

Alpha Pro RT

1KVA ~ 3KVA
PF 0.9 (1 : 1)



Applications

SOHO, PC, POS machines
Blade servers, storage systems
Telecommunication facilities
Small financial trading center
ATM / Bank terminal system
Precision instruments, Automation system

Highlights

- ✓ Tower / Rack convertible
- ✓ High power factor
- ✓ Stronger carrying capacity
- ✓ Powerful battery charger
- ✓ Frequency conversion
- ✓ ECO mode
- ✓ Low noise level
- ✓ Multiple communication ports

Alpha Pro RT Series UPS is the high density version of on-line double-conversion UPS with advanced full-time DSP control technology and input power factor correction, it is featured with output power factor 0.9 which enable to delivering more stable and clean power without interruption for critical equipment. Its Rack/Tower convertible design can be fitted to multiple applications, such as telecommunication, storage systems, medical systems, industrial applications especially ideal for blade servers. For critical business continuity applications requiring long runtimes, Alpha Pro RT (extensible model) can be installed with battery extension packs.

Features

True On-line double conversion technology

Alpha Pro is an On-line double conversion UPS which provides ideal electrical output performance with continuous and uninterruptable high quality power in switching from AC to DC or DC to AC.

DSP-Digital signal processor technology

Alpha Pro uses advanced USA native CPU chip with ability of faster and more accurate processing of signal data, keep UPS running in a high efficiency and low energy wasting condition. Providing you with rapid failure response and useful failure code for mechanical maintenance, raise MTBF, decrease MTTR.

Tower / Rack convertible and simplified installation

Users can easily install the UPS system as either a tabletop or a rack mounted device by utilizing the easy-shift LCD display.

High power factor

Alpha Pro input power factor closes to 1 with power factor correction, and output power factor 0.9 enables UPS to deliver more power and increase the load capacity by 13% compared with traditional products.

Wide input voltage range & auto sensing frequency

Alpha Pro has excellent voltage regulation ability with an ultra-wide input voltage range from 110 - 300 Vac, and auto-sensing 50 Hz / 60 Hz frequency to meet all kinds of grid environment.

Cold start capability

In the absence of any AC input, the cold start function allows users to start the UPS with the batteries, and without any damage to them or the circuits.

Multiple operating modes

Different operating modes (Line mode, Bypass mode, Stdby mode, Battery mode, ECO mode, CUCF/Frequency conversion mode and Fault mode) can be programmed according to user requirements.

Auto Power-on and Shut-down function

Under low or no-load conditions, the UPS will automatically shut down and switch to bypass mode, when the load is enabled again, the UPS will be automatically turned on and switch back to the mains power mode. This energy saving feature is great suitable for situations like office loads various from day and night.

Excellent performance and reliability

Complete hardware and software protection

Alpha Pro is equipped with over voltage, overload, surge, short circuit, over temperature protection, IGBT pulse by pulse current limiting protection, greatly ensure the stability and reliability of the system.

Power-on self test

The UPS performs advanced self-diagnostics to ensure the functionality of the UPS system and batteries, and to anticipate events before they occur.

Low noise level

Load-based fan speed control makes UPS produce low noise.

Advanced Battery Management (ABM)

Battery test function and deep discharge protection

The system has automatic / manual battery test function and deep discharge protection to optimize battery life. At the end of battery discharge, the system will pre-alarm to remind users.

Advanced charging technology

- Automatic charging in OFF mode.
- By monitoring and control the battery periodically self-test, automatically equalizing charge and floating charge control, effectively extending the battery life.
- By powerful battery charger with rapid and stable charging technology, 90% capacity can be restored in 3 hours for standard model UPS, and higher charging current is available for extensible model.

Flexible and optimized battery number design

More economical battery usage and costs with different DC voltage (24 V / 36 V / 48 V / 72 V / 96V) and two UPS models (Standard model or Extensible model) for options.

Multiple functions settable via LCD panel

Output voltage, output frequency, Bypass mode, ECO mode, battery low voltage and Frequency Converter enable/disable are settable via LCD panel.

Extensible functions and options

EPO function (Optional)

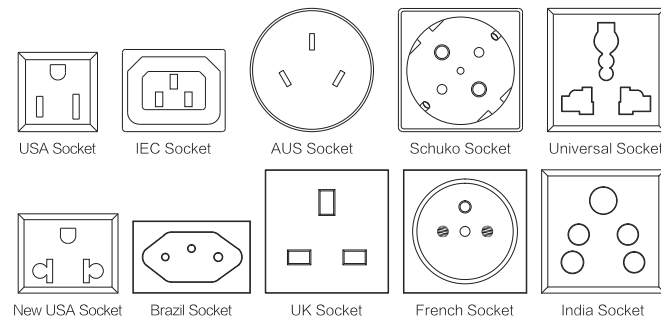
Alpha Pro is equipped with an Emergency Power Off function, providing users with a way of immediately shutting down all output power from the UPS in the case of emergencies such as fire, flood, and overheating equipment.

Advanced multi-platform communications

Standard RS232 communication port and RJ45 protection

Optional USB / RS485 / dry contacts card / SNMP / SMS / communication port

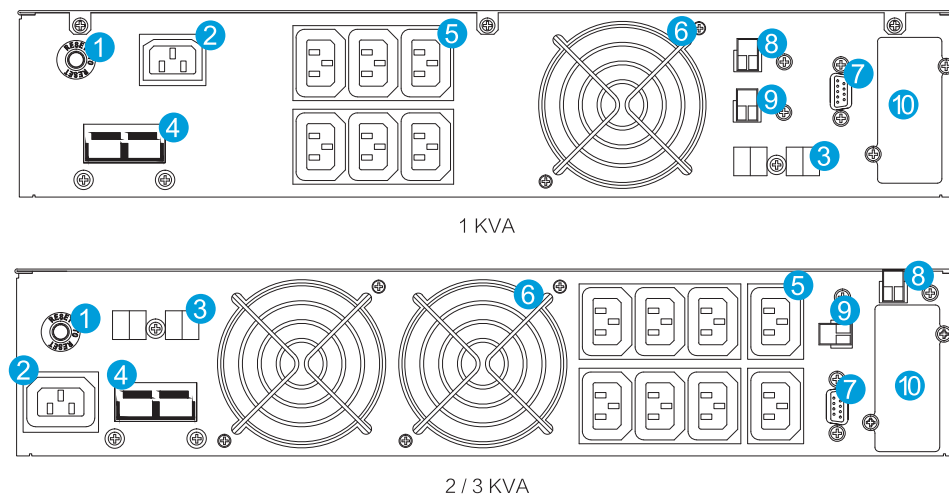
Available Sockets



Available Options

| | |
|----------------------------|--|
| Communication Ports | USB / RS485 / AS400 / SNMP / SMS |
| Software | UPSmart / iStars |
| Others | External maintenance bypass Emergency Power Off (EPO) |

Details



1. Overcurrent Protection
2. AC Input
3. Modem/Tel/Fax
4. DC Input
5. Outlet
6. Fan
7. RS232
8. USB (optional)
9. EPO (optional)
10. SNMP/AS400 (optional)

Technical specifications

| MODEL | APO 1000RT | APO 2000RT | APO 3000RT | |
|-----------------------------------|---|------------------------|------------------------|--|
| Capacity | 1 KVA / 900 W | 2 KVA / 1800 W | 3 KVA / 2700 W | |
| INPUT | | | | |
| Rated voltage | 208 V / 220 V / 230 V / 240 Vac | | | |
| Voltage range | 110 ~ 176 Vac (linear derating between 50% and 100% load); 176 ~ 280 Vac (no derating); 280 ~ 300 Vac (derating 50%) | | | |
| Frequency | 40 ~ 70 Hz (auto-sense) | | | |
| Power factor | ≥ 0.99 | | | |
| Bypass voltage | -25% ~ +15% (settable) | | | |
| OUTPUT | | | | |
| Voltage | 208 V / 220 V / 230 V / 240 Vac (settable via LCD) | | | |
| Voltage regulation | ± 1% | | | |
| Frequency | 45 ~ 55 Hz or 55 ~ 65 Hz (synchronized range); 50 / 60 Hz ± 0.1 Hz (battery mode) | | | |
| Waveform | Sinusoidal | | | |
| Crest factor | 3:1 | | | |
| Harmonic distortion | ≤ 2% (linear load); ≤ 5% (non-linear load) | | | |
| Transfer time | Mains mode to battery mode: 0 ms Inverter mode to bypass mode: 4 ms (typical) | | | |
| Overload capacity | 105% ~ 125%: transfer to bypass in 1 min; 125% ~ 150%: transfer to bypass in 30s; >150%: transfer to bypass in 300 ms | | | |
| EFFICIENCY | | | | |
| Mains mode | ≥ 90% | ≥ 91% | ≥ 92% | |
| Battery mode | ≥ 85% | ≥ 86% | ≥ 87% | |
| ECO mode | ≥ 95% | ≥ 96% | ≥ 97% | |
| BATTERIES | | | | |
| Inbuilt battery / DC voltage | Standard model | 12 V / 9 Ah × 2 (24 V) | 12 V / 9 Ah × 4 (48 V) | 12 V / 9 Ah × 6 (72 V) |
| | Extensible model | 12 V / 7 Ah × 3 (36 V) | 12 V / 7 Ah × 6 (72 V) | 12 V / 7 Ah × 8 (96 V) |
| Charging current (max.) | Standard model 1A; Extensible model 6 A | | | |
| Recharge time | Standard model: 90% capacity restored in 3 hours; Extensible model: depend on the capacity of battery | | | |
| COMMUNICATIONS | | | | |
| RS232 (standard) / USB (optional) | Supports Windows® 98 / 2000 / 2003 / XP / Vista / 2008 / Windows® 7 / 8 / 10 | | | |
| SNMP (optional) | Power management from SNMP manager and web browser | | | |
| OTHERS | | | | |
| Protections | Overload, surge, Short circuit, battery low voltage, battery overcharge, over-temperature | | | |
| Operating temperature | 0 ~ 40°C | | | |
| Relative Humidity | 0 ~ 90% (non-condensing) | | | |
| Noise level | ≤ 50 dB (1 m) | | | |
| Dimensions (W × D × H) (mm) | Standard model | 440 × 468 × 88 | 440 × 658 × 88 | 440 × 658 × 88 (72V) 440 × 468 × 88 (UPS) (96V) 440 × 468 × 88 (BAT pack) |
| | Extensible model | | 440 × 468 × 88 | 440 × 468 × 88 |
| Packaged dimensions (W × D × H) | Standard model | 545 × 592 × 198 | 545 × 782 × 198 | 545 × 782 × 198 (72V) 545 × 592 × 198 (UPS) (96V) 545 × 592 × 198 (BAT pack) |
| | Extensible model | | 545 × 592 × 198 | 545 × 592 × 198 |
| Net weight / Gross weight (Kg) | Standard model | 12.26 / 15.78 (24V) | 22.73 / 26.63 (48V) | 29.26 / 33.16 (72V) 9.45 / 12.97 (UPS) 27.2 / 30.2 (BAT) (96V) |
| | Extensible model | 7.58 / 11.1 | 9.66 / 13.18 | 10.04 / 13.56 |

* Capacity be derated to 70% in CUCF mode and to 90% when the output voltage is adjusted to 208Vac
* All specifications subject to change without notice