

APS- T Industrial 3P

10kVA to 400kVA Single Unit
Max 400kVA × 8 parallel connection



ABOUT PRODUCT

The APS- T Industrial 3P UPS is a dual conversion True Online design with digital technology topology. The UPS offers exceptional reliability, high fault tolerances, and high surge overload capability. This product series can be paralleled for hot standby backup (N+1) and also can be used as a standalone solution for applications such as banking, securities as well as other institutions like data centres, communications, electrical utility and industrial automation to mention but a few. A UPS which is fully compatible with every load or environment. Capacities in a single frame from 10kVA to 400kVA; offers a flexible power proposition to any application.

PRODUCT PERFORMANCE

The Multi-UPS parallel functionality allows users to parallel up to 8 UPS's at once for scalability and (N+1) via DSP control. Full digital control technology makes the whole system more precise, fast reacting, reliable and stable. Precise intelligent monitor functions can provide RS232, dry contact and parallel interface. Using intelligent battery charging and discharging mode as well as management mode, one can effectively improve the battery life. The UPS system is put through strict tests of short circuit and 2KV high voltage isolation tests. An optional twelve pulse solution or plus active power filter is available to effectively correct the input power factor.

MAIN FEATURES

- The Inverter adopts DSP MCU & DDC digital vector control technology to command each UPS function
- Advanced IGBT & PWM technology used to decrease system noise & energy losses
- Obtains high-quality output voltage with optimal benefit under various loads
- UPS provides low distortion noise and pure sine wave output
- Output isolation transformer to ensure load and utility electricity are isolated completely
- No DC to the load due to UPS isolation characteristics mitigating DC ripple and thus elevating load reliability
- Enhanced load capability of the machine to various capacitive and inductive type loads
- Automatic frequency synchronous function avoids skipping the frequency which can influence devices negatively
- Intelligent speed regulating fans are deployed, using noise control and energy saving methodology
- Using the large sized power IGBT's creates an inverter with the strong ability to handle overloads and resistive load impacts, and enhances the adaptation to the electrical environment
- AC input low and over voltage protection
- Output overload and short circuit protection
- Low voltage battery protection
- Over temperature protection inside the UPS
- Interactive LCD interface makes management and interfacing the UPS more convenient

CE FC ISO9001: 2008
ISO14001: 2004



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TECHNICAL SPECIFICATIONS

1. Rectifier

a) Rectifier Input

| Model | 10KVA | 20KVA | 30KVA | 40KVA | 60KVA | 80KVA | 100KVA | 120KVA | 160KVA | 200KVA | 250KVA | 300KVA | 400KVA |
|------------------------------|--|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| Capacity (KW) | 8 | 16 | 24 | 32 | 48 | 64 | 80 | 96 | 144 | 180 | 225 | 270 | 360 |
| Single phase max. current(A) | 19 | 38 | 57 | 76 | 114 | 152 | 190 | 228 | 304 | 379 | 475 | 570 | 760 |
| Work mode and principle | Supply power online, static bypass switch ('0'time transfer), double conversion technology, output isolated completely | | | | | | | | | | | | |
| Power factor | 0.8/0.9(12 pulse)/ 0.95 (active filter) | | | | | | | | | | | | |
| Phase | 3 phase + N | | | | | | | | | | | | |
| Nominal voltage | 380VAC±25% | | | | | | | | | | | | |
| Nominal frequency | 50/60Hz±10% | | | | | | | | | | | | |
| Input current harmonic | <5% | | | | | | | | | | | | |
| Soft start | 0~100% 5sec | | | | | | | | | | | | |

b) Rectifier Output

| Model | 10KVA | 20KVA | 30KVA | 40KVA | 60KVA | 80KVA | 100KVA | 120KVA | 160KVA | 200KVA | 250KVA | 300KVA | 400KVA |
|--------------------------------------|---------------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| Max Output Voltage | | | | | | | 432 | | | | 446 | | 459 |
| Microcomputer setting charge current | 6 ~ 30A(adjustable) | | | | | | | | | | | | |

2. Battery

| Model | 10KVA | 20KVA | 30KVA | 40KVA | 60KVA | 80KVA | 100KVA | 120KVA | 160KVA | 200KVA | 250KVA | 300KVA | 400KVA |
|----------------------------------|----------------------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| Max. discharge current (A) | 28 | 56 | 85 | 113 | 169 | 225 | 282 | 338 | 461 | 576 | 700 | 840 | 1120 |
| Number of battery (single group) | 12 V 32 pcs or 2 V 192 pcs | | | | | | | | | | | | |
| Nominal battery voltage | 384 VDC | | | | | | | | | | | | |
| Float charge voltage | 432 VDC | | | | | | | | | | | | |
| Charge current | 6A ~ 30A (adjustable) | | | | | | | | | | | | |

3. Inverter

| Model | 10KVA | 20KVA | 30KVA | 40KVA | 60KVA | 80KVA | 100KVA | 120KVA | 160KVA | 200KVA | 250KVA | 300KVA | 400KVA |
|----------------------------------|--|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| Rated capacity (KW) | 8 | 16 | 24 | 32 | 48 | 64 | 80 | 96 | 144 | 180 | 225 | 270 | 360 |
| Phase | Single phase/ three phase + N + G | | | | | | | | | | | | |
| Nominal voltage | 220/380 VAC ± 1% | | | | | | | | | | | | |
| Nominal frequency | 50/60Hz ± 0.5% (battery mode) | | | | | | | | | | | | |
| Output power factor | 0.8/0.9 | | | | | | | | | | | | |
| Frequency stability: out-sync | <± 0.5% | | | | | | | | | | | | |
| Frequency stability: synchronize | <± 2% | | | | | | | | | | | | |
| Peak factor | 3:01 | | | | | | | | | | | | |
| Output wave Sine wave | Sine Wave | | | | | | | | | | | | |
| Total harmonic distortion | Linear load < 3%; Non-linear load < 5% | | | | | | | | | | | | |
| Dynamic load voltage transient | < ± 4% | | | | | | | | | | | | |
| Instant recover time | < 10ms | | | | | | | | | | | | |
| Balanced load voltage | < ± 1%; < ± 5% (unbalanced load voltage) | | | | | | | | | | | | |
| Overload capacity | 125%: 30min, 150%: 1min, > 150%: 300ms | | | | | | | | | | | | |
| Inverter efficiency, load 100% | > 93 | | | | | | | | | | > 96 | | |



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TECHNICAL SPECIFICATIONS

4. Bypass

| Model | 10KVA | 20KVA | 30KVA | 40KVA | 60KVA | 80KVA | 100KVA | 120KVA | 160KVA | 200KVA | 250KVA | 300KVA | 400KVA |
|---------------------------------|-----------------------------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|---------------------|--------|--------|
| Phase | Single phase/ three phase + N + G | | | | | | | | | | Three phase + N + G | | |
| Nominal voltage | 380 VAC ± 15% | | | | | | | | | | | | |
| Nominal frequency | 50/60Hz ± 10% | | | | | | | | | | | | |
| Inverter/Bypass (transfer time) | 0ms | | | | | | | | | | | | |

5. System

| Model | 10KVA | 20KVA | 30KVA | 40KVA | 60KVA | 80KVA | 100KVA | 120KVA | 160KVA | 200KVA | 250KVA | 300KVA | 400KVA | | | | | | |
|--------------------------|---|-------|-------|-------|------------------|-------|------------------|------------|-------------------|--------|--------------------|--------|--------|--|--|--|--|--|--|
| Communication interface | Rs232, Rs485, Dry contact, Intelligent Slot | | | | | | | | | | | | | | | | | | |
| Work temperature | 0~40°C | | | | | | | | | | | | | | | | | | |
| Relative humidity | 0% ~ 90% (non-condensing) | | | | | | | | | | | | | | | | | | |
| Operation altitude (max) | <1000m (1% power lost as increase 100m, 4000m max.) | | | | | | | | | | | | | | | | | | |
| Cool mode | Forced ventilation | | | | | | | | | | | | | | | | | | |
| Noise | 48 ~ 65 dB | | | | | | | 53 ~ 68 dB | | | | | | | | | | | |
| MTBF | 300000 hours | | | | | | | | | | | | | | | | | | |
| Protection grade | IP20 | | | | | | | | | | | | | | | | | | |
| Cabinet color | White or Black | | | | | | | | | | | | | | | | | | |
| Input cable | Button/Rear | | | | | | | | | | | | | | | | | | |
| Easy-maintenance | Front/ Up/ Side | | | | | | | | | | | | | | | | | | |
| Dimension W × D × H (mm) | 420 × 800 × 900 | | | | 560 × 700 × 1140 | | 660 × 800 × 1550 | | 1200 × 860 × 1680 | | 1800 × 1200 × 1900 | | | | | | | | |
| Weight (KG) | 120 | 140 | 175 | 210 | 350 | 400 | 550 | 650 | 1080 | 1200 | 1500 ~ 2500 | | | | | | | | |
| Input component | Connection terminal | | | | | | | | | | | | | | | | | | |
| Output component | Connection terminal | | | | | | | | | | | | | | | | | | |



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