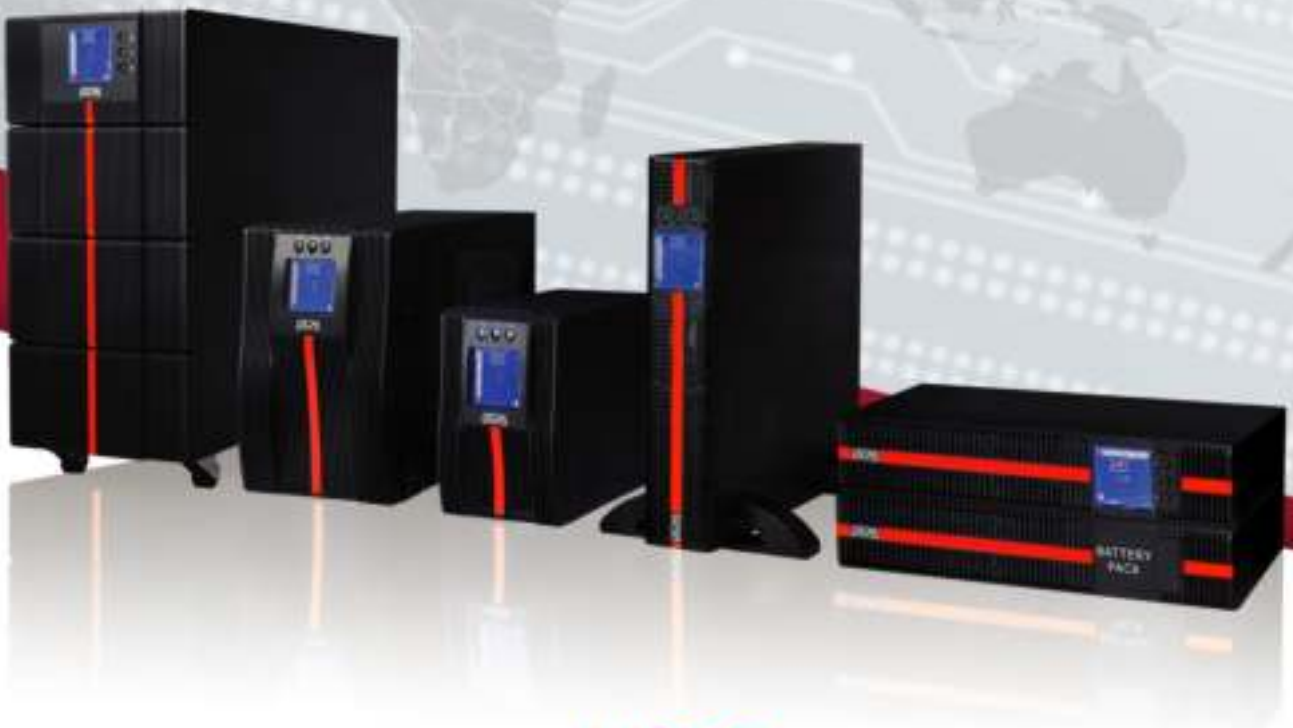
POWERCOM
Complete Power Solution™

# Complete Power Solution



# POWERCOM UPS

Your safety-guard is always here

WWW.UPSPOWERCOM.COM

# About POWRCOM


POWERCOM was founded in 1987, and is specialized specialist on Uninterruptible Power Supply (UPS) and protection power supply design and manufacture. The mission of POWERCOM is to provide Safe, High Quality and Reliable product to meet the demand with efficient power supply!

POWERCOM powerful R&D team focus on precise and innovation production research and design. POWERCOM produce Uninterruptible Power Supply (UPS), with wide range of application on Telecom, Medical, Industrial, Enterprise and Individual PCs and communication network. POWERCOM compact produce process coporate with flexible advanced system application, offers the best suit of customer requirement. In 1996, POWERCOM earned ISO 9001, ISO 14001, Awards of Golden Plaza of National Excellent Electrical Equipment and international certification recognized. In the 31 years manufacture experience, POWERCOM are driving on the way to deliver Safe, Reliable and High Quality production offer the best customer value.

Powercom Empower Your Life!

# GLOBAL SALES & OFFICES


## TAIWAN Taipei Headquarter

Address: 9F., No.246, Lian Cheng Rd.,
Zhong He Dist., New Taipei City 235, Taiwan
TEL: +886-2-2225-8552
FAX: +886-2-2225-1776 / 2-2226-0537
Email: market@upspowercom.com.tw
sales@upspowercom.com.tw
Website: www.upspowercom.com

## CHINA GuangDong Sales Office

Zhongshan Guanhong Electronic Co., LTD.
Address: No.9, HongYe Road ZhongShan Torch
Development Zone, GuangDong, China

## RUSSIA Moscow Sales Office

Address: Offices 35-37, 1 st Kabelniy proezd,
2 Moscow, Russia, 111024
Website: www.pcm.ru

## USA California Sales Office

Address: 2084 E. Francis Street, Ontario,
CA 91761, USA

California OEM Office
Address: 1877 Concourse Drive, San Jose,
CA 95131-1729, USA
Website: www.powercom-usa.com

## JAPAN Tokyo Sales Office

Address: 102-0083 3-7 Koujimachi,
Chiyoda Ku,Tokyo, Japan
Website: www.pcmups.jp

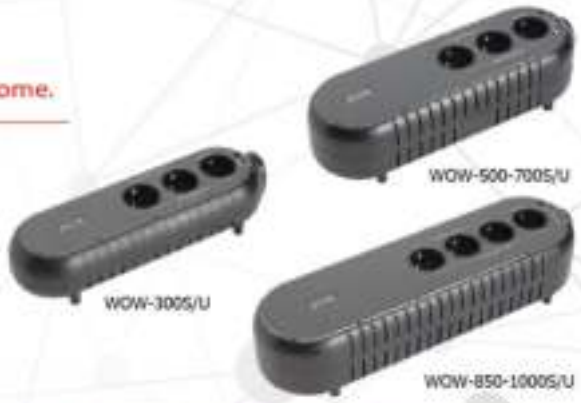
# POWRCOM CONTENT

Off-Line UPS

# WOW Series

Impressive outfit to fit in your workshop, studio and home.

- Offline UPS Design
- Energy Saving Green Topology
- Advance Battery Management (ABM)
- Advance Digital Microprocessor Control
- UPSMON Monitor Management
- Overload, Surge, Short Circuit Protection




## Specifications

| Model | WOW-300S WOW-300U | WOW-500S WOW-500U | WOW-700S WOW-700U | WOW-850S WOW-850U | WOW-1000S WOW-1000U |
|---|---|---|---|---|---|
| **Configuration** | | | | | |
| Capacity (VA) | 300 VA | 500 VA | 700 VA | 850 VA | 1000 VA |
| Capacity (Watts) | 165 W | 250 W | 350 W | 425 W | 500 W |
| Form | Office Type | | | | |
| **Input** | | | | | |
| Voltage | 100 / 110 / 115 / 120 VAC or 220 / 230 / 240 VAC | | | | |
| Input Voltage Range | 85 - 138 or 165 - 276 VAC | | | | |
| Input Frequency Range | 50 Hz / 60 Hz (Auto Sensing) | | | | |
| **Output** | | | | | |
| Waveform | Simulated Sine Wave | | | | |
| Voltage | 100 / 110 / 115 / 120 VAC or 220 / 230 / 240 VAC | | | | |
| Frequency | 50 Hz / 60 Hz ± 0.5 Hz | | | | |
| Transfer Time | 2 - 4 ms (Typical) | | | | |
| **Protection** | | | | | |
| Full Protection | Overload, Surge, Short Circuit | | | | |
| Tel Communication | RJ11 / RJ45 | | | | |
| **Battery** | | | | | |
| Type | 6V 5Ah | 12V 3.3Ah | 12V 4Ah | 12V 7.2Ah | 12V 9Ah |
| Quantity | 1 | 1 | 1 | 1 | 1 |
| Sealed, Maintenance Free | Yes | | | | |
| Typical Recharge Time | 8 hr to 90% | | | | |
| **Management & Communication** | | | | | |
| Indicator | LED Panel | | | | |
| Communication Port | RS232 : S model<br>USB B type : U model | | | | |
| **Physical** | | | | | |
| Dimensions (WxDxH) (mm) | 100 x 315 x 68 | 110 x 330 x 82 | | 120 x 410 x 85 | |
| Weight (kgs) | 1.7 | 2.5 | 2.6 | 3.8 | 4 |
| Shipping Dimensions (mm) | 162 x 417 x 102 | 187 x 447 x 140 | | 187 x 516 x 158 | |
| Shipping Weight (kgs) | 2.1 | 2.9 | 3 | 4.4 | 4.7 |
| **Alarm** | | | | | |
| Overload / Fault | Continuous Beeping | | | | |
| Battery Mode | Beep every 4 seconds | | | | |
| Low Battery | Beep every 0.5 second | | | | |
| **Environment** | | | | | |
| Operating Humidity | 0-90 % RH at 0-40°C (Non-condensing) | | | | |
| Audible Noise | Less than 40 dB | | | | |

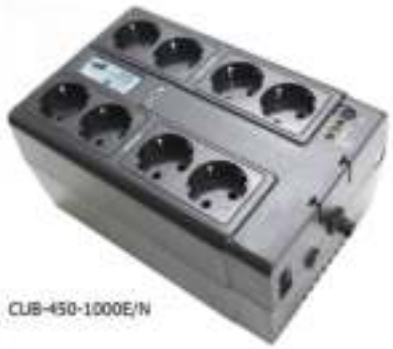
* Specifications are subject to change without further notice.
* Specifications are for reference, please refer to information based on real product.

**OUTPUT RECEPTACLE OPTION**

# CUBE Series

Compact size with multi-socket for continuous power supply.

- Offline UPS Design
- Energy Saving Green Topology
- Wall Mounting Design
- Advance Battery Management (ABM)
- Overload, Surge, Short Circuit Protection



CUB-450-1000E/N

## Specifications

| Model | CUB-450E<br>CUB-450N | CUB-650E<br>CUB-650N | CUB-850E<br>CUB-850N | CUB-1000E<br>CUB-1000N |
|---|---|---|---|---|
| **Configuration** | | | | |
| Capacity (VA) | 450 VA | 650 VA | 850 VA | 1000 VA |
| Capacity (Watts) | 270 W | 390 W | 510 W | 550 W |
| Form | Office Type | | | |
| **Input** | | | | |
| Voltage | 220 / 230 / 240 VAC | | | |
| Input Voltage Range | 165 - 276 VAC | | | |
| Input Frequency Range | 50 Hz / 60 Hz (Auto Sensing) | | | |
| **Output** | | | | |
| Waveform | Simulated Sine Wave | | | |
| Voltage | 220 / 230 / 240 VAC | | | |
| Frequency | 50 Hz / 60 Hz ± 0.5 Hz | | | |
| Transfer Time | 2 - 4 ms (Typical) | | | |
| **Protection** | | | | |
| Full Protection | Overload, Surge, Short Circuit | | | |
| Tel Communication | RJ11 / RJ45 : E model | | | |
| **Battery** | | | | |
| Type | 12V 7Ah | 12V 7.2Ah | 12V 9Ah | |
| Quantity | 1 | | 1 | |
| Sealed, Maintenance Free | Yes | | | |
| Typical Recharge Time | 8 hr to 90% | | | |
| **Management & Communication** | | | | |
| Indicator | LED Panel, LCD Panel (Option) | | | |
| Communication Port | USB B type : E model | | | |
| **Physical** | | | | |
| Dimensions (WxDxH) (mm) | 245 x 160 x 125 | | | |
| Weight (kgs) | 3.5 | 3.7 | 3.9 | 3.9 |
| Shipping Dimensions (mm) | 312 x 174 x 238 | | | |
| Shipping Weight (kgs) | 3.9 | 4 | 4.3 | 4.3 |
| **Alarm** | | | | |
| Overload / Fault | Continuous Beeping | | | |
| Battery Mode | Beep every 4 seconds | | | |
| Low Battery | Beep every 0.5 second | | | |
| **Environment** | | | | |
| Operating Humidity | 0-90 % RH at 0-40°C (Non-condensing) | | | |
| Audible Noise | Less than 40 dB | | | |

* N series without tel communication, USB port.
* Specifications are subject to change without further notice.
* Specifications are for reference, please refer to information based on real product.

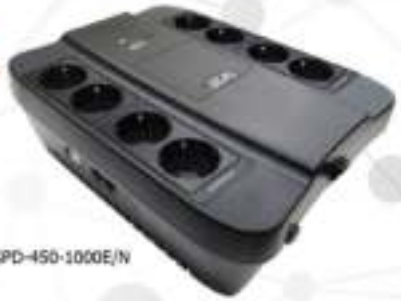
**OUTPUT RECEPTACLE OPTION**

TYPE B TYPE E TYPE F TYPE G TYPE I TYPE IEC

# SPIDER-E/N Series

Tri-direction mounting series suitable for home and workstation.

- Offline UPS Design
- Energy Saving Green Topology
- Tri-direction Hanger Flexibility
- Cold Start Function
- UPSMON Monitor Management
- Overload, Surge, Short Circuit Protection



SPD-450-1000E/N

## Specifications

| Model | SPD-450E SPD-450N | SPD-650E SPD-650N | SPD-850E SPD-850N | SPD-1000E SPD-1000N |
|---|---|---|---|---|
| **Configuration** | | | | |
| Capacity (VA) | 450 VA | 650 VA | 850 VA | 1000 VA |
| Capacity (Watts) | 270 W | 390 W | 510 W | 550 W |
| Form | Office Type | | | |
| **Input** | | | | |
| Voltage | 220 / 230 / 240 VAC | | | |
| Input Voltage Range | 165 - 276 VAC | | | |
| Input Frequency Range | 50 Hz / 60 Hz (Auto Sensing) | | | |
| **Output** | | | | |
| Waveform | Simulated Sine Wave | | | |
| Voltage | 220 / 230 / 240 VAC | | | |
| Frequency | 50 Hz / 60 Hz ± 0.5 Hz | | | |
| Transfer Time | 2 - 4 ms (Typical) | | | |
| **Protection** | | | | |
| Full Protection | Overload, Surge, Short Circuit | | | |
| Tel Communication | RJ11 / RJ45 : E model | | | |
| **Battery** | | | | |
| Type | 12V 7Ah | 12V 7.2Ah | 12V 9Ah | |
| Quantity | 1 | | 1 | |
| Sealed, Maintenance Free | Yes | | | |
| Typical Recharge Time | 8 hr to 90% | | | |
| **Management & Communication** | | | | |
| Indicator | LED Panel, LCD Panel (Option) | | | |
| Communication Port | USB B type : E model | | | |
| **Physical** | | | | |
| Dimensions (WxDxH) (mm) | 232 x 285 x 103 | | | |
| Weight (kgs) | 3.8 | 3.8 | 4.2 | 4.3 |
| Shipping Dimensions (mm) | 302 x 354 x 176 | | | |
| Shipping Weight (kgs) | 4.4 | 4.4 | 4.9 | 5 |
| **Alarm** | | | | |
| Overload / Fault | Continuous Beeping | | | |
| Battery Mode | Beep every 4 seconds | | | |
| Low Battery | Beep every 0.5 second | | | |
| **Environment** | | | | |
| Operating Humidity | 0-90 % RH at 0-40°C (Non-condensing) | | | |
| Audible Noise | Less than 40 dB | | | |

* N series without tel communication, USB
* Specifications are subject to change without further notice.
* Specifications are for reference, please refer to information based on real product.

**OUTPUT RECEPTACLE OPTION**

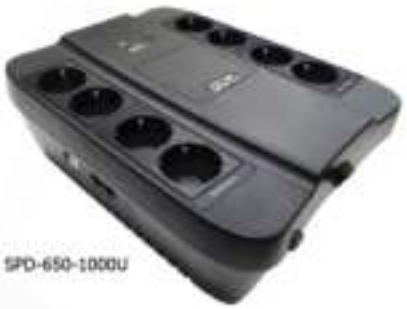
TYPE **B** TYPE **E** TYPE **F** TYPE **G** TYPE **I** TYPE **IEC**

*Line Interactive STEPWAVE UPS*

# SPIDER-U Series

Spider like multiple socket for home and office application.

- Line Interactive UPS Design
- Energy Saving Green Topology
- Tri-direction Hanger Flexibility
- Cold Start Function
- Overload, Surge, Short Circuit Protection



SPD-650-1000U

## Specifications

| Model | SPD-650U | SPD-850U | SPD-1000U |
|---|---|---|---|
| **Configuration** | | | |
| Capacity (VA) | 650 VA | 850 VA | 1000 VA |
| Capacity (Watts) | 390 W | 510 W | 550 W |
| Form | Office Type | | |
| **Input** | | | |
| Voltage | 220 / 230 / 240 VAC | | |
| Input Voltage Range | 140 - 300 VAC | | |
| Input Frequency Range | 50 Hz / 60 Hz (Auto Sensing) | | |
| **Output** | | | |
| Waveform | Simulated Sine Wave | | |
| Voltage | 220 / 230 / 240 VAC | | |
| Frequency | 50 Hz / 60 Hz ± 0.5 Hz | | |
| Transfer Time | 2 - 4 ms (Typical) | | |
| **Protection** | | | |
| Full Protection | Overload, Surge, Short Circuit | | |
| Tel Communication | RJ11 / RJ45 : U model | | |
| **Battery** | | | |
| Type | 12V 7.2Ah | 12V 9Ah | |
| Quantity | 1 | 1 | |
| Sealed, Maintenance Free | Yes | | |
| Typical Recharge Time | 8 hr to 90% | | |
| **Management & Communication** | | | |
| Indicator | LED Panel, LCD Panel (Option) | | |
| Communication Port | USB B type : U model | | |
| **Physical** | | | |
| Dimensions (WxDxH) (mm) | 232 x 285 x 103 | | |
| Weight (kgs) | 7 | 7.7 | 7.7 |
| Shipping Dimensions (mm) | 302 x 354 x 176 | | |
| Shipping Weight (kgs) | 7.5 | 8.2 | 8.2 |
| **Alarm** | | | |
| Overload / Fault | Continuous Beeping | | |
| Battery Mode | Beep every 4 seconds | | |
| Low Battery | Beep every 0.5 second | | |
| **Environment** | | | |
| Operating Humidity | 0-90 % RH at 0-40°C (Non-condensing) | | |
| Audible Noise | Less than 40 dB | | |

* N series without tel communication, USB
* Specifications are subject to change without further notice.
* Specifications are for reference, please refer to information based on real product.

**OUTPUT RECEPTACLE OPTION**

TYPE **B** TYPE **E** TYPE **F** TYPE **G** TYPE **I** TYPE **IEC**

# RAPTOR Series

Sharp eagle eyes apperance protect PC and workstation accurately.

- Line Interactive UPS Design
- Energy Saving Green Topology
- Automatic Voltage Regulator (AVR)
- Simple and Clear LCD Indicator (Option)
- Automatic Self-Diagnose and Alarm Warning
- Overload, Surge, Short Circuit Protection

RPT-600-1000A/AP

RPT-1025-2000AP

## Specifications

| Model | RPT-600A<br>RPT-600AP | RPT-800A<br>RPT-800AP | RPT-1000A<br>RPT-1000AP | RPT-1025AP | RPT-1500AP | RPT-2000AP |
|---|---|---|---|---|---|---|
| **Configuration** | | | | | | |
| Capacity (VA) | 600 VA | 800 VA | 1000 VA | 1025 VA | 1500 VA | 2000 VA |
| Capacity (Watts) | 360 W | 480 W | 600 W | 615 W | 900 W | 1200 W |
| Form | Tower Type | | | | | |
| **Input** | | | | | | |
| Voltage | 100 / 110 / 120 VAC or 220 / 230 / 240 VAC | | | | | |
| Input Voltage Range | 75 - 150 or 165 - 300 VAC | | | | | |
| Input Frequency Range | 50 Hz / 60 Hz (Auto Sensing) | | | | | |
| **Output** | | | | | | |
| Waveform | Simulated Sine Wave | | | | | |
| Voltage | 100 / 110 / 120 VAC or 220 / 230 / 240 VAC | | | | | |
| Frequency | 50 Hz / 60 Hz ± 1 Hz | | | | | |
| Transfer Time | 2 - 4 ms (Typical) | | | | | |
| **Protection** | | | | | | |
| Full Protection | Overload, Surge, Short Circuit | | | | | |
| Tel Communication | RJ11 / RJ45 : AP model | | | | | |
| **Battery** | | | | | | |
| Type | 12V 7Ah | 12V 7.2Ah | 12V 9Ah | 12V 7Ah | 12V 7.2Ah | 12V 9Ah |
| Quantity | 1 | 1 | 1 | 2 | 2 | 2 |
| Sealed, Maintenance Free | Yes | | | | | |
| Typical Recharge Time | 3-4 hr to 90% | | | | | |
| **Management & Communication** | | | | | | |
| Indicator | LED Panel, LCD Panel (Option) | | | | | |
| Communication Port | USB B type : AP Model | | | | | |
| **Physical** | | | | | | |
| Dimensions (WxDxH)(mm) | 100 x 278 x 143 | | | 147 x 360 x 164 | | |
| Weight (kgs) | 4.3 | 4.8 | 5.4 | 8.5 | 10.1 | 11.1 |
| Shipping Dimensions(mm) | 329 x 147 x 227 | | | 449 x 233 x 277 | | |
| Shipping Weight (kgs) | 4.8 | 5.3 | 5.9 | 9.7 | 11.3 | 12.3 |
| **Alarm** | | | | | | |
| Overload / Fault | Continuous Beeping | | | | | |
| Battery Mode | Beep every 2 seconds | | | | | |
| Low Battery | Beep every 0.5 second | | | | | |
| **Environment** | | | | | | |
| Operating Humidity | 0-90 % RH at 0-40°C (Non-condensing) | | | | | |
| Audible Noise | Less than 40 dB | | | | | |

* Specifications are subject to change without further notice.
* Specifications are for reference, please refer to information based on real product.

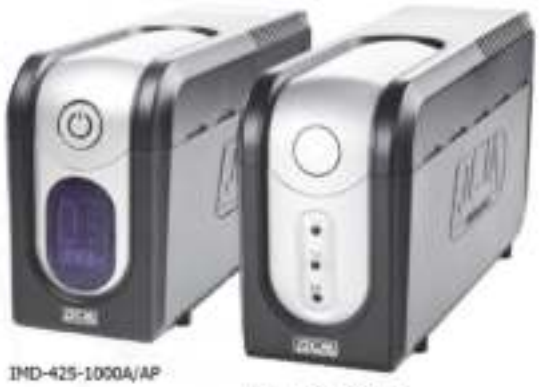
**OUTPUT RECEPTACLE OPTION**

TYPE **B** TYPE **E** TYPE **F** TYPE **G** TYPE **I** TYPE **IEC**

# IMPERIAL Series

High quality output plus elegent design protect PC and workstation.

- Line Interactive UPS Design
- Energy Saving Green Topology
- Automatic Voltage Regulator (AVR)
- Advance Digital Microprocessor Control
- Simple and Clear Digital Indicator (IMD model)
- Overload, Surge, Short Circuit Protection



IMD-425-1000A/AP

IMP-425-1000A/AP

## Specifications

| Model | IMP-425A/AP IMD-425A/AP | IMP-525A/AP IMD-525A/AP | IMP-625A/AP IMD-625A/AP | IMP-825A/AP IMD-825A/AP | IMP-1000A/AP IMD-1000A/AP |
|---|---|---|---|---|---|
| **Configuration** | | | | | |
| Capacity (VA) | 425 VA | 525 VA | 625 VA | 825 VA | 1000 VA |
| Capacity (Watts) | 255 W | 315 W | 375 W | 495 W | 550 W |
| Form | Tower Type | | | | |
| **Input** | | | | | |
| Voltage | 100 / 110 / 120 VAC or 220 / 230 / 240 VAC | | | | |
| Input Voltage Range | 75 - 150 or 165 - 300 VAC | | | | |
| Input Frequency Range | 50 Hz / 60 Hz (Auto Sensing) | | | | |
| **Output** | | | | | |
| Waveform | Simulated Sine Wave | | | | |
| Voltage | 100 / 110 / 120 VAC or 220 / 230 / 240 VAC | | | | |
| Frequency | 50 Hz / 60 Hz ± 0.5 Hz | | | | |
| Transfer Time | 2 - 4 ms (Typical) | | | | |
| **Protection** | | | | | |
| Full Protection | Overload, Surge, Short Circuit | | | | |
| Tel Communication | RJ11 / RJ45 : AP model | | | | |
| **Battery** | | | | | |
| Type | 12V 7.2Ah | | | 12V 9 Ah | |
| Quantity | 1 | | | 1 | |
| Typical Recharge Time | 6-8 hr to 90% | | | | |
| **Management & Communication** | | | | | |
| Indicator | LED Control Panel : IMP model<br>Digital Control Panel : IMD model | | | | |
| Communication Port | USB B type : AP model | | | | |
| **Physical** | | | | | |
| Dimensions (WxDxH) (mm) | 105 x 334 x 168 | | | | |
| Weight (kgs) | 6.1 | 6.1 | 6.3 | 6.8 | 6.8 |
| Shipping Dimensions (mm) | 196 x 410 x 263 | | | | |
| Shipping Weight (kgs) | 7.4 | 7.4 | 7.6 | 8.1 | 8.1 |
| **Alarm** | | | | | |
| Overload / Fault | Continuous Beeping | | | | |
| Battery Mode | Beep every 2 seconds | | | | |
| Low Battery | Beep every 0.5 second | | | | |
| **Environment** | | | | | |
| Operating Humidity | 0-90 % RH at 0-40°C (Non-condensing) | | | | |
| Audible Noise | Less than 40 dB | | | | |

* IMD Series are same specification with IMP Series, but in Digital Indicator.
* Specifications are subject to change without further notice.
* Specifications are for reference, please refer to information based on real product.

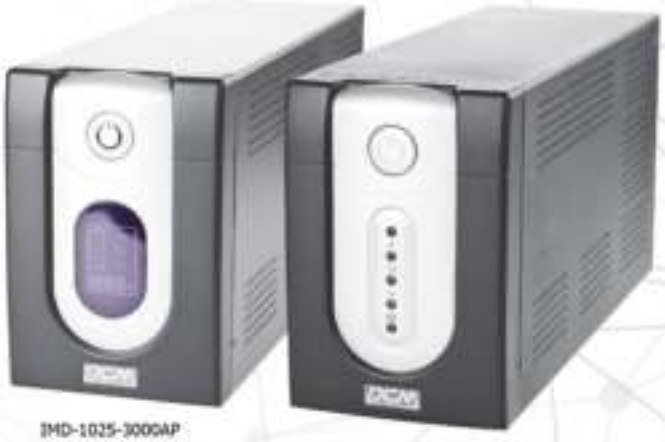
**OUTPUT RECEPTACLE OPTION**

TYPE **B** TYPE **E** TYPE **F** TYPE **G** TYPE **I** TYPE **IEC**

# IMPERIAL Series

High quality output plus elegent design protect PC and workstation.

- Line Interactive UPS Design
- Energy Saving Green Topology
- Automatic Voltage Regulator (AVR)
- Advance Digital Microprocessor Control
- Simple and Clear Digital Indicator (IMD model)
- Overload, Surge, Short Circuit Protection



IMD-1025-3000AP

IMP-1025-3000AP

## Specifications

| Model | IMP-1025AP<br>IMD-1025AP | IMP-1200AP<br>IMD-1200AP | IMP-1500AP<br>IMD-1500AP | IMP-2000AP<br>IMD-2000AP | IMP-3000AP<br>IMD-3000AP |
|---|---|---|---|---|---|
| **Configuration** | | | | | |
| Capacity (VA) | 1025 VA | 1200 VA | 1500 VA | 2000 VA | 3000 VA |
| Capacity (Watts) | 615 W | 720 W | 900 W | 1200 W | 1800 W |
| Form | Tower Type | | | | |
| **Input** | | | | | |
| Voltage | 100 / 110 / 120 VAC or 220 / 230 / 240 VAC | | | | |
| Input Voltage Range | 75 - 150 or 165 - 300 VAC | | | | |
| Input Frequency Range | 50 Hz / 60 Hz (Auto Sensing) | | | | |
| **Output** | | | | | |
| Waveform | Simulated Sine Wave | | | | |
| Voltage | 100 / 110 / 120 VAC or 220 / 230 / 240 VAC | | | | |
| Frequency | 50 Hz / 60 Hz ± 0.5 Hz | | | | |
| Transfer Time | 2 - 4 ms (Typical) | | | | |
| **Protection** | | | | | |
| Full Protection | Overload, Surge, Short Circuit | | | | |
| Tel Communication | RJ11 / RJ45 : AP model | | | | |
| **Battery** | | | | | |
| Type | 12V 7.2Ah | | | 12V 9Ah | 12V 9Ah |
| Quantity | 2 | | | 2 | 3 |
| Typical Recharge Time | 6-8 hr to 90% | | | | |
| **Management & Communication** | | | | | |
| Indicator | LED Control Panel : IMP model<br>Digital Control Panel : IMD model | | | | |
| Communication Port | USB B type : AP model | | | | |
| **Physical** | | | | | |
| Dimensions (WxDxH) (mm) | 130 x 382 x 200 | | | | 130 x 440 x 200 |
| Weight (kgs) | 13.5 | 13.5 | 16 | 16.6 | 22 |
| Shipping Dimensions (mm) | 253 x 488 x 321 | | | | 253 x 556 x 321 |
| Shipping Weight (kgs) | 15.5 | 15.5 | 18 | 18.6 | 24 |
| **Alarm** | | | | | |
| Overload / Fault | Continuous Beeping | | | | |
| Battery Mode | Beep every 2 seconds | | | | |
| Low Battery | Beep every 0.5 second | | | | |
| **Environment** | | | | | |
| Operating Humidity | 0-90 % RH at 0-40°C (Non-condensing) | | | | |
| Audible Noise | Less than 40 dB | | | | |

* IMD Series are same specification with IMP Series, but in Digital Indicator.
* Specifications are subject to change without further notice.
* Specifications are for reference, please refer to information based on real product.

**OUTPUT RECEPTACLE OPTION**

TYPE **B** TYPE **E** TYPE **F** TYPE **G** TYPE **I** TYPE **IEC**

# KING RM Series

Extremely light and thin outfit are the King of Rack Mounting UPS.

- Line Interactive UPS Design
- Advance Digital Microprocessor Control
- Advance Battery Management (ABM)
- Cold Start Function
- Built-in Fast Charger
- Overload, Surge, Short Circuit Protection

KIN-1200-1500AP RM

KIN-2200-3000AP RM

KIN-600-1000AP RM

## Specifications

| Model | KIN-600AP RM | KIN-1000AP RM | KIN-1200AP RM | KIN-1500AP RM | KIN-2200AP RM | KIN-3000AP RM |
|---|---|---|---|---|---|---|
| **Configuration** | | | | | | |
| Capacity (VA) | 600 VA | 1000 VA | 1200 VA | 1500 VA | 2200 VA | 3000 VA |
| Capacity (Watts) | 360 W | 600 W | 720 W | 900 W | 1320 W | 1800 W |
| Form | Rack Type | | | | | |
| **Input** | | | | | | |
| Voltage | 100 / 110 / 115 / 120 VAC or 220 / 230 / 240 VAC | | | | | |
| Input Voltage Range | 75 - 150 or 165 - 300 VAC | | | | | |
| Input Frequency Range | 50 Hz / 60 Hz (Auto Sensing) | | | | | |
| **Output** | | | | | | |
| Waveform | Simulated Sine Wave | | | | | |
| Voltage | 100 / 110 / 115 / 120 VAC or 220 / 230 / 240 VAC | | | | | |
| Frequency | 50 Hz / 60 Hz ± 0.5 Hz | | | | | |
| Transfer Time | 2 - 4 ms (Typical) | | | | | |
| **Protection** | | | | | | |
| Full Protection | Overload, Surge, Short Circuit | | | | | |
| Tel Communication | RJ11 / RJ45 | | | | | |
| **Battery** | | | | | | |
| Type | 6V 7Ah | 6V 8Ah | 12V 7Ah | 12V 9Ah | 12V 7Ah | 12V 9Ah |
| Quantity | 2 | 3 | 2 | 2 | 4 | 4 |
| Sealed, Maintenance Free | Yes | | | | | |
| Typical Recharge Time | 8 hr to 90% | | | | | |
| **Management & Communication** | | | | | | |
| Indicator | LED Panel | | | | | |
| Communication Port | RS232 or USB B type | | | | RS232, USB B type | |
| **Physical** | | | | | | |
| Dimensions (WxDxH)(mm) | 380 x 365 x 42 | | 428 x 357 x 84 | | 428 x 353 x 130 | 428 x 486 x 130 |
| Weight (kgs) | 9.4 | 11.5 | 16.3 | 16.3 | 28.4 | 32.7 |
| Shipping Dimensions (mm) | 478 x 438 x 161 | | 585 x 533 x 221 | | 585 x 533 x 266 | 663 x 583 x 285 |
| Shipping Weight (kgs) | 11 | 13 | 19.3 | 19.3 | 31.1 | 36 |
| **Alarm** | | | | | | |
| Overload / Fault | Continuous Beeping | | | | | |
| Battery Mode | Beep every 2 seconds | | | | | |
| Low Battery | Beep every 0.5 second | | | | | |
| **Environment** | | | | | | |
| Operating Humidity | 0-90 % RH at 0-40°C (Non-condensing) | | | | | |
| Audible Noise | Less than 40 dB | | | | | |

* Specifications are subject to change without further notice.
* Specifications are for reference, please refer to information based on real product.

**OUTPUT RECEPTACLE OPTION**

TYPE **B** TYPE **E** TYPE **F** TYPE **G** TYPE **I** TYPE **IEC**

# SMART RT Series

Upgraded SRT pure sinewave are the best series for homeand small server.

- Line Interactive UPS Design
- Pure Sinewave Output
- Automatic Voltage Regulator (AVR)
- Hot Swappable Power Battery Design
- Advance Battery Management (ABM)
- Overload, Surge, Short Circuit Protection

SRT-1000-3000A SRT-1000-3000A LCD

## Specifications

| Model | SRT-1000A<br>SRT-1000A LCD | SRT-1500A<br>SRT-1500A LCD | SRT-2000A<br>SRT-2000A LCD | SRT-3000A<br>SRT-3000A LCD |
|---|---|---|---|---|
| **Configuration** | | | | |
| Capacity (VA) | 1000 VA | 1500 VA | 2000 VA | 3000 VA |
| Capacity (Watts) | 900 W | 1350 W | 1800 W | 2700 W |
| Form | Rack and Tower Type | | | |
| **Input** | | | | |
| Voltage | 220 / 230 / 240 VAC | | | |
| Input Voltage Range | 150 - 310 VAC | | | |
| Input Frequency Range | 50 Hz / 60 Hz (Auto Sensing) | | | |
| **Output** | | | | |
| Waveform | Pure Sine Wave | | | |
| Voltage | 220 / 230 / 240 VAC | | | |
| Transfer Time | 2-4 ms (Typical) | | | |
| **Protection** | | | | |
| Full Protection | Overload, Surge, Short Circuit, EMI / RFI Filter | | | |
| Tel Communication | RJ11 / RJ45 | | | |
| **Battery** | | | | |
| Type | 12V 9Ah | 12V 7Ah | 12V 9Ah | 12V 9Ah |
| Quantity | 2 | 4 | 4 | 6 |
| Sealed, Maintenance Free | Yes | | | |
| Typical Recharge Time | 3 hr to 90% | | | |
| **Management & Communication** | | | | |
| Indicator | LED Panel | | | |
| Communication Port | RS232 , USB B type, SNMP (Option) | | | |
| **Physical** | | | | |
| Dimensions (WxDxH) (mm) | 428 x 431 x 84 | 428 x 562 x 84 | | 428 x 668 x 84 |
| Weight (kgs) | 16.7 | 24 | 27.5 | 36.8 |
| Shipping Dimensions (mm) | 577 x 590 x 211 | 720 x 577 x 211 | | 826 x 577 x 211 |
| Shipping Weight (kgs) | 20.5 | 27.9 | 31.5 | 41.6 |
| **Alarm** | | | | |
| Overload / Fault | Continuous Beeping | | | |
| Battery Mode | Beep every 4 seconds | | | |
| Low Battery | Beep every 1 second | | | |
| **Environment** | | | | |
| Operating Humidity | 0-90 % RH at 0-40°C (Non-condensing) | | | |
| Audible Noise | Less than 50 dB | | | |

* Specifications are subject to change without further notice.
* Specifications are for reference, please refer to information based on real product.

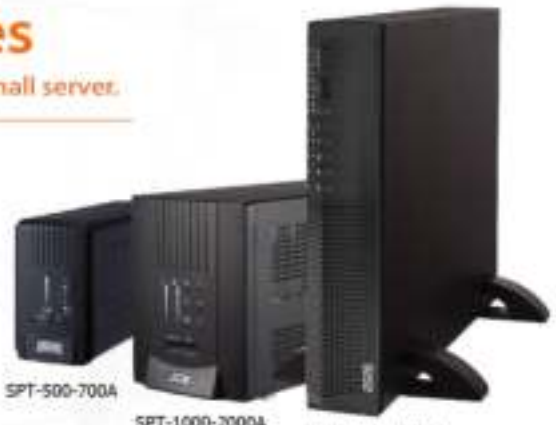
**OUTPUT RECEPTACLE OPTION**

TYPE **B** TYPE **E** TYPE **F** TYPE **G** TYPE **I** TYPE **IEC**

# SMART KING PRO Series

SPT/SPR series provide clean sinewave for home and small server.

- Line Interactive UPS Design
- Pure Sinewave Output
- Energy Saving Green Topology
- Automatic Voltage Regulator (AVR)
- Hot Swappable Power Battery Design
- Overload, Surge, Short Circuit Protection



SPT-500-700A SPT-1000-2000A SPR-1000-3000A

## Specifications

| Model | | SPT- 500A | SPT- 700A | SPT-1000A<br>SPR-1000A | SPT- 1500A<br>SPR- 1500A | SPT- 2000A<br>SPR- 2000A | SPT- 3000A<br>SPR- 3000A |
|---|---|---|---|---|---|---|---|
| **Configuration** | | | | | | | |
| Capacity (VA) | | 500 VA | 700 VA | 1000 VA | 1500 VA | 2000 VA | 3000 VA |
| Capacity (Watts) | | 350 W | 490 W | 700 W | 1050 W | 1400 W | 2100 W |
| Form | | Tower Type : SPT model | | | | | |
| | | Rack and Tower Type : SPR model | | | | | |
| **Input** | | | | | | | |
| Voltage | | 100 / 110 / 120 VAC or 220 / 230 / 240 VAC | | | | | 220 / 230 / 240 VAC |
| Input Voltage Range | | 75 - 150 or 165 - 300 VAC | | | | | 165 - 300 VAC |
| Input Frequency Range | | 50 Hz / 60 Hz (Auto Sensing) | | | | | |
| **Output** | | | | | | | |
| Waveform | | Pure Sine Wave | | | | | |
| Voltage | | 100 / 110 / 120 VAC or 220 / 230 / 240 VAC | | | | | 220 / 230 / 240 VAC |
| Frequency | | 50 Hz / 60 Hz ± 0.5 Hz | | | | | |
| Transfer Time | | 2-4 ms (Typical) | | | | | |
| **Protection** | | | | | | | |
| Full Protection | | Overload, Surge, Short Circuit | | | | | |
| Tel Communication | | RJ11 / RJ45 | | | | | |
| **Battery** | | | | | | | |
| Type | | 12V 7.2Ah | 12V 9Ah | 12V 7Ah | 12V 7.2Ah | 12V 9Ah | 12V 7Ah |
| Quantity | | 1 | 1 | 2 | 2 | 2 | 4 |
| Sealed, Maintenance Free | | Yes | | | | | |
| Typical Recharge Time | | 3-4 hr to 90% | | | | | |
| **Management & Communication** | | | | | | | |
| Indicator | | LED Panel | | | | | |
| Communication Port | | USB B type | | USB B type, RS232, SNMP (Option) | | | |
| **Physical** | | | | | | | |
| SPT | Dimensions (WxDxH) (mm) | 102 x 326 x 165 | | 140 x 380 x 210 | | | 170 x 450 x 226 |
| | Weight (kgs) | 6.2 | 6.8 | 14 | 15 | 17.5 | 25.4 |
| | Shipping Dimensions (mm) | 196 x 410 x 263 | | 258 x 487 x 326 | | | 298 x 556 x 553 |
| | Shipping Weight (kgs) | 7.2 | 7.8 | 15.4 | 16.4 | 18.9 | 28.2 |
| SPR | Dimensions (WxDxH) (mm) | -- | | 428 x 431 x 84 | | | 428 x 562 x 84 |
| | Weight (kgs) | -- | | 14.4 | 16.7 | 18.8 | 26.5 |
| | Shipping Dimensions (mm) | -- | | 577 x 590 x 221 | | | 577 x 720 x 221 |
| | Shipping Weight (kgs) | -- | | 18.2 | 20.4 | 22.6 | 30.5 |
| **Alarm** | | | | | | | |
| Overload / Fault | | Continuous Beeping | | | | | |
| Battery Mode | | Beep every 4 seconds | | | | | |
| Low Battery | | Beep every 1 second | | | | | |
| **Environment** | | | | | | | |
| Operating Humidity | | 0-90 % RH at 0-40°C (Non-condensing) | | | | | |
| Audible Noise | | Less than 40 dB | | | | | |

* Specifications are subject to change without further notice.
* Specifications are for reference, please refer to information based on real product.

**OUTPUT RECEPTACLE OPTION**

TYPE **B** TYPE **E** TYPE **F** TYPE **G** TYPE **I** TYPE **IEC**

# SMART KING PRO LCD Series

Smart King Pro LCD series with colorful LCD indicator upgrade user operating quality.

- Line interactive UPS design
- Pure sinewave output
- Colorful and clearly LCD indicator
- Energy saving green topology
- Overload, Surge, short circuit protection

SPT-1000-2000A-LCD SPR-1000-3000A-LCD

## Specifications

| Model | | SPT-1000A-LCD SPR-1000A-LCD | SPT- 1500A-LCD SPR- 1500A-LCD | SPT- 2000A-LCD SPR- 2000A-LCD | SPT- 3000A-LCD SPR- 3000A-LCD |
|---|---|---|---|---|---|
| **Configuration** | | | | | |
| | Capacity (VA) | 1000 VA | 1500 VA | 2000 VA | 3000 VA |
| | Capacity (Watts) | 800 W | 1200 W | 1600 W | 2400 W |
| | Form | Tower Type : SPT LCD Model | | | |
| | | Rack and Tower Type : SPR LCD Model | | | |
| **Input** | | | | | |
| | Voltage | 100 / 110 / 120 VAC or 220 / 230 / 240 VAC | | | 220 / 230 / 240 VAC |
| | Input Voltage Range | 75 - 150 or 165 - 300 VAC | | | 165 - 300 VAC |
| | Input Frequency Range | 50 Hz / 60 Hz (Auto Sensing) | | | |
| **Output** | | | | | |
| | Waveform | Pure Sine Wave | | | |
| | Voltage | 100 / 110 / 120 VAC or 220 / 230 / 240 VAC | | | 220 / 230 / 240 VAC |
| | Frequency | 50 Hz / 60 Hz ± 0.5 Hz | | | |
| | Transfer Time | 2-4 ms (Typical) | | | |
| **Protection** | | | | | |
| | Full Protection | Overload, Surge, Short Circuit | | | |
| | Tele Communication | RJ11 / RJ45 | | | |
| **Battery** | | | | | |
| | Type | 12V 7Ah | 12V 7.2Ah | 12V 9Ah | 12V 7Ah |
| | Quantity | 2 | 2 | 2 | 4 |
| | Sealed, Maintenance Free | Yes | | | |
| | Typical Recharge Time | 3-4 hr to 90% | | | |
| **Management & Communication** | | | | | |
| | Indicator | LCD Control Panel | | | |
| | Communication Port | USB B type, RS232 | | | |
| **Physical** | | | | | |
| SPT LCD | Dimensions (WxDxH) (mm) | 140 x 380 x 210 | | | 170 x 450 x 226 |
| | Weight (kgs) | 14 | 15 | 17.5 | 25.4 |
| | Shipping Dimensions (mm) | 258 x 487 x 326 | | | 298 x 356 x 553 |
| | Shipping Weight (kgs) | 15.4 | 16.4 | 18.9 | 28.2 |
| SPR LCD | Dimensions (WxDxH) (mm) | 428 x 431 x 84 | | | 428 x 562 x 84 |
| | Weight (kgs) | 14.4 | 16.7 | 18.8 | 26.5 |
| | Shipping Dimensions (mm) | 577 x 590 x 221 | | | 577 x 720 x 221 |
| | Shipping Weight (kgs) | 18.2 | 20.4 | 22.6 | 30.5 |
| **Alarm** | | | | | |
| | Overload / Fault | Continuous Beeping | | | |
| | Battery Mode | Beep every 4 seconds | | | |
| | Low Battery | Beep every 1 second | | | |
| **Environment** | | | | | |
| | Operating Humidity | 0-90 % RH at 0-40°C (Non-condensing) | | | |
| | Audible Noise | Less than 40 dB | | | |

* Specifications are subject to change without further notice.
* Specifications are for reference, please refer to information based on real product.

**OUTPUT RECEPTACLE OPTION**

TYPE **B** TYPE **E** TYPE **F** TYPE **G** TYPE **I** TYPE **IEC**

# VANGUARD Series

Reliable Vanguard carry on the duty for server and data center.

- On-Line UPS Design
- Pure Sinewave Output
- High Efficiency Mode
- Free-Run Mode
- Hot Swappable Battery
- Simple and Clear LCD Indicator
- Overload, Surge, Short Circuit Protection
- Design for Advance Missional Electronic Device

VGD-700-5000

## Specifications

| Model | VGD-700 | VGD-1000 | VGD-1500 | VGD-2000 | VGD-3000 | VGD-4000 | VGD-5000 |
|---|---|---|---|---|---|---|---|
| **Configuration** | | | | | | | |
| Capacity (VA) | 700 VA | 1000 VA | 1500 VA | 2000 VA | 3000 VA | 4000 VA | 5000 VA |
| Capacity (Watts) | 490 W | 700 W | 1050 W | 1400 W | 2100 W | 2800 W | 3500 W |
| Form | Tower Type | | | | | | |
| Phase | Single Phase | | | | | | |
| Energy Saving | Yes - ECO Mode Efficiency >94% | | | | | | |
| **Input** | | | | | | | |
| Voltage | 100 / 110 / 115 / 120 / 127 Vac or 208 / 220 / 230 / 240 VAC | | | | | 208 / 220 / 230 / 240 VAC | |
| Input Voltage Range (110 Vac) | 60 - 144 VAC < 40% Load<br>70 - 144 VAC < 70% Load<br>80 - 144 VAC < 100% Load | | | | | 120 - 276 VAC < 25% Load<br>140 - 276 VAC < 50 % Load<br>160 - 276 VAC < 75% Load<br>180 - 276 VAC < 100% Load | |
| Input Voltage Range (220 Vac) | 120 - 276 VAC < 40% Load<br>140 - 276 VAC < 70 % Load<br>160 - 276 VAC < 100% Load | | | | | | |
| Input Frequency Range | 50 / 60 Hz (Auto Sensing) | | | | | | |
| Input Power Factor | >0.97 | | | | | | |
| Cold Start | Yes | | | | | | |
| **Output** | | | | | | | |
| Rated Power Factor | 0.7 | | | | | | |
| Waveform | Pure Sine Wave | | | | | | |
| Voltage | 100 /110 / 115 / 120 / 127 Vac or 208* / 220 / 230 / 240 Vac ± 2% | | | | | 208* / 220 / 230 / 240 Vac ± 2% | |
| Frequency | 50 / 60 Hz ±0.5 % | | | | | | |
| Transfer Time | 0 ms | | | | | | |
| Harmonic Distortion | ≤ 3% THD at Linear Load | | | | | | |
| Crest Factor | 3 : 1 | | | | | | |
| EPO Function | Yes | | | | | | |
| **Protection** | | | | | | | |
| Overload Line Mode | 110% - 125% for 60 seconds : 125% - 150% for 10 seconds | | | | | | |
| Overload Battery Mode | > 110% for 10 seconds | | | | | | |
| Surge Protection | IEC 61000-4-5 Level 3 | | | | | | |
| Bypass | Internal Bypass (Automatic and Manual) | | | | | | |
| Short Circuit Protection | UPS Output Cut Off Immediately | | | | | | |
| **Battery** | | | | | | | |
| Type | 12V 7Ah | 12V 7Ah | 12V 9Ah | 12V 7Ah | 12V 9Ah | 12V 7Ah | 12V 9Ah |
| Quantity | 2 | 3 | 3 | 6 | 6 | 10 | 10 |
| Sealed, Maintenance Free | Yes | | | | | | |
| Typical Recharge Time | 4 hr to 90% | | | | | | |
| External Battery Module | Option | | | | | | |
| External Battery Connector | Option | | | | | | |
| **Management & Communication** | | | | | | | |
| Indicator | LCD Control Panel | | | | | | |
| Communication Port | RS 232, USB B type, SNMP card (Option) | | | | | | |
| Audible Alarms | Yes | | | | | | |
| SNMP Slot | Option | | | | | | |
| **Physical** | | | | | | | |
| Dimensions (WxDxH)(mm) | 152 x 420 x 237 | | | 225 x 420 x 360 | | 258 x 537 x 440 | |
| Weight (kgs) | 15.3 | 16 | 17.7 | 30.6 | 33.5 | 50 | |
| Shipping Dimensions (mm) | 280 x 545 x 355 | | | 340 x 526 x 485 | | 406 x 682 x 525 | |
| Shipping Weight (kgs) | 17.5 | 17.4 | 19.5 | 33.2 | 35.9 | 53 | |

* While 208V output, capacity will be derated to 90%.
** Specifications are subject to change without further notice.
** Specifications are for reference, please refer to information based on real product.

**OUTPUT RECEPTACLE OPTION**

TYPE B TYPE E TYPE F TYPE G TYPE I TYPE IEC

# VANGUARD Series

Reliable Vanguard carry on the duty for server and data center.

- On-Line UPS Design
- Pure Sinewave Output
- High Efficiency Mode
- Free-Run Mode
- Hot Swappable Battery
- Simple and Clear LCD Indicator
- Overload, Surge, Short Circuit Protection
- Design for Advance Missional Electronic Device

VGD-6000-20K

## Specifications

| Model | VGD-6000 | VGD-8000 | VGD-10K | VGD-12K | VGD-15K | VGD-20K |
|---|---|---|---|---|---|---|
| **Configuration** | | | | | | |
| Capacity (VA) | 6000 VA | 8000 VA | 10 KVA | 12000 VA | 15000 VA | 20000 VA |
| Capacity (Watts) | 4200 W | 5600 W | 7000 W | 8400 W | 10500 W | 14000 W |
| Form | Tower Type | | | | | |
| Phase | Single Phase | | | | | |
| Energy Saving | Yes - ECO Mode Efficiency >94% | | | | | |
| **Input** | | | | | | |
| Voltage | 208 / 220 / 230 / 240 VAC | | | | | |
| Input Voltage Range | 120 - 276 VAC < 25% Load<br>140 - 276 VAC < 50 % Load<br>160 - 276 VAC < 75% Load<br>180 - 276 VAC < 100% Load | | | | | |
| Input Frequency Range | 50 / 60 Hz (Auto Sensing) | | | | | |
| Input Power Factor | >0.97 | | | | | |
| Cold Start | Yes | | | | | |
| **Output** | | | | | | |
| Rated Power Factor | 0.7 | | | | | |
| Waveform | Pure Sine Wave | | | | | |
| Voltage | 208* / 220 / 230 / 240 Vac ± 2% | | | | | |
| Frequency | 50 / 60 Hz ±0.5 % | | | | | |
| Transfer Time | 0 ms | | | | | |
| Harmonic Distortion | ≤ 3% THD at Linear Load | | | | ≤ 5% THD at Linear Load | |
| Crest Factor | 3 : 1 | | | | | |
| EPO Function | Yes | | | | | |
| **Protection** | | | | | | |
| Overload – Line Mode | 110% - 125% for 60 seconds ; 125% - 150% for 10 seconds | | | | | |
| Overload – Battery Mode | > 110% for 10 seconds | | | | | |
| Surge Protection | IEC 61000-4-5 Level 3 | | | | | |
| Bypass | Internal Bypass (Automatic and Manual) | | | | | |
| Short Circuit Protection | UPS Output Cut Off Immediately | | | | | |
| **Battery** | | | | | | |
| Type | 12V 7Ah | 12V 7Ah | 12V 9Ah | 12V 7Ah | 12V 7Ah | 12V 9Ah |
| Quantity | 20 | 20 | 20 | 20 x 2 set | 20 x 2 set | 20 x 2 set |
| Sealed, Maintenance Free | Yes | | | | | |
| Typical Recharge Time | 4 hr to 90% | | | | | |
| External Battery Module | Option | | | | | |
| External Battery Connector | Option | | | | | |
| **Management & Communication** | | | | | | |
| Indicator | LCD Control Panel | | | | | |
| Communication Port | RS 232, USB B type, SNMP card (Option) | | | | | |
| Audible Alarms | Yes | | | | | |
| SNMP Slot | Option | | | | | |
| **Physical** | | | | | | |
| Dimensions (WxDxH)(mm) | 257 x 590 x 570 | 257 x 690 x 715 | | 342 x 687 x 905 | 342 x 757 x 905 | |
| Weight (kgs) | 86 | 112 | | 190 | 207 | |
| Shipping Dimensions (mm) | 415 x 760 x 800 | 415 x 860 x 930 | | 500 x 860 x 972 | 500 x 930 x 1135 | |
| Shipping Weight (kgs) | 106 | 139 | | 210.7 | 225 | |

* While 208V output, capacity will be derated to 90%.

** Specifications are subject to change without further notice.

** Specifications are for reference, please refer to information based on real product.

**OUTPUT RECEPTACLE OPTION**

TYPE **B** TYPE **E** TYPE **F** TYPE **G** TYPE **I** TYPE **IEC**

# VANGUARD RM Series

VRM series take the responsibility of missional electronic protection.

- On-Line UPS Design
- Pure Sinewave Output
- High Efficiency Mode
- Free-Run Mode
- Generator Compatible
- Hot Swappable Battery
- Simple and Clear LCD Indicator
- Overload, Surge, Short Circuit Protection
- Design for Advance Missional Electronic Device

VRM-700-1K(1U)

VRM-700-3K(2U)

## Specifications

| Model | | VGD-700 RM | VGD-1000 RM | VGD-1500 RM | VGD-2000 RM | VGD-3000 RM |
|---|---|---|---|---|---|---|
| **Configuration** | | | | | | |
| Capacity (VA) | | 700 VA | 1000 VA | 1500 VA | 2000 VA | 3000 VA |
| Capacity (Watts) | | 490 W | 700 W | 1050 W | 1400 W | 2100 W |
| Form | | Rack Type | | | | |
| Phase | | Single Phase | | | | |
| Energy Saving | | Yes - ECO Mode Efficiency >94% | | | | |
| **Input** | | | | | | |
| Voltage | | 100 / 110 / 115 / 120 / 127 Vac or 208 / 220 / 230 / 240 VAC | | | | |
| Input Voltage Range (110 Vac) | | 60 - 144 VAC < 40% Load<br>70 - 144 VAC < 70% Load<br>80 - 144 VAC < 100% Load | | | | |
| Input Voltage Range (220 Vac) | | 120 - 276 VAC < 40% Load<br>140 - 276 VAC < 70 % Load<br>160 - 276 VAC < 100% Load | | | | |
| Input Frequency Range | | 50 / 60 Hz (Auto Sensing) | | | | |
| Input Power Factor | | >0.97 | | | | |
| Cold Start | | Yes | | | | |
| **Output** | | | | | | |
| Rated Power Factor | | 0.7 | | | | |
| Waveform | | Pure Sine Wave | | | | |
| Voltage | | 208* / 220 / 230 / 240 Vac ± 2% | | | | |
| Frequency | | 50 / 60 Hz ±0.25 Hz | | | | |
| Transfer Time | | 0 ms | | | | |
| Harmonic Distortion | | ≤ 3% THD at Linear Load | | | | |
| Crest Factor | | 3 : 1 | | | | |
| EPO Function | | Yes | | | | |
| **Protection** | | | | | | |
| Overload | Line Mode | 110% - 125% for 60 seconds ; 125% - 150% for 10 seconds | | | | |
| | Battery Mode | > 110% for 10 seconds | | | | |
| Surge Protection | | IEC 61000-4-5 Level 3 | | | | |
| Bypass | | Internal Bypass (Automatic and Manual) | | | | |
| Short Circuit Protection | | UPS Output Cut Off Immediately | | | | |
| **Battery** | | | | | | |
| Type | | 12V 7Ah | 12V 7Ah | 12V 9Ah | 12V 7Ah | 12V 9Ah |
| Quantity | | 2 | 3 | 3 | 6 | 6 |
| Sealed, Maintenance Free | | Yes | | | | |
| Typical Recharge Time | | 4 hr to 90% | | | | |
| External Battery Module | | Option | | | | |
| External Battery Connector | | Option | | | | |
| **Management & Communication** | | | | | | |
| Indicator | | LCD Control Panel | | | | |
| Communication Port | | RS 232, USB B type, SNMP card (Option) | | | | |
| SNMP Slot | | Option | | | | |
| Audible Alarms | | Yes | | | | |
| **Physical** | | | | | | |
| Power Module | Dimensions (WxDxH)(mm) | 428 x 525 x 44 (1U) | 428 x 425 x 84 (2U) | 428 x 525 x 44 (1U) | 428 x 425 x 84 (2U) | 428 x 425 x 84 (2U) | 428 x 635 x 84 (2U) | |
| | Weight (kgs) | 15.5 | 14.6 | 15.5 | 17.7 | 19.1 | 31.7 | 31.7 |
| | Shipping Dimensions (mm) | 547x645x168 | 546x552x206 | 547x645x168 | 546x552x206 | 546x552x206 | 550x750x220 | |
| | Shipping Weight (kgs) | 17.5 | 16.4 | 17.5 | 19.9 | 21.3 | 34.7 | 34.7 |
| Battery Module | Dimensions (WxDxH)(mm) | - | 546 x 552 x 206 (2U) | - | 546 x 552 x 206 (2U) | 546 x 552 x 206 (2U) | 428 x 425 x 84 (2U) | |
| | Weight (kgs) | - | 16.3 | - | 16.3 | 16.3 | 43.5 | |

* While 208V output, capacity will be derated to 90%.

** Specifications are subject to change without further notice.

** Specifications are for reference, please refer to information based on real product.

**OUTPUT RECEPTACLE OPTION**

TYPE B TYPE E TYPE F TYPE G TYPE I TYPE IEC

# VANGUARD RM Series

VRM series take the responsibility of missional electronic protection.

- On-Line UPS Design
- Pure Sinewave Output
- High Efficiency Mode
- Free-Run Mode
- Generator Compatible
- Hot Swappable Battery
- Simple and Clear LCD Indicator
- Overload, Surge, Short Circuit Protection
- Design for Advance Missional Electronic Device

VRM-4K-5K(3U)

VRM-6K-12K(3U+3U)

## Specifications

| Model | VGD-4000 RM | VGD-5000 RM | VGD-6000 RM | VGD-8000 RM | VGD-10K RM | VGD-12K RM |
|---|---|---|---|---|---|---|
| **Configuration** | | | | | | |
| Capacity (VA) | 4000 VA | 5000 VA | 6000 VA | 8000 VA | 10 KVA | 12 KVA |
| Capacity (Watts) | 2800 W | 3500 W | 4200 W | 5600 W | 7000 W | 8400 W |
| Form | Rack Type | | | | | |
| Phase | Single Phase | | | | | |
| Energy Saving | Yes - ECO Mode Efficiency >94% | | | | | |
| **Input** | | | | | | |
| Voltage | 208 / 220 / 230 / 240 Vac | | | | | |
| Input Voltage Range | 120 - 276 VAC < 25% Load<br>140 - 276 VAC < 50 % Load<br>160 - 276 VAC < 75% Load<br>180 - 276 VAC < 100% Load | | | | | |
| Input Frequency Range | 50 / 60 Hz (Auto Sensing) | | | | | |
| Input Power Factor | >0.97 | | | | | |
| Cold Start | Yes | | | | | |
| **Output** | | | | | | |
| Rated Power Factor | 0.7 | | | | | |
| Waveform | Pure Sine Wave | | | | | |
| Voltage | 208* / 220 / 230 / 240 Vac ± 3% | | | | | |
| Frequency | 50 / 60 Hz ±0.25 Hz | | | | | |
| Transfer Time | 0 ms | | | | | |
| Harmonic Distortion | ≤ 3% THD at Linear Load | | | | | |
| Crest Factor | 3 : 1 | | | | | |
| EPO Function | Yes | | | | | |
| **Protection** | | | | | | |
| Overload - Line Mode | 110% - 125% for 60 seconds ; 125% - 150% for 10 seconds | | | | | |
| Overload - Battery Mode | > 110% for 10 seconds | | | | | |
| Surge Protection | IEC 61000-4-5 Level 3 | | | | | |
| Bypass | Internal Bypass (Automatic and Manual) | | | | | |
| Short Circuit Protection | UPS Output Cut Off Immediately | | | | | |
| **Battery** | | | | | | |
| Type | 12V 5Ah | 12V 5Ah | 12V 7Ah | 12V 7Ah | 12V 9Ah | 12V 9Ah |
| Quantity | 10 | 10 | 20 | 20 | 20 | 20 |
| Sealed, Maintenance Free | Yes | | | | | |
| Typical Recharge Time | 4 hr to 90% | | | | | |
| External Battery Module | Option | | | | | |
| External Battery Connector | Option | | | | | |
| **Management & Communication** | | | | | | |
| Indicator | LCD Control Panel | | | | | |
| Communication Port | RS 232, USB B type, SNMP card (Option) | | | | | |
| SNMP Slot | Option | | | | | |
| Audible Alarms | Yes | | | | | |
| **Physical** | | | | | | |
| Power Module - Dimensions (WxDxH)(mm) | 428 x 657 x 130 (3U) | | 428 x 597 x 130 (3U) | 428 x 657 x 130 (3U) | | |
| Power Module - Weight (kgs) | 40 | | 20 | 24.3 | | |
| Power Module - Shipping Dimensions(mm) | 590 x 830 x 370 (3U) | | 560 x 740 x 273 (3U) | 565 x 805 x 280 | | |
| Power Module - Shipping Weight (kgs) | 54 | | 24 | 30.5 | | |
| Battery Module - Dimensions (WxDxH)(mm) | - | | 428 x 597 x 130 (3U) | 428 x 657 x 130 (3U) | | |
| Battery Module - Weight (kgs) | - | | 66 | 68 | | |

* While 208V output, capacity will be derated to 90%.
** Specifications are subject to change without further notice.
** Specifications are for reference, please refer to information based on real product.

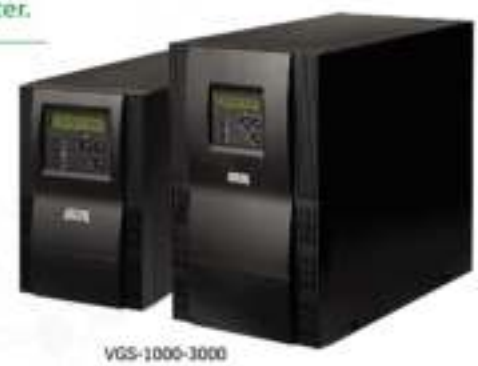
**OUTPUT RECEPTACLE OPTION**

TYPE **B** TYPE **E** TYPE **F** TYPE **G** TYPE **I** TYPE **IEC**

# VANGUARD II Series

VGS high frequency series are the worth trust for data center.

- On-Line UPS Design
- Pure Sinewave Output
- Double Conversion Technology
- High Efficiency Mode
- Advance Battery Management (ABM)
- Simple and Clear LCD Indicator
- Overload, Surge, Short Circuit Protection
- Design for Advance Missional Electronic Device
- Tower Type Design
- Free-Run Mode



VGS-1000-3000

## Specifications

| Model | VGS-1000 | VGS-1500 | VGS-2000 | VGS-3000 | VGS-6000 | VGS-10K |
|---|---|---|---|---|---|---|
| **Configuration** | | | | | | |
| Capacity (VA) | 1000 VA | 1500 VA | 2000 VA | 3000 VA | 6000 VA | 10000 VA |
| Capacity (Watts) | 900 W | 1350 W | 1800 W | 2700 W | 5400 W | 9000 W |
| Form | Tower Type | | | | | |
| Phase | Single Phase | | | | | |
| Energy Saving | Yes - ECO Mode Efficiency >94% | | | | | |
| **Input** | | | | | | |
| Voltage | 100 / 110 / 115 / 120 / 127 Vac or 208 / 220 / 230 / 240 Vac | | | | 208 / 220 / 230 / 240 Vac | |
| Input Voltage Range (110 Vac) | 60 - 144 VAC, < 25% Load<br>70 - 144 VAC, < 50% Load<br>80 - 144 VAC, < 75% Load<br>90 - 144 VAC, < 100% Load | | | | 120 - 276 VAC, < 25% Load<br>140 - 276 VAC, < 50% Load<br>160 - 276 VAC, < 75% Load<br>180 - 276 VAC, < 100% Load | |
| Input Voltage Range (220 Vac) | 120 - 276 VAC, < 25% Load<br>140 - 276 VAC, < 50% Load<br>160 - 276 VAC, < 75% Load<br>180 - 276 VAC, < 100% Load | | | | | |
| Input Frequency Range | 50 / 60 Hz (Auto Sensing) | | | | | |
| Input Power Factor | >0.97 | | | | | |
| Cold Start | Yes | | | | | |
| **Output** | | | | | | |
| Rated Power Factor | 0.9 | | | | | |
| Waveform | Pure Sine Wave | | | | | |
| Voltage | 100 / 110 / 115 / 120 / 127 Vac or 208 / 220 / 230 / 240 Vac ± 2% | | | | 208 / 220 / 230 / 240 Vac ± 2% | |
| Frequency | 50 / 60 Hz ±0.25 Hz | | | | | |
| Transfer Time | 0 ms | | | | | |
| Harmonic Distortion | ≤ 2.5% THD at Linear Load | | | | ≤ 3% THD at Linear Load | |
| Crest Factor | 3 : 1 | | | | | |
| EPO Function | Yes | | | | | |
| **Protection** | | | | | | |
| Overload – Line Mode | 105% - 120% for 30 seconds<br>121% - 150% for 10 seconds | | | | | |
| Overload – Battery Mode | 101% - 109% for 10 seconds<br>110% - 120% for 3 seconds | | | | | |
| Surge Protection | IEC 61000-4-5 Level 3 | | | | | |
| Bypass | Internal Bypass (Automatic and Manual) | | | | | |
| Short Circuit Protection | UPS Output Cut Off Immediately | | | | | |
| **Battery** | | | | | | |
| Type | 12V 7Ah | 12V 7Ah | 12V 7Ah | 12V 7Ah | 12V 7Ah | 12V 9Ah |
| Quantity | 3 | 4 | 6 | 8 | 20 | 20 |
| Sealed, Maintenance Free | Yes | | | | | |
| Typical Recharge Time | 4 hr to 90% | | | | | |
| External Battery Module | Option | | | | | |
| External Battery Connector | Option | | | | | |
| **Management & Communication** | | | | | | |
| Indicator | LCD Control Panel | | | | | |
| Communication Port | RS 232, USB B type | | | | | |
| SNMP Slot | Option | | | | | |
| Audible Alarms | Yes | | | | | |
| **Physical** | | | | | | |
| Dimensions (WxDxH) (mm) | 152 x 420 x 237 | 152 x 500 x 241 | 225 x 420 x 358 | | 257 x 590 x 570 | 257 x 690 x 585 |
| Weight (kgs) | 15.2 | 19.4 | 28.8 | 30 | 86 | 96.5 |
| Shipping Dimensions (mm) | 280 x 545 x 355 | 280 x 625 x 356 | 340 x 526 x 485 | | 415 x 760 x 800 | 405 x 860 x 800 |
| Shipping Weight (kgs) | 17.4 | 21.3 | 31.6 | 32.9 | 93.5 | 112 |

* While 208V output, capacity will be derated to 90%.

** Specifications are subject to change without further notice.

** Specifications are for reference, please refer to information based on real product.

**OUTPUT RECEPTACLE OPTION**

TYPE **B** TYPE **E** TYPE **F** TYPE **G** TYPE **I** TYPE **IEC**

# VANGUARD II RT Series

Advance VRT series with technology suitable for data center.

- On-Line UPS Design
- Pure Sinewave Output
- Double Conversion Technology
- High Efficiency Mode
- Advance Battery Management (ABM)
- Simple and Clear LCD Indicator
- Overload, Surge, Short Circuit Protection
- Rack Type Design
- Free-Run Mode

VRT-1000-3000

VRT-2000-3000 (2U+2U)

## Specifications

| Model | | VRT-1000 | VRT-1500 | VRT-2000 | VRT-3000 | VRT-2000 (2U+2U) | VRT-3000 (2U+2U) | VRT-6000 | VRT-10K |
|---|---|---|---|---|---|---|---|---|---|
| **Configuration** | | | | | | | | | |
| Capacity (VA) | | 1000 VA | 1500 VA | 2000 VA | 3000 VA | 2000 VA | 3000 VA | 6000 VA | 10000 VA |
| Capacity (Watts) | | 900 W | 1350 W | 1800 W | 2700 W | 1800W | 2700W | 5400 W | 9000 W |
| Form | | Rack and Tower Type | | | | | | | |
| Phase | | Single Phase | | | | | | | |
| Energy Saving | | Yes - ECO Mode Efficiency >94% | | | | | | | |
| **Input** | | | | | | | | | |
| Voltage | | 100 / 110 / 115 / 120 / 127 Vac or 208 / 220 / 230 / 240 Vac | | | | | | 208 / 220 / 230 / 240 Vac | |
| Input Voltage Range (110 Vac) | | 60 - 144 VAC < 25% Load<br>70 - 144VAC < 50 % Load<br>80 - 144 VAC < 75% Load<br>90 - 144 VAC < 100% Load | | | | | | 120 - 276 VAC, < 25% Load<br>140 - 276 VAC, < 50% Load<br>160 - 276 VAC, < 75% Load<br>180 - 276 VAC, < 100% Load | |
| Input Voltage Range (220 Vac) | | 120 - 276 VAC, < 25% Load<br>140 - 276 VAC, < 50% Load<br>160 - 276 VAC, < 75% Load<br>180 - 276 VAC, < 100% Load | | | | | | | |
| Input Frequency Range | | 50 / 60 Hz (Auto Sensing) | | | | | | | |
| Input Power Factor | | >0.97 | | | | | | | |
| Cold Start | | Yes | | | | | | | |
| **Output** | | | | | | | | | |
| Rated Power Factor | | 0.9 | | | | | | | |
| Waveform | | Pure Sine Wave | | | | | | | |
| Voltage | | 100 / 110 / 115 / 120 / 127 Vac or 208* / 220 / 230 / 240 Vac ± 2% | | | | | | 208* / 220 / 230 / 240 Vac ± 2% | |
| Frequency | | 50 / 60 Hz ±0.25 Hz | | | | | | | |
| Transfer Time | | 0 ms | | | | | | | |
| Harmonic Distortion | | ≤ 2.5% THD at Linear Load | | | | | | ≤ 3% THD at Linear Load | |
| Crest Factor | | 3 : 1 | | | | | | | |
| EPO Function | | Yes | | | | | | | |
| **Protection** | | | | | | | | | |
| Overload | Line Mode | 105% - 120% for 30 seconds<br>121% - 150% for 10 seconds | | | | | | | |
| | Battery Mode | 101% - 109% for 10 seconds<br>110% - 120% for 3 seconds | | | | | | | |
| Surge Protection | | IEC 61000-4-5 Level 3 | | | | | | | |
| Bypass | | Internal Bypass (Automatic and Manual) | | | | | | | |
| Short Circuit Protection | | UPS Output Cut Off Immediately | | | | | | | |
| **Battery** | | | | | | | | | |
| Type | | 12V 7Ah | 12V 7Ah | 12V 7Ah | 12V 9Ah | 12V 7Ah | 12V 7Ah | 12V 7Ah | 12V 9Ah |
| Quantity | | 3 | 4 | 6 | 6 | 6 | 8 | 20 | 20 |
| Sealed, Maintenance Free | | Yes | | | | | | | |
| Typical Recharge Time | | 4 hr to 90% | | | | | | | |
| External Battery Module | | Option | | | | | | | |
| External Battery Connector | | Option | | | | | | | |
| **Management & Communication** | | | | | | | | | |
| Indicator | | LCD Control Panel | | | | | | | |
| Communication Port | | RS 232, USB B type | | | | | | | |
| SNMP Slot | | Option | | | | | | | |
| Audible Alarms | | Yes | | | | | | | |
| **Physical** | | | | | | | | | |
| Power Module | Dimensions (WxDxH)(mm) | 428 x 425 x 84 | 428 x 500 x 84 | 428 x 635 x 84 | | 428 x 425 x 84 | | 428 x 597 x 130 (3U) | 428 x 657 x 130 |
| | Weight (kgs) | 16.3 | 17.9 | 29.8 | 32.6 | 10.1 | | 20 | 25 |
| | Shipping Dimensions(mm) | 546 x 552 x 206 | 550 x 620 x 220 | 550 x 750 x 229 | | 546 x 552 x 206 | | 560 x 740 x 273 | 565 x 865 x 288 |
| | Shipping Weight (kgs) | 19.4 | 21 | 33.9 | 36.5 | 13.2 | | 24 | 31.2 |
| Battery Module | Dimensions (WxDxH)(mm) | – | – | – | | 428 x 425 x 84 | | 428 x 597 x 130 (3U) | 428 x 657 x 130 |
| | Weight (kgs) | – | – | – | | 21 | 24.2 | 66 | 68 |
| | Shipping Dimensions(mm) | – | – | – | | 546 x 552 x 206 | | 560 x 740 x 375 | 590 x 830 x 370 |
| | Shipping Weight (kgs) | – | – | – | | 23 | 26.2 | 75.5 | 83 |

* While 208V output, capacity will be derated to 90%.

** Specifications are subject to change without further notice.

** Specifications are for reference, please refer to information based on real product.

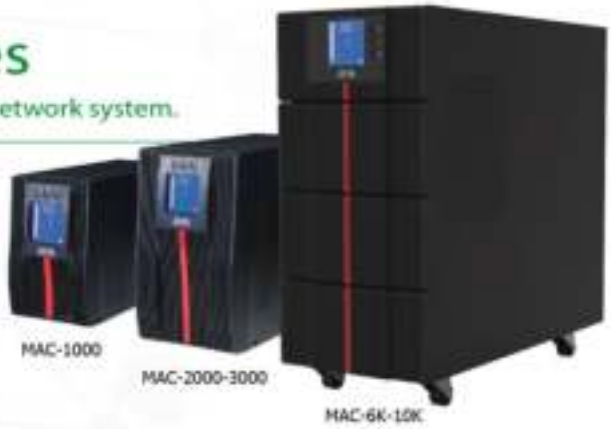
**OUTPUT RECEPTACLE OPTION**

TYPE **B** TYPE **E** TYPE **F** TYPE **G** TYPE **I** TYPE **IEC**

# MACAN Comfort Series

High quality and quiet MAC protect data center and network system.

- On-Line UPS Design
- Pure Sinewave Output
- Six Section Fan Regulation for Differnet Loading
- Simple and Clear LCD Indicator
- Double Conversion Topology
- Output Power Factor 1.0 Series
- Overload, Surge, Short Circuit Protection
- Free-Run Mode




## Specifications

| Model | | MAC-1000 | MAC-1500 | MAC-2000 | MAC-3000 | MAC-6000 | MAC-10K |
|---|---|---|---|---|---|---|---|
| **Configuration** | | | | | | | |
| Capacity (VA) | | 1000 VA | 1500 VA | 2000 VA | 3000 VA | 6000 VA | 10 KVA |
| Capacity (Watts) | | 1000 W | 1500 W | 2000 W | 3000 W | 6000 W | 10 KW |
| Form | | Tower Type | | | | | |
| Phase | | Single Phase | | | | | |
| Energy Saving | | Yes - ECO Mode Efficiency >94% | | | | | |
| **Input** | | | | | | | |
| Voltage | | 208 / 220 / 230 / 240 Vac | | | | | |
| Input Voltage Range | | 120 - 276 VAC, < 25% Load<br>140 - 276 VAC, < 50% Load<br>160 - 276 VAC, < 75% Load<br>180 - 276 VAC, < 100% Load | | | | | |
| Input Frequency Range | | 50 / 60 Hz (Auto Sensing) | | | | | |
| Input Power Factor | | >0.97 | | | | | |
| Cold Start | | Yes | | | | | |
| **Output** | | | | | | | |
| Rated Power Factor | | 1.0 | | | | | |
| Waveform | | Pure Sine Wave | | | | | |
| Voltage | | 208* / 220 / 230 / 240 Vac ± 2% | | | | | |
| Frequency | | 50 / 60 Hz ±0.25 Hz | | | | | |
| Transfer Time | | 0 ms | | | | | |
| Harmonic Distortion | | < 2.5% THD at Linear Load | | | | | |
| Crest Factor | | 3 : 1 | | | | | |
| EPO Function | | Option | | | | | |
| **Protection** | | | | | | | |
| Overload | Line Mode | 105% - 120% for 30 seconds<br>121% - 150% for 10 seconds | | | | | |
| | Battery Mode | 101% - 109% for 10 seconds<br>110% - 120% for 3 seconds | | | | | |
| Surge Protection | | IEC 61000-4-5 Level 3 | | | | | |
| Bypass | | Internal Bypass (Automatic and Manual) | | | | | |
| Short Circuit Protection | | UPS Output Cut Off Immediately | | | | | |
| **Battery** | | | | | | | |
| Type | | 12V 9Ah | 12V 7Ah | 12V 7Ah | 12V 9Ah | 12V 7Ah | 12V 9Ah |
| Quantity | | 2 | 4 | 6 | 6 | 20 | 20 |
| Sealed, Maintenance Free | | Yes | | | | | |
| Typical Recharge Time | | 4 hr to 90% | | | | | |
| External Battery Module | | Option | | | | | |
| External Battery Connector | | Option | | | | | |
| **Management & Communication** | | | | | | | |
| Indicator | | LCD Control Panel | | | | | |
| Communication Port | | RS 232, USB B type | | | | | |
| SNMP Slot | | Option | | | | | |
| Audible Alarms | | Yes | | | | | |
| **Physical** | | | | | | | |
| Dimensions (WxDxH) (mm) | | 144 x 357 x 228 | 191 x 406 x 327 | | | 257 x 590 x 570 | 257 x 590 x 570 |
| Weight (kgs) | | 10.4 | 16.4 | 20.3 | 22.9 | 86 | 95 |
| Shipping Dimensions (mm) | | 249 x 448 x 359 | 292 x 500 x 455 | | | 257 x 590 x 700 | 257 x 590 x 700 |
| Shipping Weight (kgs) | | 11.5 | 18.4 | 22.3 | 24.9 | 106 | 115 |

* While 208V output, capacity will be derated to 90%.

** Specifications are subject to change without further notice.

** Specifications are for reference, please refer to information based on real product.

**OUTPUT RECEPTACLE OPTION**

# MACAN RT Series

High quality pure sinewave output for data center power supply.

- On-Line UPS Design
- Pure Sinewave Output
- Output Power Factor 1.0 Series
- Hot Swappable Battery Replacement
- Simple and Clear Self-Rotated LCD Indicator
- UPSMON Monitor Management
- Overload, Surge, Short Circuit Protection
- Free-Run Mode

MRT-1000-3000

MRT-6K

## Specifications

| Model | | MRT-1000 | MRT-1500 | MRT-2000 | MRT-3000 | MRT-6000 | MRT-10K |
|---|---|---|---|---|---|---|---|
| **Configuration** | | | | | | | |
| Capacity (VA) | | 1000 VA | 1500 VA | 2000 VA | 3000 VA | 6000 VA | 10 KVA |
| Capacity (Watts) | | 1000 W | 1500 W | 2000 W | 3000 W | 6000 W | 10 KW |
| Form | | Rack and Tower Type | | | | | |
| Phase | | Single Phase | | | | | |
| Energy Saving | | Yes - ECO Mode Efficiency >94% | | | | | |
| **Input** | | | | | | | |
| Voltage | | 208 / 220 / 230 / 240 Vac | | | | | |
| Input Voltage Range | | 120 - 276 VAC, < 25% Load<br>140 - 276 VAC, < 50% Load<br>160 - 276 VAC, < 75% Load<br>180 - 276 VAC, < 100% Load | | | | | |
| Input Frequency Range | | 50 / 60 Hz (Auto Sensing) | | | | | |
| Input Power Factor | | >0.97 | | | | | |
| Cold Start | | Yes | | | | | |
| **Output** | | | | | | | |
| Rated Power Factor | | 1.0 | | | | | |
| Waveform | | Pure Sine Wave | | | | | |
| Voltage | | 208* / 220 / 230 / 240 Vac ± 2% | | | | | |
| Frequency | | 50 / 60 Hz ±0.25 Hz | | | | | |
| Transfer Time | | 0 ms | | | | | |
| Harmonic Distortion | | < 2.5% THD at Linear Load | | | | < 3% THD at Linear Load | |
| Crest Factor | | 3 : 1 | | | | | |
| EPO Function | | Option | | | | | |
| **Protection** | | | | | | | |
| Overload | Line Mode | 105% - 120% for 30 seconds<br>121% - 150% for 10 seconds | | | | | |
| | Battery Mode | 101% - 109% for 10 seconds<br>110% - 120% for 3 seconds | | | | | |
| Surge Protection | | IEC 61000-4-5 Level 3 | | | | | |
| Bypass | | Internal Bypass (Automatic and Manual) | | | | | |
| Short Circuit Protection | | UPS Output Cut Off Immediately | | | | | |
| **Battery** | | | | | | | |
| Battery Type + Quantity | | 12V 7Ah | 12V 9Ah | 12V 7Ah | 12V 9Ah | 12V 5Ah | 12V 9Ah |
| Internal Batt. | | Yes | Yes | Yes | Yes | External Batt. | External Batt. |
| Quantity | | 3 | 3 | 6 | 6 | 20 | 20 |
| Sealed, Maintenance Free | | Yes | | | | | |
| Typical Recharge Time | | 4 hr to 90% | | | | | |
| External Battery Module | | Option | | | | Yes | |
| External Battery Connector | | Option | | | | Yes | |
| **Management & Communication** | | | | | | | |
| LCD Control Panel | | Yes | | | | | |
| Communication Port | | RS 232, USB B type | | | | | |
| SNMP Slot | | Option | | | | | |
| Audible Alarms | | Yes | | | | | |
| **Physical** | | | | | | | |
| Power Module | Dimensions(WxDxH)(mm) | 428 x 425 x 84 | | 428 x 635 x 84 | | | |
| | Weight (kgs) | 14.7 | 16.2 | 26.2 | 29 | 15.7 | 20 |
| | Shipping Dimensions(mm) | 546 x 552 x 206 | | 550 x 750 x 220 | | | |
| | Shipping Weight (kgs) | 17.5 | 19 | 30 | 33.4 | 18 | 24 |
| Batt. Module | Dimensions(WxDxH)(mm) | 428 x 425 x 84 | | 428 x 635 x 84 | | 428 x 635 x 84 (2U) | 428 x 657 x 130 (3U) |
| | Weight (kgs) | 20.7 | | 37.3 | | 42 | 68 |
| | Dimensions(WxDxH)(mm) | 546 x 552 x 206 | | 500 x 750 x 220 | | 500 x 750 x 220 | 830 x 590 x 370 |
| | Weight (kgs) | 23.4 | | 40.8 | | 45.6 | 83 |

* While 208V output, capacity will be derated to 90%.

** Specifications are subject to change without further notice.

** Specifications are for reference, please refer to information based on real product.

OUTPUT RECEPTACLE OPTION

# VANGUARD 31 Series

Particular Three phase in- Single phase out for specific application.


VGD-8000-20K 31

- On-Line UPS Design
- Pure Sinewave Output
- High Efficiency Mode
- Tower Type Design
- Three Phase Input, Single Phase output
- Advance Battery Management (ABM)
- Simple and Clear LCD Indicator (Option)
- Overload, Surge, Short Circuit Protection
- Design for Advance Missional Electronic Device

## Specifications

| Model | | VGD-8000 31 | VGD-10K 31 | VGD-12K 31 | VGD-15K 31 | VGD-20K 31 |
|---|---|---|---|---|---|---|
| **Configuration** | | | | | | |
| Capacity (VA) | | 8000 VA | 10 KVA | 12 KVA | 15 KVA | 20 KVA |
| Capacity (Watts) | | 5600 W | 7000 W | 8400 W | 10500 W | 14 KW |
| Form | | Tower Type | | | | |
| Phase | | Input: Three Phase , Output: Single Phase | | | | |
| Energy Saving | | Yes - ECO Mode Efficiency >94% | | | | |
| **Input** | | | | | | |
| Voltage | | 208/360VAC, 220/380VAC, 230/400VAC, 240/415 VAC (3Ø 5W) | | | | |
| Input Voltage Range | | 208 - 478 VAC < 25% Load<br>243 - 478 VAC < 50 % Load<br>277 - 478 VAC < 75% Load<br>312 - 478 VAC < 100% Load | | | | |
| Input Frequency Range | | 50 / 60 Hz (Auto Sensing) | | | | |
| Input Power Factor | | > 0.9 | | | | |
| Cold Start | | Yes | | | | |
| **Output** | | | | | | |
| Rated Power Factor | | 0.7 | | | | |
| Waveform | | Pure Sine Wave | | | | |
| Voltage | | 208* / 220 / 230 / 240 Vac ± 2% | | | | |
| Frequency | | 50 / 60 Hz ±0.5 % | | | | |
| Transfer Time | | 0 ms | | | | |
| Harmonic Distortion | | ≤ 3% THD at Linear Load | | | ≤ 5% THD at Linear Load | |
| Crest Factor | | 3 : 1 | | | | |
| EPO Function | | Yes | | | | |
| **Protection** | | | | | | |
| Overload | Line Mode | 110% - 125% for 60 seconds | | | | |
| | Battery Mode | > 110% for 10 seconds | | | | |
| Surge Protection | | IEC 61000-4-5 Level 3 | | | | |
| Bypass | | Internal Bypass (Automatic and Manual) | | | | |
| Short Circuit Protection | | UPS Output Cut Off Immediately | | | | |
| **Battery** | | | | | | |
| Type | | 12V 7Ah | 12V 9Ah | 12V 7Ah | | 12V 9Ah |
| Quantity | | 20 | 20 | 20 x 2 set | | 20 x 2 set |
| Sealed, Maintenance Free | | Yes | | | | |
| Typical Recharge Time | | 4 hr to 90% | | | | |
| External Battery Module | | Option | | | | |
| External Battery Connector | | Option | | | | |
| **Management & Communication** | | | | | | |
| Indicator | | LCD Control Panel | | | | |
| Communication Port | | RS 232, USB B type | | | | |
| Audible Alarms | | Yes | | | | |
| SNMP Slot | | Option | | | | |
| **Physical** | | | | | | |
| Dimensions (WxDxH) (mm) | | 257 x 690 x 715 | | 342 x 690 x 905 | 342 x 757 x 905 | |
| Weight (kgs) | | 112 | | 190 | 207 | |
| Shipping Dimensions (mm) | | 415 x 860 x 930 | | 500 x 860 x 972 | 500 x 930 x 1135 | |
| Shipping Weight (kgs) | | 139 | | 210.7 | 22.5 | |

* While 208V output, capacity will be derated to 90%.

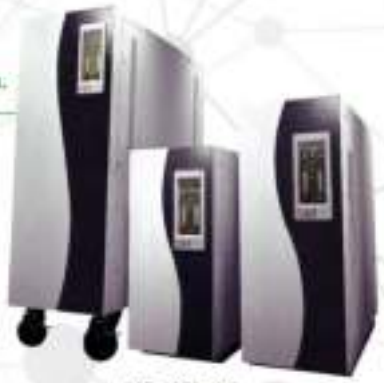
** Specifications are subject to change without further notice.

** Specifications are for reference, please refer to information based on real product.

# ONL Series

Industrial three phase UPS processed with data center strong protection.

- On-Line UPS Design
- Pure Sinewave Output
- Large Input Voltage Range
- Advance Battery Management (ABM)
- Generator Compatible
- Multi-Microprocessor Control
- Clear and LCD Indicator (Option)
- Energy Saving Green Topology
- UPSMON Monitor Management
- Industrial Usage



ONL-3750-15K

## Specifications

| Model | ONL-3750S | ONL-6250S | ONL-7500S | ONL-10KS | ONL-15KS |
|---|---|---|---|---|---|
| **Capacity** | | | | | |
| Capacity (VA) | 3750 VA | 6250 VA | 7500 VA | 10 KVA | 15 KVA |
| Capacity (Watts) | 3000 W | 5000 W | 6000 W | 8000 W | 12 KW |
| Phase | Single Phase (1 Ø 2W) | | | | |
| **Main Input** | | | | | |
| Voltage | 110 or 220 VAC | | | | |
| Voltage Range | 82 - 137 or 165 - 275 VAC | | | | |
| Frequency | 50 / 60Hz | | | | |
| Frequency Range | 45 - 65 Hz | | | | |
| **Output** | | | | | |
| Inverter Voltage | 110 / 115 / 120 VAC or 220 / 230 / 240 VAC | | | | |
| Inverter Frequency | 50 / 60 Hz | | | | |
| Output Power Factor | 0.8 - 1.0 Lagging | | | | |
| Voltage Precision | ±1.0% (100% Linear Load) | | | | |
| Output THDv | < 3% (Linear Load) | | | | |
| Inverter Overload | < 125 %,Continue Working<br>125 % to 150 %, 20 seconds<br>>150 %, for 10 Cycles | | | | |
| Frequency Regulation | 50 / 60Hz ±0.1% | | | | |
| Synchronized Range | Default Range : ± 5 Hz | | | | |
| Synchronized Slew Rate | Default Range : 1 Hz/s | | | | |
| **Battery And Charger** | | | | | |
| Battery Voltage | 220VDC (12V 16pcs) | | | | |
| Charger Voltage precision | 1% | | | | |
| Charger Power | 1.5 A | | 3 A | | |
| **Efficiency** | | | | | |
| Normal Operation | > 84 % | > 85 % | | | |
| Battery Operation | > 88 % | > 90 % | | | |
| **Static Transfer Switch** | | | | | |
| Inverter to Bypass | 0 ms | | | | |
| Bypass to Inverter | 0 ms | | | | |
| Transfer Efficiency | > 99% | | | | |
| **Environmental** | | | | | |
| Operation Temperature | 0 - 40°C | | | | |
| Storage Temperature | -15 - 60°C | | | | |
| Relative Humidity | 0 - 95% (Non condensing) | | | | |
| Noise (1m from surface) | < 55 dBA | | < 60 dBA | | |
| Altitude | Normal Load: <1000m | | | | |
| **Physical Data** | | | | | |
| Dimension (WxDxH) (mm) | 265 x 641 x 750 | | 350 x 641 x 1010 | | |
| Weight (kg) (Without Battery) | 111.4 | 83.8 | 120.4 | 156.2 | 175 |
| Indicator | LED or LCD Panel | | | | |
| **System** | | | | | |
| Interface | Standard : RS232<br>Optional : SNMP / Dry Contact | | | | |
| Other Function | Standard : Battery Cold Start | | | | |

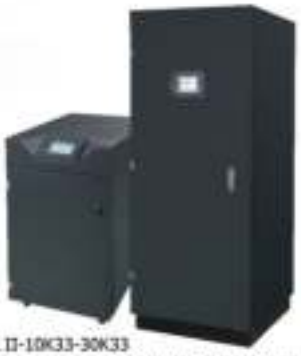
** Specifications are subject to change without further notice.

** Specifications are for reference, please refer to information based on real product.

# ONL II-33 Series

Three Phase professional UPS are the best choice for industrial usage.

- Three Phase Power UPS
- DSP (Digital Signal Processor) Control
- IGBT Modular Design
- Generator Compatible
- Dry Contact Function
- Isolation Transformer
- Human Voice Alarm System
- Industrial Usage



ONL II-10K33-30K33

ONL II-45K33-60K33

## Specifications

| Model | ONL II-10K33 | ONL II-15K33 | ONL II-20K33 | ONL II-30K33 | ONL II-45K33 | ONL II-60K33 |
|---|---|---|---|---|---|---|
| **Capacity** | | | | | | |
| Capacity (VA) | 10 KVA | 15 KVA | 20 KVA | 30 KVA | 45 KVA | 60 KVA |
| Capacity (Watts) | 8 KW | 12 KW | 16 KW | 24 KW | 36 KW | 48 KW |
| Phase | Three Phase | | | | | |
| **Main Input** | | | | | | |
| Grid System | 3 Phases + Neutral + Ground | | | | | |
| Voltage | 190 / 200 / 208 / 220 / 380 / 400 / 415 / 440 VAC (Line-Line) | | | | | |
| Voltage Range | 152 - 528 VAC (Line-Line) | | | | | |
| Frequency | 50 / 60Hz (Auto Sensing) | | | | | |
| Frequency Range | 45 - 65Hz | | | | | |
| **Output** | | | | | | |
| Inverter Voltage | 190 / 200 / 208 / 220 / 380 / 400 / 415 / 440 VAC (Line-Line) | | | | | |
| Inverter Frequency | 50 / 60Hz | | | | | |
| Output Power Factor | 0.8 - 1.0 Lagging | | | | | |
| Voltage Precision | ±1.0% (100% Linear Load) | | | | | |
| Transient Response | Linear Load 0-100 % < 5% | | | | | |
| Transient Recovery | ±2.0% < 50 ms | | | | | |
| Output THDv | <3% (Linear Load) | | | | | |
| Inverter Overload | > 100%, 30 min<br>> 125%, 10 min<br>> 150%, 1 min | | | | | |
| Frequency Regulation | 50 / 60Hz ± 0.1% | | | | | |
| Synchronized Range | Default Range : ± 5 Hz | | | | | |
| Synchronized Slew Rate | Default Range : 1 Hz/s | | | | | |
| **Battery And Charger** | | | | | | |
| Battery Voltage | 10-80K(120/208VAC) : 192VDC, 12V-16 pcs as one set<br>10-120K(220/380VAC) : 360VDC, 12V-30 pcs as one set | | | | | |
| Charger Voltage precision | 1% | | | | | |
| Charger Power | Battery 16 pcs-220VDC, Battery 30 pcs-410VDC, Battery 32 pcs-435 VDC<br>Current: Depending on the model used 1.5, 2.5, 3, 5, 10, 15, 20, 30, 40, 50A<br>Options and Automatic Current Limiting Function can be set | | | | | |
| **Bypass Input** | | | | | | |
| Voltage | 190 / 200 / 208 / 220 / 380 / 400 / 415 / 440 VAC (Line-Line) | | | | | |
| Voltage Range | 152 - 528 VAC (Line-Line) | | | | | |
| Frequency | 50 / 60 Hz | | | | | |
| Frequency Range | 45 - 65 Hz | | | | | |
| Bypass Overload | > 100%, 30 min<br>> 125%, 10 min<br>> 150%, 1 min | | | | | |
| **Efficiency** | | | | | | |
| Normal Operation | > 85 % | | > 86 % | | > 88 % | |
| Battery Operation | > 87 % | | > 88 % | | > 90 % | |
| **Static Transfer Switch** | | | | | | |
| Inverter to Bypass | 0 ms | | | | | |
| Bypass to Inverter | 0 ms | | | | | |
| Transfer Efficiency | > 99% | | | | | |
| **Environmental** | | | | | | |
| Operation Temperature | 0 - 40°C | | | | | |
| Storage Temperature | -15 - 60°C | | | | | |
| Relative Humidity | 0 - 95% (Non condensing) | | | | | |
| Noise (1m from surface) | Less than 60 dBA | | | | | |
| Altitude | Normal Load: <1000m<br>Load derated 1% per 100m From 1000 to 2000m | | | | | |
| **Physical Data** | | | | | | |
| Dimension (WxDxH) (mm) | 530 x 859 x 1010 | | | | 810 x 810 x 1900 | |
| Weight (kg) (Without Battery) | 310 | 340 | 368 | 398 | 515 | 567 |
| **Alarm** | | | | | | |
| Event Log | Detail UPS status description not use error code, record item number of event max 2400 | | | | | |
| Network | Network connection port (10/100 Base. T) and remote monitoy control, not use SNMP card. | | | | | |
| Dry Contact | Max item: 20 status, programmable select: 4 item | | | | | |
| **System** | | | | | | |
| Display | 7" TFT LCD Touch Screen Indicator | | | | | |
| Interface | Standard : RS232 / RS485 / Dry Contact<br>Optional : SNMP | | | | | |
| Other Function | Standard : Battery Cold Start<br>Optional : Parallel Kit | | | | | |

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# ONL II-33 Series

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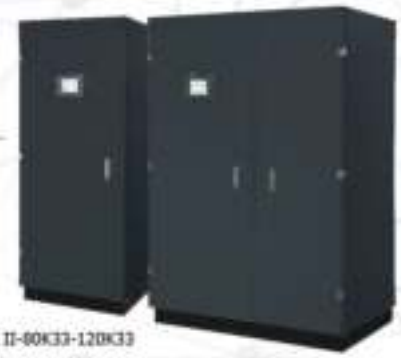
- DSP (Digital Signal Processor) Control
- IGBT Modular Design
- Generator Compatible
- Dry Contact Function
- Isolation Transformer
- Human Voice Alarm System
- Industrial Usage



ONL II-80K33-120K33

ONL II-160K33-250K33

## Specifications

| Model | ONL II-80K33 | ONL II-100K33 | ONL II-120K33 | ONL II-160K33 | ONL II-200K33 | ONL II-250K33 |
|---|---|---|---|---|---|---|
| **Capacity** | | | | | | |
| Capacity (VA) | 80 KVA | 100 KVA | 120 KVA | 160 KVA | 200 KVA | 250 KVA |
| Capacity (Watts) | 64 KW | 80 KW | 96 KW | 128 KW | 160 KW | 200 KW |
| Phase | Three Phase | | | | | |
| **Main Input** | | | | | | |
| Grid System | 3 Phases + Neutral + Ground | | | | | |
| Voltage | 190 / 200 / 208 / 220 / 380 / 400 / 415 / 440 VAC (Line-Line) | | | | | |
| Voltage Range | 152 - 528 VAC (Line-Line) | | | | | |
| Frequency | 50 / 60Hz (Auto Sensing) | | | | | |
| Frequency Range | 45 - 65Hz | | | | | |
| **Output** | | | | | | |
| Inverter Voltage | 190 / 200 / 208 / 220 / 380 / 400 / 415 / 440 VAC (Line-Line) | | | | | |
| Inverter Frequency | 50 / 60Hz | | | | | |
| Output Power Factor | 0.8 - 1.0 Lagging | | | | | |
| Voltage Precision | ±1.0% (100% Linear Load) | | | | | |
| Transient Response | Linear Load 0-100 % < 5% | | | | | |
| Transient Recovery | ±2.0% < 50 ms | | | | | |
| Output THDv | <3% (Linear Load) | | | | | |
| Inverter Overload | > 100%, 30 min<br>> 125%, 10 min<br>> 150%, 1 min | | | | | |
| Frequency Regulation | 50 / 60Hz ± 0.1% | | | | | |
| Synchronized Range | Default Range : ± 5 Hz | | | | | |
| Synchronized Slew Rate | Default Range : 1 Hz/s | | | | | |
| **Battery And Charger** | | | | | | |
| Battery Voltage | 80K(120/208VAC) : 192VDC, 12V-16 pcs one set<br>80-120K(220/380VAC) : 360VDC, 12V-30 pcs as one set | | | 160K-250K(220/380VAC) : 384V,<br>12V-32 pcs as one set | | |
| Charger Voltage precision | 1% | | | | | |
| Charger Power | Battery 16 pcs-220VDC, Battery 30 pcs-410VDC, Battery 32 pcs-435 VDC<br>Current: Depending on the model used 1.5, 2.5, 3, 5, 10, 15, 20, 30, 40, 50A<br>Options and Automatic Current Limiting Function can be set | | | | | |
| **Bypass Input** | | | | | | |
| Voltage | 190 / 200 / 208 / 220 / 380 / 400 / 415 / 440 VAC (Line-Line) | | | | | |
| Voltage Range | 152 - 528 VAC (Line-Line) | | | | | |
| Frequency | 50 / 60Hz | | | | | |
| Frequency Range | 45Hz to 65Hz | | | | | |
| Bypass Overload | > 100%, 30 min<br>> 125%, 10 min<br>> 150%, 1 min | | | | | |
| **Efficiency** | | | | | | |
| Normal Operation | > 89 % | | | > 90 % | | |
| Battery Operation | > 91 % | | | > 92 % | | |
| **Static Transfer Switch** | | | | | | |
| Inverter to Bypass | 0 ms | | | | | |
| Bypass to Inverter | 0 ms | | | | | |
| Transfer Efficiency | > 99% | | | | | |
| **Environmental** | | | | | | |
| Operation Temperature | 0 - 40°C | | | | | |
| Storage Temperature | -15 - 60°C | | | | | |
| Relative Humidity | 0 - 95% (Non condensing) | | | | | |
| Noise (1m from surface) | Less than 60 dBA | | | | | |
| Altitude | Normal Load: <1000m<br>Load derated 1% per 100m From 1000 to 2000m | | | | | |
| **Physical data** | | | | | | |
| 6P Dimension (WxDxH) (mm) | 810 x 810 x 1900 (220/380VAC) | | | 1400 x 1000 x 1800 (220/380VAC) | | |
| 6P Weight (kg) (Without Battery) | 677 | 680 | 730 | 1035 | 1055 | 1075 |
| 12P Dimension (WxDxH) (mm) | 1300 x 810 x 1900 (220/380VAC) | | | 1400 x 1000 x 1800 (220/380VAC) | | |
| 12P Weight (kg) (Without Battery) | 810 | 860 | 910 | 1035 | 1055 | 1075 |
| **Alarm** | | | | | | |
| Event Log | Detail UPS status description not use error code, record item number of event max 2400 | | | | | |
| Network | Network connection port (10/100 Base. T) and remote monitoy control, not use SNMP card. | | | | | |
| Dry Contact | Max item: 20 status, programmable select: 4 item | | | | | |
| **System** | | | | | | |
| Display | 7" TFT LCD Touch Screen Indicator | | | | | |
| Interface | Standard : RS232 / RS485 / Dry Contact<br>Optional : SNMP | | | | | |
| Other Function | Standard : Battery Cold Start<br>Optional : Parallel Kit | | | | | |

** Specifications are subject to change without further notice.
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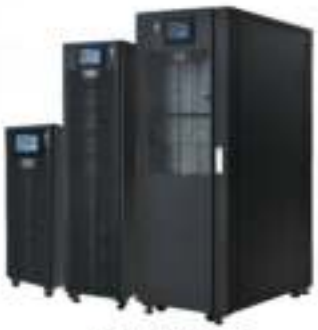
# VGD II-33 Series

VGD three phase UPS with variety collocation for electronic protection.

- Three Phase Power UPS
- High Power Density
- Isolated Transformer (Option)
- LCD Touch Screen
- Dust-Proof Capability
- N+X Parallel Redundancy
- Efficiency Heat Dissipation
- Industrial Usage



VGD II-10K-40K33

## Specifications

| Model | VGD II 10K33 | VGD II 15K33 | VGD II 20K33 | VGD II 30K33 | VGD II 40K33 |
|---|---|---|---|---|---|
| **Capacity** | | | | | |
| Capacity (VA) | 10 KVA | 15 KVA | 20 KVA | 30 KVA | 40 KVA |
| Capacity (Watts) | 10 KW | 15 KW | 18 KW | 27 KW | 36 KW |
| **Main Input** | | | | | |
| Grid System | 3 Phases + Neutral + Ground | | | | |
| Voltage | 380 / 400 / 415VAC (Line-Line) | | | | |
| Voltage Range | Full Load : 304 to 478VAC (Line-Line)<br>Other : 228 to 478VAC (Line-Line)<br>(load decreases linearly according to the min phase voltage) | | | | |
| Frequency | 50 / 60Hz | | | | |
| Frequency Range | 40Hz to 70Hz | | | | |
| Power Factor | >0.99 | | | | |
| Current THDI | <4% (full Linear Load) | | <3% (full Linear Load) | | |
| **Output** | | | | | |
| Inverter Voltage | 380 / 400 / 415VAC (Line-Line) | | | | |
| Inverter Frequency | 50 / 60Hz | | | | |
| Output Power Factor | 1 | | 0.9 | | |
| Voltage Precision | ±1.5% (0-100% Linear Load) | | | | |
| Transient Response | <5% for step load (20% -> 80% -> 20%) | | | | |
| Transient Recovery | < 30ms for step load (0% -> 100% -> 0%) | | | | |
| Output THDv | <1% (linear load)<br><5.5% (non-linear load) according to IEC/EN62040-3 | | <1% linear load<br><6 (non-linear load) according to IEC/EN62040-3 | | |
| Inverter Overload | 100% to 110%, 60min<br>110% to 125%, 10min<br>125% to 150%, 1min | | | | |
| Frequency Regulation | 50 / 60Hz ±0.1% | | | | |
| Synchronized Range | Default Range : ±3 Hz<br>Settable Range : ±0.5 Hz to ±5 Hz | | | | |
| Synchronized Slew Rate | Default Range : 0.5 Hz/s<br>Settable Range : 0.5 Hz/s to 3 Hz/s | | | | |
| **Battery And Charger** | | | | | |
| Battery Voltage | ±240VDC (12V 20+20pcs) | | | | |
| Charger Voltage Precision | 1% | | | | |
| Charger Power | MAX = 20% System Power | | | | |
| **Bypass Input** | | | | | |
| Voltage | 380 / 400 / 415VAC (Line-Line) | | | | |
| Voltage Range | Default : -20% to +15%<br>Selectable Upper Limit : +10%, +15%, +20%, +25%<br>Selectable Lower Limit : -10%, -15%, -20%, -30%, -40% | | | | |
| Frequency | 50 / 60Hz | | | | |
| Frequency Range | Selectable Range: ± 1Hz, ± 3Hz, ± 5Hz | | | | |
| Bypass Overload | 125% Long Time Operation<br>125% to 130% for 10min<br>130% to 150% for 1min | | | | |
| **Efficiency** | | | | | |
| Normal Operation | 95.0% MAX | | >95% | | >96% |
| Battery Operation | 94.5% MAX | | >95% | | >96% |
| **Static Transfer Switch** | | | | | |
| Inverter to Bypass | 0 ms | | | | |
| Bypass to Inverter | 0 ms | | | | |
| Transfer Efficiency | > 99% | | | | |
| **Environmental** | | | | | |
| Operation Temperature | 0 - 40°C | | | | |
| Storage Temperature | -40 - 70°C | | | | |
| Relative Humidity | 0 - 95% (Non condensing) | | | | |
| Noise (1m from surface) | 58dB @ 100% load / 52dB @ 45% load | | 65dB @ 100% load / 62dB @ 45% load | | |
| Altitude | Normal Load: <1000m<br>Load derated 1% per 100m From 1000 to 2000m | | | | |
| **Physical Data** | | | | | |
| Dimension (WxDxH) (mm) | 250 x 840 x 715 | 250 x 840 x 715 | 350 x 738 x 1335 | 350 x 738 x 1335 | 500 x 840 x 1400 |
| Weight (kg) (Without Battery) | 51.5 | 51.5 | 89 | 89 | 140 |
| **System** | | | | | |
| Display | LED & LCD Touch Screen | | | | |
| Interface | Standard : RS232 / RS485<br>Optional : SNMP / Dry Contact | | | | |
| Other Function | Standard : Battery Cold Start<br>Optional : Parallel Kit | | | | |

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# VGD II-33 Series

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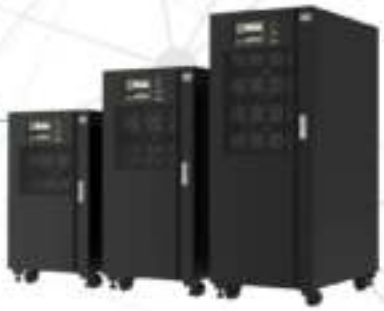
- Three Phase Power UPS
- High Power Density
- Isolated Transformer (Option)
- LCD Touch Screen
- Dust-Proof Capability
- N+X Parallel Redundancy
- Efficiency Heat Dissipation
- Industrial Usage



VGD II-60K-120K33

## Specifications

| Model | VGD II 60K33 | VGD II 80K33 | VGD II 90K33 | VGD II 100K33 | VGD II 120K33 |
|---|---|---|---|---|---|
| **Capacity** | | | | | |
| Capacity (VA) | 60 KVA | 80 KVA | 90 KVA | 100 KVA | 120 KVA |
| Capacity (Watts) | 54 KW | 72 KW | 81 KW | 90 KW | 108 KW |
| **Main Input** | | | | | |
| Grid System | 3 Phases + Neutral + Ground | | | | |
| Voltage | 380 / 400 / 415VAC (Line-Line) | | | | |
| Voltage Range | Full Load : 304 to 478VAC (Line-Line)<br>Other : 228 to 478VAC (Line-Line)<br>(load decreases linearly according to the min phase voltage) | | | | |
| Frequency | 50 / 60Hz | | | | |
| Frequency Range | 40Hz to 70Hz | | | | |
| Power Factor | >0.99 | | | | |
| Current THDi | <3% (full Linear Load) | | | | |
| **Output** | | | | | |
| Inverter Voltage | 380 / 400 / 415VAC (Line-Line) | | | | |
| Inverter Frequency | 50 / 60Hz | | | | |
| Output Power Factor | 0.9 | | | | |
| Voltage Precision | ±2% (0-100% Linear Load) | | | | |
| Transient Response | <5% for step load (20% -> 80% -> 20%) | | | | |
| Transient Recovery | < 30ms for step load (0% -> 100% -> 0%) | | | | |
| Output THDv | <1.5% (linear load)<br><6% (non-linear load) according to IEC/EN62040-3 | | | | |
| Inverter Overload | 100% to 110%, 60min<br>110% to 125%, 10min<br>125% to 150%, 1min<br>Over 150%, 200ms | | | | |
| Frequency Regulation | 50 / 60Hz ±0.1% | | | | |
| Synchronized Range | Default Range : ±3 Hz<br>Settable Range : ±0.5 Hz to ±5 Hz | | | | |
| Synchronized Slew Rate | Default Range : 0.5 Hz/s<br>Settable Range : 0.5 Hz/s to 3 Hz/s | | | | |
| **Battery And Charger** | | | | | |
| Battery Voltage | ±240VDC (12V 20+20pcs) | | | | |
| Charger Voltage precision | 1% | | | | |
| Charger Power | MAX = 20% System Power | | | | |
| **Bypass Input** | | | | | |
| Voltage | 380 / 400 / 415VAC (Line-Line) | | | | |
| Voltage Range | Default : -20% to +15%<br>Selectable Upper Limit : +10%, +15%, +20%, +25%<br>Selectable Lower Limit : -10%, -15%, -20%, -30%, -40% | | | | |
| Frequency | 50 / 60Hz | | | | |
| Frequency Range | Selectable Range: ± 1Hz, ± 3Hz, ± 5Hz | | | | |
| Bypass Overload | 125% for Long Time Operation<br>125% to 130% for 10min<br>130% to 150% for 1min<br>Over 150% for 300ms | | | | |
| **Efficiency** | | | | | |
| Normal Operation | >95% | >96% | >95% | >96% | >95% |
| Battery Operation | >95% | >96% | >95% | >96% | >95% |
| **Static Transfer Switch** | | | | | |
| Inverter to Bypass | 0 ms | | | | |
| Bypass to Inverter | 0 ms | | | | |
| Transfer Efficiency | > 99% | | | | |
| **Environmental** | | | | | |
| Operation Temperature | 0 - 40°C | | | | |
| Storage Temperature | -40 - 70°C | | | | |
| Relative Humidity | 0 - 95% (Non condensing) | | | | |
| Noise (1m from surface) | 65dB @ 100% load / 62dB @ 45% load | | | | |
| Altitude | Normal Load: <1000m<br>Load derated 1% per 100m From 1000 to 2000m | | | | |
| **Physical data** | | | | | |
| Dimension (WxDxH) (mm) | 600 x 980 x 950 | 600 x 980 x 1150 | 600 x 980 x 1400 | 600 x 980 x 1150 | 600 x 980 x 1400 |
| Weight (kg) (Without Battery) | 170 | 210 | 231 | 210 | 266 |
| **System** | | | | | |
| Display | Standard : LED & LCD Touch Screen | | | | |
| Interface | Standard : RS232 / RS485 / USB / Programmable Dry Contact<br>Optional : SNMP | | | | |
| Protections | Optional : Lightning Protection Components / Dust Filter | | | | |
| Other Function | Optional : Battery Cold Start / Parallel Kit / Load Bus Synchronization | | | | |

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- Isolated Transformer (Option)
- LCD Touch Screen
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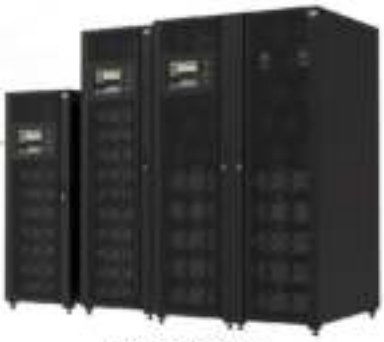
- N+X Parallel Redundancy
- Efficiency Heat Dissipation
- Industrial Usage



VGD II-150K-500K33

## Specifications

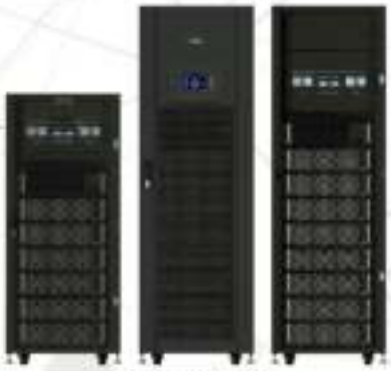
| Model | VGD II 150K33 | VGD II 200K33 | VGD II 250K33 | VGD II 300K33 | VGD II 400K33 | VGD II 500K33 |
|---|---|---|---|---|---|---|
| **Capacity** | | | | | | |
| Capacity (VA) | 150 KVA | 200 KVA | 250 KVA | 300 KVA | 400 KVA | 500 KVA |
| Capacity (Watts) | 135 KW | 180 KW | 225 KW | 270 KW | 360 KW | 450 KW |
| **Main Input** | | | | | | |
| Grid System | 3 Phases + Neutral + Ground | | | | | |
| Voltage | 380 / 400 / 415VAC (Line-Line) | | | | | |
| Voltage Range | Full Load : 304 to 478VAC (Line-Line)<br>Other : 228 to 478VAC (Line-Line)<br>(load decreases linearly according to the min phase voltage) | | | | | |
| Frequency | 50 / 60Hz | | | | | |
| Frequency Range | 40Hz to 70Hz | | | | | |
| Power Factor | >0.99 | | | | | |
| Current THDi | <3% (full Linear Load) | | | | | |
| **Output** | | | | | | |
| Inverter Voltage | 380 / 400 / 415VAC (Line-Line) | | | | | |
| Inverter Frequency | 50 / 60Hz | | | | | |
| Output Power Factor | 0.9 | | | | | |
| Voltage Precision | ±2% (0-100% Linear Load) | | | | | |
| Transient Response | <5% for step load (20% -> 80% -> 20%) | | | | | |
| Transient Recovery | < 30ms for step load (0% -> 100% -> 0%) | | | | | |
| Output THDv | <1.5% (linear load)<br><6% (non-linear load) according to IEC/EN62040-3 | | | | | |
| Inverter Overload | 100% to 110%, 60min<br>110% to 125%, 10min<br>125% to 150%, 1min<br>Over 150%, 200ms | | | | | |
| Frequency Regulation | 50 / 60Hz ±0.1% | | | | | |
| Synchronized Range | Default Range : ±3 Hz<br>Settable Range : ±0.5 Hz to ±5 Hz | | | | | |
| Synchronized Slew Rate | Default Range : 0.5 Hz/s<br>Settable Range : 0.5 Hz/s to 3 Hz/s | | | | | |
| **Battery And Charger** | | | | | | |
| Battery Voltage | +240VDC (12V 20+20pcs) | | | | | |
| Charger Voltage precision | 1% | | | | | |
| Charger Power | MAX = 20% System Power | | | | | |
| **Bypass Input** | | | | | | |
| Voltage | 380 / 400 / 415VAC (Line-Line) | | | | | |
| Voltage Range | Default : -20% to +15%<br>Selectable Upper Limit : +10%, +15%, +20%, +25%<br>Selectable Lower Limit : -10%, -15%, -20%, -30%, -40% | | | | | |
| Frequency | 50 / 60Hz | | | | | |
| Frequency Range | Selectable Range: ± 1Hz, ± 3Hz, ± 5Hz | | | | | |
| Bypass Overload | 125% for Long Time Operation<br>125% to 130% for 10min<br>130% to 150% for 1min<br>Over 150% for 300ms | | 110% for Long Time Operation<br>110% to 125% for 5min<br>125% to 150% for 1min<br>Over 150% for 1s | | | |
| **Efficiency** | | | | | | |
| Normal Operation | >96% | | | | | |
| Battery Operation | >96% | | | | | |
| **Static Transfer Switch** | | | | | | |
| Inverter to Bypass | 0 ms | | | | | |
| Bypass to Inverter | 0 ms | | | | | |
| Transfer Efficiency | > 99% | | | | | |
| **Environmental** | | | | | | |
| Operation Temperature | 0 - 40°C | | | | | |
| Storage Temperature | -40 - 70°C | | | | | |
| Relative Humidity | 0 - 95% (Non condensing) | | | | | |
| Noise (1m from surface) | 65dB @ 100% load / 62dB @ 45% load | | | | | |
| Altitude | Normal Load: <1000m<br>Load derated 1% per 100m From 1000 to 2000m | | | | | |
| **Physical data** | | | | | | |
| Dimension (WxDxH) (mm) | 650 x 960 x 1600 | 650 x 960 x 1600 | 650 x 960 x 2000 | 650 x 960 x 2000 | 1300 x 1100 x 2000 | 1300 x 1100 x 2000 |
| Weight (kg) (Without Battery) | 305 | 350 | 445 | 490 | 810 | 900 |
| **System** | | | | | | |
| Display | Standard : LED & LCD Touch Screen | | | | | |
| Interface | Standard : RS232 / RS485 / USB / Programmable Dry Contact<br>Optional : SNMP | | | | | |
| Protections | Optional : Lightning Protection Components / Dust Filter | | | | | |
| Other Function | Optional : Battery Cold Start / Parallel Kit / Load Bus Synchronization | | | | | |

** Specifications are subject to change without further notice.
** Specifications are for reference, please refer to information based on real product.

# ONL- M Series

## Modular three phase UPS provide full-protection for industrial usage.

- Three Phase Power UPS
- Modular UPS Design
- Large Input Voltage Range
- Dry Contact Function
- Generator Compatible
- Power Factor 1.0 Output
- N+X Parallel Redundancy
- Business Usage



ONL-M-30U-40U

## Specifications

| Model | ONL-M 30U-90 | ONL-M 42U-120 | ONL-M 30U-120 | ONL-M 30U-180 | ONL-M 42U-210 | ONL-M 42U-300 |
|---|---|---|---|---|---|---|
| **Capacity** | | | | | | |
| Max. Capacity (VA) | 90 K | 120 K | 120 K | 180K | 210K | 300K |
| Max. Capacity (Watts) | 90 K | 120 K | 120 K | 180K | 210K | 300K |
| One Power Module Capacity | 30KVA / 30KW or 20KVA / 20KW | | | | | |
| Max. Power Module No. | 3 | 4 | 4 | 6 | 8 | 10 |
| Power Factor** | 1 | 1 | 1 | 1 | 1 | 1 |
| **Main Input** | | | | | | |
| Grid System | 3 Phases + Neutral + Ground | | | | | |
| Voltage | 380 / 400 / 415VAC (Line-Line) | | | | | |
| Voltage Range | 304 to 478VAC : Full Load (Line-Line)<br>208 to 478VAC : <70% Load (Line-Line)<br>(load decreases linearly according to the min phase voltage) | | | | | |
| Frequency | 50/60Hz (Auto sensing) | | | | | |
| Frequency Range | 40 - 70 Hz | | | | | |
| Power Factor | > 0.99 at 100% load<br>> 0.98 at 50% load | | | | | |
| THDI | < 3% at Full Linear Load | | | | | |
| **Output** | | | | | | |
| Inverter Voltage | 380 / 400 / 415VAC (Line-Line) | | | | | |
| Inverter Frequency | 50/60Hz | | | | | |
| Output Power Factor | Typical 1.0 | | | | | |
| Voltage Precision | ± 1% Typical (0-100% balanced Linear Load) | | | | | |
| Transient Response | ± 5% Typical | | | | | |
| Transient Recovery | <100ms Recover to 90 % of Nominal Voltage | | | | | |
| Output THDv | <2% (Linear Load) ; 4% (Non-Linear Load) | | | | | |
| Inverter Overload | 105% to 110%, 60 min / 110% to 125%, 10 min / 126% to 150%, 1 min / over 150%, 200ms | | | | | |
| Frequency Regulation | Default : 50/60Hz ± 0.1% | | | | | |
| Synchronized Range | Default Range : ± 4Hz, Settable Range : ± 1Hz, ± 2Hz, ± 4Hz | | | | | |
| Synchronized Slew Rate | 1Hz / s | | | | | |
| **Battery And Charger** | | | | | | |
| Battery Type | Internal | | External Battery | | | |
| Max. Battery Set No.** | 3 | 5 | - | | | |
| Battery Voltage | Nominal Voltage : ± 216V (12V 18+18 Pcs)<br>Minimum Voltage : ± 192V (12V 16+16 Pcs)<br>Maximum Voltage : ± 240V (12V 20+20 Pcs) | | | | | |
| Charger Voltage precision | 1% | | | | | |
| Charger Power | 8A for each power module (User-adjustable) | | | | | |
| Floating Charge Voltage | 2.3V/Cell | | | | | |
| Boost Charging Voltage | 2.35V/Cell | | | | | |
| Temperature Compensation | Yes | | | | | |
| **Bypass Input** | | | | | | |
| Voltage | 380 / 400 / 415 VAC (Line-Line) | | | | | |
| Voltage Range | Default : -20% to +15%<br>Selectable Upper Limit : +10%, +15%, +20%<br>Selectable Lower Limit : -10%, -20%, -30% | | | | | |
| Frequency | 50 / 60 Hz | | | | | |
| Frequency Range | Default : ± 4Hz<br>Settable Range : ± 1Hz, ± 2Hz, ± 4Hz | | | | | |
| Bypass Overload | 105% to 110%, 60 min<br>111% to 125%, 10 min<br>126% to 150%, 1min<br>Over 150%, 200ms | | | | | |
| **Efficiency** | | | | | | |
| Normal Operation | over 50% Load : >94.5% | | | | | |
| Battery Operation | over 50% Load : >94.5% | | | | | |
| **Static Transfer Switch** | | | | | | |
| Inverter to Bypass | Synchronous transfer: 0ms<br>Asynchronous transfer: < 1 cycle | | | | | |
| Bypass to Inverter | Bypass to Inverter 0 ms<br>ECO to Inverter Mode < 20 ms | | | | | |
| Transfer Efficiency | 98% | | | | | |
| **Environmental** | | | | | | |
| Operation Temperature | 0 - 40°C | | | | | |
| Storage Temperature | -15°C - 60°C | | | | | |
| Relative Humidity | 0 - 95% non-condensing | | | | | |
| Noise (1m from surface) | 4 Power Modules : < 70dB<br>8 Power Modules : < 73dB | | | | | |
| Altitude | <1000m for Nominal power | | | | | |
| IP Class | IP 20 | | | | | |
| **Physical Data** | | | | | | |
| Dimension (WxDxH) (mm) | 600 x 1100 x 1475 | 600 x 1100 x 2010 | 600 x 1100 x 1475 | 600 x 1100 x 1475 | 600 x 1100 x 2010 | 600 x 1100 x 2010 |
| Weight (kg) | 301.5 | 344 | 197 | 230.5 | 273 | 275 |
| **System** | | | | | | |
| Display | Standard : LED & 5.7" LCD<br>Optional : 10" Color Touch Screen | | | | | |
| Interface | Standard : RS232 / USB (Windows 2000/2003/XP/Vista/2008/7/8/10)<br>Optional : SNMP | | | | | |
| Other Function | Standard : Battery Cold Start<br>Optional : SNMP card, AS 400, MOD Bus, Extra Comm. | | | | | |
| **Standards** | | | | | | |
| Safety | IEC/EN 60950-1; IEC/EN 62040-1 | | | | | |
| EMC | IEC/EN 62040-2 Category C3 | | | | | |

** Three Phase Modular UPS, Power module base Output P.F=1 @ 0 ~ 30°C, Output P.F=0.9 @ 31 ~ 35°C, Output P.F=0.8 @ 36 ~ 40°C
** Specifications are subject to change without further notice.
** Specifications are for reference, please refer to information based on real product.

# HI-AVR Series

High frequency AR series provide stable voltage for electronic application.

- Automatic Voltage Regulator (AVR)
- Large Input Voltage Range
- EMI Noise Filteration
- Energy Saving Green Topology
- Clear and LCD Indicator
- Output Power Full Protection

AR-5000-15K AR-20K

## Specifications

| Model | AR-5000 | AR-7500 | AR-10K | AR-15K | AR-20K |
|---|---|---|---|---|---|
| **Power Rating** | 3.5 KW | 5.25 KW | 7 KW | 10.5 KW | 14 KW |
| **AC Input** | | | | | |
| Frequency | 50Hz or 60Hz | | | | |
| Voltage | 1φ 2W | | | | |
| Range | 110V: ± 15%<br>220V: ± 25% | | | | |
| **AC Output** | | | | | |
| Voltage | 1φ 2W | | | | |
| Voltage Regulation | ± 1 % | | | | |
| Frequency | 50 Hz / 60 Hz Following input | | | | |
| Efficiency | > 95 % | | | | |
| Power Factor | ≥ 0.7 | | | | |
| Distortion | < 3% of T.H.D. at Linear Load | | | | |
| **AVR** | | | | | |
| Operation | SPWM ( Sinewave Plus Width Modulation) | | | | |
| Component | IGBT | | | | |
| Operation Frequency | 20 kHz | | | | |
| **Protection** | | | | | |
| Full Protection | Output over/under Voltage, Overload, Surge | | | | |
| Maintenance | Manual Bypass Switch (Option) | | | | |
| **Management & Communication** | | | | | |
| Indicator | LCD Indicator | | | | |
| **Physical** | | | | | |
| Dimension (WxDxH) (mm) | 392 x 244 x 342 | | | | 280 x 420 x 390 |
| Weight (kgs) | 15 | 24 | 28 | 32 | 40 |
| **Environment** | | | | | |
| Operating Humidity | 0-95 % RH at 0-40°C (Non-condensing) | | | | |
| Audible Noise | Less than 45 dB | | Less than 50 dB | | |

* Specifications are subject to change without further notice.

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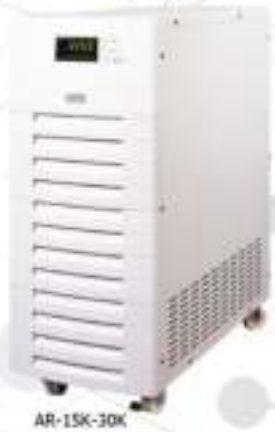
# HI-AVR 33 Series

High quality three phase series are the best AVR for electronic device.

- Automatic Voltage Regulator (AVR)
- Three Phase Output
- Large Input Voltage Range
- EMI Noise Filteration
- Energy Saving Green Topology
- Output Power Full Protection



AR-15K-30K

## Specifications

| Model | AR-15K33 | AR-30K33 |
|---|---|---|
| **Power Rating** | 10.5 KW | 21 KW |
| **AC Input** | | |
| Frequency | 50Hz or 60Hz | |
| Voltage | 1φ 2W | |
| Range | 110V: ± 15%<br>220V: ± 25% | |
| **AC Output** | | |
| Voltage | 1φ 2W | |
| Voltage Regulation | ± 1 % | |
| Frequency | 50 Hz / 60 Hz Following input | |
| Efficiency | > 95 % | |
| Power Factor | 0.7 | |
| Distortion | < 3% of T.H.D. at Linear Load | |
| **AVR** | | |
| Operation | SPWM ( Sinewave Plus Width Modulation) | |
| Component | IGBT & MOSFET | |
| Operation Frequency | 20 kHz | |
| **Protection** | | |
| Full Protection | Output over/under Voltage, Overload, Surge | |
| Maintenance | Manual Bypass Switch (Option) | |
| **Management & Communication** | | |
| Indicator | LCD Indicator | |
| **Physical** | | |
| Dimension (WxDxH) (mm) | 258 x 562 x 679 | |
| Weight (kgs) | 69.5 | 96 |
| **Environment** | | |
| Operating Humidity | 0-95 % RH at 0-40°C (Non-condensing) | |
| Audible Noise | Less than 45 dB | Less than 50 dB |

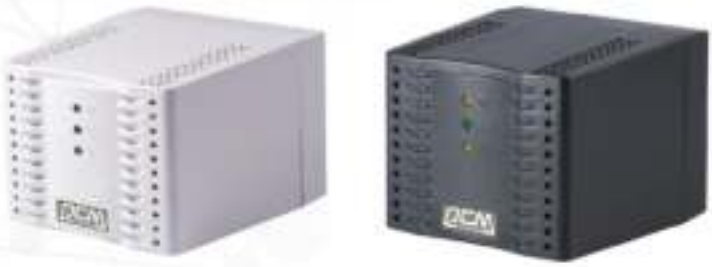
* Specifications are subject to change without further notice.

* Specifications are for reference, please refer to information based on real product.

# TAP-CHANGE AVR Series

Excellent automatic voltage stabilizer provide high quality voltage output.

- Automatic Voltage Regulator (AVR)
- Output Power Full Protection
- High Power Efficiency
- Wide Input Voltage Range
- Simple LED Indicator
- Compact Size Disegn



TCA-600-3000

## Specifications

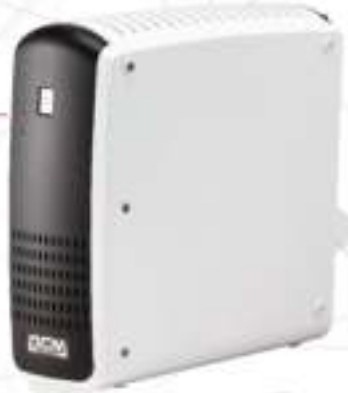
| Model | TCA-600 | TCA-1200 | TCA-2000 | TCA-3000 |
|---|---|---|---|---|
| **Power Rating** | 300 W | 600 W | 1000 W | 1500 W |
| **Phase** | Single Phase | | | |
| **AC Input** | | | | |
| Frequency | 50Hz or 60Hz | | | |
| Voltage | 1φ 2W | | | |
| Range | 110 / 120 Vac ± 15%<br>220 / 230 / 240 Vac ± 15% | | | |
| **AC Output** | | | | |
| Voltage | 1φ 2W | | | |
| Voltage Regulation | 110 / 120 Vac ± 5% (Typical)<br>220 / 230 / 240 Vac ± 5% (Typical) | | | |
| Frequency | 50 Hz / 60 Hz Following Input | | | |
| Efficiency | > 95 % | | | |
| **Protection** | | | | |
| Full Protection | Overload, Short Circuit, Surge | | | |
| Tel Communication | RJ11 / RJ45 (Option) | | | |
| **Management & Communication** | | | | |
| Indicator | LED Panel | | | |
| **Physical** | | | | |
| Dimension (WxDxH) (mm) | 123 x 136 x 102 | | | |
| Weight (kgs) | 1.45 | 1.6 | 1.8 | 2.1 |
| Shipping Dimension (WxDxH) (mm) | 145 x 195 x 120 | | | |
| Shipping Weight (kgs) | 1.65 | 1.8 | 2 | 2.3 |
| **Environment** | | | | |
| Operating Humidity | 0-95 % RH at 0-40°C (Non-condensing) | | | |
| Audible Noise | Less than 40 dB | | | |

* Specifications are subject to change without further notice.
* Specifications are for reference, please refer to information based on real product.

# Inverter Charger Hi-Frequency

Light apperance ICH series power up electronic application efficiency.

- High Efficiency Inverter Series
- Advance Digital Microprocessor Control
- Cold Start Function
- Output Power Full Protection
- Overload, Surge, Short Circuit Protection



ICH-550-1050

## Specifications

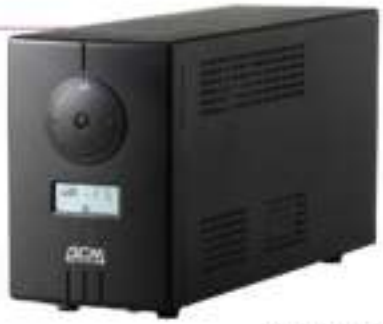
| Model | ICH-550 | ICH-1050 |
|---|---|---|
| **Configuration** | | |
| Capacity (VA) | 550 VA | 1050 VA |
| Capacity (Watts) | 330 W | 630 W |
| **INPUT** | | |
| Nominal Voltage | 120 or 230 VAC | |
| Voltage Range | 90 - 144 VAC or 170 - 285 VAC | |
| Frequency Range | 50 Hz / 60 Hz ± 10% Hz (Auto Sensing) | |
| **Output (On Battery)** | | |
| Voltage | 120 or 230 VAC | |
| Frequency Range | 50 Hz / 60 Hz ± 0.5 Hz | |
| Waveform | Stimulated Sine Wave | |
| **Efficiency** | | |
| AC to AC | > 95 % | |
| DC to DC | > 80 % | |
| **Protection** | | |
| Full Protection | Overload, Short Circuit, Thermal | |
| **Management & Communication** | | |
| Indicator | LED Indicator | |
| **Physical** | | |
| Dimension (WxDxH) (mm) | 83 x 274 x 224 | |
| Weight (kgs) | 1.7 | 1.9 |
| Shipping Dimension (mm) | 123 x 305 x 292 | |
| Shipping Weight (kgs) | 1.8 | 2 |
| **Alarm** | | |
| Overload | Continuous Beeping | |
| Battery Mode | Beep every 4 seconds | |
| Low Battery | Beep every 0.5 second | |
| **Environment** | | |
| Operating Humidity | 0-95 % RH at 0-40°C (Non-condensing) | |
| Audible Noise | Less than 40 dB | |

** Specifications are subject to change without further notice.
** Specifications are for reference, please refer to information based on real product.

# INFINITY Series

Extra battery connectable INF series prolongs power back-up time.

- High Efficiency Inverter Series
- Pure Sinewave Output
- Automatic Voltage Regulator (AVR)
- Battery Connect Extendable
- Clear and LCD Indicator
- Overload, Surge, Short Circuit Protection



INF-500-1500

## Specifications

| Model | INF-500A<br>INF-500AP | INF-800A<br>INF-800AP | INF-1100A<br>INF-1100AP | INF-1500A<br>INF-1500AP |
|---|---|---|---|---|
| **Configuration** | | | | |
| Capacity (VA) | 500 VA | 800 VA | 1100 VA | 1500 VA |
| Capacity (Watts) | 300 W | 480 W | 770 W | 1050 W |
| Form | Tower Type | | | |
| **Input** | | | | |
| Voltage | 100 / 110 / 120 VAC or 220 / 230 / 240 VAC | | | |
| Input Voltage Range | 70 - 150 or 140 - 300 VAC | | | |
| Input Frequency Range | 50 Hz / 60 Hz (Auto Sensing) | | | |
| **Output** | | | | |
| Waveform | Pure Sine Wave | | | |
| Voltage | 100 / 110 / 120 VAC or 220 / 230/ 240 VAC | | | |
| Frequency | 50 Hz / 60 Hz ± 1 Hz | | | |
| Transfer Time | 2 - 4 ms (Typical) | | | |
| **Protection** | | | | |
| Full Protection | Overload, Fuse, Surge, Short Circuit | | | |
| **Management & Communication** | | | | |
| Indicator | LCD Panel | | | |
| Communication Port | USB B type : AP Model | | | |
| **Physical** | | | | |
| Dimensions (WxDxH) (mm) | 130 x 412 x 200 | | | |
| Weight (kgs) | 5.8 | 7.2 | 10.8 | 12.2 |
| Shipping Dimensions (mm) | 253 x 488 x 321 | | | |
| Shipping Weight (kgs) | 7.3 | 8.7 | 12.3 | 13.7 |
| **Alarm** | | | | |
| Overload / Fault | Continuous Beeping | | | |
| Battery Mode | Beep every 2 seconds | | | |
| Low Battery | Beep every 0.5 second | | | |
| **Environment** | | | | |
| Operating Humidity | 0-90 % RH at 0-40°C (Non-condensing) | | | |
| Audible Noise | Less than 50 dB | | | |
| **Battery (Recommand Form)** | | | | |
| Voltage | 12 VDC | | 24 VDC | |
| Battery Capacity | 65 Ah - 200 Ah | | 100 Ah - 200 Ah | |
| Maximum Charge Current | 10 A | | 15 A | |
| Discharge Protection | Auto Diagnostics, Over- Discharge, Shot Circuit, Fuse | | | |

** Specifications are subject to change without further notice.

** Specifications are for reference, please refer to information based on real product.

**OUTPUT RECEPTACLE OPTION**

TYPE **B** TYPE **E** TYPE **F** TYPE **G** TYPE **I** TYPE **IEC**

# INVERTER RM Series

Thin outfit INV series DC to AC transform inverter application.

- High Efficiency Inverter Series
- Pure Sinewave Output
- 1U model design
- Clear and LCD Indicator
- External Battery connectoble

INV-700-1000

## Specifications

| Model | INV - 700 RM | INV - 1000 RM |
|---|---|---|
| **Configuration** | | |
| Capacity (VA) | 700 VA | 1000 VA |
| Capacity (Watts) | 490 W | 700 W |
| **Input( DC )** | | |
| Nominal Voltage | ± 48 VDC | |
| Voltage Range | ± 40 - 56 VDC | |
| Frequency Range | 50 Hz / 60 Hz (Auto Sensing) | |
| **Output** | | |
| Voltage | 100 / 110 / 115 / 120 / 127 VAC or 208 / 220 / 230 / 240 VAC | |
| Voltage Regulation | ± 2 % | |
| Frequency Range | 50 Hz / 60 Hz ± 0.5 Hz | |
| Harmonic Distortion | < 3% of T.H.D. at linear load | |
| Power Factor | 0.7 | |
| Waveform | Pure Sine Wave | |
| **Efficiency** | | |
| DC to AC | > 82% | |
| **Protection** | | |
| Full Protection | Overload, Short Circuit, Over Temperature | |
| **Management & Communication** | | |
| Indicator | LCD Panel | |
| **Physical** | | |
| Dimension (WxDxH) (mm) | 428 x 525 x 44 | |
| Weight (kgs) | 10 | |
| Shipping Dimension (mm) | 547 x 465 x 168 | |
| Shipping Weight (kgs) | 11 | |
| **Management & Communication** | | |
| Communication Port | RS231, USB B type | |
| **Alarm** | | |
| Low Condition | 2 Beep every 5 seconds | |
| Fault | Continuous Beeping | |
| **Environment** | | |
| Operating Humidity | 0-95 % RH at 0-40°C (Non-condensing) | |
| Audible Noise | Less than 45 dB | |

** Specifications are subject to change without further notice.

** Specifications are for reference, please refer to information based on real product.

**OUTPUT RECEPTACLE OPTION**

TYPE **B** TYPE **IEC**

# Solar King

SLK series lighten up home and office through sunshine transformation.

POWERCOM Solar King, the most advanced grid PV-inverter in the world. Converting sun light into electricity energy for home/industrial applications, and powering up our world with free solar energy is now no longer just a dream.


SLK-3000

## Specifications

| Model | SLK-1500 | SLK-2000 | SLK-3000 | SLK-4000 | SLK-6000 |
|---|---|---|---|---|---|
| **Input** | | | | | |
| Maximum Input Power | 1750W | 2340W | 3510W | 4700W | 6500W |
| PV Open Voltage | 500VDC | | | | 600VDC |
| Normal DC Voltage | 360V | | | | |
| MPPT Voltage Range | 150 to 500VDC ± 5% | | | | 150 to 600VDC ± 5% |
| System Start-up Voltage | 100 ± 5% | | | | |
| Working Voltage | 100 ± 5% to 500 -5% +0%V | | | | 100 ±5% to 600 -5% +0%V |
| Initial Feeding Voltage | 150V ± 5% | | | | |
| Max Input Current | 10ADC | 11ADC | 17.6ADC | 18.8ADC | 30ADC |
| Full Rating Working Range | 200V to 500V | | | 250V to 500V | 205V to 600V |
| Shutdown Voltage | 80V | | | | |
| DC Voltage Ripple | < 10% | | | | |
| DC Insulation Resistance | > 8M ohm | | | | |
| DC Switch | ON / OFF 20A | | | | ON / OFF 30A |
| Attached DC Connector | Tyco or MC4 contact(1 pair) | | | | |
| DC Connector | Tyco or MC4 contact(1 pair)-cable type | | | Tyco or MC4 contact(3 pair) | |
| **Output** | | | | | |
| Normal Output Power | 1500 W | 2000 W | 3000 W | 4000 W | 6000 W |
| Maximum Output Power | 1650 W | 2200 W | 3300 W | 4400 W | 6000 W |
| Operational Voltage Range | 184V minimum ; 264V maximum | | | | |
| Operational Normal Voltage | 230Vac | | | | |
| Operational Frequency Range | 50 / 60Hz auto selection, 47.5 ≦ f50 ≦ 53 for 50Hz, 57 ≦ f60 ≦ 63 for Hz | | | | |
| Normal Output Current | 6.6A | 8.7A | 13.0A | 17.4A | 26.1A |
| O / P Current Distortion | THD < 4%, each harmonics < 3% | | | | |
| Power Factor | > 0.99 | | | | |
| DC Current Injection | < 0.5% of rated inverter output current | | | | |
| Internal Power Consumption | < 7W | | | | < 10W |
| Standby Power(at night) | < 0.1W | | | | |
| Minimum Conversion Efficiency (DC/AC) | > 90% under input voltage > 210V, load > 20% | | | | |
| Maximum Conversion Efficiency (DC/AC) | > 94% | > 95% | | > 96% | |
| European Efficiency | > 93% | > 94% | | > 95% | |
| GFCI Threshold | See ground fault current detection | | | | |
| Ground Current Detection Range | 0 to 500mA | | | | |
| Ground Current Detection Frequency | 0 to 700Hz | | | | |
| **Environment** | | | | | |
| Protection Degree | IP 65 | | | | |
| Operation Temperature | - 20°C to +55°C | | | | |
| Humidity | 0 to 95%, non-condensing | | | | |
| Heat Dissipation | Convection | | | | |
| Acoustic Noise Level | < 40 dB, A-weighted, frequency up to 20k Hz | | | | |
| Altitude | Up to 3000m without power derating, 5°C derated for each additional 500m | | | | |
| **Physical** | | | | | |
| Dimension W x D x H (mm) | 352 x 300 x 133 | | 352 x 300 x 143 | 550 x 300 x 133 | 550 x 420 x 143 |
| Weight (kgs) | 14 | 14 | 14 | 21 | 27 |

** Specifications are subject to change without further notice.
** Specifications are for reference, please refer to information based on real product.

# DC UPS Series

Extraordinary DC UPS provide DC output for electronic application.

- DC Output UPS Design
- Wide Input Voltage Range
- Cold Start Function
- Energy Saving Green Topology
- Overload, Surge, Short Circuit Protection

DC - 9V-48V

## Specifications

| Model | DC 12V | DC 18V | DC 24V | DC 48V |
|---|---|---|---|---|
| **Configuration** | | | | |
| Capacity (Watts) | 30 W | 30 W | 30 W | 30 W |
| **Input** | | | | |
| Voltage Range | 86 V - 276 V (VAC or VDC) | | | |
| Frequency Range | 50 Hz / 60 Hz | | | |
| **Output (On Battery)** | | | | |
| Voltage Regulation | ± 15 % | ± 10 % | ± 10 % | ± 10 % |
| Transfer Time (ms) | 5 | | | |
| **Battery** | | | | |
| Type | 12V 5Ah | 12V 5Ah | 12V 5Ah | 12V 5Ah |
| Number | 1 | 1 | 1 | 1 |
| Typical Recharge Time | 8 hrs to 90 % Capacity | | | |
| **Protection** | | | | |
| Full Protection | Overload, Short Circuit | | | |
| Tele Communication | RJ11 / RJ45 | | | |
| **Physical** | | | | |
| Dimension (WxDxH) (mm)Ÿ | 267 x 155 x 64 | | | |
| Weight (kgs) | 2.4 | | | |
| Shipping Dimension (mm) | 359 x 198 x 79 | | | |
| Shipping Weight (kgs) | 2.6 | | | |
| **Management & Communication** | | | | |
| Indicator | LED Indicator | | | |
| **Alarm** | | | | |
| Overload | Continuous Beeping | | | |
| Battery Mode | Beep every 4 seconds | | | |
| Low Battery | Beep every 0.5 seconds | | | |
| **Environment** | | | | |
| Operating Humidity | 0-95 % RH at 0-40°C (Non-condensing) | | | |
| Audible Noise | Less than 40 dB | | | |

* Specifications are subject to change without further notice.
* Specifications are for reference, please refer to information based on real product.

# Traffic Control Series

Wide temperature endurance adaptable for outdoor UPS.

- Line Interactive UPS Design
- Pure Sinewave Output
- Wide Operate Environment Acceptable
- Automatic Voltage Regulator (AVR)
- Simple and Clear LCD Indicator

TC-650 / TC-1100 (2U)

TC-2000 (3U)

## Specifications

| Model | | TC-650 | TC-1100 | TC-2000 |
|---|---|---|---|---|
| **Configuration** | | | | |
| Capacity (VA) | | 650 VA | 1100 VA | 2000 VA |
| Capacity (Watts) | | 650 W | 1100 W | 2000 W |
| **Input** | | | | |
| Voltage | | 120 VAC ±25% | 220/230/240VAC ±25% | |
| Frequency | | 120VAC 60Hz | 220/230/240VAC 50 / 60 Hz | |
| **Output** | | | | |
| Waveform | | Pure Sine Wave | | |
| Voltage | | 120 VAC or 220 / 230 / 240 VAC | | |
| Frequency | | 50 Hz / 60 Hz ±0.5 Hz | | |
| Transfer Time | Normal Mode (Max.) | 12 ms | | |
| | Generator Mode (Max.) | 25 ms | | |
| AC Input & Output Connectors | | Terminal Block , Anderson PP45 Quick connector, IEC socket | | |
| **Protection** | | | | |
| Full Protection | | Overload, Breaker | | |
| **Management & Communication** | | | | |
| Communication Port | | RS232 , USB B Type, SNMP card (Option) | | |
| **Physical** | | | | |
| Dimensions (WxDxH) (mm) | | 432 x 254 x 88.6 (2U) | | 432 x 254 x 133 (3U) |
| Weight (kgs) | | 13 | | 21 |
| Shipping Dimensions (mm) | | 540 x 388 x 233 | | 540 x 388 x 277 |
| Shipping Weight (kgs) | | 14 | | 23 |
| **Indicators** | | | | |
| LCD Display | | 4 Line Multi-function LCD | | |
| LED Display | | Output Status, Alarm, Fault LED | | |
| **Environmental** | | | | |
| Operating Temperature | | -37 - +74°C | | |
| Operating Humidity | | 0-95 % RH (Non-condensing) | | |
| Audible Noise | | Less than 50 dB | | |
| **Battery** | | | | |
| String Voltage | | 24 VDC | | 48 VDC |
| Type | | Lead-acid Battery | | |
| Max Charge Current | | 10A | | |

* Specifications are subject to change without further notice.

* Specifications are for reference, please refer to information based on real product.

# Automatic Transfer Switch

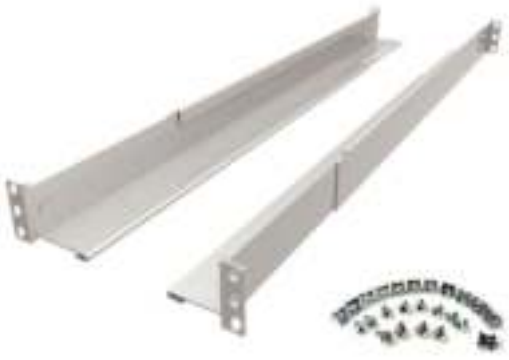
ATS


Specifications

| Model | | ATS | | | |
|---|---|---|---|---|---|
| **Input** | | | | | |
| Nominal Voltage | | 120 VAC / 30 A | 230 VAC / 30A | 230 VAC / 10A | 230 VAC / 16A |
| Voltage Range | | 100 - 130 VAC | 199 - 262 VAC | | |
| Transfer Time | Auto Transfer Switch | 10 ms | | | |
| | Manual Bypass Switch | 50 ms | | | |
| **Connection** | | | | | |
| Main Input | | Terminal Block 4 or 6 port (Normal type), 6 or 9 port (Generator type) | | IEC - C14 | IEC - C20 |
| Main Output | | | | IEC - C13 Receptacles | IEC - C13, C19 Receptacles |
| Auxiliary Output | | 5 - 15R Receptacles | IEC - C13 Receptacles | IEC - C13 Receptacles | IEC - C13 Receptacles |
| UPS Connection | | Powercord or Terminal Block | | IEC - C13 (UPS IN)<br>IEC - C14 (UPS OUT) | IEC - C19 (UPS IN)<br>IEC - C20 (UPS OUT) |
| **Physical** | | | | | |
| Dimension (WxDxH) (mm) | | 485 x 130 x 85 | | | |
| Weight (kgs) | | 2.6 | | | |
| Mounting | | 2U Rack Mount | | | |
| **Optional** | | | | | |
| Bypass Control (Optional) | | 24VDC or 48VDC or N/A | | | |

* Specifications are subject to change without further notice.
* Specifications are for reference, please refer to information based on real product.

# Rack Slide Rail



RAL-5090

Specifications

| Model | RAL-5090 |
|---|---|
| **General** | |
| Type | Heavy Duty Rail |
| **Performance** | |
| Load Capacity - Static (kg) | 80 |
| **Physical** | |
| Rack Height | 1U |
| Rackmount Equipment | 1-3U |
| Installation | Hardware Included |
| Color | Silver |
| Material | Cold Rolled Steel |
| Adjustable Mounting Depth (mm) | 500 to 900 |
| Unit Dimensions W x H x D (mm) | 61 x 46 x 501 |
| Unit Gross Weight (kg) | 2.02 |
| Unit Net Weight (kg) | 1.93 |
| Shipping Package Quantity (pcs) | 16 |
| Shipping Dimensions W x H x D (mm) | 246 x 294 x 588 |
| Shipping Weight (kg) | 35.6 |

** Specifications are subject to change without further notice.
** Specifications are for reference, please refer to information based on real product.

# .NET Power Card (NPC-100)
# .NET Power Box (NPB-200)

.NET Power SNMP Card / Box are well-design remote control management system.

.NET Power Card (NPC-100)

.NET Power Box (NPB-200)

## .NET Power SNMP Card / Box

Excellent .NET Power SNMP Card / Box support UPS remote control, monitor and auto setting management. .NET Power SNMP brings great convenience for UPS Management.NET Power SNMP Card / Box including UPS event scheduling, event logging, data logging and automatic event notification via UPSMON setting and Email. .NET Power SNMP Card / Box indicate instant UPS status, power quality and provide immediate action to protect server and workstation from data losing due to power failure.

## Feature

Remote Management
Automatic Shutdown Setting
Event Notification
Upgrade Firmware
Event Log
Data Log
Schedule Event Setting
SNMP Network Management
SNMP v1.0 and v2.0, RFC1213, RFC 1628 support
Compatible with standard SNMP NMS
Web Network Management
HTTP 1.0 Protocol Support

Ordering Information
.Net power Card (internal model)
Model No : NPC-100
.Net power Box (external model)
Model No : NPB-200

Advanced .NET Power Card / Box acquire following Awards

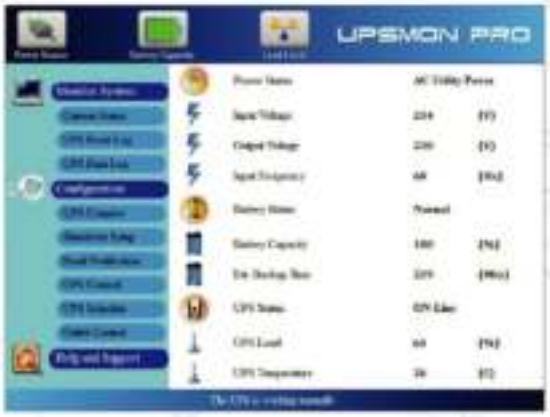
# UPSMON PRO/ UPSMON Manager

User-friendly and well design UPS Monitoring Software Managment.

Well-featured UPSMON Pro / UPSMON Manager indicate UPS information and UPS operating through computer. UPSMON Pro / UPSMON Manager are functional on all Powercom UPS series attached with RS232 or USB port. UPSMON Pro (single manager connect)/ UPSMON Manager (Multi-manager connect) are available on UPS schedule setting, message notification and UPS status indication. UPSMON PRO/ UPSMON Manager assist user information acquirement and react instantly.

## Feature

UPS Communication Management
Event Control and Scheduling
UPS Status Indication
Instant Message Notification
VMware Compatible
Event Log
Clear and Easy Operating Interface




UPSMON Interface

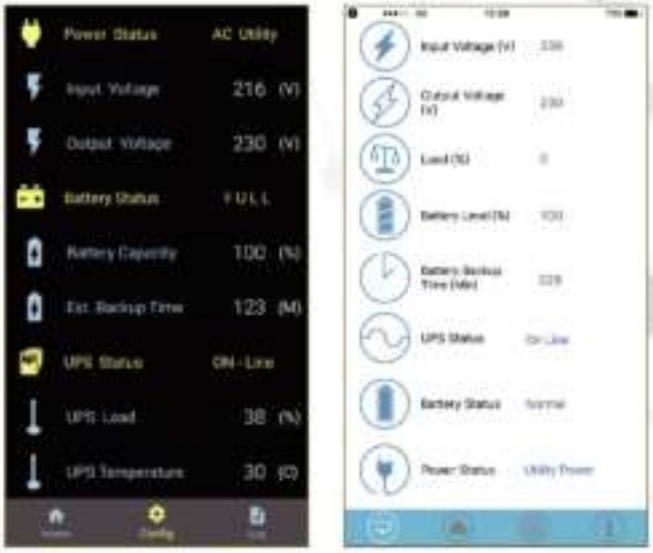
# UPSMON Android / iOS

UPSMON provide Powercom series hand control management.

UPSMON APP provide an option for portable UPS management on smart phone and available on all Powercom series attached with SNMP card or UPSMON. UPSMON APP provide UPS status information and UPS control and setting. UPSMON APP build up immediate information indication and convenient UPS management for user.

## Feature

Android / iOS support
Real-time UPS Monitor
Schedule Action Setting
Multiple Language Support
Clear and Easy Operating interface




UPSMON APP Android / iOS Interface

Innovative. Smart. Reliable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