

# Premium featured ONLINE UPS



## CLIPPERS RT SERIES



Data Center



Genset



Batt.Charger



Emergency Power Backup

Clippers series is a premium featured online double-conversion UPS with Rack/Tower design and high efficiency to reduce customer's TCO (total cost of ownership).

The internal hot-swappable battery increases system reliability and reduces MTTR; the parallel function is designed for future equipment expansion

Its special firmware design can adapt various applications like laser printer, ultrasound device and supporting long back-up time with battery monitoring.

## GENERAL FEATURES

- True double conversion
- Output power factor 1
- Rack/Tower 2 in 1 design with rotatable LCD
- Super Charger up to 12A for 1K, 8A for 2K/3K
- Output voltage regulation < 1%
- Higher output crest ratio 3:1
- 50Hz/60Hz frequency converter mode
- Programmable power management outlets
- Emergency power off function (EPO)
- Hot swappable battery design
- ECO mode for energy saving
- Support for laser printers and ultrasound systems
- Full time over-voltage cut-off and surge protection
- High power factor charger with low ripple current
- Low input THDi to reduce power system pollution
- Adjustable charging current via LCD panel
- Smart battery charger design to optimize battery performance
- Genset compatible



FSP GROUP

FORTRON/SOURCE

# On Line | Clippers Series

## 1K/2K/3K



| MODEL  | CLIPPERS RT 1K  | CLIPPERS RT 2K  | CLIPPERS RT 3K |
|--|---|---|----------------|
| <b>PHASE</b>                                   | Single phase with ground  |   |                |
| <b>CAPACITY</b>                                | 1000VA / 1000W  | 2000VA / 2000W  | 3000VA / 3000W |
| <b>INPUT</b>                                   |   |   |                |
| Nominal Voltage                                | 220 / 230 / 240 Vac   |   |                |
| Voltage Range                                  | @ 50% load<br>@100% load  | 110~300 Vac ± 5%<br>160~300 Vac ± 5%  |                |
| Frequency Range                                | 40~70Hz   |   |                |
| Harmonic Distortion(THDi)                      | @ 50% load<br>@100% load  | ≧ 5% @ Nominal Input Voltage  |                |
| Power Factor (@100% load)                      | ≧ 0.99 @ Nominal Voltage  |   |                |
| <b>OUTPUT</b>                                  |   |   |                |
| Output Voltage                                 | 220 / 230 / 240 Vac   |   |                |
| AC Voltage Regulation(Batt.Mode)               | ± 1%  |   |                |
| Frequency Range (Synchronized Range)           | 46~54Hz or 56~64Hz  |   |                |
| Frequency Range (Batt. Mode)                   | 50Hz or 60Hz ± 0.1Hz  |   |                |
| Current Crest Ratio                            | 3:1 (max.)  |   |                |
| Harmonic Distortion                            | Linear Load<br>Non-linear load  | ≦ 2 %<br>≦ 4 %  |                |
| Transfer Time                                  | Line to Battery<br>Inverter to Bypass   | Zero<br>4 ms (Typical)  |                |
| Waveform(Batt. Mode)                           | Pure Sinewave   |   |                |
| Overload                                       | AC mode<br>Battery mode   | 100~110% : 10mins ; 110~130% : 1 min ; >130% :1s<br>100~110% : 30s ; 110~130% : 10s ; >130% :1s |                |
| <b>EFFICIENCY</b>                              |   |   |                |
| AC Mode@full charged battery                   | ≦ 89%   | ≦ 91%   | ≦ 91%          |
| ECO Mode@full charged battery                  |   | ≦ 96%   |                |
| Battery Mode                                   | ≦ 88%   | ≦ 90%   | ≦ 90%          |
| <b>BATTERY</b>                                 |   |   |                |
| Battery Type                                   |   | 12V / 9Ah   |                |
| Numbers  | 2   | 4   | 6              |
| Typical Recharge Time(recover to 90% capacity) |   | 3 hours   |                |
| Charging Current (Default 2A)                  | Max: 12A  | Max: 8A   | Max: 8A        |
| Charging Voltage (Vdc ± 1%)                    | 27.4  | 54.8  | 82.1           |
| <b>PHYSICAL</b>                                |   |   |                |
| Dimension, W x H x D (mm)                      | 438 x 88 x 410  | 438 x 88 x 510  | 438 x 88 x 630 |
| Net Weight (without battery) (kgs)             | 6.6   | 9.4   | 12.4           |
| Net Weight (with battery)(kgs)                 | 11.6  | 19.5  | 27.5           |
| <b>ENVIRONMENT</b>                             |   |   |                |
| Humidity(non-condensing)                       | 20-90 % RH @ 0- 40°C  |   |                |
| Noise Level (@ 1 Meter)                        | ≦ 50 dBA  |   |                |
| Altitude(Max 3000m)                            | 10% de-rating for over 1000m  |   |                |
| <b>MANAGEMENT</b>                              |   |   |                |
| Smart RS-232/USB<br>SNMP(Optional)             | Supports Windows® 2000/2003/XP/Vista/2008/7/8/10, Linux and MAC<br>Power management from SNMP manager and web browser |   |                |
| <b>STANDARD</b>                                |   |   |                |
| EMC/safety                                     | EMC EN62040-2 C2 for CE models  |   |                |

\* Product specifications are subject to change without further notice

| MODEL        | BATTERY                | Backup Time Table for Clippers Series (min) |     |     |      |
|--------------|------------------------|---|-----|-----|------|
|              |                        | 25%   | 50% | 75% | 100% |
| Clippers 1 K | Internal 2*9Ah         | 23  | 9   | 5   | 3    |
|              | +1 BB-24/18RT (4*9Ah)  | 90  | 40  | 25  | 17   |
|              | +2 BB-24/18RT (8*9Ah)  | 150   | 77  | 46  | 32   |
| Clippers 2 K | Internal 4*9Ah         | 24  | 10  | 5   | 3    |
|              | +1 BB-48/18RT (8*9Ah)  | 90  | 41  | 25  | 17   |
|              | +2 BB-24/18RT (16*9Ah) | 150   | 79  | 48  | 33   |
| Clippers 3 K | Internal 6*9Ah         | 24  | 10  | 5   | 3    |
|              | +1 BB-72/18RT (12*9Ah) | 90  | 41  | 25  | 17   |
|              | +2 BB-72/18RT (24*9Ah) | 150   | 79  | 48  | 33   |



### TECHNICAL SPECIFICATIONS

| MODEL                                | CLIPPERS RT 6KL   | CLIPPERS RT 10KL   |
|--------------------------------------|---|--------------------|
| <b>PHASE</b>                         | Single phase with ground  |                    |
| <b>CAPACITY</b>                      | 6000 VA / 6000 W  | 10000 VA / 10000 W |
| <b>INPUT</b>                         |   |                    |
| Voltage                              | 220/230/240 VAC   |                    |
| Voltage Range                        | 110-300 VAC ± 3% @ 50% load<br>176-300 VAC ± 3% @ 100% load     |                    |
| Frequency Range                      | 46~54 or 56~64 Hz   |                    |
| Harmonic Distortion(THDi)            | < 6% (50% load)<br>< 4% (100% load)                             |                    |
| Power Factor(@100% load)             | ≥ 0.99 @ nominal voltage  |                    |
| <b>OUTPUT</b>                        |   |                    |
| Voltage                              | 220/230/240 VAC   |                    |
| AC Voltage Regulation (Batt. Mode)   | ± 1%  |                    |
| Frequency Range (Synchronized Range) | 46~54 Hz or 56~64 Hz  |                    |
| Frequency Range (Batt. Mode)         | 50 Hz ± 0.1 Hz or 60Hz ± 0.1 Hz                                 |                    |
| Harmonic Distortion                  | Linear Load   | < 1%               |
|                                      | Non-linear load   | < 4%               |
| Transfer Time                        | AC Mode to Batt. Mode   | 0 ms               |
|                                      | Inverter to Bypass  | 0 ms               |
| Waveform                             | Pure sine wave  |                    |
| <b>EFFICIENCY</b>                    |   |                    |
| AC Mode@full charged battery         | 94.5%   |                    |
| ECO Mode@full charged battery        | 98.5%   |                    |
| Battery Mode                         | 92.0%   |                    |
| <b>BATTERY</b>                       |   |                    |
| Battery Type                         | depend on application   |                    |
| Numbers                              | 16 ~ 20   | 16 ~ 20            |
| Charging Voltage(Vdc ± 1%)           | 218.4~273   | 218.4~273          |
| Charging Current( Default 2A )       | 4 A   |                    |
| <b>OPERATING ENVIRONMENT</b>         |   |                    |
| Humidity(non-condensing)             | 20-95 % RH @ 0- 40°C  |                    |
| Noise Level (@ 1 Meter)              | ≅ 55 dBA  | ≅ 58 dBA           |
| Altitude(Max 3000m)                  | 10% de-rating for over 1000m                                    |                    |
| <b>OPERATING ENVIRONMENT</b>         |   |                    |
| Smart RS-232/USB                     | Supports Windows® 2000/2003/XP/Vista/2008/7/8/10, Linux and MAC |                    |
| SNMP(Optional)                       | Power management from SNMP manager and web browser              |                    |
| <b>STANDARD</b>                      |   |                    |
| EMC/safety                           | EMC EN62040-2 C2 for CE models                                  |                    |

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#### Backup Time Table for Custos Series

##### Backup Time with Load (Min)

| Battery Bank            | Backup Time with Load (Min)        |       |      |      |      |
|-------------------------|------------------------------------|-------|------|------|------|
|                         | 25%                                | 50%   | 75%  | 100% |      |
| <b>CLIPPERS RT 6KL</b>  | +1 BB-240/9RT (20 x 9AH Batteries) | 43.0  | 20.0 | 12.9 | 8.0  |
|                         | +2 BB-240/9RT (40 x 9AH Batteries) | 99.0  | 46.0 | 31.7 | 22.7 |
|                         | +3 BB-240/9RT (60 x 9AH Batteries) | 150.0 | 71.0 | 43.5 | 30.4 |
| <b>CLIPPERS RT 10KL</b> | +1 BB-240/9RT (20 x 9AH Batteries) | 22.0  | 9.0  | 6.0  | 3.0  |
|                         | +2 BB-240/9RT (40 x 9AH Batteries) | 54.0  | 23.0 | 16.9 | 12.0 |
|                         | +3 BB-240/9RT (60 x 9AH Batteries) | 88.0  | 38.0 | 23.0 | 16.0 |





Higher load power capacity



Super Charger 12A



High Efficiency 96%



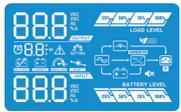
Emergency Power Backup



Zero transfer time

### User-friendly LCD display

The front panel display can be easily shifted through LCD setting to suit the installation format



### Programmable outlet

Prioritizing connected equipment's required backup time.



Programmable Outlets (P1) connect to non-critical devices

### CV / CF Mode

Providing constant voltage and constant frequency



### Special application

Compatible with genset, ISO Transformer And motor-driven equipment.



### Hot-Swappable battery

Battery replacement can be done without turning off the UPS from the operation



### Parallel option

Parallel ability up to 3 units to reach maximum 30KW Only for model Clippers RT 6KL & Clippers RT 10KL



| Battery Cabinet |              |   |                                  |   |
|-----------------|--------------|---|----------------------------------|---|
| Model           | P/N          | Pictures  | Compatible Clippers Series Model | Battery   |
| BB-24/18RT      | MPF0005500GP |  | Clippers 1K                      | Battery Bank 24V/18Ah (Rack&Tower) with 4 pieces 9Ah 12V Batteries  |
| BB-48/18RT      | MPF0005600GP |  | Clippers 2K                      | Battery Bank 48V/18Ah (Rack&Tower) with 8 pieces 9Ah 12V Batteries  |
| BB-72/18RT      | MPF0005800GP |  | Clippers 3K                      | Battery Bank 72V/18Ah (Rack&Tower) with 12 pieces 9Ah 12V Batteries |

| Network Management         |                               |   |  |  |
|----------------------------|-------------------------------|---|--|--|
| SNMP card<br>SNMP box      | MPF0000400GP<br>31-011163-07G |  | <ol style="list-style-type: none"> <li>1. Allows control and monitoring of UPS</li> <li>2. Real-time dynamic graphs of UPS data</li> <li>3. Warning notifications via audible alarm, broadcast, mobile messenger, e-mail</li> </ol>  |  |
| Modbus card                | S98-000051-07091G             |  | <ol style="list-style-type: none"> <li>1. Real-time control and monitoring of UPS</li> <li>2. Supports Modbus RTU protocol</li> <li>3. Provides MODBUS functions including read Holding Registers and write Registers</li> <li>4. Provides surge protection</li> </ol>   |  |
| Relay card                 | MPF0007500GP                  |  | <ol style="list-style-type: none"> <li>1. The AS400 communication card provides contact closures for remote monitoring UPS.</li> <li>2. To meet different application requirement, the AS400 card is capable of selection the status of the dry-contact signal (active close or active open) by setting jumper.</li> </ol> |  |
| Environment Monitor Device | 98-000069-00G                 |  | <ol style="list-style-type: none"> <li>1. Measure temperatures between 0 to 100°C with an accuracy of <math>\pm 1.5^{\circ}\text{C}</math></li> <li>2. Measure relative humidity between 10 to 90% RH with an accuracy of <math>\pm 3\%</math> Optional smoke alarm available</li> </ol>                                   |  |
| Automatic Transfer Switch  | MPF0013500GP                  |  | <ol style="list-style-type: none"> <li>1. Max output power 10 A for IEC-C13 outlets, 16 A for IEC-C19 outlet</li> <li>2. Transfer time 9-12ms (Typical), 16ms max.</li> </ol>  |  |