



MANUAL UPS



LEGAL GUARANTEES

In accordance with Law 1480 of 2011 Consumer Statute and Decree 735 of 2013 Legal Guarantee:

- To request a guarantee, the customer is obliged to report the damage to the product, make it available to the company at the guarantee service point at AV CL 80 69-70 Unit 1C, and indicate the invoice number to determine your purchase date.
- The delivery of the repaired product will be delivered to the customer at the warranty service point, unless the customer requests to send it to a different destination, in which case the customer must assume the cost of freight.
- In any case, when a product repair guarantee is denied or approved, the respective written report must be issued supporting the evidence that justifies the decision.
- In no case will Tb Plus Energy proceed with the replacement of the product given under warranty since, if the repair does not proceed, a credit note will be issued which covers the acquisition of another new product or service or the return of the money paid.
- If the failure repeats once the product has been repaired, only the credit note applies which covers the acquisition of another new product or service or the return of the money paid.
- When the customer opts for a refund of the money, it will be for the amount of the sale price. For this purpose, they must send a communication signed by the legal representative, which indicates the bank details to make the return, the which will be effective within fifteen (15) business days after receipt of the return request.
- The repair of the product will be carried out within 30 business days following the claim, which is carried out by filling out the GP-F-018 Warranty Form, which is completed in the PQRF Guarantees tab on the WEB page www.tbplusenergy.com or at the following link:

https://forms.office.com/Pages/ResponsePage.aspx?id=K987JK0Nuke_1n30RF9URwiKWAfZovhDrWEVYGmhK95UOVZYUFBWMUpaQVZBM0hIS0RKUjdLSkdIWS4u
- Once the guarantee form has been completed, the client has 15 days to make it available at the guarantee service point.
- The product manuals in which proper use, installation instructions and periods covered by the warranty are reported are found in the PQRF Product Manuals tab on the website www.tbplusenergy.com.

TECHNICAL SPECIFICATIONS

Product description

Uninterruptible Power Systems (UPS), also known as UPS (Uninterruptable Power Supply) are responsible for optimizing the use of electrical energy to various devices during a power outage.

Main properties Monophase UPS

- Online double conversion.
- Wide input voltage range (60 - 150 Vac).
- Input power factor 0.99 (with PFC).
- Output power factor 1.0.
- The charging current of the standard model can be charged 1A.
- 50Hz/60Hz frequency converter mode.
- Emergency power off (EPO) function.
- Operation in ECO mode for energy saving (ECO).
- Compatible generator.
- Multiple SNMP + USB + RS232 communications.
- Intelligent battery charging design to optimize battery performance.
- Selectable output voltage: 100*, 110*, 115, 120, 125 vac.

TECHNICAL VARIABLES

Main properties Biphasic UPS

- N + λ parallel redundancy.
- Online double conversion with DSP control.
- Input current harmonic: <3%.
- Optimization battery group, battery quantity: 16/18/20 pieces optional.
- High output power factor at PF0.9.
- Wide input voltage range: 72 - 159 vac.
- Wide input frequency range $50 \pm 10\%$ or $60 \pm 10\%$ Hz.
- Support generator input.
- Supports economical operation mode (ECO).
- Self-test at startup.
- Options: SNMP card / dry contact card / parallel card.
- Fresh start.

TECHNICAL VARIABLES (MONOPHASE)

UDC MODEL		UDC9601S One		UDC9602S One		UDC9603S One	
Capacity (VA/Watts)		1000VA / 1000W		2000VA / 2000W		3000VA / 3000W	
Phase		Single phase with ground with ground					
INPUT							
Nominal Voltage		120Vac					
Operating voltage range	Low line transfer	90Vac @100%load	60Vac @60%-0%load	60-90VAC@Linear adjustment		(Ambient Temp. <35°C)	
	Low line comback	100Vac @100%load	70Vac @60%-0%load	70-100VAC@Linear adjustment		(Ambient Temp. <35°C)	
	High line transfer	150Vac ± 5%					
	High line comback	140Vac ± 5%					
Input Voltage Range		60-150Vac @ 60% load 90-150Vac @ 100% load					
Operating frequency range		40-70Hz					
Power Factor		≥ 0.99 @ nominal voltage(100% load)					
THDI		≤5% (@100%Linear load,@ nominal voltage)					
Generator input		Support					
Plug Type		NEMA 5-15P		NEMA 5-20P		NEMA 5-30P	
OUTPUT							
Output Voltage		100*/110*/115/120/125 Vac					
Power Factor		1					
Voltage Regulation		± 1%					
Outlet Type		NEMA 5-15R 4pcs		NEMA5-20R 4pcs		NEMA5-20R 4pcs +1PCS 5-L30R	
Frequency	Line mode	47-53Hz or 57-63Hz					
	Bat. mode	(50/60 ± 0.1)Hz					
Crest Factor		3:1					
Harmonic Distortion (THDv)		≤3% THD (Linear load)					
		≤5% THD (Non-linear load)					
Waveform		Pure Sinewave					
Transfer Time	AC mode <-> Batt. Mode	Zero					
	Inverter <-> Bypass	4ms(Typical)					
EFFICIENCY							
AC Mode		90.8%		89.21%		92.31%	
Battery Mode		85.773%		86.78%		87.2%	
ECO Mode		95.26%		95.65%		98.41%	
VRLAB BATTERY							
Battery Type		12V7AH		12V 7AH		12V9AH	
Numbers				4		6	
Backup time		Full load according to actual measurement (only refers to standard UPS) , As for long backup UPS, the backup time is determined by the capacity of battery.					
Typical recharging time(Standard mode)		8 hours recover to 90% capacity					
Charging voltage		41Vdc ± 1%		82,1Vdc ± 1%		82.1Vdc ± 1%	
Charging current(max.)		1A					
SYSTEM FEATURES							
Line mode	Ambient temp.<35°C	105%~110%: UPS after 10 minutes transfer to bypass 110%~130%: UPS after 1 minute transfer to bypass 130%~150%:UPS after 5 seconds transfer to bypass >150%:UPS immediately transfer to bypass					
	35°C<ambient Temp.<40°C	105%~110%: UPS after 1minute transfer to bypass 110%~130%: UPS after 5 seconds transfer to bypass >130%: UPS immediately transfer to bypass					
Battery mode	Ambient temp.<40°C	105%~110%: UPS after 1minute shut down 110%~130%: UPS after 5 seconds shut down >130%: UPS immediately shut down					
Short circuit		Hold whole system					
Overheat		Line mode: Switch to bypass; Backup mode: Shut down UPS immediately					
Battery low		Alarm and switch off					
EPO (optional)		Shut down UPS immediately					
Audible & Visual alarms		Line failure, Battery low, Over load, System fault					
Communication interface		USB, RS232, MINI SNMP SLOT					
PHYSICAL							
Dimension W × H × D (mm)		144*209*399		191*337*460		191*337*460	
Net Weight (kg)		12.6		24.3		26.9	
ENVIRONMENT							
Operating temperature		0-40°C					
Storage temperature		-25°C - 55°C					
Humidity range		20-90% RH @ 0-40°C (Non-condensing)					
Altitude		<1500m					
Noise Level		<55dB(1m)					
Environmental		RoHS2.0 compliant					
STANDARDS							
Safety		UL 1778, cUL Listed					
EMC		FCC DoC Class A					
IP code		IP20					

* Derate to 80% of capacity when the output voltage is adjusted to 100/110VAC

TECHNICAL VARIABLES (BIPHASIC)

Model	MEMO S/H 6KVA		MEMO S/H 10KVA
Capacity	6KVA / 5.4KW		10KVA / 9KW
INPUT			
Phase	Single Phase		
Rated Voltage	208Vac		
Voltage Range	176Vac-300Vac at 100% load, 110Vac-300Vac at 50% load		
Frequency Range	50 ± 10% or 60 ± 10% Hz		
Power Factor	≥0.99		
Current THDi	≤5%(100% linear load)		
Bypass Voltage Range	208 Vac (Phase Voltage) Upper limit:+10%、+15%、+20%、+25%(default:+15%) Lower limit: -10%、-20%、-30%、-40%(default:-20%) Frequency range: ± 10%		
Generator Input Support			
Output			
Phase	Bi-Phases		
Rated Voltage	208/220/230/240Vac;104*2/110*2/115*2/120*2Vac; 50/60Hz		
Power Factor	0.9		
Voltage Regulation	± 1%		
Frequency	Utility Mode	± 1%、± 2%、± 4%、± 5%、± 10% of the rated frequency(optional)	
	Battery Mode	(50/60 ± 0.2%)Hz	
Crest Factor	3:1(max)		
THD	≤2% with linear load		
	≤5% with non linear load		
Waveform	Pure Sine Wave		
Efficiency			
Efficiency	Utility Mode	≥92.5%	
	Battery Mode	≥80%	
Battery			
Voltage	Long time unit Optional Voltage: ± 96V / ± 108V / ± 120Vdc 16 / 18 / 20pcs 12V battery		
Charge Current(A)	Long time unit Maximum current 6A(charge current can be set according to battery capacity installed)		
Transfer Time			
uninterruptible transfer: 0ms			
interrupted transfer: < 15ms (50Hz), < 13.33ms (60Hz)[1]			
Protection			
Overload	AC Mode	Load ≤110%: last 60min , ≤ 125%: last10min , ≤150%: last 1min, ≥150% shut down UPS immediately	100%≤Load≤127%: last 1min;load ≥127%:shut down UPSimmediately
	Bat. Mode	Load ≤ 110%: last 10min , ≤ 125%: last1min, ≤150%: last 5S, ≥ 150% shut down UPS immediately	100% ≤Load : shut down UPS immediately
	Bypass Mode	Breaker 100A	Breaker 125A
Short Circuit	Hold Whole System		
Overheat	Line Mode: Switch to Bypass; Backup Mode:Shut down UPS immediately		
Battery Low	EOD VOLTAGE+0.15V/CELL		
Self-diagnostics	Upon Power On and Software Control		
EPO(optional)	Shut down UPS output immediately		
Battery	Advanced Battery Management		
Noise Suppression	Complies with EN62040-2		
Alarms			
Audible & Visual	Line Failure, Battery Low, Overload, System Fault		
Display			
Status LED & LCD	Line Mode, Bypass Mode, Battery Low, Battery Bad, Overload & UPS Fault		
Reading On the LCD	Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load Percentage, Battery Voltage & Inner Temperature		
Communication Interface			
USB, RS232, Dry Contact (optional)			
Environment			
Operating Temperature	0°C ~ 40°C		
Storage Temperature	-25°C ~ 55°C		
Humidity	0 ~ 95% non condensing		
NOISE LEVEL(dB)	<55dB (1 METER)		
Altitude	< 1500m		
Other			
Unit Dimensions (W × D × H)	S Model:810*250*675; H Model:250*502*616		
Weight (Kg)	55/21	58/22	
Safety Conformance	CE,EN/IEC 62040-2,EN/IEC 62040-1-1		

Specifications subject to change without prior notice.

WARRANTY CONDITIONS


Tb Plus Energy warrants that each product is free from defects in materials and workmanship manufacturing, and offers a guarantee for a period of **12 months** from the acquisition of the product.


RECOMMENDATIONS


- Store in a safe place. Free of light, water and dust.
- Install under certified professional recommendation.
- Do not expose to nearby heat sources.
- Do not connect equipment with a power greater than that with which the power supply has been sized battery or system.
- Once a year check the battery charge level.
- Do not leave them within the reach of children.


Tb Plus [®]


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