

PHD POWERHOUSE

Reliable Power Solutions

T3R SERIES (1kVA-10kVA)

With ever greater demands being made on valuable floor space, many IT managers are moving towards computer rack solutions rather than conventional floor standing options offered in the past. The same philosophy has affected the UPS industry with many UPS now being located with the computer inside the rack cabinet. On-Line UPS have historically been handicapped in this particular market sector, essentially for two reasons, size and price.

Most IT managers have dealt with this problem by moving to Line-Interactive and Off-Line topologies. As these technologies have fewer fail safe features and for the most part only work when a problem occurs. With the introduction of the T3R series these past limitations are no longer valid.

The T3R is a physically small On-Line double conversion UPS but retains all the features normally associated with On-Line technology, but what is On-Line double conversion technology and why does it matter? Simply put, "double conversion" is where the mains supply is rectified to a clean DC voltage and rebuilt into a very clean and regulated AC voltage, at all times your critical load runs from this clean no break supply. Line-Interactive and Off-Line UPS are single conversion, put in its crudest form, your computer runs on semi regulated mains and will always suffer a small break in supply whilst the UPS moves from mains mode to battery mode in a mains fail situation. The T3R offers a competitive price, even against the more basic technologies, but unlike these technologies you will get as standard an LCD screen, RS232, USB port options, battery extension options, battery monitoring, no-break supply, static switch, wide voltage input without using batteries, optional software, comms slot for SNMP, Relays or Optocoupler.

SIMPLE NETWORK MANAGEMENT PROTOCOL (SNMP)

The T3R SNMP external agent can be located up to 5 metres away from the UPS. Initial configuration is carried out by serial comms using any suitable terminal application (e.g. Hyperterminal for Windows). The embedded HTTP server presents an HTML interface to the network, which can be accessed from any web browser. All system parameters can be configured from here including scheduled shutdown. A sophisticated JAVA applet provides full monitoring in real time, along with comprehensive events and history logs.

UPS MANAGEMENT SOFTWARE

The UPS management software is installed on a server or workstation connected to each UPS via the serial or USB port. Power failure, power restored, battery failure or eight events will be detected and the user informed.

A shutdown will be initiated when the batteries are exhausted or a technical problem occurs with the UPS. The UPS management software disconnects, logs out users and closes open applications (subject to app/os support) before shutting down the operating system itself.



STAR
T3R SERIES
1kVA -10kVA

- EXTENSIVE LOG FILES
- SCHEDULED BATTERY AND INVERTER TESTING
- SCHEDULED SYSTEM SHUTDOWN/RESTART
- USER-CUSTOMISABLE COMMANDS AND MESSAGES
- MULTIPLE UPS CONTROL FROM A SINGLE COMPUTER
- REMOTE CONSOLE COMMAND MODULE FOR REMOTE MULTIPLE SERVER SHUTDOWN
- INTERNAL SNMP SUB-AGENT FOR INTEGRATION INTO EXISTING NMS (E.G. HP OPENVIEW, CA UNICENTER)



POWERHOUSE

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Tel : +27 11 346 1812/4/5/6 e-mail: anthony@phdpowerhouse.co.za Web: www.phdpowerhouse.co.za

Model	ST3R10	ST3R20	ST3R30	ST3R60	ST3R100
Topology	True On-Line, Double Conversion — — — — —				
Output Waveform	Pure Sine Wave				
Input					
Maximum Capacity (VA/W)**	1000VA/800W	2000VA/1600W	3000VA/2100W	6000VA/4800W	10000VA/8kW
Nominal Input Voltage	230 VAC				
Input Regulation Voltage	160~300 VAC Single Phase w/ Ground			160~300 VAC Single Phase w/ Ground	
Nominal Input Frequency	50/60 ± 4Hz				
Input PFC	≥0.95			≥0.98	
Input Short Protection	Circuit Breaker				
Output					
Nominal Output Voltage	220/230/240 VAC nominal				
Output Voltage Regulation	± 2%				
Output T.H.D	≤3% (Linear Load) ≤6% (Non-Linear Load)	≤4% THD (Linear Load) ≤7% THD (Non-Linear Load)	≤4% THD (Linear Load) ≤7% THD (Non-Linear Load)	≤2% THD (Linear Load) ≤6% THD (Non-Linear Load)	≤2% THD (Linear Load) ≤6% THD (Non-Linear Load)
High Efficiency Mode (AC to DC)	85%	85%	88%	> 88%	
High Efficiency Mode (DC to AC)	83%	83%	83%	> 88%	
Crest Factor	3:1				
Start on Battery	Yes				
Output Frequency	50 Hz ± 0.2 Hz			50 Hz ± 0.5 Hz	
Battery					
Typical Backup Time	9 minutes	12 minutes	8 minutes	10 minutes	8 minutes
Battery Type	Sealed Lead-Acid maintenance-free 12VDC/7Ah per cell				12VDC/9Ah per cell
Number of Batteries	3 cells	8 cells		20 cells	
Recharge Time to 90%	5 hours			7 hours	8 hours
Charge Current of Long Standby Model *	8A			4.2A **	
Advanced Diagnostics					
Front Panel Indication – LCD	UPS Status, I/P Voltage & Frequency, O/P Voltage & Frequency, Battery Voltage, Battery Capacity, Loading %, Temperature, History Alarm.				
Front Panel Indication – LED	Normal (Green), Warning (Yellow), Fault (Red)				
Audible Alarms	Battery Mode, Low Battery, Overload, Fault				
Communication Interface					
Communication Port	RS232 (Standard), DB9 or USB or AS400 or SNMP / HTTP (Optional)				
Environmental					
Operation Temperature	0-40° C				
Storage Temperature	-15° C to 50° C				
Relative Humidity	20% to 90% non-condensing				
Audible Noise	< 45 dBA @ 1 meter	< 50 dBA @ 1 meter		< 55 dBA @ 1 meter	
Mechanical					
Dimensions (W x H x D mm)	440 x 88 x 465 (with internal batteries)	440 x 88 x 465 (UPS only) 440 x 88 x 465 (External Battery)		440 x 132 x 640 (UPS Only) 440 x 132 x 640 (External Battery)	
Weight (Net Weight with Batteries) (kgs)	15.5	35	36	85	88

* All T3R models have a long standby option with no built in batteries, this is the charge current of the long standby models. For long standby models, add "-L" to the part number.

** 6 and 10kVA models can have up to 25A charging capabilities when connected in parallel with the ST-CHARGER external super charger.

All information contained in this brochure is purely indicative and can not be used to form any contractual obligations.

Specification or design can be changed at anytime without prior notice.