Vac (Three phase)		
Current Harmonia Distortion TIID 220/ (Linear lead of 50/)	Grid Type	Three Phase		
current harmonic distortion   ThD<3% (Linear load<1.5%)	Current Harmonic Distortion	THD<3% (Linear load<1.5%)		
Efficiency	Efficiency			
,	Max. Efficiency		97.60%	
Euro Efficiency 97.00%	Euro Efficiency	97.00%		
MPPT Efficiency 99.90%	MPPT Efficiency		99.90%	

Model	SUN-8K-SG04LP3 SUN-10K-SG04LP3 SUN-12K-SG04LP3		
Protection			
PV Arc Fault Detection	Integrated		
PV Input Lightning Protection	Integrated		
Anti-islanding Protection	Integrated		
PV String Input Reverse Polarity Protection	Integrated		
Insulation Resistor Detection	Integrated		
Residual Current Monitoring Unit	Integrated		
Output Over Current Protection	Integrated		
Output Shorted Protection	Integrated		
Output Over Voltage Protection	DC Type II / AC Type II		
Certifications and Standards			
Grid Regulation	VDE 0126, AS4777,		
drid Regulation	NRS2017, G98, G99, IEC61683, IEC62116, IEC61727		
Safety Regulation	IEC62109-1, IEC62109-2		
EMC	EN61000-6-1, EN61000-6-3, FCC 15 class B		
General Data			
Operating Temperature Rande(°C)	-25~60 ℃, >45 ℃ Derating		
Cooling	Smart cooling		
Noise(dB)	<30 dB		
Communication with BMS	RS485; CAN		
Weight(kg)	36.8		
Size(mm)	422W×658H×281D		
Protection Degree	IP65		
Installation Style	Wall-mounted		
Warranty	5 years		

# 9. Appendix I

Approved battery brand from Deye

Brand	Model	48V Storage inverter	RS485 or CAN	INVERTER SETUP	note
LISAC	US2000	•	CAN	0	
PYLON	032000	•	RS485	5	
TILON	US2000-PLUS	•	CAN	0	
	U32000-PLU3	•	RS485	5	
DYNESS	B4850	•	CAN	0	Short line 6&7 at inverter side
DINESS	POWERBOX F	•	CAN	0	
CCGX	48Vxxxx	•	CAN	0	Need confirm CAN_H CAN_L
SACRED SUN	48Vxxxx	•	RS485	1	Cut line 3,6,8
SOLAX	48Vxxxx	•	CAN	0	

UZ ENERGY	UZ-EB51.2- 100-A11	•	CAN	0	
GSL ENERGY	48Vxxxx	•	CAN	0	
	TO V AAAA		RS485	12	
Herewin techlogy	HY48050	•	CAN	0	
GenixGreen		•	RS485	6	
Sunwoda	H4850M	•	CAN	0	
X-ratong	48Vxxxx	•	RS485	8	
Enershare Technology	BMS48150	•	RS485	9	
PYLON 3.0		•	RS485	12	
Murata		•	RS485	11	
G\$10000		•	RS485	3	
BPE		•	CAN	0	
AOBOET		•	CAN	0	
VISION Group		•	CAN	13	
Alpha Ess		•	CAN	0	
GBS	GBS	•	CAN	0	
Wattsonic		•	CAN	14	
jihonghui		•	CAN	0	
KODAK		•	CAN	0	
Anchitech		•	Can/485	0/12	
TOPBAND		•	CAN	0	
oliter		•	CAN	0	
Foxess	LD-48100P	•	RS485	1	
Woo-power		•	RS485	12	
SHUANGDENG		•	CAN	0	

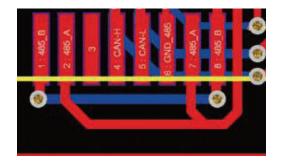
# 10. Appendix II

### Definition of RJ45 Port Pin for BMS

No.	RS485 Pin		
1	485_B		
2	485_A		
3			
4	CAN-H		
5	CAN-L		
6	GND_485		
7	485_A		
8	485_B		

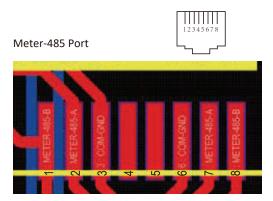


### **BMS Port**



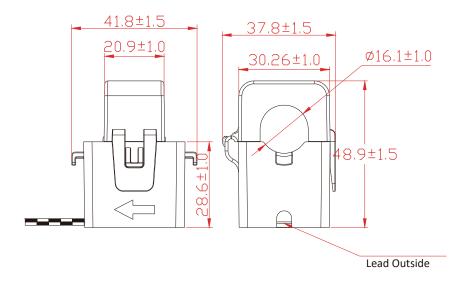
### Definition of RJ45 Port Pin for Meter-485

No.	Meter-485 Pin	
1	METER-485_B	
2	METER-485_A	
3	COM-GND	
4		
5		
6	COM-GND	
7	METER-485_A	
8	METER-485_B	



## 11. Appendix III

- 1. Split Core Current Transformer (CT) dimension: (mm)
- 2. Seconddary output cable length is 4m.





# NINGBO DEYE INVERTER TECHNOLOGY CO., LTD.