

Features

- High frequency, double conversion on-line technology
- Fully digital DSP control
- Wide input voltage range
- Integral 'hot-swap' maintenance bypass module on E2310(E) model
- Cold start function
- Advanced battery management
- Selectable ECO mode for high efficiency operation
- Automatic battery charge in UPS off mode
- Lightning and surge protection
- Short circuit and overload protection
- Automatic fan speed control with load variation
- Parallel capacity or redundancy (maximum 4 units)
- Optional Emergency Power Off facility
- Smart RS232 communications with monitoring software
- Optional relay or SNMP communications card
- Matching EE2000 battery packs available for E2310(E) model
- E suffix models have no internal battery and increased charging capacity



Specifications

UPS Model	E2310	E2310E	E2315E	E2320E
Capacity	10000VA / 8000W	10000VA / 8000W	15000VA / 12000W	20000VA / 16000W
Input	Voltage range	176V AC to 275V AC Line - Neutral		
	Phase	3 Phase 4 Wire & Earth		
	Frequency	40 - 70Hz		
	Power Factor	> 0.99		
Output	Voltage	220/230V AC +2%		
	Phase	Single phase		
	Frequency Range	50 / 60Hz (user adjustable)		
	THD (Linear Load)	< 2%		
	THD (Non-Linear Load)	< 6%		
	Overload Capability	<130% load for 10 min then transfer to bypass > 130% load for 1 sec then transfer to bypass		
	Crest Factor	3:1 (max)		
	Power Factor	0.7 (16 or 18x 12V batteries) or 0.8 (20x 12V batteries)		
	Short Circuit Protection	On-line mode: > 5 cycle duration, inverter turns off, no transfer to bypass, unit alarms Battery mode: > 5 duration, inverter turns off, bypass unavailable, unit alarms Bypass mode: Input fuse blows or breaker operates, no alarm		
	Waveform	Sine wave		
	Transfer Time	0ms (between on-line mode & battery mode)		
Efficiency	On-line mode: >90%			
Battery	Model	12V valve regulated lead acid maintenance free		
	DC Voltage	192V DC	192 / 216 / 240V DC	
	Battery	16x 12V / 9Ah	16 / 18 / 20x 12V blocks	
	Backup Time At Half Load	6.5 min	Depends on external battery	
	Backup Time At Full Load	2.5 min	Depends on external battery	
	Charge Current	1.0A	1.0 - 6.0A (selectable)	
	Recharge Time	90% capacity after 8 hours charging	Depends on external battery	
Environment	Temperature	0°C to +40°C		
	Relative Humidity	0 - 95% (non-condensing)		
	Altitude	1500m maximum		
	Storage Temperature	-25°C to +55°C		

Dale Power Solutions Ltd reserves the right to make changes in specification without notice or liability. All information is subject to Dale Power Solutions own data & is considered accurate at time of publishing.

Dale Power Solutions Ltd

Salter Road, Eastfield Industrial Estate, Scarborough, North Yorkshire, YO11 3DU, United Kingdom

Telephone: +44 (0) 1723 583511 Email: info@dalepowersolutions.com Website: www.dalepowersolutions.com

Registration No 941798 England

Specifications continued

UPS Model		E2310	E2310E	E2315E	E2320E
Communication		Standard: RS232 Optional: USB, SNMP or Relay Card			
LCD Display		Measurements: Input/output voltage/freq, battery voltage, load power and kVA, UPS temperature			Operation mode: On-line, Battery, Bypass
LED Indication		Green LED: Normal operation Yellow LED: Warning condition Red LED: Abnormal operation			
Noise level		< 55dBA			
Safety & EMC		CE marked to 2006/95/EC & 2004/108/EC Tested to EN62040-1-1:2003 & EN62040-2:2006			
Weight & Dimensions	Standard Unit Weight	80kg	40kg	45kg	45kg
	Dimensions (H x W x D)	655 x 250 x 590 mm		655 x 250 x 590 mm	
Standard Accessories	Control Software	Yes		Yes	
	Input & Output Leads	Optional extra		Optional extra	
	Data Lead	Not applicable		Optional extra	
	User Manuals	Yes		Yes	

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