

Life Is On

Schneider  
Electric

# Galaxy VX

Highly efficient, scalable, three-phase power protection with flexible operating modes and EConversion for large facilities, data centers, and business-critical applications.



From 500 kW to 1500 kW N+1  
Parallel solutions up to 4000 kW  
480 V

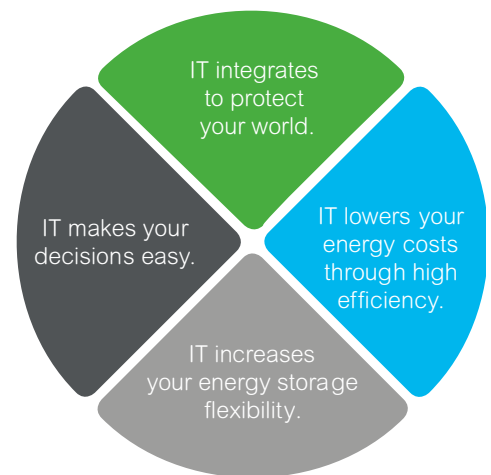
struxureOn  
enabled

[schneider-electric.com](https://www.schneider-electric.com)

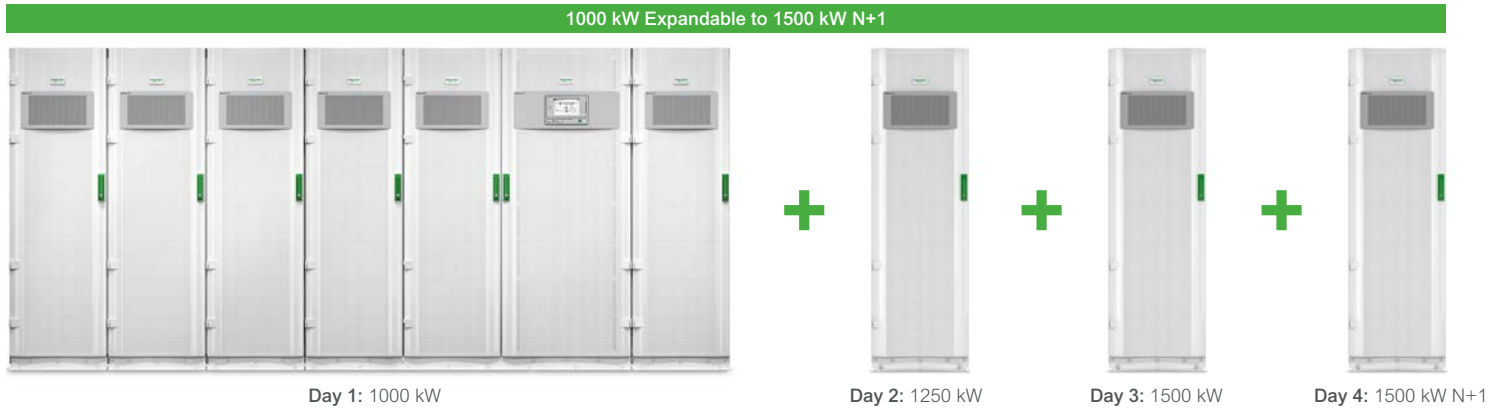
# Galaxy VX: Scalable, flexible power protection that meets your business objectives.

Highly efficient, scalable, three-phase power protection from 1000 kW to 1500 kW, with flexible operating modes and ECOversion, for large facilities, data centers, and industrial applications.

- Flexible operating modes, including ECOversion™, deliver very high efficiency even at very low load levels
- Four-level inverter technology, increasing UPS reliability and availability
- Flexible energy storage solutions, including support for Li-ion batteries
- Fully rated system with kVA = kW at 40°C
- Modular, scalable, and redundant configurations to adapt to real facility needs
- Smart Power Test (SPoT) mode, to test the UPS at site without renting a load bank before connecting to real load
- Color touch-screen display with a separate mimic diagram



# Galaxy VX: Scalable design

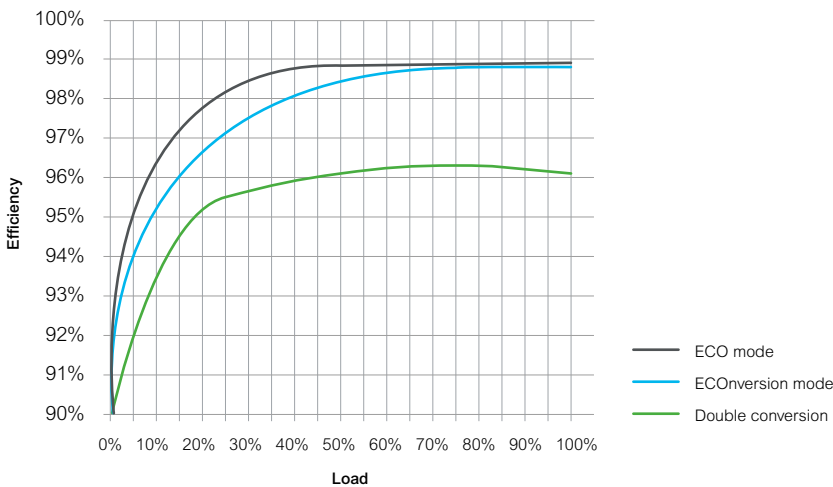
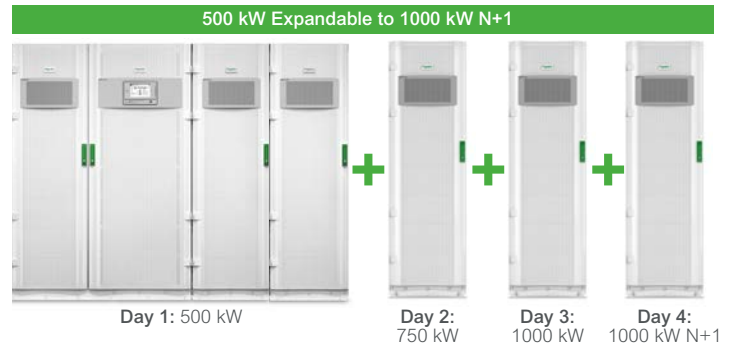


## Modular design

The Galaxy™ VX system scales using 250 kW power cabinets. Power cabinets can be added after initial installation to allow for load growth or increased redundancy.

## Select your efficiency

Galaxy VX offers three modes of operation. Each mode offers a unique combination of efficiency and performance. Select the mode that best meets your business objectives.



Efficiency curves based on 1000 kW, 480 V UPS data.

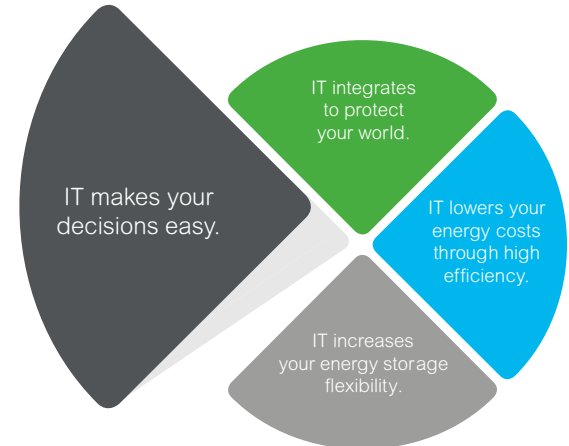
Efficiencies are preliminary until validated efficiency data is available.

## Reliable, scalable power protection

Galaxy VX redefines how UPS systems meet business objectives. The Galaxy VX's flexibility provides the perfect platform to grow or renew your mission-critical applications. Innovative technologies allow you to select the best match of UPS performance to your business objectives. It offers an adaptable approach to your changing needs. The system can scale or add redundancy after the initial installation. The Galaxy VX supports a wide range of energy storage options, allowing future technologies to integrate into your existing platform.

# Galaxy VX

IT makes your decisions easy



## Optimize operational expenses

Your business has unique operational goals and Galaxy VX meets them with three modes of operation. Choose one or a combination of all three to meet your uptime and power consumption goals:

### ECONversion mode

- Ultrahigh efficiency up to 98.8%
- Keeps excellent load protection
- Programmable for specific day and time periods for better flexibility
- Continuously charges batteries
- Compliant with IEC 62040-3 Class 1 output voltage of UPS standard
- Input power factor correction and low-input harmonics
- No-break transfers
- No drop of output voltage, even under low-impedance grid failure

### Double conversion mode

- High efficiency in double conversion online mode even at low load levels
- Less energy losses = cost savings
- Less heat dissipation = lower cooling needed, hence cost savings

### ECO mode

- Up to 99% efficiency
- Compliant with IEC 62040-3 Class 3 output definition of UPS standard

## Manage risk

Stable, protected power is critical to the success of your business. Galaxy VX is designed to meet strict uptime requirements with these design features:

- Innovative four-level inverter reduces losses and component stress, leading to higher efficiency and component reliability
- Configurable internal redundancy provides a fault-tolerant design
- A 125% rating continuous-duty static switch provides robust overload capabilities
- Modular fault-tolerant power blocks reduce mean time to repair
- SPoT mode allows testing of the UPS without renting a load bank before connecting to a critical load
- Built-in backfeed protection provides human safety and compliance, and saves installation cost

## Preserve capital

Your facility needs to grow with your expanding business. Galaxy VX delivers that flexibility along with innovative, cost-saving solutions at every step of the design, installation, and ownership life cycle:

- Pay as you grow — scale system power as load demands increase by adding 250 kW power cabinets after initial installation
- Scale the system for capacity or redundancy
- Fully rated system with kW = kVA at 40°C
- The power factor correction and harmonics filtering at input eliminates oversizing of the upstream infrastructure

# Galaxy VX

## IT integrates to protect your world

### Integration into your electrical network

- Wide input voltage and frequency ranges
- Genset compliant with adaptive ramp-in
- Integrated parallel capability with N+1 configurations
- Built-in integrated and tested backfeed protection for human safety and compliance
- Provides input power factor correction and harmonics filtering

### Integration into your facility infrastructure

- Compact footprint
- Back-to-back or against-the-wall installation — no rear entry required
- Operates at 40°C continuously without de-rating
- Top or bottom cable entry
- Embedded seismic certified to OSHPD, IBC2012 and CBC2013
- Low audible noise levels
- Replaceable dust filter for harsh environments
- Configurable input/output relays
- Top and bottom cable entry
- Parallel capability to increase UPS for capacity or redundancy
- External synchronization capability to support synchronized 2N configuration

### Smart power test

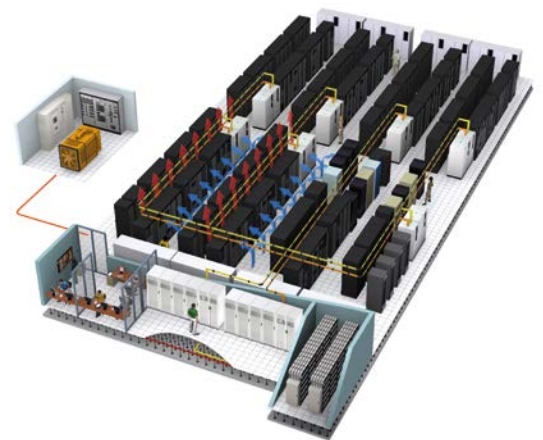
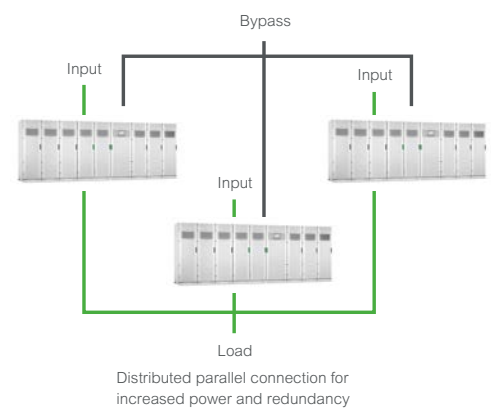
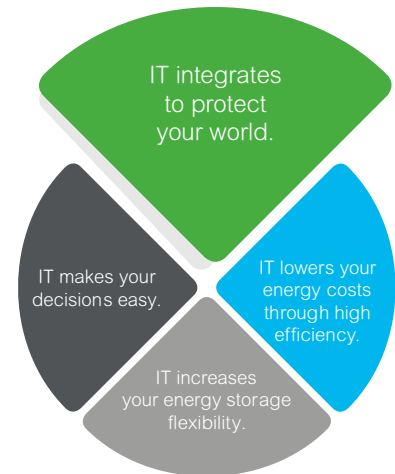
Ability to test the UPS at full load without the need to rent a load bank and before bringing critical load online.

### Full integration with Schneider Electric solutions

Fully integrates into the comprehensive Schneider Electric energy-management solution for data centers and industrial applications.

### Integration with Schneider Electric Prefabricated Data Center Modules

The Galaxy VX can also be deployed as a prefabricated solution. This method offers the most expedient way to scale up data center power quickly. Our prefabricated designs allow for large power capacities within a small footprint and can be deployed in modules that are enclosures or mounted on skids. Base designs on this Galaxy VX solution provide 750 kW and 1.25 MW of power, include input and output switchgear and batteries, and can be customized to accommodate different capacity requirements.



# Galaxy VX

## IT lowers your energy costs through high efficiency

### Double conversion mode

- High efficiency in double conversion online mode even at low load levels

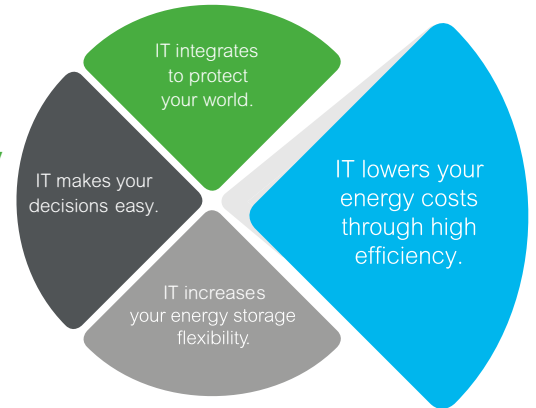
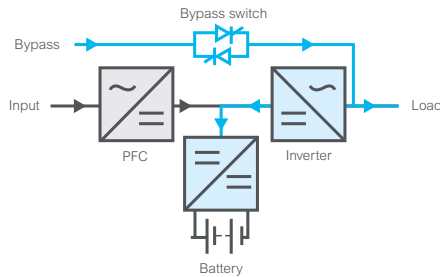
### ECO mode

- Up to 99% efficiency
- Compliant with IEC 62040-3 Class 3 output definition of UPS standard

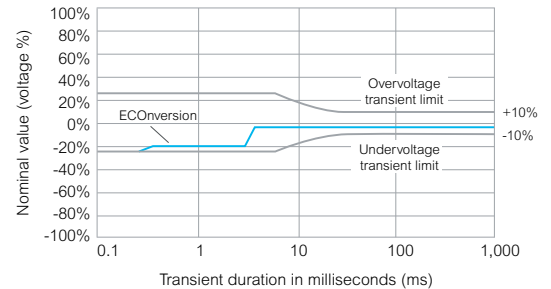
### ECONversion mode

Enables control of input current close to the same quality as the online UPS with zero-break transfer in the event of a power outage.

- Ultrahigh efficiency up to 98.8%
- Compliant with IEC 62040-3 Class 1 output voltage of UPS standard



Galaxy VX ECONversion meets Class 1 of IEC 62040-3: Zero-break transfer during power outage



## Energy cost savings by using Galaxy VX in ECONversion Mode

	Galaxy VX high-efficiency double conversion mode	Legacy double conversion UPS	Rotary UPS
Efficiency at 75% load	96.3%	94%	93%
Savings by using Galaxy VX/year (in ECONversion mode)	\$34,000	\$64,400	\$79,800
10-year savings by using Galaxy VX (in ECONversion mode)	\$340,000	\$644,000	\$798,000

Considering a total UPS load of 1500 kW with no redundancy.

Calculations assume electricity cost of \$0.13/kWh.

For detailed UPS-efficiency comparison, see the Three Phase UPS Efficiency Calculator on [schneider-electric.com](http://schneider-electric.com).

\*All figures are estimates. Individual savings could vary.

## Software



### Data center infrastructure management (DCIM)

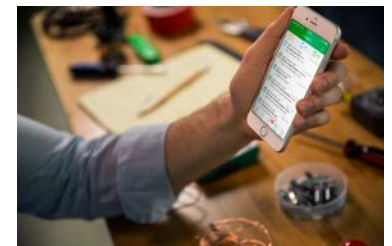
In the data center environment, Galaxy VX is fully managed through StruxureWare™ for Data Centers software, an integrated suite of DCIM applications. It enables businesses to prosper by managing their data centers across multiple domains, providing

actionable intelligence for an ideal balance of high availability and peak efficiency throughout the entire data center life cycle. StruxureWare software applications are key elements of Schneider Electric EcoStruxure™ integrated hardware and software system architecture — a system designed for intelligent energy management.

### Cloud-based remote monitoring

StruxureOn monitors and protects your critical equipment, providing 24/7 visibility through live data, smart alarming, and data-driven insights on the health of your connected assets directly to your smartphone. Regular reports keep you informed of the status of your unit lifespan and when to plan for battery replacement.

In the event of an incident, experts can provide remote troubleshooting or help dispatch an FSR for on-site support.



# Galaxy VX

## IT increases your energy storage flexibility

### Flexible battery protection

- DC protection using breakers
- Centralized battery protection in a cabinet
- Multiple string by string battery protection

### Flexible energy storage

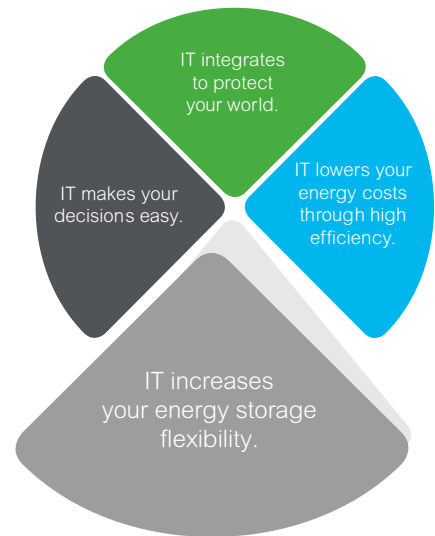
- Compatible with Li-ion, Ni-Cd, Flywheel, VRLA, and wet cells

### Flexible charging methods

- Ambient temperature charging current adaptation
- "GENSET" operation allows the user to limit charging current in order to avoid any upstream overload
- Temperature fault protection
- Different charging methods available:
  - Floating
  - Boost
  - Equalization
  - Cyclic

### Lithium-ion battery cabinet

- Rack-based concept
- Three layers of integrated Battery Monitoring System (BMS)
- Both voltage and current monitoring within each cartridge



## Services

### A comprehensive portfolio of services

Schneider Electric provides the expertise, services, and support you need for your building, industry, power, or data center infrastructure. Our world-class life cycle services offer a smart way to install and maintain your critical applications, ensuring your systems are always running at peak performance.

Assembly and start-up service by a certified Field Service Representative (FSR) allows full factory warranty coverage. A Schneider Electric certified installation makes certain your equipment is properly configured for optimal performance. This service features a standard eight hour per day/five day per week response time.

### On-site warranty extension service

In the case of a system event, an FSE will arrive by the next business day (or faster with upgrades) to isolate, diagnose, and correct in as little time as possible, minimizing downtime.

### Advantage plans

Flexible service packages offer hassle-free system maintenance to improve uptime at a predictable cost. The Advantage Plus, Prime, Ultra, and Max are full-service packages that include technical support, preventive maintenance, quick on-site response, and monitoring. Response time upgrades are available.

### Preventive maintenance

Preventive maintenance on-site examinations keep your critical systems running at maximum efficiency.

## 500/625/750/1000/1250/1500 kW UPS

### Input parameters

Rectifier type	IGBT active rectifier
Input voltage	480 V, +20%/-15%, 3-phase (600V with optional external transformer)
Input connection	Single or dual feed
Frequency	60 Hz nominal (40 – 70 Hz)
Input power factor	> 0.99
THDi	< 3% @ 100% load
Walk in	0 to 40 sec (configurable)
Short circuit withstand rating	100kA

### Output Parameters

Inverter type	4-level IGBT, high efficiency, transformerless
Output voltage	480 V, 3-phase (600V with optional external transformer)
Load power factor	0.7 leading to 0.5 lagging without UPS derating
Output voltage regulation	+/-1%
Output frequency regulation	60 Hz +/-0.1%
Overload in bypass operation	150% for 60 sec at 40°C
Overload in normal operation	125% continuous
Output power factor	1.0 kVA = kW
Voltage distortion (THD)	< 2% at 100% linear load; < 3% at 100% nonlinear load

### DC parameters

Nominal DC bus voltage	480 VDC
Energy storage	VRLA, wet cell, Li-ion, Flywheel

### Efficiency

Double conversion mode	Up to 96.3%
ECO conversion mode	Up to 98.8%
ECO mode	Up to 99%

### Communication

Control panel	Multifunction touch-screen color LCD display Modbus TCP/IP, SNMP, email Modbus RS-485 (optional)
---------------	--

### Physical

#### 750 kW I/O cabinet

500 kW expandable to 750 kW (H x W x D)	77.6 x 106.2 x 35.4 in
625/750 kW UPS (H x W x D)	77.6 x 129.8 x 35.4 in

#### 1000 kW I/O cabinet

500 kW expandable to 1000 kW UPS (H x W x D)	77.6 x 106.2 x 35.4 in
750 kW expandable to 1000 kW UPS (H x W x D)	77.6 x 130 x 35.4 in
1000 kW UPS (H x W x D)	77.6 x 153.5 x 35.4 in

#### 1500 kW I/O cabinet

1000 kW UPS (H x W x D)	77.6 x 173.2 x 35.4 in
1250 kW UPS (H x W x D)	77.6 x 196.9 x 35.4 in
1500 kW UPS (H x W x D)	77.6 x 220.5 x 35.4 in

### Regulatory

Safety	UL 1778 5 <sup>th</sup> edition, cUL	Seismic	OSHPD
EMC/EMI/RFI	FCC47 Part 15	Surge	ANSI 62.4/B3
		Protection class	IP20

### Environmental

Operating temperature	0 – 40°C (32 – 104°F)	Relative humidity	0 – 95% noncondensing
		Operating altitude	1000m (3333ft)

### Options

[Air filter, relay interface board, system-level factory witness testing](#)

[Custom 600V input or output transformers](#)

Schneider Electric Industries SAS  
35, rue Joseph Monier - CS 30323  
F92506 Reuil-Malmaison Cedex  
[www.schneider-electric.com](http://www.schneider-electric.com)

Life Is On

**Schneider**  
Electric