VOLTA POWERLINK PRIVATE LIMITED
An ISO 9001-2000 Certified Company
(*Formerly MAKSON ENGINEERS*)

Empowering your **Business**

Fully Digital Microprocessor Controlled ONLINE UPS

TF/HF SERIES

1-200 kVA

MOODY INTERNATIONAL

ISO 9001-2000 CERTIFIED PRODUCT

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TF Series ONLINE UPS Systems

1 Phase / 1 Phase • 3 Phase / 1 Phase • 3 Phase / 3 Phase

TECHNICAL SPECIFICATIONS

Model 1 / 1	TF1061	TF1101								
Model 3 / 1		TF3101	TF3151	TF3201	TF3301	TF3401	TF3501	TF3601	TF3801	
Model 3 / 3		TF3103	TF3153	TF3203	TF3303	TF3403	TF3503	TF3603	TF3803	TF31003
Rating	6kVA	10kVA	15kVA	20kVA	30kVA	40kVA	50kVA	60kVA	80kVA	100kVA
Operating Mode and Principle	True On-Line, Dual Conversion Output Galvanic Isolation									
AC Input										
Phase	1 Phases + N + G / 3 Phases + N + G									
Voltage	220V ± 20%/ 380V ± 20%									
Frequency	50/60Hz ± 5%									
Power Factor	≥ 0.8									
Rectifier	Fullwave / 3 Phase - 6 Pulse									
Bypass Input										
Voltage (Model 1 / 1)	220V ± 20% Single Phase									
Voltage (Model 3 / 1)	220V ± 20% Single Phase									
Voltage (Model 3 / 3)	380V ± 20% Three Phase + N + G									
Frequency	50/60Hz ± 5%									
Transfer Time	0ms Inverter/Bypass (Overload)									
Battery										
Voltage	192V DC / 360V DC - 480V DC (Rated Voltage)									
Current	User Adjustable Charging Current									
AC Output										
Voltage (Model 1 / 1)	220V/230V/240V ± 1% (Single Phase)									
Voltage (Model 3 / 1)	220V/230V/240V ± 1% (Single Phase)									
Voltage (Model 3 / 3)	380V/400V/415V ± 1% (Three Phase + N + G)									
Frequency	50~60Hz ± 0.05% (Battery Mode)									
Power Factor	≥ 0.8									
Wave Form	Pure Sine Wave									
Distortion (THD)	< 3% (Linear load), < 5% (Non-Linear Load)									
Transient Response	± 5% < 10ms									
Overload	110%/115%/150% of rated current for 30 min. / 10 min. /1 min.									
Cooling	Forced Wind									
System										
Efficiency	92%					93%				
Interface	RS 232, (SNMP Compatible)									
Ambient Temperature	0~45° C									
Humidity	< 95% (Without Condensing)									
Noise(1M)	< 60 dB									

Salient Features :

- Most advanced Digital Microprocessor based SPWM Technology using IGBT
- Applies High-Tech Components
- Super Performance from IGBT
- SNMP Compatible
- Fully meets Sharp load Fluctuations from 0 to 100%
- Large Screen LCD & LED Display
- Perfect Protections
- Low Output Voltage Distortion
- Intelligent Battery Management
- Static & Manual Maintenance Bypass
- Parallel Redundant Option

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Due to continuous improvement the Company reserves the right to vary the specification and models without prior notice.

HF Series **ONLINE UPS** *Systems*

1 Phase / 1 Phase • 3 Phase / 1 Phase

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TECHNICAL SPECIFICATIONS

Model		HF1011	HF1021	HF1031	HF1061	HF1101	HF3101	HF3151	HF3201
Capacity		1kVA	2kVA	3kVA	6kVA	10kVA	10kVA	15kVA	20kVA
Input	Voltage Range	Half Load 115V - 295V AC ± 5V AC Full Load 165V - 295V AC ± 5V AC			176V - 276V AC ± 5V AC		304V - 478V AC ± 5V AC		
	Frequency	46 Hz - 54 Hz							
	Power Factor	≥ 0.98					≥ 0.95		
Output	Voltage	220V / 230V / 240V AC ± 2%							
	Frequency	50 Hz ± 0.2% on Free running mode							
	Power Factor	0.7							
	Waveform	Pure Sine Wave							
	Distortion (THD)	< 3%(Linear Load); < 5%(Non-linear load)							
	Overload	> 110% 30 s. Switch to Bypass mode ; > 150% 300 ms. Switch to Bypass mode			105% - 130% 10 min. Switch to Bypass mode ; > 130% 1 s. Switch to Bypass mode				
	Efficiency	≥ 85%							
	Crest factor	3 : 1							
Battery	Voltage	36V DC	96V DC		240V DC				
	Charge Current Standard Unit	0.7A			1A			N.A.	
	Charge Current Long Time Unit	7.5A			5A				
Noise (1M)		45db			55db				
LCD and LED		Utility, Inverter, Bypass, Battery, Load, Battery Mode, Frequency UPS Fault Indicator							
Transfer Time (AC to DC)		Zero							
Protection		Electronic protection for Output Overload Short Circuit, Over Temperature, Battery Low and Overcharge							
Parallel Port					Parallel option for redundancy & load sharing				
Communication		RS 232 Interface for Power monitoring, SNMP compatible							
Ambient Temperature		0°C - 45°C							
Humidity		10% - 95% (Non-Condensing)							
Weight (kg) net / gross approx.		7.5/9	14/16	15/17	36/46		39/51	60/74	
Dimension (mm) WxDxH approx.		144 x 419 x 215	195 x 478 x 339		260 x 570 x 717		320 x 620 x 950		

Salient Features :

- Most advanced Digital Microprocessor based SPWM Technology using IGBT
- Wide Input Voltage Window
- Overall High Efficiency
- *LCD / LED Display*
- Provision for Internal Batteries
- Advanced Power Factor Correction
- EMI / RFI Filters at Input and Output
- Inbuilt Static Bypass
- SNMP Compatible
- Self diagnosis at UPS startup
- Advance Battery Management
- Suitable for long backup
- Lightening & Surge Protection

Rack Mount UPS Available

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Power Management Technology

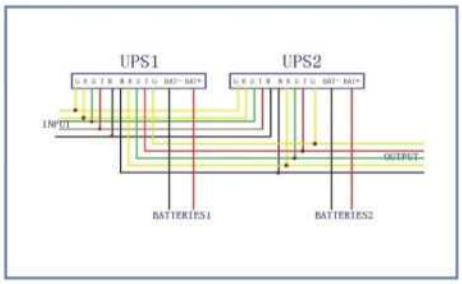
SNMP CARD FOR UPS MANAGEMENT

SNMP communication device is an advanced feature to allow UPS monitoring and management from virtually anywhere in the world via web browser or telnet connections. As soon as the UPS are connected to the network through SNMP adapters and their proper network settings are completed, the UPS device are ready to send all their parameters to this software program. It displays critical data informations belonging to UPS and updates information of power problems.

UPS MONITORING SOFTWARE

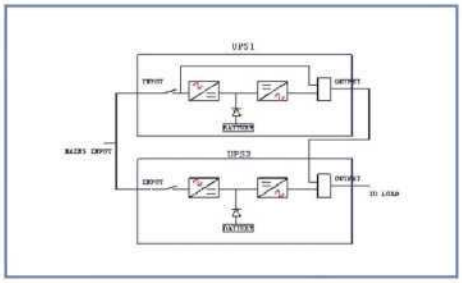
This software allows to monitor UPS Parameters through PC. This program provides communication between RS232 Port (COM PORT) of a PC and the RS232 Port of the UPS. The data that the UPS offers includes input voltage, output voltage, output frequency, input frequency, battery capacity percentage, load percentage, UPS internal temperature etc.

PARALLEL CONFIGURATION:



Parallel configuration system ensures more sensitive and reliable operation of the UPS to continue feeding the loads. In a parallel configuration output load is shared equally by 2 UPS units under healthy condition. Upon failure of UPS, the entire load it taken care off by UPS 2 & vice versa, without transferring the load to bypass and thus ensures a contmuos feeding of the load.

HOT STAND BY CONFIGURATION



Hot stand by configuration system ensures reliable operation of the UPS to continue feeding the critical / priority load. UPS 1 & UPS 2 delivers power to the critical load respectively under healthy conditions. In case of a critical UPS failure, critical load works on UPS 2throughATS switch.

MANUFACTURED BY:
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All India Network

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