# **3-PHASE UPS SYSTEMS**



## Powering and Connecting Your World

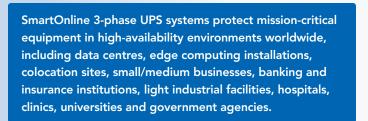
TRIPPLITE

# SmartOnline<sup>®</sup> 3-Phase UPS

Continuous power for critical applications.

10–210 kVA, 380/400/415V Ph-Ph 20–140 kVA, 208/220V Ph-Ph

- Efficient and reliable operation
- Parallel capability up to 400 kVA
- Powerful network management
- Battery cabinets for scalable runtimes
- Comprehensive service program



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| Overview                              | 2-3   |
|---------------------------------------|-------|
| 3-Phase UPS Families                  | 4-5   |
| <b>SVTX Series</b> (400V, 10–30 kVA)  | 6-7   |
| <b>SUTX Series</b> (400V, 20–40 kVA)  | 8-9   |
| <b>S3MX Series</b> (400V, 30–200 kVA) | 10-12 |
| <b>SVX Series</b> (400V, 30–210 kVA)  | 13–15 |
| SUT Series (208V, 20-60 kVA)          | 16–17 |
| <b>SV Series</b> (208V, 20–140 kVA)   | 18-20 |
| Network Management                    | 21    |
| 3-Phase UPS Accessories               | 22-23 |
| Service Program                       | 24    |

# TRIPP-LITE OVERVIEW

### Tripp Lite SmartOnline 3-Phase UPS Systems: Protecting Mission-Critical Environments Worldwide

Since 1922, Tripp Lite has built a reputation for outstanding reliability and exceptional service. From desktop to critical infrastructure, Tripp Lite products and solutions power and connect the computers, networking equipment and electronic devices that form the foundation of our digital world.

With capacities ranging from 10 kVA to 210 kVA (400 kVA in parallel), Tripp Lite's field-proven 3-phase UPS systems are used today in mission-critical production environments worldwide, including data centres, edge computing installations, colocation sites, small/medium businesses, banking and insurance institutions, light industrial facilities, hospitals, clinics, universities and government agencies. Featuring voltage- and frequency-independent (VFI) double-conversion operation, they provide the highest level of power protection.



Review this brochure for an introduction to Tripp Lite 3-phase UPS systems and the benefits they can provide to your organisation. When you are ready to learn more, Tripp Lite's dedicated 3-phase application engineers will help you configure the best solution for your requirements, providing actionable recommendations and bills of material to ensure your solution provides the availability and affordability you need to meet your goals.



400V UPS Families – See page 4 for more information.

### Scalable Runtime with External Battery Cabinets

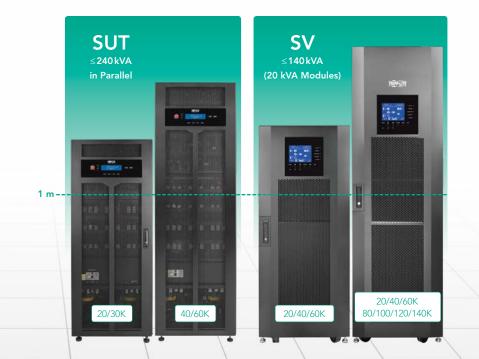
Tripp Lite provides a variety of external battery cabinet options, allowing you to customise and expand battery backup runtime.

### Scalable Capacity to Keep Pace with Your Business

As loads increase, you can expand UPS capacity with hot-swappable power modules (SV/SVX series) or parallel capability (SVTX, SUT/SUTX and S3MX series).

### Optimised Footprints for Edge Computing

A variety of models with internal batteries offer the compact footprint required for IoT, edge computing, back office and other space-constrained applications, including containerised micro data centres.



### Powerful and Convenient Remote Management

**WEBCARDLX** enables remote management through HTML5 and SNMP interfaces, as well as support for integration with DCIM platforms.

# Customisable Redundancy for High Availability

Select the best configuration for your application's availability requirements, including N+1 and N+N redundancy.

# Comprehensive Service for Reliability and Uptime

Tripp Lite's 3-phase UPS service program ensures your UPS is ready to protect you from downtime over its entire lifecycle, from initial startup to annual service agreements and preventive maintenance.

### Low Cost of Ownership to Maximise Profitability

High efficiency in double-conversion mode and ECO mode reduces your organisation's operational expenditures for power and cooling, while low THDi and active input power factor correction eliminate costly over-sizing requirements for generators and other equipment. Small UPS footprints leave more space for revenue-generating equipment and permit installation in smaller spaces without the expense and delay of retrofitting.

208V UPS Families – See page 5 for more information.

# TRIPP-LITE 3-PHASE UPS FAMILIES







|                                |  |   |  | 0 0 00  |  |  |  |  |  |
|--------------------------------|--|---|--|---|--|--|--|--|--|
| 400V                           | SVTX Series  | SUTX Series   | S3MX Series  | SVX Series  |  |  |  |  |  |
| Capacity                       | 10/20/30 kVA<br>(Parallel to 90 kVA)   | 20/40 kVA<br>(Parallel to 160 kVA)  | 30–200 kVA<br>(Parallel to 400 kVA)  | 30–210 kVA<br>(30 kVA modules)  |  |  |  |  |  |
| Voltage                        | 380/400/415V (Ph-Ph), 220/230/240V (Ph-N)  |   |  |   |  |  |  |  |  |
| Distinct<br>Series<br>Benefits | Cost-effective power<br>protection for small<br>applications that require a<br>small footprint | Advanced, high-efficiency<br>protection for installations<br>that may require N+N<br>redundancy             | Best-value, high-<br>performance power<br>protection with best-in-<br>class footprint and unique<br>battery-sharing capability   | Best value for growing<br>businesses; scalable via<br>30 kVA modules with N+1;<br>high efficiency; low mean<br>time to repair (MTTR)                      |  |  |  |  |  |
| Applications and I             | ndustries  |   |  |   |  |  |  |  |  |
| Typical<br>Applications        | Small business<br>installations, server rooms<br>and network closets                           | Small and medium<br>installations, dedicated<br>IT space and mixed-use<br>buildings with IT load<br>≤ 80 kW | Small and medium data<br>centres, light industrial<br>settings and large<br>corporate networks with<br>IT load ≤400 kW or 50<br>server racks at 8 kW/rack  | Small and medium data<br>centres, light industrial<br>settings and large<br>corporate networks with<br>IT load ≤210 kW or 26<br>server racks at 8 kW/rack |  |  |  |  |  |
| Industries                     | Data centres, edge comput<br>education, government   | ting, colocation, business, lig   | ht manufacturing, finance, h   | ealthcare,  |  |  |  |  |  |
| Key Features                   |  |   |  |   |  |  |  |  |  |
| Format                         | Small tower  | Compact tower   | Best-in-class footprint  | Rack-based (30U or 42U)   |  |  |  |  |  |
| UPS Footprint                  | 10/20K: 0,20 m² (2,2 ft.²)<br>30K: 0,24 m² (2,6 ft.²)  | 20/40K: 0,41 m² (4,4 ft.²)  | 30/40K: 0,24 m <sup>2</sup> (2,6 ft. <sup>2</sup> )<br>60/80K: 0,28 m <sup>2</sup> (3,0 ft. <sup>2</sup> )<br>100/120K: 0,54 m <sup>2</sup> (5,8 ft. <sup>2</sup> )<br>160/200K: 0,56 m <sup>2</sup> (6,0 ft. <sup>2</sup> ) | 30–210K: 0,66 m² (7,1 ft.²)   |  |  |  |  |  |
| UPS Height                     | 10/20K: 0,86 m (33,9 in.)<br>30K: 1,04 m (40,7 in.)  | 20/40K: 1,40 m (55,1 in.)   | 30/40K: 1,00 m (39,4 in.)<br>60/80K: 1,01 m (39,8 in.)<br>100/120K: 1,02 m (40,0 in.)<br>160/200K: 1,45 m (57,3 in.)   | 30–90K: 1,48 m (58,1 in.)<br>30–210K: 2,01 m (79,1 in.)   |  |  |  |  |  |
| Local/Remote<br>Management     | LCD + optional<br>network card   | LCD + optional<br>network card  | LCD or extra-large LCD + optional network card   | Large LCD + included<br>network card  |  |  |  |  |  |
| Output Power<br>Factor         | 0,9 power factor   | Unity (1,0) power factor  | 0,9 power factor   | Unity (1,0) power factor  |  |  |  |  |  |
| Efficiency                     | ≤92% (≤99% ECO)  | ≤95% (≤99% ECO)   | ≤94% (≤98% ECO)  | ≤95% (≤99% ECO)   |  |  |  |  |  |
| Parallel Capability            | 3x capacity for<br>20/30K only   | 4x capacity or redundancy   | 3x capacity and<br>redundancy for 30-80K;<br>2x capacity and<br>redundancy for 100-200K  | Internal/modular N+1  |  |  |  |  |  |
| Battery Options                | Internal and/or<br>external batteries  | Internal and/or<br>external batteries   | Internal (30–40K) or<br>external (30–200K)<br>batteries; 2 units can<br>share 1 battery cabinet  | Internal or<br>external batteries   |  |  |  |  |  |
| Series Details                 | SVTX: Pages 6-7  | SUTX: Pages 8-9   | S3MX: Pages 10-12  | SVX: Pages 13-15  |  |  |  |  |  |

# TRIPP-LITE 3-PHASE UPS FAMILIES



|                                |   | 0 V V 0   |
|--------------------------------|---|---|
| 208V                           | SUT Series  | SV Series   |
| Capacity                       | 20/30/40/60 kVA<br>(Parallel to 240 kVA)  | 20–140 kVA<br>(20 kVA modules)  |
| Voltage                        |   | , 120/127V (Ph-N)   |
| Distinct<br>Series<br>Benefits | Advanced protection<br>for installations that may<br>require N+N redundancy                                 | Best value for growing<br>businesses; scalable via<br>20 kVA modules with N+1;<br>low mean time to repair<br>(MTTR)                                       |
| Applications and I             | ndustries   |   |
| Typical<br>Applications        | Small and medium<br>installations, dedicated<br>IT space and mixed-use<br>buildings with IT load<br>≤ 80 kW | Small and medium data<br>centres, light industrial<br>settings and large<br>corporate networks with<br>IT load ≤126 kW or 15<br>server racks at 8 kW/rack |
| Industries                     | Data centres, edge computin<br>manufacturing, finance, healt  | g, colocation, business, light<br>hcare, education, government  |
| Key Features                   |   |   |
| Format                         | Compact tower   | Rack-based (30U or 42U)   |
| UPS Footprint                  | 20–60K: 0,42 m² (4,5 ft.²)  | 20–140K: 0,66 m² (7,1 ft.²)   |
| UPS Height                     | 20/30K: 1,38 m (54,3 in.)<br>40/60K: 1,76 m (69,3 in.)  | 20–60K: 1,48 m (58,1 in.)<br>20–140K: 2,01 m (79,1 in.)   |
| Local/Remote<br>Management     | LCD + optional<br>network card  | Large LCD + included<br>network card  |
| Output Power<br>Factor         | Unity (1,0) power factor  | 0,9 power factor  |
| Efficiency                     | ≤93% (≤98% ECO)   | ≤92% (≤99% ECO)   |
| Parallel Capability            | 4x capacity or redundancy   | Internal/modular N+1  |
| Battery and<br>Runtime Options | Internal and/or<br>external batteries   | Internal or<br>external batteries   |
| Series Details                 | SUT: Pages 16–17  | SV: Pages 18-20   |



#### Remote Management

Tripp Lite 3-phase UPS systems support powerful and convenient remote management capabilities through **WEBCARDLX**, which is included with SV and SVX models and optional for other models. For more information, see page 21.



### Scalable Runtime

Tripp Lite provides a variety of external battery cabinets that allow you to customise and expand your 3-phase UPS system's battery backup runtime to support a wide range of applications. For more information, see pages 22–23.



**3-Phase UPS Service** 

Tripp Lite's 3-phase UPS service program maintains the reliability and efficiency of your UPS over its entire lifecycle, ensuring it is always ready to protect you from downtime. For more information, see page 24.

# TRIPP-LITE SVTX SERIES



# SmartOnline SVTX Series

### 10/20/30 kVA, 380/400/415V Ph-Ph

- Best-in-class footprint
- VFI operation and IGBT inverter
- High output power factor (0,9)
- Optional network management card
- Built-in static and maintenance bypass
- Parallel capability up to 90 kVA
- ≤4 min. at full load with internal batteries
- ≤92 min. at full load with external batteries

### Key Features and Benefits

### **BEST-IN-CLASS FOOTPRINT**

• Compact footprint saves valuable space for revenuegenerating equipment and allows installation in smaller spaces without the expense and delay of retrofitting

### SCALABLE, FAULT-TOLERANT ARCHITECTURE

- Parallel capability provides up to 90 kVA
- Space-saving internal batteries enable short-runtime applications with a small footprint
- Optional external battery cabinets outlast extended outages to enable long-runtime applications
- Built-in static and maintenance bypass transfer load to utility power during faults, overloads and service

### POWERFUL UPS MANAGEMENT

- User-friendly LCD control panel permits full-featured local management through a user-friendly interface
- Optional WEBCARDLX network card enables remote management through embedded HTML5 web, SSH/telnet and SNMP interfaces, as well as integration with Network Management Systems and DCIM platforms (See page 21 for more information.)
- Standard Emergency Power Off (EPO) allows immediate shutdown during emergencies

### HIGH-PERFORMANCE OPERATION

- Voltage- and frequency-independent (VFI) operation and transformerless IGBT rectifier technology provide reliable output power quality with pure sine wave
- Low THDi (<6%) improves generator compatibility and eliminates costly over-sizing requirements
- Low THDv (<2%) and active power factor correction improve output performance
- High output power factor (0,9) allows the UPS to support more equipment without overloading
- High charging capacity allows the UPS to ride through multiple power failures in rapid succession

### COMPREHENSIVE SERVICE PROGRAM

- Tripp Lite Care ensures your UPS is ready to protect you from downtime over its entire lifecycle, from initial startup to annual service agreements and preventive maintenance
- Regular service improves UPS reliability, longevity and cost control (See page 24 for more information.)

Typical Applications: Small business installations, server rooms and network closets

# SmartOnline SVTX Series Technical Specifications

| Model                                    | SVT10KX                                 | SVT20KX   | SVT30KX         |
|--|---|---|-----------------|
| Capacity                                 | 10 kVA/9 kW                             | 20 kVA/18 kW  | 30 kVA/27 kW    |
| opology                                  |   | ency-Independent (VFI) True On-Line   |                 |
| NPUT                                     | , i i i i i i i i i i i i i i i i i i i |   |                 |
| /oltage                                  | 38                                      | 0/400/415V (Ph-Ph); 220/230/240V (Ph  | n-N)            |
| /oltage Range                            |   | 305–478V (100% Load)  |                 |
| Phase                                    |   | 3-Phase, Neutral and Ground   |                 |
| Operating Frequency                      |   | 50/60 Hz (Selectable)   |                 |
| Frequency Range                          | 46-54                                   | Hz (50 Hz System); 56–64 Hz (60 Hz S  | System)         |
| Power Factor                             |   | >0,99%  |                 |
| [HDi                                     |   | <6%   |                 |
| nverter Bridge                           |   | IGBT Technology   |                 |
|  | 20                                      |   | N I)            |
| /oltage<br>AC Voltage Regulation         |   | <u>0/400/415V (Ph-Ph); 220/230/240V (Ph</u><br>±1%                          | I-IN)           |
| Frequency (Range)                        |   | 50/60 Hz, Selectable (±0,1 Hz)  |                 |
| Efficiency (ECO/Line Mode, 100% Load)    | 99%/90%                                 | 97%/91%   | 97%/92%         |
| Overload (AC and Battery Mode)           |   | )% (10 min.); 111%–130% (1 min.); >1  |                 |
| Crest Factor                             | 100%=110                                | 3:1   | 50% (1 sec.)    |
| Harmonic Distortion                      | <                                       | 2% (Linear Load); < 5% (Non-Linear Lo                                       | ad)             |
| Fransfer Time                            |   | (Line $\leftarrow$ Battery); 0 ms (Inverter $\leftarrow$ B)                 |                 |
| Dutput Waveform                          | 0113                                    | Pure Sine Wave  | 12000/          |
| BYPASS                                   |   |   |                 |
| Static and Maintenance Bypass            |   | Standard  |                 |
| Fransfer Time                            |   | <1 ms   |                 |
| Default Bypass Voltage Tolerance         |   | 190V–457V (Ph-Ph, Adjustable)   |                 |
| Overload                                 |   | <130% (Continuous); >130% (1 min.)  | )               |
| BATTERY                                  |   |   |                 |
| Battery Type                             | Maintenand                              | ce-Free Sealed Valve-Regulated Lead   | -Acid (VRLA)    |
| Battery Capacity                         |   | 12V 9 Ah  |                 |
| Quantity                                 | 20                                      | 20 x 2  | 20 x 3          |
| Battery Charging Capacity                | 2A                                      | 44  | λ               |
| Float Voltage                            |   | 273V DC ± 1%  |                 |
| Battery Storage Time                     |   | 6 months (Without Recharge, 25° C)  |                 |
| BATTERY RUNTIME (50%/100% Load)          |   |   |                 |
| nternal Batteries Only                   | 11/4 min.                               | 11/4 min.   | 11/4 min.       |
| -1 BP240V135 External Battery Cabinet    | 68/29 min.                              | 38/16 min.  | 32/13 min.      |
| +2 BP240V135 External Battery Cabinets   | 135/59 min.                             | 68/30 min.  | 53/22 min.      |
| -3 BP240V135 External Battery Cabinets   | 206/92 min.                             | 101/45 min.   | 76/31 min.      |
|  |   |   |                 |
| Operating Temperature / Humidity         |   | otimal Battery Life <25° C)/0–95% (N<br>0 m (1% Derating per 100 m Above 10 |                 |
| Dperating Altitude                       | < 100                                   | <65 dBA @ 1 m   | 000 m)          |
| MANAGEMENT                               |   | < 65 UBA @ T III  |                 |
| Control Panel                            |   | 62 mm Multifunction LCD   |                 |
| RS-232 Serial (DB9)                      |   |   |                 |
| Network Management Card (SNMP)           | Ontional M                              | Standard<br>VEBCARDLX (See page 21 for more in                              | nformation )    |
| MODBUS                                   |   | Optional <b>MODBUSCARDSV</b>  |                 |
| Relay Interface Card                     |   | Optional ( <b>RELAYCARDSV</b> )   |                 |
| requency Converter Mode                  |   | Programmable  |                 |
| Parallel Capability for Capacity         | No                                      | Up to 3   | Units           |
| EPO (Emergency Power Off)                |   | Standard  |                 |
| STANDARDS                                |   |   |                 |
| Safety                                   |   | IEC/EN 62040-1  |                 |
| EMC                                      | IEC/EN                                  | 62040-2; IEC/EN 61000-4-2; IEC/EN 6   | 1000-4-3        |
| burge                                    |   | IEC/EN 61000-4-5 Level 4  |                 |
| Conduction Immunity                      |   | IEC/EN 61000-4-6  |                 |
| Approvals                                |   | TUV   |                 |
| Additional                               |   | RoHS, IP20 Ingress Protection Rating  | 1               |
| HYSICAL                                  |   |   |                 |
| Jnit Dimensions (HxWxD)                  |   | 0x813 mm  | 1035x300x813 mm |
| Jnit Weight                              | 118 kg                                  | 178 kg  | 235 kg          |
| hipping Dimensions (HxWxD)               |   | 80 x 920 mm   | 1240x430x920 mm |
| Shipping Weight                          | 135 kg                                  | 195 kg  | 255 kg          |
| Cabinet Colour                           |   | RAL 9005 (Black)  |                 |
| ADDITIONAL ACCESSORIES (Sold Separately) |   |   |                 |
| Maintenance Bypass Panels                | SU10KMBPKX                              | SU20KMBPKX<br>35 (Connect up to 3 battery cabinets                          | SU40KMBPKX      |

# TRIPP-LITE SUTX SERIES



# SmartOnline SUTX Series

### 20/40 kVA, 380/400/415V Ph-Ph

- VFI operation and IGBT with DSP control
- Up to 95% double-conversion efficiency
- Unity output power factor (1,0)
- Optional network management card
- Built-in static and maintenance bypass
- Parallel capability up to 160 kVA
- Dual redundant AC inputs
- ≤14 min. at full load with internal batteries
- Up to several hours of runtime at full load with external batteries

### Key Features and Benefits

### SCALABLE, FAULT-TOLERANT ARCHITECTURE

- Parallel capability provides up to 160 kVA and supports N+N redundancy
- Space-saving internal batteries enable short-runtime applications with an optimised footprint
- Optional external battery cabinets outlast extended outages to enable long-runtime applications
- Built-in static and maintenance bypass transfer load to utility power during faults, overloads and service
- Dual AC inputs can connect to independent sources for additional power redundancy and increased availability

### POWERFUL UPS MANAGEMENT

- User-friendly LCD control panel permits full-featured local management through a user-friendly interface
- Optional WEBCARDLX network card enables remote management through embedded HTML5 web, SSH/telnet and SNMP interfaces, as well as integration with Network Management Systems and DCIM platforms (See page 21 for more information.)
- Standard Emergency Power Off (EPO) allows immediate shutdown during emergencies

### EFFICIENT, HIGH-PERFORMANCE OPERATION

- Voltage- and frequency-independent (VFI) operation and transformerless IGBT rectifier technology with DSP control provide reliable output power quality with pure sine wave
- 95% double-conversion efficiency and 99% ECO-mode efficiency reduce power and cooling costs
- Low THDi (4–5%) improves generator compatibility and eliminates costly over-sizing requirements
- Low THDv (1%) and active power factor correction improve output performance
- Unity output power factor (1,0) allows the UPS to support more equipment without overloading
- High charging capacity allows the UPS to ride through multiple power failures in rapid succession

### COMPREHENSIVE SERVICE PROGRAM

• Tripp Lite Care improves UPS reliability, longevity and cost control (See page 24 for more information.)

Typical Applications: Small and medium installations, dedicated IT space and mixed-use buildings with IT load  $\leq$  80 kW

# SmartOnline SUTX Series Technical Specifications

| OVERVIEW<br>Model  | SUTX20K  | SUTX40K  |
|--|--|--|
| Capacity   | 20 kVA/20 kW                                     | 40 kVA/40 kW                                       |
| Тороlоду   |  | nt (VFI) True On-Line Double Conversion            |
| INPUT  | voltage- and riequency-independe                 |  |
| Voltage  | 380/400/415V (Pb-P                               | h); 220/230/240V (Ph-N)                            |
| Voltage Range  |  | / (100% Load)                                      |
| Phase  |  | utral and Ground                                   |
| Operating Frequency (Range)                                |  | ectable (40–70 Hz)                                 |
| Power Factor   |  | 0,99%  |
| THDi   | 5%   | 4%   |
| Inverter Bridge  | IGBT 1   | echnology  |
| OUTPUT   |  |  |
| Voltage  | 380/400/415V (Ph-P                               | h); 220/230/240V (Ph-N)                            |
| AC Voltage Regulation                                      |  | ±1%  |
| Frequency (Range)  |  | ectable (±0,05 Hz)                                 |
| Efficiency   |  | s); 99% ECO Mode (100% Load)                       |
| Overload (AC and Battery Mode)                             | 105% (Continuous); 106–125% (10 r                | nin.); 126–150% (1 min.); >150% (1 sec.)           |
| Crest Factor   |  | 3:1  |
| Harmonic Distortion  | 1% (Linear Load), 3% (Non-Linear Load)           | 1% (Linear Load), 2% (Non-Linear Load)             |
| Transfer Time  |  | ; 0 ms (Inverter -> Bypass)                        |
| Output Waveform  | Pure   | Sine Wave  |
| BYPASS   | <u>;</u> ;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;     |  |
| Static and Maintenance Bypass                              |  | andard   |
| Transfer Time  |  | 0 ms<br>= 15%                                      |
| Default Bypass Voltage Tolerance<br>Overload               |  | nin.); 126–150% (1 min.); >150% (1 sec.)           |
| BATTERY  | 105% (Continuous); 106–125% (10 r                | nin.); 120–150% (1 min.); > 150% (1 sec.)          |
|  | Maintananaa Fraa Saalad V                        | alve-Regulated Lead-Acid (VRLA)                    |
| Battery Type<br>Battery Capacity                           |  | V9Ah   |
| Quantity   |  | 2 Strings  |
| Battery Charging Capacity                                  | 1,5A–5A (Default: 1,5A)                          | 1,5A–5A (Default: 2A)                              |
| Float Voltage  |  | DC ±2%   |
| Boost Voltage  |  | DC ±2%   |
| End of Discharge Voltage                                   |  | DC ± 2%  |
| Battery Storage Time                                       |  | but Recharge, 25° C)                               |
| Battery Runtime (50%/100% Load)                            | 33/14 min.                                       | 14/5 min.  |
| ENVIRONMENT  |  |  |
| Operating Temperature / Humidity                           | 0–40° C (For Optimal Battery Life:               | 17–25° C)/0–95% (Non-Condensing)                   |
| Operating Altitude   | <1000 m (Derate 1%                               | per 100 m above 1000 m.)                           |
| Audible Noise  | <55 dBA @ 1 m                                    | <60 dBA @ 1 m                                      |
| MANAGEMENT   |  |  |
| Control Panel  |  | Iltifunction LCD                                   |
| RS-232 Serial (DB9)  | Sta  | andard   |
| Contact Closure  |  | andard   |
| Network Management Card (SNMP)                             |  | e page 21 for more information.)                   |
| MODBUS   |  | 10DBUSCARD   |
| Frequency Converter Mode<br>Parallel Connection Capability |  | ammable<br>apacity or Redundancy                   |
| EPO (Emergency Power Off)                                  |  | apacity of Redundancy                              |
| STANDARDS  |  |  |
| Safety   |  | N 62040-1  |
| EMC  |  | 61000-4-2; IEC/EN 61000-4-3                        |
| Surge  | · · · · · · · · · · · · · · · · · · ·            | 000-4-5 Level 4                                    |
| Conduction Immunity  |  | J 61000-4-6  |
| Approvals  |  | TUV  |
| Additional   |  | ess Protection Rating                              |
| PHYSICAL   |  |  |
| Unit/Shipping Dimensions (HxWxD)                           | 1400×490×840 mn                                  | n/1642x725x1010 mm                                 |
| Unit/Shipping Weight                                       | 363 kg/400 kg                                    | 383 kg/420 kg                                      |
| Cabinet Colour   |  | D05 (Black)  |
| ADDITIONAL ACCESSORIES (Sold Separat                       |  |  |
| External Battery Cabinets                                  |  | V500 (Non-matching battery cabinets with batteries |
|  | included for a range of long-runtime application | s. See www.tripplite.com for more information.)    |
|  |  | al battery cabinets per UPS.                       |
| Maintenance Bypass Panels                                  | SUT20KMBPX                                       | SUT40KMBPX   |

# TRIPP-LITE S3MX SERIES



power protection with bestin-class footprint and unique battery-sharing capability

### Key Features and Benefits

### BEST-IN-CLASS FOOTPRINT AND POWER DENSITY

- Compact footprint for up to 200 kVA saves valuable space for revenue-generating equipment and allows installation in smaller spaces without the expense and delay of retrofitting
- Parallel capability provides up to 400 kVA

### EFFICIENT, HIGH-PERFORMANCE OPERATION

- Highly efficient transformerless double-conversion technology delivers operating cost savings
- 94% double-conversion efficiency and 98% ECO-mode efficiency reduce power and cooling costs
- Low THDi (<3%) improves generator compatibility and eliminates costly over-sizing requirements
- Low THDv (≤2%) and active power factor correction improve output performance
- Built-in static and maintenance bypass transfer UPS load to utility power during faults, overloads and service to avoid costly system downtime
- Unified platform and firmware design reduces the number of unique boards, improving mean time to repair (MTTR)

### UNIQUE BATTERY-SHARING CAPABILITY

• Two S3MX UPS systems can share a single battery cabinet, providing substantial cost and space savings

# SmartOnline S3MX Series

### 30-200 kVA, 380/400/415V Ph-Ph

- Best-in-class footprint and power density
- Reduced cost of ownership
- Large, advanced colour touchscreen
- Efficient and reliable operation
- Powerful network management
- Parallel for redundancy and capacity up to 3 units (30-80 kVA) and up to 2 units (100-200 kVA)
- VFI operation with DSP control
- Dual AC inputs available
- Comprehensive service plans

### POWERFUL UPS MANAGEMENT

- Extra-large (25,4 cm/10 in.) colour touchscreen display permits comprehensive local management through an advanced and user-friendly interface (100–200 kVA models)
- Optional WEBCARDLX network card enables remote management through embedded HTML5 web, SSH/telnet and SNMP interfaces, as well as integration with Network Management Systems and DCIM platforms (See page 21 for more information.)
- Standard Remote Emergency Power Off (REPO) allows shutdown from a safe distance during emergencies

### RELIABLE PERFORMANCE

- Parallel for redundancy or capacity
- Dual AC inputs can connect to independent sources for additional power redundancy and increased availability
- Voltage and frequency independent (VFI) operation and advanced IGBT rectifier technology with DSP control provide reliable output power quality
- Built-in static and maintenance bypass transfer UPS load to utility power during faults, overloads and maintenance to avoid costly system downtime

Typical Applications: Small and medium data centres, light industrial settings and large corporate networks with IT load  $\leq$ 400 kW or 50 server racks at 8 kW/rack

# SmartOnline S3MX Series Technical Specifications

| Models (Single AC Input)                                  | S3M30KX        | S3M40KX                          | S3M60KX                              | S3M80KX            | S3M100KX  | S3M120KX              | S3M160KX                            | S3M200KX             |
|---|----------------|----------------------------------|--------------------------------------|--------------------|---|-----------------------|-------------------------------------|----------------------|
| Models (Dual AC Input)                                    | S3M30KXD       | S3M40KXD                         | S3M60KXD                             | S3M80KXD           | S3M100KXD   | S3M120KXD             | S3M160KXD                           | S3WI200KXD           |
| OVERVIEW  |                |                                  | -                                    |                    | -   |                       |                                     |                      |
| Capacity (VA)   | 30 kVA         | 40 kVA                           | 60 kVA                               | 80 kVA             | 100 kVA   | 120 kVA               | 160 kVA                             | 200 kVA              |
| Capacity (Watts)  | 27 kW          | 36 kW                            | 54 kW                                | 72 kW              | 90 kW   | 108 kW                | 144 kW                              | 180 kW               |
| INPUT   |                |                                  |                                      |                    |   |                       |                                     |                      |
| Nominal Voltage   |                |                                  | Ph-Ph 3                              | 80V/400V/415V      | (Ph-N 220V/230  | )V/240V)              |                                     |                      |
| Voltage Range   | Ph-Ph 208-4    | 478V at < 50% L                  | _oad; Ph-Ph 208                      |                    | 78V at 50% to 80<br>/ at > 80% Load   |                       | ge Range Varies                     | with Load);          |
| Voltage Comeback  |                |                                  | Low-Los                              | s Voltage +10V;    | High-Loss Volt  | age -10V              |                                     |                      |
| Nominal Frequency   |                |                                  |                                      |                    | to-Selectable)  | <u> </u>              |                                     |                      |
| Frequency Range   | 46-54 Hz       | (50 Hz System);                  | 56-64 Hz (60 H                       |                    |   | 40-7                  | 70 Hz                               |                      |
| Phase   | 10 0 1 1 12    | (00112 0)30011),                 |                                      |                    | Phase, Neutral +  |                       | 0112                                |                      |
| Power Factor (100% Load)                                  |                |                                  | 5-111836 1                           |                    | ),99  |                       |                                     |                      |
| Harmonic Distortion (THDi; 100% Load)                     |                |                                  |                                      |                    | 3%  |                       |                                     |                      |
|   |                |                                  |                                      | < .                | 3%  |                       |                                     |                      |
| OUTPUT  |                |                                  | 0.51                                 |                    |   |                       |                                     |                      |
| Phase   |                |                                  |                                      | · · · ·            | Phase, Neutral -  | •                     |                                     |                      |
| Nominal Voltage   |                |                                  | Ph-Ph 3                              | 80V/400V/415V      | (Ph-N 220V/230  | )V/240V)              |                                     |                      |
| AC Voltage Regulation<br>(Double-Conversion Mode)         |                |                                  |                                      | ±1% (Bala          | nced Load)  |                       |                                     |                      |
| AC Voltage Regulation<br>(Converter Mode or Battery Mode) |                |                                  |                                      | ±                  | 1%  |                       |                                     |                      |
| Power Factor  |                |                                  |                                      | 0                  | ,9  |                       |                                     |                      |
| AC Voltage Regulation (ECO Mode)                          |                | + 11V of                         | Nominal                              |                    |   | + 15V of              | Nominal                             |                      |
| Frequency   | 16-51 Hz       | (50 Hz System);                  |                                      | z Svetem)          | Selectable +  |                       | 4 Hz of Input (D                    | ofault: + 1 Hz)      |
| Frequency Regulation                                      | 40-34112       | (SOTIZ System),                  | 30-04112 (0011                       |                    | 1 Hz  | $1112, \pm 2112, \pm$ |                                     |                      |
| (Converter Mode or Battery Mode)                          |                |                                  |                                      | ± 0,               |   |                       |                                     |                      |
| -   |                |                                  |                                      |                    |   | _                     |                                     |                      |
| Frequency Range (Battery Mode)                            | 11 .           | 1100/ 10 :                       |                                      | '                  | or 60 Hz $\pm$ 0,1 H  |                       | 1 1050/ 10                          | •                    |
| Overload (AC Mode)  | Up to          | 110% = 10 min;<br>> 130%         | ; Up to 130% =<br>% = 1 s            | I min;             | Up to 110% = 1 h; Up to 125% = 10 min;<br>Up to 150% = 1 min; > 150% = 200 ms |                       |                                     |                      |
| Overload (Battery Mode)                                   | Up ·           | to 110% = 30 s;<br>> 130%        | Up to 130% = <sup>-</sup><br>% = 1 s | 10 s;              | Up t  | o 110% = 1 h; L       | Jp to 125% = 10<br>n; > 150% = 200  | min;                 |
| Current Crest Ratio                                       |                |                                  |                                      | 3:1 Ma             | iximum  |                       |                                     |                      |
| Harmonic Distortion (100% Load)                           |                |                                  | ≤ 2% THD (                           | Linear Load): ≤    | 4% THD (Non-L   | _inear Load)          |                                     |                      |
| Transfer Time (Line (                                     |                |                                  |                                      |                    | ms  | · · · · ·             |                                     |                      |
| Transfer Time (Inverter (                                 | Synch          | ronous = 0 ms;                   | Asynchronous                         |                    |   | onous = 0 ms          | Asynchronous <                      | 1 cvcle              |
| Transfer Time (Inverter (                                 |                |                                  | ) ms                                 |                    | <b>-j.</b>  |                       | 0 ms                                |                      |
| BYPASS INPUT  |                |                                  | 51115                                |                    |   |                       | 0 1113                              |                      |
| Nominal Voltage   |                |                                  |                                      | Ph Ph 3801         | //400V/415V   |                       |                                     |                      |
| Phase   |                |                                  | 2 Dhasa                              |                    | Phase, Neutral +  |                       |                                     |                      |
|   |                | 11                               |                                      | vitil Neutral (3-i |   |                       | 0/ .150/ .00                        | 20/                  |
| Voltage Range   |                | Upper Limit: F<br>Lower Limit: P | Ph-IN 231-264V<br>Ph-N 176-209V      |                    |   |                       | 1%, +15% or +20<br>)%, -20% or -30% |                      |
| Nominal Frequency   |                |                                  |                                      | 50/60 Hz (Aut      | to-Selectable)  |                       |                                     |                      |
| Frequency Range   | Sel            | ectable: ± 1-4 ŀ                 | Hz (Default: ± 4                     | Hz)                | Selectable  | e: ± 1 Hz, ± 2 H      | lz, ± 4 Hz (Defau                   | ult: ± 4 Hz)         |
| Overload (Bypass Mode)                                    |                |                                  | = 1 min                              |                    | 10  | 5-110% = 1 h; 1       | 11-125% = 10 n<br>; > 150% = 200    | nin;                 |
| EFFICIENCY  |                |                                  |                                      |                    | 12  |                       | ,                                   |                      |
| AC Line Mode  | 9/1% >+ 100%   | Resistive Load;                  | 93 5% -+ 50%                         | Perietive Load     | 9/1% at 100%  | Registive Load        | ; 93,5% at 50% F                    | Perietive Load       |
|   |                |                                  |                                      |                    |   |                       |                                     |                      |
| ECO Mode  |                | Resistive Load;                  |                                      |                    |   |                       | d; 97% at 50% R                     |                      |
| Battery Mode  | 93,5% at 1009  | % Resistive Load                 | a; 93% at 50% H                      | esistive Load      | 93% at 100%   | Resistive Load;       | ; 92,5% at 50% F                    | kesistive Load       |
| PARALLEL  |                |                                  |                                      |                    |   |                       |                                     |                      |
| Parallel for Capacity & Redundancy                        |                |                                  | 3 Units                              |                    |   | Up to                 | 2 Units                             |                      |
| INTERNAL BATTERIES (S3M30KX, S                            |                |                                  |                                      |                    |   |                       |                                     |                      |
| Versions are also available without<br>Type               | 12V Non-Sp     | illable VRLA                     | -NIB, S3M30K                         | KD-NIB, S3M4       | 0KX-NIB and S   | 3M40KXD-NIB           | 3.)                                 |                      |
|   |                | /GEL                             |                                      |                    |   |                       |                                     |                      |
| Capacity  | 9 Ah           | 10 Ah                            |                                      |                    |   |                       |                                     |                      |
| Quantity  | 80 (2 x String | js of 20 + 20)                   |                                      |                    | No Interna  | al Batteries          |                                     |                      |
| Runtime (50%/100% Load)                                   | 17/5,7 min     | 15/5 min                         |                                      |                    | 10 000000000000000000000000000000000000                                       |                       |                                     |                      |
| Recharge Time   | 9 h to         | 90%                              |                                      |                    |   |                       | KXD-NIB, S3M                        |                      |
| Maximum Charging Current                                  | Adjustable up  |                                  |                                      |                    |   |                       | S3M80KXD, S                         |                      |
| with Included Charging Board                              |                | 2A ±10%)                         | 5310                                 | 100KAD, 53M        | 120KX, S3M12<br>S3M200KX an   |                       | 50KX, S3M160                        | <b>ΛΛ</b> <i>U</i> , |
|   | 13,65V/Batte   |                                  | 1                                    |                    | JUNE OULA di  |                       | •                                   |                      |
| Float Voltage   |                |                                  |                                      |                    |   |                       |                                     |                      |
| Boost Charging  |                | y; 2,35V/Cell                    |                                      |                    |   |                       |                                     |                      |

# SmartOnline S3MX Series Technical Specifications (continued)

| Models (Single AC Input)<br>Models (Dual AC Input)  | S3M30KX<br>S3M30KXD  | S3M40KX<br>S3M40KXD                           | S3M60KX<br>S3M60KXD   | S3M80KX<br>S3M80KXD   | \$3M100KX   | S3M120KX   | S3M160KX<br>S3M160KXD                                   | \$3M200KX                    |  |
|---|--|---|---|---|---|--|---|------------------------------|--|
| EXTERNAL BATTERIES (S3M30KX-  |  |   |   |   |   |  |   |                              |  |
| S3M100KXD, S3M120KX, S3M120   | KXD, S3M160  | KX, S3M160KX                                  |   |   |   |  | s for backup.)  |                              |  |
| Type<br>DC Nominal Acceptance Voltage   |  |   | 12  | •   |   | EL   |   |                              |  |
| Quantity  |  | ± 240 VDC<br>40N (N ≥ 1 x Strings of 20 + 20) |   |   |   |  |   |                              |  |
| Maximum Charging Current  | Adjustable up<br>(Max 12A with 2   |   |   | o to 8A ± 10%   | Adjustable up   |  |   | Adjustable up<br>to 48A ± 1% |  |
| Float Voltage   |  |   |   | · · · · · · · · · · · · · · · · · · ·   | ry; 2,27V/Cell  |  |   |                              |  |
| Boost Charging  |  |   |   |   | y; 2,35V/Cell   |  |   |                              |  |
| End of Discharge  |  |   |   |   | r; 1,67V/Cell   |  |   |                              |  |
| Charger Temperature<br>Compensation   |  | N   | /Α  |   | (Requires   |  | Cell/°C<br>C100200 thern                                | nostat kit.)                 |  |
| PHYSICAL  |  |   |   |   |   |  |   |                              |  |
| Dimensions (H x W x D)  | 1000 x 300 x<br>815 mm   | 1000 x 300 x<br>815 mm                        | 1010 x 360 x<br>790 mm  | 1010 x 360 x<br>790 mm  | 1015 x 567 x<br>945 mm  | 1015 x 567 x<br>945 mm   | 1455 x 567 x<br>995 mm                                  | 1455 x 567 x<br>995 mm       |  |
| Unit Weight<br>(With Internal Batteries)  | 265 kg   | 316 kg  | N/A   | N/A   | N/A   | N/A  | N/A   | N/A                          |  |
| Unit Weight<br>(Without Internal Batteries)   | 60 kg  | 61 kg   | 108 kg  | 113 kg  | 197 kg  | 232 kg   | 309 kg  | 343 kg                       |  |
| ENVIRONMENT   |  |   |   |   |   |  |   |                              |  |
| Operating Temperature   |  |   |   |   | ptimal battery li   |  |   |                              |  |
| Storage Temperature   |  | 0 t   | o 35° C (UPS wit  |   | 5 to 60° C (UPS   | without batteri  | es.)  |                              |  |
| Operating Humidity  |  |   |   |   | n-Condensing)   |  |   |                              |  |
| Operating Altitude  | (0.15.1  |   |   |   | by 1% per 100 r   |  |   |                              |  |
| Audible Noise   | < 60 dBA at<br>1 m   | < 70 dBA at<br>1 m                            | < 70 dBA at<br>1 m  | < 75 dBA at<br>1 m  |   | A at 1 m   |   | A at 1 m                     |  |
| Heat Dissipation (100% Load)  | 5527 BTU/h   | 7362 BTU/h                                    | 11054 BTU/h   | 14738 BTU/h   |   |  | 31343 BTU/h   | 39179 BTU/h                  |  |
| Heat Dissipation (50% Load) MANAGEMENT  | 2994 BTU/h   | 3992 BTU/h                                    | 5998 BTU/h  | 7984 BTU/h  | 9974 BTU/h  | 11048 BTU/h  | 14731 BTU/h   | 18414 BTU/h                  |  |
| Network Management Interface  | manage   | ment through i                                | oot the UPS usi<br>ntegration with  | ng HTML5 web<br>a wide range o  | al <b>WEBCARDL&gt;</b><br>, SSH/telnet an<br>f Network Mana                 | d SNMP interfa<br>Igement Systen                               | ns and DCIM pl  | atforms.)                    |  |
| Control Panel   | 62 1   |   | upplemental LE  |   | supplemer<br>dia  | ital LEDs. (Mon<br>agnose the UPS                              | our LCD touchs<br>itor, control, cor<br>from the displa | nfigure and                  |  |
| Contact Closure Interface   |  | Re  |   |   | SV Programmak   |  | ard   |                              |  |
| Remote Emergency Power Off (REPO)   |  |   | Featur  |   | ault: Normally (  | Closed)  |   |                              |  |
| RS-232  |  |   |   | Included (S   | ervice Only)  |  |   |                              |  |
| STANDARDS   |  |   |   | (00.40.4.0000)  | A 4 0042 (TU) ( A   | l)   |   |                              |  |
| Safety  |  |   |   |   | A1:2013 (TUV A  |  |   |                              |  |
| EMC/EMI   |  |   | EIN 62040   |   | 040-2:2016 (TUV<br>20   | Approval)  |   |                              |  |
| Ingress Protection Rating<br>CE Marking   |  |   |   |   | 20<br>es  |  |   |                              |  |
| RoHS Compliant  |  |   |   |   | es  |  |   |                              |  |
| Quality Management System   |  |   |   |   | 9001  |  |   |                              |  |
| OTHER INFORMATION   |  |   |   | 130   | ,001  |  |   |                              |  |
| Colour  |  |   |   | RAL 9005  | Jet Black   |  |   |                              |  |
| Mobility  |  |   |   |   | iters   |  |   |                              |  |
| ACCESSORIES (Sold Separately)   |  |   |   |   |   |  |   |                              |  |
| Scalable Battery Cabinets   |  |   |   |   | els include BP48<br>IB, BP480V10,   |  |   |                              |  |
| Network Management Card   | BP480V65, BP480V40-NIB, BP480V40, BP480V10-NIB, BP480V10, BP480V09. (NIB=No internal batteries.)<br>WEBCARDLX<br>(Monitor, control and reboot the UPS using HTML5 web, SSH/telnet and SNMP interfaces. Supports centralised<br>management through integration with a wide range of Network Management Systems and DCIM platforms.) |   |   |   |   | d SNMP interfa   | ces. Supports c   | entralised                   |  |
| Network Management Card   |  | ment through ii                               | ntegration with   |   |   |  |   |                              |  |
| Remote Environmental Sensors<br>(Requires WEBCARDLX)  | manage   | <b>E2MT</b> (Ter<br>Temperature Se            | nperature Senso<br>ensor with Digita  | or); <b>E2MTDO</b> (1<br>al Inputs); <b>E2M</b>   | Temperature Sei<br><b>THDI</b> (Temperat<br>Sensor - also rec               | ure/Humidity S   | ensor with Digi   | tal Inputs);                 |  |
| Remote Environmental Sensors  | manage   | <b>E2MT</b> (Ter<br>Temperature Se            | nperature Senso<br>ensor with Digita  | or); <b>E2MTDO</b> (1<br>al Inputs); <b>E2M</b><br>eak Detection S                            | Temperature Sei<br><b>THDI</b> (Temperat                                    | ure/Humidity S   | ensor with Digi   | tal Inputs);                 |  |
| Remote Environmental Sensors<br>(Requires <b>WEBCARDLX</b> )  | manage   | <b>E2MT</b> (Ter<br>Temperature Se            | nperature Senso<br>ensor with Digita  | or); <b>E2MTDO</b> (1<br>al Inputs); <b>E2M</b><br>eak Detection S<br><b>RELAYC</b>           | Temperature Sei<br><b>THDI</b> (Temperat<br>Sensor - also rec               | ure/Humidity S   | ensor with Digi   | tal Inputs);                 |  |
| Remote Environmental Sensors<br>(Requires <b>WEBCARDLX</b> )<br>Contact Closure Card<br>MODBUSCARD<br>External Bypass Panel | manage<br>E2MTDI (   | E2MT (Ter<br>Temperature Se<br>E<br>Conta     | nperature Senso<br>nsor with Digita<br><b>2SLD</b> (Water Le<br>ct your local sale            | or); E2MTDO (1<br>al Inputs); E2M<br>eak Detection S<br>RELAYC<br>MODBUS<br>es representation | Temperature Sei<br>THDI (Temperat<br>Sensor - also rec<br>CARDSV            | ure/Humidity S<br>Juires <b>E2MTHD</b>                         | ensor with Digi<br>I)                                   | tal Inputs);                 |  |
| Remote Environmental Sensors<br>(Requires <b>WEBCARDLX</b> )<br>Contact Closure Card<br>MODBUSCARD                          | manage<br>E2MTDI (   | E2MT (Ter<br>Temperature Se<br>E<br>Conta     | nperature Senson<br>nsor with Digita<br>2SLD (Water Le<br>ct your local sale<br>CBKIT30-80 (A | or); E2MTDO (1<br>al Inputs); E2M<br>eak Detection S<br>RELAYC<br>MODBUS<br>es representation | Temperature Sei<br>THDI (Temperat<br>Sensor - also rec<br>CARDSV<br>SCARDSV | ure/Humidity S<br>juires <b>E2MTHD</b><br>for more inform<br>N | ensor with Digi<br>I)                                   | tal Inputs);                 |  |





businesses; scalable via 30 kVA modules with N+1; high efficiency; low mean time to repair (MTTR)

### **Key Features and Benefits**

#### MODULAR, SCALABLE, FAULT-TOLERANT ARCHITECTURE

- Hot-swappable 30 kVA power modules can increase capacity and/or provide N+1 redundancy for fault tolerance
- Power and battery modules can be added or replaced without powering down for zero-downtime maintenance
- All UPS capacities are available without internal batteries for long-runtime applications using external battery cabinets
- 30–90 kVA models are also available with internal batteries for shorter-runtime applications with a smaller footprint
- Dual AC inputs can connect to independent sources for additional power redundancy and increased availability
- Built-in static and maintenance bypass transfer load to utility power during faults, overloads and service

#### POWERFUL UPS MANAGEMENT

- Large LCD control panel permits full-featured local management through a user-friendly interface
- Included WEBCARDLX network card enables remote management through embedded HTML5 web, SSH/telnet and SNMP interfaces, as well as integration with Network Management Systems and DCIM platforms (See page 21 for more information.)
- Standard Emergency Power Off (EPO) allows immediate shutdown during emergencies

### SmartOnline SVX Series

### 30-210 kVA (N+1), 380/400/415V Ph-Ph

- Modular, scalable UPS platform
- Up to 95% double-conversion efficiency
- VFI operation and IGBT with DSP control
- Unity output power factor (1,0)
- Built-in network management card
- Built-in static and maintenance bypass
- N+1 redundancy and dual AC inputs
- Rack-based cabinet (30U or 42U)
- ≤17 min. at full load with internal batteries
- ≤223 min. at full load with external batteries

#### EFFICIENT, HIGH-PERFORMANCE OPERATION

- 95% double-conversion efficiency and 99% ECO-mode efficiency reduce power and cooling costs
- Voltage- and frequency-independent (VFI) operation and transformerless IGBT rectifier technology with DSP control provide reliable output power quality with pure sine wave
- Low THDi (< 3%) improves generator compatibility and eliminates costly over-sizing requirements
- Low THDv (<1,5%) and active power factor correction improve output performance
- Unity output power factor (1,0) allows the UPS to support more equipment without overloading

#### COMPREHENSIVE SERVICE PROGRAM

- Tripp Lite Care ensures your UPS is ready to protect you from downtime over its entire lifecycle, from initial startup to annual service agreements and preventive maintenance
- Regular service improves UPS reliability, longevity and cost control (See page 24 for more information.)

Typical Applications: Small and medium data centres, light industrial settings and large corporate networks with IT load  $\leq$  210 kW or 26 server racks at 8 kW/rack

# SmartOnline SVX Series Technical Specifications

| OVERVIEW   |                                     | 30K  | 60K                 | 90K                 | 120K                | 150K                 | 180K                | 210K    |  |
|--|-------------------------------------|--|---------------------|---------------------|---------------------|----------------------|---------------------|---------|--|
| CAPACITY kVA/kW  |                                     | 30/30  | 60/60               | 90/90               | 120/120             | 150/150              | 180/180             | 210/210 |  |
| TOPOLOGY Voltage- and Frequency-Independent (VFI) True On-Line Double Conversion |                                     |  |                     |                     |                     |                      |                     | on      |  |
| INPUT  |                                     |  | 5                   |                     |                     |                      |                     |         |  |
| Voltage  |                                     | 380/400/415V (Ph-Ph); 220/230/240V (Ph-N)                |                     |                     |                     |                      |                     |         |  |
| Voltage Range  |                                     |  |                     |                     | 78V (Ph-Ph); 10     |                      |                     |         |  |
| Phase  |                                     |  |                     |                     | e, Neutral and      |                      |                     |         |  |
| Operating Frequency  | (Range)                             |  |                     |                     | lectable (40–7)     |                      |                     |         |  |
| Power Factor   | (nange)                             |  |                     | 00,00112,00         | >0,99               | 0112 = 0,1112        |                     |         |  |
| THDi   |                                     |  |                     |                     | <3%                 |                      |                     |         |  |
| Inverter Bridge  |                                     |  |                     |                     | GBT Technolog       |                      |                     |         |  |
| OUTPUT   |                                     |  |                     |                     |                     | 3 <i>Y</i>           |                     |         |  |
| Voltage  |                                     |  |                     | 380/400/415\/       | (Ph Ph): 220/2      | 30/240V (Ph-N)       |                     |         |  |
| AC Voltage Regulatio   | n                                   |  |                     |                     | % (Balanced Lo      |                      |                     |         |  |
| Frequency (Range)  | 11                                  |  |                     |                     | lectable (40–7)     |                      |                     |         |  |
| Efficiency (ECO Mode   | (Lina Mada)                         |  |                     |                     | 5/>95% (100%)       |                      |                     |         |  |
|  | AC Mode                             | 105  | 2/ 1100/.40 mg      |                     | •                   | ,                    | in./>150%: 20       | 0       |  |
|  |                                     |  |                     |                     |                     |                      |                     |         |  |
|  | Battery Mode                        | 105  | /o – 1 10%: 60 m    | 111./111%-125       |                     | 5⁄0−150%:1 M         | iin./>150%: 20      | U ms    |  |
| Crest Factor   |                                     |  | 4 50/               | (1000/ 1: 1         | 3:1                 | 0/ NI                | 1                   |         |  |
| Harmonic Distortion  |                                     |  | 1,5%                | (100% linear lo     |                     |                      | Load)               |         |  |
| Output Waveform  |                                     |  |                     |                     | Pure Sine Wave      | 9                    |                     |         |  |
| BYPASS   |                                     |  |                     |                     |                     |                      |                     |         |  |
| Static and Maintenan   | ce Bypass                           |  |                     |                     | Standard            |                      |                     |         |  |
| Transfer Time  |                                     |  |                     |                     | ≤1 ms               |                      |                     |         |  |
| Bypass Voltage Tolera  | ance (Default)                      | +15%/-20%  |                     |                     |                     |                      |                     |         |  |
| Overload   |                                     | 1059   | %–110%: 60 m        | in./111%–125        | %: 10 min./12       | 6%–150%: 1 m         | in./>150%: 20       | 0 ms    |  |
| BATTERY  |                                     |  |                     |                     |                     |                      |                     |         |  |
| Battery Type*  |                                     | Maintenance-Free Sealed Valve-Regulated Lead-Acid (VRLA) |                     |                     |                     |                      |                     |         |  |
| Battery Capacity*  |                                     |  |                     |                     | 12V 9 Ah            |                      |                     |         |  |
| Float Voltage  |                                     |  |                     |                     | 2,3V/Cell           |                      |                     |         |  |
| Boost Voltage  |                                     |  |                     |                     | 2,35V/Cell          |                      |                     |         |  |
| End-of-Discharge Volt  | tage                                |  |                     |                     | 1,67V/Cell          |                      |                     |         |  |
| Battery Storage Time   | k .                                 |  | ć                   | 6 months (With      | out Recharge,       | Stored at 25° (      | C)                  |         |  |
| Battery Charger Capa   | icity                               |  |                     |                     | 8A (2A default      | )                    |                     |         |  |
| Estimated Maximum I<br>Internal Battery Modu                                     |                                     | 17 min.  | 7 min.              | 4,2 min.            | N/A                 | N/A                  | N/A                 | N/A     |  |
| Estimated Maximum F<br>External Battery Cabir                                    |                                     | 222 min.   | 98 min.             | 59 min.             | 41 min.             | 31 min.              | 24 min.             | 20 min. |  |
| *Applies to models with inte   | rnal battery modules. ** External b | pattery cabinets are s                                   | old separately. Run | time varies with mo | del. See accessorie | s section on next pa | age for more inform | ation.  |  |
| ENVIRONMENT  |                                     |  |                     |                     |                     |                      |                     |         |  |
| Operating Temperatu  | ire                                 |  |                     |                     | 0° to 40° C         |                      |                     |         |  |
| Storage Temperature  |                                     |  |                     | -15° to 6           | 0°C (Excluding      | g Battery)           |                     |         |  |
| Operating Humidity   |                                     |  |                     | 0 to 95             | 5% (Non-Cond        | ensing)              |                     |         |  |
| Operating Altitude   |                                     |  | < '                 | 1000 m (1% De       | ration per 100      | m Above 1000         | m)                  |         |  |
| Audible Noise  |                                     |  |                     |                     | <73 dBA at 1 n      |                      |                     |         |  |
| Colour   |                                     |  |                     |                     | L 9005 (Jet Bla     |                      |                     |         |  |
| MANAGEMENT   |                                     |  |                     |                     |                     |                      |                     |         |  |
| Control Panel  |                                     |  |                     | Large 14            | 5 mm Multifund      | ction LCD            |                     |         |  |
| Network Managemen  | t Card (SNMP)                       |  | WEBCA               | RDLX Include        |                     |                      | rmation.)           |         |  |
| MODBUS   |                                     |  |                     |                     | al MODBUSC          |                      |                     |         |  |
| Contact Closure  |                                     |  |                     | · · ·               |                     | old Separately)      |                     |         |  |
| Emergency Power Off  | f (EPO)                             |  |                     |                     | Standard            |                      |                     |         |  |
| STANDARDS  |                                     |  |                     |                     | Stanualu            |                      |                     |         |  |
| Safety   |                                     |  |                     |                     | EC/EN 62040-        | 1                    |                     |         |  |
| ,  |                                     |  |                     |                     |                     |                      |                     |         |  |
| EMC  |                                     |  |                     |                     | EC/EN 62040-        | ۷                    |                     |         |  |
| Approvals  |                                     |  |                     |                     | TUV                 | L' D'                |                     |         |  |
| Additional   |                                     |  |                     | ROHS, IP20          | Ingress Protec      | tion Rating          |                     |         |  |

### SmartOnline SVX Series Technical Specifications (continued)

| ADDITIONAL ACCESSORIES (Sold Separately) |  |               |                |                   |               |                 |             |  |
|--|--|---------------|----------------|-------------------|---------------|-----------------|-------------|--|
|  | 30K  | 60K           | 90K            | 120K              | 150K          | 180K            | 210K        |  |
| Power Modules                            | <b>SVX30PM</b> (Hot-swappable 30 kVA/30 kW power modules for SVX series UPS models.)   |               |                |                   |               |                 |             |  |
| Internal Battery Modules                 | SVXBM  | (Hot-swappabl | e battery modu | lles for SVX seri | es UPS models | with internal b | atteries.)  |  |
|  | BP480V370 (Matching 42U battery cabinet with batteries for long-runtime applications.)   |               |                |                   |               |                 |             |  |
| External Battery Cabinets                | BP480V370NB (Matching 42U battery cabinet without batteries for long-runtime applications.)  |               |                |                   |               |                 |             |  |
| External Dattery Cabinets                | BP480V200/BP480V300/BP480V400/BP480V500 (Non-matching battery cabinets with batteries for a range of long-runtime applications. See www.tripplite.com for more information.) |               |                |                   |               |                 |             |  |
| Maintenance Bypass Panels                | SU40KMBPKX   | SU60KMBPKX    | SU100КМВРКХ    | SU120KMBPKX       | SU160KMBPKX   | SU180KMBPKX     | SU210KMBPKX |  |

### Small Frame (30U) Maximum Configurable Power: 90kVA/90kW

Total Dimensions (H x W x D): 1475 x 600 x 1100 mm • Shipping Dimensions (H x W x D): 1650 x 750 x 1220 mm

| Capacity           | Model       | Battery Configuration        | Runtime<br>(100% Load) | Unit Weight | Shipping Weight |
|--------------------|-------------|------------------------------|------------------------|-------------|-----------------|
| NEW 30 kVA/30 kW   | SVX30KS1P0B | Internal Batteries: N/A      | N/A                    | 294 kg      | 351 kg          |
| 30 kVA/30 kW       | SVX30KS1P2B | Internal Batteries: 2 SVXBM  | 4,7 min.               | 502 kg      | 573 kg          |
| 30 kVA/30 kW       | SVX30KS1P3B | Internal Batteries: 3 SVXBM  | 9 min.                 | 606 kg      | 684 kg          |
| NEW 60 kVA / 60 kW | SVX60KS2P0B | Internal Batteries: N/A      | N/A                    | 328 kg      | 389 kg          |
| 60 kVA / 60 kW     | SVX60KS2P3B | Internal Batteries: 3 SVXBM  | 3,5 min.               | 641 kg      | 722 kg          |
| 90 kVA/90 kW       | SVX90KS3P   | External Battery Cabinet(s)* | 6,2–59 min.**          | 363 kg***   | 427 kg***       |

\* External battery cabinets are sold separately. \*\* Range available with recommended battery cabinet options. \*\*\* Without external battery cabinets.

### Medium Frame (42U) Maximum Configurable Power: 90kVA/90kW

Total Dimensions (H x W x D): 2010 x 600 x 1100 mm • Shipping Dimensions (H x W x D): 2175 x 750 x 1220 mm

| Capacity       | Model       | Battery Configuration       | Runtime<br>(100% Load) | Unit Weight | Shipping Weight |
|----------------|-------------|-----------------------------|------------------------|-------------|-----------------|
| 30 kVA / 30 kW | SVX30KM1P2B | Internal Batteries: 2 SVXBM | 4,7 min.               | 517 kg      | 596 kg          |
| 30 kVA / 30 kW | SVX30KM1P3B | Internal Batteries: 3 SVXBM | 9 min.                 | 621 kg      | 707 kg          |
| 30 kVA / 30 kW | SVX30KM1P4B | Internal Batteries: 4 SVXBM | 13 min.                | 725 kg      | 818 kg          |
| 30 kVA/30 kW   | SVX30KM1P5B | Internal Batteries: 5 SVXBM | 17 min.                | 829 kg      | 929 kg          |
| 60 kVA / 60 kW | SVX60KM2P3B | Internal Batteries: 3 SVXBM | 3,5 min.               | 655 kg      | 745 kg          |
| 60 kVA / 60 kW | SVX60KM2P4B | Internal Batteries: 4 SVXBM | 5 min.                 | 759 kg      | 856 kg          |
| 60 kVA / 60 kW | SVX60KM2P5B | Internal Batteries: 5 SVXBM | 7 min.                 | 863 kg      | 967 kg          |
| 90 kVA / 90 kW | SVX90KM3P5B | Internal Batteries: 5 SVXBM | 4,2 min.               | 898 kg      | 1005 kg         |

### Large Frame (42U) Maximum Configurable Power: 210kVA/210kW

Total Dimensions (H x W x D): 2010 x 600 x 1100 mm • Shipping Dimensions (H x W x D): 2175 x 750 x 1220 mm

| Capacity         | Model      | Battery Configuration        | Runtime<br>(100% Load) | Unit Weight | Shipping Weight |
|------------------|------------|------------------------------|------------------------|-------------|-----------------|
| 30 kVA / 30 kW   | SVX30KL    | External Battery Cabinet(s)* | 28-223 min.**          | 308 kg***   | 373 kg***       |
| 60 kVA / 60 kW   | SVX60KL    | External Battery Cabinet(s)* | 11–98 min.**           | 342 kg***   | 411 kg***       |
| 90 kVA / 90 kW   | SVX90KL    | External Battery Cabinet(s)* | 6,2–59 min.**          | 377 kg***   | 449 kg***       |
| 120 kVA / 120 kW | SVX120KL   | External Battery Cabinet(s)* | 4-41 min.**            | 411 kg***   | 487 kg***       |
| 150 kVA / 150 kW | SVX150KL   | External Battery Cabinet(s)* | 4,9–31 min.**          | 446 kg***   | 525 kg***       |
| 180 kVA / 180 kW | SVX180KL   | External Battery Cabinet(s)* | 5,7–24 min.**          | 480 kg***   | 563 kg***       |
| 210kVA/210kW     | SVX210KL7P | External Battery Cabinet(s)* | 4,3-20 min.**          | 515 kg***   | 601 kg***       |
| 210kVA/210kW N+1 | SVX210KL8P | External Battery Cabinet(s)* | 4,3-20 min.**          | 549 kg***   | 639 kg***       |

\*External battery cabinets are sold separately. \*\*Range available with recommended battery cabinet options. \*\*\*Without external battery cabinets.

# TRIPP-LITE SUT SERIES



# **SmartOnline SUT Series**

### 20/30/40/60 kVA, 208/220V Ph-Ph

- VFI operation and IGBT with DSP control
- Up to 93% double-conversion efficiency
- Unity output power factor (1,0)
- Optional network management card
- Built-in static bypass
- Parallel capability up to 240 kVA
- Dual redundant AC inputs
- ≤6 min. at full load with internal batteries
- ≤110 min. at full load with external batteries

### Key Features and Benefits

### SCALABLE, FAULT-TOLERANT ARCHITECTURE

- Parallel capability provides up to 240 kVA and supports N+N redundancy
- Space-saving internal batteries enable short-runtime applications with a small footprint
- Optional external battery cabinets outlast extended outages to enable long-runtime applications
- Built-in static bypass transfers load to utility power during faults and overloads
- Dual AC inputs can connect to independent sources for additional power redundancy and increased availability

### POWERFUL UPS MANAGEMENT

- User-friendly LCD control panel permits full-featured local management through a user-friendly interface
- Optional WEBCARDLX network card enables remote management through embedded HTML5 web, SSH/telnet and SNMP interfaces, as well as integration with Network Management Systems and DCIM platforms (See page 21 for more information.)
- Standard Emergency Power Off (EPO) allows immediate shutdown during emergencies

### EFFICIENT, HIGH-PERFORMANCE OPERATION

- Voltage- and frequency-independent (VFI) operation and transformerless IGBT rectifier technology with DSP control provide reliable output power quality with pure sine wave
- 93% double-conversion efficiency and 98% ECO-mode efficiency reduce power and cooling costs
- Low THDi (<3-4%) improves generator compatibility and eliminates costly over-sizing requirements
- Low THDv (≤3%) and active power factor correction improve output performance
- Unity output power factor (1,0) allows the UPS to support more equipment without overloading
- High charging capacity allows the UPS to ride through multiple power failures in rapid succession

### COMPREHENSIVE SERVICE PROGRAM

• Tripp Lite Care improves UPS reliability, longevity and cost control (See page 24 for more information.)

Typical Applications: Small and medium installations, dedicated IT space and mixed-use buildings with IT load ≤80 kW

# SmartOnline SUT Series Technical Specifications

| Model   | SUT20K                      | SUT30K                              | SUT40K                                | SUT60K                       |  |  |  |
|---|-----------------------------|-------------------------------------|---------------------------------------|------------------------------|--|--|--|
| Capacity  | 20kVA/20kW                  | 30kVA/30kW                          | 40kVA/40kW                            | 60kVA/60kW                   |  |  |  |
| Topology  | Voltage- and                | d Frequency-Independen <sup>.</sup> | t (VFI) True On-Line Double           | e Conversion                 |  |  |  |
| INPUT   |                             |                                     |                                       |                              |  |  |  |
| Voltage   |                             | 208/220V (Ph-Ph                     | ); 120/127V (Ph-N)                    |                              |  |  |  |
| Voltage Range   | 125–253V (Ph-Ph)            |                                     |                                       |                              |  |  |  |
| Phase   | 3-Phase, Neutral and Ground |                                     |                                       |                              |  |  |  |
| Operating Frequency (Range)                                     |                             |                                     | table (40–70 Hz)                      |                              |  |  |  |
| Power Factor  |                             |                                     | ),99                                  |                              |  |  |  |
| THDi  |                             | <4%                                 |                                       | <3%                          |  |  |  |
| nverter Bridge  |                             | IGBT Te                             | chnology                              |                              |  |  |  |
| OUTPUT  |                             |                                     |                                       |                              |  |  |  |
| /oltage   | 208/220V                    | (Ph-Ph); 3-Phase, 4-Wire,           | Neutral Reference to Bypa             | iss Neutral                  |  |  |  |
| AC Voltage Regulation   |                             | ±                                   | 1%                                    |                              |  |  |  |
| Frequency (Range)   |                             |                                     | ctable (±0,05 Hz)                     |                              |  |  |  |
| Overload (AC and Battery Mode)                                  | 105% (Conti                 |                                     | n.); 126–150% (1 min.); >15           | 50% (0,5 sec.)               |  |  |  |
| Crest Factor  |                             |                                     | 3:1                                   |                              |  |  |  |
| Harmonic Distortion   | <2%                         | <2%                                 | <2%                                   | <3%                          |  |  |  |
| Fransfer Time   |                             |                                     | 0 ms (Inverter                        |                              |  |  |  |
| Dutput Waveform   |                             | Pure Si                             | ne Wave                               |                              |  |  |  |
| BYPASS  |                             |                                     |                                       |                              |  |  |  |
| Static Bypass   |                             |                                     | ndard                                 |                              |  |  |  |
| Fransfer Time   |                             |                                     | ms                                    |                              |  |  |  |
| Default Bypass Voltage Tolerance                                |                             |                                     | 15%                                   |                              |  |  |  |
| Dverload  | 105% (Conti                 | nuous); 106–125% (10 mi             | n.); 126–150% (1 min.); >15           | o0% (0,5 sec.)               |  |  |  |
| BATTERY   |                             |                                     |                                       |                              |  |  |  |
| Battery Туре  | Mair                        |                                     | ve-Regulated Lead-Acid (V             | (RLA)                        |  |  |  |
| Battery Capacity  |                             |                                     | ′9Ah                                  | 1                            |  |  |  |
| Quantity  | 48                          | 72                                  | 72                                    | 96                           |  |  |  |
| Battery Charging Capacity                                       | 1–10A (Default 5A)          | 1–10A (Default 7,5A)                | 1–20A (Default 7,5A)                  | 1–20A (Default 10A)          |  |  |  |
| Float Voltage   |                             |                                     | /DC ± 2V                              |                              |  |  |  |
| Boost Voltage   |                             |                                     | $DC \pm 2V$                           |                              |  |  |  |
| End of Discharge Voltage  |                             |                                     | $DC \pm 2V$                           |                              |  |  |  |
| Battery Storage Time<br>nternal Battery Runtime (50%/100% Load) | 15/5 min.                   | 15/6 min.                           | Recharge, 77° F/25° C)<br>11/3,5 min. | 9,5/3 min.                   |  |  |  |
| ENVIRONMENT   | 137311111.                  | 13/011111.                          | 117 5,5 mm.                           | 7,57511111.                  |  |  |  |
|   |                             |                                     | 220/                                  |                              |  |  |  |
| Efficiency (Line Mode)<br>Efficiency (ECO Mode)                 |                             |                                     | 73%<br>8%                             |                              |  |  |  |
| Operating Temperature   | 32° – 101° E (Ear Optim     |                                     | ); 0° to 40°C (For Optimal I          | Battery Life 17°_25°()       |  |  |  |
| Operating Humidity  | 32 - 104 T (101 Optili      |                                     | n-Condensing)                         |                              |  |  |  |
| Operating Altitude  | <3280 ft (1% Deration       | per 328 ft Above 3280 ft            | ); <1000 m (1% Deration pe            | er 100 m Above 1000 m        |  |  |  |
| Audible Noise @ 3 ft./1 m                                       |                             | dBA                                 |                                       | dBA                          |  |  |  |
| MANAGEMENT  |                             |                                     |                                       |                              |  |  |  |
| Control Panel   |                             | 130 mm Mul                          | tifunction LCD                        |                              |  |  |  |
| RS-232 Serial (DB9)   |                             | Star                                | ndard                                 |                              |  |  |  |
| Contact Closure   |                             |                                     | ndard                                 |                              |  |  |  |
| Network Management Card (SNMP)                                  | Opt                         |                                     | page 21 for more informat             | ion.)                        |  |  |  |
| Parallel Capability   |                             |                                     | pacity or Redundancy                  |                              |  |  |  |
| EPO (Emergency Power Off)                                       |                             | Star                                | ndard                                 |                              |  |  |  |
| STANDARDS   |                             |                                     |                                       |                              |  |  |  |
| Safety  |                             |                                     | 22.2 No. 107.3-14                     |                              |  |  |  |
| EMC   | FCC Part 1                  |                                     | 2; IEC/EN61000-4-2; IEC/EI            | NO 1000-4-3                  |  |  |  |
| Surge<br>Conduction Immunity                                    |                             |                                     | 00-4-5 Level 4<br>61000-4-6           |                              |  |  |  |
| Approvals   |                             |                                     | JL                                    |                              |  |  |  |
| Additional  |                             |                                     | s Protection Rating                   |                              |  |  |  |
| PHYSICAL  |                             |                                     |                                       |                              |  |  |  |
| Jnit Dimensions (H x W x D)                                     | 54,3 x 20.5 x 31.5 in (     | 1380 x 521 x 800 mm)                | 69,3 x 20.5 x 31.5 in                 | (1760 x 521 x 800 mm)        |  |  |  |
| Jnit Weight   | 767 lb. (348 kg)            | 926 lb. (420 kg)                    | 1076 lb. (488 kg)                     | 1244 lb. (564 kg)            |  |  |  |
| Shipping Dimensions (H x W x D)                                 |                             | 70 x 720 x 1000 mm)                 |                                       | 20 x 720 x 1000 mm)          |  |  |  |
| Shipping Weight   | 855 lb. (388 kg)            | 1014 lb. (460 kg)                   | 1186 lb. (538 kg)                     | 1355 lb. (615 kg)            |  |  |  |
| Colour  |                             |                                     | (Jet Black)                           |                              |  |  |  |
| ADDITIONAL ACCESSORIES (Sold Separate                           |                             |                                     |                                       |                              |  |  |  |
| External Battery Cabinets                                       |                             |                                     | BP288VEBPNB (Without B                |                              |  |  |  |
|   | Up to 4 per UPS             | Up to 3 per UPS<br>SUT30KMBP        | Up to 9 per UPS                       | Up to 9 per UPS<br>SUT60KMBP |  |  |  |
| Maintenance Bypass Panels                                       | SUT20KMBP                   |                                     | SUT40KMBP                             |                              |  |  |  |

# TRIPP-LITE SV SERIES



## SmartOnline SV Series

### 20-140 kVA (N+1), 208/220V Ph-Ph

- Modular, scalable UPS platform
- VFI operation and IGBT with DSP control
- High output power factor (0,9)
- Control panel with large LCD screen
- Built-in network management card
- Built-in static and maintenance bypass
- N+1 redundancy and dual AC inputs
- Rack-based cabinet (30U or 42U)
- ≤24,5 min. at full load with internal batteries
- ≤405 min. at full load with external batteries

### Key Features and Benefits

#### MODULAR, SCALABLE, FAULT-TOLERANT ARCHITECTURE

- Hot-swappable 20 kVA power modules increase capacity and/or provide N+1 redundancy for fault tolerance
- Power and battery modules can be added or replaced without powering down for zero-downtime maintenance
- All UPS sizes are available without internal batteries for long-runtime applications using external battery cabinets
- Select models are also available with internal batteries for shorter-runtime applications with a smaller footprint
- Dual AC inputs can connect to independent sources for additional power redundancy and increased availability
- Built-in static and maintenance bypass transfer load to utility power during faults, overloads and service

### POWERFUL UPS MANAGEMENT

- Large LCD control panel permits full-featured local management through a user-friendly interface
- Included WEBCARDLX network card enables remote management through embedded HTML5 web, SSH/telnet and SNMP interfaces, as well as integration with Network Management Systems and DCIM platforms (See page 21 for more information.)
- Standard Emergency Power Off (EPO) allows immediate shutdown during emergencies

#### HIGH-PERFORMANCE OPERATION

- Voltage- and frequency-independent (VFI) operation and transformerless IGBT rectifier technology with DSP control provide reliable output power quality with pure sine wave
- Low THDi (<3%) improves generator compatibility and eliminates costly over-sizing requirements
- Low THDv (<2%) and active power factor correction improve output performance
- High output power factor (0,9) allows the UPS to support more equipment without overloading

#### COMPREHENSIVE SERVICE PROGRAM

- Tripp Lite Care ensures your UPS is ready to protect you from downtime over its entire lifecycle, from initial startup to annual service agreements and preventive maintenance
- Regular service improves UPS reliability, longevity and cost control (See page 24 for more information.)

Typical Applications: Small and medium data centres, light industrial settings and large corporate networks with IT load  $\leq$  126 kW or 15 server racks at 8 kW/rack

# SmartOnline SV Series Technical Specifications

| OVERVIEW  | 20K   | 40K  | 60K  | 80K  | 100K   | 120K                           | 140K    |  |
|---|---|--|--|--|--|--------------------------------|---------|--|
| CAPACITY kVA  | 20  | 40   | 60   | 80   | 100  | 120                            | 140     |  |
| CAPACITY kW   | 18  | 36   | 54   | 72   | 90   | 108                            | 126     |  |
| TOPOLOGY  |   | ltage- and Fre   | auency-Indep   | endent (VFI) Tr  | ue On-Line Do  | uble Conversio                 | on      |  |
| INPUT   |   | ge and the   |  |  |  |                                |         |  |
| Voltage   |   |  | 208/2201/  | (Ph-Ph); 120/1   | 27.V (Ph-N)  |                                |         |  |
| Voltage Range   |   | 15   |  |  | (Ph-N); 100% lc  | ad                             |         |  |
| Phase   |   | 10   |  | e, neutral and   |  |                                |         |  |
| Operating Frequency (Range)   |   |  |  | ectable (40–7  |  |                                |         |  |
| Power Factor  |   |  | 30/00 112, 301   | >0,99  | $5 \text{ mz} \pm 0, 1 \text{ mz})$  |                                |         |  |
| THDi  |   |  |  | < 3%   |  |                                |         |  |
| Inverter Bridge   |   |  | 10   | GBT Technolog  |  |                                |         |  |
| OUTPUT  |   |  | K  |  | 1 Y  |                                |         |  |
| Voltage   |   |  | 208/2201/  | (Ph-Ph); 120/1   | 27\/ (Ph_NI)   |                                |         |  |
| AC Voltage Regulation   |   |  |  | % (Balanced Lo   |  |                                |         |  |
|   |   |  |  | ectable (40–7  |  |                                |         |  |
| Frequency (Range)<br>Efficiency (ECO Mode/Line Mode)  |   |  |  | 5/>91% (100%)  | · · · ·  |                                |         |  |
| Overload AC Mode  | 1059  | 110%·60 m  |  | •  | 6%–150%: 1 m   | in /~150%.20                   | ) mc    |  |
| Battery Mode  |   |  |  |  | 5%–150%: 1 m<br>5%–150%: 1 m   |                                | -       |  |
| Crest Factor  | 103,  | %-110%. 00 m   | 11.7 111/0-123   | 3:1  | 5/0-150/0.1111   | in./ >150 /o. 20               | ) 1115  |  |
|   |   | < 20/  | (1000/ 1:  |  | NO( N  | 1 N                            |         |  |
| Harmonic Distortion   |   | <2%  |  | pad); < 4% (100<br>Pure Sine Wave  | )% Non-Linear  | Load)                          |         |  |
| Output Waveform   |   |  | 1  | Pure Sine Wave   | 9  |                                |         |  |
| BYPASS  |   |  |  | <u>Currente en la currente</u>   |  |                                |         |  |
| Static and Maintenance Bypass   |   |  |  | Standard   |  |                                |         |  |
| Transfer Time   |   |  |  | ≤1 ms  |  |                                |         |  |
| Bypass Voltage Tolerance (Default)  | 1050  | 4400/ /0   | . (1110/ 100   | +15%/-20%  | (0/ 1500/ 1  | . /. 1500/ 00                  |         |  |
| Overload<br>BATTERY   | 105%  | %–110%: 60 m   | in./111%–125   | %: 10 min./12  | 6%–150%: 1 m   | in./>150%: 200                 | ) ms    |  |
| Battery Type*   |   | Mainton  | anco Eroo Sool   | ad Valva Pagu  | lated Load Ac  |                                |         |  |
| Battery Capacity*   | Maintenance-Free Sealed Valve-Regulated Lead-Acid (VRLA) 12V 18 Ah / Module |  |  |  |  |                                |         |  |
| Float Voltage   |   |  | 12   |  | ale  |                                |         |  |
| Boost Voltage   | 2,3V/Cell   |  |  |  |  |                                |         |  |
| End-of-Discharge Voltage  | 2,35V/Cell<br>1,67V/Cell  |  |  |  |  |                                |         |  |
| Battery Storage Time*   | ·   |  |  |  |  |                                |         |  |
| Battery Charger Capacity  | 6 months (Without Recharge, Stored at 77° F/25° C)<br>8A (2A Default)       |  |  |  |  |                                |         |  |
| Estimated Maximum Runtime with  | 24,5 min.   | 10 min.  | 5,7 min.   | 4 min.   | N/A  | N/A                            | N/A     |  |
| Internal Battery Modules, 100% Load   |   |  |  |  |  |                                |         |  |
| Estimated Maximum Runtime with<br>External Battery Cabinet(s), 100% Load**  | 405 min.  | 185 min.   | 114 min.   | 80 min.  | 61 min.  | 49 min.                        | 40 min. |  |
| *Applies to models with internal battery modules. **External b  | pattery cabinets are s  | ald apparataly. Dura   |  |  |  | age for more inform            | ation   |  |
| ENVIRONMENT   |   | old separately. Ruh  | time varies with mo  | del. See accessorie  | s section on next pa   | ige for more inform            |         |  |
| Operating Temperature   |   | old separately. Kun  |  |  |  |                                |         |  |
| Storage Temperature   |   |  | 32° t  | o 104° F/0° to   | 40° C  |                                |         |  |
|   |   |  | 32° to<br>5° to 140° F/-1!   | o 104° F/0° to<br>5° to 60° C (Ex  | 40° C<br>cluding Battery   |                                |         |  |
| Operating Humidity  |   |  | 32° to<br>5° to 140° F / -19<br>0 to 95  | o 104° F/0° to<br>5° to 60° C (Ex<br>% (Non-Cond   | 40° C<br>cluding Battery<br>ensing)  | )                              |         |  |
|   |   |  | 32° to<br>5° to 140° F / -19<br>0 to 95  | o 104° F/0° to<br>5° to 60° C (Ex<br>% (Non-Cond   | 40° C<br>cluding Battery   | )                              |         |  |
| Operating Humidity  |   |  | 32° tr<br>5° to 140° F/-13<br>0 to 95<br>328 ft. above 3<br><73  | o 104° F/0° to<br>5° to 60° C (Ex<br>% (Non-Cond<br>281 ft.); < 1000<br>dBA at 3,3 ft.   | 40° C<br>cluding Battery<br>ensing)<br>m (Derate 1%<br>(1 m)   | )                              |         |  |
| Operating Humidity<br>Operating Altitude  |   |  | 32° tr<br>5° to 140° F/-13<br>0 to 95<br>328 ft. above 3<br><73  | o 104° F/0° to<br>5° to 60° C (Ex<br>% (Non-Cond<br>281 ft.); < 1000   | 40° C<br>cluding Battery<br>ensing)<br>m (Derate 1%<br>(1 m)   | )                              |         |  |
| Operating Humidity<br>Operating Altitude<br>Audible Noise   |   |  | 32° tr<br>5° to 140° F/-13<br>0 to 95<br>328 ft. above 3<br><73  | o 104° F/0° to<br>5° to 60° C (Ex<br>% (Non-Cond<br>281 ft.); < 1000<br>dBA at 3,3 ft.   | 40° C<br>cluding Battery<br>ensing)<br>m (Derate 1%<br>(1 m)   | )                              |         |  |
| Operating Humidity<br>Operating Altitude<br>Audible Noise<br>Colour   |   |  | 32° tr<br>5° to 140° F/-11<br>0 to 95<br>328 ft. above 3<br><73<br>RA  | o 104° F/0° to<br>5° to 60° C (Ex<br>% (Non-Cond<br>281 ft.); < 1000<br>dBA at 3,3 ft.   | 40° C<br>cluding Battery<br>ensing)<br>m (Derate 1%<br>(1 m)<br>ick)   | )                              |         |  |
| Operating Humidity<br>Operating Altitude<br>Audible Noise<br>Colour<br>MANAGEMENT   |   | Derate 1% per a  | 32° tr<br>5° to 140° F/-1<br>0 to 95<br>328 ft. above 3<br><73<br>RA<br>Large 145  | o 104° F/0° to<br>5° to 60° C (Ex<br>% (Non-Cond<br>281 ft.); < 1000<br>dBA at 3,3 ft.<br>L 9005 (Jet Bla<br>5 mm Multifun   | 40° C<br>cluding Battery<br>ensing)<br>m (Derate 1%<br>(1 m)<br>ick)   | )<br>per 100 m abo             |         |  |
| Operating Humidity<br>Operating Altitude<br>Audible Noise<br>Colour<br>MANAGEMENT<br>Control Panel  |   | Derate 1% per a  | 32° tr<br>5° to 140° F/-1<br>0 to 95<br>328 ft. above 3<br><73<br>RA<br>Large 145<br><b>RDLX</b> Included                                    | o 104° F/0° to<br>5° to 60° C (Ex<br>% (Non-Cond<br>281 ft.); < 1000<br>dBA at 3,3 ft.<br>L 9005 (Jet Bla<br>5 mm Multifun   | 40° C<br>cluding Battery<br>ensing)<br>m (Derate 1%<br>(1 m)<br>ick)<br>ction LCD<br>for more infor                                    | )<br>per 100 m abo             |         |  |
| Operating Humidity<br>Operating Altitude<br>Audible Noise<br>Colour<br>MANAGEMENT<br>Control Panel<br>Network Management Card (SNMP)  |   | Derate 1% per a  | 32° tr<br>5° to 140° F/-1<br>0 to 95<br>328 ft. above 3<br><73<br>RA<br>Large 145<br><b>RDLX</b> Included<br>Option                          | o 104° F/0° to<br>5° to 60° C (Ex<br>% (Non-Cond<br>281 ft.); < 1000<br>dBA at 3,3 ft.<br>L 9005 (Jet Bla<br>5 mm Multifun<br>d (See page 21<br>al <b>MODBUSC</b>                                    | 40° C<br>cluding Battery<br>ensing)<br>m (Derate 1%<br>(1 m)<br>ick)<br>ction LCD<br>for more infor                                    | )<br>per 100 m abo             |         |  |
| Operating Humidity<br>Operating Altitude<br>Audible Noise<br>Colour<br>MANAGEMENT<br>Control Panel<br>Network Management Card (SNMP)<br>MODBUS  |   | Derate 1% per a  | 32° tr<br>5° to 140° F/-1<br>0 to 95<br>328 ft. above 3<br><73<br>RA<br>Large 145<br><b>RDLX</b> Included<br>Option                          | o 104° F/0° to<br>5° to 60° C (Ex<br>% (Non-Cond<br>281 ft.); < 1000<br>dBA at 3,3 ft.<br>L 9005 (Jet Bla<br>5 mm Multifun<br>d (See page 21<br>al <b>MODBUSC</b>                                    | 40° C<br>cluding Battery<br>ensing)<br>m (Derate 1%<br>(1 m)<br>(1 m)<br>ick)<br>ction LCD<br>for more infor<br><b>ARDSV</b>           | )<br>per 100 m abo             |         |  |
| Operating Humidity<br>Operating Altitude<br>Audible Noise<br>Colour<br>MANAGEMENT<br>Control Panel<br>Network Management Card (SNMP)<br>MODBUS<br>Contact Closure   |   | Derate 1% per a  | 32° tr<br>5° to 140° F/-1<br>0 to 95<br>328 ft. above 3<br><73<br>RA<br>Large 145<br><b>RDLX</b> Included<br>Option                          | o 104° F/0° to<br>5° to 60° C (Ex<br>% (Non-Cond<br>281 ft.); < 1000<br>dBA at 3,3 ft.<br>L 9005 (Jet Bla<br>5 mm Multifun<br>d (See page 21<br>al <b>MODBUSC</b><br>AYCARDSV So                     | 40° C<br>cluding Battery<br>ensing)<br>m (Derate 1%<br>(1 m)<br>(1 m)<br>ick)<br>ction LCD<br>for more infor<br><b>ARDSV</b>           | )<br>per 100 m abo             |         |  |
| Operating Humidity<br>Operating Altitude<br>Audible Noise<br>Colour<br>MANAGEMENT<br>Control Panel<br>Network Management Card (SNMP)<br>MODBUS<br>Contact Closure<br>Emergency Power Off (EPO)                        |   | Derate 1% per de la companya de la compa | 32° to<br>5° to 140° F/-1<br>0 to 95<br>328 ft. above 3<br><73<br>RA<br>Large 145<br><b>RDLX</b> Included<br>Optional ( <b>REL</b>           | o 104° F/0° to<br>5° to 60° C (Ex<br>% (Non-Cond<br>281 ft.); < 1000<br>dBA at 3,3 ft.<br>L 9005 (Jet Bla<br>5 mm Multifun<br>d (See page 21<br>al <b>MODBUSC</b><br><b>AYCARDSV</b> Se<br>Standard  | 40° C<br>cluding Battery<br>ensing)<br>m (Derate 1%<br>(1 m)<br>(1 m)<br>ick)<br>ction LCD<br>for more infor<br><b>ARDSV</b>           | )<br>per 100 m abo<br>mation.) |         |  |
| Operating Humidity<br>Operating Altitude<br>Audible Noise<br>Colour<br>MANAGEMENT<br>Control Panel<br>Network Management Card (SNMP)<br>MODBUS<br>Contact Closure<br>Emergency Power Off (EPO)<br>STANDARDS           |   | Derate 1% per de la companya de la compa | 32° to<br>5° to 140° F/-1<br>0 to 95<br>328 ft. above 3<br><73<br>RA<br>Large 145<br><b>RDLX</b> Included<br>Option<br>Optional ( <b>REL</b> | o 104° F/0° to<br>5° to 60° C (Ex<br>% (Non-Cond<br>281 ft.); < 1000<br>dBA at 3,3 ft.<br>L 9005 (Jet Bla<br>5 mm Multifun<br>d (See page 21<br>al <b>MODBUSC</b><br><b>AYCARDSV</b> Se<br>Standard  | 40° C<br>cluding Battery<br>ensing)<br>m (Derate 1%<br>(1 m)<br>ick)<br>ction LCD<br>for more infor<br><b>ARDSV</b><br>old Separately) | )<br>per 100 m abo<br>mation.) |         |  |
| Operating Humidity<br>Operating Altitude<br>Audible Noise<br>Colour<br>MANAGEMENT<br>Control Panel<br>Network Management Card (SNMP)<br>MODBUS<br>Contact Closure<br>Emergency Power Off (EPO)<br>STANDARDS<br>Safety |   | Derate 1% per de la companya de la compa | 32° to<br>5° to 140° F/-1<br>0 to 95<br>328 ft. above 3<br><73<br>RA<br>Large 145<br><b>RDLX</b> Included<br>Option<br>Optional ( <b>REL</b> | o 104° F/0° to<br>5° to 60° C (Ex<br>% (Non-Cond<br>281 ft.); < 1000<br>dBA at 3,3 ft.<br>L 9005 (Jet Bla<br>5 mm Multifun-<br>d (See page 21<br>al <b>MODBUSC</b><br><b>AYCARDSV</b> So<br>Standard | 40° C<br>cluding Battery<br>ensing)<br>m (Derate 1%<br>(1 m)<br>ick)<br>ction LCD<br>for more infor<br><b>ARDSV</b><br>old Separately) | )<br>per 100 m abo<br>mation.) |         |  |

### SmartOnline SV Series Technical Specifications (continued)

| ADDITIONAL ACCESSORIES (Sold Separately) |  |                |                  |                   |                    |                    |            |
|--|--|----------------|------------------|-------------------|--------------------|--------------------|------------|
|  | 20K  | 40K            | 60K              | 80K               | 100K               | 120K               | 140K       |
| Power Modules                            | SV20PM (Hot-swappable 20kVA/18kW power modules for SV series UPS models.)  |                |                  |                   |                    |                    |            |
| Internal Battery Modules                 | SVBM (Hot-swappable battery modules for SV series UPS models with internal batteries.)                           |                |                  |                   |                    |                    |            |
| External Battery Cabinets                | В  | P240V370 (Matc | hing 42U battery | cabinet with batt | eries for long-rur | ntime applications | s.)        |
|  | BP240V370NB (Matching 42U battery cabinet without batteries for long-runtime applications.)                      |                |                  |                   |                    |                    |            |
|  | EBP240V Series (Non-matching battery cabinets with or without batteries. 16 models available for a wide range of |                |                  |                   |                    |                    |            |
|  | long-runtime applications. See www.tripplite.com for more information.)  |                |                  |                   |                    |                    |            |
| Maintenance Bypass Panels                | SU2030KMBP   | SU40KMBPK      | SU60KMBPK        | SU80KMBPK         | SU120KMBPK         | SU120KMBPK         | SU140KMBPK |

### Small Frame (30U) Maximum Configurable Power: 60kVA/54kW

Total Dimensions (H x W x D): 58,1 x 23,6 x 43,3 in. / 1475 x 600 x 1100 mm • Shipping Dimensions (H x W x D): 64,9 x 29,5 x 48 in. / 1650 x 750 x 1220 mm

|                |            |                              | Runtime        |                     |                     |
|----------------|------------|------------------------------|----------------|---------------------|---------------------|
| Capacity       | Model      | Battery Configuration        | (100% Load)    | Unit Weight         | Shipping Weight     |
| 20 kVA / 18 kW | SV20KS1P0B | External Battery Cabinet(s)* | 27–400 min.**  | 648 lb. (294 kg)*** | 773 lb. (351 kg)*** |
| 20 kVA / 18 kW | SV20KS1P1B | Internal Batteries: 1 SVBM   | 4 min.         | 878 lb. (398 kg)    | 1033 lb. (469 kg)   |
| 20 kVA / 18 kW | SV20KS1P2B | Internal Batteries: 2 SVBM   | 10 min.        | 1108 lb. (503 kg)   | 1293 lb. (587 kg)   |
| 20 kVA / 18 kW | SV20KS1P3B | Internal Batteries: 3 SVBM   | 21,5 min.      | 1338 lb. (607 kg)   | 1553 lb. (705 kg)   |
| 40 kVA / 36 kW | SV40KS2P0B | External Battery Cabinet(s)* | 11–183 min.**  | 724 lb. (328 kg)*** | 857 lb. (389 kg)*** |
| 40 kVA / 36 kW | SV40KS2P2B | Internal Batteries: 2 SVBM   | 4 min.         | 1184 lb. (537 kg)   | 1377 lb. (625 kg)   |
| 40 kVA / 36 kW | SV40KS2P3B | Internal Batteries: 3 SVBM   | 6,7 min.       | 1414 lb. (642 kg)   | 1637 lb. (743 kg)   |
| 60 kVA / 54 kW | SV60KS3P0B | External Battery Cabinet(s)* | 5,9–113 min.** | 800 lb. (363 kg)*** | 941 lb. (427 kg)*** |
| 60 kVA / 54 kW | SV60KS3P3B | Internal Batteries: 3 SVBM   | 4 min.         | 1490 lb. (676 kg)   | 1721 lb. (781 kg)   |

\*External battery cabinets are sold separately. \*\*Range available with recommended battery cabinet options. \*\*\*Without external battery cabinets.

### Medium Frame (42U) Maximum Configurable Power: 80kVA/72kW

Total Dimensions (H x W x D): 79,1 x 23,6 x 43,3 in. / 2010 x 600 x 1100 mm • Shipping Dimensions (H x W x D): 85,6 x 29,5 x 48 in. / 2175 x 750 x 1220 mm

|                |            |                              | Runtime       |                     |                      |
|----------------|------------|------------------------------|---------------|---------------------|----------------------|
| Capacity       | Model      | Battery Configuration        | (100% Load)   | Unit Weight         | Shipping Weight      |
| 20 kVA / 18 kW | SV20KM1P0B | External Battery Cabinet(s)* | 26-404 min.** | 679 lb. (308 kg)*** | 822 lb. (373 kg)***  |
| 20 kVA/18 kW   | SV20KM1P1B | Internal Batteries: 1 SVBM   | 4 min.        | 909 lb. (413 kg)    | 1082 lb. (491 kg)    |
| 20 kVA/18 kW   | SV20KM1P2B | Internal Batteries: 2 SVBM   | 10 min.       | 1139 lb. (517 kg)   | 1342 lb. (609 kg)    |
| 20 kVA/18 kW   | SV20KM1P3B | Internal Batteries: 3 SVBM   | 21,5 min.     | 1369 lb. (621 kg)   | 1602 lb. (727 kg)    |
| 20 kVA/18 kW   | SV20KM1P4B | Internal Batteries: 4 SVBM   | 24,5 min.     | 1599 lb. (726 kg)   | 1862 lb. (845 kg)    |
| 40 kVA/36 kW   | SV40KM2P0B | External Battery Cabinet(s)* | 11–185 min.** | 755 lb. (343 kg)*** | 906 lb. (411 kg)***  |
| 40 kVA/36 kW   | SV40KM2P2B | Internal Batteries: 2 SVBM   | 4 min.        | 1215 lb. (552 kg)   | 1426 lb. (647 kg)    |
| 40 kVA / 36 kW | SV40KM2P3B | Internal Batteries: 3 SVBM   | 6,7 min.      | 1445 lb. (656 kg)   | 1686 lb. (765 kg)    |
| 40 kVA/36 kW   | SV40KM2P4B | Internal Batteries: 4 SVBM   | 10 min.       | 1675 lb. (760 kg)   | 1946 lb. (883 kg)    |
| 60 kVA / 54 kW | SV60KM3P0B | External Battery Cabinet(s)* | 6–114 min.**  | 831 lb. (377 kg)*** | 991 lb. (450 kg)***  |
| 60 kVA / 54 kW | SV60KM3P3B | Internal Batteries: 3 SVBM   | 4 min.        | 1521 lb. (690 kg)   | 1770 lb. (803 kg)    |
| 60 kVA / 54 kW | SV60KM3P4B | Internal Batteries: 4 SVBM   | 5,7 min.      | 1751 lb. (795 kg)   | 2030 lb. (921 kg)    |
| 80 kVA/72 kW   | SV80KM4P0B | External Battery Cabinet(s)* | 5,7-80 min.** | 907 lb. (411 kg)*** | 1074 lb. (487 kg)*** |
| 80 kVA/72 kW   | SV80KM4P4B | Internal Batteries: 4 SVBM   | 4 min.        | 1827 lb. (829 kg)   | 2114 lb. (959 kg)    |

\*External battery cabinets are sold separately. \*\*Range available with recommended battery cabinet options. \*\*\*Without external battery cabinets.

### Large Frame (42U) Maximum Configurable Power: 140kVA/126kW

Total Dimensions (H x W x D): 79,1 x 23,6 x 43,3 in. / 2010 x 600 x 1100 mm • Shipping Dimensions (H x W x D): 85,6 x 29,5 x 48 in. / 2175 x 750 x 1220 mm

|                        |           |                             | Runtime       |                   |                    |
|------------------------|-----------|-----------------------------|---------------|-------------------|--------------------|
| Capacity               | Model     | Battery Configuration       | (100% Load)   | Unit Weight***    | Shipping Weight*** |
| 20 kVA/18 kW           | SV20KL    | External Battery Cabinet(s) | 27–405 min.** | 677 lb. (307 kg)  | 820 lb. (372 kg)   |
| 40 kVA / 36 kW         | SV40KL    | External Battery Cabinet(s) | 11–185 min.** | 753 lb. (342 kg)  | 904 lb. (410 kg)   |
| 60 kVA / 54 kW         | SV60KL    | External Battery Cabinet(s) | 6–114 min.**  | 829 lb. (376 kg)  | 988 lb. (449 kg)   |
| 80 kVA/72 kW           | SV80KL    | External Battery Cabinet(s) | 5,7–80 min.** | 905 lb. (411 kg)  | 1072 lb. (487 kg)  |
| 100 kVA / 90 kW        | SV100KL   | External Battery Cabinet(s) | 6,6–61 min.** | 981 lb. (445 kg)  | 1156 lb. (525 kg)  |
| 120 kVA / 108 kW       | SV120KL   | External Battery Cabinet(s) | 6–49 min.**   | 1057 lb. (480 kg) | 1240 lb. (563 kg)  |
| 140 kVA / 126 kW       | SV140KL7P | External Battery Cabinet(s) | 6,9–40 min.** | 1133 lb. (514 kg) | 1324 lb. (601 kg)  |
| 140 kVA / 126 kW (N+1) | SV140KL8P | External Battery Cabinet(s) | 6,9-40 min.** | 1209 lb. (549 kg) | 1408 lb. (639 kg)  |

\* External battery cabinets are sold separately. \*\* Range available with recommended battery cabinet options. \*\*\* Without external battery cabinets.

### Powerful Network Management is Only a Click Away



The optional WEBCARDLX

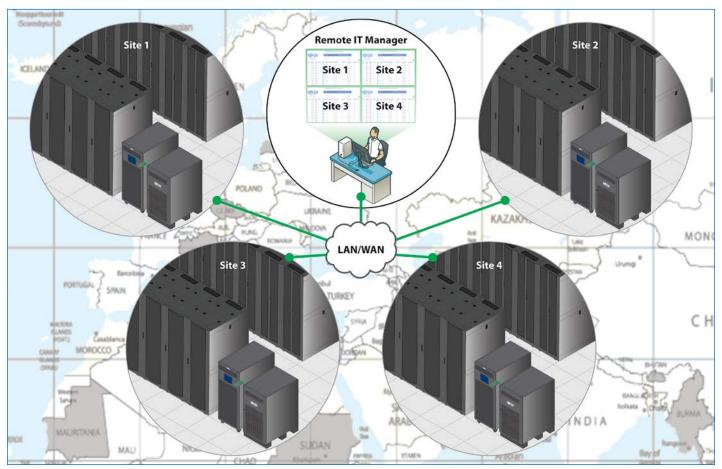
accessory card enables remote monitoring and control through several interfaces: HTML5 web via HTTP(S), menu/CLI via SSH/Telnet, and SNMP for integration with software

management platforms such as DCIM. Using **WEBCARDLX** in your UPS combined with Tripp Lite's network-enabled switched PDUs, you can manage power throughout your facility and receive automated alerts to identify problems before they cause downtime. WEBCARDLX also supports a family of sensors for remotely monitoring environmental conditions. You can link up to three sensors together, connecting them to a single port on the WEBCARDLX.



Tripp Lite offers free PowerAlert<sup>®</sup> Network Management System software. Learn more and download at https://www.tripplite.com/products/power-alert.

| Network Managem          | nent Card  |  |  |  |  |  |  |  |
|--------------------------|--|--|--|--|--|--|--|--|
| WEBCARDLX                | Network Management Card for Compatible Tripp Lite UPS Systems. Provides HTML5 Web, SSH/Telnet and SNMP Interfaces. |  |  |  |  |  |  |  |
| <b>Environmental Sen</b> | Environmental Sensors (Require WEBCARDLX)  |  |  |  |  |  |  |  |
| E2MT                     | EnviroSense2 (E2) Environmental Sensor Module with Temperature.  |  |  |  |  |  |  |  |
| E2MTDO                   | EnviroSense2 (E2) Environmental Sensor Module with Temperature and Digital Outputs.                                |  |  |  |  |  |  |  |
| E2MTHDI                  | EnviroSense2 (E2) Environmental Sensor Module with Temperature, Humidity and Digital Inputs.                       |  |  |  |  |  |  |  |
| E2SLD                    | EnviroSense2 (E2) Water Leak Detection Sensor (Requires <b>E2MTHDI</b> ).  |  |  |  |  |  |  |  |
| Intrusion Detection      | Intrusion Detection Sensor   |  |  |  |  |  |  |  |
| SRSWITCH                 | Magnetic Door Switch Kit (Monitors Front and Rear Doors of a Single Cabinet; Requires <b>E2MTHDI</b> ).            |  |  |  |  |  |  |  |



With the **WEBCARDLX** network management card installed, you can monitor and control UPS systems across multiple sites from any location. The unified Tripp Lite LX platform also includes PDUs, allowing you to manage power throughout your facilities.

### Complete, Customisable Power Protection

Create a power protection solution with the size and the management systems that are ideal for your environment. Whether you only need a few minutes of battery backup runtime to ride through brief power problems or multiple hours to outlast extended power outages; whether you have a single installation across the hall or a dozen installations across the globe, Tripp Lite offers the external battery cabinets, bypass panels and monitoring technology to help build the optimal solution.



|                       |           |                   |   |         |                   |              | Remote                          |              |   |  |
|-----------------------|-----------|-------------------|---|---------|-------------------|--------------|---------------------------------|--------------|---|--|
| LIDC                  | P         | F 1               | Battery Bus                                   | LIDE    |                   |              | and Local                       | C            | E                                       |  |
| UPS                   | Battery   | External Battery  | Dimensions                                    | UPS     |                   | Bypass Panel | Monitoring                      | Serial       | Environmental                           |  |
| Family                | Bus       | Cabinet Model     | (H x W x D)                                   | Poles   | UPS Model         | Model        | SNMP/HTML5                      |              | Sensors                                 |  |
| SUT                   | ± 144V DC | BP288VEBP         | 23,5 x 30,1 x 33,6 in.                        | 4-Pole  | SUT20K            | SUT20KMBP    | WEBCARDLX                       | MODBUSCARD   |   |  |
| (208V)                |           |                   | (597 x 765 x 853 mm)                          |         | SUT30K            | SUT30KMBP    | Optional                        |              |   |  |
| 20-60kVA              |           | BP288VEBPNB       |   |         | SUT40K            | SUT40KMBP    | Add-On                          |              |   |  |
|                       |           |                   |   |         | SUT60K            | SUT60KMBP    |                                 |              |   |  |
| SV                    | ± 120V DC | BP240V370         | 78,9 x 25,5 x 43,3 in.                        | 3-Pole  | SV20K             | SU2030KMBP   | WEBCARDLX                       | MODBUSCARDSV |   |  |
| (208V)<br>20-140kVA   |           | BP240V370NB       | (2004 x 648 x 1100 mm)                        |         |                   |              | Pre-Installed                   |              |   |  |
|                       |           | EBP240V2501       | 59 x 29 x 31,5 in.                            |         |                   |              |                                 |              |   |  |
|                       |           | EBP240V2501NB     | (1499 x 737 x 800 mm)                         |         |                   |              |                                 |              |   |  |
|                       |           | EBP240V2502       | 59 x 58 x 31,5 in.                            |         | SV40K             | SU40KMBPK    |                                 |              |   |  |
|                       |           | EBP240V2502NB     | (1499 x 1473 x 800 mm)                        |         |                   |              |                                 |              |   |  |
|                       |           | EBP240V3501       | 59 x 29 x 31,5 in.                            | 1       |                   |              |                                 |              |   |  |
|                       |           | EBP240V3501NB     | (1499 x 737 x 800 mm)                         |         |                   |              |                                 |              |   |  |
|                       |           | EBP240V3502       | 59 x 58 x 31,5 in.                            | 1       |                   |              |                                 |              |   |  |
|                       |           |                   | (1499 x 1473 x 800 mm)                        |         |                   |              |                                 |              |   |  |
|                       |           | BP288VEBPNB       | 23,5 x 30,1 x 33,6 in.                        | 1       |                   |              |                                 |              |   |  |
|                       |           |                   | (597 x 765 x 853 mm)                          |         |                   |              |                                 |              |   |  |
|                       |           | EBP240V5001       | 59 x 29 x 31,5 in.                            |         | SV60K             | SU60KMBPK    |                                 |              | - · · · · · · · · · · · · · · · · · · · |  |
|                       |           | EBP240V5001NB     | (1499 x 737 x 800 mm)                         |         |                   |              |                                 |              | EnviroSense2 (E2)                       |  |
|                       |           | EBP240V5002       |   |         |                   |              |                                 |              | Monitoring; Optional                    |  |
|                       |           | EBP240V5002NB     |   |         |                   |              |                                 |              | Add-Ons (Require                        |  |
|                       |           | EBP240V6002       | 59 x 58 x 31,5 in.                            |         | SV80K             | SU80KMBPK    |                                 |              | WEBCARDLX)                              |  |
|                       |           | EBP240V6002NB     | (1499 x 1473 x 800 mm)                        |         |                   |              |                                 |              | E2MT:                                   |  |
|                       |           | EBP240V6003       | 59 x 87 x 31,5 in.                            | )       | SV100K            | SU120KMBPK   |                                 |              | Temperature                             |  |
|                       |           | 20100000          | (1499 x 2210 x 800 mm)                        |         | SV120K            | JOILORMEIR   |                                 |              | romporataro                             |  |
|                       |           | EBP240V6003NB     |   |         | SV120K            | SU140KMBPK   | -                               |              | E2MTDO:                                 |  |
| SVTX                  | ± 240V DC | BP240V135         | 22,8 x 9,85 x 32,5 in.                        | 3-Pole  | SVT40K<br>SVT10KX | SU10KMBPKX   | WEBCARDLX<br>Optional<br>Add-On | MODBUSCARDSV | Temperature and<br>Digital Outputs      |  |
| (400V)                |           | DF 240 V 133      | (579 x 250 x 826 mm)                          | 3-1 UIE | SVT20KX           | SU20KMBPKX   |                                 |              |   |  |
| 10-30kVA              |           |                   |   |         | SVT20KX           | SU40KMBPKX   |                                 |              |   |  |
| SUTX                  | ± 240V DC | BP480V200         | 59 x 29 x 31,5 in.                            | 4-Pole  | SUTX20K           | SUT20KMBPX   | WEBCARDLX<br>Optional           | MODBUSCARD   | E2MTHDI:                                |  |
| (400V)                | 1 240V DC | BF460V200         | (1499 x 737 x 800 mm)                         |         | 3017201           | SUT40KMBPX   |                                 |              | Temperature,                            |  |
| 20/40kVA              |           | BP480V26B         | 45,7 x 20,5 x 33,7 in.                        |         | SUTX40K           |              |                                 |              | Humidity and                            |  |
| 20/ 10/07/            |           | DI 400V20D        | (1161 x 521 x 856 mm)                         |         | 3017401           |              |                                 |              | Digital Inputs                          |  |
| SVX                   | ± 240V DC | BP480V300         | 78,7 x 36 x 29,5 in.                          | 3-Pole  | SVX30             | SU40KMBPKX   | WEBCARDLX                       | MODBUSCARDSV | E3CLD.                                  |  |
| (400V)                | ± 240V DC | 51 400 1 500      | (1999 x 914 x 749 mm)                         | 5-1 010 | SVX60             | SU60KMBPKX   | Pre-Installed                   | MODBUSCARDSV | <b>E2SLD</b> :<br>Water Leak            |  |
| 30-210kVA             |           | DD400\/400        |   |         | SVX90             |              | X<br>X                          |              | Water Leak<br>Detection Sensor          |  |
|                       |           | BP480V400         |   |         |                   | SU100KMBPKX  |                                 |              | (Requires E2MTHDI)                      |  |
|                       |           | DD400\/40C        | 66,9 x 20,5 x 33,7 in.                        |         | SVX120            | SU120KMBPKX  |                                 |              |   |  |
|                       |           | BP480V40C         | (1699 x 521 x 856 mm)                         |         | SVX150            | SU160KMBPKX  |                                 |              | SRSWITCH:                               |  |
|                       |           | BP480V500         | 78,7 x 40 x 29,5 in.                          |         | SVX180            | SU180KMBPKX  | -                               |              | Cabinet Door Access                     |  |
|                       |           | DF400V500         | (1999 x 1016 x 749 mm)                        |         | SVX180            | SU210KMBPKX  | -                               |              | (Requires E2MTHDI                       |  |
| C2MY                  |           | BP480V40          |   | 3-Pole  |                   |              |                                 | MODBUSCARDSV |   |  |
| <b>S3MX</b><br>(400V) | ± 240V DC | DP460V40          | 48 x 24,7 x 35,4 in.<br>(1219 x 627 x 899 mm) | 3-Pole  | S3M30KX*          | SU40KMBPKX   | WEBCARDLX<br>Optional           | WODBUSCARDSV |   |  |
| (400V)<br>30-200kVA   |           |                   | (1217 X 027 X 077 mm)                         |         | S3M40KX*          |              | Add-On                          |              |   |  |
| 50 200K VA            |           |                   | -   |         | S3M60KX           | SU60KMBPKX   |                                 |              |   |  |
|                       |           | BP480V40-NIB      |   |         | S3M80KX           | SU80KMBPKX   |                                 |              |   |  |
|                       |           |                   |   |         |                   | SU100KMBPKX  |                                 |              |   |  |
|                       |           | DD4001//5         | FO 22 F 44 7 1                                |         |                   | SU120KMBPKX  | -                               |              |   |  |
|                       |           | BP480V65          | 59 x 32,5 x 44,7 in.                          |         |                   | SU160KMBPKX  | -                               |              |   |  |
|                       |           |                   | (1499 x 826 x 1135 mm)                        |         |                   | SU210KMBPKX  | -                               |              |   |  |
|                       |           | DD 400) // 5 5 10 | -   |         |                   | SU40KMBPKX   |                                 |              |   |  |
|                       |           | BP480V65-NIB      |   |         | S3M40KXD          |              | -                               |              |   |  |
|                       |           |                   |   |         |                   | SU60KMBPKX   |                                 |              |   |  |
|                       |           |                   | -   |         |                   | SU80KMBPKX   | -                               |              |   |  |
|                       |           | BP480V100         |   |         |                   | SU100KMBPKX  |                                 |              |   |  |
|                       |           |                   |   |         | S3M120KXD         | SU120KMBPKX  |                                 |              |   |  |
|                       |           | BP480V100-NIB     |   |         | S3M160KXD         | SU160KMBPKX  |                                 |              |   |  |
|                       |           |                   |   |         |                   | SU210KMBPKX  |                                 |              |   |  |

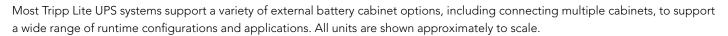
 $_{\rm 22}$  \* Also available without battery in single and dual input configurations.

### User-Friendly Online Runtime Tools

Tripp Lite's website provides a wealth of runtime data to help you configure battery capacity for your application, including dynamic interactive runtime charts, interactive runtime tables, load calculators and downloadable, printable runtime chart PDFs.

These tools allow you to compare battery configurations to see how they affect available runtime at various load levels. They are accessible from each UPS product page at www.tripplite.com.

### Sample UPS and External Battery Cabinet Pairings





SVT10KX UPS with BP240V135 External Battery Cabinets



**S3M40KX** UPS with **BP480V10** External Battery Cabinets



**S3M200KX** UPS with **BP480V100** External Battery Cabinet



SUTX40K UPS with BP480V200 External Battery Cabinet



Ratione Doot Partice Table Load

42U SVX or SV Series UPS with **BP480V370** (SVX) or **BP240V370** (SV) Matching 42U External Battery Cabinet



SUT20K UPS with BP288VEBP External Battery Cabinet



SV40KS2P0B UPS with EBP240V2501 External Battery Cabinet

### Tripp Lite Care Service and Support

Service is the most critical component of 3-phase UPS ownership. When you invest in a large UPS, you may need it to operate reliably for 10 years or more. Tripp Lite Care<sup>SM</sup> 3-phase UPS services are designed to protect your UPS over its entire lifecycle, from commissioning to preventive maintenance and eventual replacement. They keep your UPS in peak condition so it is always ready to protect you from downtime.

#### Warranty

Tripp Lite 3-phase UPS system factory warranties vary by region. Optional extended warranties up to three years past the standard factory warranty are available. External batteries include a one-year warranty in all regions.



#### Commissioning

Commissioning builds a solid foundation for improved reliability, higher efficiency, reduced costs, enhanced safety, fewer repairs, quicker service and longer UPS lifespan. Commissioning helps you verify and document the proper installation and startup of your UPS system at the installation site. Commissioning also registers your UPS, initiates its service record and establishes a working relationship between your organisation and the Tripp Lite service team, which is essential for a successful 3-phase UPS deployment. Lastly, commissioning activates an enhanced 24/7/365 on-site UPS warranty, which covers parts, travel and labour.

#### Annual Service Agreements with Preventive Maintenance

Annual service agreements include extended 24/7/365 on-site warranties and on-site preventive maintenance visits. Regular preventive maintenance significantly reduces failure rates by identifying potential threats early and correcting problems before they cause downtime. UPS systems with regular preventive maintenance are much less likely to experience a failure than UPS systems without it. Component failures can still happen, but on-site warranties minimise the cost and disruption of unavoidable repairs.

#### **Non-Warranty Services**

Tripp Lite provides non-warranty services when the UPS system is outside the warranty or service agreement period, or when a required service or repair is not covered under the terms of the current warranty or service agreement. Tripp Lite quotes non-warranty services on a case-by-case, time-and-materials basis, and cost depends on the UPS model and specific service requested. Available non-warranty services include rapid-response on-site repair, battery installation and battery service/replacement.

#### **Planned Replacement Services**

Although Tripp Lite products are built to provide long service life, there comes a point for every UPS system when it makes more sense to modernise than to keep an older system in service. Tripp Lite's planned replacement services provide a free assessment of your current UPS, balancing the cost of replacement against the cost of maintenance and risk of downtime. Once you decide to modernise, Tripp Lite helps you make the transition efficient and seamless, minimising disruption to your critical operations. **Note:** Service availability varies with location.

### **Contact Tripp Lite for more information:**

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