SmartZone™ UPS 1-3kVA VRLA

overview

The Panduit® SmartZone™ UPS with maintenance free VRLA battery, 1-3kVA single phase 120 V and 230 V units is a pure Online Double Conversion system that delivers highly efficient and reliable power protection and power backup for your computer IT equipment. With excellent electrical performance, enhanced intelligent monitoring and network functions, complying with ENERGY STAR® 2.0, EMC and safety standards to meet the continually growing power demands of Data Center, Enterprise and Edge IT equipment.

key features and benefits

Rack/Tower convertible	Supports rack/tower installation with rotatable colorful LCD display
Online Double Conversion with fully digital control	Provides stable and clean power with less ripple by filtering noise, automatic voltage regulation (AVR) and surge protection
Wide input voltage range	110-300 VAC for EU units and 55-150 VAC for NA units, covering extended voltage range, applicable for severe situation such as large power grid fluctuation
High efficiency	Up to 96.5%, reducing the energy waste and the cost of electricity
Energy savings	High Efficiency on Smart ECO mode for Online Double Conversion models
Green design	RoHS and Reach, CE/UL/ENERGY STAR® 2.0 compliant for North America units
Output unity power factor	Means more active power for IT equipment load
Input power factor	Power factor correction topology on the input side dramatically reducing the total harmonic distortion (THD)
Expandable battery packs	Allows to connect maximum four external battery packs, extending the UPS backup running time
Intelligent Battery Management	The most optimal curve and temperature-compensated with advanced algorithms prolonging the battery life
EPO function (Emergency Power Off)	Allows to quickly and easy shut down the UPS when emergency event occurs
Generator compatible	Wide input frequency and voltage, supports connecting to generators, ensuring the uninterruptible operation
Hot-Swappable battery design	Can perform the replacement of battery cartridge without powering down the UPS
Cold start function	Allows to boot up the UPS without mains input but with batteries
Intelligent fan speed regulation	Automatically adjustment of fan speed due to the ambient temperature and load percentage
Programmable outlet group with Smart Load Shedding	Loads connected to the programmable group can lose power first, saving more energy and extending the runtime for critical load. Smart Load Shed allows logical group shutdown with time or load.
Segment colorful LCD	Colorful LCD with four buttons and LED indicators, providing intuitive display
Multiple communication interface	RS232/USB/intelligent slot, realizing communication and monitoring function
Comprehensive protection function	Short-circuit, overload, overheat, battery overcharge and over discharge, output low voltage, fan fault alarm and RJ45 surge protection
Intelligent Network Management Card (included with N Models*)	Provides harden security remote access via Ethernet Secure SNMPv3 protocol to monitor and manage the UPS, micro-USB for firmware upgrade and RS-485 for connecting environmental and security sensors. Built-in WiFi and Bluetooth hardware support with future optional firmware upgrade.
SmartZone™ Cloud Ready (included with N Models*)	Support for technology allowing to easily, securely and quickly connect to SmartZone™ Cloud DCIM with management, monitoring, control and alerting of Power Chain, Environmental, Cooling, Security, Asset and Connectivity Infrastructure Assets.
SmartZone™ mPower Management Software	Configure, monitor, and manage the UPS (includes graceful equipment shutdown) remotely via RS-232 or USB or Ethernet. Software is available for free download from www.panduit.com/smartzone-ups.

* N Model UPS has an N in the 4th digit of the part number, e.g. U01N12V

SmartZone™ UPS 1-3kVA VRLA

product specifications

• 1-3k 230 V VRLA

MODEL		U01S12V/U01N12V	U02S12V/U02N12V	U03S12V/U03N12V
Output power capacity		1000 VA	2000 VA	3000 VA
Max Configurable Power (Watts)		1000 W	2000 W	3000 W
Nominal output voltage		230 VAC (220/240 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		
Load crest factor		3:1		
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	(4) IEC C13		(4) IEC C13
	Non-programmable	(4) IEC C13		(1) IEC C19; (4) IEC C13
Bypass		Internal		
INPUT				
Nominal input voltage		230 VAC (220 VAC/240 VAC selectable)		
Input voltage range	Full load	176 - 264 VAC		
	Half load	110 - 300 VAC		
Input frequency range		40 - 70 Hz (auto sensing)		
Input connection		C14 socket (2 cords included)		C20 socket (2 cords included)
Input power factor		>0.98 (full load)		
Cord Length		1.8m (6 ft.)		
Number of Power Cords		Schuko CEE 7/EU1-16P and BS1363A		
BATTERY				
Battery type		VRLA		
Typical recharge time		4-6 hrs.		
Battery voltage		36 VDC	48 VDC	72 VDC
Battery quantity × capacity		3 × 12 V/9 Ah	4 × 12 V/9 Ah	6 × 12 V/9 Ah
Charging current (max.)		2 A		
Backup time	Full load	6 min.	2.9 min.	3.4 min.
	Half load	19.1 min.	11.0 min.	10.7 min.
Expected Battery Life (years)		3-5 yrs.		
Internal Replacement Cartridge		UVC036	UVC048	UVC072
Maximum External Battery Pack (EBP) quantity		4 units		

SmartZone™ UPS 1-3kVA VRLA

1-3k 230 V VRLA (continued)

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		
ENVIRONMENTAL			
Operating temperature	32°F - 104°F (0°C - 40°C) (no derating)		
Storage temperature	-25°C - 55°C (without batteries)		
Relative humidity	0 - 95% (non-condensing)		
Operating elevation	Up to 3000 m (derated 10%)		
Online thermal dissipation	400 BTU/hr.	593 BTU/hr.	890 BTU/hr.
Protection Class	IP20		
Noise level	<55dB at 1m		
CONFORMANCE			
Safety	CB: IEC62040-1:2013, CE-LVD: EN62040-1:2008+A1:2013, UKCA: BS62040-1-2013		
EMC	IEC 62040-2-2016, EN 62040-2-2018, BS62040-2-2018		
Transportation	ISTA Procedure 2A		
Surge protection	ANSI C62.41 Category A (380 J)		
CUSTOMER SERVICE			
Warranty	3 years for UPS and EBP, 2 years for internal battery cartridges		
SUSTAINABLE OFFER STATUS			
RoHS 2.0	Compliant		
Proposition 65 Warning	See Safety Sheet (IM053)		
PHYSICAL			
Maximum Height	86.5mm		
Maximum Width	440mm		
Maximum Depth	460mm		600mm
Rack Height	2 RU		
Net Weight	16.1 kg	21.3 kg	24.4 kg
Shipping Weight	22.3 kg	27.6 kg	30.9 kg
Shipping Height	202mm (7.95 in.)		
Shipping Width	555mm (21.8 in.)		
Shipping Depth	590mm (23.2 in.)	590mm (23.2 in.)	730mm (28.7 in.)
Color	Black		

SmartZone™ UPS 1-3kVA VRLA

1-3k 120 V VRLA

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			
Load crest factor		3:1			
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		100 - 125 VAC			
Input voltage range		55 - 150 VAC			
Input frequency range		40 - 70 Hz (auto sensing)			
Input connection		NEMA 5-15P		NEMA 5-20P	NEMA L5-30P
Input power factor		>0.98 (full load)			
Cord Length		3m (10 ft.)			
Number of Power Cords		(1) fixed			
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.)		2A			
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)		3-5 yrs.			
Internal Replacement Cartridge		UVC024	UVC036	UVC048	UVC072
Maximum External Battery Pack (EBP) quantity		4 units			

SmartZone™ UPS 1-3kVA VRLA

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		
ENVIRONMENTAL			
Operating temperature	32°F - 104°F (0°C - 40°C) (no derating)		
Storage temperature	-25°C - 55°C (without batteries)		
Relative humidity	0 - 95% (non-condensing)		
Operating elevation	Up to 3000m (derated 10%)		
Online thermal dissipation	400 BTU/hr.	534 BTU/hr.	801 BTU/hr.
Protection Class	IP20		
Noise level	<55dB at 1m		
CONFORMANCE			
Energy Saving	ENERGY STAR® 2.0		
Safety	cUL: UL 1778 5th Edition, CSA C22.2 NO.107.3-14		
EMC	FCC Part 15 Subpart B Class A, ANSI C63.4-2014		
Transportation	ISTA Procedure 2A		
Surge protection	ANSI C62.41 Category A (380 J)		
CUSTOMER SERVICE			
Warranty	3 years for UPS, 2 years for internal battery and EBP		
SUSTAINABLE OFFER STATUS			
RoHS 2.0	Compliant		
Proposition 65 Warning	See Safety Sheet (IM053)		
PHYSICAL			
Maximum Height	86.5mm		
Maximum Width	440mm		
Maximum Depth	325mm	460mm	600mm
Rack Height	2 RU		
Net Weight	12.4 kg	16.6 kg	20 kg	25.7 kg
Shipping Weight	18.4 kg	22.7 kg	27.9 kg	31.7 kg
Shipping Height	202mm (7.95 in.)		
Shipping Width	555mm (21.8 in.)		
Shipping Depth	545mm (21.4 in.)	590mm (23.2 in.)	730mm (28.7 in.)
Color	Black		

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EBP specifications

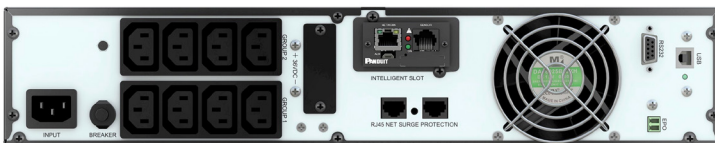| EBP MODEL	UVP024	UVP036	UVP048	UVP072
MATCHED UPS	U01S13V/U01N13V	U01S11V/ U01N11V U01S12V/ U01N12V	U02S11V/U02N11V U02S12V/U02N12V	U03S11V/U03N11V U03S12V/U03N12V
BATTERY SYSTEM				
Battery type	VRLA (lead acid maintenance free battery)			
Typical battery life	3 - 5 years, depend on discharging cycle and ambient temperature			
System voltage	24 VDC	36 VDC	48 VDC	72 VDC
Battery quantity	2 × 2 pcs.	2 × 3 pcs.	2 × 4 pcs.	2 × 6 pcs.
Battery capacity	12 V/9 Ah			
Replacement Cartridge Set	UVD024	UVD036	UVD048	UVD072
PHYSICAL				
Maximum Height	86.5mm (3.42 in.)			
Maximum Width	440mm (17.3 in.)			
Maximum Depth	430mm (16.9 in.)		550mm (21.6 in.)	710mm (27.9 in.)
Rack Height	2 RU			
Net Weight	17.8 kg	23.3 kg	30 kg	43 kg
ENVIRONMENTAL				
Operating temperature	0°C - 40°C			
Relative humidity	0 - 95% (non-condensing)			
Noise level	<40dB at 1m			
CONFORMANCE				
Safety	CB: IEC62040-1:2013, CE-LVD: EN62040-1:2008+A1:2013, UKCA: BS62040-1-2013, cULus: UL 1778 5th Edition, CSA C22.2 NO.107.3-14			
Transportation	ISTA Procedure 2A			

SmartZone™ UPS 1-3kVA VRLA

UPS accessories

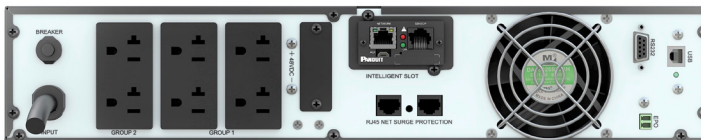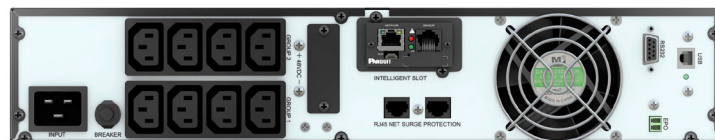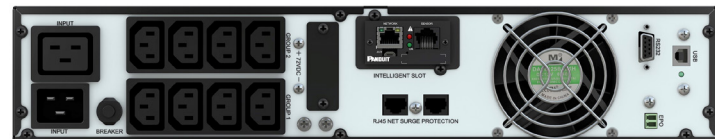| URC005	Relay card (MiniAS400) (12 V) (for 1 to 10kVA single phase UPS units)
UNCP01	Panduit® Intelligent Network Management Card (iNMC) See iNMC specs for more details
UTOWFT	Tower stabilizer brackets
URMKIT2	Rack mount rail kit for 1-3kVA & 5-20kVA UPS and EBP

U01N11V (Rear)

U01N12V (Rear)

U02N11V (Rear)

U02N12V (Rear)

U03N11V (Rear)

U03N12V (Rear)

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