

Installation manual for UE-H Series batteries







Inverter Setup SOP - Battery

1. OMEGA X

(1)	Inverter	Spec.:
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INVERTER MODEL		5KW			
Line Mode Specification					
Input Voltage Waveform		Sinusoidal (utility or generator)			
Nominal Input Voltage		230Vac			
Max AC Input Voltage		300Vac			
Inverter Mode Specification					
Output Voltage Waveform		Pure Sine Wave			
Output Voltage Regulation		230Vac±5%			
Peak Efficiency		93%			
Overload Protection		5s@≥130% load; 10s@105%~130% load			
Surge Capacity		2* rated power for 5 seconds			
Nominal DC Input Voltage		48Vdc			
Cold Start Voltage		46.0Vdc			
Low DC Warning Voltage					
@ load < 50%		46.0Vdc			
@ load ≥ 50%		44.0Vdc			
Low DC Warning Return Voltage					
@ load < 50%		47.0Vdc			
@ load ≥ 50%		46.0Vdc			
Low DC Cut-off Voltage		40.0700			
@ load < 50%		43.0Vdc			
@ load ≥ 50%		43.0Vdc 42.0Vdc			
		62Vdc			
High DC Recovery Voltage		63Vdc			
High DC Cut-off Voltage Charge Mode Specification		63Vdc			
INVERTER MODEL		0.01-			
Charging Algorithm		3-Step			
AC Charging Current (Max)	1	60Amp (@VI/P=230Vac)			
Bulk Charging Voltage	Flooded Battery	58.4			
	AGM / Gel Battery	56.4			
Floating Charging Voltage		54Vdc			
MPPT Solar Charging Mode					
Max. PV Array Power		4000W			
Nominal PV Voltage		240Vdc			
Start-up Voltage		150Vdc +/- 10Vdc			
PV Array MPPT Voltage Range		120~450Vdc			
Max. PV Array Open Circuit Volt	age	145Vdc			
Max Charging Current (AC charg	ger plus solar charger)	80Amp			
General					
Operating Temperature Range		-10°C to 50°C			
Storage temperature		-15°C~ 60°C			
Humidity		5% to 95% Relative Humidity (Non-condensing)			
Dimension (D*W*H), mm		115 x 300 x 440			
Net Weight, kg		10			



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Battery Type		UE-48VLI2400WH - UE-48VLI3600WH
Inverter Type		Omega X
Recommend		According to load requirement and inverter rated power.
battery Amount		Battery Amount N = Load power/1200W
Communication		Not required, but need finish the setting on Inverter.
DOD		80%
Working Temp.		0 - 50°C(Indoor operation)
Charge/Discharge Current		N*25, N = Battery amount
Warranty		Refer to each country's warranty terms, please contact your distributor

(2) General Compatible Condition:

(3) Inverter set up:Method1: Through WatchPower

(a) Connect PV or Grid power to wake up inverter; connect the communication cable (RS232/micro-USB cable to USB) from Inverter to computer.



(b) Open 'WatchPower.exe' (the inverter set up software).

/ Hatem over								
WatchPower configuration Device control	View Language Help							
🔄 🛐 📼 👔	Guest Monitored device: USB2	2D5AD925_92931805104429						
💆 VTW-Sandy.vtw.vol.corp			- Ba	asic information				
USB2D5AD925_92931805104429		Battery Mode		AC voltage:		Charging current:		
						Battery discharge current:		
				PV input voltage:		Output voltage:		
		vortor.		PV input current		Output frequency:		
		Source: Batt		PV input power:		Output apparent power:		
		- ()		Battery voltage:		Output active power:		
				Battery capacity:				
	Product Information			nformation				
	Model type:	Stand alone		ominal AC voltage:		Nominal output frequency:	60.0	
		Transformerless				Nominal output current:		
	Main CPU version:		Rat	ted battery voltage:		Nominal output apparent power:	5000.0	
	Remote Panel CPU version:			nal output voltage:		Nominal output active power:	5000.0	
	BLE CPU version:							



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WatchPower configuration Device control	View Language Help						
Parameters se Restore to the		2D5AD925_92931805104429					
VTW-Sandy.vtw.vol.corp			Basic information				
USB2D5AD925_92931805104429		Battery Mode	AC voltage:		Charging current:		A
					Battery discharge current:		A
			PV input voltage:		Output voltage:		
		verter.			Output frequency:		
		Source: Battery	PV input power:		Output apparent power:		
			Battery voltage:		Output active power:		
			Battery capacity:				
	Product Information		Rated information				
	Model type:	Stand alone	Nominal AC voltage:		Nominal output frequency:	60.0	
	Topology:	Transformerless			Nominal output current:		
	Main CPU version:	00010000	Rated battery voltage:	48.0	Nominal output apparent power:	5000.0	
	Remote Panel CPU version:		Nominal output voltage:		Nominal output active power:	5000.0	
	BLE CPU version:	0000.21					

(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', enter password to login. According to the inverter limitation, for 5kW max is 80A.

MatchPower	Parameters setting							\mathbf{X}		
WatchPower configu	Buzzer al	arm: 💿 Enable 🔿 Dis	able Apply		Beeps while primary	source interrupt 💿 Enable	O Disable Apply			
	Back	light: 💿 Enable 🔘 Dis	able Apply			Overload bypass: 🔿 Enable	Disable Apply			
VTW-Sandy.vtw.vo	Overload auto re	start: 🔘 Enable 🖲 Dis	able Apply	LCD screen retur	ns to default display scr	een after 1 min.: 🌘 Enable	O Disable Apply	nt).0 A
	Over temperature auto re	start: 🔵 Enable 🖲 Dis	able Apply			ault code record: 🌘 Enable	O Disable Apply	e		.0 A
	Charger source priority:	Solar only	-	Apply	Output voltage:		V Apply	37	c 60	0.0 Hz
	Output source priority:	Utility	-	Apply	Back to grid voltage:		V Apply	ər		0.0 VA
	AC input range:	Appliance	Login				🔹 A Apply	ər		0.0 W
	Battery type:		Password:	Please login first			A Apply	nt		0 %
	Output frequency:		Password.	Login Clear			V Apply			
	Bulk charging voltage(C.\	/. voltage): 53.2 🗧 V				Battery cut-off voltage:	47 V Apply			
	Float chargir	ig voltage: 53.2 🗧 V	Apply							
	Battery equalization setting									
	Battery equalization: 🔘) Enable 💿 Disable 🛕	ply		Real-time activate batt	ery equalization: 🔵 Activate	Cancel Apply		60.0	Hz
	Equalization time:	60 🗧 Min Apply				Equalization voltage: 54	B.4 🗧 V Apply		21.7	A
	Equalization period:	30 🗧 Day(s) Apply				Equalization timeout: 1	20 🌐 Min Apply		5000.0	VA
							Clo	se	5000.0	o w ▼



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Method2: Through remote panel

(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:





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Item No.	Setting Value
Program 02	Set to N*25A, N=battery amount, If N = 1, 3, minus single digit
Program 05	Set to USE
Program 12	Set to 48V
Program 13	Set to 51V
Program 26	Set to 53.2V
Program 27	Set to 53.2V
Program 29	Set to 47.5V

Recommended value:

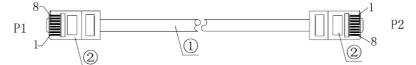
(4) Battery & Inverter set up:

Connect Battery and Inverter via RJ45 cable. Please refer to picture as below.





Communication cable:



Here is internal connection between P1 and P2.

BMS RS485		Remote Pane	el RS485
Pin No	Pin Name	Pin No	Pin Name
PIN 1	RS485-N1 ᆽ	🗾 PIN 1	RS485-N2
PIN 2	RS485-P1 💌	PIN 2	RS485-P2
PIN 3	RS485-N2 🗡	PIN 3	RS485-N1
PIN 4		PIN 4	
PIN 5	RS485-P2 🗡	PIN 5	RS485-P1
PIN 6		PIN 6	
PIN 7		PIN 7	
PIN 8		PIN 8	



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