



RENEWABLE ENERGY STORAGE  
AND MANAGEMENT SYSTEMS

# Standard Lead Acid Gel Battery Data Sheet

The Wattstor® system can be installed in multiple configurations depending on the customer's existing system and energy requirements. Details of the most common configurations are summarised in the table opposite.

The batteries used in each configuration are identical, with differing amounts of energy storage being achieved by increasing the number of batteries.

## Wattstor® System Specifications

Model	Wattstor® 3/3	Wattstor® 5/6
Power Rating (kW)	3	5
Useable Energy Storage (kWh)	3	6
Number of Batteries	2	4

## Battery Specifications

### Battery Data

Designed Floating Life	12 Years (Floating) or >1000 Cycles @ 50% D.O.D.			
Capacity (25°C)	10HR(25A, 1.75V)			
	250AH			
	Length	Width	Height	Total Height
	520mm	269mm	220mm	249mm
Approx. Weight	74 Kg			
Internal Resistance	Full charged at 25°C: 0.004 Ohms			
Self-Discharge	3% of capacity declined per month at 25°C			
Capacity affected by temperature (20HR)	40°C	25°C	0°C	-15°C
	102%	100%	85%	65%
Charge Voltage	Cycle use		Float Use	
	14.4-15V (-30mV/°C) Max. Current: 50A		13.6-13.8V (-20mV/°C)	
Transport Standards	UN2800 – Class 8 Compliant – 'wet non-spillable electrical storage', A67 Compliant			

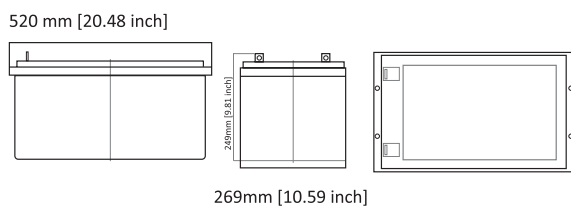
- Sealed and maintenance free operation.
- Leak free construction and design.
- ABS container and cover.
- Safety valve.
- Exceptional deep discharge recovery performance.
- Low self-discharge characteristic.
- German origin sulphuric acid thixotropic gel.
- Vacuum filled to ensure maximum capacity and contact with electrodes.



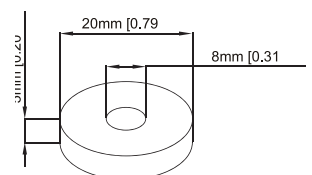
### Construction

Component	Raw material
Positive	Lead dioxide
Negative Lead Container	ABS
Cover	ABS
Sealant	Epoxy Resin
Safety valve	EPDR
Terminal	Copper
Separator	Macromolecule polymer
Electrolyte	Sulphuric acid thixotropic gel

### Battery Body Dimensions



### Terminal Dimensions



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## Inverter/Charger Specifications

- Two AC outputs: The main output has no-break functionality to ensure a constant feed in the event of supply failure. The second output is only active when an AC input is available in order to power loads not suitable for battery supply.
- Parallel operation (up to 6 systems) for increased power output.
- Compatible with three-phase power supplies (3 systems required).
- Four stage adaptive charging to extend battery lifespan.
- System configuration via DIP switch or VE.Net. (all units supplied are preconfigured prior to despatch by Wattstor).



Inverter / Charger Data		
Model	Wattstor® 3/3	Wattstor® 5/6
Transfer switch (A)	16 or 50	100
Parallel and 3-phase operation	Yes	Yes
<b>Inverter</b>		
Input Voltage range (V DC)	19 – 33 V	
Output	Output Voltage: 230 V AC ± 2% Frequency: 50 Hz ±	
Cont. output power at 25°C (VA) – Non-linear load, crest factor 3:1	3000	5000
Cont. output power at 25°C (W)	2500	4500
Cont. output power at 40°C (W)	2200	4000
Peak power (W)	6000	10000
Maximum efficiency (%)	94	94
Zero-load power (W)	15	25
Zero-load power in AES mode (W)	10	20
Zero-load power in Search mode (W)	5	5
<b>Charger</b>		
AC Input	Input voltage range: 187 – 265 V AC Input frequency: 45-65 Hz Power factor: 1	
Charge voltage 'absorption' (V DC)	28.8	
Charge voltage 'float' (V DC)	27.6	
Storage mode (V DC)	26.4	
Charge current house battery (A) at 25°C	70	120
Charge current starter battery (A)	4	
Battery temperature sensor	Yes	
<b>General</b>		
Auxiliary output (A)	16	25
Programmable relay	Programmable relay that can be set for general alarm, DC under voltage or genset start/stop function (AC rating: 230V/4A, DC rating: 4A up to 35 V DC, 1A up to 60 V DC)	
Protection	Output short circuit; overload; battery voltage too high; battery voltage too low; temperature too high; 230 V AC on inverter output; input voltage ripple too high	
VE. Bus communication port	For parallel and three phase operations, remote monitoring and system integration	
Remote on-off	Yes	
Common characteristics	Operating temp range -40 to +50°C (fan assisted cooling) Humidity (non- condensing): Max 95%	
<b>Enclosure</b>		
Common characteristics	Protection category: IP 21	
Battery-connection	Four M8 bolts (2 plus and 2 minus connections)	
230 V AC-connection	Screw terminals 13mm <sup>2</sup> (6 AWG)	
Mass (Kg)	18	30
Dimensions (h x w x d in mm)	363 x 258 x 218	444 x 328 x 240
<b>Standards</b>		
Safety	EN 60335-1, EN 60335-2-29	
Emission, Immunity	EN 55014-1, EN 55014-2, EN 61000-3-3	
Automotive Directive 2004/104/EC	2004/104/EC	