3-PHASE UPS SYSTEMS

SmartOnline® SV Series

Clean, continuous power that expands with your data center.

20 to 140 kVA, 208/220V Ph-Ph

- Modular, scalable UPS platform
- Efficient and reliable operation
- Built-in network management card
- N+1 redundancy for fault-tolerance
- Rack-based cabinet design
- Available with or without internal batteries

42U Cabinet
- 20 to 80 kVA with internal batteries
- 20 to 140 kVA without internal batteries

30U Cabinet
- 20 to 60 kVA with or without internal batteries

MODULAR, SCALABLE, COMPACT, POWERFUL

Tripp Lite's SmartOnline SV series UPS systems deliver true scalability in a compact form factor and offer the highest level of secure, uninterrupted power protection. Available in three frame sizes in heights from 30U to 42U and capacities ranging from 20 kVA to 140 kVA, SV series UPS systems seamlessly integrate into any standard IT rack environment.

The SV series offers multiple variations of power and battery runtime options, scalable to site needs as network or application demands change. Comprised of multiples of **SV20PM** power modules, the SV series UPS delivers capacity up to 140 kVA in a simple rack-width frame. Each power module provides 20 kVA / 18 kW capacity and occupies just 3U of rack space for exceptional power density. As network infrastructure grows, additional 20 kVA power modules may be added.

Small, medium and large frame sizes are available without internal batteries for long-runtime applications using external battery cabinets (up to 405 minutes at full load, depending on model and configuration). Small and medium frame sizes are also available with internal batteries for shorter-runtime applications (up to 24.5 minutes at full load, depending on model and configuration).

Tripp Lite SmartOnline SV Series Modular 3-Phase UPS Systems

Model	Load Capacity	Power Module Configuration	Battery Module Configuration
Small Frame (30U / 20 kVA to 60 kVA / With or Without Internal Batteries)			
NEW! SV20KS1P0B	20 kVA / 18 kW	1 SV20PM (2 Can Be Added)	0 SVBM (Requires External Battery Cabinet)**
SV20KS1P1B	20 kVA / 18 kW	1 SV20PM (2 Can Be Added)	1 SVBM (2 Can Be Added)
SV20KS1P2B	20 kVA / 18 kW	1 SV20PM (2 Can Be Added)	2 SVBM (1 Can Be Added)
SV20KS1P3B	20 kVA / 18 kW	1 SV20PM (2 Can Be Added)	3 SVBM (0 Can Be Added)
NEW! SV40KS2P0B	40 kVA / 36 kW	2 SV20PM (1 Can Be Added)	0 SVBM (Requires External Battery Cabinet)**
SV40KS2P2B	40 kVA / 36 kW	2 SV20PM (1 Can Be Added)	2 SVBM (1 Can Be Added)
SV40KS2P3B	40 kVA / 36 kW	2 SV20PM (1 Can Be Added)	3 SVBM (0 Can Be Added)
NEW! SV60KS3P0B	60 kVA / 54 kW	3 SV20PM (0 Can Be Added)	0 SVBM (Requires External Battery Cabinet)**
SV60KS3P3B	60 kVA / 54 kW	3 SV20PM (0 Can Be Added)	3 SVBM (0 Can Be Added)
Medium Frame (42U / 20 kVA to 80 kVA / With or Without Internal Batteries)			
NEW! SV20KM1P0B	20 kVA / 18 kW	1 SV20PM (3 Can Be Added)	0 SVBM (Requires External Battery Cabinet)**
SV20KM1P1B	20 kVA / 18 kW	1 SV20PM (3 Can Be Added)	1 SVBM (3 Can Be Added)
SV20KM1P2B	20 kVA / 18 kW	1 SV20PM (3 Can Be Added)	2 SVBM (2 Can Be Added)
SV20KM1P3B	20 kVA / 18 kW	1 SV20PM (3 Can Be Added)	3 SVBM (1 Can Be Added)
SV20KM1P4B	20 kVA / 18 kW	1 SV20PM (3 Can Be Added)	4 SVBM (0 Can Be Added)
NEW! SV40KM2P0B	40 kVA / 36 kW	2 SV20PM (2 Can Be Added)	0 SVBM (Requires External Battery Cabinet)**
SV40KM2P2B	40 kVA / 36 kW	2 SV20PM (2 Can Be Added)	2 SVBM (2 Can Be Added)
SV40KM2P3B	40 kVA / 36 kW	2 SV20PM (2 Can Be Added)	3 SVBM (1 Can Be Added)
SV40KM2P4B	40 kVA / 36 kW	2 SV20PM (2 Can Be Added)	4 SVBM (0 Can Be Added)
NEW! SV60KM3P0B	60 kVA / 54 kW	3 SV20PM (1 Can Be Added)	0 SVBM (Requires External Battery Cabinet)**
SV60KM3P3B	60 kVA / 54 kW	3 SV20PM (1 Can Be Added)	3 SVBM (1 Can Be Added)
SV60KM3P4B	60 kVA / 54 kW	3 SV20PM (1 Can Be Added)*	4 SVBM (0 Can Be Added)
NEW! SV80KM4P0B	80 kVA / 72 kW	4 SV20PM (0 Can Be Added)	0 SVBM (Requires External Battery Cabinet)**
SV80KM4P4B	80 kVA / 72 kW	4 SV20PM (0 Can Be Added)	4 SVBM (0 Can Be Added)
Large Frame (42U / 20 kVA to 140 kVA / Without Internal Batteries)			
SV20KL	20 kVA / 18 kW	1 SV20PM (7 Can Be Added)	Requires External Battery Cabinet**
SV40KL	40 kVA / 36 kW	2 SV20PM (6 Can Be Added)	Requires External Battery Cabinet**
SV60KL	60 kVA / 54 kW	3 SV20PM (5 Can Be Added)	Requires External Battery Cabinet**
SV80KL	80 kVA / 72 kW	4 SV20PM (4 Can Be Added)	Requires External Battery Cabinet**
SV100KL	100 kVA / 90 kW	5 SV20PM (3 Can Be Added)	Requires External Battery Cabinet**
SV120KL	120 kVA / 108 kW	6 SV20PM (2 Can Be Added)	Requires External Battery Cabinet**
SV140KL7P	140 kVA / 126 kW	7 SV20PM (1 Can Be Added)*	Requires External Battery Cabinet**
SV140KL8P	140 kVA / 126 kW (N+1)	8 SV20PM (0 Can Be Added)	Requires External Battery Cabinet**

* Adding SV20PM provides N+1 redundancy for fault tolerance, but does not increase capacity. ** Tripp Lite offers a full range of matching and non-matching external battery cabinets with or without batteries. See page 6 or www.tripplite.com for more information.

- 30U with Internal Batteries
- 20 to 60 kVA
- Shorter Runtime & Smaller Footprint

- 30U with External Battery Cabinet(s)
- 20 to 60 kVA
- Longer Runtime

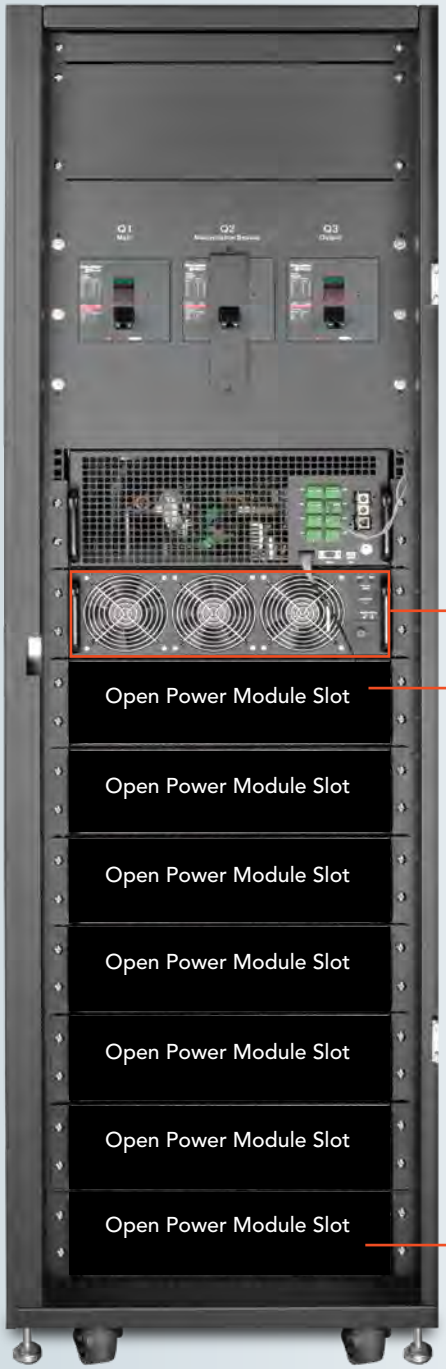
- 42U with Internal Batteries
- 20 to 80 kVA
- Shorter Runtime & Smaller Footprint

- 42U with External Battery Cabinet(s)
- 20 to 140 kVA
- Longer Runtime

N+1 REDUNDANCY FOR FAULT-TOLERANCE

UPS capacity is scalable in 20 kVA increments, from 20 kVA to 140 kVA N+1, with three frame configurations:

- Small frame up to 60 kVA or 40 kVA N+1
- Medium frame up to 80 kVA or 60 kVA N+1
- Large frame up to 140 kVA N+1



*(1) Installed 20 kVA **SV20PM** Power Module*

MODULAR ARCHITECTURE ELIMINATES DOWNTIME

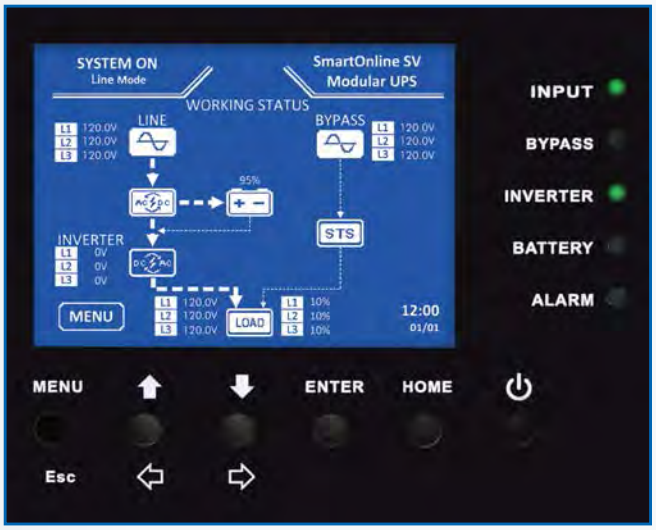
SV power modules (**SV20PM**) and battery modules (**SVBM**) may be removed and swapped out while the UPS is in operation, eliminating costly downtime and ensuring protected equipment remains powered up, even during standard maintenance.

TRANSFORMERLESS DESIGN

The SV series has a transformer-free, IGBT rectifier design to deliver low input total harmonic distortion (THDi) and a high input power factor. An attached generator set may be sized 1:1 to the UPS capacity. This also reduces sizing requirements, as well as cost, for installation cabling and input, output and bypass breakers.

INTUITIVE DISPLAY

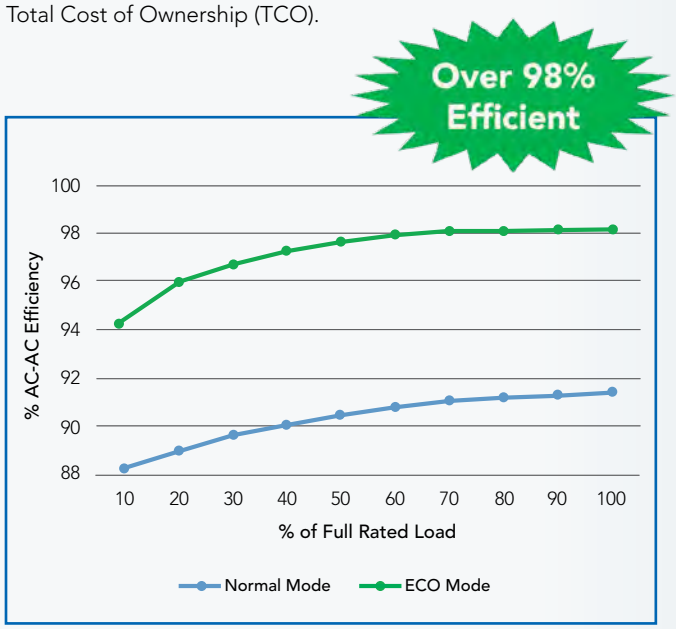
A multifunctional LCD user interface provides clear, immediate data on UPS status. Additionally, it provides an easy path to UPS setup for specific site or load requirements and direct access to UPS settings, controls and measurements during the UPS operation. For authorized service personnel, the LCD interface doubles as a service screen to assist in troubleshooting and diagnosis.



*(7) open slots are available for additional user-installable 20 kVA **SV20PM** power modules for up to 140 kVA capacity with N+1. (Large Frame Shown)*

OVER 98% EFFICIENCY

An SV series UPS maintains an efficiency rating of over 91% during normal operation and over 98% in ECO mode, making it one of the most efficient UPS systems in its class. This results in fewer energy losses, lower operating costs and lower cooling costs at the installation site, which translates to a compelling Total Cost of Ownership (TCO).



AUTOMATIC & MANUAL BYPASS

In overload or over-temperature conditions, the UPS automatically transfers to bypass. For scheduled maintenance or planned site events, a manual transfer to bypass may be conducted quickly and safely via the bypass switch. For maximum site safety, SV series UPS systems are also equipped with EPO (Emergency Power Off) shutdown.

NETWORK MANAGEMENT CARD INCLUDED

The included **WEBCARDLX** network management card enables remote monitoring and control through HTML5 web, SSH/telnet and SNMP interfaces, as well as integration with a wide range of Network Management Systems and DCIM platforms. Automated alerts allow you to detect problems before they cause downtime.

SIMPLIFIED ASSEMBLY & INSTALLATION

The control module and static transfer switch (STS) module are pre-installed in the frame. Power and battery modules lock into open slots in the frame quickly and easily. Air filter replacement is simple and does not require tools; standard filters may be used.

HIGH PERFORMANCE

Because an SV series UPS is rated at 0.9 power factor, it may be sized closer to actual power and load requirements. Compared to a similarly sized UPS with a legacy 0.8 power factor, an SV series UPS accepts more than 10% additional loading.

RELIABILITY

SV series UPS systems accept dual AC input sources to maintain maximum load support availability. Not only are power modules designed for redundant parallel operation within the UPS system, independent power sources can also feed into the UPS.

Small Frame

Medium/Large Frame

SmartOnline SV Technical Specifications

		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		Voltage and Frequency Independent (VFI) True On-Line Double Conversion						
INPUT								
Voltage		208/220V (Ph-Ph); 120/127V (Ph-N)						
Voltage Range		156V – 253V (Ph-Ph); 90V – 146V (Ph-N); 100% load						
Phase		3-phase, neutral and ground						
Operating Frequency		50/60 Hz (selectable)						
Frequency Range		40 – 70 Hz ± 0.1 Hz						
Power Factor		> 0.99						
THDi		< 3%						
Inverter Bridge		IGBT technology						
OUTPUT								
Voltage		208/220V (Ph-Ph); 120/127V (Ph-N)						
AC Voltage Regulation		< 1% (balanced load)						
Frequency		50/60 Hz (selectable)						
Frequency Range		40 – 70 Hz ± 0.1 Hz						
Efficiency (ECO Mode / Line Mode)		> 98% / > 91% (100% load)						
Overload	**AC Mode**	105% – 110%: 60 min. / 111% – 125%: 10 min. / 126% – 150%: 1 min. / >150%: 200 ms						
	Battery Mode	105% – 110%: 60 min. / 111% – 125%: 10 min. / 126% – 150%: 1 min. / >150%: 200 ms						
Crest Factor		3:1						
Harmonic Distortion		< 2% (100% linear load); < 4% (100% non-linear load)						
Output Waveform		Pure sine wave						
BYPASS								
Automatic Bypass		Standard						
Manual Maintenance Bypass		Standard						
Transfer Time		≤ 1 ms						
Bypass Voltage Tolerance (Default)		+15% / -20%						
Overload		105% – 110%: 60 min. / 111% – 125%: 10 min. / 126% – 150%: 1 min. / >150%: 200 ms						
BATTERY								
Battery Type*		Maintenance-free sealed valve-regulated lead-acid (VRLA)						
Battery Capacity*		12V 18Ah/module						
Float Voltage		2.3V/cell						
Boost Voltage		2.35V/cell						
End-of-Discharge Voltage		1.67V/cell						
Battery Storage Time*		6 months (without recharge, stored at 77° F / 25° C)						
Battery Charger Capacity		8A (2A default)						
Estimated Maximum Runtime with Internal Battery Modules, 100% Load		24.5 min.	10 min.	5.7 min.	4 min.	N/A	N/A	N/A
Estimated Maximum Runtime with External Battery Cabinet(s), 100% Load**		405 min.	185 min.	114 min.	80 min.	61 min.	49 min.	40 min.
ENVIRONMENT								
Operating Temperature		32° to 104° F / 0° to 40° C						
Storage Temperature		5° to 140° F / -15° to 60° C (excluding battery)						
Operating Humidity		0 to 95% (non-condensing)						
Operating Altitude		< 3281 ft. (1% deration per 328 ft. above 3281 ft.); < 1000 m (1% deration per 100 m above 1000 m)						
Audible Noise		< 73 dBA at 3.3 ft. (1 m)						
Protection Rating		IP20						
Color		RAL 9005 (Jet Black)						
MANAGEMENT								
Multifunctional LCD		Standard						
Network Management Card (SNMP)		**WEBCARDLX** included						
Relay Interface		Optional (**RELAYCARDSV** sold separately)						
Emergency Power Off (EPO)		Standard						
STANDARDS								
Safety		UL 1778 5th edition; CSA C22.2 No. 107.3-14						
EMC		FCC Class A						
Approvals		TUV						
ACCESSORIES								
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		**BP240V370** (Matching 42U battery cabinet with batteries for long-runtime applications.)						
		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.)						

*Applies to models with internal battery modules. **External battery cabinets are sold separately. Runtime varies with model. See accessories section below for more information.

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

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

Capacity	Model	Battery Configuration	Runtime (100% Load)	Unit Weight	Shipping Weight
20 kVA / 18 kW	**SV20KS1P0B**	External Battery Cabinet(s)*	27 – 405 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 – 185 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)*	6 – 114 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: 80 kVA / 72 kW

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

Capacity	Model	Battery Configuration	Runtime (100% Load)	Unit Weight	Shipping Weight
20 kVA / 18 kW	**SV20KM1P0B**	External Battery Cabinet(s)*	27 – 405 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: 140 kVA / 126 kW

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

Capacity	Model	Battery Configuration	Runtime (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.

Visit **www.tripplite.com** to access detailed runtime data for a variety of internal and external battery configuration options.

Tripp Lite Manufactures more than 4,000 IT Infrastructure Solutions!

3-PHASE ACCESSORIES TO COMPLETE YOUR APPLICATION

Our selection of external battery cabinets, remote paralleling cabinets, external maintenance bypass, whip cables and transformers allows you to get more out of your new SV series UPS system. Visit **www.tripplite.com** today to see the full line of SV UPS accessories.

RACK & COOLING SOLUTIONS

Tripp Lite makes more than 250 models of EIA-compliant rack enclosures, open frame racks, wall-mount racks, close-coupled cooling solutions and rack accessories.

POWER DISTRIBUTION UNITS (PDUs)

Tripp Lite offers more than 200 models of basic, metered, monitored, switched, ATS and hot-swap PDUs in horizontal (1U/2U) and vertical (0U) form factors.

KVM/CONSOLE SOLUTIONS

Tripp Lite has more than 80 models of KVM switches, rack consoles and IP console servers, with or without built-in remote access (KVM over IP), built-in LCD monitor, multiuser support and Cat5/UTP cabling.

CABLES & CONNECTIVITY

Choose from hundreds of Tripp Lite cables, adapters and patch panels to connect high-speed data networks and power outlets to switches, routers and servers in high-density environments.

ABOUT TRIPP LITE

Since 1922, Tripp Lite has established a global reputation for quality manufacturing, superior value and excellent service. Tripp Lite makes more than 4,000 products to power, protect and connect electronic equipment, including UPS systems, replacement batteries, power distribution units, rack systems, cooling solutions, surge protectors, KVM switches, cables, display solutions, power strips and inverters.

PulseSupply
pulsesupply.com

Pulse Supply
909 Ridgebrook Road.,Sparks,Maryland 21152,USA
TEL : +1-410-583-1701 FAX : +1-410-583-1704
E-mail: sales@pulsesupply.com
https://www.pulsesupply.com/tripp-lite

95 OVER YEARS Manufacturing Excellence.

ISO 9001 CERTIFIED QUALITY SYSTEMS

TRIPP·LITE

GREEN SOLUTIONS

RoHS COMPLIANT

Copyright © 2018 Tripp Lite. All trademarks are the property of their respective owners. Photos may differ slightly from actual products Tripp Lite has a policy of continuous improvement. Specifications are subject to change without notice.

18-10-477 95-3540