UPS Smart Zone

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Conceptos Base

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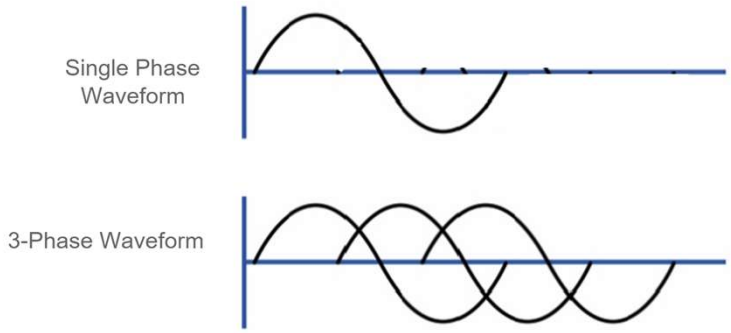
Single Phase & 3 Phase

Dos formas comunes de alimentación de CA proporcionadas a los DC son la alimentación monofásica y trifásica. La energía monofásica tiene solo una forma de onda de energía básica, mientras que la energía trifásica tiene tres formas de onda de energía básicas que están desfasadas entre sí por 120º.

Cuando la alimentación de AC ingresa a un edificio como una fuente de voltaje única, se le denomina monofásica. Si la energía ingresa al edificio utilizando tres fuentes de voltaje, o tres fases, o tres cables vivos, con neutros y conexiones a tierra, se denomina energía trifásica.



When AC power comes into a building as a single voltage source, it is referred to as single phase

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Tensiones Eléctricas en México

Clasificación	Tensión eléctrica nominal del sistema (*) V			Tensión eléctrica de suministro V		Tensión eléctrica nominal de utilización V (**)
	1 fase 3 hilos	3 fases 3 hilos	3 fases 4 hilos	máximo	mínimo	
Baja tensión	**120/240** - - - - - -	- - - - - - -- **480**	- - 208 Y/120 (1) **220 Y/127 (2)** **480 Y/277** - -	126/252 231/133,3 504/291 504	108/216 198/114,3 432/249,4 432	**115/230** **208 Y/120** **460 Y/265** **460**
Media tensión		**4 160** - - **13 800** - - **23 000** - - **34 500** - -	- - - - - - **13 800 Y/7 970** - - **23 000 Y/13 280** - - **34 500 Y/19 920**	4 368 - - 14 490 14 490/8 366 24 150 24 150/13 943 36 225 36 225/20 915	3 744 - - 12 420 12 420/7 171 20 700 20 700/11 951 31 050 31 050/17 927	**4 000** - - **13 200**
				Tensión máxima para equipo		
Alta tensión		69 000 85 000 **115 000** 138 000 161 000 **230 000**		72 500 123 000 123 000 145 000 170 000 245 000		
Extra alta tensión		**400 000**		420 000		

***Multiplicar por ($\sqrt{3} = 1.732$) para cargas trifásicas.**

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Capacidad

La capacidad de un sistema dado es la cantidad de electricidad (amperaje) disponible para el usuario en el voltaje nominal. Esto también se puede expresar en voltamperios (VA) o watts (W).

Tensión	Interruptor	Máxima por NOM-001 (80%)	Potencia Máxima
120V monofásico	20Amp	16Amp	1,920W
120V monofásico	30Amp	24Amp	2,880W
240V monofásico	20Amp	16Amp	3,840W
240V monofásico	30Amp	24Amp	5,760W
240V monofásico	50Amp	40Amp	9,600W
208V trifásico	20Amp	16Amp	5,764W*
208V trifásico	30Amp	24Amp	8,646W*
208V trifásico	60Amp	48Amp	17,292W*

Amps to Kilowatts (kW) conversion calculator (rapidtables.com)

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Potencia Real Vs Potencia Aparente.

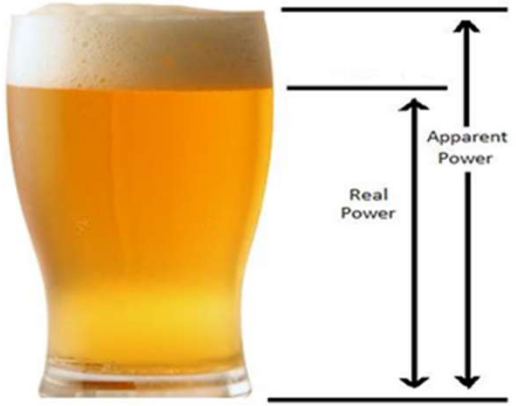
Volt Amps (VA)

VA: Es el producto de Volts x Amps.

Ejemplo: 230V x 16A = 3680VA ó 3.680 kVA

VA referido constantemente como ***potencia aparente,*** diferente a potencia real !

Algunas capacidades de UPS serán solicitadas en Vas ó kVA.



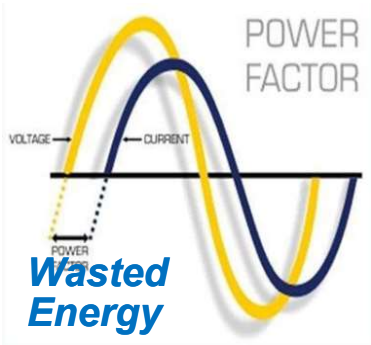
Watts (W)

Watts: Medida de ***potencia real*** disponible.

Esta es la cifra que debe buscar al dimensionar un sistema UPS para respaldar equipos de TI

Watts: Volts x Amps x Power Factor.

Ejemplo: 230V x 16A x .9pf = 3312 Watts (Potencia real utilizable).



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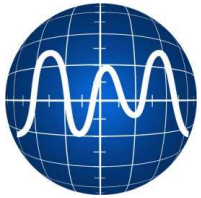
9 Problemas comunes de energía

STANDBY

1. Apagón o Fallo de red: Un apagón es la perdida total de energía en una red eléctrica.



2. Bajada breve de tensión: Es un disminución del voltaje en un periodo de tiempo muy corto

3. Subida breve de tensión: Es un incremento de voltaje en el orden de 110% respecto al nominal en un periodo muy corto de tiempo.

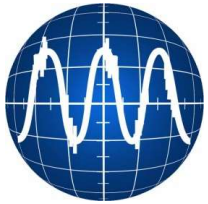
INTERACTIVA

4. Caída de tensión: Es un bajo voltaje en un periodo de tiempo considerable, el cual puede ser de unos pocos minutos o de varios días.

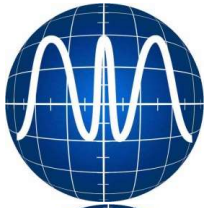
5. Pico de alto voltaje: Un pico de alto voltaje es un incremento dramático de este en un periodo de tiempo muy corto que puede exceder los 6000 volts.

DOBLE CONVERSIÓN

6. Transientes: Un transitorio de tensión es un aumento instantáneo de voltaje en el rango de nanosegundos



7. Ruido en la línea: El ruido es una forma de onda de alta frecuencia causada por la frecuencia de radio o las interferencias electromagnéticas



8. Variación de frecuencia: Es una variación de la frecuencia fundamental ocasionada por la red eléctrica o equipos de generación en sitio.

9. Distorsión armónica: La distorsión harmónica es una deformación de la onda fundamental ocasionada por cargas no lineales.

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UPS – Topologies

The 3 general categories (or topologies) of modern distributed UPS systems are:

- **Offline or Standby UPS**
- **Line Interactive UPS**
- **Online Double Conversion**

Selecting the best fit depends on several factors:

- Level of reliability
- Level of availability
- Type of equipment being protected
- The application/environment

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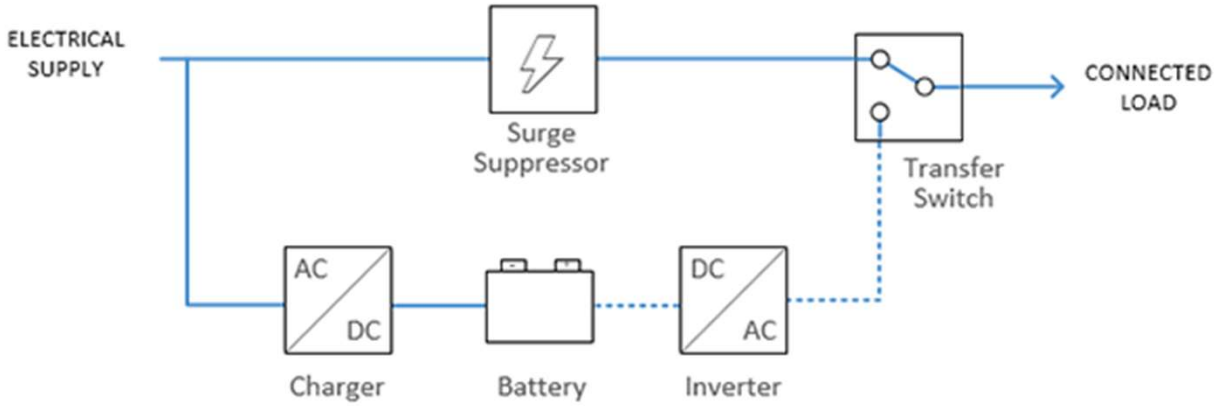
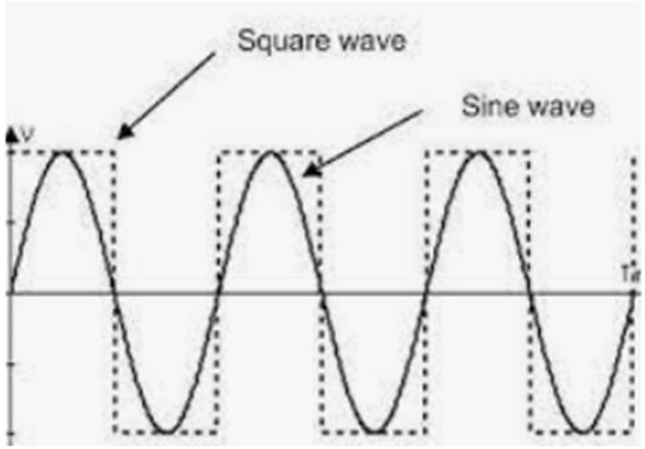
UPS Topologies

- **Offline or Standby UPS.**
  - The cheapest and simplest type.
  - Basic filtering is applied to the incoming raw mains and passed straight out to the load.
  - UPS only “works” in event of a mains failure.
  - Cheapest models of this type of UPS produce a square wave rather than a sine wave when on battery !





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UPS Topologies

Offline or Standby UPS. (No-Offering from Panduit)

- **Benefits**
  - High-efficiency (The charger is not constantly on).
  - User-friendly to operate. (plug and play)
  - Affordable price.

- **Limitations**
  - Uses battery during brownouts, limited or no protection against power irregularities.
  - The load is continuously exposed to spikes, transients, and any other aberrations coming down the power line, resulting in the risk of loss or damage to sensitive equipment and data.
  - **Transfer time (6 to 10ms)** from mains power to inverter when the mains power supply fails.
  - Low runtime – not expandable

Apagón > 10 ms

Bajada breve de tensión < 16 ms

Subida breve de tensión 4 – 16 ms

Typical competition:

- APC – Back-UPS (BE, BK, BN, BV series)
- EATON / TrippLite – 3S UPS series
- Vertiv/Liebert – PST5 Series

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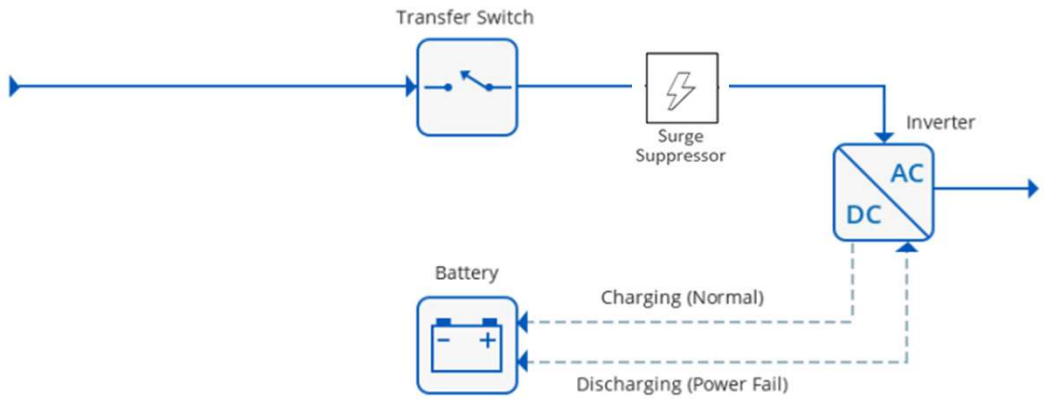
UPS Topologies

- **Line Interactive UPS.**
  - The most common type of small UPS system used for critical applications
  - Employs a degree of voltage regulation by using an internal transformer to either boost up or buck down the incoming mains voltage to be closer to the ideal output voltage. Typically, the window is 12% above or below the nominal input voltage.
  - This type of UPS the output inverter is always on and ready to switch to battery power.
  - When on battery waveform shape is usually always a sine wave.



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UPS Topologies

Line Interactive UPS. (Panduit Lithium-Ion NA model only)

- **Benefits**
  - High-reliability.
  - High-efficiency.
  - Reasonable voltage conditioning.
  - Lower electricity consumption.
  - Lower operating temperatures.

- **Limitations**
  - Impractical over 5kVA.
  - **Transfer time (2 to 4ms)** from mains power to inverter when the mains power supply fails.
  - Do not provide Line noise, pf correction, switching transients or frequency regulation.
  - Require frequent battery use in areas of extreme voltage distortion

Typical competition:

- APC – Smart-UPS (SMT, SMC, SC, SC-Li series)
- EATON/ TrippLite – 5P, 5PX, 5S, 5SC series
- Vertiv/Liebert – PSI5 & PSA5 series

Apagón > 10 ms

Bajada breve de tensión < 16 ms

Subida breve de tensión 4 – 16 ms

Caída de tensión prolongada Continuo

Pico alto voltaje Continuo

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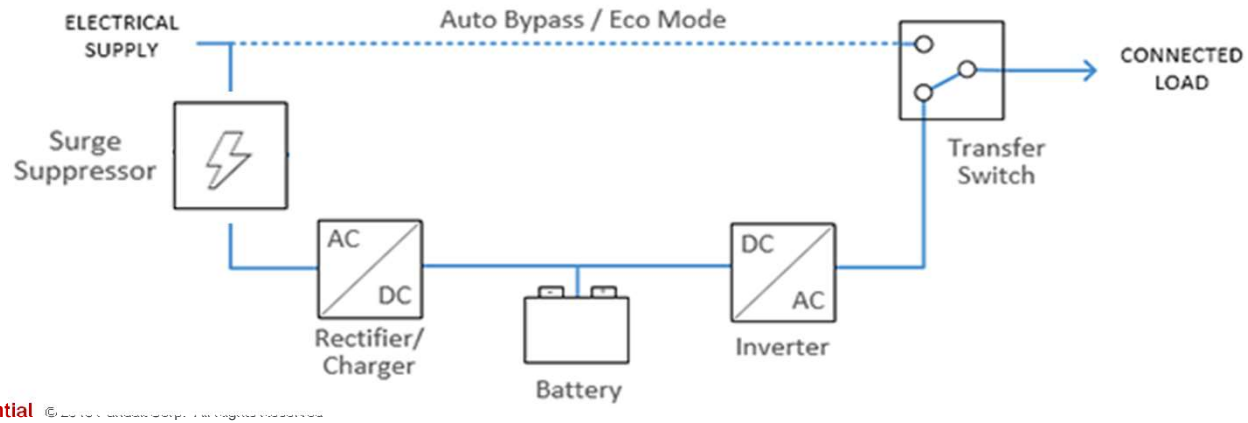
UPS Topologies

- **Online Double Conversion**. **(Panduit Offering)**
  - The most popular type of UPS for critical applications, also known as **an online** UPS.
  - Available in **single phase** and **three phase** power **up to mega watt** ratings.
  - This design converts all the incoming AC into DC and then reconstructs it back again into AC at the output.
  - The output inverter is always on and supplying perfect **sine wave** regulated to **+/- 1% voltage tolerance**.
  - This type of UPS guarantees the **best** possible **quality power to** the critical **IT equipment** it supports.



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UPS Topologies

Online Double Conversion.

- **Benefits**
  - Better voltage regulation.
  - Conversion time from DC to AC is negligible with no gaps in coverage.
  - No fluctuations in the voltage, indicating stable voltage quality.
  - The quality of the load voltage is free from distortion.
  - Highest protection against all power irregularities.
- **Limitations**
  - Higher power dissipation.
  - The overall efficiency of UPS is reduced
  - The wattage of the rectifier is increased (It has to supply power to the inverter as well as charge the battery).
  - Most expensive than other UPS systems

Typical competition:

- APC – Smart-UPS On-Line SRT, SURT series & Symmetra SYH & SYA series
- EATON/ TrippLite – 9155, 93E, 9PX, 9PM, 9SX series
- Vertiv/Liebert – GXT5, GXT4, APS, ITA2, EXM, EXS series

Apagón > 10 ms

Bajada breve de tensión < 16 ms

Subida breve de tensión 4 – 16 ms

Caída de tensión prolongada Continuo

Pico alto voltaje Continuo

Transitorio tensión < 4 ms

Ruido en línea Continuo

Variaciones de frecuencia Esporádico

Distorsión armónica Continuo

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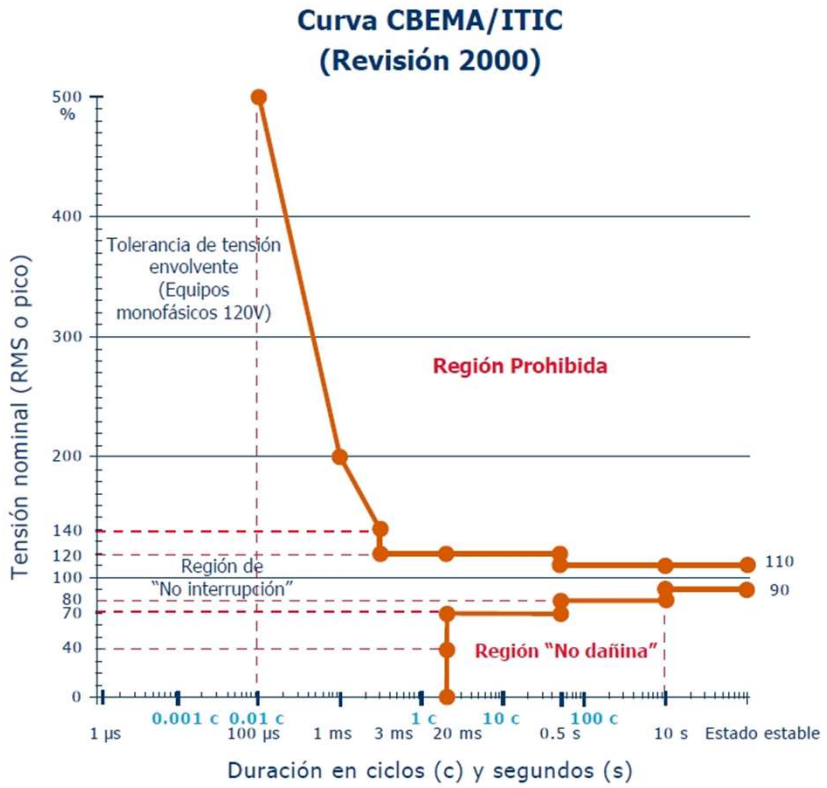
La Curva CBEMA/ITIC

Todos equipos electrónicos se apegan a la Curva ITIC:

- A partir de 2000 la “curva” del Information Technology Industry Council (ITIC), antes CBEMA, establece los parámetros de los equipos electrónicos, p. ej.:
  - Caída a 70% por 0.5 s
  - Caída a 80% por 10 s
  - Pico a 120% por 0.5 s
  - Interrupción de 20 ms
  - Continuo 90-110%
- Asume 120V a 60Hz



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Li-ion Lithium-Ion Battery Technology Vs VRLA

1. **40-60%** Less Footprint
2. **60-70%** Less Weight
3. **2-3X** Expected Life
4. **4X** Shelf life
5. **Higher** Operating Temperature
6. **10X** # Cycles
7. **5X** Faster Recharge Time
8. **1.2-2X** Initial CAPEX
9. **30-50%** TCO Savings

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Part Number & Specifications

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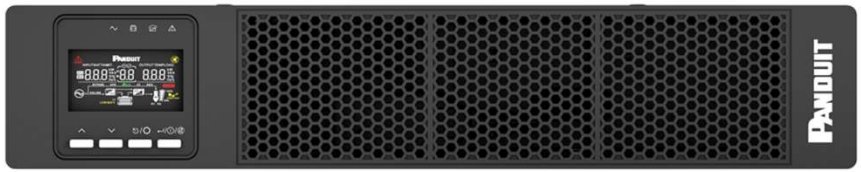
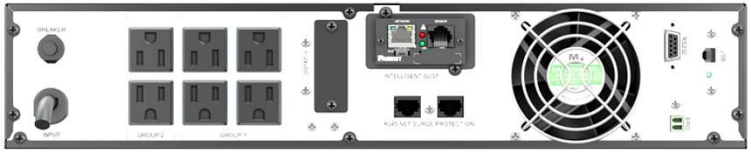
Infraestructura Convergente: UPS 1-3kVA

1-3 kVA 120V VRLA North America



MODEL	U01S13V / U01N13V	U01S11V / U01N11V	U02S11V / U02N11V	U03S11V / U03N11V
Max Configurable Power (Watts)	1000 W	1000 W	2000 W	3000 W
PHYSICAL				
Dimension(H*W*D)	86.5mm*440mm*325 mm		86.5mm*440mm*460 mm	86.5mm*440mm*600 mm
Rack Height	2RU			
Net Weight	12.4 kg	16.4 kg	20 kg	27.3 kg
Color	Black			

U01S13V / U01N13V



U01S11V / U01N11V

U02S11V / U02N11V

U03S11V / U03N11V

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Inf. Convergente: UPS 1-3kVA Spec Sheet

1-3kVA 120V VRLA North America

MODEL		U01S13V / U01N13V	U01S11V / U01N11V	U02S11V / U02N11V	U03S11V / U03N11V
Output power capacity		1000 VA		2000 VA	3000 VA
Max Configurable Power (Watts)		1000 W		2000 W	3000 W
Nominal output voltage		120 Vac (100 / 110 / 115 / 125 Vac selectable)			
Output Voltage Distortion		Linear load < 3%; Non-Linear load < 5%			
Output frequency	Online mode	50 / 60 ± 4 Hz			
	Battery mode	50 / 60 ± 0.1 Hz			
Output power factor		1.0			
Topology		Double conversion online			
Waveform		Pure Sine wave			
Overload capability	Online mode	105% ~ 125%: 1 min; 125% ~ 130%: 30 s; > 130%: 200 ms, transfer to bypass			
	Battery mode	105% ~ 125%: 1 min; 125% ~ 130%: 10 s; > 130%: 200 ms, shut down			
Transfer time (typical)	Online mode <-> battery mode	0 ms			
	Inverter <-> bypass	4 ms			
Efficiency	Online mode	90.0%		92.0%	92.0%
	ECO mode	95.0%		96.0%	96.5%
Output connection	Programmable	(2) NEMA 5-15R		(2) NEMA 5-20R	(2) NEMA 5-20R
	Non-programmable	(4) NEMA 5-15R		(4) NEMA 5-20R	(1) NEMA L5-30R; (2) NEMA 5-20R
Bypass		Internal			
INPUT					
Nominal input voltage		120 Vac			
Input voltage range	Full load	95 ~ 150 Vac			
	Half load	55 ~ 150 Vac			
Input frequency range		40 ~ 70 Hz (auto sensing)			
Input connection		NEMA 5-15P		NEMA L5-20P	NEMA L5-30P
Input power factor		>0.98 (full load)			
Cord Length		3m (10ft)			
Number of Power Cords		(1) fixed			

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Inf. Convergente: UPS 1-3kVA Spec Sheet

1-3kVA 120V VRLA North America

MODEL		U01S13V / U01N13V	U01S11V / U01N11V	U02S11V / U02N11V	U03S11V / U03N11V
Online thermal dissipation		400 BTU/hr.		534 BTU/hr.	801 BTU/hr.
BATTERY					
Battery type		VRLA			
Typical recharge time		4-6 hrs			
Battery voltage		24 Vdc	36 Vdc	48 Vdc	72 Vdc
Battery quantity × capacity		2 × 12 V / 9 Ah	3 × 12 V / 9 Ah	4 × 12 V / 9 Ah	6 × 12 V / 9 Ah
Charging current (max.)		2 A			
Backup time	Full load	2.7 min	6 min	4.28 min	4.6 min
	Half load	10.9 min	19.1 min	13.5 min	14.1 min
Expected Battery Life (years)		3-5yrs			
Internal Replacement Cartridge		UVC024	UVC036	UVC048	UVC072
Maximum External Battery Pack (EBP) quantity		4 units			
COMMUNICATION&MANAGEMENT					
Communication ports		USB, RS232, intelligent slot			
Pre-Installed SmartZone™ iNMC card		N model only			
Local Display/ Control Panel		Segment colorful screen			
Audible Alarm		Yes			
Emergency power off (EPO)		Yes			

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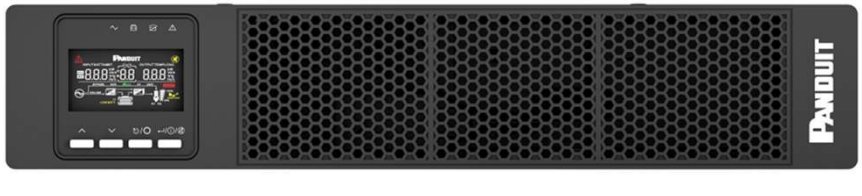
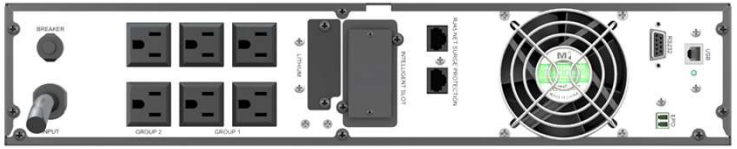
Infraestructura Convergente: UPS 1-3kVA Li Ion

1-3kVA 120V Li Ion Line- interactive North America

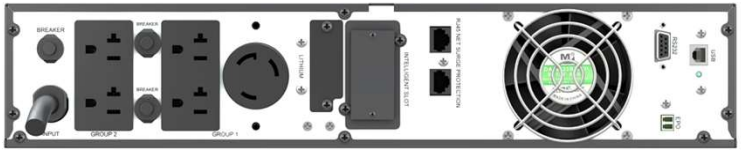


U01S11L / U01N11L

U02S11L / U02N11L



U03S11L / U03N11L



MODEL	U01S11L / U01N11L	U02S11L / U02N11L	U03S11L / U03N11L
Max Configurable Power (Watts)	1000 W	1500 W	3000 W
PHYSICAL			
Maximum Height	86.5 mm (3.42")		
Maximum Width	440 mm (17.2")		
Maximum Depth	460 mm (18.1")		630 mm (24.8")
Rack Height	**2RU**		
Net Weight	19.5 kg (42.9lbs)	22 kg (48.4lbs)	31 kg (68.2lbs)
Color	Black		

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Inf. Convergente: UPS 1-3kVA Li Ion Spec Sheet

Line-Interactive 1-3kVA 120V Li North America

MODEL		U01S11L / U01N11L	U02S11L / U02N11L	U03S11L / U03N11L
Output power capacity		1000 VA	1500 VA	3000 VA
Max Configurable Power (Watts)		900 W	1350 W	2700 W
Nominal output voltage		120 Vac (100 / 110 / 115 / 125 Vac selectable)		
Output Voltage Distortion		Linear load < 3%; Non-Linear load < 5%		
Output frequency	Online mode	Sychronize with input		
	Battery mode	50 / 60 ± 0.1 Hz		
Output power factor		0.9		
Load crest factor		3 : 1		
Topology		Line-interactive		
Waveform		Pure Sine wave		
Overload capability	Online mode	105%-110%, last warning. 110%-120%, alarm for 10s and shutdown. >120% , shut down immediately		
	Battery mode			
Transfer time (typical)		4 ~ 6 ms		
Efficiency	Online mode	96.5%	96.5%	97.0%
	Battrey mode	87.5%	89.5%	89.5%
Output connection	Programmable (Group 2)	(2) NEMA 5-15R		(2) NEMA 5-20R
	Non-programmable (Group 1)	(4) NEMA 5-15R		(1) NEMA L5-30R; (2) NEMA 5-20R
Bypass		Internal		
INPUT				
Nominal input voltage		100 - 125 Vac		
Input voltage range	Full load	75 ~ 146 Vac		
Input frequency range		50 / 60 Hz (auto sensing)		
Input connection		NEMA 5-15P		NEMA L5-30P
Cord Length		3m (10ft)		
Number of Power Cords		1 (fixed)		

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Inf. Convergente: UPS 1-3kVA Li Ion Spec Sheet

Line-Interactive 1-3kVA 120V Li Ion （North America）

MODEL		U01S11L / U01N11L	U02S11L / U02N11L	U03S11L / U03N11L
Online thermal dissipation		107 BTU/hr.	138 BTU/hr.	276 BTU/hr.
BATTERY				
Battery type		Lithium-Ion (LiFePO4)		
Typical recharge time		3-4 hrs		
Battery voltage		25.6 Vdc	48 Vdc	76.8 Vdc
Charging current (max.)		2A		
Backup time	Full load	9 min	7.5 min	9 min
	Half load	22 min	19 min	22 min
Expected Battery Life (years)		8-10yrs		
Internal Replacement Cartridge		ULC024	ULC048	ULC072
COMMUNICATION&MANAGEMENT				
Communication ports		USB, RS232, intelligent slot		
Pre-Installed SmartZone™ iNMC card		N model only		
Local Display/ Control Panel		Segment colorful screen		
Audible Alarm		Yes		
Emergency power off (EPO)		Yes		

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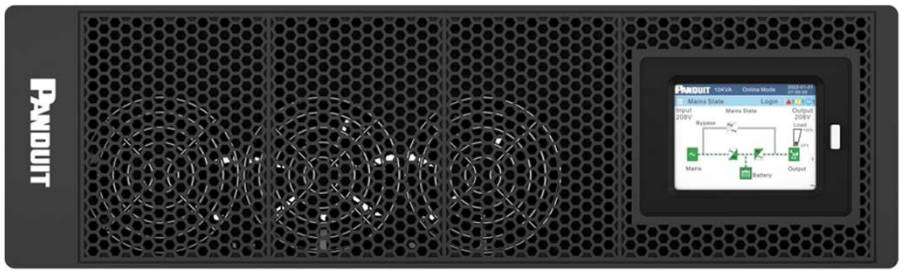
Inf. Convergente: UPS 5-10kVA VRLA

5-10 kVA 208V VRLA North America



MODEL	U05S11V / U05N11V	U06S11V / U06N11V	U10S11V / U10N11V
Max Configurable Power (Watts)	5000 W	6000 W	10000 W
PHYSICAL			
Dimension(H*W*D)	440 × 666.5 × 131mm		
Rack Height (UPS + Battery)	6RU		
Net Weight	19.3 kg	17.5 kg	20 kg
Color	Black		

U05S11V /

U06S11V /

U10S11V /

"N" model include NMC card

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Inf. Convergente: UPS 5-10kVA VRLA Spec Sheet

5-10kVA 208V VRLA NA

MODEL		U05S11V / U05N11V	U06S11V / U06N11V	U10S11V / U10N11V
Output power capacity		5000 VA	6000 VA	10000 VA
Max Configurable Power (Watts)		5000 W	6000 W	10000 W
Nominal output voltage		208 Vac (240 Vac selectable)		
Output Voltage Distortion		Linear load <3%; Non-Linear load< 5%		
Output frequency	Online mode	50 / 60 ± 10%		
	Battery mode	50 / 60 ± 0.1 Hz		
Output power factor		1	1	
Load crest factor		3 : 1		
Topology		Double conversion online		
Waveform		Pure Sine wave		
Overload capability	Online mode	105% ~ 125%: 5 min; 125% ~ 130%: 1 min; > 130%: 200 ms, transfer to bypass		
	Battery mode	105% ~ 125%: 1 min; 125% ~ 130%: 30 s; > 130%: 200 ms, shut down		
Transfer time (typical)	Online mode <-> battery mode	0 ms		
	Inverter <-> bypass	0 ms		
Efficiency	Online mode	93.5%	94.0%	95.0%
	ECO mode	97.0%	97.5%	98.0%
Output connection	Programmable	(2)L6-30R		
	Non-programmable	(2) NEMA L6-30R	HW terminal (L+N+G)	
Bypass		Internal		
INPUT				
Nominal input voltage		208 Vac (240 Vac selectable)		
Input voltage range	Full load	185 ~ 264 Vac		
	Half load	110 ~ 285 Vac		
Input frequency range		40 ~ 70 Hz (auto sensing)		
Input connection		NEMA L6-30P	HW terminal (L1+L2+G)	
Input power factor		>0.99 (full load)		

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Inf. Convergente: UPS 5-10kVA VRLA Spec Sheet

5-10kVA 208V VRLA NA

MODEL		U05S11V / U05N11V	U06S11V / U06N11V	U10S11V / U10N11V
Online thermal dissipation		1067 BTU/hr.	1423 BTU/hr.	1985 BTU/hr.
BATTERY				
Battery type		VRLA		
Typical recharge time		4-6 hrs		
Battery voltage		± 120Vdc		
Battery quantity × capacity		20 × 12 V / 9 Ah		
Charging current (max.)		10A		
Backup time	Full load	14.5 min	9.7 min	4.5 min
	Half load	37.1 min	25.3 min	12.9 min
Expected Battery Life (years)		3-5 yrs		
EBP Replacement Cartridge		UVD240		
Additional External Battery Pack (EBP)		UVP240		
Maximum External Battery Pack (EBP) quantity		5 units		
COMMUNICATION&MANAGEMENT				
Communication ports		USB, RS232, intelligent slot		
Pre-Installed SmartZone™ iNMC card		N model only		
Local Display/ Control Panel		3.5 inch colorful touch screen		
Audible Alarm		Yes		
Emergency power off (EPO)		Yes		

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How to Win Against APC UPS

Reliability

Support

Batteries

Lifespan

Density

Predictability

Efficiency

Delivery

Manageability

Security

Schneider Electric $34.6B revenue 2020

- Worldwide brand recognition and market leader w/ 24% market share.
- Full Power Chain Solutions Provider with extensive products variations.
- Strong software offering w/ ecoStruxure & PowerShute and now all Smart-UPS units with ecoStruxure Cloud Ready.
- Extensive Services: Facility Expert, Power Advisor, Power & IT Monitoring, Power Operation, Full Managed Services & recent PaaS.

- ✓ La Warranty: 3yr UPS / 2yr Battery (Same)
- ✓ Li Warranty: 5yr UPS / 5yr Battery (Same)
- ✓ Weight and Dimensions – (Similar)
- ✓ Scalable Runtime – hot swappable battery replacement (Similar)
- ✓ Operating Temp.: (Similar)
- ✓ Switchable Outlet groups – (Similar)
- ✓ UPS Efficiency – (Similar)
- ✓ Intelligent Battery Management – (Similar)
- ✓ ECO Mode – (Similar)
- ✓ ENERGY START 2.0 (similar)
- ✓ Power Conditioning – (Similar)
- ✓ High Performance Intelligent Network Management Card – (Similar)
- ✓ Security - PEN certification with crypto-accelerator (Better)
- ✓ Built-in WiFi & Bluetooth connectivity (Better)
- ✓ Additional Accessories (Better)
- ✓ Free SZ mPower SW (Better)
- ✓ Pricing lower (Better)

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How to Win Against Tripp Lite UPS

Reliability

Support

Batteries

Lifespan

Density

Predictability

Efficiency

Delivery

Manageability

Security

TRIPP·LITE

$475M(est.) revenue 2020

- •Owned By Eaton
- •limited products, solutions and support.
- •Focusing on low-KVA and targeted markets with lower warranty & support.
- •Little or no software solutions for monitoring, management and control.
- •No much more power products beyond UPSs and few accessories.
- •Some low-tech Services: E.g. battery replacement & recycling.

- ✓ La Warranty: 3yr UPS / 2yr Battery (Same)
- ✓ Li Warranty: 5yr UPS / 5yr Battery (Same)
- ✓ Weight and Dimensions – (Similar)
- ✓ Scalable Runtime – hot swappable battery replacement (Similar)
- ✓ Operating Temp.: (Similar)
- ✓ Switchable Outlet groups – (Similar)
- ✓ UPS Efficiency – (Similar)
- ✓ Intelligent Battery Management – (Similar)
- ✓ ECO Mode – (Similar)
- ✓ ENERGY START 2.0 (similar)
- ✓ Power Conditioning – (Similar)
- ✓ High Performance Intelligent Network Management Card – (Better)
- ✓ Security - PEN certification with crypto-accelerator (Better)
- ✓ Built-in WiFi & Built-in Bluetooth connectivity (Better)
- ✓ Additional Accessories (Better)
- ✓ Free SZ mPower SW (Better)
- ✓ Pricing compatible (Similar)

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How to Win Against Other Local UPS Vendors

Reliability

Support

Batteries

Lifespan

Density

Predictability

Efficiency

Delivery

Manageability

Security

Other

Other $5.5B revenue 2020 - 51% market share

- Regional local vendors with limited products, solutions and support.
- Focusing on low-KVA and targeted markets with lower warranty & support.
- Little or no software solutions for monitoring, management and control.
- No much more power products beyond UPSs and few accessories.
- Some low-tech Services: E.g. battery replacement & recycling.

- ✓ La Warranty: 3yr UPS / 2yr Battery (Same?)
- ✓ Li Warranty: 5yr UPS / 5yr Battery (Same?)
- ✓ Weight and Dimensions – (Similar)
- ✓ Scalable Runtime – hot swappable battery replacement (Similar)
- ✓ Operating Temp.: (Similar)
- ✓ Switchable Outlet groups – (Similar)
- ✓ UPS Efficiency – (Similar)
- ✓ Intelligent Battery Management – (Similar)
- ✓ ECO Mode – (Similar)
- ✓ ENERGY START 2.0 (similar)
- ✓ Power Conditioning – (Similar)
- ✓ High Performance Intelligent Network Management Card – (Better)
- ✓ Security - PEN certification with crypto-accelerator (Better)
- ✓ Built-in WIFI & Built-in Bluetooth connectivity (Better)
- ✓ Additional Accessories (Better)
- ✓ Free SZ mPower SW (Better)
- ✓ Pricing compatible (Similar)

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Aplicaciones en segmentos de industria?

	STANDBY	Line-Interactive	Online Double Conversion
TYPICAL USE	Desktop computers, home networks	Desktop computers, network workstations and audio/video equipment	Mission-critical equipment in data centers and server rooms
Battery Backup Emergency backup power for utility power outages	X	X	X
Surge Protection Protection against power surges or spikes	X	X	X
Brownout Protection Maintains safe voltage levels without using battery power		X	X
Overvoltage Protection Keeps overvoltages from damaging connected equipment without using battery power		X	X
Pure Sine Wave Output Perfect power for sensitive electronics			X
Fully Online Operation Zero transfer time to battery			X

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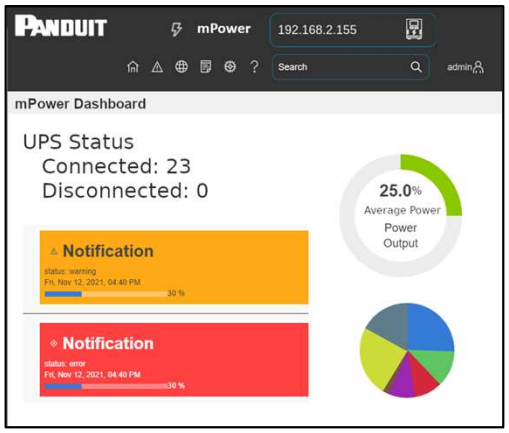
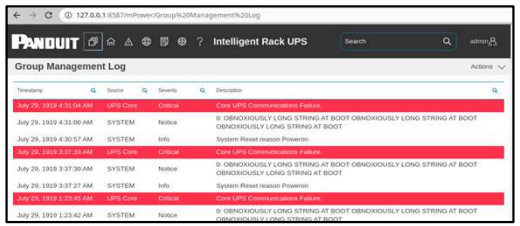
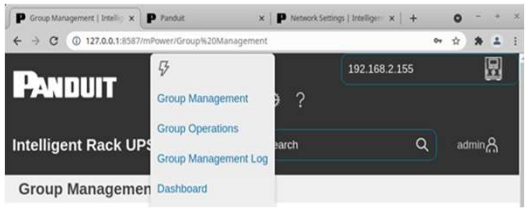
SZ *m*Power - Overview

- UPS Standalone Software for Monitoring, Configuring, and Firmware Update

  - ✓ Includes Bulk Firmware Update and Configuration
  - ✓ Support up to 100 UPS NMC units via Ethernet
  - ✓ Microsoft Windows OS compatible
  - ✓ Includes UPS Status Dashboard, Events Log, and Alert (aggregated)
  - ✓ Will provide link to Individual UPS WEB UI







[Panduit | Uninterruptible Power Supply (UPS) Downloads]

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Rápido de implementar

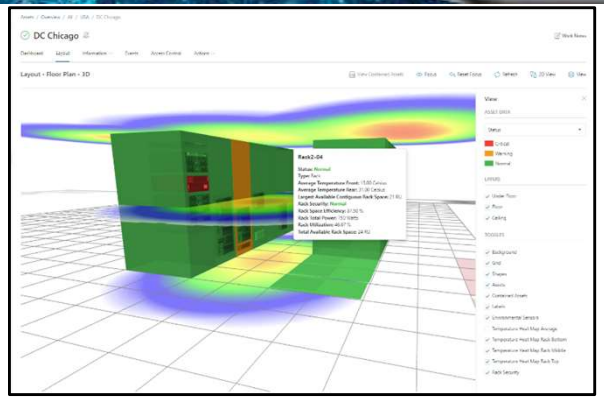
Uso intuitivo

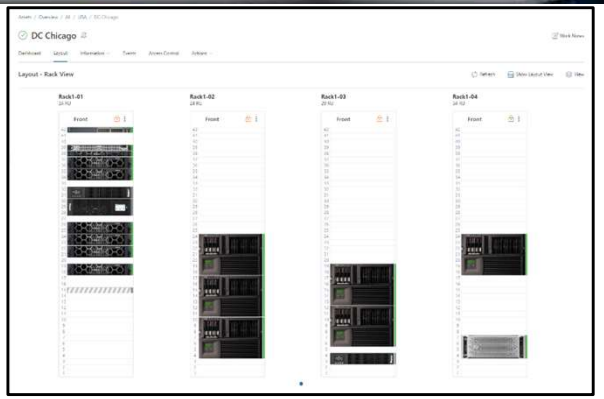
Fácil de mantener

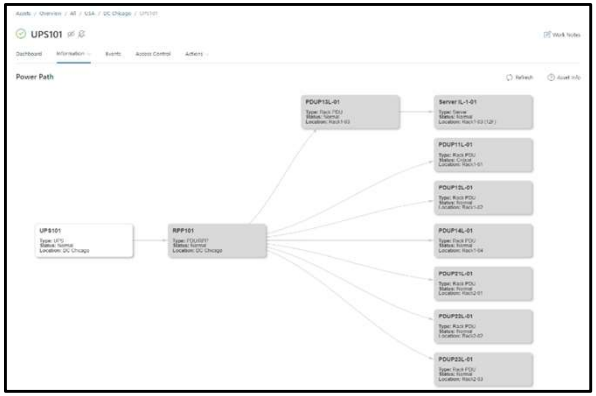
smartzone™ cloud

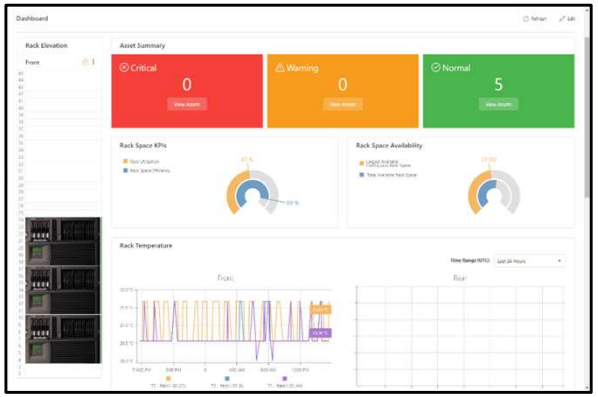
DCIM de próxima generación

- Reduzca el riesgo de tiempo de inactividad
- Ahorre en consumo de energía
- Reduzca el costo de sobre aprovisionamiento
- Mejore la eficiencia y la vida útil del equipo
- Movimiento, adiciones y cambios efectivos
- Monitoree toda la infraestructura digital
- Comprender las dependencias de conectividad
- Control de acceso al rack con mango de seguridad SmartZone™ G5
- Gestión de firmware de UPS SmartZone™









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https://pages.panduit.com/SmartZone-Cloud-LATAM.html

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Panduit Ecosystem +

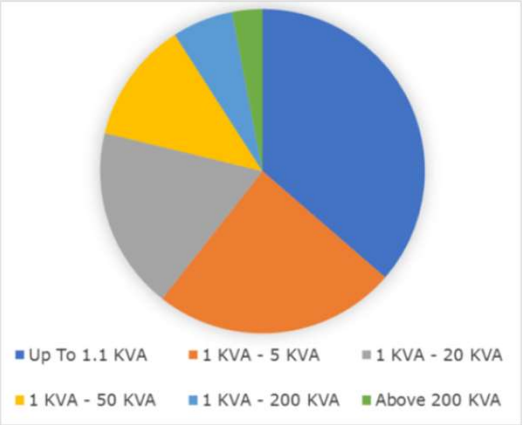
DATAINTELO HOME REPORTS CATEGORIES BLOGS PRESS RELEASE

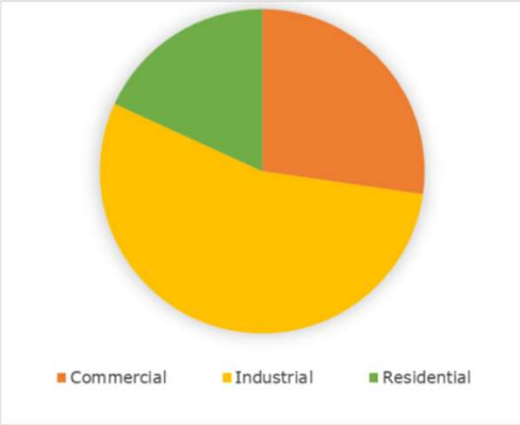
sustain in the market.

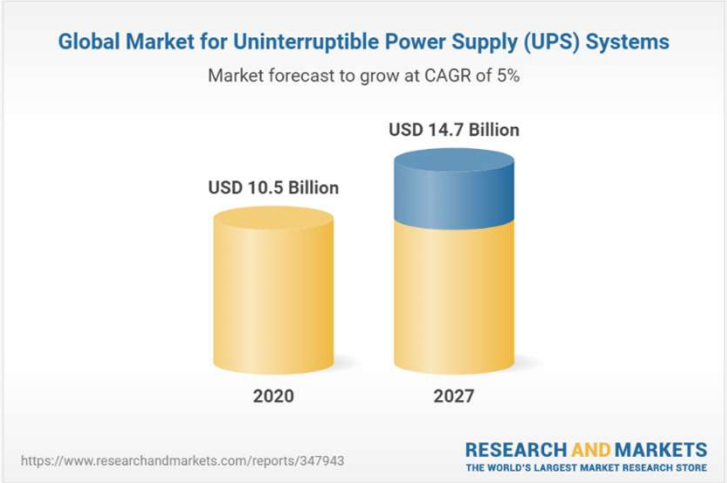
Report Details | Table of Content | Free Sample

UNINTERRUPTIBLE POWER SUPPLY (UPS) MARKET 2020-2026

SEGMENTATION BY TYPE & END-USER







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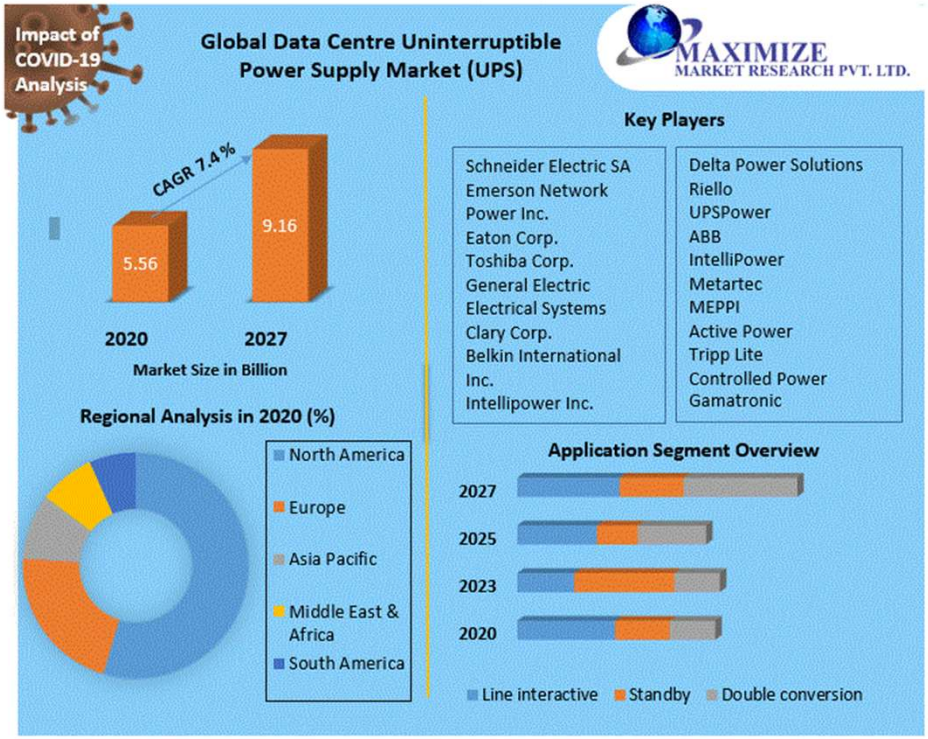
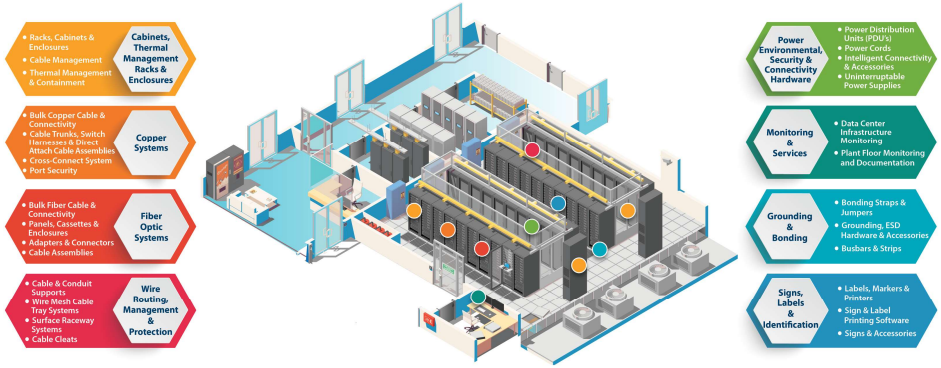
Panduit Ecosystem: Whole Portfolio





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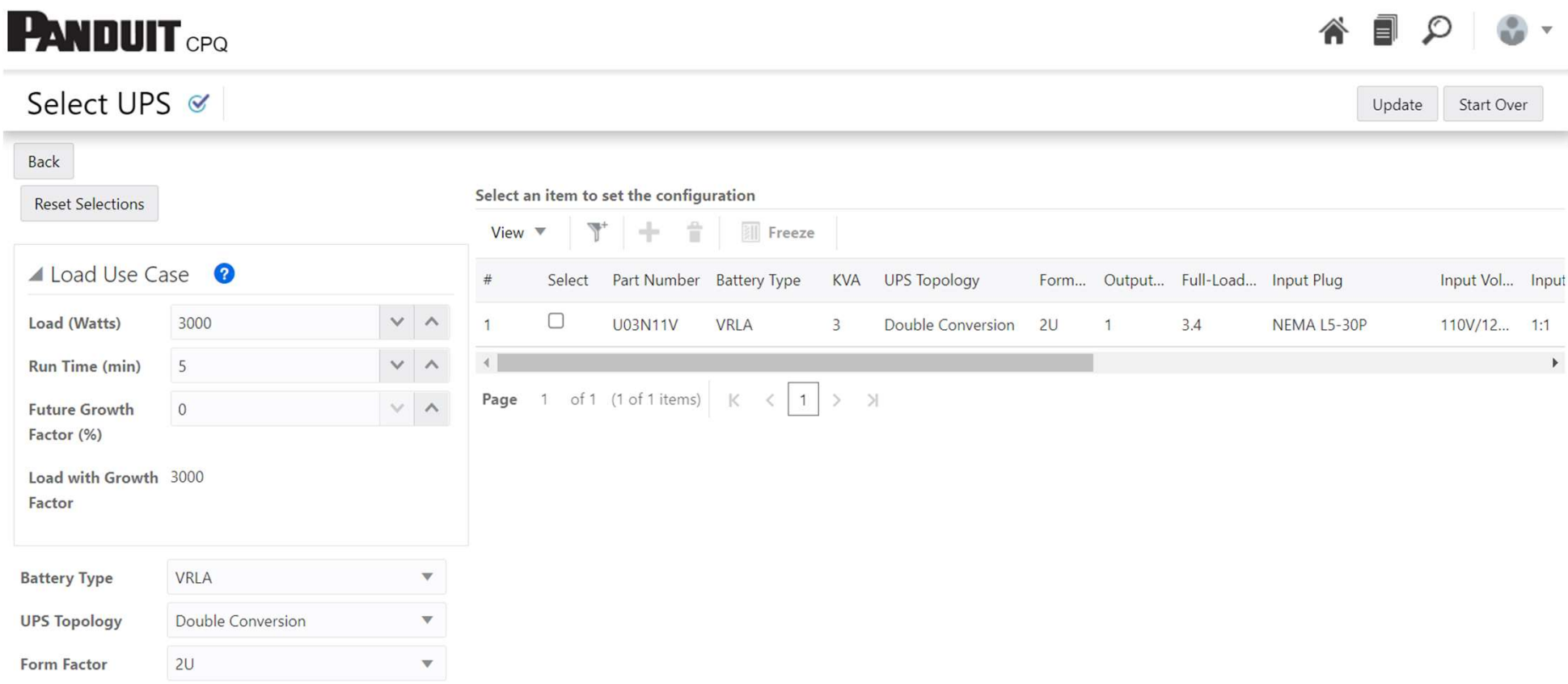
Panduit CPQ: UPS



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