Voltronic Inverter Setup SOP - Pylon Battery

1. Infinisolar - On-grid Solution

(1) Inverter Spec.:

InfiniSolar On-grid Inverter with Energy Storage Selection Guide

MODEL	InfiniSolar 2KW	InfiniSolar Plus 3KW	InfiniSolar Plus 5KW	InfiniSolar 3P 10KW
PHASE	1-phase in / 1-phase out			3-phase in / 3-phase out
MAXIMUM PV INPUT POWER	2250 W	4500 W	10000 W	14850 W
RATED OUTPUT POWER	2000 W	3000 W	5000 W	10000 W
MAXIMUM CHARGING POWER	1200 W		4800 W	9600 W
GRID-TIE OPERATION				
PV INPUT (DC)				
Nominal DC Voltage / Maximum DC Voltage	300 VDC / 350 VDC	360 VDC / 500 VDC	720 VDC / 900 VDC	720 VDC / 900 VDC
Start-up Voltage / Initial Feeding Voltage	80 VDC / 120 VDC	116 VDC / 150 VDC	225 VDC / 250 VDC	320 VDC / 350 VDC
MPP Voltage Range	120 VDC ~ 320 VDC	250 VDC ~ 450 VDC	250 VDC ~ 850 VDC	400 VDC ~ 800 VDC
Number of MPP Trackers / Maximum Input Current	1 / 1 x 15 A	1 / 1 x 18 A	2 / 2 x 10 A	2 / 2 x 18.6A
GRID OUTPUT (AC)				
Nominal Output Voltage	101/110/120/127 VAC	208/220/230/240 VAC		230 VAC (P-N) / 400 VAC (P-P)
Output Voltage Range	88 - 127 VAC*	184 - 265 VAC*		184 - 265 VAC* per phase
Nominal Output Current	18 A	13 A	21 A	14.5A per phase
Power Factor	> 0.99			
EFFICIENCY				
Maximum Conversion Efficiency (DC/AC)	95%	96%		
European Efficiency@ Vnominal	94%	95%		
OFF-GRID OPERATION				
AC INPUT				
AC Start-up Voltage/Auto Restart Voltage	60 - 70 VAC / 85 VAC	120 - 140 VAC / 180 VAC		120 - 140 VAC per phase / 180 VAC per phase
Acceptable Input Voltage Range	80 - 130 VAC	170 - 280 VAC		170 - 280 VAC per phase
Maximum AC Input Current	30 A		40 A	
PV INPUT (DC)				
Maximum DC Voltage	350 VDC	500 VDC	900 VDC	900 VDC
MPP Voltage Range	150 VDC ~ 320 VDC	250 VDC ~ 450 VDC	250 VDC ~ 850 VDC	400 VDC ~ 800 VDC
Number of MPP Trackers / Maximum Input Current	1 / 1 x 15 A	1 / 1 x 18 A	2 / 2 x 10A	2 / 2 x 18.6A
BATTERY MODE OUTPUT (AC)				
Nominal Output Voltage	101/110/120/127 VAC	202/208/220/230/240 VAC	202/208/220/230/240 VAC	230 VAC (P-N) / 400 VAC (P-P)
Output Waveform	Pure Sinewave			
Efficiency (DC to AC)	90%	93%		91%

HYBRID OPERATION				
PV INPUT (DC)				
Nominal DC Voltage / Maximum DC Voltage	300 VDC / 350 VDC	360 VDC / 500 VDC	720 VDC / 900 VDC	720 VDC / 900 VDC
Start-up Voltage / Initial Feeding Voltage	80 VDC / 120 VDC	116 VDC / 150 VDC	225 VDC / 250 VDC	320 VDC / 350 VDC
MPP Voltage Range	150 VDC ~ 320 VDC	250 VDC ~ 450 VDC	250 VDC ~ 850 VDC	400 VDC ~ 800 VDC
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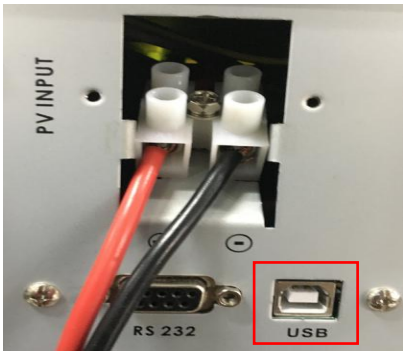
GRID OUTPUT (AC)				
Nominal Output Voltage	101/110/120/127 VAC	202/208/220/230/240 VAC	202/208/220/230/240 VAC	230 VAC (P-N) / 400 VAC (P-P)
Output Voltage Range	88-127 VAC*	184 - 264.5 VAC*		184 - 264.5 VAC* per phase
Nominal Output Current	18 A	13 A	21 A	14.5 A per phase
AC INPUT				
AC Start-up Voltage / Auto Restart Voltage	60 - 70 VAC / 85 VAC	120 - 140 VAC / 180 VAC		120 - 140 VAC per phase / 180 VAC per phase
Acceptable Input Voltage Range	80 - 130 VAC	170 - 280 VAC		170 - 280 VAC per phase
Maximum AC Input Current	30 A		40 A	
BATTERY MODE OUTPUT (AC)				
Nominal Output Voltage	101/110/120/127 VAC	202/208/220/230/240 VAC	202/208/220/230/240 VAC	230 VAC (P-N) / 400 VAC (P-P)
Efficiency (DC to AC)	90%	93%		91%
BATTERY & CHARGER				
Nominal DC Voltage	48 VDC			
Maximum Charging Current	Default 25A, 5A - 25A (Adjustable)		Default 60A, 5A - 100A (Adjustable)	Default 60A, 10A - 200A (Adjustable)
GENERAL				
PHYSICAL				
Dimension, D X W X H (mm)	107 x 438 x 480		204.2 x 460 x 600	167.5 x 500 x 622
Net Weight (kgs)	15.5		29	45
INTERFACE				
Communication Port	RS-232/USB		RS-232/USB and CAN Interface	
Intelligent Slot	Optional SNMP, Modbus and AS-400 cards available			
ENVIRONMENT				
Humidity	0 ~ 90% RH (Non-Condensing)			
Operating Temperature	0 to 40°C		-10 to 55°C	
Altitude	0 ~ 1000 m**			

(2) General Compatible Condition:

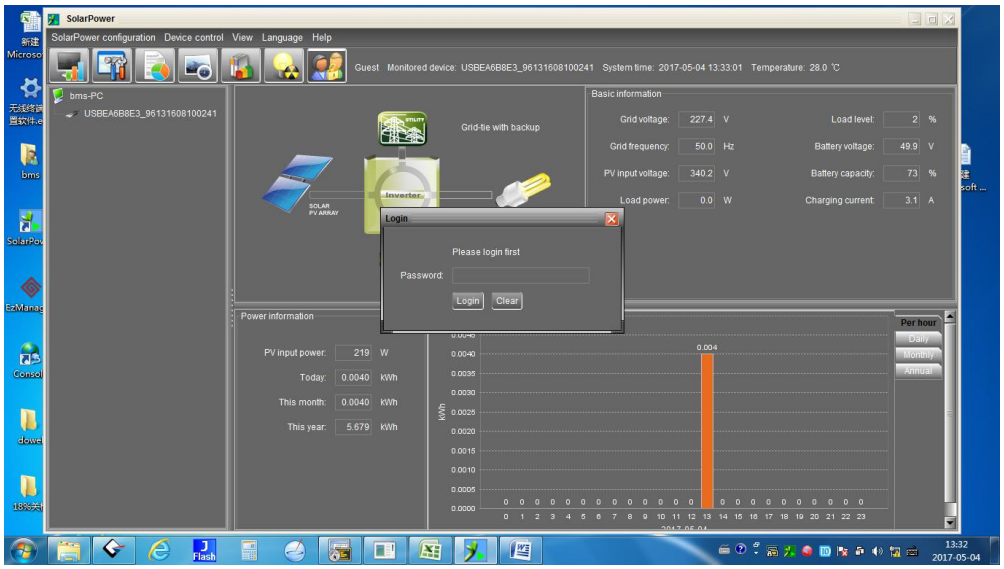
Battery Type		US2000B/Phantom-S		
Inverter Type	Infinisolar 2kW	Infinisolar Plus 3kW	Infinisolar Plus 5kW	Infinisolar 3P 10kW
Recommend battery Amount	According to load requirement and inverter rated power. Battery Amount N = Load power/1200W			
Communication	Not required, but need finish the setting on Inverter software			
DOD	80%			
Working Temp.	0 - 50℃(Indoor operation)			
Charge/Discharge Current	N*25, N = Battery amount			
Warranty	5yrs			

(3) Inverter set up:

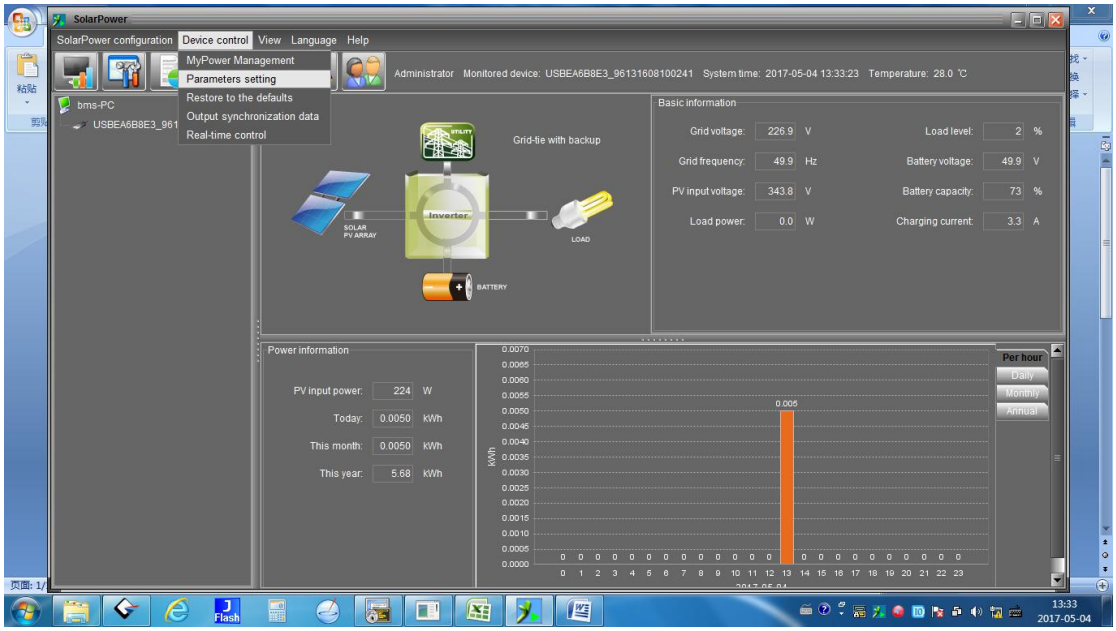
(a) Connect PV or Grid power to wake up inverter; Connect the communication cable from Inverter to computer.



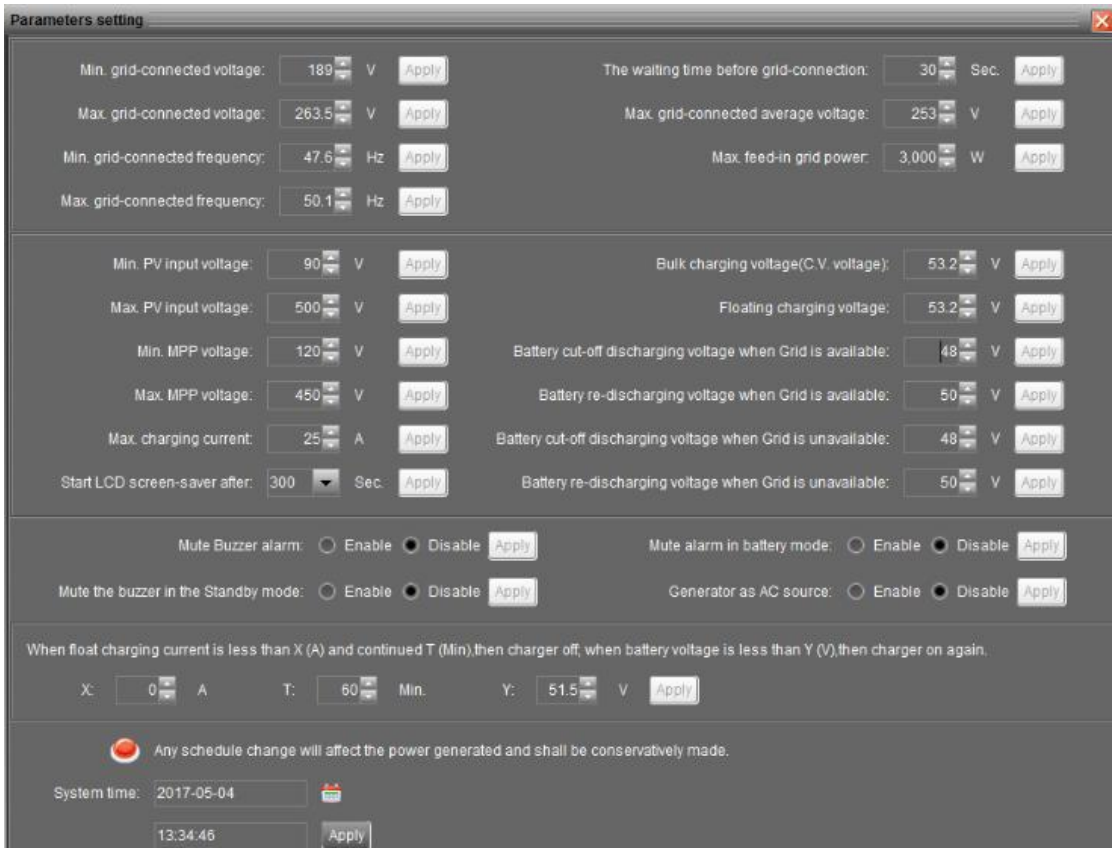
(b) Open 'Solarpower.exe'(the inverter set up software), Log in .



(c)Press 'Parameters Setting'.



(d) Set the parameter according to below recommendation, the max. charge current refer to the specific battery amount of real application. Then click 'Apply'. According to the inverter limitation, for 2kW&3kW inverter max. is 25A, for 5kW max. is 100A, for 10kW max. is 200A.



2. Axpert - Off-grid Solution

(1) Inverter Spec.:

MODEL	Axpert MKS 1K-24	Axpert MKS 1K-48	Axpert MKS 2K-24	Axpert MKS 3K-24	Axpert MKS 3K-48	Axpert MKS 4K	Axpert MKS 5K
Rated Power	1000VA/800W	1000VA/1000W	2000VA/1600W	3000VA/2400W	3000VA/2400W	4000VA/3200W	5000VA/4000W
INPUT							
Voltage	230 VAC						
Selectable Voltage Range	170-280 VAC (For Personal Computers) 90-280 VAC (For Home Appliances)						
Frequency Range	50 Hz/60 Hz (Auto sensing)						
OUTPUT							
AC Voltage Regulation (Batt. Mode)	230VAC ± 5%						
Surge Power	2000VA		4000VA	6000VA		8000VA	10000VA
Efficiency (Peak)	90% - 93%		93%				
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)						
Waveform	Pure sine wave						
BATTERY							
Battery Voltage	24 VDC	48 VDC	24 VDC	24 VDC	48 VDC	48 VDC	
Floating Charge Voltage	27 VDC	54 VDC	27 VDC	27 VDC	54 VDC	54 VDC	
Overcharge Protection	31 VDC	62 VDC	31 VDC	31 VDC	62 VDC	60 VDC	
SOLAR CHARGER & AC CHARGER							
Maximum PV Array Power	600W	900W	600W	600W	900W	4000W	
MPPT Range @ Operating Voltage	30VDC ~ 66VDC	60VDC ~ 88VDC	30VDC ~ 66VDC	30VDC ~ 66VDC	60VDC ~ 88VDC	60VDC ~115VDC	
Maximum PV Array Open Circuit Voltage	75VDC	102VDC	75VDC	75VDC	102VDC	145 VDC	
Maximum Solar Charge Current	25A	18A	25A	25A	18A	80 A	
Maximum AC Charge Current	20A	15A	30A	30A	15A	60 A	
Maximum Charge Current	45A	33A	55A	55A	33A	140 A	
Maximum Efficiency	98%						
Standby Power Consumption	2 W						
PHYSICAL							
Dimension, D x W x H (mm)	100 x 272 x 355					120 x 295 x 468	
Net Weight (kgs)	6.8		7.0	7.4		11	
OPERATING ENVIRONMENT							
Humidity	5% to 95% Relative Humidity (Non-condensing)						
Operating Temperature	0°C - 55°C						
Storage Temperature	-15°C - 60°C						

(2) General Compatible Condition:

Battery Type		US2000B/Phantom-S		
Inverter Type	Axpert MKS 1K-48	Axpert MKS 3K-48	Axpert MKS 4K	Axpert MKS 5K
Max. charge current	33A	33A	140A	140A
Recommend battery Amount	According to load requirement and inverter rated power. Battery Amount N = Load power/1200W			
Communication	Not required, but need finish the setting on Inverter.			
DOD	80%			
Working Temp.	0 - 50℃(Indoor operation)			
Charge/Discharge Current	N*25, N = Battery amount			
Warranty	5yrs			

(3) Inverter set up:

(a) Connect Inverter with battery, wake up inverter.

(b) Press ‘Enter’ for 5s, to enter into the setting.

(c) Press 'Up' and 'Down' to choose the setting item No., press 'Enter' to enter into the detailed setting parameter, when finish press 'Enter' again. The following setting items need to be set follow the recommended value:

Item No.	Setting Value
Program 02	Set to N*25A, N=battery amount
Program 05	Set to USE
Program 12	Set to 48V
Program 13	Set to 51V
Program 26	Set to 53.2V
Program 29	Set to 47.5V
Program 27	Value below of the one set at program 26 (i.e. 52.2V)

Note: Axpert Inverter can only be waked up via battery, if the battery is turned off due to over-discharge, over temp. or other reasons, in order to wake up the inverter you need turn on the battery manually.

Any further questions to this SOP please contact us via service@pylontech.com.cn

Para consulta en Chile escribir a proyectos@naturaenergy.cl o visitar www.naturaenergy.cl