



**CITY OF NOVI CITY COUNCIL**  
**SEPTEMBER 14, 2020**

**SUBJECT:** Approval to award bid to Power Techniques, Inc., the lowest qualified bidder meeting all requirements, for the replacement of the 911 Uninterruptible Power Supply (UPS) for the Novi Police Department in the amount of \$56,834.06.

**SUBMITTING DEPARTMENT:** Public Safety, Police

<b>EXPENDITURE REQUIRED</b>	<b>\$56,834.06</b>
<b>AMOUNT BUDGETED</b>	<b>\$68,880</b>
<b>APPROPRIATION REQUIRED</b>	<b>N/A</b>
<b>LINE ITEM NUMBER</b>	<b>101-301.00-980.003</b>

**BACKGROUND INFORMATION:** Included in the 2020-21 budget was the replacement of the 911 Uninterruptible Power Supply (UPS) for the Novi Police Department. The dispatch center for the City of Novi has a back-up diesel powered generator. In addition to the generator, the dispatch center is protected by a UPS, which ensures that critical equipment within the center is not disrupted during a power outage. The UPS continues to supply uninterrupted power to the dispatch center between the time when a power outage occurs and the time the generator takes over to provide primary power supply. The current UPS, a chloride 50KVA, was installed in August, 2006, and is now 14 years old. The average life expectancy of our UPS is approximately 15 years.

Unlike our current UPS, new systems can be equipped with redundancies to ensure protection even if part of the system fails. Our current UPS is 50 KVA. Our dispatch center only draws approximately 10 KVA. The recommendation would be to install a 20 KVA redundant UPS. This unit would have two 20 KVA modules working in tandem. If one of those modules failed, administrators would be notified immediately via email so that the module could be repaired. During that time however, the other module would continue to provide power and protect critical operations.

An invitation for bids was posted on the Michigan Intergovernmental Trade Network (MITN) website on August 3, 2020 for the replacement of the UPS. We received five

(5) bids on August 21, 2010. Power Techniques, Inc. was the lowest qualified bidder and met all the specifications of the bid.

**RECOMMENDED ACTION:** Approval to award bid to Power Techniques, Inc., the lowest qualified bidder meeting all requirements, for the replacement of the 911 Uninterruptible Power Supply System (UPS) for the Novi Police Department in the amount of \$56,834.06.

**CITY OF NOVI**

**911 Uninterruptable Power Source System**

**Friday, August 21 2:00pm**

<b>Company</b>	<b>Brand Name</b>	<b>Lump Sum Total</b>	<b>Lead Time for Materials (wks)</b>	<b>Days to Complete</b>	<b>Exceptions to Specs</b>	<b>Addendum #1</b>
<b>POWER TECHNIQUES</b>	SCHNEIDER ELECTRIC APC	\$56,834.06	4-6	1	No	Yes
<b>CORBY ENERGY</b>	LIEBERT	\$63,975.00	5-6	7	No	Yes
<b>JEM TECH GROUP</b>	EATON	\$61,925.18	4-6	3	Yes	Yes
<b>LEE CONTRACTING</b>	LIEBERT	\$75,900.00	6-8	2	No	Yes
<b>**WESCO</b>	LIEBERT	\$56,800.00	2	3	No	Yes

**\*\*WESCO is considered non-responsive because they did not provide the required references.**

# MEMORANDUM



**TO:** DAVID E. MOLLOY, CHIEF OF POLICE / DIRECTOR OF PUBLIC SAFETY  
**FROM:** ALAN PATTERSON, COMMUNICATIONS MANAGER  
**SUBJECT:** UNINTERRUPTIBLE POWER SUPPLY – 911 CENTER  
**DATE:** AUGUST 27, 2020

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Replacement of the Uninterruptible Power Supply (UPS) was approved, and is included in the City of Novi's FY 2021 budget.

On August 3, 2020, Tracey Marzonie, Accountant in Finance, issued a Request for Proposal (RFP) for this project. Bids from interested parties were due by Friday, August 21, 2020. The bids were opened in a public forum on Friday, August 21, 2020 at 2:00 pm. Five companies responded with details listed below.

Company	Days to Complete Project	Bid Total
1. Power Techniques	1	\$56,834.06
2. Corby Energy	7	\$63,975.00
3. Jem Tech Group	3	\$61,925.18
4. Lee Contracting	2	\$75,900.00
5. Wesco	3	\$56,800.00

Although Wesco is the lowest bidder, they are considered non-responsive because they failed to provide the required references.

Power Techniques provided the lowest bid meeting all requirements. The product they proposed, a 20kVA UPS with modular batteries meets all specifications detailed in the RFP. The bid from Power Techniques was also the most comprehensive, listing all equipment, materials, dimensions, and scope of work.

## References

1. Brighton Schools – On August 26, 2020, I spoke to Chris Turner, the contact at Brighton Schools. Mr. Turner said that Power Techniques had replaced UPS units in all of their schools. Mr. Turner went on to say that Mike Lewandowski at Power Techniques was the best vendor he has ever worked with. Mr. Turner wholeheartedly recommended Power Techniques and said that we would not be disappointed if we decided to award our project to Power Techniques.
2. Waterford Police Department – On August 25, 2020 I spoke with Lt. Scott Good at the Waterford Police Department. Lt. Good said that Power Techniques installed a UPS to

supply power to their 911 Center, and that the company provided great service. Lt. Good gave Power Techniques a good recommendation.

3. City of Wayne Police Department – On August 25, 2020 I spoke with Jeff Martin at the City of Wayne Police Department. Mr. Martin gave Power Techniques a very good recommendation.

#### Recommendation

I recommend the project be awarded to Power Techniques for the following reasons:

1. Power Techniques is the lowest bidder meeting all requirements.
2. The product proposed by Power Techniques meets all specifications set forth in the RFP.
3. All references gave Power Techniques a great recommendation. Mr. Turner at Brighton Schools was exceptionally pleased with the work performed by Power Techniques, saying that Mike Lewandowski was the best vendor he has ever worked with.

c:



**NOTICE - CITY OF NOVI  
INVITATION TO BID**

**911 UPS System**

The City of Novi will receive sealed bids for the purchase and installation of a **911 UPS System** according to the specifications of the City of Novi and de-installation and removal of existing UPS, batteries and battery cabinet.

**IMPORTANT DATES**

<b>Bid Issue Date</b>	<b>August 3, 2020</b>
<b>Recommended Onsite Visit:</b>	<b>August 10, 2020 at 10:00 a.m.</b> 45125 Ten Mile Rd, Novi, MI 48375
<b>Last Date for Questions</b>	<b>Friday, August 14, 2020 by 12 p.m.</b> Please submit all questions via email to: Tracey Marzonie, Purchasing Department tmarzonie@cityofnovi.org
<b>Response Due Date</b>	<b>Friday, August 21, 2020 by 2:00 p.m.</b> Deliver to: City of Novi Finance Department 45175 Ten Mile Road Novi, MI 48375

**NOTICE TO BIDDERS**

The City of Novi officially distributes bid documents through the Michigan Intergovernmental Trade Network (MITN). **Copies of bid documents obtained from any other source are not considered official copies.** The City of Novi cannot guarantee the accuracy of any information not obtained from the MITN website and is not responsible for any errors contained by any information received from alternate sources. Only those vendors who obtain bid documents from the MITN system are guaranteed access to receive addendum information, if such information is issued. If you obtained this document from a source other than the source indicated, it is recommended that you register on the MITN site, [www.mitn.info](http://www.mitn.info) and obtain an official copy.



## CITY OF NOVI

### 911 UPS System

### SPECIFICATIONS

#### **OVERVIEW**

The City of Novi is seeking bids from qualified contractors to install a Single Module UPS System at the Novi Police Department located at 45125 W Ten Mile Road., Novi, MI 48375 according to the specifications below.

- 1. De-installation and removal of existing UPS, batteries and battery cabinet.**
- 2. Installation of the following UPS system (or equivalent):**

**Liebert EXM Single Module UPS System each consisting of the following: One (1) 20kVA Nameplate Liebert EXM UPS, model 47SA020CBC003GY, with the following features:**

- System Input Voltage of 480V, 60Hz, 3 Phase, 3 wire plus ground
- System Output Voltage of 208/120V, 3 Phase, 4 wire plus ground
- Fixed Capacity 20kVA UPS System
- System includes One (1) 20kVA 208V redundant module
- 208V Native Output Voltage
- Single Input Configuration
- One (1) IntelliSlot Unity Dual Protocol Card; P/N: IS-UNITY-DP; Monitoring and configuration of Vertiv products and environmental sensors through stand-alone Web UI or integration with Trellis™, Liebert Nform, LIFE™ Services. Supports third-party management systems using SNMP, Modbus or BACnet.
- Transformer-Free Architecture --Efficiency up to 95% in double conversion mode
- Unity Power Factor Rating - Delivers more usable power per kVA
- Load Power Factor Support - Supports loads 0.5 lagging to unity without derating
- Energy Optimization Mode (Eco-Mode)
- 65kAIC Rating - Provides interrupting rating and labeling of 65kA
- Active Power Factor Corrected IGBT Input Converter
- PWM transistorized (IGBT) inverter
- Continuous Duty Static Bypass Switch
- Input Contacts - Dry contacts are available for functions including monitoring external breakers, on-generator signal, and other functions
- Output Contacts - Dry contacts are available for functions including a permissive signal to maintenance bypass SKRU, to trip external breakers, and other functions
- Generator Load Control - Suppresses battery charging reducing power demand by an external signal. Shifts unit from Eco Mode to double conversion (if applicable), and synchronizes the inverter output with the bypass
- Automatic retransfer - Provides return to inverter power after an overload

- DSP based controls - Provides digital control of power conversion and system operation
- Backlit LCD display - Monitors power conversion, UPS operation and utility conditions. Deviations are logged for troubleshooting
- Temperature-Compensated Charging/Battery Load Test
- Top-and-bottom-entry cable access
- Front only service access
- Local Emergency Power Off (EPO)
- LIFETM Services for the 1st year
- IP 20 enclosure
- Casters and leveling feet
- UL and cUL Listed to UL Standard 1778 4th Edition
- Liebert EXM Factory Services Certified Test Report

The solution includes **One (1) Liebert EXM Battery Cabinet System(s), model 47BECXX81L**, with the following features :

- 77 min @ 20 kVA, 1 -880 MM External Cabinet(s) of ENERSYS HX540-FR Batteries
- 77 min: Run Time at Ordered KVA
- BE-Alber Battery Monitoring Included.
- One (1) BDSUi Control Module(s)
- One (1) BDSUi Battery Module(s)
- Cabinet Mounted Left Attached to Module
- The battery is provided with a 3 year full and 7 year prorated warranty
- One IS-UNITY-DP Card Included per Control Module.

The solution includes **One (1) Maintenance Bypass Cabinet(s), model 47MBC37AC0R10P9** with the following features:

- 3 Switching Devices (BIB,MBB,MIB)
- Key Interlock (SKRU)
- Cabinet Mounted Right Attached to Module with connecting cables factory supplied
- 600 MM - 23.6 inches Frame Size
- 480V/ 208V Input Transformer Included
- Front Access service design
- Input Voltage of 480V, 60Hz, 3 Phase, 3 wire plus ground
- Output Voltage of 208/120V, 3 Phase, 4 wire plus ground

#### **System Startup Services**

Startup includes one site trip by a LS customer engineer after the UPS has been installed. The site trip includes the following services for one UPS module: non-powered inspection, UPS electrical and operational checkout, full parts and labor for any remedial work required on the UPS or battery cabinets, and customer operation training. Startup also includes remedial onsite labor, parts, and travel for the full one-year warranty period.

- Startup 24x7 is scheduled at the customers designated time
- MBC/BDC/Wallmount Panel Startup is included

## **SAFETY REQUIREMENTS**

The Contractor shall be solely responsible for the entire work site and provide all necessary protections as required by laws or ordinances governing such conditions and as required by the Owner. He shall be responsible for any damage to the Owner's property or that of others on the job, by himself, his personnel or his subcontractors, and shall make good such damages. He shall be responsible for and pay for any claims against the owner arising from such damages.

The Contractor shall provide all necessary safety measures for the protection of all persons on the work, and shall fully comply with all state laws or regulations and Michigan State building code requirements to prevent accident or injury to persons on or about the location of the work. He shall clearly mark or post signs warning of hazards existing, and shall barricade excavations and similar hazards. He shall protect against damage or injury resulting from falling materials and he shall maintain all necessary protective devices and signs throughout the progress of the work.



CITY OF NOVI

BID FORM

911 UPS System

We, the undersigned as bidder, propose to furnish to the City of Novi, according to the specifications, terms, conditions and instructions attached hereto and made a part thereof:

**A. De-installation and Removal of Existing UPS, Batteries, and Battery Cabinet AND Installation of New Vertiv/Liebert EXM UPS System(or equivalent) per**

**specifications**

Brand Name: Schneider Electric/APC Lump Sum \$ \$56,834.06

Lead Time for materials 4-6 Weeks.

Days required to perform work 1 Day

**We acknowledge receipt of the following Addenda:** Addendum #1  
(please indicate numbers)

**EXCEPTIONS TO SPECIFICATIONS (all exceptions must be noted here):**

No exception. We can meet the spec, N+1, battery run time, install requirements, warranty requirements

**COMMENTS:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**REFERENCES: Please provide at least three client (3) references for projects of similar scope done in the last 3 years.**

Company Brighton Schools  
Address 125 South Church Street  
Phone 517 575-8610 Contact name Dr. Chris Turner

Company Waterford Police Department  
Address 5150 Civic Center Dr. Waterford, MI  
Phone 810 459-2169 Contact name Lt. Scott Good

Company City of Wayne Police Department  
Address 3355 S Wayne RD. Wayne, MI  
Phone 734 721-1414 Ext 1537 Contact name Jeff Martin

**NON-IRAN LINKED BUSINESS**

By signing below, I certify and agree on behalf of myself and the company submitting this proposal the following: (1) that I am duly authorized to legally bind the company submitting this proposal; and (2) that the company submitting this proposal is not an "Iran linked business," as that term is defined in Section 2(e) of the Iran Economic Sanctions Act, being Michigan Public Act No. 517 of 2012; and (3) That I and the company submitting this proposal will immediately comply with any further certifications or information submissions requested by the City in this regard.

**THIS BID SUBMITTED BY:**

Company (Legal Registration) Power Techniques Inc

Address 3210 Coolidge Hwy

City Berkley State MI Zip 48072

Telephone 248 291-6213 Fax 248 291-6178

Representative's Name Laura Kurcz

Representative's Title President

Authorized Signature 

Email Lkurcz@powertechniquesinc.com

Date 08-20-20



Uninterruptible

3210 Coolidge Highway  
 Berkley, MI 48072  
 800.536.8150 or 248.291.6213  
 PowerTechniquesInc.com

Due Date: August 21, 2020  
 To: City of Novi  
 Attention: Novi Finance Department  
 Project: 911 UPS System  
 Proposal: 20-14011  
 Part 1: Equipment - Uninterruptible Power Supply Systems  
 Part 2: Installation – Electrical Scope of Work  
 Manufacturer: Schneider model Galaxy VS  
 Prepared by: Mike Lewandowski

Line Item	Price	Description
Base Bid	\$56,834.06	20 kVA N+1 UPS with modular batteries. Delivery and 5x8 Installation
Option 1	Add \$3,995.00	2 Year Extended warranty including, all parts, labor. (3 Years total)
Option 2	Add \$2,950.78	7x24 Mon-Sat off hours installation
Option 3	Add \$0.00	Operator training using customer load. <i>Project Specific Note 2: Performed by manufacturer's field engineer during startup.</i>
Option 4	Add \$0.00	Pick up decommissioned UPS system from the site, include recycling to reduce land fill waste. <i>Project Specific Note 3: Included in base bid.</i>

**Part 1: Equipment – Bill of Material**

Qty. 1) Schneider model Galaxy VS Uninterruptible Power Supply System UL 1778 listed 4<sup>th</sup> Ed including:

Highlighted items outline specific items in the spec that this UPS meets or exceeds.

System Capacity: 20 KVA/ 20 KW at unity power factor  
 UPS Redundancy: N+1  
 Battery Redundancy: Yes  
 UPS Input Voltage: 480 VAC, 60 Hz, 3 wire + ground  
 UPS Input Amps Max: 31 Amps including full load, low line voltage and battery recharge  
 Short Circuit Rating: 65 KAIC  
 UPS Output Voltage: 208/120 VAC, 4 wire + ground  
 Output Amps: 56 Amps  
 Environmental: Operation 0-95% humidity non-condensing

- UPS is transformer-free double conversion topology.
- Programmable | selectable EConversion mode.
- Digital (microprocessor) controlled operation and diagnostics.
- Touch screen display provides UPS system status, monitoring and metering displays utility and critical load data, load on UPS, available minutes of battery backup, remaining minutes of battery during power outage, active alarms, logs events with date and time stamp.
- Single input configuration.

### **Part 1: Equipment – Bill of Material continued**

- Input power factor corrected insulated-gate bipolar transistor (IGBT) converter technology.
- Output inverter pulse-width modulation (PWM) technology.
- Less than 6% Input THD provides engine generator compatibility.
- Soft-start feature to provide engine generator load compatibility via external signal.
- Internal automatic continuous duty static bypass.
- Internal manual maintenance bypass.
- External wrap-around 3 circuit breaker maintenance bypass cabinet with integral 480 VAC / 208-120 VAC step down transformer including: Bypass Input Breaker (UIB), Maintenance Bypass Breaker (MBB), Maintenance Bypass Output Breaker (UOB) and SKRU Kirk-Key interlock for safety and to prevent mis-operation during transfer.
- Battery cabinet include:
  - Modular valve-regulated lead acid (VRLA) internal to UPS cabinet. The modular construction provides 'Hot Swappable', fused battery modules (cartridges).
  - The modular battery system design provides battery redundancy due to configuration of battery strings.
  - Each battery module has built-in battery monitoring and diagnostics including: voltage, temperature and health of each module.
  - Seventy-Seven (77) minutes at 20 KW load, unity power factor – full UPS capacity.
  - Battery disconnect mounted integral in UPS cabinet and battery cabinets (if applicable).
- Battery Management System monitors UPS operation and individual battery modules: DC voltage, including battery current charge and discharge, time remaining on battery during a power outage event, available time on battery, shutdown imminent, battery temperature and battery-cycle monitoring.
- Temperature compensated battery charger.
- Hardwired input and output from top or bottom of the cabinet.
- Front access only required for service.
- All cabinets are IP20 rated.
- All cabinets include casters and levelling feet.
- Inter-cabinet conductors for adjacent cabinets provided and installed by others.
- UPS connectivity for remote monitoring includes: *(Project Specific Note 1: comm wires & data drop provided by others and installed by others.)*
  - Modbus interface.
  - Web-enabled Network Management Card, ethernet TCP/IP.
  - SNMP.
  - Eight (8) dry contacts (4 inputs, 4 outputs).
  - Schneider EcoStruxure Asset Advisor (EAA) for secure power & cooling, a cloud-enabled remote monitoring service, including UPS monitoring, troubleshooting and proactively tracks site problems in a timely and efficient manner. This annual service proactively evaluates incidents and activates the proper response mechanism with user-defined notification rules, including phone call or message on a mobile app. The EcoStruxure Asset Advisor (EAA) IT app delivers live sensor data and smart alarms on connected devices, providing owners peace of mind knowing their physical infrastructure is being monitored by trained experts, 24 hours a day, 7 days a week, 365 days a year.
- Local emergency power off (EPO) with provisions for remote emergency power off.



### Part 1: Equipment – Bill of Material continued

- Startup performed by manufacturer including verification of installation, cutover, during normal business hours Monday – Friday 8:00 a.m. – 5:00 p.m. (excluding holidays). If more than one day or trip to the site is required due to not fault of the manufacturer, additional charges will be invoiced.
- Schneider Electric factory certified UPS test report.
- One (1) year UPS warranty including next business day onsite response time, all parts, labor and emergency service.
- Battery Warranty: 3 year full and 7 year prorated.

### Dimensions / Weight (Each)

UPS Cabinet:	58.46"h x 13.11"w x 33.34"d / 641 lbs.
UPS Maintenance Bypass Cabinet with Integral Transformer:	58.46"h x 22.38"w x 33.35"d / 1565 lbs.
Battery Cabinet #1:	58.46'h x 21.65"w x 33.35"d / 1,692 lbs.
Battery Cabinet #2:	58.46'h x 21.65"w x 33.35"d / 1,146 lbs.

### UPS Heat Rejection

4,356 BTU/hr at 20 KW load (full load including UPS & Transformer)

*Project Specific Note 2: Batteries are an integral component of all uninterruptible power supply systems. Maintaining an optimum battery temperature of 77 °F is a warranty requirement issued by Battery Manufacturers.*

### Part 2: Installation – Electrical Scope of Work

- Project kick off meeting.
- UPS delivered directly to City of Novi 911 Call Center.
- Move new UPS into place and assemble.
- Install new external maintenance bypass.
- Extend existing line and load conduits and wire to reach new UPS location.
- Disconnect existing UPS and batteries, prepare for removal.
- Remove batteries from old UPS and palletize for removal.
  - *Project Specific Note 3: Shutdown of existing UPS and critical loads performed by others.*
- Place decommissioned UPS and batteries near overhead door for removal from site and recycling.
  - *Project specific note 4: Old UPS and batteries will be picked up within 2-3 days of new install.*
- Disconnect existing ceiling mounted 30kVA transformer. Abandon in place.
- Install new 20 KVA UPS.
- Reconnect existing input feeds to new UPS input and UPS bypass input.
- Assist with Schneider start up (same day)
  - *Project specific note 8: Assistance is requested in scheduling any city required inspections same day to avoid delay or downtime.*



**Part 2: Installation – Electrical Scope of Work - continued**

- Installation scheduled and performed during normal business hours Monday through Friday.
- Permits/Inspections Included.
- Lost time excluded.

Please address all technical questions to: Laura Kurcz  
[LKurcz@PowerTechniquesInc.com](mailto:LKurcz@PowerTechniquesInc.com)

Please address all logistics questions to: Ken Piron  
[KPiron@PowerTechniquesInc.com](mailto:KPiron@PowerTechniquesInc.com)

Please address all purchase orders to: Power Techniques, Inc.  
3210 Coolidge Hwy  
Berkley, MI 48072

Attention: Sue Siekierski, Project Administration  
(248) 291-6213 • Fax (248) 291-6178  
E-mail: [SSiekierski@PowerTechniquesInc.com](mailto:SSiekierski@PowerTechniquesInc.com)

Terms: Net 30 days.  
Freight: Prepaid and included, f.o.b. shipping point.  
Availability: TBD. *COVID-19 event is impacting manufacturing and availability. Estimate only approximately ~ 6 weeks.*  
Taxes: Applicable taxes not included.  
Prices: Firm 60 days.



# Power Techniques Inc. Profile

POWER TECHNIQUES INC PROUDLY SERVES THESE INDUSTRIES



EDUCATION



GOVERNMENT



MEDICAL



AUTOMOTIVE



UTILITY

- 30+ Years in Business
- Woman's Business Enterprise
- Customers include:



Auto Manufactures

Wayne State University

Auto Parts Suppliers

Local Utilities

Major Local Hospitals

Local Law Enforcement 911

Operations Centers

Municipalities: City of Wayne, Waterford, Chesterfield

# Power Techniques Inc. Profile

- **Equipment/Engineering**
  - Elite Data Center Partner for Schneider. Battery UPS.
  - Flywheel UPS systems
  - UL924 Emergency Lighting UPS systems
  - Data Center design capabilities with on staff engineers and electricians.
- **Service**
  - Ultra Service Plans
  - Managed Asset Program
  - On site support
  - Remote Monitoring
  - 24 Hr. 1-800 Emergency support.
- **Accessories**
  - Surge Suppression
  - Battery Replacement
  - Digital Metering
  - Current Monitoring





JOIN FORCE. SUCCEED TOGETHER.  
hereby grants

# National Women's Business Enterprise Certification

to

Power Techniques, Inc.

who has successfully met WBENC's standards as a Women's Business Enterprise (WBE).  
This certification affirms the business is woman-owned, operated and controlled; and is valid through the date herein.

WBENC National WBE Certification was processed and validated by  
Great Lakes Women's Business Council, a WBENC Regional Partner Organization.

*Michelle Richards*  
Authorized by Michelle Richards, President  
Great Lakes Women's Business Council

Certification Granted: February 25, 2013  
Expiration Date: February 25, 2020  
WBENC National Certification Number: 2005121903



NAICS: 221330, 541330, 541490, 541512, 541513, 541519, 541990, 561210, 811212, 811219, 811310  
UNSPSC: 26111704, 26111707, 26111709, 26111710, 26121541, 26121629, 26121636, 39121001, 39121002, 39121007, 39121009, 39121011, 39121013, 39121014, 39121017, 39121106, 73171502, 77101505





# Galaxy VS

Increased availability. Reduced operating costs.  
First-class power protection for critical infrastructure.

20 - 100 kW (480 V)

10 - 50 kW (208 V)

Equipment Sales and Non-Emergency Service Support Provided by:

Power Techniques, Inc.

3210 Coolidge Hwy.

Berkley, MI 48072

Office: (248) 291-6213 | (800) 536-8150

Email: [LauraKurcz@PowerTechniquesInc.com](mailto:LauraKurcz@PowerTechniquesInc.com)

[schneider-electric.com/gvs](http://schneider-electric.com/gvs)



Life Is On

**Schneider**  
Electric

# Maximize your availability; minimize your total cost of ownership

Galaxy VS is a highly efficient, modular, easy-to-deploy 20 - 100 kW (480 V) / 10-50 kW (208 V) three-phase uninterruptible power supply (UPS) that delivers top performance to critical IT, commercial, and industrial facilities.

You need best-in-class power protection that is as high-performing and innovative as your business is. Galaxy VS maximizes your availability while minimizing your total cost of ownership, with highly efficient patented technologies and modular architecture.

Battery flexibility is one of the main highlights of Galaxy VS. When you choose lithium-ion batteries, you benefit from a longer battery lifetime and higher temperature tolerance than classic battery solutions. When you choose smart battery modules integrated in the UPS cabinet, Galaxy VS offers optimized footprint and ensures critical loads have highly predictable runtimes and battery redundancy.

The Galaxy VS is EcoStruxure™ Ready to give you visibility into the health of your UPS and peace of mind by sending real-time status updates directly to your smartphone. With its robust design and industry-leading performance, Galaxy VS is the ideal backbone for your critical infrastructure.





### New patented hybrid technology

Provides up to 97% efficiency in double conversion mode.

Electricity savings in full protection mode at every load level.



### Compact design

High-density technology and full front access make Galaxy VS a footprint saver well suited for confined spaces.



### Battery flexibility, including Lithium-ion batteries\*

Increase availability with compact, intelligent energy storage.



### 99% efficient in patented ECOConversion™ mode

Recover your initial investment within two-three years through energy savings.\*\*



### Maximum availability thanks to modular architecture

Critical system components built as modules for faster serviceability and fault tolerance.

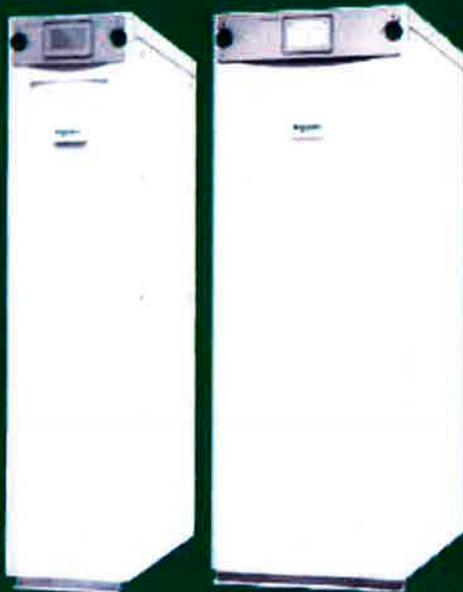


### EcoStruxure IT

Anytime, anywhere monitoring and service support via smartphone app\*.

\* Contact your local representative for availability.

\*\* Model dependent



### Well suited for a wide range of applications

- Edge, small, and medium data centers and computer rooms
- Manufacturing facilities
- Telecommunication
- Commercial buildings
- Healthcare
- Transportation
- Emergency lighting (UL 924 and CSA 22.2 NO. 141-15)



Green Premium Certified

Sustainable business performance, by design. Learn more: [se.com/en/work/support/green-premium/](http://se.com/en/work/support/green-premium/)

# Leading performance

Robust and flexible design ideal for demanding environments at maximum performance



## Flexibility and performance

- Unity Power Factor (PF=1) allows for right-size protection to real IT needs
- Well suited for different applications thanks to high flexibility on power factor and high overload capability
- Seamlessly integrates into electrical environment:
  - Single and dual mains supported
  - Supports 3- or 4-wire installations\*
- Optimized uptime with wide input tolerance window (+/-15%)
- Right-sized batteries with flexible DC bus

## Robust design supports both IT and non-IT environments

- Supports a wide range of loads
- Fault-tolerant design ensures continuous protection in critical circumstances
- Designed to perform in dusty environments with its high-quality air filter
- Withstands 40 °C operating temperature without derating
- Suited for humid environments thanks to conformal coating
- Seismic certified (with option kit)
- Maximum short circuit rating: 65 kA
- Exceeds industry standards on electromagnetic protection due to EMC Level C2

## The best energy storage performance

- Faster battery charging capabilities restore back-up time 2 – 3 times faster compared to industry standards
- High predictability and manageability thanks to the built-in battery monitoring system



## Choose the battery solution with the benefits that meet your site needs

### Lithium-ion battery\*:

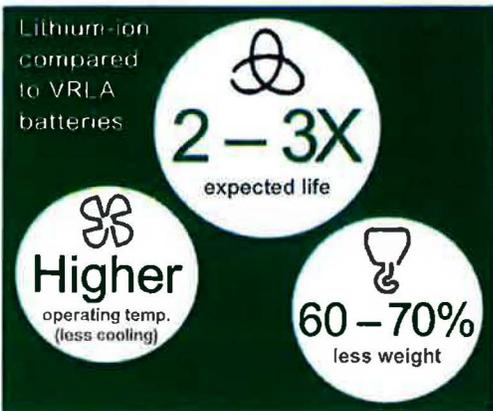
- Protect your load even during repeated power interruptions
- Longer lifetime than classic battery solutions

### Smart battery modules:

- Integrate batteries in the UPS to reduce footprint.
- Battery monitoring included
- Improve availability when you install additional smart modular battery strings
- Easily increase runtime by installing self-configuring smart battery modules

### Classic batteries:

- Quickly install the battery cabinet next to the UPS
- Compact footprint



\* Contact your local representative for availability.

# Best operational efficiency

## Reduce your energy bill

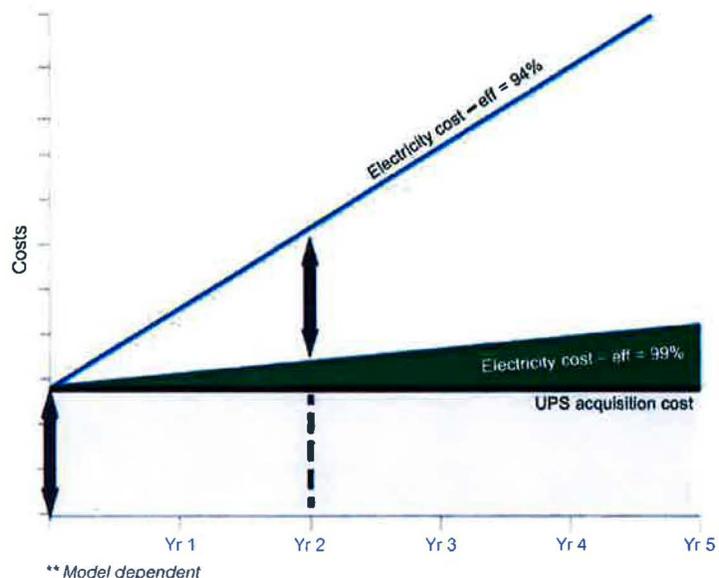
Very high efficiency for small to medium data centers, buildings, and facilities. By using ECOConversion mode, significant savings are achieved every year on your electricity bill. Compared to a legacy design, the savings are equivalent to the UPS acquisition costs after two-three years.

After two-three years\*\*, electricity savings = UPS acquisition costs

## ECOConversion: an unbeatable combination of power quality and high efficiency

	Efficiency	Annual electricity savings
ECOConversion	99%	\$5,242
Double conversion	97%	\$3,145
Legacy design	94%	\$0

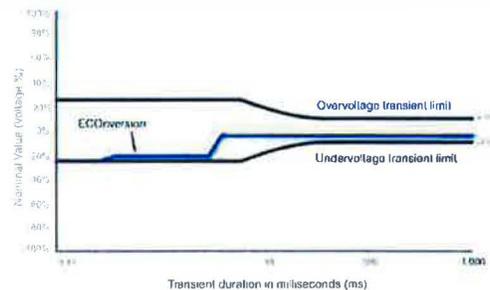
Comparison at 100 kW



## ECOConversion mode

Enjoy the highest energy savings available today without sacrificing load protection – our patented zero-break transfer design offers peace of mind:

- World-class efficiency up to 99%
- Keeps excellent load protection
- Continuously charged batteries
- Compliant with IEC 62040-3 Class 1 output performance of UPS standard
- Input power factor correction and no harmonics



Galaxy VS ECOConversion meets Class 1 of IEC 62040-3: zero-break transfer during power outage.

## New patented hybrid technology

- Up to 97% efficiency in double conversion online mode even at low load levels
- Uses soft-switch method to reduce losses during double-conversion

\* Based on a market electricity price: 0.12\$/kWh

The annual electricity savings are done in comparison with a 94% efficiency standard UPS.

Calculate your efficiency savings using the Three Phase UPS Efficiency Comparison Calculator: [schneider-electric.com/ups/efficiencycalculator](http://schneider-electric.com/ups/efficiencycalculator)

# Meets your needs in multiple environments



## Galaxy VS UPS for external batteries

10-50 kW: 208 V

20-100 kW: 480 V

Height: 59 in

Width: 20.5 in

Cable entry: Bottom and rear

Batteries: External. Compatible with Lithium-ion and VRLA batteries.

IP (Ingress Protection) level: IP21

Cabling: Copper or aluminum

Special features: Lithium-ion battery compatibility. Large cabling section provides convenient access, connection and installation.



## Galaxy VS UPS with up to 2 internal smart modular battery strings

10 kW: 208 V

20 kW: 480 V

Height: 59 in

Width: 13 in

Cable entry: Rear (top/bottom)

Batteries: Internal 7Ah smart battery modules (VRLA)

IP level: IP20

Cabling: Copper

Special features: Internal smart battery modules



## Galaxy VS UPS with up to 4 internal smart modular battery strings

10-25 kW: 208 V

20-50 kW: 480 V

Height: 59 in

Width: 20.5 in

Cable entry: Rear (top/bottom)

Batteries: Internal 9Ah smart battery modules (VRLA)

IP level: IP20

Cabling: Copper

Special features: Internal smart battery modules. Compatible with external modular battery cabinets.



# Faster installation and serviceability



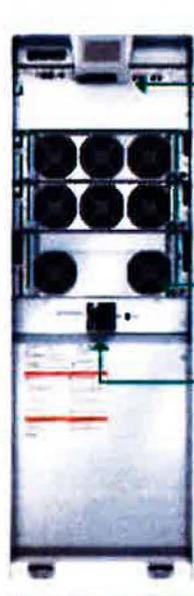
## Quick to install and fits everywhere thanks to its compact design

- Lightweight, small footprint, with rolling casters
- Everything you need is included – Network Management Card (NMC), Modbus, single and dual mains, air filters, and eight dry contacts
- Precise and reliable battery configuration, thanks to predefined battery parameters
- Set up a simplified 1+1 parallel configuration using the built-in internal maintenance bypass breaker, or use an external maintenance bypass panel to configure parallel installations for capacity or redundancy
- Supports a common battery bank
- Supports installation with NEMA 2-hole lugs



## Simple to maintain and fast to service thanks to its modular architecture

- Fast mean time to repair thanks to swappable power, static switch, battery, and intelligence modules
- Full front access for simple and fast connection and service (Galaxy VS for external batteries)
- Reduces risk of human error; the easy and intuitive guided maintenance bypass transfer sequence on the display helps you easily transfer to and from maintenance bypass and monitors the system breaker status



Galaxy VS for external batteries

### Intelligence module

"System brain" contains critical control and signal wire interfaces

### Power modules

Fast-swap, slide in / slide out modules with rear connector. Includes fan box for simple replacement. Superb core performances (PF=1, high-density, high-efficiency) and fault-tolerant design

### Static switch module

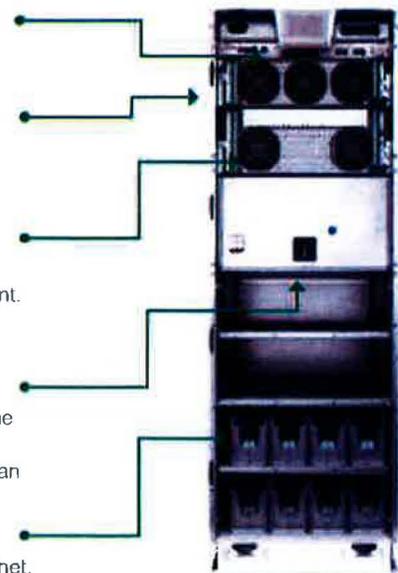
Fast-swap, slide in / slide out modules with rear connector. Includes fan box for simple replacement. Replaceable without installing an external maintenance bypass solution.

### Internal maintenance breaker

Simplifies service operations. With this breaker, the intelligence modules, power modules, and static switch module can be replaced without installing an external bypass solution.

### Smart modular battery strings

Integrates smart battery modules in the UPS cabinet, conserving footprint and increasing availability with battery monitoring, additional battery strings, and fast runtime expansion with self-configuring modules



Galaxy VS with internal batteries

# Visibility and peace of mind

Manage and monitor your Galaxy VS from anywhere, at any time, on any device, thanks to EcoStruxure IT software and services.

EcoStruxure leverages advancements in IoT, mobility, sensing, cloud, analytics and cybersecurity to deliver Innovation at Every Level. This includes Connected Products, Edge Control, and Apps, Analytics & Services. EcoStruxure IT Expert and EcoStruxure Asset Advisor are cloud-based solutions at the Edge Control, and Apps, Analytics & Services level and provide you with data-driven insights to optimize data center resiliency and performance.

When it comes to IT critical equipment monitoring, are you more hands-on or hands-off?



## Visibility anywhere, anytime

**EcoStruxure IT Expert** provides you a hands-on approach with secure, cloud-based monitoring software that synthesizes performance and alert data into proactive recommendations and enables secure, wherever-you-go visibility from any device. Try it for free for 30 days:

[ecostruxureit.com/ecostruxure-it-expert/#trial](https://ecostruxureit.com/ecostruxure-it-expert/#trial)

*\* Contact your local representative for availability.*



## 24/7 remote monitoring and troubleshooting

**EcoStruxure Asset Advisor\*** for secure power and cooling, provides you a hands-off approach with 24/7 remote monitoring service by the Schneider Electric service bureau engineers. We monitor and troubleshoot, you relax.

## Comprehensive on-site services

### Provides optimal system lifetime

#### Start-up service: included with UPS

- Commission the installation in accordance with manufacturer's recommendations. Ensure optimal system performance from Day 1.

#### Schneider Electric-certified installation services

- Expert configuration of your equipment for optimal performance and reliability.

#### Maintenance services

- Ensure proper care of your mission-critical applications.
- Preventive maintenance and response time upgrades, where available.

#### Flexible service plans / on-site extended warranty

- Hassle-free system maintenance.
- Improve uptime at a predictable cost.

# Options and accessories

Galaxy VS is available with a full range of options and accessories that ensure the best performance in any environment.



Lithium-ion batteries\*



Classic battery cabinet



Modular battery cabinet



Maintenance bypass cabinet



Wall mount maintenance bypass panel



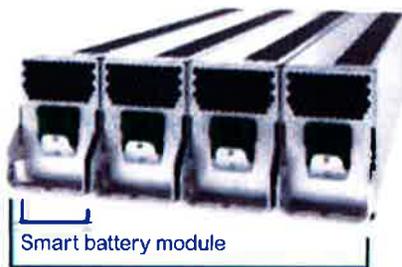
Maintenance bypass cabinet with transformer

- Accessories**
- Seismic kit
  - Air filter kit
  - Parallel communications kit
  - NEMA 2-holes kit\*\*
  - Kirk key



\* Contact your local representative for availability.  
\*\* Galaxy VS UPS for external batteries only

# Improved availability with modular batteries



Smart modular battery string

Modular battery cabinet for up to 6 smart modular battery strings

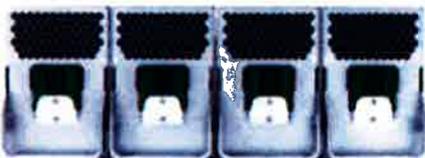


## Accurate anytime replacement

- **Simple:** Push-in and plug; unplug and pull-out
- **Safe:** Touchproof connectors
- **Self-configuring:** The UPS automatically detects the presence and type of batteries, so the battery configuration is updated accurately

## Flexible, high-density energy storage

- **Right-sizing:** Add more strings for additional runtime
- **High density:** No need for service clearance between battery rows



## Improved availability

- **Increased availability:** 4 smart battery modules form one smart modular battery string. All smart battery modules support the load, so no individual battery is a single point of failure
- **Fast Mean Time To Repair (MTTR):** Replace a smart battery module in just a few minutes

## Battery monitoring included

- **Sensors:** Each smart battery module contains two temperature sensors and a battery identification device for self-configuration
- **Runtime:** Estimate on the display interface updates when smart battery modules are removed or installed
- **Quick status on display:** Use the UPS display to quickly identify and replace an inoperative smart battery module

# Technical specifications

Galaxy VS	480 V	208 V
Topology	On-line double conversion	
Nominal power (kW)	20 - 100 kW (parallel up to 300 kW)	10 - 50 kW (parallel up to 150 kW)
<b>Key features</b>		
Modular elements	Power modules, static switch module, smart battery modules, intelligence module	
Display	Color touch screen, 4.3 inches, status LED, mimic on display	
Communication	Network management card included with ethernet (SNMP) and Modbus 8 dry contacts (4 inputs, 4 outputs)	
Maintenance bypass	Internal maintenance breaker Optional maintenance bypass panel/cabinet	
Parallel capability	Simplified 1+1 parallel (for redundancy); Up to 3 UPSs for capacity or 3+1 UPSs for redundancy	
<b>Efficiency</b>		
Double conversion mode	Up to 97%	Up to 95.5%
ECO mode	Up to 99%	
ECOConversion mode	Up to 99%	
<b>Input</b>		
Nominal input voltage	200/208/220 V, 480 V, 600 V (with maintenance bypass cabinet with transformer)	
Input voltage range (phase to phase)	+/-15%	
Single mains/dual mains	Single mains as standard. Easily converted to dual mains.	
Input frequency	40 - 70 Hz	
Input power factor	0.99 for load greater than 50% 0.95 for load greater than 25%	
Maximum short-circuit rating	65 kA	
Backfeed protection	Included	
<b>Output</b>		
Nominal output voltages	200/208/220 V, 480 V, 600 V (with transformer cabinet)	
Load power factor	PF=1 (0.7 leading to 0.7 lagging without derating)	
Voltage regulation	+/- 1%	
Frequency	50 / 60 Hz +/-0.1% free running	
Overload	1 min @ 150%; 10 min @ 125%	
Output THDU on linear load	<1%	<2%
<b>Battery type</b>	VRLA, Li-Ion	
Nominal DC Bus	480 - 576 V (at ratings 50 kW, 100 kW) 384 - 576 V (at other ratings)	384 - 480 V
Charging power	Charging power in % of output power at 0 - 40% load: 80% Charging power in % of output power at 100% load: 20%	
<b>Environment</b>		
Acoustic noise	54 dB (70% load) / 61 dB (100% load)	57 dB (70% load) / 65 dB (100% load)
Dust protection	Air filter included. Conformal coating	
Seismic	With optional kit. OSHPD tested	

Preliminary specifications - can be subject to changes.

Life Is On



**Equipment Sales and Non-Emergency Service Support Provided by:**

Power Techniques, Inc.

3210 Coolidge Hwy.

Berkley, MI 48072

Office: (248) 291-6213 | (800) 536-8150

Email: [LauraKurcz@PowerTechniquesInc.com](mailto:LauraKurcz@PowerTechniquesInc.com)

To learn more about the Galaxy VS UPS, EcoStruxure IT cloud-based DCIM, and EcoStruxure Asset Advisor 24x7 Digital Monitoring Services, contact your Schneider Electric representative or visit [se.com/gvs](http://se.com/gvs)

**About Schneider Electric** At Schneider Electric, we believe access to energy and digital is a basic human right. We empower all to make the most of their energy and resources, ensuring Life Is On everywhere, for everyone, at every moment. We provide energy and automation digital solutions for efficiency and sustainability. We combine world-leading energy technologies, real-time automation, software and services into integrated solutions for Homes, Buildings, Data Centers, Infrastructure and Industries. We are committed to unleash the infinite possibilities of an open, global, innovative community that is passionate about our Meaningful Purpose, Inclusive and Empowered values.

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