

Professional Series



Green Power



Environmental Friendly



Energy Saving



Modular Plus⁺ Series

Modular True Double Conversion Online UPS



- High Efficiency Online Double Conversion Technology
- Modular Design lowers MTTR (Mean Time to Repair)
- N+1 or N+X Parallel Redundancy for Power Guarantee
- Graphic 5.7" LCD Display
- High Scalability
- Unity Output Power Factor - 1.0
- Flexible Battery Configuration Adapts Different Applications
- High Reliable Operation with Redundant Power Supply in STS
- High Overload Capability
- Comes with RS232/USB Port, Smart Slot & Power Management Software



• Software •



• 2 Years •
Warranty



High Efficiency Online Double Conversion Technology

Modular Plus uses online double conversion technology with high efficiency rate up to 96% at over 50% load and 95% at 25% light load. It significantly reduces overall Total Cost of Ownership (TCO).

High Scalability

DSP control provides an improved solution with high performance. Integrated with modular design and parallel technology simplifies future power expansion.

Unity Output Power Factor

Modular Plus delivers unity output power (kVA=kW) providing the maximum power capacity to mission critical loads.

Modular Design Lowers MTTR

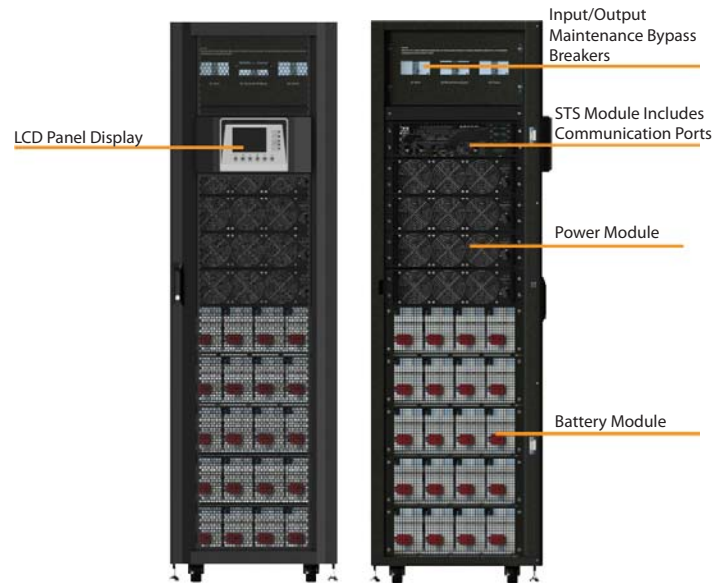
Modular design is applied in power module, STS module and battery module. It will simplify maintenance and replacement with low MTTR (Mean Time to Repair).

N+1 or N+X Parallel Redundancy for Power Guarantee

Scalable architecture allows you to optimize cost expense to meet power demands by vertically expanding in a single rack enclosure from 30KVA to 210KVA and achieve N+1 or N+X redundancy in the same rack

Ease of Installation and Maintenance

Built-in maintenance bypass assures continuous power to critical loads during UPS maintenance. Besides, to facilitate installation and maintenance, all panel control and connectors are front accessibility.



Flexible Battery Configuration adapts different Applications

Battery numbers can be adjusted flexibly. It will adapt different power demands and shorten system downtime. Battery voltage can be set from 32 to 40 pieces per string.

Adjustable Charging Current

Modular Plus provides maximum 8A charging current for every power module and its adjustable based on requirement.

High Overload Capability

Modular Plus supports 110% overload for 60 minutes, 120% for 10 minutes and 150% for 1 minute

Graphic 5.7" LCD Design for Easy Management

Designed for easy management, Modular Plus is equipped with 5.7" graphic LCD screen. Intuitive design enhances display information identified and advanced configuration.

*Specification subjects to change without prior notice



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Technical Specification:

| MODEL | M+ 20K | M+ 40K | M+ 60K | M+ 80K | M+ 100K | M+ 120K |
|--------------------------------|---|--------|--------|--------|---------|---------|
| TOTAL CAPACITY* | 20KW | 40KW | 60KW | 80KW | 100KW | 120KW |
| UPS POWER MODULES | 1 | 2 | 3 | 4 | 5 | 6 |
| PHASE | 3-Phase in / 3-phase out | | | | | |
| TOPOLOGY | True Double-Conversion Online | | | | | |
| INPUT | | | | | | |
| NOMINAL VOLTAGE | 3 x 380VAC/400VAC/415VAC (3Ph+N) | | | | | |
| VOLTAGE RANGE | 305 - 478VAC @ Full load; 208 - 304VAC @ <70% Load | | | | | |
| NOMINAL FREQUENCY | 50 or 60Hz (Auto-Sensing) | | | | | |
| FREQUENCY RANGE | 40Hz - 70Hz | | | | | |
| INPUT POWER FACTOR | >0.99 @ 100% Load , >0.98 @ 50% Load | | | | | |
| HARMONIC DISTORTION (THDi) | < 3% @ 100% Load | | | | | |
| OUTPUT | | | | | | |
| NOMINAL VOLTAGE | 3 x 380VAC/400VAC/415VAC (3Ph+N) | | | | | |
| OUTPUT POWER FACTOR | 1.0 | | | | | |
| VOLTAGE REGULATION | ≤ ±1% Typical (balanced load) ; ≤ ±2% Typical (unbalanced load) | | | | | |
| VOLTAGE REGULATION (TRANSIENT) | ≤ ±5% Typical | | | | | |
| NOMINAL FREQUENCY | 50 or 60Hz | | | | | |
| FREQUENCY RANGE (SYNCHRONIZED) | 46Hz - 54Hz or 56Hz - 64Hz | | | | | |
| OVERLOAD CAPACITY | 1 Hour for 110%, 10mins for 120% ; 1min for 150%, 200ms for >150% | | | | | |
| HARMONIC DISTORTION | ≤ 1% THD (Linear Load) ; ≤ 4% THD (Non-Linear Load) | | | | | |
| EFFICIENCY | Up to 94.5% | | | | | |
| BATTERY CHARGER | | | | | | |
| NOMINAL VOLTAGE | +/-216V (12V x 36pcs) | | | | | |
| MAXIMUM VOLTAGE | +/-240V (12V x 40pcs) | | | | | |
| MINIMUM VOLTAGE | +/-192V (12V x 32pcs) | | | | | |
| FLOAT CHARGING VOLTAGE | 2.25V/Cell | | | | | |
| BOOST CHARGING VOLTAGE | 2.35V/Cell | | | | | |
| TEMPERATURE COMPENSATION | Yes | | | | | |
| MAXIMUM CHARGING CURRENT | 8A for each power module (User-adjustable) | | | | | |
| STATUS INDICATION | | | | | | |
| LCD DISPLAY | Graphic 5.7" LCD Display | | | | | |
| COMMUNICATION | | | | | | |
| POWER MANAGEMENT SOFTWARE | Support Window Family, Linux, Sun Solaris, IBM Aix, Compaq True 64, FreeBSD, HP-UX, MAC | | | | | |
| INTERFACE | RS 232 / USB Port | | | | | |
| SNMP Slot | Yes | | | | | |
| ENVIRONMENT | | | | | | |
| OPERATION TEMPERATURE | 0 - 40°C | | | | | |
| RELATIVE HUMIDITY | 0 - 95% non-condensing | | | | | |
| ALTITUDE | <1000m for Nominal Power | | | | | |
| IP CLASS | IP 20 | | | | | |
| PHYSICAL | | | | | | |
| M+ CHASIS DIMENSION (DxWxH)mm | 1100 x 600 x 1475 (30U) | | | | | |
| M+R CHASIS DIMENSION (DxWxH)mm | 1000 x 514 x 763 | | | | N/A | |
| STANDARDS | | | | | | |
| SAFETY | IEC/EN 60950-1 ; IEC/EN 62040-1 | | | | | |
| EMC | IEC/EN 62040-2 Category C3 | | | | | |

Power Module Dimension

| DESCRIPTION | DIMENSION (DxWxH)mm | WEIGHT (KG) |
|-------------------------------|----------------------|-------------|
| 3P/3P 20KVA/20KW POWER MODULE | 650 x 440 x 132 (3U) | 34 |

Chassis Dimension

| DESCRIPTION | DIMENSION (DxWxH)mm | MAX POWER MODULE / MAX BATTERY MODULE |
|---------------------------------|-------------------------|---|
| M+ CHASSIS DIMENSION (DxWxH)mm | 1100 x 600 x 1475 (30U) | Max 3 Power Module + Max 3 Battery Module |
| | 1100 x 600 x 1475 (30U) | Max 6 Power Module |
| M+R CHASSIS DIMENSION (DxWxH)mm | 1000 x 514 x 763 (15U) | Max 3 Power Module |

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RIGHT POWER

The Power Of Continuity

Technical Specification:

| MODEL | M+ 30K | M+ 60K | M+90K | M+ 120K | M+ 150K | M+ 180K | M+ 210K |
|--------------------------------|---|--------|-------|---------|---------|---------|---------|
| TOTAL CAPACITY* | 30KW | 60KW | 90KW | 120KW | 150KW | 180KW | 210KW |
| UPS POWER MODULES | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| PHASE | 3-Phase in / 3-phase out | | | | | | |
| TOPOLOGY | True Double-Conversion Online | | | | | | |
| INPUT | | | | | | | |
| NOMINAL VOLTAGE | 3 x 380VAC/400VAC/415VAC (3Ph+N) | | | | | | |
| VOLTAGE RANGE | 305 - 478VAC @ Full load; 208 - 304VAC @ <70% Load | | | | | | |
| NOMINAL FREQUENCY | 50 or 60Hz (Auto-Sensing) | | | | | | |
| FREQUENCY RANGE | 40Hz - 70Hz | | | | | | |
| INPUT POWER FACTOR | >0.99 @ 100% Load , >0.98 @ 50% Load | | | | | | |
| HARMONIC DISTORTION (THDi) | < 3% @ 100% Load | | | | | | |
| OUTPUT | | | | | | | |
| NOMINAL VOLTAGE | 3 x 380VAC/400VAC/415VAC (3Ph+N) | | | | | | |
| OUTPUT POWER FACTOR | 1.0 | | | | | | |
| VOLTAGE REGULATION | ≤ ±1% Typical (balanced load) ; ≤ ±2% Typical (unbalanced load) | | | | | | |
| VOLTAGE REGULATION (TRANSIENT) | ≤ ±5% Typical | | | | | | |
| NOMINAL FREQUENCY | 50 or 60Hz | | | | | | |
| FREQUENCY RANGE (SYNCHRONIZED) | 46Hz - 54Hz or 56Hz - 64Hz | | | | | | |
| OVERLOAD CAPACITY | 1 Hour for 110%, 10mins for 120% ; 1min for 150%, 200ms for >150% | | | | | | |
| HARMONIC DISTORTION | ≤ 1% THD (Linear Load) ; ≤ 4% THD (Non-Linear Load) | | | | | | |
| EFFICIENCY | Up to 94.5% | | | | | | |
| BATTERY CHARGER | | | | | | | |
| NOMINAL VOLTAGE | +/-216V (12V x 36pcs) | | | | | | |
| MAXIMUM VOLTAGE | +/-240V (12V x 40pcs) | | | | | | |
| MINIMUM VOLTAGE | +/-192V (12V x 32pcs) | | | | | | |
| FLOAT CHARGING VOLTAGE | 2.25V/Cell | | | | | | |
| BOOST CHARGING VOLTAGE | 2.35V/Cell | | | | | | |
| TEMPERATURE COMPENSATION | Yes | | | | | | |
| MAXIMUM CHARGING CURRENT | 8A for each power module (User-adjustable) | | | | | | |
| STATUS INDICATION | | | | | | | |
| LCD DISPLAY | Graphic 5.7" LCD Display | | | | | | |
| COMMUNICATION | | | | | | | |
| POWER MANAGEMENT SOFTWARE | Support Window Family, Linux, Sun Solaris, IBM Aix, Compaq True 64, FreeBSD, HP-UX, MAC | | | | | | |
| INTERFACE | RS 232 / USB Port | | | | | | |
| SNMP Slot | Yes | | | | | | |
| ENVIRONMENT | | | | | | | |
| OPERATION TEMPERATURE | 0 - 40°C | | | | | | |
| RELATIVE HUMIDITY | 0 - 95% non-condensing | | | | | | |
| ALTITUDE | <1000m for Nominal Power | | | | | | |
| IP CLASS | IP 20 | | | | | | |
| STANDARDS | | | | | | | |
| SAFETY | IEC/EN 60950-1 ; IEC/EN 62040-1 | | | | | | |
| EMC | IEC/EN 62040-2 Category C3 | | | | | | |

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| 3P/3P 30KVA/30KW Power Module | 650 x 440 x 132 (3U) | 34.5 |

Chassis Dimension

| DESCRIPTION | DIMENSION (DxWxH)mm | MAX POWER MODULE / MAX BATTERY MODULE |
|---------------------------------|-------------------------|---|
| M+ CHASSIS DIMENSION (DxWxH)mm | 1100 x 600 x 1475 (30U) | Max 3 Power Module + Max 3 Battery Module |
| | 1100 x 600 x 1475 (30U) | Max 6 Power Module |
| | 1100 x 600 x 2010 (42U) | Max 7 + 1 Power Module |
| M+R CHASSIS DIMENSION (DxWxH)mm | 1000 x 514 x 763 (15U) | Max 3 Power Module |

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