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WHO WE ARE?

ONYXLINE DISTRIBUTION LTD, established in 1998. Our headquarter Based in Dubai, United Arab Emirates, which is a professional hi-tech company specialized in Power Products and Networking Solution, installation and after-service.

We have 12 branches with official distributors in more than 70 countries all over the globe including our branch in Lagos, Nigeria which is leading and covering the market of West African Countries.

Our established partnerships with top industry brands allow us to provide the most effective, superior assemblies and supply a range of accessory products.

Our products have become synonymous with technological innovation, build quality and unparalleled customer service and are highly spoken of by our customers worldwide.

WHAT IS OUR VISION?

To deliver international quality products, ONYXLINE DISTRIBUTION LTD has been certified by the following policies: ISO9001, CE, IEC, SAA, S O N C A P. In the future, ONYXLINE DISTRIBUTION LTD will continue to follow existing rules and regulations and be certifed by different international rules and regulations

WHAT IS OUR MISSION?

At Onyxline Distribution Limited, our main mission is to:

- 1. To Explore our Service
- 2. Programs & Initiatives



...we bring the sun to earth

GROVOLT is a distinguished brand in the solar energy sector, specializing in offering complete solutions that encompass solar systems, batteries, inverters, charge controllers, and solar street lights. Driven by a bold vision to empower individuals and businesses to harness clean, sustainable energy, GROVOLT provides high-qualityproducts that are both efficient and reliable.



Innovation lies at the heart of GROVOLT's philosophy, with the company leveraging the latest technologies to create advanced products that meet the diverse needs of its customers. By focusing on delivering integrated energy solutions, GROVOLT enables communities to utilize solar energy effectively, making it both accessible and affordable.

Committed to sustainability and environmental stewardship, GROVOLT is paving the way toward a future where clean energy is available to all. The company continually advances its products, ensuring that customers receive solutions that offer outstanding performance and cost-effectiveness.





HIGH FREQUENCY INVERTERS

Ragnar Series



Pure Sine Wave



Led Display



Built-in MPPT solar charger.



User adjustable charging current and voltage.



WiFi monitoring externally



BMS button compatible with wide range of lithium brands batteries.





UP TO 12 UNITS IN PARALLEL

Model	GI-R24-4KW-GO	GI-R48-6KW-GO	GI-R48-12KW-GO				
Rated Output Power	4000VA	6000VA	12000VA				
	4000W	6000W	12000W				
Nominal DC Input Voltage	24V	48V	48V				
Input Voltage Waveform		Sinusoidal utility of generator)					
Nominal Input Voltage		230Vac					
Low Line Voltage Disconnect	90Vac <u>+</u> 3V(For	90Vac±3V(For Home Appliances) 170Vac±3V(For Computers)					
Low Loss Voltage Re-connect	100Vac <u>+</u> 3V(For	Home Appliances) 180Vac <u>+</u> 3V(For Co	omputers)				
High Line Voltage Re-connect		270Vac+ <u>3</u> V					
Max AC Input Voltage		280Vac+ <u>3</u> V					
Nominal Input Frequency		50Hz/60Hz(Auto detection)					
Low Line Frequency Disconnect		40 <u>+</u> 1Hz					
Low Line Frequency Re-connect		42 <u>+</u> 1Hz					
High Line Frequency Disconnect		65 <u>+</u> 1Hz					
High Line Frequency Re-connect		63 <u>+</u> 1Hz					
Output Voltage Waveform	As same as input waveform						
Output Short Circuit Protection	Line mode: Circuit Breaker Battery mode: Electronic Circuits						
Efficiency (Line Mode)	>95%	6 (Rated R load, battery full charged)					
Transfer Time (Single Unit)	10ms ty	ypical (UPS); 20ms typical (Appliances)				
Transfer Time (Parallel)		50ms typical					
Pass Through Without Battery		Yes					
Max . Bypass Overload Current	28A	40A	70A				
Max . Bypass Input Current	28A	50A	90A				
Max . Inverter/ Rectifier Current	18.2A/4000W	27.3A/6000W	50A/12000W				
Solar Charging & Grid Charging		'					
Max. PV Open Circuit Voltage		50V					
PV Voltage Range		85V-450V					
Max. Input Power	4000W	6000W	12000W				
Max. Solar Charging Current	120A	120A	210A				
Max. Charging Current (PV+Grid)	120A	120A	210A				
Max. Input Current	15A	27A	27A				
Min. Startup Voltage	80V						





"electrify your expectations."



LOW FREQUENCY INVERTERS

Amuma Plus Series





Pure Sine Wave



Auto restart when Ac is recovering



Built-in solar charger.



Built-in Transformer



WiFi monitoring externally



Power Saving Mode

Capacity (VA)	GAP-1512	GAP-2024	GAP-3024	GAP-7548	GAP-12548		
Input Voltage(DC)	12V	24V	24V	48V	48V		
Nominal Voltage			220VAC				
Voltage Range	154-265VAC (AC Model);185-264VAC <u>+</u> 3V(UPS Model)						
Frequency			50-60HZ Auto sensi	ng			
Power Factor			0.8				
Rated Power	1200W	1600W	2400W	6000W	10000W		
Voltage			220VAC				
Frequency			50/60HZ				
Waveform			Pure Sine Wave				
Transfer Time (AC to DC)			<8ms				
Transfer Time (DC to AC)			<8ms				
Output Voltage Regulation			<u>+</u> 10%				
Bypass Mode			Yes				
Saver Mode			Yes				
Efficiency			>98%				
Input Protection			Circuit Breaker				
Output Protection			Circuit Breaker				
Battery Type		AGM-Dee	ep Cycle ,Gel/Turbular/L	ithium Battery			
Charging Current	20A	24A	48A	52A	80A		
Low Level Disconnect (Selectable)	10V or 10.5V	20V o	r 21V	40V or 42V	40V or 42V		
Protections							
LCD Indicator Status	AC input voltag	e/input frequency,	Output Voltage/Freque	ency, Battery voltage,	Load current etc.		
LED Indicator Status		AC Line In:Greer	n/Inverter:Green/Chargii	ng :Yellow/Alarm :Red			
Low Battery Alarm		Αι	udible alarm-5 seconds I	peeping			
Overload Alarm		Au	dible alarm- continuous	beeping			
Fault		Au	dible alarm- continuous	beeping			
Temperature	0-40℃						
Humidity			—10°C~90°C Non conde	nsing			
Accoustic Noise (db)			>55dB				
Size L*W*H(mm)	490*312*125MM	465*	310*135MM	545*40	00*200MM		
Carton size L*W*H(mm)	430*330*173MM	555*:	375*198MM	660*46	60*270MM		
Weight (kg)	10.85	14.98	17.87	38.21	42		



LOW FREQUENCY INVERTERS

Amuma Plus Hybrid Series





Pure Sine Wave



Auto restart when Ac is recovering



Support Lithium Battery with Auto wake up



Built-in Transformer



WiFi monitoring externally



Power Saving Mode

Capacity (VA)	GAP-1512	GAPS-2012	GAPS-2024	GAPS-3024	GAPS-5048	GAPS-10048		
Input Voltage(DC)	12V	12V	24V	24V	48V	48V		
Nominal Voltage	220VAC							
Voltage Range		154-26	5VAC (AC Model);185-264	VAC <u>+</u> 3V(UPS Model)				
Frequency			50-60HZ Auto se	nsing				
Power Factor			0.8					
Rated Power	800W	4000W	8000W					
Voltage			220VAC					
Frequency			50/60HZ					
Waveform			Pure Sine Wav	/e				
Transfer Time (AC to DC)			<8ms					
Transfer Time (DC to AC)			<8ms					
Output Voltage Regulation			<u>+</u> 10%					
Bypass Mode			Yes					
Saver Mode			Yes					
Efficiency			>98%					
Input Protection			Circuit Breake	er				
Output Protection			Circuit Breake	er				
Battery Type		AGM-Deep Cycle ,Gel/Turbular/Lithium Battery						
Charging Current	20A	48A	32A	48A	30A	64A		
Low Level Disconnect (Selectable)	10V or	10.5V	20V or 21V		40V or 42V	40V or 42V		
PWM (Optional) controller Voltage	15VDC-5	50VDC		30VDC-105VDC				
MPPT(Optional) controller Voltage		15VDC-150V	DC for 12V ; 30-150VDC	for 24V; 60-150V for 48V				
Maximum PV array power	720	W	1600W		3200W	6000W		
Maximum PV array open circuit voltage	PWM:5	OVDC	PWM:105VDC		MPPT:150VDC	MPPT:150VDC		
Maximum solar charge current	60.	A		60A		120A		
Protections	Over	load, over temp, over	charging, battery low, batt	ery reverse connect, high AC	voltage etc.	•		
LCD Indicator Status	AC inp	out voltage/input frequ	uency, Output Voltage/Free	quency, Battery voltage, Loac	I current etc.			
LED Indicator Status		AC Line In:	Green/Inverter:Green/Cha	rging :Yellow/Alarm :Red				
Low Battery Alarm			Audible alarm-5 second	ds beeping				
Overload Alarm			Audible alarm- continuo	ous beeping				
Fault		Audible alarm- continuous beeping						
Temperature			0-40°C					
Humidity			−10°C~90°C Non con	densing				
Accoustic Noise (db)			>55dB					
Size L*W*H(mm)	490*312*125MM 465*310*135MM 545*400*200I				545*400*200MN			
Carton size L*W*H(mm)	430*330*173MM		555*375*198M	М		660*460*270MN		
Weight (kg)	10.85	14.5	14.98	19.5	23.33	40		



LOW FREQUENCY INVERTERS

Ricco Plus Series



Pure Sine Wave



Strong protection on Surge & thunder



Power Saving Mode



Lithium Auto Wake-up Function



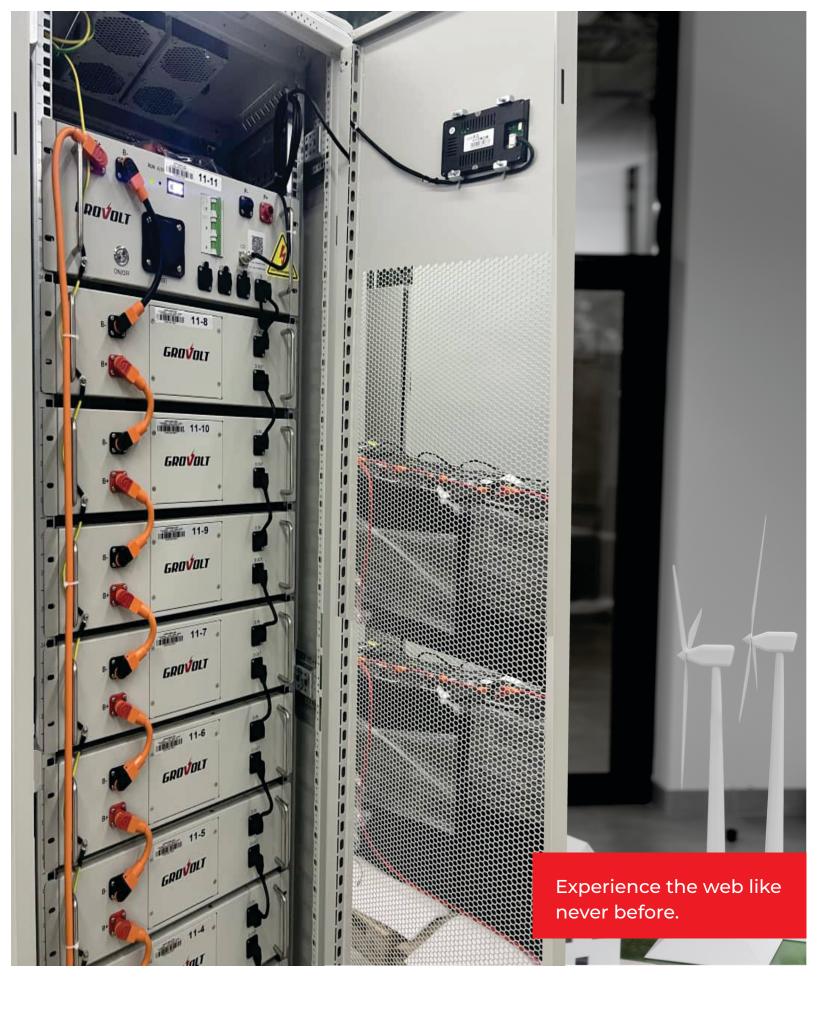
Smart battery charger design



Auto Restart Function



Capacity (VA)	RP-2500	RP-3500	RP-3548	RP-5024	RP-5000	RP-8000	RP-10000
Rated Power	2000W	2800W	2800W	4000W	4000W	6400W	8000W
Voltage(DC)	24V	24V	48V	24V	48V	48V	48V
Nominal Voltage							
Voltage Range			154-265VAC	;185-264VAC (selectable)		
Frequency			50-6	OHZ Auto sens	ing		
Power Factor				0.8			
Voltage				220VAC			
Frequency				50/60HZ			
Waveform			Р	ure Sine Wave			
Transfer Time (AC to DC)				<8ms			
Transfer Time (DC to AC)				<8ms			
Output Voltage Regulation				<u>+</u> 10%			
Bypass Mode				Yes			
Saver Mode	Yes						
Efficiency	>98%						
Input Protection		Circuit Breaker					
Output Protection			C	Circuit Breaker			
Battery Type		L	ITHIUM/VRLA /	GEL /DEEP CY	CLE / FLOOD		
Charging Current	25A	35A	20A	53A	30A	44A	55A
Low Level Disconnect (Selectable)	20V -22V	20V -22V	40V-44V	20V -22V	40V-44V	40V-44V	40V-44V
LCD Indicator Status	AC input volt	age/input freq	uency, Output '	Voltage/Freque	ency, Battery v	oltage, Load cu	irrent etc.
LED Indicator Status		AC Line I	n:Green/Invert	er:Red/Chargin	g :Yellow/Alarn	n :Red	
Low Battery Alarm			Audible al	arm-5 seconds	beeping		
Overload Alarm	Audible alarm- continuous beeping						
Fault	Audible alarm- continuous beeping						
Temperature	0-60C						
Humidity			-10C~9	OC Non conde	nsing		
Accoustic Noise (db)	>55dB						
Size L*W*H(mm)		470mm	n*335mm*210m	ım		720mm*335m	nm*210mm
Weight (kg)	18.5	20	20	22	22	30	33







LITHIUM BATTERIES

5kwh-51.2V, 11kwh-51.2V, 15kwh-51.2KV



With detection of Voltage Current & Temp. Detection



With weak power switch, sleep and wake function.



With short-circuit & anti-reverse connection protection



With built-in automatic fire extinguishing device, the product is safer.



Wide Working Temperature Range



Using high stability of lithium iron phosphate batteries, safe and reliable



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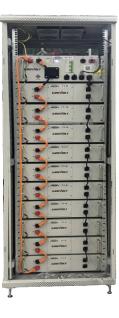
Model	GLPB-5051	GLPB-1151	GLPB-1551	
Usable Capacity	5120WH	11776WH	15360WH	
Rated Voltage	51.2V	51.2V	51.2V	
Cells Voltage	3.2V	3.2V	3.2V	
Cells Quantity	16 PCS	16 PCS	16 PCS	
Voltage Range	43.2-59.2	43.2-59.2	43.2-59.2	
Max Continuous Charge Current	100A	100A	150A	
Max Continuous Discharge Current	100A	100A	200A	
Recommend Output Power	2500W	5000W	7650W	
Display Screen LED Display DOD ≥95%	LED Display	LED Display	LED Display	
	≥95%	<u>≥</u> 95%	≥95%	
Modules Connection	1-16 in parallel	1-16 in parallel	1-16 in parallel	
Communication	485/CAN	485/CAN	485/CAN	
Ingress Protection	lp21	lp21	lp21	
Cycle Life	<u>></u> 6000	<u>≥</u> 6000	<u>≥</u> 6000	
Working Temp. Range	Discharge:-10°Cto+50°C	, Charge:+0°Cto+60°C		
Product Dimension (MM)	720*480*170	785*510*293	970*600*250	
Package Dimension (MM)	820*580*311	860*580*470	1070*620*430	
Product N.W.(kg)	55.18kg	81.85kg	128.85kg	
Product G.W.(kg)	62.82kg	90.5kg	149kg	
Max.Charging Voltage	58.4V	58.4V	58.4V	
Floating charging Voltage	57.6V	57.6V	57.6V	



LITHIUM BATTERIES

High Voltage Battery 50KWH /350V to 512V







Convenient

Quick installation, standard 19-inch embedded designmodule is comfortable for installation and maintenance.



Safe and Reliable

Cathode material is made from LiFePO4 with safety performance and long cycle life, The module has self-discharge, up to 6 months without charging it on shelf, no memory effect, excellent performance of shallow charge and discharge.



Eco-Friendly

The whole module is non-toxic, non-polluting and environmentally friendly.



Wide Temperature

Working temperature range is from -20 C to 55 C, with excellent discharge performance and cycle life.

Cell chemistry	LIFePO4	
Module energy(kWh)	5.12	
Module nominal voltage(V)	5.12	
Module capacity(Ah)	100	
Cell model/ Configuration	3.2V 100Ah /160S1 P	
System nominal voltage(V)	512	
System operating voltage(V)	432 to 560	
System energy(kWh)	51.2	
Charge Discharge Current(A) {Recommend}	50	
Charge Discharge Current(A) {Max}	100	
Working temperature	Charge: 0°C-55°C ; Discharge: -20°C~55C	
Communication port	CAN2.0/RS485/WIFI	
Hurnidity	5-85%RH Humidity	
Altitude	<2000 m	
IP rating of enclosure	lp20	
Dimension (W*D*H,mm)	538*492*1691	
Weight approximate(kg)	465	
Installation location	Rack Mounting	
Storage temperature°C	O°C~35°C	
Recommend depth of discharge	90%	
Cycle life	25+2°C, 0.5C/0.5C, EOL70%>6000	



TUBULAR BATTERIES

220AH / 12V





Up to 66kg



Up to 18 months Warranty



Cycle life span (80% DOD) 1600



Low water Loss



Low Self Discharge



Consistent Backup throughout Life

Model	Nominal Voltage	Rated Capacity 10Hr @27°C (Ah)	Length (+/-3mm)	Width (+/-3mm)	Height (+/-3mm)	Battery Weight (Kg) (+/-3%)	Terminal Type
(12 v 220 AH)	12	220	495	190	430	66 (N.W 64.5)	L

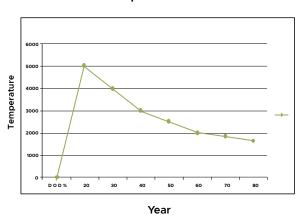
Electrical Parameters & Charging Profile Battery Specified Capacity Test @ 27° C

Model	C 10 @10.5V	C 5 @10.5V	C 3 @10.5V	C 1 @10.5V
(12 V220AH)	220	183	158	110
		AH & WH Efficiency		
Ah Efficiency	>9	0% Wh Efficier	ncy	>75%

Expected Life

Specific Gravity & Self Discharge w.r.t Temperature

	Add	Substract
CHARGE TEMPERATURE	0.005 volt per cell for every 1°C below 25°C	0.005 volt per cell for every 1°C below 25°C
COMPENSATION	0.0028 volt per cell for every 1°F below 77°F	0.0028 volt per cell for every 1°F below 77°F
OPERATIONAL DATA	-4°F to 131°F (-20°C to +55°C) At temperature below 32°F (0°C) maintain a state of charge greater than 60%.	As per discharge Graph



Charging Instructions

Charging Voltage Settings (at 77° F/25°C)						
System Voltage	12V	48V				
Maximum Charge Current	20 Apm					
Maximum Charging Current	4 Apm					
Absorption Voltage	14.4	28.8	57.6			
Float Voltage	13.6	27.2	54.4			
Equalization Voltage	16	32	64			

Do not install or charge batteries in a sealer or non-ventilated compartment. Constant under or overcharging will damage the battery and shorten its battery as with any battery.



MPPT CHARGE CONTROLLER

40A, 60A, 80A, 100A, 120A.





12V/24V/48V adaptive



Wall-Mountable Design



Adjustable parameters press button



High tracking efficiency & high conversion efficiency



LED Display



With input/output reverse protection function

Mod	lel	МРРТ40А	мррт60А	мррт8	OA MF	PPT100A	MPPT100A-96V	MPPT100A-96V		
System voltage		12V/24V/48V(Adaptive)				96V				
Nominal	Nominal current		60A	80A		100A	80A	100A		
Charging	ı mode	MPPT maximum power point tracking								
Applicable battery type		Sealed lead acid battery, GEL lead acid battery, open lead acid battery (can also customize parameters for other types of battery charging)								
Charging method		Three stages: constant current, constant voltage, floating charge								
PV input maximum open circuit voltage (VOC)		DC150V					DC250V			
Starting	time	≤10s								
Dynamic respons	e recovery time	≤500us								
Static power		≤4W ≤8W					≤8W			
MPPT Trackin	g efficiency	≥99.5%								
Overall efficiency		≥98%								
	12V		9~16V							
System	24V	18 ~ 32V 27 ~ 48V								
identified voltage	36V						72 ~	128V		
voltage	48V	36 ~ 64V								
	12V			20 ~ 15	OV					
	24V	36~150V					128 ~ 250V			
Photovoltaic input voltage	36V	48 ~ 150V								
input voitage	48V	64 ~ 150V								
	12V	540W	800W	1040W	, l	300W				
	24V	1080W	1600W	2080W	/ 2	2600W	,			
Solar panel	36V	1620W	2400W	3120W		3900W				
rated input power	48V	2160W	3200W	4160W	' 5	5200W				
	96V	/					8320W	10400W		
Load vo	oltage	Same as the battery voltage								
Nominal load current		40A	60A	80A		100A	80A	100A		
Load contro	ol method	Normally on&off mode								
Load undervolta	age protection	10.5V*N (N stands for batteries number) Parameters can be adjustable								
Cooli	ing	Air Cooling								
Displ	ay	HD LCD backlight display								
Protec		Input and output over&low-voltage protection, input and output anti-reverse protection, over-temperature protection, load over-current protection								
Temperature c	ompensation cient	3mV/°C/2V								
Working temperature		—20°C ~ +50°C								
Storage temperature		-40°C~+70°C								
Accoustic Noise(db)		≤50dB								
Humidity		0∼90%RH								
Working altitude		0~3000M								
Communication Type		Rs485								
Suggested wire	specification	7AWG/10mm²	6AWG/16mm ² 4	AWG/25mm²	2AWG/35mm²	4AWG/25mm²	2AWG/35mm²			
Dimension	, L×W×H	219*2	60*110	275*348*	109	275*348*10	09			
Net Weig	ht (KG)	2.6KG		4.5KG		4.5KG	4.5KG			





GSL-ML Series (200W)





Aluminum



Philips SMD3030 96pcs 160lm/W



Intelligent controller



768WH (25.6V30AH)



36V/200W



625*285*90mm

GSL-TA18 Series (60W-120W-140W)





Aluminum



Intelligent controller



COB 2PCS ,160lm/W PhilipsSMD3030 144PCS,160lm/W PhilipsSMD3030 216PCS ,160lm/W



18V /60W 18V /120W 18V /140W



12.8V 24AH 12.8V 45AH 12.8V 60AH



910*350*50mm 1290*500*50mm 1559*500*50mm



GSL-T6 Series (60W-70W-90W)





Aluminum



Intelligent controller



6V/60W 6V/70W 6V/90W



3.2V 80AH 3.2V 90AH 6.4V 60AH



1100*400*50mm 1250*400*50mm 1450*400*50mm



PhilipsSMD3030 96pcs 160lm/W PhilipsSMD3030 144pcs 160lm/W PhilipsSMD3030 192pcs 160lmW

GSL-TR Series (30W-45W-60W)





Aluminum



Intelligent controller



5V /30W 5V /45W 9V /60W



153WH(3.2V48AH) 192WH(3.2V60AH) 256WH)3.2V80AH)



710*250*125mm 1030*250*125mm 1330*250*125mm



PhilipsSMD5050 56pcs 200lm/W PhilipsSMD5050 84pcs 200lm/W PhilipsSMD5050 112pcs 200lmW



GSL-PRL Series (50W-60W-80W-90W)





Aluminum



Intelligent controller



6V/60W 6V/70W 6V/90W



256WH(3.2V 80AH), 384WH(3.2V120AH) 480WH(3.2V 150AH)



1200*382*65mm 1400*382*65mm 1520*382*65mm



PhilipsSMD5050 72pcs 180lm/W PhilipsSMD5050 84pcs 180lm/W PhilipsSMD5050 90pcs 180lm/W

GSL-T Series (35W-45W-60W-80-90W-120W)





Aluminum



Intelligent controller



5V 35W, 5V 45W, 9V 60W, 18V 60W 18V 80W, 18V 90W, 18V 120W



740*300*125mm, 885*300*125mm, 1130*300*125mm, 900*355*125mm, 1250*355*125mm, 978*410*50mm, 1450*410*50mm



PhilipsSMD5050 56pcs 200lm/W PhilipsSMD5050 84pcs 200lm/W PhilipsSMD5050 112pcs 200lm/W



GST CF5-15W Hybrid





Aluminum



Philips SMD505028pcs, 200lm/W



Intelligent controller



3.2V 15000MAH



5V/15W



Warm white/ Cool white

GSL-MTR Series (100W -150W)





Aluminum



Philips SMD 5050 72pcs 200lm/W



Intelligent controller



384WH 512WH



10V/100W 10V/150W



Warm white/ Cool white



Solis stands as a global leader in the solar energy industry, excelling in the manufacturing and development of cutting-edge integrated solar solutions. Founded with a visionary goal to make renewable energy universally accessible, Solis emphasizes quality and innovation in producing highly efficient products. Over the years, the company has built a reputation for advanced technologies and robust systems that cater to diverse sectors, ranging from residential to large-scale industrial projects.



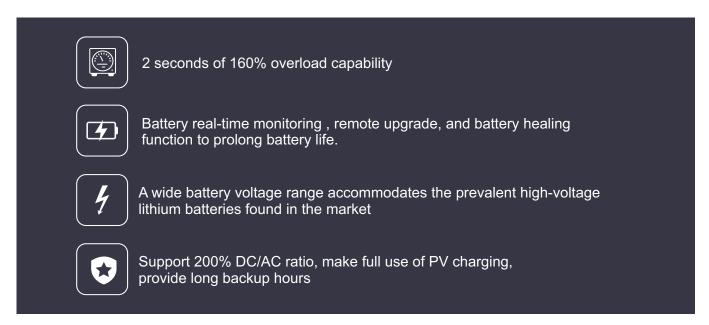
Renowned for their reliability, ease of installation, and low-maintenance, Solis products have become the preferred choice for businesses and individuals committed to clean energy. Moreover, Solis takes pride in offering expert consultations and exceptional after-sales support, reinforcing its status as a trusted partner in the global transition toward a sustainable, environmentally-friendly future.



HIGH VOLTAGE INVERTERS

50KW/150V to 800V IP66 (S6-EH3P50K-H) 29.9K/30K/40K/50K







DATASHEET

S6-EH3P(29.9-50)K-H

Models	29.9K	30K	40K	50K		
nput DC (PV side)						
Recommended max. PV array size	59.8 kW	60 kW	80 kW	100 kW		
Max. usable PV input power	59.8 kW	60 kW	80 kW	96 kW		
Max. input voltage			00 V			
Rated voltage			00 V			
Start-up voltage			30 V			
MPPT voltage range			850 V			
lax. input current	3*40) A	4*40	A		
Max. short circuit current	3*60) A	4*60	A		
MPPT number/Max. input strings number	3/6	5	4/8			
Battery	,					
Battery type		Li.	ion			
Battery voltage range	00.4.1.11		800 V			
Max. charge / discharge power	32.1 kW	33 kW	44 kW	55 kW		
Max. charge / discharge current			A*2 (1)			
No. of battery inputs			2			
Max. charge / discharge power of each input	32.1 kW	33 kW	35 kW	35 kW		
Communication		CAN/	RS485			
Output AC (Grid side)		6,114)	113 103			
	20.0 LW	20 1144	40 1344	EQ LIM		
Rated output power	29.9 kW	30 kW	40 kW	50 kW		
Max. apparent output power	29.9 kVA	30 kVA	40 kVA	50 kVA		
Rated grid voltage		3/N/PE, 220 V / 380 V	; 3/N/PE, 230 V / 400 V			
Rated grid frequency		50 Hz	/ 60 Hz			
Rated grid output current	45.4 A / 43.2 A		60.8 A / 57.7 A	76 A / 72.2 A		
Max. output current	45.4 A / 43.2 A	45.6 A / 43.3 A	60.8 A / 57.7 A	76 A / 72.2 A		
Power factor			ng - 0.8 lagging)	. 011/12.211		
THDi		<	3%			
nput AC (Grid side)						
Max. AC passthrough current	90.8 A / 86.4 A		121.6 A / 115.4 A	152 A / 144.4 A		
Rated input voltage		3/N/PE, 220 V / 380 V	; 3/N/PE, 230 V / 400 V			
Rated input frequency		50 Hz	/ 60 Hz			
nput Generator						
Max. input power	29.9 kW	30 kW	40 kW	50 kW		
Rated input current	45.4 A / 43.2 A	45.6 A / 43.3 A	60.8 A / 57.7 A	76 A / 72.2 A		
Rated input voltage			; 3/N/PE, 230 V / 400 V			
Rated input frequency		50 Hz	/ 60 Hz			
Output AC (Back-up)						
Rated output power	29.9 kW	30 kW	40 kW	50 kW		
Max. apparent output power		1.6 times of ra	ated nower 2 s			
Back-up switch time			0 ms			
Rated output voltage			; 3/N/PE, 230 V / 400 V			
Rated frequency			/ 60 Hz			
Rated output current	45.4 A / 43.2 A	45.6 A / 43.3 A	60.8 A / 57.7 A	76 A / 72.2 A		
HDv (@linear load)		<	2%			
Efficiency						
Max. efficiency		97	.8%			
EU efficiency			.4%			
BAT charged by PV Max. efficiency			.5%			
BAT charged/discharged to AC Max. efficiency		97	.5%			
Protection						
Anti-islanding protection		Y	es			
Output over current protection		Υ	es			
Short circuit protection			es			
ntegrated DC switch						
Ü			es			
OC reverse-polarity protection			es /ACT			
Surge protection			/ AC Type II			
ntegrated AFCI (DC arc-fault circuit protection)		Υ	es ⁽²⁾			
General Data						
Dimensions (W*H*D)		530*880	*290 mm			
Veight			kg			
opology			rmerless			
Self-consumption (night)			5 W			
1 0 /						
Operating ambient temperature range			+60°C			
Relative humidity			95%			
ngress protection		IF	266			
Cooling concept		Intelligent redur	ndant fan-cooling			
Max, operation altitude			00 m			
Grid connection standard	NTS 631/RD 1699/RD	4105 / VDE V 0124, EN 50549-2 244 / UNE 206006 / UNE 20600	L/EN 50549-10, VDE 0126 / UTE C 1 07-1, CEI 0-21, C10/11, NRS 097-2-1	l, TOR, EIFS 2018.2,		
Safety/EMC standard		EC 60068, IEC 61683, EN 50530,	MEA, PEA,PORTARIA Nº 140, DE 22 N 61000-6-2/-4, EN 55011			
Features		,, 2, 1, 2, 100/1	, .,			
		14040	annastian alu-			
PV connection			nnection plug			
Battery connection			connector			
AC connection		Termin	al Block			
Display		LCD + Blue	tooth + APP			
	CAN, RS485, Ethernet, Optional: Wi-Fi, Cellular, LAN					



HYBRID INVERTERS 1P

6KW/48V, 8KW/48V with screen lp66 (S6-EH1P6K-L-PLUS) 3K/3.6K/4.6K/5K/6K/8K





Compatible with generator, extend backup duration during grid power outage



Ensures excellent power supply stability, keeping the load unaffected by weak grid or generator supply fluctuations



Multiple inverters can work together to form microgrid



Automatic switchover time is <4ms, providing seamless transitions from grid connected to backup



DATASHEET

S6-EH1P(3-8)K-L-PLUS

Models	3K	3.6K	4.6K	5K	6K	8K		
Input DC (PV side)								
Recommended max. PV array size	6 kW	7.2 kW	9.2 kW	10 kW	12 kW	16 kW		
Max. usable PV input power	4.8 kW	5.76 kW	7.36 kW	8 kW	9.6 kW	12.8 kW		
Max. input voltage	500 V							
Rated voltage	330 V							
Start-up voltage	90 V							
MPPT voltage range	90-435 V							
Max. input current	16 A / 16 A							
Max. short circuit current	20 A / 20 A							
MPPT number/Max. input strings number	2/2 2/4							
Battery								
Battery type			Li-ion / L	ead-acid				
Battery voltage range		40-60 V						
Max. charge / discharge power	3 kW	3.6 kW	4.6 kW	5 kW	6 kW	8 kW		
Max. charge / discharge current	70 A	80 A	105 A	112 A	135 A	190 A		
Communication				RS485				
Output AC (Grid side)			5/111/					
Rated output power	3 kW	3.6 kW	4.6 kW	5 kW	6 kW	8 kW		
Max. apparent output power	3 kVA	3.6 kVA	4.6 kVA	5 kVA	6 kVA	8 kVA		
	3 KVM	3.0 KVA		I/PE	UKVA	OKVA		
Operation phase								
Rated grid voltage		220 V / 230 V						
Rated grid frequency	4074/4044	40 44 (45 7 4		/ 60 Hz	07.0 4 (00.4 4	0011/0101		
Rated grid output current	13.7 A / 13.1 A	16.4 A / 15.7 A	20.9 A / 20 A	22.8 A / 21.8 A	27.3 A / 26.1 A	36.4 A / 34.8 A		
Max. output current	13.7 A / 13.1 A	16.4 A / 15.7 A	20.9 A / 20 A	22.8 A / 21.8 A	27.3 A / 26.1 A	36.4 A / 34.8 A		
Power factor				ng - 0.8 lagging)				
THDi	<2%							
Input AC (Grid side)								
Input voltage range			187-	253 V				
Max. input current	21 A	25 A	29 A	32 A	40 A	50 A		
Frequency range			45-55 Hz	/ 55-65 Hz				
Output AC (Back-up)								
Rated output power	3 kW	3.6 kW	4.6 kW	5 kW	6 kW	8 kW		
Max. apparent output power			2 times of rate	ed power, 10 s				
Back-up switch time			<4	ms				
Rated output voltage			1/N/PE, 22	20 V / 230 V				
Rated frequency				/ 60 Hz				
Rated output current	13.7 A / 13.1 A	16.4 A / 15.7 A	20.9 A / 20 A	22.8 A / 21.8 A	27.3 A / 26.1 A	36.4 A / 34.8 A		
Max. AC Passthrough current	35 A	35 A	40 A	40 A	40 A	50 A		
THDv (@linear load)				2%				
Efficiency								
Max. efficiency			96.	2%				
EU efficiency								
BAT charged by PV/AC Max. efficiency	94.7% 95.3%/94.5%							
BAT discharged to AC Max. efficiency	95.3%)94.5%							
Protection			J-1.	370				
Ground fault monitoring			V	es				
DC reverse-polarity protection	Yes							
Integrated AFCI (DC arc-fault circuit protection)	Yes ⁽¹⁾ I / II (PV and BAT), III (MAINS and BACKUP and GEN)							
Protection class/Over voltage category		1/11	(PV and BAT), III (MAII	NS and BACKUP and (GEN)			
General Data								
Dimensions (W*H*D)				*227 mm				
Weight			21.6 kg			22.2 kg		
Topology				lation (for battery)				
Operating ambient temperature range			-40 ~	+60°C				
Ingress protection			IP	66				
Cooling concept		Natural c	onvection		Intelligent redu	ndant fan-cooling		
Max. operation altitude			300	0 m				
Grid connection standard		NRS 097-2-1, IEC	62116, IEC 61727, IEC	60068, IEC 61683, EN	I 50530, MEA, PEA			
Safety/EMC standard			IEC/EN 62109-1/-:	2, EN 61000-6-2/-3				
Features								
		M	C4 plug (PV port) / Te	rminal Block (BAT po	rt)			
DC connection		191						
DC connection AC connection		141		al Block				
		141	Termin					



ON-GRID INVERTERS 1P

110KW IP66 (S5-GC110K 80K/100K-HV/110K-BHV







DATASHEET

S5-GC(80-110)K

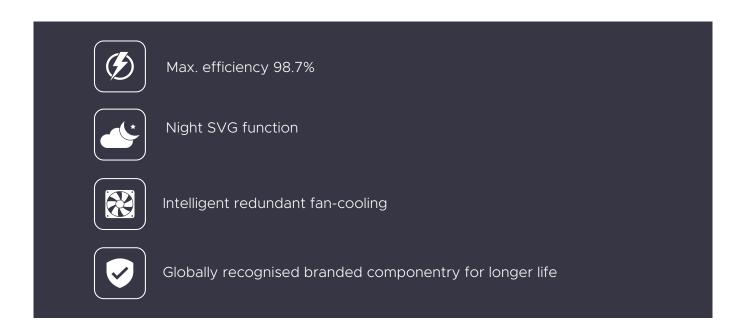
Models	80K	100K-HV	110K-BHV			
Input DC						
Max. input voltage		1100 V				
Rated voltage	600 V	72	20 V			
Start-up voltage		195 V				
MPPT voltage range		180-1000 V				
Max. input current	9*32 A	10*	*32 A			
Max. short circuit current	9*40 A 10*40 A					
MPPT number/Max. input strings number	9/18 10/20					
Output AC						
Rated output power	80 kW	100 kW	110 kW			
Max. apparent output power	88 kVA	110 kVA	121 kVA			
Max. output power	88 kW	110 kW	121 kW			
Rated grid voltage	3/N/PE, 220 V / 380 V, 230 V / 400 V	3/PE, 480 V	3/PE, 540 V			
Rated grid frequency		50 Hz / 60 Hz				
Rated grid output current	121.6 A / 115.5 A	120.3 A	117.6 A			
Max. output current	133.7 A	132.3 A	129.4 A			
Power factor		>0.99 (0.8 leading - 0.8 lagging)				
THDi		<3%				
Efficiency		370				
Max. efficiency	98.7%	ag	3.8%			
EU efficiency	98.3%		3.5%			
Protection	36.370	30				
DC reverse-polarity protection		Yes				
Short circuit protection		Yes				
Output over current protection						
Surge protection	Yes DC Type II / AC Type II					
Grid monitoring	DC Type II / AC Type II					
Anti-islanding protection	Yes					
Temperature protection	Yes					
Strings monitoring	Yes					
I/V Curve scanning	Yes					
Integrated AFCI (DC arc-fault circuit protection)	Yes Yes (1)					
Integrated PID recovery						
Integrated DC switch	Optional					
Integrated AC switch	Yes					
General Data		Optional				
Dimensions (W*H*D)		1050*567*214.5 mm (with AC switch)				
Weight	1050*567*314.5 mm (with AC switch)					
	85 kg					
Topology Self-consumption (night)	Transformerless					
	<2 W					
Operating ambient temperature range	-30 ~ +60°C					
Relative humidity	0-100%					
Ingress protection	IP66					
Cooling concept Max. operation altitude	Intelligent redundant fan-cooling					
Grid connection standard	4000 m G98 or G99, VDE-AR-N 4105 / VDE-AR-N 4110 / VDE V 0124, EN 50549-1, VDE 0126 / UTE C 15 / VFR:2019,					
Safety/EMC standard	CEI 0-21, C10/11, NRS 097-2-1, TOR, EIFS 2018.2, IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530 IEC/EN 62109-1/-2, IEC/EN 61000-6-2/-4					
Features		120, 214 02100 1/ 2, 120, 214 01000-0-2/-4				
DC connection	MC4 connector					
AC connection	OT terminal (max. 185 mm²)					
Display	LCD					
0.0000	RS485, Optional: Wi-Fi, GPRS, PLC					



ON-GRID INVERTERS 1P

50KW IP66 (S5-GC50K) 50K/60K







DATASHEET

S5-GC(50-60)K

Models	50K	60K				
Input DC						
Max. input voltage	1100 V					
Rated voltage	60	0 V				
Start-up voltage	19	5 V				
MPPT voltage range	180-1000 V					
Max. input current	5*32 A	6*32 A				
Max. short circuit current	5*40 A 6*40 A					
MPPT number/Max. input strings number	5/10	6/12				
Output AC						
Rated output power	50 kW	60 kW				
Max. apparent output power	55 kVA	66 kVA				
Max. output power	55 kW	66 kW				
Rated grid voltage	3/N/PE, 220 V / 3	80 V, 230 V / 400 V				
Rated grid frequency	50 Hz ,	/ 60 Hz				
Rated grid output current	76.0 A / 72.2 A	91.2 A / 86.6 A				
Max. output current	83.6 A	100.3 A				
Power factor	>0.99 (0.8 leadii	ng - 0.8 lagging)				
THDi		%				
Efficiency						
Max. efficiency	98.7%					
EU efficiency	98.3%					
Protection						
DC reverse-polarity protection	Ye	es				
Short circuit protection	Yo					
Output over current protection	Yes					
Surge protection						
Grid monitoring	DC Type II / AC Type II Yes					
Anti-islanding protection	Yes					
Temperature protection	Yes					
Strings monitoring	Yes					
I/V Curve scanning	Yes					
Integrated AFCI 2.0	Optional					
Integrated PID recovery	Optional ⁽²⁾					
Integrated DC switch	Yes					
General Data						
Dimensions (W*H*D)	691*578	*338 mm				
Weight	53.7 kg					
Topology	Transformerless					
Self-consumption (night)	<1 W					
Operating ambient temperature range	-25 ~ +60°C					
Relative humidity	0-100%					
Ingress protection	IP66					
Noise emission (typical)	<55 dB(A)					
Cooling concept	Intelligent redundant fan-cooling					
Max. operation altitude	intelligent redundant fan-cooling 4000 m					
Grid connection standard	G99, VDE-AR-N 4105 / VDE V 0124, EN 50549-1, VDE 0126 / UTE C 15 / VFR:2019, RD 1699 / RD 244 / UNE 206006 / UNE 206007-1, CEI 0-21, C10/11, NRS 097-2-1, EIFS 2018.2, IEC 62116, IEC 61727, IEC60068, IEC 61683, EN 50530					
Safety/EMC standard	IEC 62109-1/-2, IEC62116 & IEC 61000-6-1/-2/-3/-4					
Features						
DC connection	MC4 connector					
AC connection	OT terminal (max. 70 mm²)					
Display	LCD, Capacitive touch buttons					
Communication	RS485, USB, Optional: Wi-Fi, GPRS					
2000	10 100, 000, 0 palottat. 11 1 1, 01 10					



Explore the extensive range of renewable energy projects by Onyxline, a leader in delivering advanced solar solutions designed to meet the highest industry standards. Backed by robust warranties of up to ten years and comprehensive nationwide service across Nigeria, ensuring that your investment in solar energy is both secure and profitable. With a strong focus on quality, reliability, and customer satisfaction, Onyxline is dedicated to providing innovative solutions that offer long-term savings and contribute to a sustainable future. Trust us to power your home or business with cutting-edge technology and unparalleled support, making your transition to renewable energy seamless and worry-free.



Home and Residential Power Solutions

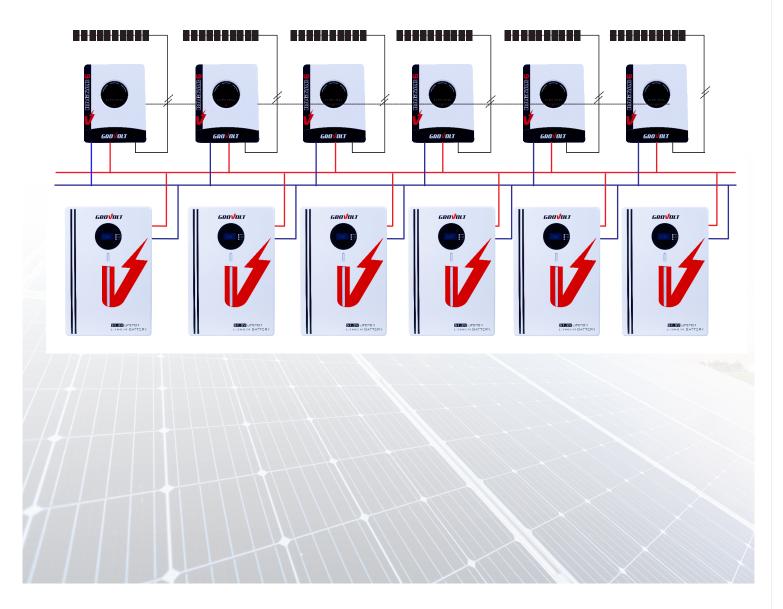
Backup storage - Grid - Solar

Design and installation of home and residential power solutions with consultants and specialists for home and residential projects with back up time depends on the client's needs.

Design and installation with consultants and specialists for home and residential projects with back up time depends on the client's needs. Residential systems are typically compact, designed to maximize energy production within a limited space without being overly intrusive. An average residential solar system might range from 6 to 100 kW, depending on the household's energy needs and roof space.

The diagram is a simple system that designed for some projects needs single phase systems and three phase systems with different capacities depending on the site inspections.

Single Line Diagram hybrid 36KW up to 72kw with storage system 60kwh up to 160wh



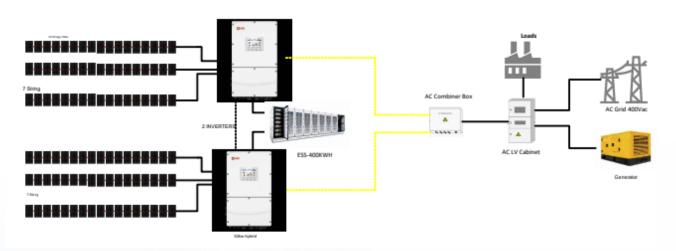
Hybrid Power Solution

Backup storage - Grid - Solar

Residential & commercial Design and installation of a hybrid power solution with consultants and specialists for on hybrid projects with back up time depends on the clients needs.

An explanatory diagram for a project of up to 100s watts with a monitoring and control system to achieve the optimal work between the solar , battery and utility or generators then a hybrid solar system has many benefits cost-savingn energy independence.

Single Line Diagram Hybrid System 100KW - 400kwh



By remaining connected to the grid, you can get power if your panels aren't currently getting sunlight and the energy has been pulled from your battery, it is fitted with company uses, offices ,banks and education buildings, that clear the cost is higher than on grid system and return on investment, not exceeding 4-5 years and with a guarantee of no less than 20 years of the system and its efficiency

Off-Grid Solar Solution

Backup Storage - Solar

Design and installation of off grid solar solution with consultants and specialists for on off grid projects with backup time 24/7.

An explanatory diagram for a project of up to 100s watts with a monitoring and control system to achieve the optimal work between the solar and batteries. Mini-grids are an ideal solution for low- and medium-density areas, providing electricity to rural communities and businesses more economically than extending a centralized grid. These systems are particularly valuable in connecting millions of people worldwide who currently lack access to electricity.

A mini-grid designed for up to 100 watts uses a monitoring and control system to optimize the interaction between solar panels and batteries, ensuring efficient energy use.



The explanatory diagram shows how the system balances solar power and battery storage, maximizing reliability and minimizing costs. Although mini-grids have a higher upfront cost compared to on-grid and hybrid systems, the return on investment is generally achieved within 5-6 years. With a 20-year guarantee on the system's efficiency, this investment is both reliable and long-lasting. These systems are particularly beneficial in areas where grid extension is impractical, offering a sustainable solution for energy independence and economic growth.

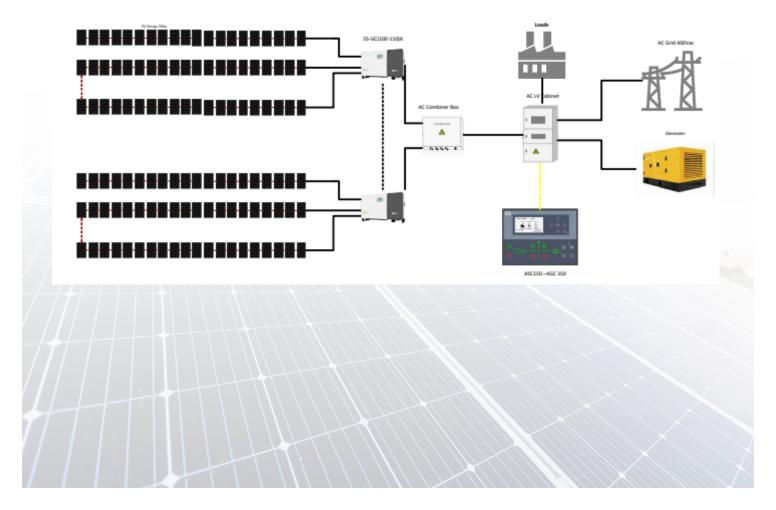
On-Grid Solar Solution

Industrial & Commercial Solutions

Design and installation of an on grid solution with consultants and specialists for on grid-grid tie projects with the utility with or without exporting to it.

An explanatory diagram for a project of up to megawatts with a control system to achieve the optimal work between the network for the utility, generators and the solar system while maintaining the work of the generator at its lowest rate to maintain its shelf life and reduce consumption from the utility by 100% during the anytime hours and 70% of the consumption of generators in the case Its operation in emergency cases, and in this case the benefit rate is more than 40% in work situations 24 hours, with a rate of more than 90% in work situations during daylight hours only, at lower costs and return on investment, not exceeding 3 years and with a guarantee of no less than 20 years of the system and its efficiency.

Single Line Diagram Ongrid System 1000KW





Tiger Brand is a leading force in the power solutions industry, offering a diverse array of top-tier products designed to address a wide spectrum of energy needs. Their portfolio includes reliable dry cell batteries, state-of-the-art online UPS systems, and robust DC UPS solutions.



Dry Cell Batteries: Known for their durability and long-lasting power, Tiger Brand's dry cell batteries are perfect for both consumer and industrial applications, delivering consistent energy when it's needed most.

Online UPS: Tiger Brand's online UPS systems are engineered to provide uninterrupted power and protect against electrical disturbances. With advanced features and reliable performance, these systems are essential for keeping critical equipment running smoothly during power outages and fluctuations.

DC UPS: Offering dependable DC power backup, Tiger Brand's DC UPS solutions are ideal for sensitive electronics and telecommunications equipment, ensuring seamless operation with stable power delivery.

Through a combination of innovation and uncompromising quality, Tiger Brand delivers power solutions that guarantee reliability, efficiency, and peace of mind to users around the world.



ONLINE UPS

TG-1KVA / TG-3KVA/ TG-6KVA/ TG-10KVA





Capacity from 1KVA to 10KVA



High Frequency Smart Online UPS



Smart RS-232



Single Phase



LED Display



Frequency Range 47Hz-53Hz or 57Hz – 63Hz



Technical Sheet

		Online High Frequ	ency UPS					
Model	TG-1KVA	TG-2KVA	TG-3KVA	TG-6KVA	TG-10KVA			
Phase			Single-phase					
Capacity	1000VA/800W	2000VA/1600W	3000VA/2400W	6000VA/5400W	10000VA/9000W			
Input								
	110-300VAC in 50% load 110-300VAC in 50% load							
Voltage Range		160-300VAC in 100% load	t	176-300VAC in 100% load				
Input Return Voltage		110-300V						
Frequency Range			40Hz -70Hz					
Power Factor	100% load ? 0.95	100% load ? 0.97	100% load ? 0.97	100% lo	ad ? 0.99			
Output								
Output Voltage		220VAC± 1%£" 208/220/230/240 the panel is adjustable £©						
Voltage range (Batt. Mode)	±1%							
			=170					
Frequency Range (Sync Calibration Range)	47Hz- 53Hz or 57Hz - 63Hz							
Frequency Range (Batt. Mode)		50	Hz (60Hz optional) ± 0.25	5 Hz				
Surge Ratio			3: 1	7112				
ourge realio								
Harmonic Distortion			?3% THD(linear load)	٨/				
	?6% THD (Nonlinear load)							
Transfer Time (AC to DC)			0ms					
Transfer Time (inverter to bypass)			4 ms(standard)					
Waveform			Pure sine wave					
Battery								
Standard Model Battery Type		12V/7AH			/7AH			
Standard Model Battery Quantity	3	6	8	16	20			
Standard Model Charging Current		1.0A(Max)		1-10A s	selected			
Standard Model Charging Voltage	41.0VDC ± 1%	41.0VDC ± 1% 82.1VDC ± 1% 110VDC ± 1% 220VDC ± 1% 275VDC ± 1%						
Long Run Model Battery Type			Depends on the buyer					
Long Run Model Battery Quantity	3	6	8	16	16			
Long Run Model Charging Current	6A	4A or 8A (st	andard is 4A)	1-10A s	selected			
Long Run Model Charging Voltage	41.0VDC ± 1%	82.1VDC ± 1%	110VDC ± 1%	220VD	C ± 1%			
Protection against								
	Full tim	ne lightning protection, nois	se and surge protection;					
	Outp	ut short circuit protection ar	nd overload protection					
Appearance								
I CD Display		Using LCD d	lisplay, the status paramete	rs at a glance;				
LCD Display	Load level, battery capacity, AC Mode, battey mode, bypass mode, fault indication							
Alarm								
Battery Mode	Alarm beeps every four seconds							
Low Battery	Alarm beeps every second							
Overload	Alarm beeps every second							
Fault	Alarm beeps continuously							
interface								
	Smart RS232	2 interface(USB interface to	o communicate with engine	er)				
Environment			J					
Temperature And Humidity		Humidity 20-90%, temperature 0-40°C (non-condensing)						
Noise(dB)	< 50dBA at one meter distance							
Control Management		COMPTER STOTION MUMITOR						
Smart RS-232	Support Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux, Unix							
Optional SNMP	Power Management supports SNMP management and network management							
External Dimension				<u> </u>				
Standard Model Dimension(mm)	352*145*213	450*1	92*335	450*1	92*670			
Standard Model Weight(KGS)	N.W:10.9	N.W:23.7	N.W:27.7	N.W:26.7	N.W:31			
Long Run Model Dimension(mm)	352*145*213		92*335		92*335			
Long Run Model Weight(KGS)	N.W:5.8 N.W:12.6 N.W:13 N.W:14.6 N.W:15							
Warranty								
	15months warranty on Spare Parts							
Certification		, , , , , , , , ,						
		ISO9001/ISO14001/CE	Certification					
	-							



UPS BATTERIES



SUITABLE FOR

- Security System

DC Mini UPS

8800AH (TDC-1100)



- ✓ High capacity lithium battery✓ Built-in adapter✓ 2 USB Socket





TP-Link is a world-renowned leader in networking and smart home solutions, known for its unwavering commitment to delivering reliable and innovative technology. Established in 1996, TP-Link offers an extensive range of networking devices, including routers, switches, and access points, designed to enhance connectivity and simplify network management for both homes and businesses.



The company also excels in smart home technology, offering a wide selection of devices such as smart plugs, cameras, and lighting solutions. By integrating cutting-edge technology, TP-Link enhances everyday living with seamless and secure connectivity. Their ongoing dedication to research and development ensures that their products offer the latest in performance and security, meeting the evolving needs of an increasingly connected world.

With a strong focus on quality and customer satisfaction, TP-Link remains a trusted brand, empowering users to achieve efficient and secure connectivity through high-performance networking and smart home solutions.



Embrace the digital era with confidence

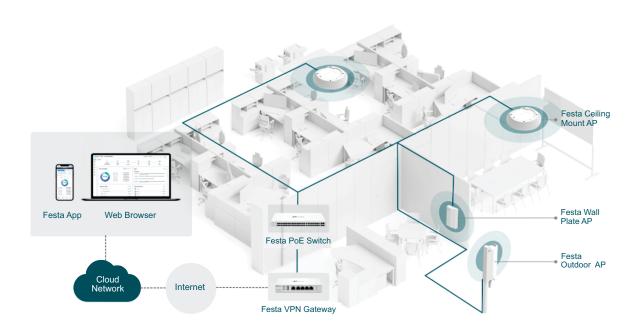






Festa - A Networking Solution Built For Small Business, No IT Required

Festa offers business-class features with consumer-inspired simplicity. Our free cloud-based centralized management is accessible via the Festa app or web, providing essential features for small businesses without the complexity required by I arger-scale operations.





Free Centralized

Management via Cloud



Festa App for Easy Setup and Management



Zero-Touch
Provisioning (ZTP)



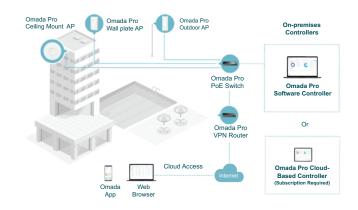
Self-Organizing Network (SON)





Omada Pro - Energy-Engineered for Enterprise Verticals

Omada Pro is our enterprise-grade product line designed to meet the high-capacity, security, and management needs of various industries.





MDUs



Hospitality





Catering



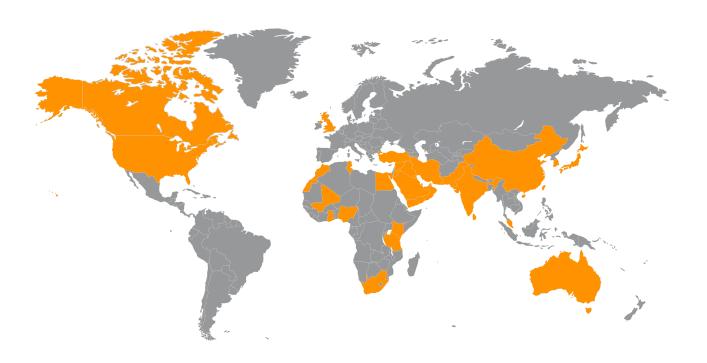
Manufacturing



Retail

Our Presence

Nothing motivates us more than seeing our products installed around the world putting smile on the faces of our customers for years on end. That's what drives us.



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- Saudi Arabia
- Syria
- Lebanon
- Turkey
- Morocco
- Tunisia
- Tanzania
- Kenya
- Ghana

- India
- Iraq
- China
- Bangladesh
- **USA**
- Canada
- UK
- Pakistan

