Tacoma Series

1 / 1 or 3 / 1 Input Phase Selectable Online UPS



TAC-10K31 / 20K31 TAC-6 / 10K(L)

FEATURES

- **6KVA ~ 20KVA DSP, true double conversion UPS**
  DSP control technology greatly reduces harmonic distortion in non-linear loads without manual intervention for advanced maintenance. True double conversion UPS provides clean, high quality power, ideal for sensitive applications.
- **High efficiency mode (ECO)**
  Energy-saving, Efficiency Corrective Optimizer(ECO) mode, allows efficiency up to 98% (TAC-10K31 & TAC-20K31) and 96% (TAC-6K(L) & TAC-10K(L)) for more cost effective UPS system.
- **Frequency converter mode**
  Input / Output accepts different frequency.

APPLICATIONS

- Server Rooms
- Office Equipment
- Telecom & Networking
- Automation Equipment



TACOMA ON-LINE UPS SPECIFICATION

MODEL	TAC-6K	TAC-6KL	TAC-10K	TAC-10KL
Capacity	6 KVA / 5.4 KW	6 KVA / 5.4 KW	10 KVA / 9 KW	10 KVA / 9 KW
INPUT				
Input Voltage Range	110 ~ 276 VAC			
Frequency Range	45 ~ 55 Hz / 54 ~ 66 Hz			
Phase	Single phase with ground			
Power Factor	> 0.99 @ 100% load			
OUTPUT				
Voltage	208 / 220 / 230 / 240 VAC			
Current Crest Ratio	3:1			
Harmonic Distortion	≤ 2% @ linear load / ≤ 5% @ non-linear load			
Output Waveform	Pure sine wave			
Parallel	Up to 4			
EFFICIENCY				
Line Mode	> 92% @ full load and battery fully charged			
BAT Mode	> 92% @ full load and 12 VDC / battery			
BATTERY				
Number of Internal Batteries Per Set	20 pcs	Depend on the capacity of external batteries	20 pcs	Depend on the capacity of external batteries
Battery Type	12 VDC / 7.2 Ah		12 VDC / 9 Ah	
Backup Time	> 5 minutes		> 5 minutes	
Recharge Time	5 hours charge to 90%		5 hours charge to 90%	
Charging Current (max)	1.2 A	4.0 A	1.2 A	4.0 A
Rated Battery Voltage	240 VDC			
TRANSFER TIME				
LINE < -- > BAT	0ms			
INV < -- > BYPASS	0ms			
INDICATORS				
LCD Panel	Load level / battery voltage / battery mode / AC mode / bypass mode information			
MANAGEMENT				
RS-232 / USB Software	Software supports windows family / Linux / Sun Solaris / IBM / Aix / CompaqTrue64 / SGIIRIX / FreeBSD / HP-UX / MAC			
Intelligent Slot	SNMP / AS400 / relay card			
PHYSICAL				
Dimension (W x H x D)	260 x 708 x 550 / 10.2 x 27.9 x 21.7			
Net Weight (kg / lb)	90 / 198.5	40 / 88.2	93 / 205.1	41 / 90.4

- **Input THDi < 5% and output THDv < 2%**
  Low Total Harmonic Distortion (THD) for low electrical distortion to provide pure power for sensitive applications and other critical applications.
- **Fan speed controller based on UPS load**
  Fan automatically turns on based on UPS load and adjusts speed based on load.
- **N + X Parallel redundancy**
  Connect up to 4 units for parallel redundancy.
  Extendable runtime feature
  Long back-up time models available for extended run time and larger charger for critical equipment.
- **SNMP slot & card (Optional)**
  SNMP card allows easy monitoring of multiple UPS control and monitoring through RJ-45 network connection for remote management, warning alarms, historic data log, and password security protection.
- **Emergency Power Off (EPO)**
  EPO safety feature allows immediate power down of UPS and equipment in case of emergency to protect connected equipment.
- **AC input phase selectable: 1 / 1 or 3 / 1 (TAC-10K31 & TAC-20K31 models)**
  Selectable input phase for high flexibility in single phase and three-phase setups.
- **RS-232 and USB ports for power management software**
  Easily monitor the current status of the UPS with WinPower software for control and monitor multiple UPS.
- **Output voltage regulation < 1%**
  Provides quality, stable output power.
- **0.9 High output power factor**
  The 0.9 output power factor provides higher performance and efficiency to critical applications.

TACOMA ON-LINE UPS SPECIFICATION

MODEL	TAC-10K31	TAC-20K31
Capacity	10 KVA / 9 KW	20 KVA / 18 KW
INPUT		
Input Voltage Range	110 ~ 276 VAC depends on load level for single phase input / 190 ~ 478 VAC depends on load level for three phase input	
Frequency Range	45 ~ 55 Hz / 54 ~ 66 Hz	
Phase	Three phase with ground (combo)	
Power Factor	> 0.99@ 100% load	
OUTPUT		
Voltage	200 / 208 / 220 / 230 / 240 VAC	
Current Crest Ratio	3:1	
Harmonic Distortion	≤ 2% @ linear load / ≤ 5% @ non-linear load	
Output Waveform	Pure sine wave	
Parallel	Up to 4	
EFFICIENCY		
Line Mode	> 94% @ full load and battery full charged	
BAT Mode	> 93% @ full load and 12 VDC / battery	
BATTERY		
Number of Internal Batteries Per Set	24 pcs x 1 group	24 pcs x 2 groups
Battery Type	12 VDC / 9 Ah	12 VDC / 9 Ah
Backup Time (Full Load)	> 5 minutes	> 5 minutes
Recharge Time	5 hours charge to 90%	
Charging Current (Max)	2 A (Expandable)	4 A (Expandable)
Rated Battery Voltage	288 VDC	
TRANSFER TIME		
LINE < -- > BAT	0ms	
INV < -- > BYPASS	0ms	
INDICATOR		
LCD	Load level / battery voltage / battery mode / AC mode / bypass mode information	
MANAGEMENT		
RS-232 / USB	Software supports windows family / Linux / Sun Solaris / IBM / Aix / CompaqTrue64 / SGIIRIX / FreeBSD / HP-UX / MAC	
Intelligent Slot	SNMP / AS400 / relay card	
PHYSICAL		
Dimension (W x H x D) (mm / in)	350 x 890 x 650 / 13.8 x 35 x 25.6	
Net Weight (kg / lb)	115 / 253.6	183 / 403.5

Ultima Plus Series

Double Conversion Online UPS With DSP Technology



ULT-P6KL / P10KL ULT-P6K / P10K

FEATURES

- Online double conversion technology
- DSP technology guarantees high performance
- Pure sine wave output
- 1.0 output power factor
- High efficiency up to 94%
- 3-Stage extendable charging design for optimized battery performance
- Generator compatible
- Wide input voltage range (110 ~ 300 VAC)
- 0.99 active input power factor correction
- 50 / 60 Hz frequency converter mode
- Emergency power off function (EPO)
- Build-in maintenance bypass switch
- Optional N + X parallel redundancy
- Optional OVCD (over voltage cut-off device) protection

APPLICATIONS

- Server Rooms
- Automation Equipment
- Telecom & Networking
- Office Equipment



ULTIMA PLUS ON-LINE UPS SPECIFICATION

MODEL	ULT-P6K	ULT-P6KL	ULT-P10K	ULT-P10KL
Capacity	6000 VA / 6000 W		10000 VA / 10000 W	
INPUT				
Nominal Voltage	208 / 220 / 230 / 240 VAC			
Voltage Range	176 ~ 300 VAC at 100% load ; 110 ~ 300 VAC at 60% load			
Frequency Range	46 ~ 54 Hz or 56 ~ 64 Hz			
Power Factor	≥ 0.99 @ 100% load			
OUTPUT				
Voltage	208 / 220 / 230 / 240 VAC			
Current Crest Ratio	3:1(max.)			
Harmonic Distortion	≤ 1% THD (linear load)	≤ 1% THD (linear load)	≤ 1% THD (linear load)	≤ 1% THD (linear load)
Transfer Time	Zero			
EFFICIENCY				
Line Mode	94%			
Battery Mode	91%			
BATTERY				
Battery Type	12 V / 7 Ah (9 Ah optional)	Depending on applications	12 V / 9 Ah	Depending on applications
Numbers	16 pcs	16 ~ 20 (Programmable)	16 pcs	16 ~ 20 (Programmable)
Typical Recharge Time	8 hours recover to 90% capacity	Depending on ext. Batt. Capacity	8 hours recover to 90% capacity	Depending on ext. Batt. Capacity
Charging Current	Default: 1.0 A Max.: 2.0 A	Max. 4.0 A	Default: 1.0 A Max.: 2.0 A	Max. 4.0 A
Float Charging Voltage	218.4 VDC ±1%	273 VDC ±1% (Based on 20 pcs batteries)	218.4 VDC ±1%	273 VDC ±1% (Based on 20 pcs batteries)
INDICATOR				
LCD Panel	UPS status, load level, battery level, input / output voltage, discharge timer, and fault conditions			
MANAGEMENT				
Smart RS-232 / USB	Supports Windows® 2000 / 2003 / XP / Vista / 2008 / 7 / 8 / 10, Linux, Unix and MAC			
Optional SNMP	Power management from SNMP manager and web browser			
PHYSICAL				
Dimension (D x W x H) (mm / in)	369 x 190 x 688 / 14.5 x 7.5 x 27.1	369 x 190 x 318 / 14.5 x 7.5 x 12.5	442 x 190 x 688 / 17.4 x 7.5 x 27.1	442 x 190 x 318 / 17.4 x 7.5 x 12.5
Net Weight (kg / lb)	54 / 119.1	13 / 28.7	66 / 145.5	16 / 35.3

Ultima W Series

Double Conversion Online Tower UPS



ACCESSORY ITEM



MBS-123TW

FEATURES

- True double-conversion technology
- Microprocessor control optimizes reliability
- Input power factor correction
- Pure sine wave output
- Wide input voltage (110 ~ 300 VAC)
- Converter mode available
- ECO mode for energy saving
- Generator compatible
- Charger capacity expandable up to 6 A for long runtime (L) models
- Comprehensive display allows easy monitoring and access of UPS status
- Smart SNMP (card option) simultaneously works well with USB or RS-232 together
- External PDU / maintenance bypass switch (Optional)

APPLICATIONS

- Server Rooms
- Office Equipment
- Telecom & Networking
- Security System



ULTIMA W ON-LINE UPS SPECIFICATION

MODEL		ULT-W1K(L)	ULT-W2K(L)	ULT-W3K(L)
Capacity		1000 VA / 800 W	2000 VA / 1600 W	3000 VA / 2400 W
INPUT				
Voltage		200 / 208 / 220 / 230 / 240 VAC		
Voltage Range		160 ~ 280 VAC at 100% load; 110 ~ 300 VAC at 50% load		
Frequency Range		40 ~ 70 Hz		
OUTPUT				
Voltage		200 / 208 / 220 / 230 / 240 VAC		
Frequency Range		47 ~ 53 Hz or 57 ~ 63 Hz (synchronized range)		
Current Crest Ratio		3:1		
Harmonic Distortion		≤ 3% THD (linear load) /≤ 6% THD (non-linear load)		
Transfer Time		Zero (AC mode to battery mode), typical 4ms (inverter to bypass)		
EFFICIENCY				
To AC Mode		88%		90%
To Battery Mode		83%	87%	88%
BATTERY				
Standard Model	Type & Number	12 V / 9 Ah x 2	12 V / 9 Ah x 4	12 V / 9 Ah x 6
	Typical Recharge Time	4 hours recover to 90% capacity		
	Charging Current (Max.)	1.0 A		
	Charging Voltage	27.4 VDC ±1%	54.7 VDC ±1%	82.1 VDC ±1%
Long Run (L) Model	Charging Current (Max.)	1.0 A / 2.0 A / 4.0 A / 6.0 A		
LCD Display		Load level, battery level, AC mode, battery mode, bypass mode, and fault indicators		
MANAGEMENT				
Smart RS-232 / USB		Supports Windows® 2000 / 2003 / XP / Vista / 2008 / 7 / 8 / 10, Linux, Unix and MAC		
Optional SNMP		Power management from SNMP manager and web browser		
PHYSICAL				
Standard Model	Dimension (D x W x H) (mm / in)	282 x 145 x 220 / 11.1 x 5.7 x 8.7	397 x 145 x 220 / 15.6 x 5.7 x 8.7	421 x 190 x 318 / 16.6 x 7.5 x 12.5
	Net Weight (kg / lb)	9.8 / 21.6	17 / 37.5	27.6 / 60.9
Long Run (L) Model	Dimension (D x W x H) (mm / in)	282 x 145 x 220 / 11.1 x 5.7 x 8.7	397 x 145 x 220 / 15.6 x 5.7 x 8.7	
	Net Weight (kg / lb)	4.1 / 9.0	6.8 / 15.0	7.4 / 16.3

Ultima W Series

Double Conversion Online Tower UPS



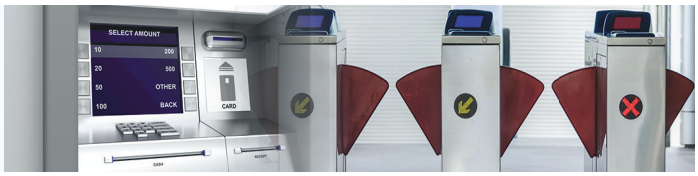
ULT-W6KL / ULT-W10KL ULT-W6K / ULT-W10K

FEATURES

- True double-conversion technology
- Microprocessor control optimizes reliability
- Input power factor correction
- Pure sine wave output
- Wide input voltage (110 ~ 300 VAC)
- Converter mode available
- Generator compatible
- Emergency power off (EPO) function
- Charger capacity expandable up to 6 A for long runtime (L) models
- Smart SNMP (card option) simultaneously works well with USB or RS-232 together
- Comprehensive display allows easy monitoring and access of UPS status
- External PDU / maintenance bypass switch (Optional)

APPLICATIONS

- Server Rooms
- Professional Workstation
- Telecom & Networking
- Office Equipment



ULTIMA W ON-LINE UPS SPECIFICATION

MODEL	ULT-W6K	ULT-W6KL(D)	ULT-W10K	ULT-W10KL(D)
Capacity	6000 VA / 4800 W		10000 VA / 8000 W	
INPUT				
Nominal Voltage	208 / 220 / 230 / 240 VAC			
Voltage Range	176 ~ 300 VAC at 100% load; 110 ~ 300 VAC at 50% load			
Frequency Range	46 ~ 54 Hz or 56 ~ 64 Hz			
OUTPUT				
Voltage	208 / 220 / 230 / 240 VAC & 120 VAC available in (D) model			
Frequency Range	46 ~ 54 Hz or 56 ~ 64 Hz (synchronized range)			
Current Crest Ratio	3:1 (max.)			
Harmonic Distortion w / o ISO	≤ 3% THD (linear load) / ≤ 5% THD (non-linear load)			
Transfer Time	Zero			
EFFICIENCY				
Line Mode w / o ISO	92%		93%	
Battery Mode w / o ISO	90%		91%	
BATTERY				
Battery Type	7 Ah (9 Ah optional)	Depending on applications	9 Ah	Depending on applications
Numbers	16 pcs	16 ~ 20 pcs (Programmable)	16 pcs (20 pcs optional)	16 ~ 20 pcs (Programmable)
Typical Recharge Time	8 hours recover to 90% capacity	Depending on the capacity of external batteries	8 hours recover to 90% capacity	Depending on the capacity of external batteries
Charging Current	Default:1.0 A ±10%	1 / 2 / 4 / 6 A @ 16 pcs	Default:1.0 A ±10%	1 / 2 / 4 / 6 A @16 pcs
Float Charging Voltage	218.4 VDC ±1%	273 VDC ±1% (Based on 20 pcs batteries)	218.4 VDC ±1%	273 VDC ±1% (Based on 20 pcs batteries)
INDICATOR				
LCD Panel	Load level, battery level, AC mode, battery mode, bypass mode, and fault indicators			
MANAGEMENT				
Smart RS-232 / USB	Supports Windows® 2000 / 2003 / XP / Vista / 2008 / 7 / 8 / 10, Linux, Unix and MAC			
Optional SNMP	Power management from SNMP manager and web browser			
PHYSICAL				
Dimension (D x W x H) (mm / in) w / o ISO	369 x 190 x 688 / 14.5 x 7.5 x 27.1	369 x 190 x 318 / 14.5 x 7.5 x 12.5	442 x 190 x 688 / 17.4 x 7.5 x 27.1	442 x 190 x 318 / 17.4 x 7.5 x 12.5
UPS Net Weight (kg / lb) w / o ISO	61 / 134.5	12 / 26.5	66 / 145.5	16 / 35.3