

PHD POWERHOUSE

Reliable Power Solutions

FEATURES

- Wide Input Range, Robust Design for Harsh Environments
- DC Start Function, Can be started without AC
- Intelligent, Safe and Unique Battery Management System
- Variety of accessories
- Parallel Operation available
- Specifications can be Customised
- Frequency Converter Option Available



T6 Series 10kVA-1MVA

The AEC Star T6 series UPS is an on-line double conversion three phase UPS with a fully digitised intelligent galvanic isolation design. Single unit ratings of up to 1MVA are available and parallel capability is also available. The UPS can also be customised for various input voltages allowing them to be used in various applications (e.g. mining).

FEATURES AND ADVANTAGES

Advanced Technology DSP, IGBT and Switching Components

To increase reliability and efficiency.

True Galvanic Isolation Design

An isolation transformer is used on the output. This can solve numerous problems such as poor input grounding, different grounds between input and output and ground leakage currents. The user also has the benefit of attenuation of common mode noise from the output isolation transformer.

Multi-CPU design and Software/Hardware Cooperate Control

Several CPU's are employed in the control circuitry, critical functions are designed to employ parallel redundancy to improve reliability.

Redundant Power Supply

An extra power supply is connected redundantly to supply power to the static switch, so that, there will be AC output no matter what happens to the UPS.

Plug and Play Modular Design

The power circuit is separated into several modules plugged into slots in the UPS, which is easy to remove, allowing for quick maintenance and easier trouble-shooting.

Each Phase with Individual Inverter Support

Allowing for 100% unbalanced load.

Protection Against Detached or Floating Neutral of the Input

MOV's are used at the input and provide sufficient protection to both the UPS and the load from any lightning or surges caused by neighbouring large loads.

Large Charging Power (Selectable)

The charge power is selectable according to the Ah of the battery bank. Ah ratings to allow for 8 hours backup time can be supported with no additional external chargers needed.

Various Interface Options

Remote control panel, 3 phase software for PC monitoring, auto dialling module, battery monitoring module, 3 Phase SNMP card, emergency stop switch.

12-Pulse Fully Controlled Rectifier (Optional)

In order to further improve the power factor and reduce harmonic current drawn by the rectifier, the UPS from 120kVA uses a 12-pulse fully controlled rectifier. The total harmonic current can be reduced to around 10% and the power factor improved to over 0.8. A phase shift transformer is added to achieve the performance. The input inductor is retained to obtain the best result. This is a more rugged topology.

Parallel Operation (Optional)

To increase the capacity and reliability of the UPS. The load is equally shared between the paralleled units. When there is a fault with one of the units, the other units continue running without output interruption.

STAR

T6 SERIES
10kVA - 1MVA



POWERHOUSE

Reliable Power Solutions

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SPECIFICATIONS	ST6 3310	ST6 3315	ST6 3320	ST6 3330	ST6 3340	ST6 3350	ST6 3360	ST6 3380	ST6 33100	ST6 33120	ST6 33160	ST6 33240	ST6 33320	ST6 33400	
KVA	10	15	20	30	40	50	60	80	100	120	160	240	320	400	
Input (Rectifier)															
Input Voltage	190V / 208V / 380V / 400V / 415V / 440V / 480V / 600V, 3P4W or 3P3W														
Input Range	± 20% (> 20% available on request)														
Input Frequency	50Hz / 60Hz ± 5Hz														
Power Walk In	0% - 100% : 20sec														
Battery															
DC Voltage	29 x 12Vdc =348Vdc														
Maximum Charge Current	5	8	10	15	20	25	30	40	50	60	80	120	160	200	
Inverter															
Output Voltage Regulation	190V / 208V / 380V / 400V / 415V / 440V / 480V / 600V, 3P4W or 3P3W ± 1%														
Output Power Factor	0.8														
Output Frequency	50Hz / 60Hz ± 3Hz (lock range), 50Hz / 60Hz ± 0.1Hz (free running)														
Phase Shift	< 0.5° at 100% unbalanced load														
THD (Linear Load)	< 2%														
Overload	< 110% Continuous, 110%-125% 15 mins, 125%-150% 10mins, > 150% 30sec														
Efficiency at 100% Load	93%			93.5%			94%			94.5%			95%		
Overall Characteristics															
Overall Efficiency (%)					91.5		92		92.5		93				
Maximum Heat Dissipation (kW)	1.1	1.1	1.3	1.9	2.6	3	3.5	4.6	5.4	6.5	8.7	13	17.4	21.7	
Dimensions (L x W x H) (mm)	550 x 800 x 1600							1100 x 800 x 1600				2200 x 800 x 1600		3300 x 800 x 1600	
Weight (kg)	270	300	350	400	480	550	680	820	950	1180	1450	1950	2450	3100	
Audible Noise	< 65 dBA (at 1m)							< 67 dBA (at 1m)							
Temperature / Humidity	0-40°C, 32-104°F / 0-90% (Non-Condensing)														
Altitude	< 1500m Above Sea Level														
12 Pulse Rectifier	Optional										Standard				
FCC Class A, EN50091-1, -2	Yes														
Short Circuit Protection	Rectifier, Reserve and Bypass														
Lightning / EMC Filter	MOV / Input & Output														
Galvanic Isolation	Output true Galvanic Isolation (input available on request)														
Indicator & Alarm	LCD, LED, Mimic Display, Buzzer														
Remote Control / Communication Interface	Monitoring 1-99 UPS simultaneously / Dry Contact, RS232, RS485														

Bigger sizes up to 1000kVA available

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 notice.