

# SHUYI UPS SOLUTIONS







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• HEFEI SHUYI DIGITAL POWER CO., LTD

# COMPANY PROFILE

- Shuyi digital power, based on the core technology of power electronics, integrates innovative digital technology, provides comprehensive solutions for data center, high-end power supply and clean energy, promotes the transformation and development of digitalization and low-carbon energy in government, finance, industry, communication, transportation, Internet and other industries.
- With over 10 years of development, we have exported our various kinds of products and solutions to 86 countries and have branches and offices in over 55 countries and regions. Our products and solution won a good reputation in quality and service.

### **Mission**

 Committed to innovation in digital energy technology and building a green and intelligent future.

#### **Vision**

 Serve global customers and become a leading expert in digital Power infrastructure.





## **Products and Solutions**

- Data Center Solution: Micro Data center, Modular Data Center, Prefabricated Container Data Center.
   Critical Power: PDU,UPS,DC Power System, Lead Acid Battery, Lithium battery.
   Thermal Management Solution: Room /In row precision air conditioner, Fluorine pump air conditioner Liquid cooling, Free cooling.
   PV Energy Storage: PV, Inverter, Energy Storage System.
- Shuyi attaches great importance to product innovation and research and development. Having industry-leading power electronics research and development centers, testing centers, and laboratories.
- At present, we have established industry-leading electromagnetic compatibility laboratories, including Enthalpy difference laboratory, Environmental reliability laboratory, Noise laboratory, Vibration laboratory, Power laboratory, and IP protection laboratory. We have obtained ISO9001 quality management system certification, ISO14001 environmental management system certification, and the products have been certified by CE ICE, UL certification.

**01** Hefei Shuyi Digital Power Co., Ltd.



# **SY-RT Series 1-10kVA Rack Mounted UPS**

#### Power range

1 - 10 kVA

#### Phase

Single phase grounding

#### Application area

Widely applied in government, finance, communication, education, transportation, climate, broadcasting television, industry. Various industries such as taxation, healthcare, energy and electricity.

#### **Performance characteristics**

- Truly achieving online dual conversion
- Microprocessor control technology ensures high reliability
- Input power factor correction
- Output power factor 0.8
- Wide input voltage (110 V to 300 V)
- Efficient frequency conversion mode
- ECO mode provides energy-saving effect (limited to 1-3K models only)
- Compatible with generator input
- The charging current of the long-lasting model reaches 6A







SYRT6kVA/SYRT10kVA

#### Specification

| Model                                       |   | SYRT1k\  | /A          | SYRT   | 2kVA            | SYRT                  | 3kVA             | SYRT  | 6kVA  | SYRT1                       | 0kVA          |  |
|---|---|--|-------------|--|-----------------|-----------------------|------------------|---|---|-----------------------------|---------------|--|
| C   | Capacity                                    | 1000VA/80  | 00W         | 2000VA   | /1600W          | 3000VA                | /2400W           | 6000VA  | /4800W  | 10000VA                     | /8000W        |  |
|   |   | INPU   | т           |  |                 |                       |                  |   |   |                             |               |  |
| Nominal voltage                             |   | 100/110/115/120/127VAC or 200/208/220/230/240VAC   |             |  |                 |                       |                  | 208/220/230/240VAC  |   |                             |               |  |
| Input voltage range                         |   | 55-145 VAC or 110-300 VAC at 50% load  |             |  |                 |                       |                  | 110-300 VAC ± 3% at 50% load                                    |   |                             |               |  |
|   |   | 85-140 VAC or 160-280 VAC at 100% load   |             |  |                 |                       |                  | 176-300 VAC ± 3% at 100% load<br>46Hz ~ 54 Hz or 56Hz ~ 64 Hz   |   |                             |               |  |
| Frequency range  Power factor               |   | 40Hz ~ 70 Hz   |             |  |                 |                       |                  | 46HZ ~  | 54 HZ Or 56HZ -                                   | ~ 64 HZ                     |               |  |
| Power factor                                |   | ≥ 0.99 @ 100% load   |             |  |                 |                       |                  |   |   |                             |               |  |
| Patr  | od voltago                                  | <b>OUTPUT</b> 100/115/120/127VAC or 200/208/220/230/240VAC 208/220/230/240VAC  |             |  |                 |                       |                  |   |   |                             |               |  |
| Rated voltage  Voltage range (Battery mode) |   | ± 1%   |             |  |                 |                       |                  |   | ± 1%  |                             |               |  |
| Frequency range                             |   | 1752 Hz or 5762 Hz   |             |  |                 |                       |                  |   | 46Hz ~ 54 Hz or 56Hz ~ 64 Hz                      |                             |               |  |
|   | is correction range)<br>inge (Battery mode) |  |             |  |                 |                       |                  | 50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz                                |   |                             |               |  |
|   | nt peak ratio                               | 3:1  |             |  |                 |                       |                  |   |   |                             |               |  |
| Harmo                                       | nic distortion                              | ≤ 3%   | THD (linear | load); ≤ 5% THI                                | O (Nonlinear Lo | ad)                   |                  | ≤ 3% TH   | ≤ 3% THD (linear load); ≤ 5% THD (Nonlinear Load) |                             |               |  |
|   | itching from mains<br>de to battery mode    | Not h  | ave         |  |                 |                       |                  |   |   |                             |               |  |
|   | Reverse to bypass                           | 4 milliseconds (under standard conditions)   |             |  |                 |                       |                  |   | 0 milliseconds                                    |                             |               |  |
| Waveform                                    | n (Battery mode)                            | Pure :   | sine wave   |  |                 |                       |                  |   |   |                             |               |  |
|   |   | EFFIC  | CIENCY      |  |                 |                       |                  |   |   |                             |               |  |
| А   | AC mode                                     | 88%  |             | 89   | 9%              | 9                     | 0%               | 92  | 2%  | 939                         | %             |  |
| Bat   | tery mode                                   | 83%  |             | 87   | 7%              | 8                     | 8%               | 9   | 0%  | 911                         | %             |  |
|   |   | BATT   | EDV         |  |                 |                       |                  |   |   |                             |               |  |
|   | Battery type                                | 12 V /   |             | 12 V   | / 9 AH          | 12 V                  | / 9 AH           |   | 12 V  | / 9 AH                      |               |  |
|   | Numbers                                     | 2  | 3741        | 12 V / 9 AH                                    |                 | 6                     |                  | 16 pieces   | 20 pieces   | 16 pieces                   | 20 pieces     |  |
| Standard                                    | Standard                                    | Charge to 90% in   |             |  |                 |                       |                  | Charge to 90% in 9 hours  |   |                             |               |  |
| Model                                       | charging time<br>Maximum                    | 1.0A (maximum)   |             |  |                 |                       |                  | Drocoti 1.0.A   | m avimum 2.04                                     |                             |               |  |
|   | charging current                            |  |             |  |                 |                       |                  | 210 41/06   |   | maximum 2.0A                | 273VDC ±      |  |
|   | Charging Voltage                            | 27.4VDC ± 1%   |             | 54.7 VDC ±1%                                   |                 | 82.1 VDC ±1%          |                  | 218.4 VDC ±<br>1%   | 273VDC ±<br>1%                                    | 218.4 VDC ±<br>1%           | 2/3VDC±<br>1% |  |
|   | Battery type                                |  |             | Match multiple battery boxes according to actu |                 |                       | ual applications |   |   |                             |               |  |
| Long-run                                    | Numbers                                     | 2 3  |             | 4 6 6 8  |                 | 16~20 (adjustable)    |                  |   |   |                             |               |  |
| Model                                       | Standard<br>charging time                   |  |             | 1.0A/2.0A/4.0A/6.0 A                           |                 |                       |                  | 1A/2A/4A/6A<br>(adjustable, 6A is only suitable for 16 batterie |   | attorios)                   |               |  |
|   | Maximum                                     | 27.4VDC ± 41.0VDC ±  |             | 54.7 VDC 82.1 VDC                              |                 | 82.1 VDC 109.4VDC     |                  | 218.4 VDC ± 1% (Based on 16 pcs batteries)                      |   |                             |               |  |
|   | charging current                            | 1% 1% ±1% ±1% ±1% ±1% 210.4 VDC ±1% (based of 110 ptc 1  |             |  |                 |                       |                  |   | ,   |                             |               |  |
|   |   |  |             |  | 1 1 1           |                       | 1 6 10           | - 12 - 42   |   |                             |               |  |
| LCD or                                      | r LED display                               | Load size, battery capacity, mains mode, battery mode, bypass mode, fault indication   |             |  |                 |                       |                  |   |   |                             |               |  |
|   |   | ALARM  |             |  |                 |                       |                  |   |   |                             |               |  |
| Bat   | tery mode                                   | Sound every 4 seconds  |             |  |                 |                       |                  |   |   |                             |               |  |
| Lo  | w battery                                   | Sound once every second  |             |  |                 |                       |                  |   |   |                             |               |  |
| 0   | )verload                                    | Soun   | d once ever | y second                                       |                 |                       |                  |   |   |                             |               |  |
|   | Fault                                       | Continuous ringing   |             |  |                 |                       |                  |   |   |                             |               |  |
|   | Todic                                       |  |             | ng .   |                 |                       |                  |   |   |                             |               |  |
|   |   | PHYS   | SICAL       |  |                 |                       |                  | Llosts  | Hosti   |                             |               |  |
|   | D*\/*!!                                     | 220 420 0  | 10.13       | 410420   |                 | 620 42                | Tuc1 00 0        | Host:<br>530x438x88<br>[2U]                                     | Host:<br>530x438x88<br>[2U]                       | Host: 580x43                |               |  |
| Standard                                    | D * W * H<br>(mm)                           | 310 x 438 x 88 [2U]  | 8 [20]      | 410 x 438 x 88 [2U]                            |                 | 630 X 43              | 8 x 88 [2U]      | Battery kit:<br>668x438x88                                      | Battery kit:<br>580x438x133                       | Batter<br>580x438x          |               |  |
| machine                                     |   |  |             |  |                 |                       |                  | [2U]  | [2U]  |                             |               |  |
|   | Net weight (kg)                             | 12   |             | 1  | 9               | 2                     | 9.3              | Host: 15  | Host: 15  | Host: 18<br>Battery kit: 51 | Host: 18      |  |
| Long  | D*W*H                                       | 310 x 438 x 8  | [ווכ] מ     | 410 v 420                                      |                 | [11C] 88 v            |                  |   |   | 580 x 438 x                 |               |  |
| lasting                                     | (mm)<br>Net weight (kg)                     | 1 1  |             | 410 x 438 x 88 [2U]                            |                 | 500 x 438 x 88 [2U] 5 |                  | 18  |   |                             |               |  |
| machine Net weight (kg)                     |   |  |             |  |                 |                       |                  |   | 16  |                             |               |  |
| -   |   | Relative humidity 20-90% and temperature 0-40 ° C (non condensing)  Relative humidity 20-90% and temperature 0-40 ° C (non condensing)  Relative humidity 20-90% and temperature 0-40 ° C (non condensing) |             |  |                 |                       |                  |   |   |                             |               |  |
|   | ure and humidity                            |  |             |  | mperature 0-4   | o - c (non cond       | ierisirig)       | temperature 0-40 ° C (non condensing)                           |   |                             |               |  |
| Noise                                       |   |  | than 50dBA  | @ I meter                                      |                 |                       |                  | Less than 550   | IBA @ 1 meter                                     | Less than 58di              | BA @ 1 meter  |  |
|   |   | MANAGEMENT   |             |  |                 |                       |                  |   |   |                             |               |  |
|   |   |  |             |  |                 |                       |                  |   |   |                             |               |  |
|   | 5-232/optional USB                          |  |             | vs * 2000/2003<br>nent supports S              |                 |                       |                  |   |   |                             |               |  |

<sup>\*</sup>When the UPS is set to constant voltage and frequency mode, the output power will be reduced by 40%. When the output voltage of the UPS is set to 208VAC, the output power will be reduced by 10%.

\*\*When the number of internal batteries is changed to 16-19, the machine will reduce the output according to the following formula: P=Prating X (N/20 x 100%).

\*\*\*If the machine is installed at an altitude exceeding 1000 meters, the output power will decrease by 1% for every 100 meters increase.



# **SY-RT Series Winner Pro+ Rack Tower/Rackmount Online UPS**

#### Power range

1 - 10 kVA

#### Phase

Single phase with ground

#### **Application area**

Widely applied in government, finance, communication, education, transportation, climate, broadcasting television, industry. Various industries such as taxation, healthcare, energy and electricity.





SYRTWinner Pro+



SYRTWinner Pro+6KR (L)



SYRTWinner Pro+10KR (L)

#### Performance characteristics

- True double-conversion
- Microprocessor control optimizes reliability
- Input power factor correction
- Output power factor 0.9
- Wide input voltage range
- Converter mode available
- ECO mode for energy saving only available for 1-3K models
- Generator compatible
- Adjustable charging current via LCD or software (1A~6A)
- Emergency power off function (EPO) only available for 6K/10K models
- Comprehensive display allows easy monitoring and access of UPS status

#### Specification

|                               | Model                               | SYRTWinner   | Pro+1kVA   | SYRTWinner Pro+2kVA             | SYRTWinner Pro+3kVA                        | SYRTWinne  | r Pro+6kVA  | SYRTWinne                        | Pro+10kVA                                  |  |  |  |
|-------------------------------|-------------------------------------|--|--|---------------------------------|--|--|---|----------------------------------|--|--|--|--|
| Capacity                      |                                     | 1000VA/  | 900W   | 2000VA/1800W                    | 3000VA/2700W                               | 6000VA/5400W   |   | 10000VA/9000W                    |  |  |  |  |
|                               |                                     | INI  | PUT  |                                 |  |  |   |                                  |  |  |  |  |
| Nominal voltage               |                                     | 110  | 0/115/120/12   | 7VAC or 208/220/230/240VAC      | 208/220                                    | 0/230/240VAC   |   |                                  |  |  |  |  |
| Input v                       | oltage range                        | 60-145 VAC or 120-300 VAC (Based on load at 50%)                                     |  |                                 |  |  | 110-300 VAC (Based on load at 50%)<br>176-300 VAC (Based on load at 100%) |                                  |  |  |  |  |
|                               |                                     | 90-145 VAC or 180-300 VAC (Based on load at 100%)                                    |  |                                 |  |  |   | n load at 100%)                  |  |  |  |  |
| Frequency range  Power factor |                                     | 40Hz ~ 70 Hz   |  |                                 |  |  | Iz or 56~64 Hz  |                                  |  |  |  |  |
| FOV                           | wei lactoi                          |  | ≥ 0.99 @ 100% load   |                                 |  |  |   |                                  |  |  |  |  |
| Outr                          | out voltage                         |  | <b>OUTPUT</b> 110/115/120/127VAC or 208/220/230/240VAC 208/220/230/240VAC 208/220/230/240VAC |                                 |  |  |   |                                  |  |  |  |  |
|                               | je regulation                       | ±1   |  | 7 VAC 01 200722072307240 VAC    | 200/220/230/240VAC                         |  |   |                                  |  |  |  |  |
| Frequ                         | iency range                         | 47-  | ~ 53 Hz or 57 ·  | ~ 63 Hz                         | 46Hz ~ 54 Hz or 56Hz ~ 64 Hz               |  |   |                                  |  |  |  |  |
|                               | onized range)<br>nge (Battery mode) | 50   | Hz or 60Hz ± (   | 0.5%                            |  | 50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz                                       |   |                                  |  |  |  |  |
|                               | nt crest ratio                      | 30 H2 ± 0.1 H2 01 00 H2 ± 0.1 H2  311  |  |                                 |  |  |   |                                  |  |  |  |  |
| Harmo                         | nic distortion                      | ≤3   | % THD (Linea   | r Load); ≤ 6% THD (Nonlinear L  | ≦ 3% TH                                    | ≤ 3% THD(Linear Load);≤ 5% THD(Non-linear Load)                        |   |                                  |  |  |  |  |
| ransfer                       | AC mode to battery mode             | No   | t have   |                                 |  | 0 ms   | 0 ms  |                                  |  |  |  |  |
| Time Ir                       | nverter to bypass                   | 4 n  | nilliseconds (u  | ınder standard conditions)      | Oms  |  |   |                                  |  |  |  |  |
|                               | n (battery mode)                    | Pur  | re sinewave  | •                               |  |  |   |                                  |  |  |  |  |
|                               |                                     | EFI  | FICIENCY   |                                 |  |  |   |                                  |  |  |  |  |
| А                             | .C mode                             | 889  | %  | 89%                             | 90%  | 92   | 2%  | 93%                              |  |  |  |  |
| Batt                          | tery mode                           | 839  | %  | 87%                             | 88%  | 90   | )%  | 91                               | 1%   |  |  |  |
|                               |                                     | RA.  | TTERY  |                                 |  |  |   |                                  |  |  |  |  |
|                               | Battery type                        |  | V / 9 AH   | 12 V / 9 AH                     | 12 V / 9 AH                                |  | 12 V  | / 9 AH                           |  |  |  |  |
|                               | Numbers                             | 2  | 3  | 4                               | 6  | 16   | 20  | 16                               | 20   |  |  |  |
| Standard                      | Typical                             |  |  |                                 | -  |  |   | to 90% capacit                   |  |  |  |  |
| Model                         | Recharge Time Charging Current      | +  |  |                                 |  | 1A/2A (Adjustable)   |   |                                  | y  |  |  |  |
|                               | (max.)                              | 1.0A (maximum)   |  |                                 |  |  |   |                                  |  |  |  |  |
|                               | Charging Voltage                    | 27.4VDC ± 1%   | 41.0VDC ± 1%   | 54.7 VDC ±1%                    | 82.1 VDC ±1%                               | 218.4 VDC ±<br>1%  | 273VDC ±<br>1%  | 218.4 VDC ±<br>1%                | 273VDC ±<br>1%                             |  |  |  |
|                               | Battery type                        | Match multiple   |  | pattery boxes according to actu | al applications                            |  |   |                                  |  |  |  |  |
| Long run                      | Numbers                             | 3  |  | 6                               | 16 ~ 20 (Adjustable)                       |  |   |                                  |  |  |  |  |
| Long-run<br>Model             | Charging Current (max.)             | t  |  | 1.0A/2.0A/4.0A/6.0 A            |  | 1A/2A/4A/6A<br>(Adjustable, 6A is only available for 16 pcs batterie   |   | s hattorios)                     |  |  |  |  |
|                               | Charging Voltage                    | 41.0 VD  | C +1%  | 82.1 VDC ±1%                    | 218.4 VDC ± 1% (Based on 16 pcs batteries) |  |   |                                  |  |  |  |  |
|                               | charging voltage                    | 41.0 VDC ±1% 82.1 VDC ±1% 82.1 VDC ±1% 218.4 VDC ± 1% (Based on 16 pcs batteries)    |  |                                 |  |  |   | tteries)                         |  |  |  |  |
|                               |                                     |  |  |                                 |  |  |   |                                  |  |  |  |  |
|                               | LCD                                 | Load size, battery capacity, mains mode, battery mode, bypass mode, fault indication |  |                                 |  |  |   |                                  |  |  |  |  |
|                               |                                     | ALARM  Sounding every 4 seconds  Sounding every second                               |  |                                 |  |  |   |                                  |  |  |  |  |
| Batt                          | tery mode                           |  |  |                                 |  |  |   |                                  |  |  |  |  |
| Lov                           | w battery                           |  |  |                                 |  |  |   |                                  |  |  |  |  |
| 0                             | verload                             | Sounding twice every second  |  |                                 |  |  |   |                                  |  |  |  |  |
|                               | Fault                               |  | ntinuously soi   |                                 |  |  |   |                                  |  |  |  |  |
|                               | rdull                               |  |  | anding                          |  |  |   |                                  |  |  |  |  |
|                               |                                     | PH   | YSICAL   |                                 |  |  |   |                                  |  |  |  |  |
| Standard<br>Model             | D*W*H<br>(mm)                       | 310 x 438 x 88   |  | 410 x 438 x 88                  | 630 x 438 x 88                             | UPS Unit:<br>500x438x88<br>[2U]<br>Battery Pack:<br>668x438x88<br>[2U] | UPS Unit:<br>500x438x88<br>[2U]<br>Battery Pack:<br>580x438x133<br>[3U]   | 500x438:<br>Batter               | Unit:<br>x133 [2U]<br>y Pack:<br>x133 [3U] |  |  |  |
|                               | Net weight (kg)                     | 12   | 14.1   | 19                              | 29.3                                       | UPS Unit:15<br>Battery pack:48   | UPS Unit: 15<br>Battery Pack: 61  | UPS Unit: 18<br>Battery Pack: 51 | UPS Unit: 18<br>Battery Pack: 61           |  |  |  |
| Long                          | D * W * H<br>(mm)                   | 310 x 438  | x 88   | 410 x 438 x 88                  | 410 x 438 x 88                             | 500 x 438  | x 88 [2U]   | 580 x 438                        | x 133 [3U]                                 |  |  |  |
| backup -<br>ime model         | Net weight (kg)                     | 9  |  | 12                              | 14.2                                       | 1:   | 5   | 18                               |  |  |  |  |
|                               |                                     | EN   | VIRONMENT  |                                 |  |  |   |                                  |  |  |  |  |
| Н                             | lumidity                            | Rel  | ative humidit  | / 20-90% and temperature 0-4    | 0 ° C (non condensing)                     | 0-95   | 5% RH @ 0-40°0  | (non-condens                     | ina)                                       |  |  |  |
|                               | oise level                          |  | ss than 50dB (   | •                               |  | Less than 55d  |   | 1                                | IBA @ 1 meter                              |  |  |  |
| ויטואכ ובעלו                  |                                     |  | NAGEMENT   |                                 |  |  | e . metel   |                                  | .z. ve i meter                             |  |  |  |
|                               |                                     |  |  | N/S® 2000/2003/YD///icta/2000   | Windows® 7/8/10 Linux and                  | MAC  |   |                                  |  |  |  |  |
| Smart I                       | Smart RS-232 / USB                  |  | UNITED ANTITUO   | /                               | vvii nativvi i 7707 tuli liliux di lu      | 1-1/7/   | Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8/10, Linux and MAC |                                  |  |  |  |  |
|                               | onal SNMP                           |  |  | nent from SNMP manager and      |  |  |   |                                  |  |  |  |  |

<sup>\*1-3</sup>KVA: Derate to 70% of capacity in Frequency converter mode or when the output voltage is adjusted to 208VAC
\*\*6-10KVA: Derate to 60% of capacity in Frequency converter mode and to 90% when the output voltage is adjusted to 208VAC
\*\*\*Long-run model is only available in 208/220/230/240VAC systems.



## **SY-RT High Frequency Rack Mounted UPS**

#### Power range

10 - 60 kVA

#### Phase

Three in, three out

#### **Application areas**

Widely applied in government, finance, communication, education, transportation, meteorology, broadcasting & television, plus taxation, healthcare, energy & power industries.

#### Performance characteristics

- Pure double conversion technology
- Automatic LCD screen rotation
- (only for 10K-30K models)
- DSP technology ensures high performance
- Output power factor 1.0
- With power factor correction
- 50 Hz/60Hz inverter mode
- With energy-saving working mode (ECO)
- Emergency shutdown function (EPO)
- Support generator
- Support two-way input



High Frequency Rack Mounted UPS (10-60kVA)



- Adjustable number of batteries for long-term operation
- Support shared battery packs
- Optional isolation transformer
- Optional parallel operation
- SNMP+USB+RS-232 multiple communications
- Power walk-in function



High Frequency Rack Mounted UPS (10-60kVA)

#### Specification

|  | Model                                      | SYRT10kVA  | SYRT15kVA                | SYRT20kVA                  | SYRT30kVA                   | SYRT40kVA             | SYRT60kVA             |  |  |  |
|--|--|--|--------------------------|----------------------------|-----------------------------|-----------------------|-----------------------|--|--|--|
|  | Capacity                                   | 10kVA/10kW   | 15kVA/15kW               | 20kVA/20kW                 | 30kVA/30kW                  | 40kVA/40kW            | 60kVA/60kW            |  |  |  |
|  | Phase                                      | Three in, th   |                          | ZURVA/ ZURW                | JUNYA/ JUNY                 | 40KV// 40KW           | OOKVA/ OOKVV          |  |  |  |
| F  | arallel capacity                           | 4 max  |                          |                            |                             |                       |                       |  |  |  |
|  |  | INPUT  |                          |                            |                             |                       |                       |  |  |  |
|  | Rated voltage                              | 3 x 380 VAC (3PH+N)  |                          |                            |                             |                       |                       |  |  |  |
|  | Voltage range                              | 190-520VAC (three-phase) @ 50% load, -305-478VAC (three-phase) @ 100% load                   |                          |                            |                             |                       |                       |  |  |  |
| F  | requency range                             | 46 ~ 54 Hz or 56 ~ 64Hz  |                          |                            |                             |                       |                       |  |  |  |
|  | Power factor                               | ≧ 0.99 1009  | 6 load                   |                            |                             |                       |                       |  |  |  |
|  |  | ОИТРИТ   |                          |                            |                             |                       |                       |  |  |  |
|  | Rated voltage                              | 3 x 360*/38  | 0/400/415 VAC (3PH+N)    |                            |                             |                       |                       |  |  |  |
| Output a                                     | ccuracy (battery mode)                     | ± 1%   |                          |                            |                             |                       |                       |  |  |  |
|  | requency range<br>nous correction range)   | 46 ~ 54Hz o  | or 56 ~ 64Hz             |                            |                             |                       |                       |  |  |  |
|  | requency range<br>(battery mode)           | 50Hz ± 0.1H  | z or 60Hz ± 0.1 Hz       |                            |                             |                       |                       |  |  |  |
| Cı   | urrent peak ratio                          | 3: 1 (maxim  | num value)               |                            |                             |                       |                       |  |  |  |
| На   | rmonic distortion                          | ≤ 1% THD (linear load) ≤ 3% THD (nonlinear load)   |                          |                            |                             |                       |                       |  |  |  |
| Transfer                                     | AC mode to battery mode                    | Not have   |                          |                            |                             |                       |                       |  |  |  |
| Time   | me Inverter to bypass Not have             |  |                          |                            |                             |                       |                       |  |  |  |
| Wave   | form (battery mode)                        | Pure sine wave   |                          |                            |                             |                       |                       |  |  |  |
| Overload                                     | AC mode                                    | 100% -110% 60 minutes, 110% -125% 10 minutes, 125% -150% 1 minute,>150% immediate protection |                          |                            |                             |                       |                       |  |  |  |
| 0.1000                                       | Battery mode                               | 100% -1109   | % 60 minutes, 110% -12   | 5% 10 minutes, 125% -150   | % 1 minute,>150% immed      | iate protection       |                       |  |  |  |
|  |  | EFFICIENC  | Υ                        |                            |                             |                       |                       |  |  |  |
|  | AC mode                                    | 95.5%  |                          |                            |                             |                       |                       |  |  |  |
|  | ECO mode                                   | 98.5%  |                          |                            |                             |                       |                       |  |  |  |
|  | Battery mode                               | 94.5%  |                          |                            |                             |                       |                       |  |  |  |
|  |  | BATTERY  |                          |                            |                             |                       |                       |  |  |  |
|  | Type                                       | Match mult   | iple battery boxes accor | ding to actual application | S                           |                       |                       |  |  |  |
|  | Numbers                                    | 20   |                          |                            | 32 ~ 40 (Adjustable)        |                       |                       |  |  |  |
| Maxim  | um charging current                        | 1A ~ 12A (A  | djustable)               |                            |                             | 1A ~ 16A (Adjustable) | 1A ~ 18A (Adjustable) |  |  |  |
| Cl   | narging Voltage                            | ± 13.65 VDC x N (N=10)   |                          |                            | ± 13.65 V x N ( N = 16 ~ 20 | )                     | I                     |  |  |  |
|  |  | PHYSICAL   | PROPERTY                 |                            |                             |                       |                       |  |  |  |
| Desil  | Size                                       | 680 x 438 x  | 133 [3U]                 |                            |                             | 797 x 438             | x 176 [4U]            |  |  |  |
| Depth * Width * Height (mm)  Net weight (kg) |  | 27 30 32 40  |                          |                            |                             |                       |                       |  |  |  |
|  |  | ENVIRONN   | IENT                     |                            |                             |                       | 45                    |  |  |  |
| Tempo  | erature and humidity                       |  |                          | ensing) and temperature (  | -40 °C                      |                       |                       |  |  |  |
| Tempt  | <u> </u>                                   | 0-95% relative humidity (non condensing) and temperature 0-40 °C                             |                          |                            |                             |                       |                       |  |  |  |
|  | Noise                                      | less than 62dB@1 m less than 65dB@1 m less than 70dB@1 m                                     |                          |                            |                             |                       |                       |  |  |  |
| lest.  | ligant BC 222/JCD                          | MANAGEMENT Supports Windows® series, Linux and MAC   |                          |                            |                             |                       |                       |  |  |  |
|  | ligent RS-232/USB                          |  |                          | P management and netw      | ork managomont              |                       |                       |  |  |  |
|  | Optional SNMP<br>e output voltage is set t | o 3 × 360VAC, the output   |                          |                            | ork management              |                       |                       |  |  |  |



# SY-RT Series 1KVA/1.5KVA/2KVA/3KVA Rack/Tower Online UPS

#### Power range

1 - 3 kVA

#### Phase

Single phase with ground

#### **Application area**

Widely applied in government, finance, communication, education, transportation, climate, broadcasting television, industry.
Various industries such as taxation, healthcare, energy and electricity.



#### Performance characteristics

- True double-conversion
- Output power factor 1
- 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 energy saving
- Emergency power off (EPO) function
- Provides over voltage cutt-off protection and surge immunity by MOV for full time equipment protection
- High power factor charger upto 1000W capacity with very low ripple current when charging battery
- Low input THDi to reduce power system pollution
- Adjustable charging current via LCD panel

#### Specification

| Specification  |   |                       |   |                           |                   |                           |  |  |  |  |
|--|---|-----------------------|---|---------------------------|-------------------|---------------------------|--|--|--|--|
| Model  | SYRT1K  |                       | SYRT1.5K  | SYRT1.5K SYR              |                   | SYRT3K                    |  |  |  |  |
| Capacity   | 1000VA  | /1000W                | 1500VA/1500W  | 2000VA/2000W 3000VA/3000W |                   |                           |  |  |  |  |
| INPUT  |   |                       |   |                           |                   |                           |  |  |  |  |
| Nominal Voltage 100/110/115/120/127 VAC or 200/208/220/230/240 VAC |   |                       |   |                           |                   |                           |  |  |  |  |
| Voltage Range  | 55-150 VAC ± 5% or 110-300 VAC ± 5% @ 50% load<br>80-150 VAC ± 5% or 160-300 VAC ± 5% @ 100% load |                       |   |                           |                   |                           |  |  |  |  |
| Frequency Range Power Factor                                       | 40Hz ~ 70 Hz ≥ 0.99 @ nominal voltage (100% load)   |                       |   |                           |                   |                           |  |  |  |  |
| Harmonic Distortion(THDi)  | ≥ 0.99 @ nominal voltage (100% load) ≤ 5% @ nominal input voltage                                 |                       |   |                           |                   |                           |  |  |  |  |
|  | OUTPUT  |                       |   |                           |                   |                           |  |  |  |  |
| Output Voltage   | 100*/   |                       |   |                           |                   |                           |  |  |  |  |
| AC Voltage Regulation<br>(Batt. Mode)                              | ± 1%  |                       |   |                           |                   |                           |  |  |  |  |
| Frequency Range<br>(Synchronized range)                            | 57 ~ 6  | 53 Hz or 47 ~ 53 Hz   |   |                           |                   |                           |  |  |  |  |
| Frequency Range (Battery mode)                                     | 60Hz  | ± 0.1Hz or 50 Hz ± 0  |   |                           |                   |                           |  |  |  |  |
| Current Crest Ratio  | 3:1 (m  |                       | ····-   |                           |                   |                           |  |  |  |  |
| Harmonic Distortion  |   |                       | ≤ 4 % THD (Non-linear Load)   |                           |                   |                           |  |  |  |  |
| - AC Mode to Batt. Mode  | ≧2 %<br>Zero  | IND (LINEAI LOAU) ,   | ≥ 4 % THD (NOTI-tilled Load)  |                           |                   |                           |  |  |  |  |
| Time   |   | <i>(</i> )            |   |                           |                   |                           |  |  |  |  |
| Inverter to Bypass   |   | (Typical)             |   |                           |                   |                           |  |  |  |  |
| Waveform (battery mode)  |   | Sinewave              |   |                           |                   |                           |  |  |  |  |
|  |   | CIENCY                |   |                           |                   |                           |  |  |  |  |
| AC Mode  | ≧89%  | @ full charged bat    | tery  |                           | ≧91% @ full char  | narged battery            |  |  |  |  |
| ECO Mode   | ECO Mode ≥96% @ full charged battery  |                       |   |                           |                   |                           |  |  |  |  |
| Battery Mode   | ≧88%  |                       |   | ≧90%                      |                   |                           |  |  |  |  |
|  | BATT  | ERY                   |   |                           |                   |                           |  |  |  |  |
| Battery type   | 12 V / 9 Ah   | 12 V / 7 Ah           | 12 V / 9 Ah   | 12 V / 9 Ah               | 12 V / 7 Ah       | 12 V / 9 Ah               |  |  |  |  |
| Numbers  | 2   | 3                     | 3   | 4                         | 6                 | 6                         |  |  |  |  |
|  |   |                       |   |                           |                   |                           |  |  |  |  |
| Typical recharge time  | 3 hours recover to 95% capacity for internal battery@ 2A charging current                         |                       |   |                           |                   |                           |  |  |  |  |
| Charging Current   |   |                       | 'AC models: default 2A, max. 8A adjus<br>AC models: default 2A, max. 12A adju |                           | Defaul            | t: 2A, Max: 8A adjustable |  |  |  |  |
| Charging Voltage   | 27.4 VDC ± 1%   | 41.1 VDC ± 1%         | 41.1 VDC ± 1%   | 54.8 VDC ±1%              | 82.1 VDC ±1%      | 82.1 VDC ±1%              |  |  |  |  |
| enarging vollage   |   | CATORS                | 1 150-170   | 3 1.0 13 0 - 170          | 02.1 10 0 = 170   | 02.1 VBC=170              |  |  |  |  |
| LCD  |   |                       | attany laval Input/Output valtage Dis   | chargo timor, and I       | ault conditions   |                           |  |  |  |  |
| LCD  |   |                       | attery level, Input/Output voltage, Dis                                       | criarge tirrier, ariu i   | -ault contaitions |                           |  |  |  |  |
|  | ALAR  |                       |   |                           |                   |                           |  |  |  |  |
| Battery mode   |   | ding every 5 second   |   |                           |                   |                           |  |  |  |  |
| Low battery  | Sound   | ding every 2 second   | d   |                           |                   |                           |  |  |  |  |
| Overload   | Sound   | ding every second     |   |                           |                   |                           |  |  |  |  |
| Fault  |   | nuously sounding      |   |                           |                   |                           |  |  |  |  |
|  | PHYS  | ICAL                  |   |                           |                   |                           |  |  |  |  |
| Dimension, D x W x H(mm)   | 410 x 4   | 38 x 88               | 410 x 438 x 88  | 510 x 438 x 88            | 630 x 438 x 88    | 630 x 438 x 88            |  |  |  |  |
| Net Weight<br>(without battery) (kgs)                              | 6.6   | 7.8                   | 8.1   | 9.4                       | 10.6              | 12.4                      |  |  |  |  |
| Net Weight   | 11.6  | 14.1                  | 15.5  | 19.5                      | 23.3              | 27.5                      |  |  |  |  |
| (w/built-int battery) (kgs)  |   | RONMENT               |   |                           |                   |                           |  |  |  |  |
| Humidity   |   |                       |   |                           |                   |                           |  |  |  |  |
|  |   |                       |   |                           |                   |                           |  |  |  |  |
| Noise level  | Less than 50dB @ 1 Meter  |                       |   |                           |                   |                           |  |  |  |  |
| Altitude   | 10% c   | de-rating for over 10 | 000m (The altitude should not exceed  | 3000m)                    |                   |                           |  |  |  |  |
|  | MANA  | AGEMENT               |   |                           |                   |                           |  |  |  |  |
| Smart RS-232 / USB   | Suppo   | orts Windows® 2000    | 0/2003/XP/Vista/2008/7/8/10, Linux a  | and MAC                   |                   |                           |  |  |  |  |
| Optional SNMP  | Power management from SNMP manager and web browser  |                       |   |                           |                   |                           |  |  |  |  |
|  | STANDARD  |                       |   |                           |                   |                           |  |  |  |  |
| EMC/safety   | (EMC  | 1-1.5K: EN62040-2     | C1, 2K-3K EN62040-2 C2) for CE mode   | ls                        |                   |                           |  |  |  |  |
|  | ,   |                       |   |                           |                   |                           |  |  |  |  |

\*Derate capacity to 80% when the output voltage is adjusted to 100VAC/200VAC/208VAC.



# **SY-RT Series 6KVA/10KVA Rack/Tower Online UPS**

#### Power range

6 kVA / 10 kVA

#### Phase

1 phase in / 1 phase out

#### Application area

Widely applied in government, finance, communication, education, transportation, climate, broadcasting television, industry. Various industries such as taxation, healthcare, energy and electricity.



#### **Performance characteristics**

- True double-conversion
- DSP technology guarantees high performance
- Output power factor 1
- Wide input voltage range (110-300 VAC)
- Active input power factor correction 0.99
- 50Hz/60Hz frequency converter mode
- Emergency power off function (EPO)
- Generator compatible
- SNMP/USB/RS-232 communications
- Adjustable battery numbers
- Optional N+X parallel redundancy

#### Specification

| Spe                  | cification                            |   |  |  |   |  |  |  |  |
|----------------------|---------------------------------------|---|--|--|---|--|--|--|--|
|                      | Model                                 | SYRT6kVA  |  | SYRT10kVA  |   |  |  |  |  |
| (                    | Capacity                              | 6000VA/6000W  |  | 10000VA/10000W   |   |  |  |  |  |
|                      |                                       | INPUT   |  |  |   |  |  |  |  |
| Nominal Voltage      |                                       | 208/220/230/240 VAC   |  |  |   |  |  |  |  |
| Voltage Range        |                                       | 110~300VAC ± 3 % at 50% load                                      |  |  |   |  |  |  |  |
|                      | uency Range                           |   | 176~300VAC±3 % at 100% load<br>46~54 Hz © 50Hz / 56~64 Hz © 60Hz   |  |   |  |  |  |  |
|                      | wer Factor                            | ≥ 0.99 @ full load  |  |  |   |  |  |  |  |
|                      | THDi                                  | < 4% @100% Load, < 6% @50% Load                                   |  |  |   |  |  |  |  |
|                      |                                       | OUTPUT  |  |  |   |  |  |  |  |
| Out                  | put Voltage                           | 208*/220/230/240 VAC  |  | 208*/220/230/240 VAC   |   |  |  |  |  |
| AC Volta             | age Regulation                        | ± 1%  |  | 1  |   |  |  |  |  |
|                      | uency Range                           | 46~54 Hz ◎ 50Hz / 56~6  | 46~54 Hz © 50Hz / 56~64 Hz © 60Hz                                  |  |   |  |  |  |  |
|                      | ronized Range)<br>ange (Battery mode) | 50 Hz ± 0.1 Hz or 60 Hz ±   |  |  |   |  |  |  |  |
|                      | nt Crest Ratio                        |   | U.I HZ   |  |   |  |  |  |  |
|                      | onic Distortion                       | 3:1 (max.)  | ≦4% THD (Non-linear Load)  |  |   |  |  |  |  |
|                      | AC Mode to                            |   | = 170 1115 (Not1 tilledi Edda)                                     |  |   |  |  |  |  |
| Transfer<br>Time –   | Battery Mode                          | Zero  |  |  |   |  |  |  |  |
|                      | Inverter to Bypass                    | Zero  |  |  |   |  |  |  |  |
| waveforr             | m (Battery mode)                      | Pure Sinewave   |  |  |   |  |  |  |  |
| Overload -           | AC Mode                               | 100%~110%: 10min、11   | 0%~130%: 1min、>130% : 1sec   |  |   |  |  |  |  |
|                      | Battery Mode                          | 100%~110%: 30sec、110  | 0%~130%: 10sec、>130%: 1sec   |  |   |  |  |  |  |
|                      |                                       | EFFICIENCY  |  |  |   |  |  |  |  |
|                      | AC Mode                               | 94%   |  | 94%  |   |  |  |  |  |
|                      | CO Mode<br>ttery Mode                 | 98.5%   |  | 98.5%<br>92%   |   |  |  |  |  |
| 50                   | tiery riode                           | BATTERY 92%   |  |  |   |  |  |  |  |
|                      | Battery Type                          |   | / 7 Ah   | 12 V /   | 9 Ah  |  |  |  |  |
|                      |                                       |   |  | 16   |   |  |  |  |  |
| Standard             | Numbers<br>Typical                    | 16  | 20   | 10   | 20  |  |  |  |  |
| Model                | Recharge Time Charging Current        | 9 hours recover to 90% c  | apacity  |  |   |  |  |  |  |
|                      | (max.)                                | 1.0 A   |  |  |   |  |  |  |  |
|                      | Charging Voltage                      | 218.4 VDC ± 1%  | 273 VDC ± 1%   | 218.4 VDC ± 1%   | 273 VDC ± 1%  |  |  |  |  |
|                      | Battery type                          | Depending on application  | ons  |  |   |  |  |  |  |
| Long-run             | Numbers                               | 16-20**   |  |  |   |  |  |  |  |
| Model                | Charging Current                      | 4.0 A   | 4.0 A  |  |   |  |  |  |  |
|                      | (max.) Charging Voltage               | /12 65VDC v hatton/ num   | (13.65VDC x battery number) ± 1%                                   |  |   |  |  |  |  |
|                      | Charging voltage                      | INDICATORS  |  |  |   |  |  |  |  |
|                      |                                       |   |  |  |   |  |  |  |  |
| L                    | CD Panel                              |   | attery level, Input/Output voltage, Dis                            | charge timer, and Fault conditions                                 |   |  |  |  |  |
|                      |                                       | ALARM   |  |  |   |  |  |  |  |
| Bai                  | ttery Mode                            | Sounding every 4 seconds  |  |  |   |  |  |  |  |
|                      | ow Battery                            | Sounding every seconds  |  |  |   |  |  |  |  |
| (                    | Overload                              | Sounding twice every se   | cond   |  |   |  |  |  |  |
|                      | Fault                                 | Continuously sounding   |  |  |   |  |  |  |  |
|                      |                                       | PHYSICAL  |  |  |   |  |  |  |  |
| Standard             | D * W * H(mm)                         | UPS Unit: 610 x 438 x 88 [2U]<br>Battery Pack:715 x 438 x 88 [2U] | UPS Unit: 610 x 438 x 88 [2U]<br>Battery Pack:600 x 438 x 133 [3U] | UPS Unit: 610 x 438 x 88 [2U]<br>Battery Pack: 715 x 438 x 88 [2U] | UPS Unit: 610 x 438 x 88 [2U]<br>Battery Pack: 600 x 438 x 133 [3U] |  |  |  |  |
| Model                | Net weight (kg)                       | UPS Unit: 17  | UPS Unit: 17   | UPS Unit: 20<br>Battery Pack: 53                                   | UPS Unit: 20<br>Battery Pack: 63                                    |  |  |  |  |
| Long                 | D * W * H(mm)                         |   | Battery Pack: 48 Battery Pack: 57  610 x 438 x 88 [2U]             |  | Battery Pack: 53 Battery Pack: 63 610 x 438 x 88 [2U]               |  |  |  |  |
| backup<br>time model | ` '                                   |   |  |  |   |  |  |  |  |
| ame model            | Net weight (kg)                       | 17 20   |  |  |   |  |  |  |  |
|                      |                                       | ENVIRONMENT   |  |  |   |  |  |  |  |
| Opera                | ating Humidity                        | 20-90 % RH @ 0- 40°C (n   | on-condensing)   |  |   |  |  |  |  |
| N                    | oise Level                            | Less than 55dB @1Meter  |  | Less than 58d  | 3 @1Meter   |  |  |  |  |
|                      |                                       | MANAGEMENT  |  |  |   |  |  |  |  |
| Smart                | : RS-232 / USB                        | Supports Windows® 2000  | 0/2003/XP/Vista/2008, Windows* 7/8                                 | /10, Linux and MAC   |   |  |  |  |  |
| Opt                  | ional SNMP                            | Power management from SNMP manager and web browser                |  |  |   |  |  |  |  |

Derate capacity to 60% of capacity in CVCF mode and to 90% when the output voltage is adjusted to 208VAC or parallel system is operated.
Then using 16 pieces of batteries, the output power factor will be derated to 0.9 if using 18 or 19 pieces of batteries, the output power factor will be derated to 0.9 if the UPS is installed or used in a place where the altitude is above than 1000m, the output power must be derated one percent per 100m.