1000 Eaton Boulevard
Cleveland, OH 44122
United States

SmartOnline S3MX Series 3-Phase 380/400/415V 160kVA 144kW On-Line Double-Conversion UPS

MODEL NUMBER: **S3M160KX**

Highly efficient 94% on-line UPS with compact design protects mission-critical equipment against downtime due to power disturbances.

Features

Battery Backup and VFI Operation Protect Critical Loads The SmartOnline® S3M160KX IGBT UPS supports the continuous availability of your most important loads through all power conditions, providing a compact backup power platform that's easy to manage and inexpensive to operate. Sophisticated voltage and frequency independent (VFI) operation and advanced IGBT rectifier technology with DSP control deliver reliable output power quality. Providing up to 160kVA of clean, continuous power, this 3-phase UPS system is perfect for critical applications in IT, communications, corporate, commercial, retail, financial, security, transportation, emergency and light industrial environments.

Best-in-Class Footprint for Easy Integration into Your Network Application This on-line double-conversion UPS system has a very small footprint of just 0.56 square meters. It requires less valuable space in your data center, and you can install the UPS system in spaces that would previously have required expensive retrofitting.

Efficient Operation and Design Reduces Cost of Ownership This IGBT UPS benefits from highly efficient transformer-free double-conversion technology that delivers operating cost savings. It achieves 94% efficiency in double-conversion mode and up to 98% in ECO mode, reducing your power and cooling costs. A low THDi (<3%) improves generator compatibility. A low THDv (2%) and active power factor correction improve output performance. The hardware and firmware platform design reduces the number of unique boards, improving mean time to repair (MTTR) and resulting in reduced downtime. Built-in static and maintenance bypass transfer UPS load to utility power during faults, overloads and maintenance, which also avoids costly system downtime.

External Batteries Supply Reliable Backup with Expandable Runtime Options The S3M160KX uses external scalable battery cabinets, such as BP480V65 and BP480V100 (sold separately), to provide up to three hours of backup support in case of a power failure. Add the optional TEMPC100200 thermostat kit to enable temperature-compensated charging for optimized battery lifespan. The UPS system automatically restarts after a lengthy power outage.

Intuitive Color Touchscreen Display Delivers Important Performance Information at a Glance The large (25.4 cm/10 inches) front-panel color interface enables comprehensive local monitoring and control capability. It displays critical operating conditions and diagnostic data, such as phase load levels, available runtime, alarm status, battery charge, and voltage and frequency values. Six LEDs indicate bypass, on-

Highlights

- Best-in-class footprint and power density minimize space requirements for up to 160kVA
- Large (25.4 cm/10 in.) color touchscreen display enables user-friendly local management
- High efficiency (94% on-line, 98% ECO mode) helps reduce operating costs
- Optional WEBCARDLX with latest version of PADM20 supports Auto Probe feature
- Parallel capability provides increased capacity and fault tolerance

Applications

- Fit 160kVA UPS in best-in-class footprint to save space for revenue-generating equipment
- Back up critical IT equipment and data in network, telecom, financial and light industrial applications
- Maintain data-center operations during all power conditions

Package Includes

- S3M160KX SmartOnline S3MX Series 3-Phase 380/400/415V 160kVA 144kW On-Line Double-Conversion UPS
- P100200KIT parallel cable kit
- RS-232 cable
- Owner's manual

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line, inverter, battery and alarm/fault modes.

Network Management Card Offers Remote Monitoring and Control The optional WEBCARDLX (sold separately) with the latest version of PowerAlert Device Manager firmware (PADM20) provides enhanced remote management capabilities, including customizable dashboard graphs to fit user preferences. The PADM20 upgrade and Tripp Lite's PowerAlert Element Manager (PAEM) software form a powerful tool for expanding maintenance functions in large installations, including firmware update checks and backup and restoration of device configurations. Auto Probe allows a UPS with switched loads to automatically reboot devices if a network communication failure is detected. This preserves uptime and minimizes the time and expense associated with on-site support.

Parallel Capability Provides Additional Capacity Connect two S3M160KX units in parallel using separate/shared battery cabinets for increased capacity and fault tolerance (N+1 redundancy).

Specifications

OVERVIEW	
UPC Code	037332225443
UPS Type	On-Line
INPUT	
Input Phase	3-Phase
Rated input current (Maximum Load)	275A
Nominal Input Voltage(s) Supported	220/380V 3-PH Wye; 230/400V 3-PH Wye; 240/415V 3-PH Wye
Nominal Input Voltage Description	3-Phase Wye, 4 wire plus ground (L1, L2, L3, N, G)
UPS Input Connection Type	Hardwire
Input Circuit Breakers	400A (3 pole)
Power Factor (Input)	.99PF (100% load)
THDi	<3% (100% load)
OUTPUT	
Output Capacity (VA)	160000
Output Capacity (kVA)	160
Output Capacity (Watts)	144000
Output Capacity (kW)	144.00
Output Capacity Details	Supports up to 100% load continuously in double conversion mode; Supports up to 110% load for 60 minutes, up to to 125% load for 10 minutes, up to 150% load for 1min and greater than 150% for 1 milliseconds before switching to bypass mode; Inverter mode is automatically restored as load levels are reduced to less than 100%; Configuration options support up to 2 S3M160KX systems wired in parallel for increased capacity, or redundancy (N+1) to increase fault-tolerant and redundant operation
Power Factor	0,9
Crest Factor	3:1
Frequency Compatibility	50 / 60 Hz; Supports 50 to 60 Hz and 60 to 50 Hz conversion

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Frequency Compatibility Details	Automatic frequency selection
Output Voltage Regulation (Line Mode)	+/- 1%
Output Voltage Regulation (Economy Line Mode)	+/-15V of nominal
Output Voltage Regulation (Battery Mode)	+/- 1%
Output AC Waveform (AC Mode)	Pure Sine wave
Output AC Waveform (Battery Mode)	Pure Sine wave
Nominal Output Voltage(s) Supported	220/380V 3-PH Wye; 230/400V 3-PH Wye; 240/415V 3-PH Wye
Output Receptacles	Hardwire
Individually Controllable Load Banks	Yes
BATTERY	
Expandable Runtime	Yes
External Battery Pack Compatibility	BP480V100; BP480V100-NIB ; BP480V40; BP480V40-NIB ; BP480V65
DC System Voltage (VDC)	+/- 240
Battery Recharge Rate (Included Batteries)	9 hours to 90% (Internal batteries)
VOLTAGE REGULATION	
Voltage Regulation Description	Online, double-conversion power conditioning maintains output within 1% of the selected nominal voltage in online mode
USER INTERFACE, ALERTS & CONTROLS	
Front Panel LCD Display	Large (25.4cm/10 in) color touchscreen display enables comprehensive local monitoring, diagnostics and control through an advanced, intuitive and user-friendly interface. The display has six sub-screens: HOME, CONTROL, MEASUREMENTS, SETUP, INFORMATION and EVENT. Each of these screens is intuitive and comprehensive providing specifics from input and output phase loads, voltages, frequencies, battery charge status, system operating mode (online, standby, ECO, Battery, fault) status, specific measurement in every operating mode, current and event history of up to 500 events to enable diagnostics and system fault troubleshooting. It is powerful local management tool at your fingertips.
Audible Alarm	Alarms warn users of a variety of operational conditions: There are audible alarms for all modes of operation, as well as fault modes. Please refer to the owner's manual for a full list of audible alarms. Here are a few: Bypass Mode (beeps every 1 min), Battery Mode (beeps every 2 seconds), Low Battery Mode (beeps every 0.5 seconds), UPS Fault Mode (beeps continuously), and UPS alarm (beeps every 1 seconds).
LED Indicators	6 LEDs report BYPASS / LINE / INV/ BATTERY / FAULT/ALARM modes
PHYSICAL	
Primary Form Factor	Tower
Cooling Method	Fans
Installation Form Factors Supported with Included Accessories	Tower

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Primary UPS Depth (mm)	996
Primary UPS Height (mm)	1,455
Primary UPS Width (mm)	567
Shipping Dimensions (hwd / in.)	63.40 x 27.80 x 44.30
Shipping Dimensions (hwd / cm)	161.04 x 70.61 x 112.52
Shipping Weight (lbs.)	739.70
Shipping Weight (kg)	335.52
UPS Housing Material	Steel
UPS Power Module Dimensions (Height x Width x Depth, mm)	1455 x 567 x 995
UPS Power Module Dimensions (hwd, cm)	145.54 x 56.69 x 99.57
UPS Power Module Dimensions (hwd, in.)	57.3 x 22.32 x 39.20
UPS Power Module Weight (kg)	308.99
UPS Power Module Weight (lbs.)	681.2
ENVIRONMENTAL	
Operating Temperature Range	0C to +40C (32-104F)
Storage Temperature Range	-15C to 60C (5 to +140F) without battery
Relative Humidity	5 to 95%, non-condensing
Operating Elevation (ft.)	< 3280ft (Capacity de-rates by 1% for every 328ft over 3280ft)
Audible Noise	<73dBA at 1meter
Operating Elevation (m)	< 1000m (Capacity de-rates by 1% for every 100m over 1000m)
COMMUNICATIONS	
Network Management Cards	WEBCARDLX; MODBUSCARDSV ; RELAYCARDSV
Network Monitoring Port Description	Card accessory slot supports network management interface WEBCARDLX card or a programmable I/O RELAYCARDSV relay card options
Communications Cable	DB9/RS-232 cable included
Communications Interface	DB9 Serial; EPO (emergency power off); Slot for SNMP/Web interface
LINE / BATTERY TRANSFER	
Transfer Time	Zero transfer time Online to Battery, Inverter to Bypass 0ms (Synchronous), and Inverter to ECO mode < 20ms.
Low Voltage Transfer to Battery Power (Setpoint)	120V(Ph-N), 208V (Ph-Ph) @ 50% load / 176V (Ph-N), 305V (Ph-Ph) @ 100% load.
High Voltage Transfer to Battery Power (Setpoint)	276 (Ph-N), 478V (Ph-Ph) @ 50% or 100% load.

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FEATURES & SPECIFICATIONS	
Cold Start (Startup in Battery Mode During a Power Failure)	Cold-start operation supported
High Availability UPS Features	Automatic inverter bypass; Manual bypass switch; Auto Probe Monitoring (requires WEBCARDLX); Zero transfer time; On-Line/Double-Conversion
Green Energy-Saving Features	High efficiency economy mode operation
Grounding Details	Yes
IP68 Rated	No
IP20 Rated	No
APPLICATIONS	
UPS Applications	Mission Critical Applications
STANDARDS & COMPLIANCE	
Product Certifications	IEC/EN 62040
Product Compliance	RoHS; CE (Europe); UKCA
WARRANTY & SUPPORT	
Product Warranty Period (U.S. & Canada)	2-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