# Line-interactive (PWM output)

#### **▼** Main Features

- CPU controlled
- Auto re-starts when AC recovers
- Silence setup
- Automatic charging (offline charging)
- Battery low voltage protection
- Overload & short circuit protection
- Wide input voltage range



#### **▼** Technical Parameter

MODEL	V-525	V-525A	V-625	V-1000						
Capacity	500VA/300W	500VA/300W	600VA/360W	1000VA/500W						
INPUT	'									
Input voltage		110/120Vac or 220/230/240Vac								
Input voltage range	90-132Vac / 175-265Vac	0-132Vac / 175-265Vac 85-150Vac / 145-290Vac								
Frequency range		45–6	65Hz							
OUTPUT										
Output voltage		110/120Vac or 220/230/240Vac								
Output voltage range	90-132Vac / 175-265Vac	0-132Vac / 175-265Vac 102-132Vac / 200-255Vac								
Output frequency		60 ± 0.5Hz or 50 ± 0.5Hz (Batt. mode)								
Output wave form	PWM (Batt.mode)									
Transfer time	Typical 2-6ms, 10ms max									
BATTERY										
QTY. & capacity of battery	12V/4.5AH × 1pc	12V/4.5AH × 1pc	12V/7AH × 1pc	12V/9AH × 1pc						
Charging period		4-6 hours recove	r to 90% capacity							
PROTECTION										
Full protection		Low voltage & overload	& short circuit protection							
PHYSICAL										
Unit dimension(mm)	255*98	8*140	300*9	5*140						
Net weight(kg)	3.5	3.6	4.3	4.8						
ENVIRONMENT										
Environment of performance	Temperature 0°C−40°C, Humidity 20%−90%									
Noise level		≤40d	B(1m)							
MANAGEMENT										
LCD or LED, RJ45/11 & USB		Opti	onal							

# Line-interactive (PWM output)

#### ▼ Main Features

- CPU controlled
- Auto re-starts when AC recovers
- Silence setup
- Automatic charging (offline charging)
- Battery low voltage protection
- Overload & short circuit protection
- Wide input voltage range



MODEL	V-1200	V-1500	V-2000	V-3000						
Capacity	1200VA/720W	1500VA/900W	2000VA/1200W	3000VA/1800W						
INPUT										
Input voltage		110/120Vac or 220/230/240Vac								
Input voltage range	85-150Vac / 145-290Vac 85-150Vac / 175-275Vac									
Frequency range		45-	65Hz							
OUTPUT										
Output voltage	110/120Vac or 220/230/240Vac									
Output voltage range	102-132Vac/	200-255Vac	102-132Vac / 198-242Vac							
Output frequency	60 ± 0.5Hz or 50 ± 0.5Hz (Auto sensing)									
Output wave form	PWM (Batt. mode)									
Transfer time	Typical 2-6ms, 10ms max									
BATTERY										
QTY. & capacity of battery	12V/7AH×2pcs	12V/9AH×2pcs	12V/9AH × 2pcs	12V9AH×4pcs						
Charging period		4–6 hours recove	er to 90% capacity							
PROTECTION										
Full protection		Low voltage & overload	& short circuit protection							
PHYSICAL										
Unit dimension (mm)	330 * 12	22 * 192	345 * 122 * 192	412 * 145 * 210						
Net weight (kg)	9.5	11.5	14.7	20						
ENVIRONMENT	'									
Environment of performance	Temperature 0°C-40°C, Humidity 20%-90%									
Noise level		<b>≤</b> 40c	IB(1m)							
MANAGEMENT										
LCD or LED, RJ45/11 & USB		Opt	ional							

# **RTL Series**

# Line-interactive (Pure sine wave)

#### ▼ Main Features

- Double CPU controlled
- Silence function
- Pure sine wave output
- Compatible with generator
- Automatically transferred to battery mode when input over voltage or under voltage
- Output overload and short circuit protection
- Can be connected to external battery for longer power supply
- Powerful charging current for high-capacity battery
- RJ11/RJ45, communication line protection function
- RS232/USB port(optional), intelligent monitoring function



#### **▼** Technical Parameter

MODEL	SL-600	SL-1K	SL-1.5K	SL-2K	SL-3K	SL-5K	SL-600L	SL-1KL	SL-1.5KL	SL-2KL	SL-3KL	SL-5KI
Capacity	600VA	1000VA	1500VA	2000VA	3000VA	5000VA	600VA	1000VA	1500VA	2000VA	3000VA	5000VA
	360W	800W	1200W	1600W	2400W	4000W	360W	800W	1200W	1600W	2400W	4000W
DISPLAY												
Indicator panel		LCD display / LED display (Optional)										
AC MODE												
Input voltage		145-275Vac										
Input frequency						45-65	5Hz					
Output voltage						200-24	0Vac					
INVERTER MODE												
Output voltage						220V ±	:5%					
Output frequency						$50 \pm 0$ .	.5Hz					
Power factor	0.6	0.6										
Output wave form		Pure Sine Wave										
Transfer time		Typical 2-6ms, 10ms max										
Overload capability		110% shut down within 60secs. 120% shut down within 5secs.										
Overcurrent protection		System shuts down automatically within 20ms										
BATTERY												
Battery type		Sealed maintenance-free lead-acid batteries										
DC voltage	DC12V	DO	C 24V		DC 48V		DC	24V		DC	2 48V	
QTY. & capacity of battery	12V/7AHX1	12V/7AHX2	12V/9AHX2	12V/7AHX4	12V/9AHX4	12V/17AHX4		Ex	ternal bat	ttery		
Charging current								5A /	10A(Adju	stable)		
Charging period	(	6–8 hours	s recover	to 90% ca	apacity	D	epends o	n the batt	teries con	nected		
Battery protection point						Adjust	able					
PHYSICAL												
Dimension(mm)	305*85 *141	384 * 12	22 * 192	375 * 19	92 * 330	585*192 *330	305*85 *141	345 * 12	22 * 192	45	5 * 195 * 3	330
Net weight(kg)	4.8	9	12.1	22.5	24.5	30	3.8	6	8.1	17.3	20.6	26
ENVIRONMENT												
Environment				Tem	perature (	0°C-40°C	. Humidity	/ 20%-90	1%			
Noise level						≤40dB		,				
	≤1000 m (Altitude exceeds 1000m, full power cannot reach)								not reach	1)		
Altitude												
Altitude  MANAGEMENT			~ 1									

# Line-interactive (Pure sine wave)

#### ▼ Main Features

- Pure sine wave output
- Double CPU controlled
- G-Sensor autorotation LCD display
- Extensible battery pack
- Powerful charging function(Self settable)



					-						
MODEL	RTL-1K/F	RTL-1KL	RTL-1.5K	/RTL-1.5KL	RTL-2K/F	TL-2KL	RTL-3K/F	TL-3KL	RTL-5K/I	RTL-5KL	
Capacity	1000VA	\/800W	1500VA	/1200W	2000VA/	1600W	3000VA/2	2400W	5000VA	/4000W	
DISPLAY	1						I				
Indicator panel		LCD display									
AC MODE						,					
Input voltage					145-2	75Vac					
Input frequency					45-6	65Hz					
Output voltage					200-2	40Vac					
INVERTER MODE											
Output voltage					220V	± 5%					
Output frequency				50 ± 19	6 Hz / 60 ± 1	%Hz(Auto	sensing)				
Power factor					0.	8					
Output wave form		Pure Sine Wave									
Transfer time		Typical 2-6ms, 10ms max									
Overload capability		110% shut down within 60secs. 120% shut down within 5secs.									
Overcurrent protection		System shuts down automatically within 20ms									
BATTERY											
Battery type		Sealed maintenance-free lead-acid batteries									
DC voltage		DC	24V			DC 4	V8V		DC	48V	
QTY. & capacity of battery	12V/7AHx2		12V/9AHx2		12V/7AHx4		12V/9AHx4		12V/9AHx4		
External DC voltage		24VDC		24VDC		48VDC		48VDC		48VDC	
Charging current			Lo	ng back up	time models	: 5A or 10	A ( Adjustab	le)			
Charging period	Standard ty	/pe mode <b>l</b> s	s:6-8 hours re	cover to 90%	capacity;Long	g backup ti	me models:De	pends on th	e batteries co	nnected.	
PHYSICAL											
Dimension(mm)				441	* 445 * 88				441 * 44	15 * 132	
Net weight(kg)	16.2	13.5	19.2	16	26.6	18.6	28.5	20.5	39	30.8	
ENVIRONMENT											
Environment				Temperat	ure 0℃-40℃	C, Humidit	y 20%–90%				
Noise level											
Altitude		≤ 1000 m (Altitude exceeds 1000m, full power cannot reach)									
MANAGEMENT											
USB & RS232					Opti	onal					
BATTERY PACK	12	2V/7AH×	8	1	2V/9AH×8			12V/9AH	× 12		
Dimension(mm)			441 * 44	5 * 88				441 * 445	* 132		
Net weight(kg)		24.5			27.4			42.6			



# **PT Series**

#### **▼** Product Introduction

The 1-10KVA PT series Online high frequency UPS takes the three-level technique and soft switch design, with the active power factor correction (APFC) to make the input PFC can be higher as 0.99. The new design make our PT series with high energy density ratio, reduce the UPS machine size very much, and also less occupy the space in the server room. The digital control make UPS with much more stable system, and also have the well ability of self-defensive and fault diagnosis.

This series UPS can provide better solution for the dierent power problems, such as transient voltage sag, damped oscillation, high voltage pulse, surge voltage, harmonic distortion, noise wave interference, frequency uctuation and others. Providing more reliable protection for the application and UPS itself.



# ▼ PT1-10KVA Field of Application

#### • IT and Network equipment

Small and Medium-sized data centers

Computer Server room
Production line control in factory

#### • Embedded and Automatic Control System

Telecommunication base station Automatic control system

Electrical and railway signaling systems Security system

Television broadcast system

#### Office and Business Equipment

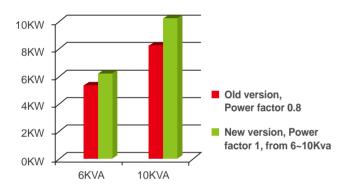
Office computer and Printer Scanner and MPOS



#### ▼ Product Function and Features

#### Green Power design for energy saving and environmental protection

- Different power configuration flexibility to achieve a multi - purpose machine, power customized available;
- Selectable digital charger from 1A ~12A, match for different appliance;
- Wide input voltage range: 208/220/230/240V for option;
- High efficiency up to 95.5%, lower power loss and save cost;
- Output power factor up to 1.0, as an industry leader, super high load efficiency;
- Green power ECO mode, power efficiency up to 98.5%
- Smart adjustable setting, support voltage compensation of output to transformer



The diagram of Loads capacity from 6~10Kva

(Full machine efficiency)

# 90 — ECO mode — Standard mode

10% 30% 50% 70% 90% (Load capacity)

The diagram of 1-10K efficiency under mains supply



#### **Novel Features Upgraded**

With three-level technology and soft switching design, minimizes to reduce switching losses and creates a new generation of more reliable and efficient power products.

#### Higher power factor

Input power factor >=0.99, output power factor up to 1.0, performance with super high load efficiency.

#### **Higher efficiency**

1-10KVA, the maximum efficiency is up to 95.5%. In ECO mode, the efficiency is up to 98.5%, saving energy and electricity for you.

#### Larger charging current

All models of this series can support 1A~12A charging current, and can flexibly configure battery combinations with different capacitances.

#### Wider frequency adjustment

Frequency can be setup in 50hz/60hz±10Hz, with wider frequency adjustment range to match the input characteristics of the generator.

#### Higher design standards

All models are designed to comply with standards EN/IEC 61000, EN/IEC 62040, GB/T7260, GB/T4943, YD/T1095, TLC, which greatly reduces the interference to the power grid and the equipment used, and protects the user's equipment well.

# **PT Series**

#### ▼ UPS Performance and Features

#### Can connected with multiple battery pack in parallel.

Long back up UPS can be freely connected with the battery pack, not only save the space, we also can increase the battery pack's quantity (Max. 15pcs battery pack), to meet the different users' need.





90%

Brand A



95.5%

#### Faster maintenance

The long back up model and the standard model use the same PCBA. It is very simple to connect and easy to maintain, so greatly improve the speed and reliability of maintenance, and users can adjust the required parameters through the LCD.

#### Save power

At present, the efficiency of some brands in the market is generally between 80% ~ 93%. Take our 3KVA and 6KVA as a sample, compared with the model which the efficiency is 90% in the market.



Saving fee per year for 3KVA (0.955-0.9)\*3000W\*24 hours\*365 day  $\approx$ 1445Kwh

Saving fee per year for 6KVA (0.955-0.9)\*6000W\*24 hours\*365 day ≈2900Kwh

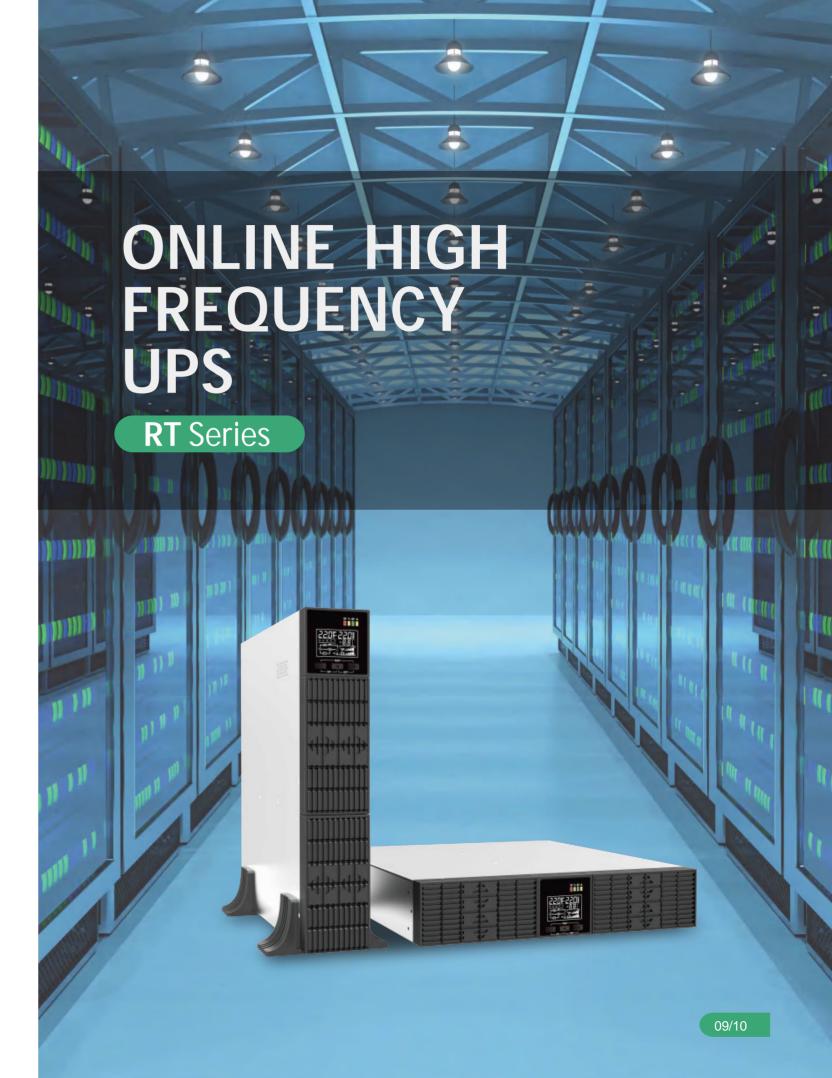


# **PT Series**

#### ▼ SPECIFICATION 1-10KVA

MODEL	PT-1K	PT-1KL	PT-2K	PT-2KL	PT-3K	PT-3KL	PT-6K	PT-6KL	PT-10K	PT-10KL		
Rated Capacity	1KVA /1	000W	2 KVA /	2000W	3 KVA /:	3000W	6 KVA /	6000W	10 KVA	/10000W		
INPUT			'		'		'		'			
Input Formats		L+N+PE										
Rated Input Voltage					208/220/23	0/240VAC						
Voltage Range			110~	300VAC (1	10~176VAC,28	0~300VAC	power limited	)				
Frequency Range				50	/60Hz±6Hz,± 1	0Hz (setable	2)					
Input Power Factor					≥0.	99						
Input Harmonic Distortion	≦3% 7	THD(linear	load), ≦5%	THD(non-lir	near load) PF:	=0.8	≦5% THD(lin	ear load), ≦8	3% THD(non-line	ear load) PF=0.8		
OUTPUT												
Output Formats					L+N-	+PE						
Output Voltage					208/220/23	0/240VAC						
Output Accuracy					±1	%						
Output Frequency			,	AC mode: sa	me as AC ,Batt	ery mode:50	)/60Hz±1%					
Output Harmonic Distortion	≦1%	THD(linear I	load), ≦3% Th	HD(non-linea	r load) PF=0.8		≦2% THD(lin	ear load), ≦5	5% THD(non-line	ear load) PF=0.8		
Output Power Factor		,	,	`	1.	0						
Transform Time		AC mode to Batt. Mode:0ms,Inverter mode to Bypass mode:4ms										
Load Capacity	AC Mode:       Battery Mode:       AC Mode:       Battery Mode:         30min@102%~110% Load       1min@102%~110% Load       30min@102%~110% Load       10min@102%~110% Load         10min@110%~130% Load       10s@110%~130% Load       10min@110%~130% Load       1min@110%~130% Load         30s@130%~150% Load       3s@130%~150% Load       3os@130%~150% Load       10s@130%~150% Load         200ms@>150% Load       200ms@>150% Load       500ms@>150% Load       500ms@>150% Load									2%~110% Load %~130% Load ~150% Load		
MACHINE EFF	ICIENCY	CIENCY										
		94 5%@ 220VAC	Full load efficiency	95.5%@220\/AC	Full load efficiency 9	95.5%@220VAC	Maximum ef	ficiency 95.5	5%,Full load ef	ficiency 95%		
	·		Full load efficiency		Full load efficiency 9				-	1.8%(20pcs battery)		
					Full load efficiency 9							
BATTERY	,		7		,							
Battery Quantity	7Ah x 2	36V	7Ah x 4/7Ah x 6	72V	7Ahx6/7Ahx8	96V	7Ahx16/7Ah x20	16~20PCS	7Ahx16/7Ah x20	16~20PCS		
Backup Time			1	Depend on (	user's requirem	ent and conf						
Charge Current				able) Externa	al battery back rnal battery ba	PT1KL-	-3KL:5.0A(de	,	A(adjustable) . 2A(adjustable)			
WORKING EN	VIRONME	NT										
Ambient Temperature					0-	-40°C						
Ambient Humidity				2	.0%~95% (No	Condensat	tion)					
Storage Temperature					-15~60°C(Ba	attery:0~40°	C)					
Altitude		<1000m, Derating at above 1000m, maximum 4000m, Refer to IEC62040										
DISPLAY												
LCD	Working mode/load/battery power/input/output ect.											
STANDARD &	CERTIFICATION											
Standard & Certifica	cation: EN/IEC 61000,EN/IEC 62040,GB/T4943,YD/T 1095,TLC etc.											
PHYSICAL												
case size(L*W*H)(mm)	276*14	5*225	392*145*225/	395*190*325	395*190*225	392*145*225	460*190*615	395*190*325	460*190*615	395*190*325		
	40.0 (0===)	10.9 (2pcs)	30.6(48V, 2pcs)/	15.4 (48V, 2pcs)	22.4(72V)/ 26.5(96V),1pc	16.5 (2pcs)	55.8(16pcs battery) 63.8(20pcs battery)	10.1	57(16pcs battery)/ 65(20pcs battery)	12.05		
Weight(KG)	18.8 (2pcs)	10.0 (Zp00)	22(72V,1pc)		20.0(001),100		oo.o(zopoo battory)		***************************************			
Weight(KG)  Carton size(L*W*H)(mm)	485*380°	,		 510*295*455(72V)	510*295*455	494*485*355		510*295*455		510*295*455		
	485*380	*355		1 510*295*455(72V)		494*485*355		510*295*455		510*295*455		

Note: L for long back up time models



#### ▼ Online High Frequency UPS

The 1-10KVA PT series Online high frequency UPS takes the three-level technique and soft switch design, with the active power factor correction (APFC) to make the input PFC can be higher as 0.99. The new design make our PT series with high energy density ratio, reduce the UPS machine size very much, and also less occupy the space in the server room. The digital control make UPS with much more stable system, and also have the well ability of self-defensive and fault diagnosis.

This series UPS can provide better solution for the different power problems, such as transient voltage sag, damped oscillation, high voltage pulse, surge voltage, harmonic distortion, noise wave interference, frequency fluctuation and others. Providing more reliable protection for the application and UPS itself.

#### ▼ RT1-10KVA Field of Application

•IT and Network equipment

Small and Medium-sized data centers

Computer Server room

Production line control in factory

• Embedded and Automatic Control System

Telecommunication base station Automatic control system

Electrical and railway signaling systems Security system

Television broadcast system

Office and Business Equipment

Office computer and Printer Scanner and MPOS



### **RT Series**

#### **▼** Product Function and Features

#### Green Power design for energy saving and environmental protection

- Different power configuration flexibility to achieve a multi purpose machine, power customized available;
- Selectable digital charger from 1A ~12A, match for different appliance;
- Wide input voltage range: 208/220/230/240V for option;
- High efficiency up to 95.5%, lower power loss and save cost;
- Output power factor up to 1.0, as an industry leader, super high load efficiency;
- Green power ECO mode, power efficiency up to 98.5%
- Smart adjustable setting, support voltage compensation of output to transformer



#### **Novel Features Upgraded**

With three-level technology and soft switching design, minimizes to reduce switching losses and creates a new generation of more reliable and efficient power products.

#### Higher power factor

Input power factor >=0.99, output power factor up to 1.0, performance with super high load efficiency.

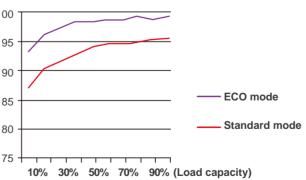
#### Higher efficiency

1-10KVA, the maximum efficiency is up to 95.5%. In ECO mode, the efficiency is up to 98.5%, saving energy and electricity for you.

#### Larger charging current

All models of this series can support 1A~12A charging current, and can flexibly configure battery combinations with different capacitances.

#### (Full machine efficiency)



The diagram of 1-10K efficiency under mains supply

#### Wider frequency adjustment

Frequency can be setup in  $50hz/60hz\pm10Hz$ , with wider frequency adjustment range to match the input characteristics of the generator.

#### Higher design standards

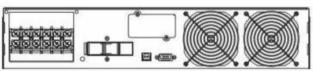
All models are designed to comply with standards EN/IEC 61000, EN/IEC 62040, GB/T7260, GB/T4943, YD/T1095, TLC, which greatly reduces the interference to the power grid and the equipment used, and protects the user's equipment well.

# **RT Series**

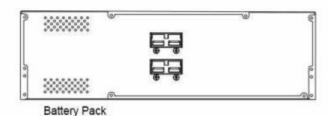
#### **▼** UPS Performance and Features

#### Can connected with multiple battery pack in parallel.

Long back up UPS can be freely connected with the battery pack, not only save the space, we also can increase the battery pack's quantity (Max. 15pcs battery pack), to meet the different users' need.



Rack mout UPS

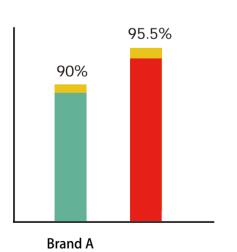






#### Faster maintenance

The long back up model and the standard model use the same PCBA. It is very simple to connect and easy to maintain, so greatly improve the speed and reliability of maintenance, and users can adjust the required parameters through the LCD.



#### Save power

At present, the efficiency of some brands in the market is generally between  $80\% \sim 93\%$ . Take our 3KVA and 6KVA as a sample, compared with the model which the efficiency is 90% in the market.



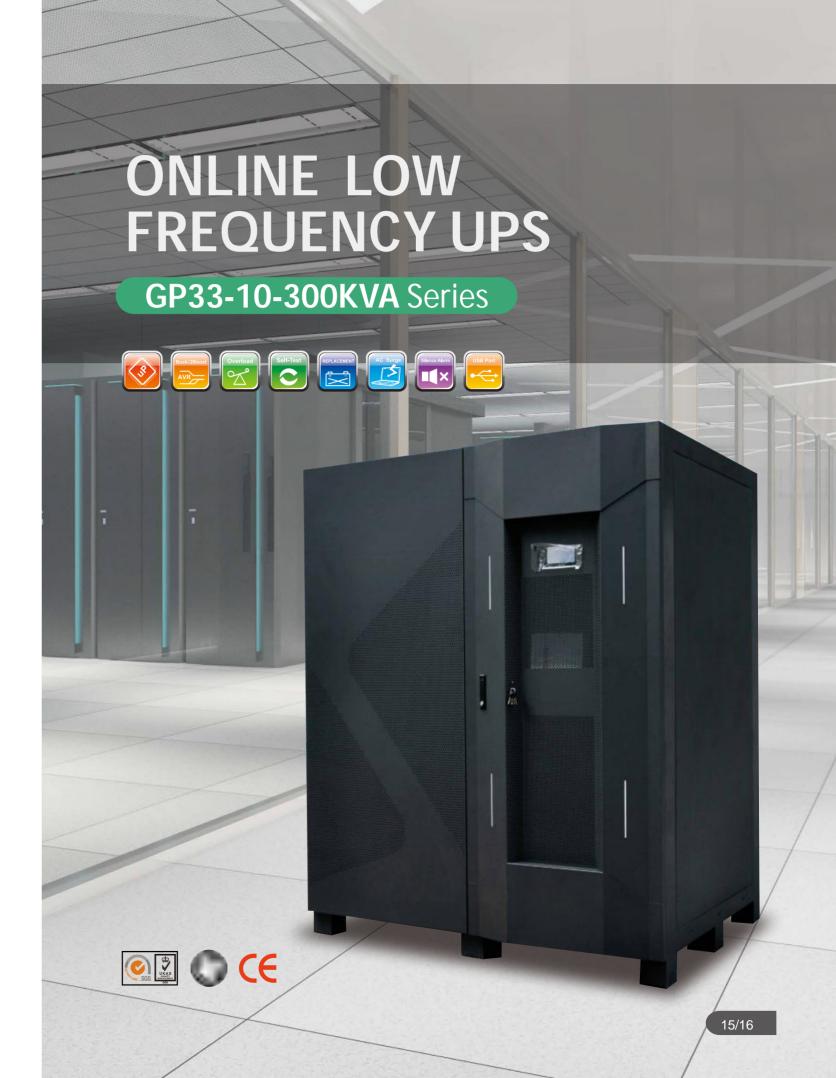
# **RT Series**

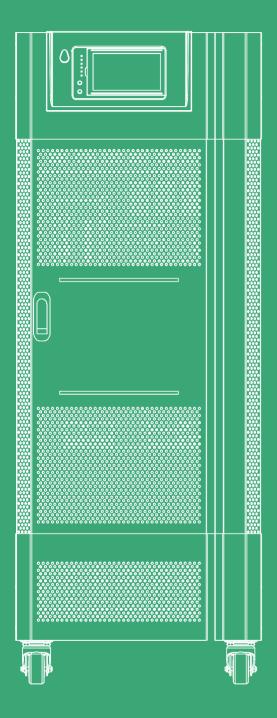
#### ▼ SPECIFICATION 1-3KVA

Model	RT-1K	RT-1KL	RT-2K	RT-2KL	RT-3K	RT-3KL				
Rated Capacity	1KVA /1	000W	2 KVA	/2000W	3 KVA /3000W(for72V) 3 KVA /2400W(for48V)	3 KVA /3000W				
INPUT										
Input Formats			L+	N+PE						
Rated Input Voltage			208/220/	230/240VAC						
Voltage Range		110	0~300VAC (110~176V	/AC,280~300VAC	power limited )					
Frequency Range			50/60Hz±6Hz	.,± 10Hz (setable)						
Input Power Factor			≥(	).99						
Input Harmonic Distortion		<b>≦</b> 3°	% THD(linear load), ≦5	5% THD(non-linea	r load) PF=0.8					
OUTPUT										
Output Formats			L+	N+PE						
Output Voltage			208/220/2	30/240VAC						
Output Accuracy				±1%						
Output Frequency		A	C mode: same as AC ,I	Battery mode:50/6	0Hz±1%					
Output Harmonic Distortion		≦1%	THD(linear load), ≦3%	% THD(non-linear I	oad) PF=0.8					
Output Power Factor			, , , , , ,	1.0	,					
Transform Time		AC mode to Batt. Mode:0ms,Inverter mode to Bypass mode:4ms								
Load Capacity		AC Mode: Battery Mode: 30min@102%~110% Load 1min@102%~110% Load 10s@110%~130% Load 10s@110%~130% Load 30s@130%~150% Load 3s@130%~150% Load 200ms@>150% Load 200ms@>150% Load								
MACHINE EFF	ICIENCY									
AC Mode	Full load efficiency 9	Full load efficiency 94.5%@220VAC Full load efficiency 95.5%@220VAC Full load efficiency 95.5%@220VAC								
Battery Mode	Full load efficiency 8	89.5%@36VDC	Full load efficiency 9	1.5%@72VDC	Full load efficiency	91.5%@ 96VDC				
Battery Mode	Full load efficiency 8	89.5%@24VDC	Full load efficiency 9	91.5%@ 48VDC	Full load efficiency	91.5%@ 72VDC				
BATTERY										
Battery Quantity	7Ah x 2/ 7Ah x 3	36V	7Ah x 4/ 7Ah x 6	72V	7Ah x 4/ 7Ah x 6	96V				
Backup Time		[	Depend on user's req	uirement and con	figuration					
Charge Current	RT1K-3K : 1.0A(d	efault) ,1-2A(ad	justable) External batt	ery back; RT1k	(L-3KL: 5.0A(default)	,1-12A(adjustable)				
WORKING EN	VIRONMENT									
Ambient Temperature			(	)~40°C						
Ambient Humidity			20%~95%	(No Condensation	1)					
Storage Temperature			-15~60℃	(Battery:0~40°C)						
Altitude		<1000m,Dera	iting at above 1000m,r	naximum 4000m,	Refer to IEC62040					
DISPLAY										
LCD	Working mode/load/battery power/input/output ect.									
STANDARD &	CERTIFICATION									
Standard & Certi	fication:	EN/IE	C 61000,EN/IEC 62040	),GB/T4943,YD/T	1095,TLC etc.					
PHYSICAL										
case size (L*W*H)	438*88	3*385	438*88*505	438*88*385	438*88*505	438*88*385				
Weight(KG)	10.4/12.4 (1pcs)	5.8 (1pcs)	14.9/23.6 (1pcs)	7.0 (1pcs)	20.5/25.2 (1pcs)	7.4(1pcs)				
Carton size(L*W*H)	533*50		533*617*178	533*507*178	533*617*178	533*507*178				
	ON INTERFACE		-							
INTERFACE			1*LISR 1*	*RS232,1*EPO						
	L		1 000,1							

#### ▼ SPECIFICATION 6-10KVA

Model	RT-6K	RT-6KL	RT-10K	RT-10KL					
0.9	6KVA	/5.4KW	10KV/	A/9KW					
Rated Capacity 1.0	6KVA	/6KW	10KV/	A/10KW					
INPUT									
Input Formats		L+N+	PE						
Rated Input Voltage		208/220/23	0/240VAC						
Voltage Range	110	~300VAC (110~176VA	C,264~300VAC power	limited)					
Frequency Range		50/60Hz±6Hz, ±10Hz	(can be setting)						
Input Power Factor		≥0.99							
Input Harmonic Distortion	≦5%	THD(linear load), ≦8%	THD(non-linear load) P	PF=0.8					
OUTPUT									
Output Formats		L+N+PE							
Output Voltage		208/220/230/240	VAC						
Output Accuracy		±1%							
Output Frequency	Online mo	de:according to AC freque	ncy, Battery mode:50/60H	łz±1%					
Output Harmonic Distortion	≦2% TH	D(linear load), ≤5% THD(	non-linear load) PF=0.8						
Output Power Factor		1.0							
Switching Time		0ms (w/o ECO	function)						
Load Capacity	30min@1 10min@1 30s@130	AC Mode: Battery Mode: 10min@102%~110% Load 10min@110%~130% Load 1min@110%~130% Load 30s@130%~150% Load 500ms@>150% Load 500ms@>150% Load							
MACHINE EFFICIENCY									
AC Mode		Maximum efficiency 95.	5%. Full load effciency 9	95%					
Battery Mode		Maximum efficiency 95.3%, Full load effciency 94.8%(20pcs batteries)							
Charger				,					
Battery Quantity	Adjust	able from 16/18/20pcs,[	Default 16PCS(Refer 4.4	for details)					
Battery Type	,	Lead acid b	`	,					
Charge Current	Adjustable	e from 1~12A(PF=0.8,A	djustable 1~8A ),Default	1A					
Charging Mode		Two/Three Perio	d Charging						
WORKING ENVIRONMI	ENT								
Ambient Temperature		0~40°0							
Ambient Humidity		20%~95% (No 0	Condensation)						
Storage Temperature		-15~60°C(Batte	ry:0~40°C)						
Altitude	<1000m,Der	ating at above 1000m,max	imum 4000m,Refer to IEC	62040					
DISPLAY									
LCD	Wo	orking mode/load/battery po	ower/input/output ect.						
STANDARD & CERTIFI	CATION								
Standard & Certification	EN/IE	EN/IEC 61000,EN/IEC 62040,GB/T4943,YD/T 1095,TLC etc.							
PHYSICAL									
case size (L*W*H)	Rack mount UPS ca	Rack mount UPS case size: 438*88*385mm; Battery Pack case size: 438*88							
Net Weight(KG)	9.5kg (PF=1.0 ) Not i	5kg (PF=1.0 ) Not include bettery pack 10.25kg (PF=1.0 ) Not include bettery							
Gross Weight(KG)	11.45kg (PF=1.0 ) No	t include bettery pack	12.2kg (PF=1.0 ) Not	include bettery pack					
Carton size(L*W*H)		ase size : 533*507*178 r		e size: 570*815*230mn					
COMUNICATION INTER	· ·		, , ,						
INTERFACE	I	4*LICD 4*	RS232,1*EPO						





#### **Application**

Its advanced battery charging system enables the UPS to supply a long backup time while the charging time is rather short, and its temperature compensation system can help to prolong the service life of the battery. Also, its circult is simple, which reduces the number of components and makes the machine more compact and more reliable.

Its true double-conversion online technology provides pure and safe power supply to all appliances, communication equipment and important loads connected to the Internet, and the DSP technology responds quickly to different power supply problems, making sure its load will work uninterruptedly.

It is compatible to all kinds of loads and widely used in the fields of energy sources, transportation, office, medical equipment, engine-room, data center, toll station and so on.

# ONLINE LOW FREQUENCY UPS

GP33-10-300KVA Series

#### Function and Feature

Range from 10kva to 300kva

True double-conversion online technology

DSP 100% micro controlled

N+1 parallel redundant connection

High efficiency > 92%

Dual power supply (selectable)

Accept 100% unbalanced load

Cold start

Intelligent battery control

Compatible with generators

Powerful communication system (RS232, SNMP, GPRS)













30-40Kva Appearance













Energysources

Enterprise

Data center

Electronics

Scientific research

Engine-room

# GP33-10-300Kva Series

#### Advanced Communication Function

With the use of communication interface and monitoring software, you can monitor this UPS on your computer, which simplifies the management of power supply. You can also choose to buy a SNMP card, which is compatible to all kinds of operating system, and supports TCP/IP, SNMP, HTTP Protocol, so as to monitor the UPS through internet. Moreover, it will be easier to achieve central management even users are scattered in different places and it can also diagnose network and maintain the system remotely, realizing global management in a very real sense.

#### 1. Software monitoring through RS232

There is a RS232 interface on the back panel of the UPS, which can be used to connected the UPS to a computer by a communication line so as to monitor the UPS. The distance between the UPS and its monitoring equipment is better to be less than 10 meters and better to use the USB cable which is called trendnet tu-s9. The hyper terminal in the computer will monitor the UPS and this software is already installed in "Window's" and "Window xp" system or you can download a newer edition from Internet.

The window of running this program is shown as the graph on the right:



#### 2. Monitoring through network adapter

With the use of network adapter, information can be exchanged through local area network or Internet, so a network adapter can monitor a UPS at a time or many UPS simultaneously, depending on user's wishes.

- 2.1 Thanks to http server, UPS will become a small server so any computer can do the monitoring job by entering the IP address of the UPS.
- 2.2 The other way is to use SNMP. Our company will provide a software that can drive SNMP (NetAgent Utlity) to monitor the UPS in real time.

#### 3. Monitoring through GPRS

Specifications of the UPS can be monitored or set by exchanging information through MODEM GPRS. As long as users register information of the UPS on the Internet, he will be able to check information of the UPS on the website and he will also be able to schedule for the UPS as well. As a result, no matter what happen to the UPS, an email or a message will be sent to the user's mobile phone. This way can be very helpful in the area, which has no LAN, Internet or is far away.

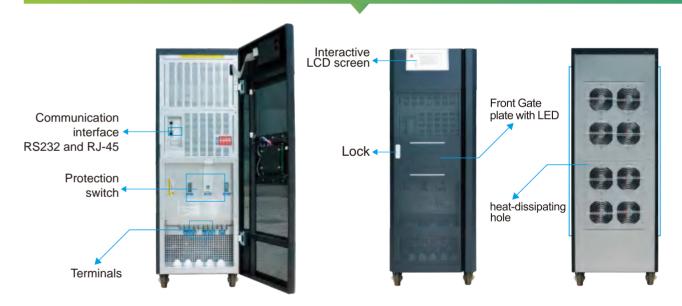
All the network information, operating process and software CD will be sent to the user along with the product.

# GP33-10-300Kva Series

#### 30-40Kva Appearance



#### 100-120Kva Appearance



MODEL	GP33-10~20Kva	GP33-30~40Kva GP33-60~80Kva		GP33-100~120Kva	GP33-160~200Kva	GP33-250~300Kva				
Capacity	10/15/20Kva	30/40Kva	60/80Kva	100/120Kva	160/200Kva	250/300Kva				
UPS(WxDxH)mm	400x750x970	410x810x1070	500x980x1320	505x1060x1420	848x1117x1876	1600x1180x1960				
Pack(WxDxH)mm	478x836x1141	515x825x1310	603x1170x1500	603x1190x1586	948x1325x1985	1760x1301x2168				
UPS weight (kg)	146/165/183	238/264	353/430	540/566	960/1080	1540/1745				
Temperature		0℃~40℃								
Relative humidity			0~9	5%, non condensin	ıg					
Noise		< 60db at 1.5m from surface of unit								
Altitude		1000m(height rises every 100m, power decreases 1%, maximum height is 4000m)								
Efficiency			Power saving mod	de>98%, Inverter>92	2%, AC-AC>91%					

Product specifications are subject to change without notice.

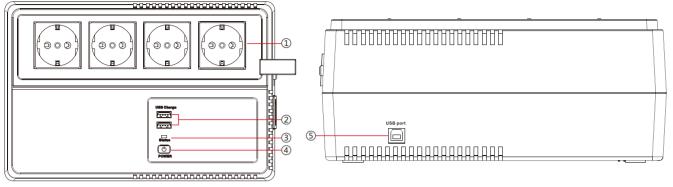
# GP33-10-300Kva Series

MODEL	GP33-10~20Kva	GP33-30~40Kva	GP33-60~80Kva	GP33-100~120Kva	GP33-160~200Kva	GP33-250~300Kva				
Transference			0ms cut	less						
Technology	Tru	e double-conver	sion online techn	ology, conversio	n performed by I	GBT				
INPUT										
Voltage			3x220/380	vac ± 25%						
Frequency			50Hz ±	: 15%						
Conductors			Three pha	ases+N+E						
OUTPUT										
Voltage (selectable)		$3x220/380 \text{ vac} \pm 1\%$ (More voltage can be selected)								
Frequency			50Hz ± 0	.1%						
Waveform		Pure sine wa	ave generated by	high frequency I	PWM inverter					
Harmonic Distortion		<	2% Linear load/<	<5% Nonlinear l	oad					
Crest Factor			3:1							
Power factor			0.8 or	0.9						
Overload recuperation		Automatic transfer to normal								
Voltage regulation		Load balance:±1%								
Overload capacity		125%	for 12 minutes /	150% for one mi	nute					
Conductors		Three phases+N+E								
Battery										
Туре		Maintena	nce – free sealed	ead-acid battery,	12V*32 batterie:	S				
Full load autonomy		3 t	o 15 minutes. ex	ended-range cap	oability					
Typical recharge time			4~8h	ours, 90%						
Battery behavior		Autotest. Tr	ansfer Point Adju	ıstable battery a	nd alarm setting					
Battery protection		otection, battery on, overvoltage t	switch, temperat tripping.	ure compensatio	n, regular inspec	tion, software				
Rectification	Softw	are protection, i	nput switch, ove	current protecti	on, temperature	protection				
Protection										
Hardware protections			, battery and byp ture sensors, on			s,redundant				
Bypass	Static solid state, automatic and manual operation without interruption for maintenance. External Bypass (optional)									
Emergency switch		Remote and/or local EPO								
Supervisory control a	nd communicat	on								
Frontal panel		I	nteractive LCD	display(Touchscr	reen)					
Alarms		Audible	e and visual aları	n for abnormal c	conditions					
Communications	RS232	2, SNMP-RJ45,	GPRS (RS2328	RJ45 standard,	the other is option	onal)				



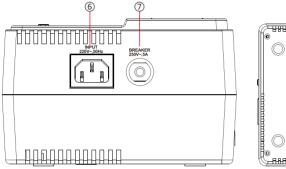
# **BS Series**

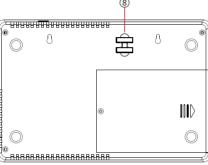
# **▼** Description Of Appearance



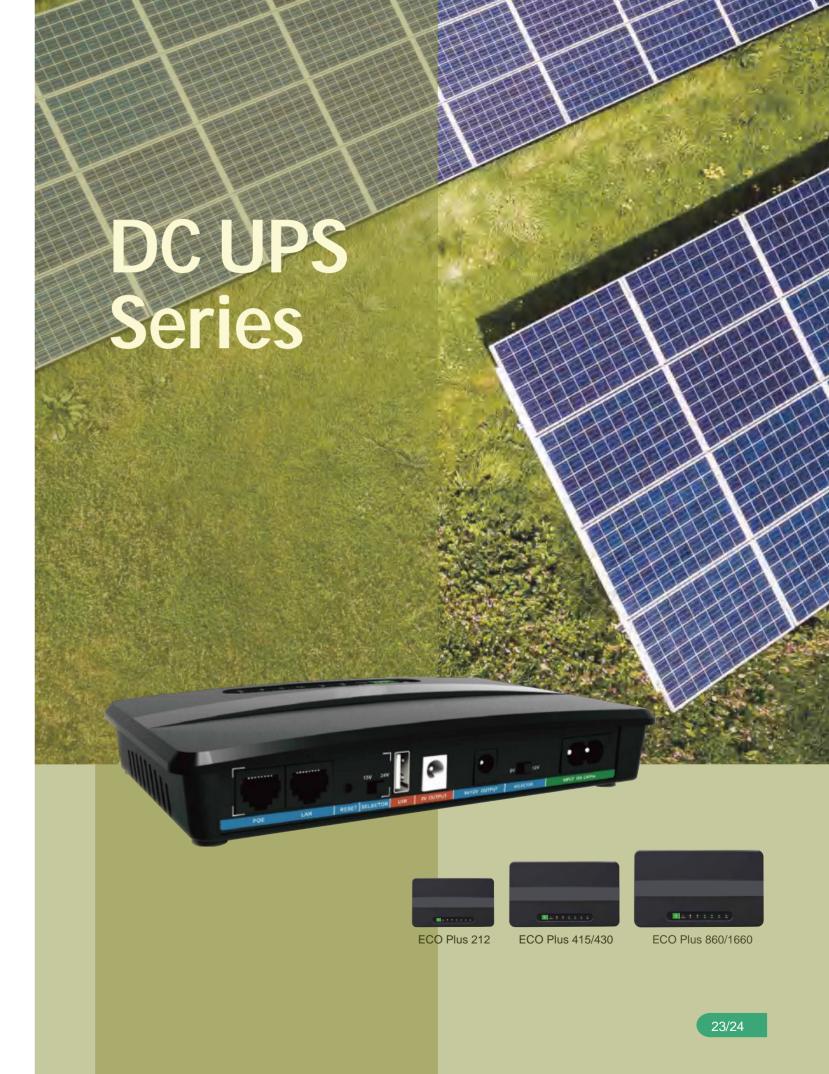
- Output Socket
   USB Output
   Work Stadus Indicator
   On/Off Switch
   USB port (For monitoring)
   AC Input

- 7. Breaker
- 8. Battery Fuse





Model	BS-380						
Rated power	600VA/390W						
BATTERY							
Battery capacity	12V /5Ah lead acid battery						
Recharge time	8 hours						
INPUT							
AC input voltage	220VAC						
AC input voltage range	175-260VAC						
AC input frequency	50/ 60Hz						
OUTPUT							
AC Output voltage range	175-260VAC						
AC Output voltage(battery mode)	225±5VAC						
AC Output frequency	50/60Hz						
Output waveform	PWM(batt.mode)						
USB output	5V/2A* 2						
Output sockets	4 x European socket or bypass for option						
ENVIRONMENT							
Environment of performance	Temperature 0°C-40°C , Humidity20%-90%						
Noise level	≤40dB(1m)						
MACHINE SPECIFICATIONS							
Dimension (L*W*H) (mm)	257*170*108						
Weight (Kg)	3						



# **DC UPS Series**

#### DC UPS

#### ▼ Main Features

- High capacity lithium batteries, provides long backup to the loads.
- High compatibility, suitable for most digital products in the market.
- POE can transmit power and simplify wiring.
- Intelligent circuit design with over-charging, over-discharging andshort circuit protections.
- Built-in adapter allows wide AC voltage range (100~240Vac).
- Solar panel is acceptable for the input interface.



MODEL					E	CO F	Plus			
MODEL	212	212 415 415P 430P 430M 430S							860	1660
INPUT										
Input voltage					1	00-2	40Vac			
OUTPUT										
DC output voltage(optional)	USB 1.5A 9/12V 1A	9V/12V	1A	5V+USB 2A 9V/12V 1A 15V/24V (POE) 0.5A	9V/12V	2A 2A 1A	5V+USB 2A 9V/12V 2A 12VX4 2A	5V+USB 2A 9V/12VX4 2A Solar input 1A	9/12V	2A 2A 1A 5A 2A
Voltage select		Choosing through the slide switch								
Output power (Max)	12W	12W 15W 30W						60W	1	
Transfer time		0 ms								
BATTERY										
Battery type					Lit	hium	battery			
QTY. & capacity of battery	6700mAh				8800m	Ah			2200mAhX8 2	200mAhX16
CHARGE										
Charging period	1-2 hours				2-3 ho	urs			4–5 h	ours
PHYSICAL										
Unit dimension ( mm )	141.5*84.5*35	41.5*84.5*35 180*106*29 258*152*46						52*46		
Net weight ( Kg )	0.3	0.4							0.94	1.28
ENVIRONMENT										
Environment of performance				Temperatu	re: 0°℃°	2-40	°C, Humidity	: 20%-90%		
Noise level					Les	ss tha	an 40dB			

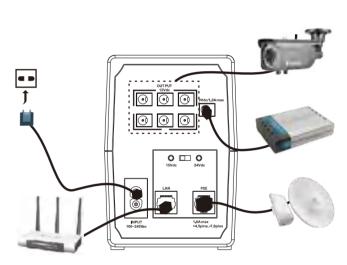
#### DC UPS

#### ▼ Main Features

- High capacity lead-acid batteries, provides long backup to the loads.
- High compatibility ,suitable for most digital products in the market.
- POE can transmit power and simplify wiring.
- In elligent circuit design with over-charging, over-discharging and short circuit protections.
- Built-in a dapter allows wide AC voltage range (85-265Vac).







MODEL	DCT-60	DCT-120				
INPUT						
Voltage range	100–2	40 Vac				
Input frequency	35–7	0 Hz				
OUTPUT						
Output power ( Max.)	60W(5A)	120W(10A)				
Output voltage & current ( Max.)	9Vdc(1A)+12VdcX6(5A)+15/24Vdc POE(1A)	9Vdc(1A)+12VdcX6(10A)+15/24Vdc POE(1A)				
BATTERY						
Battery type	12V/7Ah	12V/9Ah				
PHYSICAL						
Dimension ( mm )	300*9	5*140				
Net weight ( Kg )	2.8	3.0				