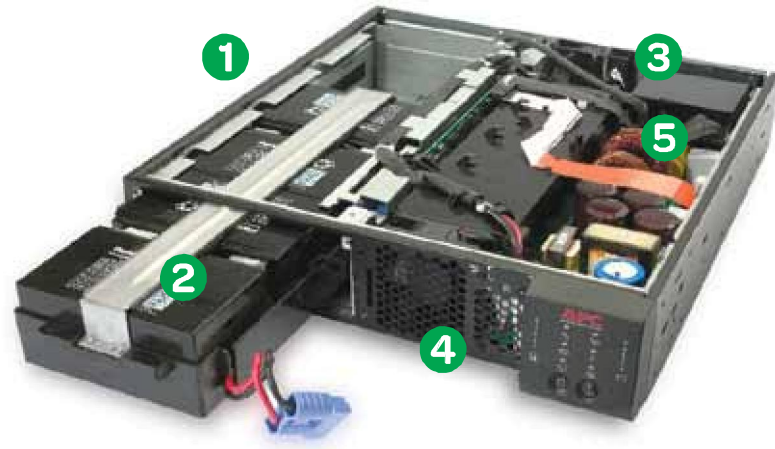# Smart-UPS On-Line

1 – 20 kVA

High-density, double-conversion online
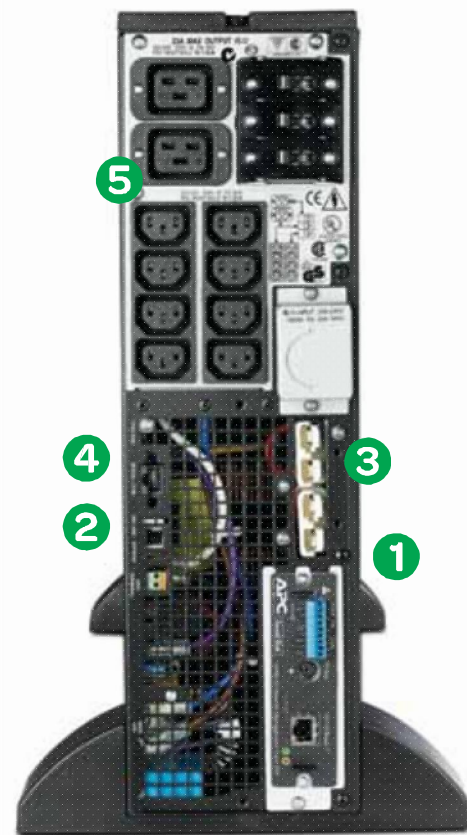power protection with scalable runtime

## A versatile UPS developed for the harshest power conditions in the world

Smart-UPS™ On-Line provides high-density, true double-conversion online power protection for servers, voice/data networks, medical labs, and light industrial applications. Capable of supporting loads from 1 to 20 kVA in a rack/tower convertible form, the Smart-UPS On-Line is available from 2 U to 12 U. The 15 kVA and 20 kVA models enable support of power hungry blade servers or heavily loaded equipment racks. When business-critical systems require runtime in hours, not minutes, Smart-UPS On-Line can be configured with matching battery packs to comply with aggressive runtime demands. The included PowerChute™ management software provides unattended graceful shutdown of network operating systems. All models 5 kVA and above include an integrated network management card for remote management (optional on models below 5 kVA). The entire Smart-UPS On-Line family provides value to customers with demanding power environments, including a very wide input voltage window, extremely tight output voltage regulation, frequency regulation, internal bypass, and input power factor correction.

APC™

by Schneider Electric

# Features and Benefits

**1 Rack/Tower Convertible**
Ensures integration in various environments

**2 Hot-swappable/User-replaceable Batteries**
Ensures continuous operation of the load even when the batteries are being replaced

**3 Double-conversion Online**
Provides tight voltage and frequency regulation and zero transfer time for reactive loads (machinery, lab equipment, etc.)

**4 Advanced 16-segment LED Display**
Quickly understand unit and power status with visual indicators. (LCD on 15 – 20 kVA models)

**5 Frequency and Voltage Regulation**
Gives higher application availability by correcting poor frequency and voltage conditions without using the battery

**1 UPS Network Management Card with Environmental Monitoring**
Provides remote user interface, managed via web browser, SNMP, and Telnet. Includes graceful unattended shutdown. The UPS Network Management Card is pre-installed on UPS models 5 kVA through 20 kVA

**2 Serial Connectivity**
Enables quick and easy configuration of the UPS

**3 Scalable Runtime**
Allows additional run time to be quickly added as needed

**4 Built-in Automatic and Manual Bypass**
Ensures seamless power to the load even in the event of catastrophic UPS failure

**5 Field-replaceable Power Distribution Panels**
Enables quick in-field modification of output receptacles to fit changing needs

# Product Accessories

## Management Cards
AP9610: Relay I/O SmartSlot™ Card (Not compatible with SURTD UPS models)

AP9622: Modbus®/Jbus Interface Card (Not compatible with SURTD UPS models)

AP9630: UPS Network Management Card

AP9631: UPS Network Management Card with Environmental Monitoring

AP9810: APC™ Dry Contact I/O Accessory (Not compatible with SURTD UPS models)

AP9620: Legacy Communications SmartSlot Card (Compatible with SURTD UPS models only)

## Transformers
APTF10KW01: APC WW 10 kVA Isolation Transformer

APTF20KW01: APC WW 20 kVA Isolation Transformer

SURT001: APC Smart-UPS RT 3000 VA 230 V Isolation Transformer

SURT002: APC Smart-UPS RT 5000 VA 230 V Isolation Transformer

## Backplate Kits
SURT007: APC Smart-UPS RT 3/5/6 kVA Input/Output Hardware Kit

SYPD10: Symmetra™ RM 230 V Backplate Kit with (2) IEC 320 C19 and (1) IEC 60309

## Other
SURT013: SURT Equipment Cart

## Rail Kits
SURTRK: APC Smart-UPS RT 482 mm Rail Kit 1 kVA and 2 kVA

SURTRK2: APC Smart-UPS RT 482 mm Rail Kit for Smart-UPS RT 3/5/6/8/10 kVA

SURTRK4: APC Smart-UPS RT 482 mm Rail Kit for Smart-UPS RT 15/20 kVA

## Battery Packs
SURT48XLBP: APC Smart-UPS RT 48 V Battery Pack

SURT48RMXLBP: APC Smart-UPS RT 48 V RM Battery Pack

SURT192XLBP: APC Smart-UPS RT 192 V Battery Pack

SURT192RMXLBP: APC Smart-UPS RT 192 V RM Battery Pack

SURT192RMXLBP2: APC Smart-UPS RT 192 V RM Battery Pack 2 Rows

## Service Bypass Panels
SBP3000: APC Service Bypass Panel 100 – 240 V; 30 A; BBM; Hardwire Input/Output

SBP6KRMI2U: APC Service Bypass Panel 230 V; 50 A; MBB; Hardwire Input; (4) IEC 320 C19 Output

SBP10KRMI4U: APC Service Bypass Panel 230 V; 100 A; MBB; Hardwire Input; IEC 320 Output (8) C13 (2) C19

SBP20KP: APC Service Bypass Panel 200/208/230/240 V 125 A HW Input/Output

SBP20KRMI4U: APC Service Bypass Panel 230 V 125 A HW Input IEC 320 Output (8) C19

# Technical Specifications

| UPS VA | 1000 | 2000 | 3000 | 5000 | 6000 | 8000 | 10000 | 15000 | 20000 |
|---|---|---|---|---|---|---|---|---|---|
| **Output** | | | | | | | | | |
| Topology | Double-conversion Online | | | | | | | | |
| Nominal Output Voltage | Configurable for 220 : 230 or 240 nominal output voltage | | | | | | | Configurable for 220 : 230 : 240 : 400 V nominal output voltage | |
| Efficiency at Full Load | | Up to 92% | | | | | | | |
| Output Frequency (sync to mains) | 50/60 Hz +/- 3 Hz user adjustable | | | | | | | | |
| Output Power Capacity | 700 W | 1400 W | 2100 W | 3500 W | 4200 W | 6400 W | 8000 W | 12 kW | 16 kW |
| Output Connections | (6) IEC 320 C13 | | (8) IEC 320 C13; (2) IEC 320 C19 | | | (1) Hardwire 3-wire (H + N + G); (4) IEC 320 C13; (4) IEC 320 C19 | | (1) Hardwire 3-wire (H + N + G); (1) Hardwire 5-wire (3PH + N + G); (8) IEC 320 C19 | |
| **Input** | | | | | | | | | |
| Nominal Input Voltage | 230 V | | | | | 230 V or 400 V | | | |
| Input Frequency | 45 – 65 Hz (auto sensing) | | | | | | | | |
| Input Connections | British BS1363A; IEC 320 C20; Schuko CEE 7/EU1-16P | | Hardwire 3-wire (1PH + N + G) | | | Hardwire 3-wire (1PH + N + G); Hardwire 5-wire (3PH + N + G) | | | |
| Bypass | Automatic and Manual (Built-in) | | | | | | | | |
| **Battery** | | | | | | | | | |
| Battery Type | Maintenance-free sealed lead-acid battery with suspended electrolyte: leak proof | | | | | | | | |
| Replacement Battery | RBC57 | | RBC44 | | | | | | |
| Runtime | See Chart Below | | | | | | | | |
| **Communications and Management** | | | | | | | | | |
| Interface Port(s) | DB-9 RS-232, SmartSlot, USB | | RJ-45 10/100 Base-T, RJ-45 Serial, SmartSlot | | | | | | |
| Pre-installed SmartSlot Card | – | – | – | AP9631 | | | | | |
| Emergency Power Off (EPO) | Yes | | | | | | | | |
| Control panel | LEDs | | | | | | | LCD Display | |
| **Physical** | | | | | | | | | |
| Rack Height | 2 U | | 3 U | | | 6 U | | 12 U | |
| Maximum Height | 432 mm | | | | | | | 533 mm | |
| Maximum Width | 85 mm | | 130 mm | | | 263 mm | | 432 mm | |
| Maximum Depth | 483 mm | | 660 mm | | | 736 mm | | 773 mm | |
| Net Weight | 25.00 kg | | 54.55 kg | | | 110.91 kg | | 247.70 kg | |

# Runtime Estimates at Half and Full Load (minutes)

| UPS VA | 1000 | 2000 | 3000 | 5000 | 6000 | 8000 | 10000 | 15000 | 20000 |
|---|---|---|---|---|---|---|---|---|---|
| Internal | 32/14 | 17/6 | 34/14 | 18/6 | 16/5 | 20/7 | 15/5 | 22/8 | 15/5 |
| (1) Battery Pack | 122/69 | 67/30 | 122/57 | 70/31 | 49/21 | 48/21 | 37/15 | 53/23 | 38/15 |
| (2) Battery Pack | 257/129 | 121/56 | 217/102 | 125/58 | 88/40 | 76/35 | 60/26 | 84/38 | 60/27 |
| (3) Battery Pack | 360/180 | 177/83 | 315/150 | 183/85 | 130/60 | 106/49 | 83/38 | 117/54 | 85/38 |
| (4) Battery Pack | 480/240 | 234/110 | 416/199 | 242/113 | 172/80 | 136/63 | 107/49 | 150/69 | 104/50 |