SmartOnline SUT Series 3-Phase 208/120V 220/127V 30kVA 30kW On-Line Double-Conversion UPS, Tower, Extended Run, SNMP Option

MODEL NUMBER: **SUT30K**







3-phase UPS system protects mission-critical network equipment against downtime and data loss in data center, telecom, medical, manufacturing and financial environments.

Description

The SUT30K SmartOnline® SUT Series 3-Phase 208/120V 220/127V 30kVA 30kW On-Line Double-Conversion UPS provides complete protection against power interruptions and fluctuations that can contribute to equipment failures and data loss. It's recommended for critical data center, telecommunications, computer network, manufacturing and financial applications.

The Voltage and Frequency Independent (VFI) design allows continuous operation at either 50 or 60 Hz. Zero transfer time from online to battery mode ensures no disruption to attached equipment loads. Offering an efficiency of 94% during normal operation and 98% in economy mode, the SUT30K reduces energy losses for cost-saving operation. Automatic bypass keeps connected equipment powered, even during overloads and many potential UPS fault conditions.

IGBT inverter technology produces output power with less than 2% total harmonic distortion (THDi) to keep connected equipment functioning at its peak. A 3:1 crest factor safely supports a variety of loads, even those with wildly fluctuating power demands.

Managing the SUT30K is simplified through the multi-language LCD interface, which displays critical operating conditions and diagnostic data, such as battery and load status. Four LEDs indicate AC, bypass, battery and fault modes. A built-in card slot supports optional remote management cards, such as WEBCARDLX, for comprehensive monitoring and control over a network.

Features

VFI True On-Line Double-Conversion 3-Phase UPS System Provides fully regulated sine wave AC output for critical data center, telecom, computer network, light industrial and financial applications+/-1% output voltage regulation in online and battery modesHigh 1.0 unity power factor with 30kVA/30kW output capacity offers higher capacity than competing 0.8 and 0.9 PF designsSupports 208/120V or 220/127V at 50/60 HzWide input voltage window (125–253V) minimizes battery use and prolongs battery life

Reliable Battery Backup with Expandable Runtime Supports half load for 15.7 min. and full load for 5.5 min. with standard internal batteriesOptional BP288VEBP external battery packs provide additional runtimeSine wave output with zero transfer time compatible with all equipment types

IGBT Inverter Technology Produces output power with <2% THD to keep connected equipment functioning at its peakLow <4% full load THDi input rating and advanced IGBT rectifier enables 1:1 generator sizing, eliminating costly oversizing requirements for generators, breakers and cables

Highlights

- On-line double-conversion topology, VFI operation
- 1.0 unity power factor supports 30kVA/30kW capacity
- Up to 98% economy-mode efficiency option saves energy
- Internal batteries included with external battery pack options
- Parallel up to 4 units for increased capacity or N+N fault tolerance redundancy

Package Includes

- SUT30K SmartOnline SUT Series 3-Phase 30kVA 30kW On-Line Double-Conversion UPS
- RS-232 (DB9) cable
- Owner's manual

Paralleling Capability Connect up to 4 units in parallel configuration for N+N fault tolerance redundancy or increased power capacity up to 120kVA

Automatic Bypass Maintains output power to connected equipment during a variety of potential UPS fault conditions

Economy Mode Increases operating efficiency levels as high as 98% when input line conditions are favorable

Remote Management Card Options Compatible with Tripp Lite UPS card accessories, such as WEBCARDLX, that enable comprehensive monitoring and control over a network

Communications PortsDB9 (RS-232) port enables data-saving unattended shutdown when used with PowerAlert® software (free download at tripplite.eaton.com/products/power-alert)EPO port supports Emergency Power Off shutdown

Standard Compliance Tested to UL 1778 5th Edition, CSA C22.2 No. 107.3, NOM, FCC Part 15 Class A (EMC), GB17626-2/IEC 61000-4-2 (Electrostatic Discharge) Level 4, GB17626-3 (Radio-Frequency Electromagnetic Fields) Level 3, GB17626-4 (Fast Transient/Burst) Level 4, GB17626-5/IEC 61000-4-5 (Surge) Level 4 and RoHS

Specifications

OVERVIEW	
UPC Code	037332186706
UPS Type	On-Line
INPUT	
Input Phase	3-Phase
Rated input current (Maximum Load)	100A (120/208V); 95A (120/208V)
Nominal Input Voltage(s) Supported	120/208V 3-PH Wye; 127/220V 3-PH Wye
Nominal Input Voltage Description	3-Phase Wye, 4 wire (L1, L2, L3, N, G)
UPS Input Connection Type	Hardwire
Input Circuit Breakers	125A 3 pole 240V breaker
Power Factor (Input)	>0.99 (maximum resistive load)
THDi	<4% (maximum resistive load)
OUTPUT	
Output Capacity (VA)	30000
Output Capacity (kVA)	30
Output Capacity (Watts)	30000
Output Capacity (kW)	30.00
Output Capacity Details	Supports parallel connection of up to 4 SUT30K systems for 120kVA max capacity or redundancy; Supports up to 100% load continuously, 125% load for up to 10 minutes, 149% load for up to 1 minute and over 150% load for up to 0.5 seconds before transferring to bypass mode; Automatic inverter restart is available when the load level recovers to 95% or less after overload-related transfer to bypass

Power Factor	1.0
Crest Factor	3:1
Nominal Voltage Details	Factory default output voltage is 120/208V; Less than 2% THD (full resistive load); Less than 0.1V Max DC Offset; Less than 2° Max Phase Angle Deviation; Less than 1% Max Voltage Unbalance Deviation
Frequency Compatibility	50 / 60 Hz
Frequency Compatibility Details	Auto-selectable frequency configuration
Output Voltage Regulation (Line Mode)	±1%
Output Voltage Regulation (Economy Line Mode)	±10%
Output Voltage Regulation (Battery Mode)	±1%
Output Circuit Breakers	Electronic AC output protection; Short-circuit protection
Output AC Waveform (AC Mode)	Pure Sine wave
Output AC Waveform (Battery Mode)	Pure Sine wave
Nominal Output Voltage(s) Supported	120/208V 3-PH Wye; 127/220V 3-PH Wye
Output Receptacles	Hardwire
Individually Controllable Load Banks	No
BATTERY	
Runtime Full Load (min.)	5.5 min. (30kW)
Runtime Half Load (min.)	15.7 min. (15kW)
Expandable Runtime	Yes
Expandable Runtime Description	External battery pack wiring is contractor supplied
External Battery Pack Compatibility	BP288VEBP
DC System Voltage (VDC)	±144VDC
Battery Recharge Rate (Included Batteries)	3.2 hours from 10 to 90%; Battery charge current adjustable from 1 to 20A (7.5A factory default)
Replacement Battery Cartridge	RBCSUT
Battery Replacement Description	The SUT30K UPS system uses 18 x RBCSUT battery cartridges. Replace all 18 RBCSUT battery cartridges at the same time in order to optimize battery performance. Each RBCSUT contains 4 x 9Ah batteries. The Total number of batteries is 4 x 18 RBCSUT = 72.
VOLTAGE REGULATION	
Voltage Regulation Description	Online, double-conversion power conditioning maintains ±1% output voltage regulation
Overvoltage Correction	Maintains continuous operation without using battery power during overvoltages to 253V
Undervoltage Correction	Maintains continuous operation without using battery power during brownout/undervoltage conditions to 125V (63% load or less); 166V (100% load)
USER INTERFACE, ALERTS & CONTROLS	

Front Panel LCD Display	Front panel LCD with scroll and enter buttons offers display of UPS operating mode, site power and UPS condition monitoring and operating configuration options; LCD also reports alarm conditions, including Short circuit, Inverter fail and Over temperature; Supports English, French, German, Russian, Portuguese, Spanish, Turkish and Polish language options
Switches	ON button turns UPS system on; OFF button turns UPS system off; SELECT/ENTER UP and SELECT/ENTER DOWN buttons enable on-screen selection and navigation options; EPO (Emergency Power Off) button turns UPS output off and disables Bypass output
Alarm Cancel Operation	Power-fail alarm can be silenced using alarm-cancel switch
Audible Alarm	Alarms signal a variety of operational conditions: low-battery, overload, shutdown, bypass and more
LED Indicators	Four LEDs indicate AC mode (Green), Bypass (Yellow), Battery (Yellow) and Fault (Red) modes
SURGE / NOISE SUPPRESSION	
EMI / RFI AC Noise Suppression	Yes
AC Suppression Joule Rating	9220
AC Suppression Response Time	Instantaneous
PHYSICAL	
Primary Form Factor	Tower
Cooling Method	Fans
Installation Form Factors Supported with Included Accessories	Tower
Primary UPS Depth (mm)	800
Primary UPS Height (mm)	1,349
Primary UPS Width (mm)	521
Shipping Dimensions (hwd / in.)	61.80 x 28.30 x 39.40
Shipping Dimensions (hwd / cm)	156.97 x 71.88 x 100.08
Shipping Weight (lbs.)	1014.00
Shipping Weight (kg)	459.94
UPS Housing Material	Steel
UPS Power Module Dimensions (hwd, cm)	134.87 x 52.07 x 80.01
UPS Power Module Dimensions (hwd, in.)	53.1 x 20.5 x 31.5
UPS Power Module Weight (kg)	364.69
UPS Power Module Weight (lbs.)	804
ENVIRONMENTAL	
Operating Temperature Range	+32 to +104 degrees Fahrenheit / 0 to +40 degrees Celsius
Storage Temperature Range	+4 to +104 degrees Fahrenheit / -20 to +40 degrees Celsius
Relative Humidity	Up to 95%, non-condensing
AC Mode BTU / Hr. (Full Load)	8217

AC Economy Mode BTU / Hr. (Full Load)	1730
AC Mode Efficiency Rating (100% Load)	93%
AC Economy Mode Efficiency Rating (100% Load)	98%
Battery Mode Heat Dissipation (BTU/Hr) @ Full Load	4269
Operating Elevation	0 to 10,000 feet, but derates 1% per 328 feet above 3280 feet
Audible Noise	Less than 65 dBA at 1m front side
COMMUNICATIONS	
Network Management Cards	SNMPWEBCARD; WEBCARDLX; MODBUSCARD ; RELAYIOCARD
Network Monitoring Port Description	Additional built-in set of INPUT and OUTPUT contacts support remote notification of Online Mode operation, Battery Mode operation, Bypass Mode operation, Abnormal Bypass Source, Battery Test Fail and Low Battery conditions
PowerAlert Software	Available via free download from https://tripplite.eaton.com/products/power-alert
Communications Cable	DB9 cabling included
Communications Interface	DB9 Serial; Slot for SNMP/Web interface
LINE / BATTERY TRANSFER	
Transfer Time	Online mode: No transfer time (0 ms.); Economy mode: 6 ms. (AC to battery), 1 ms. (Battery to AC)
Low Voltage Transfer to Battery Power (Setpoint)	Maintains continuous operation without using battery power during brownout/undervoltage conditions to 125VAC (under 63% load) / 160VAC (100% load). 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 253VAC, reducing output within 1% of nominal. Above this point, output is maintained utilizing reserve battery power
FEATURES & SPECIFICATIONS	
Cold Start (Startup in Battery Mode During a Power Failure)	Cold-start operation supported
High Availability UPS Features	Automatic inverter bypass; Hot swappable batteries; Auto Probe Monitoring (requires WEBCARDLX); Zero transfer time; On-Line/Double-Conversion
Green Energy-Saving Features	High efficiency economy mode operation; Schedulable daily hours of economy mode operation
Grounding Details	Yes
IP68 Rated	No
IP20 Rated	No
APPLICATIONS	
UPS Applications	Mission Critical Applications
STANDARDS & COMPLIANCE	
Product Certifications	IEC 60825-1; CSA (Canada); NOM (Mexico); UL 1778
Product Compliance	RoHS; FCC Part 15 Class A (USA)

WARRANTY & SUPPORT	
Product Warranty Period (U.S. & Canada)	1-year limited warranty
Product Warranty Period (International)	2-year limited warranty
Product Warranty Period (Mexico)	2-year limited warranty
Product Warranty Period (Puerto Rico)	2-year limited warranty
3-Phase Warranty Statement	Tripp Lite 3-Phase UPS Factory Warranty

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