

SmartOnline 40kVA Modular 3-Phase UPS System, On-line Double-Conversion International UPS

MODEL NUMBER: **SU40KX**



Description

Tripp Lite's SU40KX (40kVA) SmartOnline Modular 3-Phase Intelligent, True On-Line UPS System provides 100% system availability with N+1 modular architecture and 1+1 parallel capability. In N+1 configuration, the SU40KX provides two self-contained, redundant 20kVA power modules that can be hot-swapped (load remaining powered) if maintenance is required. In 1+1 configuration, two SU40KX models connected in parallel can provide fail-safe redundancy (two 40kVA models supporting a 40kVA load) or increased capacity (two 40kVA models supporting an 80kVA load). Large capacity 40,000VA/32,000W UPS continually converts incoming AC power into filtered DC power, and then resynthesizes it back into AC power with a pure sine wave. Perfectly regulated, continuous sine wave output with zero transfer time assures compatibility with all equipment types.

High input power factor, advanced IGBT inverter technology and Digital Signal Processor (DSP) technology produce less than 3% input total harmonic distortion (THDi). With low THDi, generators run cooler and last longer, allowing managers to save installation costs by installing a generator with a capacity equal to the equipment load (1:1 ratio). Extremely efficient operation (up to 97%) saves money by lowering electricity consumption. Hardwire input and output connections support a variety of permanent or PDU-style power connections. Frequency is 50 or 60 Hz (auto-selectable). The SU40KX combines internal power and battery modules in a single small-footprint tower compartment. Typical half-load/full-load runtimes are 13 min./5.5 min. Battery runtime can be extended with optional stand-alone hardwired external battery modules (Models BP480V26B and BP480V40C, available separately). A manual bypass breaker and an automatic bypass function ensure 100% availability of connected equipment by safely passing through AC power if the UPS requires maintenance.

Features

- N+1 configuration: If maintenance is required, two self-contained, redundant 20kVA power modules can be hot-swapped with the load remaining powered
- 1+1 configuration: Two SU40KX can be connected in parallel to provide either fail-safe redundancy or increased capacity
- High input power factor, advanced IGBT inverter technology and Digital Signal Processor (DSP) technology produce low input total harmonic distortion (THDi)
- Low THDi (less than 3%) reduces installation costs by allowing 1:1 generator sizing
- Extremely efficient operation (up to 97%) saves money by reducing electricity consumption
- True on-line, double-conversion UPS with IGBT technology provides pure sine wave AC output at all times

Highlights

- 40,000 VA (40kVA) 3-phase tower UPS
- N+1 redundant modular architecture helps assure 100% availability
- 1+1 parallel capability allows for system redundancy or increased capacity
- Low THDi reduces installation costs by permitting 1:1 generator sizing
- 3-phase hardwire (220/380V, 230/400V or 240/415V AC, 3-phase, 4-wire + ground, wye) input/output
- IGBT technology and zero transfer time, on-line double-conversion operation
- Runtime is expandable via external battery cabinet options

Package Includes

- SU40KX UPS System
- PowerAlert Software
- Instruction manual
- Warranty information



- Maintains continuous operation with zero transfer time through blackouts, voltage fluctuations and surges
- Removes harmonic distortion, electrical impulses, frequency variations and other hard-to-solve power problems
- 40,000VA/32,000W power capacity with 3-phase, hardwire input/output connections
- Wide input voltage correction range: 173-300V/276-477V AC
- Precision +/-1% output voltage regulation
- Internal power and battery modules are combined in a single small-footprint tower compartment. Typical half-load/full-load runtimes are 13 min./5.5 min. Battery runtime can be extended with optional stand-alone hardwired external battery modules (Models BP480V26B and BP480V40C, available separately)
- Front panel combination LCD/LED display includes a real-time event log screen with up to 500 events listed
- Dynamic battery management screen optimizes battery function to lengthen service life and allow cold restart of the UPS
- Built-in RS-232 communication port works with included PowerAlert Software to provide shutdown commands and reporting on a single server
- Accessory slot accepts an optional internal SNMP card (Model SNMPWEBCARD) for remote shutdowns, reboots and more
- Emergency Power Off button turns UPS output OFF and disables Bypass output
- Built-in Emergency Power Off (EPO) dry-contact interface supports remote emergency shutdown in large facilities

Specifications

| SELECTOR | |
|---------------------------------------|---|
| Selector Type | UPS SYSTEMS |
| General Info | |
| Product Group | UPS SYSTEMS |
| TAA Compliant | No |
| OVERVIEW | |
| UPS Family | SmartOnline |
| UPS Type | On-Line |
| OUTPUT | |
| Output Volt Amp Capacity (VA) | 40000 |
| Output kVA Capacity (kVA) | 40 |
| Output Watt Capacity (Watts) | 32000 |
| Output kW Capacity (kW) | 32 |
| Power Factor | 0.8 |
| Crest Factor | 3:1 |
| Nominal Output Voltage(s) Supported | 220/380V; 230/400V; 240/415V; 3-Phase Wye |
| Frequency Compatibility | 50 / 60 Hz |
| Output Voltage Regulation (Line Mode) | +/- 1% |



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| Output Voltage Regulation (Battery Mode) | +/- 1% |
| Output Receptacles | Hardwire |
| Output AC Waveform (AC Mode) | Sine wave |
| Output AC Waveform (Battery Mode) | Pure Sine wave |
| INPUT | |
| Rated input current (Maximum Load) | 48A/50A/53A |
| Nominal Input Voltage(s) Supported | 220/380V (3ph wye); 230/400V (3ph wye); 240/415V (3ph wye) |
| Nominal Input Voltage Description | 3-Phase Wye, 4 wire (L1, L2, L3, N, G) |
| UPS Input Connection Type | Hardwire |
| Input Phase | 3-Phase |
| BATTERY | |
| Full Load Runtime (min.) | 5.5 min. (32kw) |
| Half Load Runtime (min.) | 13 min. (16kw) |
| Expandable Battery Runtime | Supports extended runtime with optional external battery packs |
| External Battery Pack Compatibility | BP480V103 ; BP480V140 ; BP480V26B ; BP480V40C ; BP480V55 ; BP480V78 ; BP480V200 ; BP480V300 ; BP480V400 ; BP480V500 |
| Expandable Runtime Description | External battery pack wiring is contractor supplied |
| DC System Voltage (VDC) | +/- 240VDC |
| Battery Recharge Rate (Included Batteries) | 4 hours from 10% to 90% |
| Battery Replacement Description | Hot-swappable, replaceable batteries |
| VOLTAGE REGULATION | |
| Voltage Regulation Description | Online, double-conversion power conditioning |
| Overvoltage Correction | Maintains continuous operation without using battery power during overvoltages to 276-477 (3-phase, 4-wire, wye), reducing output within 1% of nominal |
| Undervoltage Correction | Maintains continuous operation without using battery power during brownout/undervoltage conditions to 173-300 (3-phase, 4-wire, wye) |
| LEDS ALARMS & SWITCHES | |
| LED Indicators | 4-LED Display: Displays normal AC input, on battery power, bypass input and fault conditions |
| Audible Alarm | Alarms signal a variety of operational conditions: low-battery, overload, shutdown, bypass and more |
| Alarm Cancel Operation | Power-fail alarm can be silenced using alarm-cancel switch |
| Switches | ON button turns UPS inverter on. OFF button turns UPS inverter off. LCD Display Control Buttons browse through and select items displayed on LCD screen. EPO (Emergency Power Off) button turns UPS output off and disables Bypass output |



| SURGE / NOISE SUPPRESSION | |
|---|--|
| EMI / RFI AC Noise Suppression | Yes |
| AC Suppression Joule Rating | 5950 |
| AC Suppression Response Time | Instantaneous |
| PHYSICAL | |
| Installation Form Factors Supported with Included Accessories | Tower |
| Primary Form Factor | Tower |
| UPS Power Module Dimensions (hwd, in.) | 45.8 x 20.5 x 33.7 |
| UPS Power Module Dimensions (hwd, cm) | 116.3 x 52.1 x 85.6 |
| Installed Whole System Maximum Rack Depth (cm) | 0 |
| UPS Power Module Weight (lbs.) | 908 |
| UPS Power Module Weight (kg) | 412.2 |
| UPS Shipping Dimensions (hwd / in.) | 55 x 28.5 x 42.5 |
| UPS Shipping Dimensions (hwd / cm) | 139.7 x 72.4 x 108 |
| Shipping Weight (lbs.) | 1058 |
| Shipping Weight (kg) | 480.3 |
| Cooling Method | Fans |
| UPS Housing Material | Steel |
| ENVIRONMENTAL | |
| Operating Temperature Range | +32 to +104 degrees Fahrenheit / 0 to +40 degrees Celsius |
| Storage Temperature Range | +5 to +122 degrees Fahrenheit / -15 to +50 degrees Celsius |
| Relative Humidity | 0 to 95%, non-condensing |
| AC Mode BTU / Hr. (Full Load) | 7006 |
| COMMUNICATIONS | |
| Communications Interface | DB9 Serial; Slot for SNMP/Web interface |
| PowerAlert Software | Included |
| Communications Cable | DB9 cabling included |
| LINE / BATTERY TRANSFER | |
| Transfer Time | No transfer time (0 ms.) in online, double-conversion mode |



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| Low Voltage Transfer to Battery Power (Setpoint) | Maintains continuous operation without using battery power during brownout/undervoltage conditions to 173-300V AC (3-phase, 4-wire, wye). Below this point, output is maintained utilizing reserve battery power |
| High Voltage Transfer to Battery Power (Setpoint) | Maintains continuous operation without using battery power during overvoltages to 276-477V AC (3-phase, 4-wire, wye), reducing output within 1% of nominal. Above this point, output is maintained utilizing reserve battery power |
| SPECIAL FEATURES | |
| Cold Start (Startup in Battery Mode During a Power Failure) | Cold-start operation supported |
| High Availability UPS Features | Automatic inverter bypass; Hot swappable batteries |
| Green Energy-Saving Features | High efficiency economy mode operation; Schedulable daily hours of economy mode operation |
| WARRANTY | |
| Product Warranty Period (International) | 2-year limited warranty |
| Product Warranty Period (Mexico) | 1-year limited warranty |
| Product Warranty Period (Puerto Rico) | 2-year limited warranty |
| APPLICATIONS | |
| UPS Applications | Data Center; Eco Energy-Saving |

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