UniStar® VP Series
6 and 10 kVA Tower

On-line, Single-phase Parallel Redundant UPS System

- Power range and runtime scalability
- Full-time Digital Signal Processor Control
- LCD/LED mimic panel
- Easy-to-set user personalization
- Up to 98% energy efficiency
- Continuous power conditioning, even when not running on battery
- Smooth, uninterrupted switching from utility power to battery mode, and back again
- Wide fluctuations in utility power are handled without going to battery
- Parallel up to three units for added capacity or redundancy, using a simple connection on the rear panel without additional cabinets
- Unlike most UPSs in this size range, the UniStar® VP has a very low rate of added and reflected harmonics, which protects the integrity of your entire electrical system

Full Three Year Warranty

www.stacoenergy.com
Applications
- Broadcast
- Computer Networks
- Retail
- Robotics
- Printing
- Medical/Pharmaceuticals
- Paper Production
- Food Processing

Proven Technology
Higher reliability and greater immunity from power anomalies is achieved through our field-proven Digital Signal Processor architecture. The front panel controls are intuitive and user friendly. The system display clearly communicates all major system parameters, system status, and system diagnostics, and includes access to system information and unit personalization via the front panel.

Simple Parallel Installation
For increasing power capacity, or making redundant systems, the UniStar® VP can be installed in parallel. By simply connecting the parallel control lines through an RJ-45 connector on the rear panel and CAN-bus, communication is established to all units. Up to three units can be paralleled together without a paralleling cabinet. It is important that you initially plan the electrical supply and distribution infrastructure for maximum load profile of your system to avoid growth limitations of your facility.

Power Range and Runtime Scalability
The UniStar® VP provides an excellent return on investment. The system can be configured with line up and match battery cabinets to extended the runtime and/or placed in side by side parallel operation as you grow your business.

Three Year Warranty
Electronics:
A full Three Year parts with depot repair or replacement warranty is standard.

Battery:
A full One Year Warranty on the Battery System ensures that your batteries are protected from system failure now and in the future. (Warranty provided by battery manufacturer) Extended warranties, customized service plans and preventative maintenance are also available. Please refer to our warranty statement for complete details.

Manual Maintenance Bypass
The optional external maintenance bypass ensures a continuous supply of power to the critical load during service or periodic maintenance of the UPS system, by isolating the UPS Electronic Module from the load.

Optional Power Distribution Unit - SCV-PDU
The SCV-PDU provides a simple and fast solution for distributing power to your peripheral devices from the UPS Module. Makes your installation clean, safe and easy for power distribution from the UPS Module.
**On-line, Single-phase Parallel Redundant UPS System**

**High Input Power Factor and Low Current THD**
The UniStar® VP meets today’s industry standard for energy savings and low reflected harmonics, and achieves up to 0.99 Power Factor as well as <5% THD.

**EPO Function**
The Emergency Power Off Function enables user shutdown of the UPS in an emergency situation.

**Energy Efficient UPS**
The AC to AC efficiency of the UPS may reach up to 91% at 25% load, and better with larger loads and normal VFI operation. Using the ECO mode, up to 98% efficiency can be achieved.

**Smart ECO Mode**
In ECO operation mode, the UniStar® VP normally supplies power to load via bypass utility. It will automatically transfer to inverter supply with SmartECO Mode if the bypass utility becomes out of tolerance.

**Silent Fan Control**
The UniStar® VP employs forced air cooling by internally mounted fans with speed control that is based on load percentage. This means low audible noise levels, suitable for most environments.

**Intelligent Self-Diagnostics**
The DSP self-diagnostics assists the service engineer in pinpointing system faults rapidly, making repairs fast and easy.

**LCD/LED Mimic Panel**
A concise LCD/LED display provides real-time status and readings such as operation modes, AC voltage, frequency, battery voltage, load level, inner temperature, and more. A full-size microprocessor-based graphical LCD display provides advanced monitoring functions.

**User Personalization**
Through the LCD front panel, you may easily change the parameters and settings built in to the DSP controllers, such as UPS operation modes, voltage configurations, synchronization frequency windows (for use with generators), bypass voltage tolerances and audible alarm.

**Advanced Battery Management**
The UniStar® VP automatically manages the end of discharge voltage according to load. This function prevents deep-discharge of the built-in battery during a power failure and saves battery life.

**Communications Capability**
The UniStar® VP is shipped with standard monitoring/shutdown software. The software allows control of the UPS and graceful shutdown when the utility power fails, but also allows the user to:
- Remotely test the major operating functions of the UPS
- Communicate via optional SNMP/WEB card
- Access UPS functions via the WEB

**Hot-Swappable Battery Packs**
The UniStar® VP allows users to replace batteries without electric shock hazard, while the UPS supplies continuous power to your application.

**Matching Extended Battery Pack**
Optional matching battery packs are available to easily extend the UPS runtime to several hours.

**Programmable Frequency Converter**
Using the front panel keypad, you may reprogram the UniStar® VP to act as a frequency converter for either 50 Hz or 60 Hz.

**Cold Start Function**
Users can turn on the UPS without utility power available.
### UniStar Series VP, 6 & 10 kVA Tower

<table>
<thead>
<tr>
<th>Model Number</th>
<th>kVA/kW</th>
<th>Galvanic Isolation Transformer</th>
<th>Input VAC</th>
<th>Output VAC</th>
<th>Dimensions H&quot; x W&quot; x D&quot; / (mm)</th>
<th>Wt. lbs. / (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCV-60021T &amp; (P)</td>
<td>6/5.4</td>
<td>YES</td>
<td>208/120</td>
<td>208/120</td>
<td></td>
<td>258 / (117)</td>
</tr>
<tr>
<td>SCV-60021T-240 &amp; (P)</td>
<td>6/5.4</td>
<td>YES</td>
<td>240/120</td>
<td>240/120</td>
<td></td>
<td>258 / (117)</td>
</tr>
<tr>
<td>SCV-60022T &amp; (P)</td>
<td>6/5.4</td>
<td>NO</td>
<td>208/220/230/240</td>
<td>208/220/230/240</td>
<td>32.54&quot; x 9.84&quot; x 22.57&quot;</td>
<td>179 / (81)</td>
</tr>
<tr>
<td>SCV-60022T-240 &amp; (P)</td>
<td>6/5.4</td>
<td>NO</td>
<td>240</td>
<td>240</td>
<td></td>
<td>313 / (142)</td>
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<tr>
<td>SCV-11021T &amp; (P)</td>
<td>10/9</td>
<td>YES</td>
<td>208/120</td>
<td>208/120</td>
<td></td>
<td>313 / (142)</td>
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<tr>
<td>SCV-11021T-240 &amp; (P)</td>
<td>10/9</td>
<td>YES</td>
<td>240/120</td>
<td>240/120</td>
<td></td>
<td>190 / (86)</td>
</tr>
<tr>
<td>SCV-11022T &amp; (P)</td>
<td>10/9</td>
<td>NO</td>
<td>208/220/230/240</td>
<td>208/220/230/240</td>
<td></td>
<td>190 / (86)</td>
</tr>
</tbody>
</table>

*Always reference Spec Control Drawing (SCD) for the most current & accurate dimensions and weights

### Battery Cabinets

<table>
<thead>
<tr>
<th>Model Number</th>
<th>DC Voltage</th>
<th>Battery Type</th>
<th>Number of Batteries</th>
<th>Dimensions H&quot; x W&quot; x D&quot; / (mm)</th>
<th>Wt. lbs. / (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCV-BAT-40T</td>
<td>240</td>
<td>VRLA 12V/9AH</td>
<td>40</td>
<td>32.54&quot; x 9.84&quot; x 22.57&quot;</td>
<td>285 / (129)</td>
</tr>
<tr>
<td>SCV-BAT-60T</td>
<td>240</td>
<td>VRLA 12V/9AH</td>
<td>60</td>
<td>32.54&quot; x 9.84&quot; x 22.57&quot;</td>
<td>400 / (181)</td>
</tr>
</tbody>
</table>

*Always reference Spec Control Drawing (SCD) for the most current & accurate dimensions and weights

### UniStar VP, 6 & 10kVA Tower - Extended Battery Run Times (in minutes)

<table>
<thead>
<tr>
<th>UPS Rating</th>
<th>Part Number</th>
<th>Qty. of Cabinets</th>
<th>25% Load</th>
<th>50% Load</th>
<th>75% Load</th>
<th>100% Load</th>
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</thead>
<tbody>
<tr>
<td>6 kVA</td>
<td>60021T</td>
<td>0</td>
<td>38.3</td>
<td>17.4</td>
<td>12.7</td>
<td>8.6</td>
</tr>
<tr>
<td></td>
<td>60021T + SCV-BAT-40T</td>
<td>1</td>
<td>145.6</td>
<td>68</td>
<td>50.7</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>60021T + SCV-BAT-60T</td>
<td>1</td>
<td>205.4</td>
<td>96.5</td>
<td>72.1</td>
<td>51.3</td>
</tr>
<tr>
<td></td>
<td>60021T + SCV-BAT-40T</td>
<td>2</td>
<td>267.5</td>
<td>126.3</td>
<td>94.5</td>
<td>67.4</td>
</tr>
<tr>
<td></td>
<td>60022T</td>
<td>0</td>
<td>44.6</td>
<td>21.7</td>
<td>13.2</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>60022T + SCV-BAT-40T</td>
<td>1</td>
<td>169.1</td>
<td>84</td>
<td>52.8</td>
<td>37.6</td>
</tr>
<tr>
<td></td>
<td>60022T + SCV-BAT-60T</td>
<td>1</td>
<td>238.2</td>
<td>119</td>
<td>74.9</td>
<td>53.5</td>
</tr>
<tr>
<td></td>
<td>60022T + SCV-BAT-40T</td>
<td>2</td>
<td>309.6</td>
<td>155.7</td>
<td>98.2</td>
<td>70.3</td>
</tr>
<tr>
<td>10 kVA</td>
<td>11021T</td>
<td>0</td>
<td>20.2</td>
<td>8.7</td>
<td>6</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>11021T + SCV-BAT-40T</td>
<td>1</td>
<td>78.5</td>
<td>36.4</td>
<td>27</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>11021T + SCV-BAT-60T</td>
<td>1</td>
<td>111.3</td>
<td>51.8</td>
<td>38.6</td>
<td>27.3</td>
</tr>
<tr>
<td></td>
<td>11021T + SCV-BAT-40T</td>
<td>2</td>
<td>145.6</td>
<td>68</td>
<td>50.7</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>11022T</td>
<td>0</td>
<td>22.2</td>
<td>9.3</td>
<td>6.5</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>11022T + SCV-BAT-40T</td>
<td>1</td>
<td>85.8</td>
<td>38.5</td>
<td>28.6</td>
<td>20.2</td>
</tr>
<tr>
<td></td>
<td>11022T + SCV-BAT-60T</td>
<td>1</td>
<td>121.5</td>
<td>54.8</td>
<td>40.9</td>
<td>29.1</td>
</tr>
<tr>
<td></td>
<td>11022T + SCV-BAT-40T</td>
<td>2</td>
<td>158.9</td>
<td>71.9</td>
<td>53.7</td>
<td>38.3</td>
</tr>
</tbody>
</table>

Note: 1. Battery times are based on new batteries +/- 5%.
2. Consult Factory for longer run times.
## SPECIFICATION

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SCV-60022T &amp; (P)</th>
<th>SCV-60021T &amp; (P)</th>
<th>SCV-11022T &amp; (P)</th>
<th>SCV-11021T &amp; (P)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHASE</td>
<td>Single phase with ground</td>
<td>Single phase with ground</td>
<td>Single phase with ground</td>
<td>Single phase with ground</td>
</tr>
<tr>
<td>CAPACITY</td>
<td>6000 VA / 5400 W</td>
<td>6000 VA / 5400 W</td>
<td>10000 VA / 9000 W</td>
<td>10000 VA / 9000 W</td>
</tr>
</tbody>
</table>

### INPUT

- **Nominal Voltage:** 200/208/220/230/240 VAC
- **Voltage Range:** 176 -300 VAC @ 100% load
- **Frequency Range:** 46–54 Hz or 56–64 Hz
- **Power Factor:** 0.99 @ 100% load

### OUTPUT

- **Nominal Voltage:** 208/220/230/240 VAC or 208/120 VAC or 240/120 VAC
- **AC Voltage Regulation:** ± 1%
- **Frequency Range (Sync. Range):** 46–54 Hz or 56–64 Hz
- **Frequency Range (Batt. Mode):** 50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz
- **Current Crest Ratio:** 3:1 (max.)
- **Harmonic Distortion:**
  - 2 % THD (Linear Load)
  - 4 % THD (Non-linear Load)
  - 3 % THD (Linear Load)
  - 6 % THD (Non-linear Load)
- **Transfer Time:** 0ms
- **Waveform (All Modes):** Pure Sinewave

### EFFICIENCY

- **Line Mode:**
  - 90% / 84% / 90% / 84%
- **Battery Mode:**
  - 88% / 83% / 88% / 83%
- **ECO Mode:**
  - 96% / 87% / 96% / 87%

### BATTERY

- **Nominal Voltage:** 240 VDC
- **Battery Type:** VRLA, 12 V / 9 AH
- **Numbers:** 20
- **Typical Recharge Time:** 7 hours recover to 90% capacity / 9 hours recover to 90% capacity
- **Float Charging Voltage:** 273 VDC
- **Charge Current (max.):** 4 Amps
- **Float Charging Voltage:** 273 VDC

### INDICATORS/ALARMS

- **LCD Panel:** UPS status, Load level, Battery level, Input / Output voltage, Discharge timer, and Fault conditions
- **Audible Alarms:** Battery Mode, Low Battery, Overload, Fault

### ENVIRONMENT

- **Operating:** 32°F (0°C) to 104°F (40°C)
- **Humidity:** 0-95 % RH @ 0-40°C (non-condensing)
- **Storage:**
  - -13°F (25°C) to 140°F (60°C)
  - ELECTRONICS
  - -13°F (25°C) to 140°F (40°C)
  - BATTERIES (REFRESH Charge @ 3 months)
- **Noise Level:** Less than 58dBA @ 1 Meter

### AGENCY LISTING

- UL1778, CE, cUL

### COMMUNICATIONS

- **Smart RS-232/USB Port:** Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7, Linux, Unix, MAC

### OPTIONS

- **SNMP Card:** SNMP/ Web Browser capability
- **EMD:** SNMP support device for sensing temperature, humidity and the presence of water. Options modules for smoke and dry contact detection available.
- **MODBUS Card:** Provides communication with PCs through MODBUS protocol
- **CONTACT Card (AS/400):** Provides contact closures for remote monitoring of the UPS
- **Rack/Tower Enclosure:** Complete system in enclosure with casters for mobility
Service Options

With our ServiStar® program, a wide range of planned maintenance and extended service options are offered to maximize equipment life and reliability of your FirstLine® UPS. Through an extensive network of factory trained professionals you receive:

- Start-Up and Training
- Annual Service Plan
- 24/7 Emergency Service
- Preventative Maintenance
- Programs tailored to meet your needs

About Staco Energy Products Company

Since 1937, customers worldwide have been relying on Staco Energy Products Company to deliver voltage control and power quality solutions tailored to their needs.

As a leading power quality resource, we offer our customers world-class support; from our thorough applications assessment, to our ability to design and deliver a solution that is tailored to the specific needs of our customers; through delivery and commissioning.

Our professional, factory trained service team is in place to ensure that our customers’ revenues are protected, and their investment provides them with many years of trouble free operation.

Staco develops total power solutions for OEM and end user applications.

Represented locally by:

In addition to the UniStar® VP we offer a wide array of power quality products, including:

- Uninterruptible Power Supplies
- Power Conditioners
- Voltage Regulators
- Power Factor Correction and Harmonic Mitigation
- Active Harmonic Filters
- Variable Transformers
- Custom Engineered Test Sets

Contact Us:
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E-mail: sales@stacoenergy.com

For more information about Staco products www.stacoenergy.com