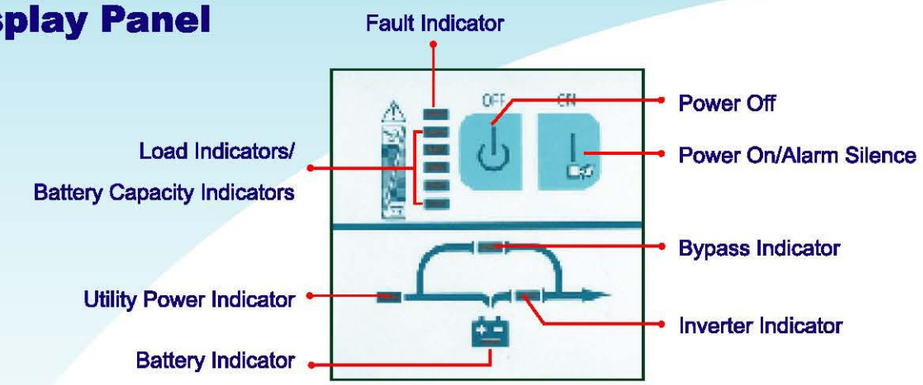
TITAN

Powerful On-Line UPS

THE EXPERTS' CHOICE

- Microprocessor Control Guarantees High Reliability
- PWM Technology with IGBTs
- Wide Input Voltage Range
- Communication Ports Selectable : Smart RS-232 and Intelligent Slot for AS-400, and SNMP Card
- Free Download Software from the Internet for Monitoring UPS Status
- Optional External Battery Socket Available for Extended Backup Time
- Cold Start Function
- Auto Self-testing System while Turning on the UPS
- Tower and Rack Mount Available
- Modular Design Available for Titan 1K/Titan 2K/Titan 3K
- Maintenance Bypass Switch and DSP Technology Application for Titan 6K/Titan 10K
- Two-Step Intelligent Charging Mode Available for Titan 6K/Titan 10K S Models
- N+X Parallel Redundancy and Capacity Expansion for Titan 6K/Titan 10K

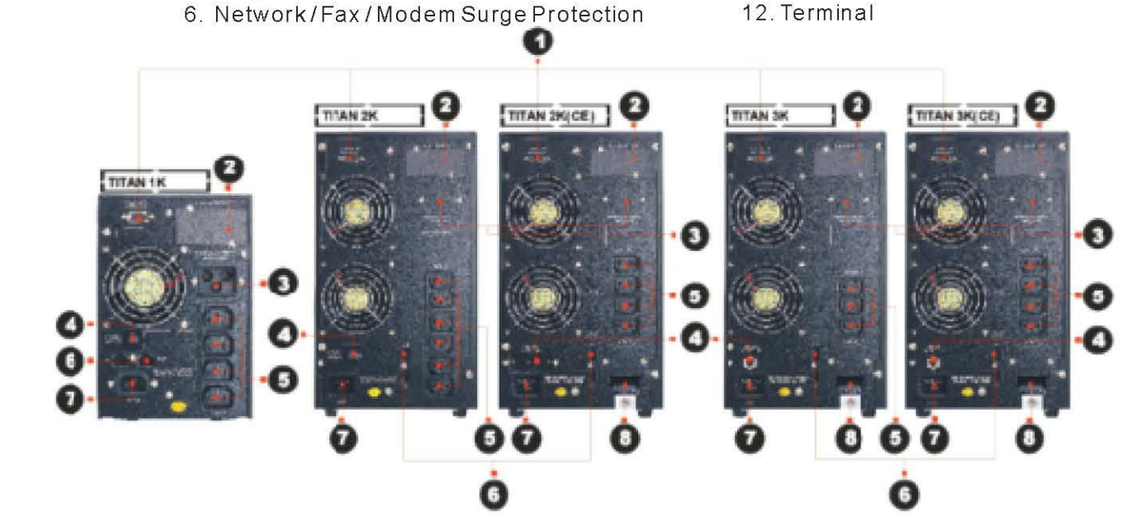
Display Panel

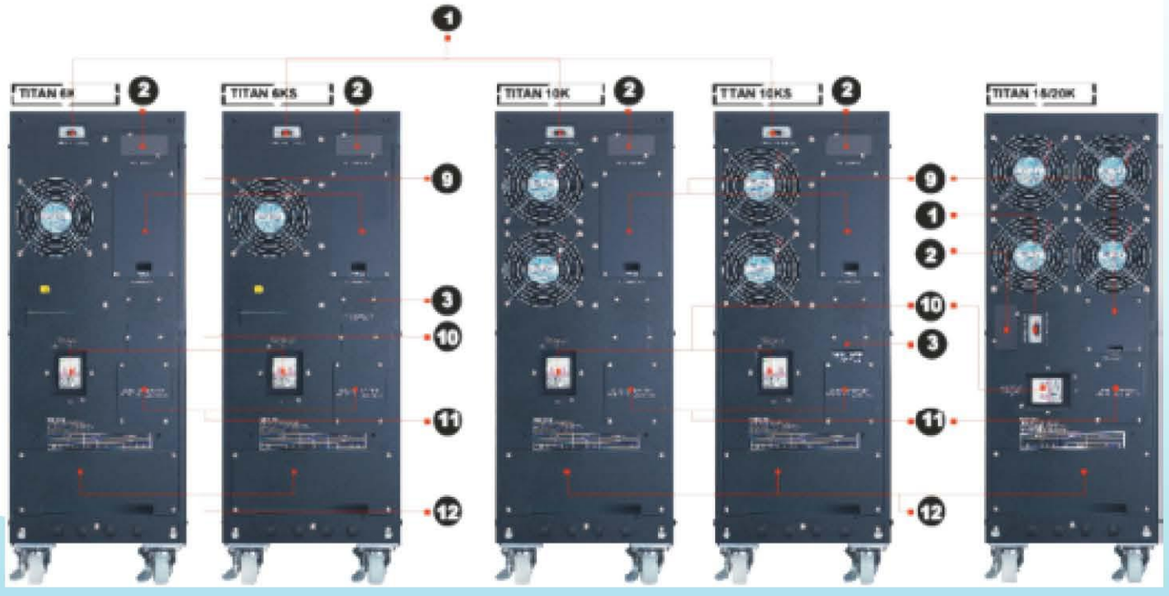


Back Panel

Back Panel for all models

1. Communication Port
2. Intelligent Slot
3. External Battery Socket (For S model ONIY)
4. Breaker
5. Output Socket
6. Network / Fax / Modem Surge Protection
7. Input Socket
8. Output Terminal Block
9. Parallel Port
10. Input Breaker
11. Maintenance Switch
12. Terminal





TITAN 110V / 115V / 120V ON-LINE UPS SPECIFICATION

MODEL			TITAN 1K	TITAN 1KS*	TITAN 1.5K	TITAN 1.5KS*	TITAN 3K	TITAN 3KS*
CAPACITY	VA/W		1000VA/700W		2000VA/1400W		3000VA/2100W	
INPUT	Voltage		60~138VAC					
	Voltage Range	Base on load percentage (100%-70% / 70%-60% / 60%-50% / 50%-40% / 40%-0%)						
		Low Line Transfer	80VAC/70VAC/70VAC/60VAC/60VAC					
		Low Line Comeback	85VAC/85VAC/75VAC/75VAC/65VAC					
		High Line Transfer	138VAC					
		High Line Comeback	133VAC					
	Frequency Range		46Hz ~ 54Hz / 56Hz ~ 64Hz					
	Phase		Single phase with ground					
	Power Factor		≧0.95					
OUTPUT	Voltage		110VAC/115VAC/120VAC					
	Voltage Regulation		±2%					
	Frequency (Synchronized range)		46Hz ~ 54Hz / 56Hz ~ 64Hz					
	Frequency (Battery Mode)		50/60Hz ± 0.2 Hz					
	Current Crest Ratio		3:1					
	Harmonic Distortion		≦5% THD (Linear Load) ≦10% THD (Non-Linear Load)					
	Output Waveform		Pure Sinewave					
EFFICIENCY	Tower Case	To AC Mode	85%		83%		86%	
		To Battery Mode	83%		82%		83%	
	Rack Case	To AC Mode	85%		83%		86%	
		To Battery Mode	83%		82%		83%	
BATTERY	Tower Case	Battery Type	12V/7.2Ah	Depending on thecapacity of external batteries	12V/7.2Ah	Depending on thecapacity of external batteries	12V/7.2Ah	Depending on thecapacity of external batteries
		Numbers of Batteries	3		4		8	
		Backup Time (Full Load)	＞5 minutes		＞5 minutes		＞5 minutes	
		Recharge Time	8 hours to 90%		8 hours to 90%		8 hours to 90%	
		Charging Current (Max.)	1.0A	7.8A	1.0A	7.8A	1.0A	7.8A
		Charging Voltage	41.1Vdc ± 0.6V		54.9Vdc ± 0.4V		110Vdc ± 0.4V	
	Rack Case	Battery Type	12V/7.2Ah	Depending on thecapacity of external batteries	12V/7.2Ah	Depending on thecapacity of external batteries	12V/7.2Ah	Depending on thecapacity of external batteries
		Numbers of Batteries	3		4		8	
		Backup Time (Full Load)	＞5 minutes		＞5 minutes		＞5 minutes	
		Recharge Time	8 hours to 90%		8 hours to 90%		8 hours to 90%	
		Charging Current (Max.)	1.0A	7.8A	1.0A	7.8A	1.0A	7.8A
		Charging Voltage	41.1Vdc +0.6V/-0.8V		54.9Vdc +0.4V		110Vdc ± 0.4V	
		External Battery Rack	N/A	12V/7.2Ahx6	N/A	12V/7.2Ahx8	N/A	12V/7.2Ahx8
TRANSFER TIME	AC to DC		Zero					
	Inverter to Bypass		2.5ms (Typical)				Zero	
INDICATOR -	Status		Load Level / Battery Level / Battery Mode / AC Mode / Bypass Mode / Fault					
AUDIBLE ALARM	Battery Mode		Sounding every 4 seconds					
	Low Battery		Sounding every second					
	Overload		Sounding twice every second					
	Fault		Continuously Sounding					
DIMENSION	Tower Case (DxWxH) mm		400x145x220		465x145x220		465x192x340	
	Rack Case (DxWxH) mm		482.6x450x87(w. battery)		482.6x450x88		482.6x450x88	
WEIGHT	Tower Case		13 kgs	7 kgs	17.5 kgs	9 kgs	33 kgs	16 kgs
	Rack Case	UPS Case	15.3 kgs	9.1 kgs	19.3 kgs	11.5 kgs	11.2 kgs	12.3 kgs
		Battery Pack	N/A	20.5 kgs	N/A	25.3 kgs	N/A	25.3 kgs
ENVIRONMENT	Operating Temperature		0-40° C					
	Relative Humidity		20-90% (Non-Condensing)					
	Noise Level		＜45dB @ 1Meter		＜45dB @ 1Meter		＜50dB @ 1Meter	
INTERFACE	Smart RS-232		Windows 98/NT/2000/XP/2003, Linux, Sun Solaris, IBM Aix, Compaq True64, SGI IRIX, FreeBSD, HP-UX, and MAC					
	SNMP (option)		Power management from SNMP manager and web browser					

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Titan Series UPS make use of the unique AC-DC conversion circuitry to detect the electricity current and voltage output of utility power supply. The current is input via the high frequency PWM to maintain uniform wave form and phase in line with the voltage, so as to attain high input power factor over 95% and avoid generating comparatively significant harmonic interference on the power network. With the use of the outstanding IGBT as the power conversation component, the operating frequency of the Inverter of UPS is capable of reaching tens of KHz, due to the high frequency operating characteristics of IGBT. Higher working efficiency of the inverter alwo improves the overall efficiency of UPS. Moreover, higher inversion frequency reduces the noise of the inverter as well.

TITAN RACK

▶TR 1K(S)

▶TR 2K(S)/3K(S)

▶TR 6K

Microprocessor Control:
By means of innovative software control programs, the complicated hardware circuitry is inlaid in the powerful microprocessor. Apart from reduced size, it also lowers the defective rate of UPS.

Communication Ports:
Offering three different communication ports for user selection: RS-232, SNMP slot and AS-400 slot. Through either one of them, the user can control and monitor UPS status easily.

Extended Backup Time:
Long Backup Models are allowed to connect external batteries to get prolonged backup time. It is particularly suitable for use in areas where power supply is consistently in shortage.

Cold Start Function:
The unique Cold Start Function elaborates the emergency standby capability of UPS to a sufficient extent.

Auto Self-Testing System:
When the UPS is powered on, it immediately performs an inspection of the components such as the inverter and the battery as well as the load, so as to detect any problem in time to avoid causing any negligence or loss.

Tower And Rack Mount Available:
The tower-designed models occupy the minimum footprint. And the rack mount models are ideal for rack-optimized servers.

Modular Design:
Titan 1-3KVA is the modular design UPS. There are many small modular boards on the Power Board. They are Fan module, Charger module, Power Supply module, DC-DC module, PFC module and PWM Driver module etc. The modular design would help technicians easily to maintain and repair the UPS and the product quality will be more reliable.

DSP Technology:
Titan 6K/10K adopts DSP technology. DSP is applied to replace bulky transformers, relays and mechanical bypass switches with smaller, more intelligent functional equivalents. DSP implementations also facilitate other design benefits, including increased power efficiency and increased power density - smaller product footprint with less weight.

Two-step Charging System:
Two steps external charger boards are applying to the Titan 6-10KVA S models. The intelligent two-step charger will help to reduce the charging time than the cheaper constant voltage charger.

N+X Parallel Redundancy and Capacity Expansion:
Titan 6K/10K provides the capacity expansion which is capable to parallel up to 3 UPS systems, this system can be connected in parallel to realize output power sharing and power redundancy. In case one unit fails or be shut down for maintenance, the power is still operating without any interrupting to supply the load. Then the total load will be automatically transferred to the remaining units.

TITAN 220V/230V/240V ON-LINE UPS SPECIFICATION

MODEL			TITAN- 1K	TITAN-1KS*	TITAN - 2K	TITAN - 2KS*	TITAN - 3K	TITAN - 3KS*	TITAN - 6K	TITAN - 6KS*	TITAN-10K	TITAN-10KS*
CAPACITY	VA/W		1000VA/700W		2000VA/1400W		3000VA/2100W		6000VA/4200W		10000VA/7000W	
INPUT	Voltage Range		Base on load percentage (100%-80% / 80%-70% / 70%-60% / 60%-0%)									
		Line Low Transfer	160VAC/140VAC/120VAC/110VAC± 5VAC (Customized)						176 ±3% VAC			
		Line Low Comeback	175VAC± 5VAC						185 ± 3% VAC			
		Line High Transfer	300VAC± 5VAC						276 ± 3% VAC			
		Line High Comeback	285VAC± 5VAC						266 ± 3% VAC			
	Frequency Range		46Hz ~ 54Hz						46Hz ~ 54Hz			
	Phase		Single phase with ground						Single phase with ground			
	Power Factor		≧0.95						≧0.98			
OUTPUT	Voltage		220VAC/230VAC/240VAC						220/230/240VAC			
	Voltage Regulation		± 2% (Customized)						± 1%			
	Frequency (Synchronized Range)		46~54Hz						46~54Hz			
	Frequency (Battery Mode)		50 ± 0.2 Hz						50Hz ± 0.05Hz			
	Current Crest Ratio		3:1						3:1			
	Harmonic Distortion	Tower Case	≦3% THD (Linear Load) ≦6% THD (Non-Linear Load)		≦4% THD (Linear Load) ≦7% THD (Non-Linear Load)				≦ 2% THD (Linear Load) ≦ 6% THD (Non-Linear Load)			
		Rack Case	≦4% THD (Linear Load) ≦7% THD (Non-Linear Load)						N/A			
	Output Waveform		Pure Sinewave									
EFFICIENCY	To AC Mode		85%		85%		88%		> 88%			
	To Battery Mode		83%		83%		83%					
BATTERY	Tower Case	Battery Type	12V/7.2Ah	Depending on the capacity of external batteries	12V/7.2Ah	Depending on the capacity of external batteries	12V/7.2Ah	Depending on the capacity of external batteries	12V/7.2Ah	Depending on the capacity of external batteries	12V/9Ah	Depending on the capacity of external batteries
		Numbers of Batteries	3		8		8		20		20	
		Backup Time (Full Load)	>5 minutes		>9 minutes		>5 minutes		8 minutes		5 minutes	
		Recharge Time	5 hours to 90%		5 hours to 90%		5 hours to 90%		7 hours to 90%		8 hours to 90%	
		Charging Current (Max.)	1.0A	7A	1.0A	9.6A	1.0A	9.6A	2A	4.2A	2A	4.2A
		Charging Voltage	41.1Vdc ± 0.6V		110Vdc ± 0.4V				274Vdc ± 1V			
	Rack Case	Battery Type	12V/7.2Ah	Depending on the capacity of external batteries	12V/7.2Ah	Depending on the capacity of external batteries	12V/7.2Ah	Depending on the capacity of external batteries	12V/7.2Ah	N/A		
		Numbers of Batteries	3		8		8		20			
		Backup Time (Full Load)	>5 minutes		>9 minutes		>5 minutes		>8 minutes			
		Charging Current (Max.)	1.0A	7A	1.0A	9.6A	1.0A	9.6A	2A			
		Charging Voltage	41.1Vdc ± 0.6V		110Vdc ± 0.4V				274Vdc ± 0.5V			
TRANSFER TIME	AC to DC		Zero									
	Inverter to Bypass		2.5ms (Typical)						Zero			
INDICATOR	Status		Load Level / Battery Level / Battery Mode / AC Mode / Bypass Mode / Fault									
AUDIBLE ALARM	Battery Mode		Sounding every 4 seconds									
	Low Battery		Sounding every second									
	Overload		Sounding twice every second									
	Fault		Continuously Sounding									
DIMENSION	Tower Case (DxWxH)mm		400x145x220		460x192x340				570x260x717			
	Rack Case (DxWxH) mm	Rack UPS	482.6x450x87 (w. battery)		482.6x450x87				600x482.6x132	N/A		
		Battery Pack	482.6x450x87		482.6x450x87				600x482.6x132			
WEIGHT	Tower Case (kgs)		14 kgs	7 kgs	34.5 kgs	15 kgs	35.5 kgs	16 kgs	90 kgs	35 kgs	93 kgs	38 kgs
	Rack Case (kgs)		16.3 kgs (w. battery)		10.3 kgs	11.5 kgs	11.2 kgs	12.3 kgs	18.3 kgs	N/A		
ENVIRONMENT	Operating Environment		0-40° C									
	Relative Humidity		20-90% (NON-CONDENSING)									
	Noise Level		<45dB @ 1 Meter		<50dB @ 1 Meter				<55dB @ 1 meter			
INTERFACE	Smart RS-232		Software supports Windows 98/NT/2000/XP/2003, Linux, Sun Solaris, IBM Aix, Compaq True64, SGI IRIX, FreeBSD, HP-UX, and MAC									
	SNMP (option)		Power management from SNMP manager and web browser									

CE