

# DSR GridVerter™

Multifunction On/Off Grid DSR Hybrid Inverter



## The all-in-one demand side response inverter

Use energy, store it or feed it to the grid, on demand. The DSR GridVerter combines a MPPT solar charge controller, inverter, battery charger, UPS, AC distribution and full demand side response functionality. Communication via GPRS or WiFi allows remote control of energy import and export, and management of up to 5 AC loads.

## Scalable, flexible and future proof

The DSR GridVerter can charge battery storage from Solar PV, the grid or other AC sources, and also power AC loads directly. Up to 3 GridVerter's can be connected in parallel to match your future energy requirements.

## Uninterrupted power for on & off grid installations

In the event of a grid failure, the DSR GridVerter's automatic switching time of less than 10 milliseconds means computers and other electronic equipment will continue to operate without disruption as the battery storage takes over supply to any connected loads.

## Safe and versatile

Incorporating built-in protection from overload, short circuit, and deep discharge, the DSR GridVerter family also features a cold start function. Using GPRS or WiFi the DSR GridVerter communicates with a central server to allow users and utility providers access to performance data, AC load management and demand side response functionality.



DSR-5 GridVerter  
1.5kW, 3kW & 5kW

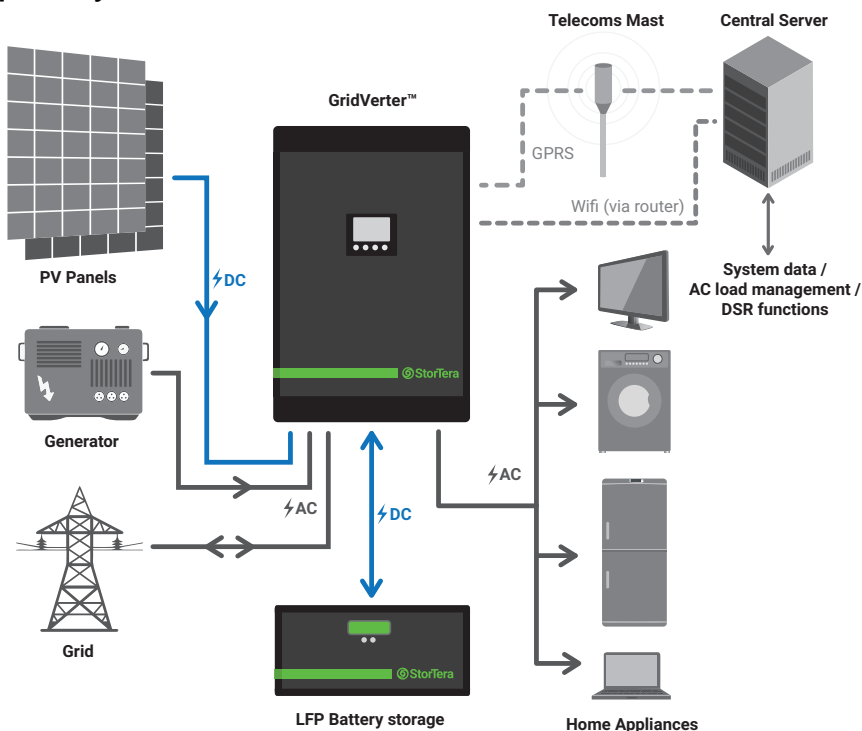


DSR-3.8 GridVerter (G83)  
2kW, 3kW & 4kW



DSR-12 GridVerter  
12kW

## Typical System Connection



# DSR-5 GridVerter™

The DSR-5 GridVerter is suitable for on and off grid applications outside the UK and conforms to IEC 61727:2004.

	DSR5 GV-1524	DSR5 GV-3048	DSR5 GV-5048
<b>INVERTER OUTPUT</b>			
Nominal Battery System Voltage	24 VDC	48 VDC	
Rated Power	1500 W	3000 W	5000 W
Surge Power	3000 W	6000 W	10000 W
Waveform	Pure Sine Wave		
AC Voltage Regulation	220VAC/230VAC/240VAC±5% (Battery Mode)		
Electric Current	3.4 A	10.5 A	13 A
Output Frequency	50Hz/60Hz Auto Sensing		
THD (Linear loads)	Off grid ≤2%		
	Grid discharge ≤3%		
	Grid charge ≤3%		
Inverter Efficiency	93% (Peak)		
Transfer Time	10ms (max)		
<b>AC INPUT</b>			
Voltage	230 AVC		
Selectable Voltage Range	170~280VAC(For Personal Computers) / 90~280VAC(For Home Appliances) / 184~253VAC(VDE4105)		
Frequency Range	50Hz/60Hz Auto Sensing		
<b>BATTERY</b>			
Normal Voltage	24 VDC	48 VDC	
Floating Charge Voltage	27 VDC	54 VDC	
Overcharge Protection	31 VDC	60 VDC	
<b>SOLAR &amp; AC CHARGER</b>			
Maximum PV Array Open Circuit Voltage	145 VDC		
PV Array MPPT Voltage Range	30~130 VDC	64~130 VDC	
Standby Power Consumption	2 W		
Rated Power	1500 W/2000 W	4000 W	4000 W
Maximum Solar Charge Current	60A/80A	80 A	80 A
Maximum Efficiency	98%		
Maximum AC Charge Current	20 A or 30 A	60 A	
<b>MECHANICAL SPECIFICATIONS</b>			
Product Dimensions (W*H*D)	272*355*100 mm	297.5*468*125 mm	
Net Weight	7.4 Kg	14 Kg	
Package Dimensions (W*H*D)	485*393*251 mm	638*395*241 mm	
Gross Weight	9.5 Kg	16.4 Kg	
<b>OTHER</b>			
Humidity	5% to 95% Relative Humidity (Non-condensing)		
Operating Temperature	0°C ~ 55°C		
Storage Temperature	-15°C ~ 60°C		
Certification	IEC61727:2004		
Warranty	5 Year Manufacturer Warranty		

Product specifications subject to change without prior notice.

# DSR-3.8 GridVerter™

The DSR-3.8 GridVerter is suitable for on and off grid applications and conforms to G83 (UK) and IEC 61727:2004.

	DSR3.8 GV-2048	DSR3.8 GV-3048	DSR3.8 GV-5048
<b>INVERTER OUTPUT</b>			
Nominal Battery system Voltage	48 VDC		
Rated Power	2000 W	3000 W	5000 W
Surge Power	4000 W	6000 W	10000 W
Waveform	Pure Sine Wave		
AC Voltage Regulation	220VAC/230VAC/240VAC±5% (Battery Mode)		
Electric Current	8.7 A	13 A	17.4 A
Output Frequency	50Hz/60Hz Auto Sensing		
THD (Linear loads)	Off grid ≤2%		
	Grid discharge ≤3%		
	Grid charge ≤3%		
Inverter Efficiency	93% (Peak)		
Transfer Time	10ms (max)		
<b>AC INPUT</b>			
Voltage	230 AVC		
Selectable Voltage Range	170~280VAC(For Personal Computers) / 90~280VAC(For Home Appliances) / 184~253VAC(VDE4105)		
Frequency Range	50Hz/60Hz Auto Sensing		
<b>BATTERY</b>			
Normal Voltage	48 VDC		
Floating Charge Voltage	27 VDC	54 VDC	
Overcharge Protection	31 VDC	60 VDC	
<b>SOLAR &amp; AC CHARGER</b>			
Maximum PV Array Open Circuit Voltage	145 VDC		
PV Array MPPT Voltage Range	30~130 VDC	64~130 VDC	
Standby Power Consumption	2 W		
Rated Power	2000 W	4000 W	4000 W
Maximum Solar Charge Current	60 A		
Maximum Efficiency	98%		
Maximum AC Charge Current	40 A	60 A	80 A
<b>MECHANICAL SPECIFICATIONS</b>			
Product Dimensions (W*H*D)	337*462*183 mm	337*462*183 mm	370*462*183 mm
Net Weight	25 Kg	29.5 Kg	35 Kg
Package Dimensions (W*H*D)	476*602*325 mm	476*602*325 mm	476*602*325 mm
Gross Weight	30.3 Kg	33 Kg	38.5 Kg
<b>OTHER</b>			
Humidity	5% to 95% Relative Humidity (Non-condensing)		
Operating Temperature	-5°C ~ +55°C		
Storage Temperature	-15°C ~ 60°C		
Certification	G83, IEC61727:2004		
Warranty	5 Year Manufacturer Warranty		

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# DSR-12 GridVerter™

DSR12 GV-12048	
<b>INVERTER OUTPUT</b>	
Nominal Battery System Voltage	48VDC
Continuous Output Power	12kW
Surge Rating (20ms)	36kW
Capable of Starting Electric Motor	6hp
Output Waveform	Pure sine wave / same as input (bypass mode)
Inverter Efficiency (Peak)	>88%
Line Mode Efficiency	>95%
Power Factor	1
Nominal Output Voltage RMS	220V/230V/240VAC(+/-10% RMS)
Output Frequency	50Hz/60Hz +/-0.3 Hz
Short Circuit Protection	Yes (1sec after fault)
Typical Transfer Time	10ms(max)
<b>AC INPUT</b>	
Voltage	230VAC
Selectable Voltage Range	155~280VAC(For Personal Computers)
Frequency Range	50HZ/60HZ (Auto sensing) 40~80Hz
<b>BATTERY</b>	
Minimum Start Voltage	20.0VDC/21.0VDC for 24VDC mode (40.0VDC/42.0VDC for 48VDC mode)
Low Battery Alarm	21.0VDC+/-0.3V for 24VDC mode (42.0VDC+/-0.6V for 48VDC mode)
Low Battery Cut-off	20.0VDC+/-0.3V for 24VDC mode (40.0VDC+/-0.6V for 48VDC mode)
High Voltage Alarm	32.0VDC+/-0.3V for 24VDC mode (64.0VDC+/-0.6V for 48VDC mode)
High Battery Voltage Recover	31.0VDC+/-0.3V for 24VDC mode (62.0VDC+/-0.6V for 48VDC mode)
<b>CHARGER</b>	
Output Voltage	Depends on battery type
Charger AC Input Breaker Rating	63A
Max Charge Power Rate	1/3 Rating power
Overcharge Protection S.D.	62.8VDC
Maximum Charge Current	100A
<b>BYPASS &amp; PROTECTION</b>	
Input Voltage Waveform	Sine wave (grid or generator)
Nominal Voltage	220V/230V/240VAC
Max Input AC Voltage	300VAC for 230VAC HV mode
Nominal Input Frequency	50Hz or 60Hz
Overload Protection (SMPS load)	Circuit breaker
Output Short Circuit Protection	Circuit breaker
Bypass Breaker Rating	80A
Max Bypass Current	80A
<b>MECHANICAL SPECIFICATIONS</b>	
Mounting	Free standing
Inverter Dimensions (W*H*D)	670*410*215mm
Inverter Weight	74 Kg
Shipping Dimensions (W*H*D)	802*533*429.5mm
Shipping Weight	93.5 Kg
<b>OTHER</b>	
Operation Temperature Range	0°C to 40°C
Storage Temperature	-15°C to 60°C
Audible Noise	60dB MAX

Product specifications subject to change without prior notice.