

UL4, UL5 Series UPS



Features

- Rackmount UPS designed for standard 19" rack with 2 units height
- One of the most advanced and robust UPS in the world today
- Designed to supply various types of single-phase appliances
- Premium quality with over 250,000 hours of MTBF (Mean Time Between Failures)
- Compliance with the global standard IEC 62040-3
- Ultra high efficiency resulting in minimum energy consumption, reduced, operational cost and superb ROI
- UL5 series designed for high start-up currents, suitable for reactive appliances such as induction loads and switch-mode power supplies

Technical Specifications

General		
Model	UL4-1500	UL4,UL5-2000
Rated power	1500VA/1200W	2000VA/1600W
Efficiency	>98%	
Applicable standards	IEC 62040-3	
Dimensions (WxDxH)	480x345x88.9 mm	
Weight	19kg	23kg
Environmental		
Storage temperature	-20°C to +70°C	
Operating temperature	0°C to 40°C	
Altitude	≤3000m	
Humidity	0 to 95% non-condensing	
Degree of protection against hazards and water ingress (IP)	IP20	
Acoustic noise at 1m	<50dBA	
Input		
Phases request	1	
Rated voltage	220Vac	
Maximum input voltage in stored energy mode	440Vac	
Maximum input voltage in normal mode	255Vac	
Minimum acceptable input voltage in normal mode and nominal load (Vac)	165Vac	
Frequency range	50±5%HZ (±1% to ±6% Adjustable)	
Current THDi	Same as the load	
Input power factor at normal mode and nominal load	Same as the load	
Generator compatibility	Generator must provide UPS input power based on maximum start-up plus battery charging power	

Inverter's Electrical Output Specifications		
Output phases available	1	
Output wave	sine wave	
Rated voltage	220Vac	
Voltage regulation	±1%	
Output frequency	50Hz	
Output frequency Range	50Hz ±0.0001 (Free running)	
Acceptable input frequency for output synchronization	50Hz±5% (±1% to ±6% Adjustable)	
Max sync phase error (Degrees)	6	
Apparent power	1500VA	2000VA
Active power in linear load	1200W	1600W
Active power in non-linear reference load	1200W	1600W
Start-up current capacity	200%	200,300 %
Overload	120%@100Sec.	
THD		
linear load		<3%
non-linear load		<5%
Power factor (lead to lag)	Unlimited	
Max output voltage variation from no load to nominal load or changing UPS operation mode	<10%	
Recovery time from start of changes to 90% output correction	<3ms	
Battery and Charger		
Normal voltage	48Vdc	
Battery type	All types of lead acid and gel, sealed or vented	
Battery installation	External battery	
Capability to add more packs or Battery Ah	Yes	
Max allowed battery capacity to complete echarge under 12 hours (Ah)	100	
Charger type	Standard charger technology DIN-41773	
Capability to adjust recharge current according to number of battery packs and Ah	Yes	
Float and boost charging method	Yes	
Maximum adjustable battery recharge current	10A	
Minimum adjustable battery recharge current	2.5A	
Minimum time required to recharge battery to 90% nominal capacity	4h	
SCM recharge method	Yes	
Capability to automatically adjust current or charger voltage	Yes	

Life	
Mean Time Between Failures (MTBF)	250,000h
Temperature of input electrolytic capacitors of the inverter	
ambient temperature 20°C	25°C
ambient temperature 40°C	45°C
Percentage of overall time when fans are turned on in nominal load	<1%
Isolation	
Magnetic isolation by iron core between AC and DC	Yes (Transformer Based)
Material of winding in isolated transformer	100% copper winding
Isolation class	F
Protections	
AC input overcurrent	
Against 2-phase in input without interruption in UPS operation	
Against voltage transient	
Against decrease and increase in output voltage	
Against positive feedback (short between output and input)	
Against decrease and increase in output voltage	
Against overload and overheat	
Against disconnecting the battery without disconnecting the output to replace batteries during operation and against unexpected situations	
Against connecting reverse battery poles when UPS is off	
Against connecting reverse battery poles while replacing, when the UPS is working, without shutting down the output	
Against high input impedance	
Against increase or decrease of the DC voltage	
Protected charger against short circuit	
Against improper quantity of connected batteries	
Against output short circuit	
Earth protection	
Input and output protection against RFI and EMI noises	
Computer network protection (Ethernet) against transient voltage (Spike) with 1500W power	
Information Transfer Connectors	
RS232 serial port	
Serial port to LAN converter (optional)	
GSM modem (optional)	
Free-contact relays (optional)	
Remote control LCD panel (optional)	

Screen and Alarms

LED screen

Capability to change settings by LCD

Audio alarms

Speech warnings (optional)

Other Capabilities

UPS installation as a shared neutral

Software with UPS monitoring capability

Software with management and configuration setting capability

Software with capability to record the operation and failure reports

Software with capability to monitor multiple UPSes simultaneously (optional)

In the interest of continual product improvement, all specifications are subject to change without notice.