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	for safer buildings

> Ratings						
24 V DC						
48 V DC*	6 A (50 A at peak)	12 A (50 A at peak)				
The currents $I_n$ shown are at rated	output power.					
*The Lithium model is only availab	le in 48 V DC.					
> Standard -based specifications						
Safety	EN 62368-1					
EMC - Immunity	EN 61000-6-2					
EMC - Emission	EN 61000-6-4 • EN 61000-3-2 • EN 55032 • EN 5502	4				
Trade	NFC 13-100 compliant					
Environment	This product range meets the environnmental requirements of ISO 14001, RoHS and WEEE standards.					
> Environmental specifications						
Humidity	<b>during storage</b> : relative humidity of 10% to 95% non-condensing <b>in operation</b> : relative humidity of 20% to 95% non-condensing					
Storage temperature	-25°C t	o +85°C				
	75% of load	-5°C to +50°C				
Operating temperature	100% of load	-5°C to +40°C				
Altitude	Above 2,000 m, the maximum temper	rature is lowered by 5% every 1,000 m				
Service life	200,000 h at 25°C extern	nal ambient temperature				
> Input characteristics						
Voltage	98 to 2	98 to 265 V AC				
Frequency	47 to	65 Hz				
Neutral system	TT-TT	N - IT				
Inrush current	limited	by NTC				
Upstream circuit breaker required	D C	urve				
Class	Cla	ss 1				
	Charger 300 W	Charger 600 W				
Mains consumption @ 98 V	4 A	8 A				
Mains consumption @ 265 V	2 A 4 A					
> Efficiency	1					
At 20% load	0% load 84%					
At nominal load	90%					
> Output characteristics	1	1				
Nominal voltage	24 V DC	48 V DC				
Floating voltage (U <sub>n</sub> ) adjusted to half load and 25°C	27.2 V +/-0.5%	54.4 V +/-0.5%				
Charger current limitation	l₀: 6 A to 12 A dep	pending on model				
> Charger consumption on battery	y in stand-alone mode					
	24 V DC	48 V DC				
300 W	94 mA	37 mA				
600 W	106 mA	73 mA				

## **ENERGO DATASHEET**

> For reliable output	ıt volta	age							
Protection from exte aggressions	ernal	<ul> <li>Resistance to all types of external aggression:</li> <li>Overvoltages encountered in the mains grid (lightning, industrial, isolation fault on impedant neutral, etc.)</li> <li>Short-circuit on primary by slow-blow timed fuse on phase.</li> <li>Differential mode shock waves by varistor and fuse.</li> <li>Battery polarity reversals.</li> <li>Overvoltages on secondary.</li> <li>Overcurrents and short circuits on secondary.</li> <li>Short circuits inside the product by primary fuse.</li> <li>Rises in external temperatures (outside specified range).</li> </ul>							
Charger current limitation managem	ient	<ul> <li>Protects t</li> </ul>	<ul> <li>The output current limitation can start a charging cycle on a discharged battery.</li> <li>Protects the product completely from short-circuits on the installation.</li> <li>Protection selectivity is provided by fuses on each load output and the battery circuit.</li> </ul>						
Control and high-performance filtering		<ul> <li>Particularly efficient output voltage regulation</li> <li>Static control &lt; 0.5% of U<sub>n</sub>.</li> <li>Dynamic control &lt; 5% of U<sub>n</sub> for cumulative variations of the mains and the load (10% to 90%).</li> <li>Boosted filtering that eliminates all interference and reduces the ripple on the DC output voltage. Battery capacity preserved and guaranteed optimum operation of systems.</li> <li>LF rms ripple &lt; 0.5% of U<sub>n</sub>.</li> <li>HF ripple (20 MHz-50 Ω) &lt; 4% of U<sub>n</sub>.</li> </ul>							
> For the control an	d mar	nagement of t	he emergency powe	r source					
LED Test function		The two LED	light up for one seco	ond when the power	is switched on.				
System control		<ul> <li>Monitoring:</li> <li>State of mains, battery and load fuses.</li> <li>Presence or absence of battery.</li> <li>Temperature inside the cabinet.</li> <li>Battery voltage.</li> <li>Operating status.</li> <li>Presence of mains voltage in the correct operating range.</li> </ul>							
Battery charge management		<ul> <li>This function is essential to achieve the theoretical service life and guarantee optimum battery operation.</li> <li>The charge voltages are factory set.</li> <li>They comply with the stipulations of the battery manufacturers.</li> <li>The charger incorporates battery charge current limitation.</li> </ul>							
Battery safeguard		<ul> <li>Charger disconnects automatically at the end of battery discharge to preserve battery life.</li> <li>Prevents batteries from becoming too discharged, which would cause irreparable deterioration in performances (cut-off threshold 1.8 V/element at +/-0.5%).</li> </ul>							
Battery Circuit Test function		Every thirty seconds for the first twenty minutes, then every fifteen minutes.							
Battery Health Test function		Impedance test performed every sixteen hours (internal resistance measurement).							
Temperature compensation		-3 mV/element/°C (on lead battery models only)							
Restart (C13-100)		By local or remote manual action. After a configurable back-up time, the load will be disconnected from the battery. The restart button blinks and indicates a restart stand-by. "Restart?", "Restart in progress" or "Restart impossible" is displayed.							
Cold start		Start up without the mains present, only using the battery							
Configurable back-up		Via LCD screen (30 min, 1 h, 2 h, 4 h).							
<i>Wind turbine</i> function Delays the remote restart. The execution of the order can be delayed from 1 to 30 s, configurable via the LCD screen.						via the LCD screen.			
> For optimum com									
- Green/red/orange						o			
Battery LED		ery charged	Blinking green Battery being charged	Blinking orange - Low battery - Battery flat - Battery needs to be charged	Steady orange Battery operation	Steady red Battery test fault	Off Battery disconnected in restart stand-by		
User LED	Loa	d powered	-	-	10 mm <sup>2</sup>	- Charger fault - Fuse fault	Load disconnected		
Restart button LED		-	-	Restart on stand-by	1.5 mm²	-	-		



## **ENERGO DATASHEET**

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> For optimum communicat	ion						
- Digital display							
Display and remote reporting of information	The product displays the standard menu constantly. The standard menu display is incremented every ten seconds to indicate the next item of information and runs on a loop.         Pressing and holding (1 s) is used to access the configuration menu.         Pressing and holding again once in the configuration menu gives access to one of the proposed sub-menus.         Press and hold to select a variable in one of the sub-menus. When selected, variable has an * next to it. <b>Two menus:</b> - The Standard Menu displays the information regarding         • the battery voltage and current,         • the output voltage and current         • the output voltage and current         • the mains, charger, battery or fuse fault         • the remaining autonomy (lead model)         • the language (Lead model: French/English/German; Lithium model: French/English)         • the duration of the autonomy (Lead model: 0.5h/1h/2h/4h/8h/12h/no limit; Lithium model: 0.5h/1h/2h/4h)         • the restart delay (0 to 30s)         • the battery test (lithium model)						
- Positive safety dry contact							
		Alarm rej	porting				
Name	Terr	ninals		Status	j.	- <u>1000000</u> - <u>1012</u> <u>1013</u> <u>1013</u> Fau	ult conditions
General fault		-2	Open in the event of a fault		Charger or mains or battery		
						or impedance fault	
Mains present			Open in the event of a fault Open in the event of a fault			No mains power	
Battery flat alarm		5-6	Open in the ev	ent of a fa	ult	Battery volt	age < 1.85 V per cell
> Connection specifications		Corour turo to	minal block				
Mains		Screw-type ter		mm <sup>2</sup>			
Batteries	max. 4 mm <sup>2</sup>						
Load (two outputs)	Cabling supplied						
Alarm reporting	max 10 mm <sup>2</sup> max 2.5 mm <sup>2</sup>						
> Cabinet characteristics			111dA 2	5 11111			
	Cabinet dimensions						
	W x H x D (mm)	Weight (kg)	IF	)	Ca	abinet	Туре
C85 Lead		16 - 50					Wall or
C85 Lithium	408 x 408 x 224	27	IP31		Metal RAL 7035 floor-mounted		
> Cabinet incorporating batt	teries						
_		24 V				48 V	
C85 Lead			7 Ah, 14 A	h, 24 Ah			
C85 Lithium	- 26 Ah						
LAT reserves the right to alter the character	istics of its products without prior r	otice					