

## overview

The Panduit® SmartZone™ Intelligent Rack UPS with compact, high capacity, and long life Lithium Ion battery, 1-3kVA single phase 120 V Line-Interactive unit and 230 V unit with pure Online Double Conversion system that delivers highly efficient and reliable power protection and backup power for your computer IT equipment. With excellent electrical performance, enhanced intelligent monitoring and network functions and complying with EMC and safety standards to meet the continually growing power demands of Data Center, Enterprise and Edge IT equipment.



## key features and benefits

<b>Rack/Tower convertible</b>	Support rack/tower installation with rotatable colorful LCD display
<b>Online Double Conversion with fully digital control (EMEA unit only)</b>	Provides stable and clean power with less ripple by filtering noise, automatic voltage regulation (AVR) and surge protection
<b>Wide input voltage range</b>	(110-300Vac Online models) (75-146Vac Line Interactive models), covering more voltage range, applicable for severe situation such as large power grid fluctuation
<b>High efficiency</b>	Up to 96.5% for Online models and up to 97% for Line-interactive models, reducing the energy waste and the cost of electricity
<b>Energy savings</b>	High Efficiency on Smart ECO mode for Online Double Conversion models
<b>Green design</b>	RoHS and Reach, CE/UL/ENERGY STAR® 2.0 compliant for North America units
<b>Output unity power factor</b>	Means more active power for IT equipment load
<b>Input power factor</b>	Power factor correction topology on the input side dramatically reducing the total harmonic distortion (THD)
<b>Intelligent Battery Management</b>	The most optimal curve and temperature-compensated with advanced algorithms prolonging the battery life
<b>EPO function (Emergency Power Off)</b>	Allows to quickly and easy shut down the UPS when emergency event occurs
<b>Generator compatible</b>	Wide input frequency and voltage, supports connecting to generators, ensuring the uninterruptible operation
<b>Hot-Swappable battery design</b>	Can perform the replacement of battery cartridge without powering down the UPS
<b>Cold start function</b>	Allows to boot up the UPS without mains input but with batteries
<b>Intelligent fan speed regulation</b>	Automatically adjustment of fan speed due to the ambient temperature and load percentage
<b>Programmable outlet group with Smart Load Shedding</b>	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.
<b>Segment colorful LCD</b>	Colorful LCD with four buttons and LED indicators, providing intuitive display
<b>Multiple communication interface</b>	RS232/USB/intelligent slot, realizing communication and monitoring function
<b>Comprehensive protection function</b>	Short-circuit, overload, overheat, battery overcharge and over discharge, output low voltage, fan fault alarm and RJ45 surge protection
<b>Intelligent Network Management Card (included with N Models*)</b>	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.
<b>SmartZone™ Cloud Ready (included with N Models*)</b>	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.
<b>SmartZone™ mPower Management Software</b>	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 <a href="http://www.panduit.com/smartzone-ups">www.panduit.com/smartzone-ups</a> .

\* N Model UPS has an N in the 4<sup>th</sup> digit of the part number, e.g. U01N12L

## product specifications

### • 1-3kVA 230 V Lithium Ion (Online Models)

MODEL		U01S12L/U01N12L	U02S12L/U02N12L	U03S12L/U03N12L
Output power capacity		1000 VA/1000 W	2000 VA/2000 W	3000 VA/3000 W
Max Configurable Power (Watts)		1000 VA	2000 VA	3000 VA
<b>OUTPUT</b>				
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	89.5%	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		
<b>INPUT</b>				
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		1.8 m (6 ft.)		
Number of Power Cords		Schuko CEE 7/EU1-16P and BS1363A		
<b>BATTERY</b>				
Battery type		Lithium-Ion (LiFePO4)		
Typical recharge time		3-4 hrs.		
Battery voltage		25.6 Vdc	76.8 Vdc	76.8 Vdc
Charging current (max.)		2 A		

## 1-3kVA 230 V Lithium Ion (Online Models) (continued)

Backup time	Full load	9 min.	9 min.	9 min.
	Half load	20 min.	18 min.	18 min.
Expected Battery Life (years)		8-10 yrs.		
Internal Replacement Cartridge		ULC024	ULC272	ULC372
<b>COMMUNICATION &amp; MANAGEMENT</b>				
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		
<b>ENVIRONMENTAL</b>				
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		95 BTU/hr.	142 BTU/hr.	334 BTU/hr.
Protection Class		IP20		
Noise level		<55dB at 1 m		
<b>CONFORMANCE</b>				
Safety		CB: IEC 62040-1:2017, CE-LVD: EN 62040-1:2008+A1: 2013, IEC 62133 (cell), IEC 62619 (pack)		
EMC		IEC 62040-2-2016, EN 62040-2-2018, BS62040-2-2018		
Transportation		ISTA Procedure 2A, UN 38.3		
Surge protection		ANSI C62.41 Category A (380 J)		
<b>CUSTOMER SERVICE</b>				
Warranty		5 years (UPS & Battery)		
<b>SUSTAINABLE OFFER STATUS</b>				
RoHS		Compliant		
Proposition 65 Warning		See Safety Sheet (IM053)		
<b>PHYSICAL</b>				
Maximum Height		86.5mm		
Maximum Width		440mm		
Maximum Depth		325mm	500mm	640mm
Rack Height		2 RU		
Net Weight		9.5kg	15.6kg	20.7kg
Shipping Weight		15.9kg	22.1kg	27.6kg
Shipping Height		202mm (7.95 in.)		
Shipping Width		555mm (21.8 in.)		
Shipping Depth		545mm (21.4 in.)	630mm (24.8 in.)	770mm (29.9 in.)
Color		Black		

## 1-3 kVA 120 V Lithium Ion (Line Interactive Models)

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 (UL derated)
Nominal output voltage		120 Vac (100/110/115/125 Vac selectable)		
Output voltage distortion	Linear load	<3%		
	Non linear load	<5%		
Output frequency	Line mode	Synchronize 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	Line mode	105%-110%, last warning 110%-120%, alarm for 10s and shutdown >120%, shut down immediately		
	Battery mode	105%-110%, last warning 110%-120%, alarm for 10s and shutdown >120%, shut down immediately		
Transfer time (typical)		4 - 6 ms.		
Efficiency	Line mode	96.5%	96.5%	97%
	Battery mode	87.5%	89.5%	89.5%
Output connection	Programmable	(2) NEMA 5-15R		(2) NEMA 5-20R
	Non-Programmable	(4) NEMA 5-15R		(1) NEMA L5-30R; (2) NEMA 5-20R
Bypass		Internal		
<b>INPUT</b>				
Nominal input voltage		100 - 125Vac		
Input voltage range	Full load	75 - 146Vac		
Input frequency range		50/60 Hz (auto sensing)		
Input connection		NEMA 5-15P		NEMA L5-30P
Cord length		3 m (10 ft.)		
Number of power cords		1 (fixed)		
<b>BATTERY</b>				
Battery type		Lithium-Ion (LiFePO4)		
Typical recharge time		3-4 hrs.		
Battery voltage		25.6 Vdc	48 Vdc	76.8 Vdc
Charging current (max.)		2 A		
Backup time	Full load	9 min.	7.5 min.	9 min.
	Half load	22 min.	19 min.	22 min.
Expected Battery Life (years)		8-10 yrs.		
Internal Replacement Cartridge		ULC024	ULC048	ULC372

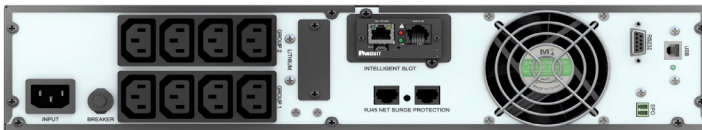
## 1-3kVA 120 V Lithium Ion (continued)

<b>COMMUNICATION &amp; MANAGEMENT</b>			
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		
<b>ENVIRONMENTAL</b>			
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%)		
Operating elevation	Up to 3000 m (derated 10%)		
Online thermal dissipation	95 BTU/hr.	142 BTU/hr.	334 BTU/hr.
Protection Class	IP20		
Noise level	<55dB at 1 m		
<b>CONFORMANCE</b>			
Safety	cTUVus: UL1778 5th Edition, CSA C22.2 NO.107.3-14, UL 1642 (cell), UL 1973 (pack)		
FCC	FCC Part 15 Subpart B Class A, ANSI C63.4-2014		
Transportation	ISTA Procedure 2A, UN 38.3		
Surge protection	IEEE/ANSI C62.41 Category A Level 3		
<b>CUSTOMER SERVICE</b>			
Warranty	5 years (UPS & Battery)		
<b>SUSTAINABLE OFFER STATUS</b>			
RoHS	Compliant		
Proposition 65 Warning	See Safety Sheet (IM053)		
<b>PHYSICAL</b>			
Maximum Height	86.5mm (3.42 in.)		
Maximum Width	440mm (17.2 in.)		
Maximum Depth	460mm (18.1 in.)	640mm (25.1 in.)	
Rack Height	2 RU		
Net Weight	14.2kg (31.2 lbs.)	17.1kg (37.6 lbs.)	31kg (68.2 lbs.)
Shipping Weight	20.4kg (44.8 lbs.)	23.1kg (50.8 lbs.)	31.6kg (69.5 lbs.)
Shipping Height	202mm (7.95 in.)		
Shipping Width	555mm (21.8 in.)		
Shipping Depth	590mm (23.2 in.)	760mm (29.9 in.)	
Color	Black		

## 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

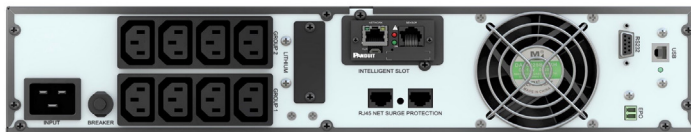
U01N12L (Rear)



U01N11L (Rear)



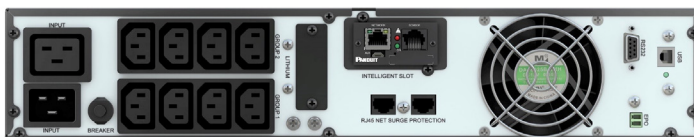
U02N12L (Rear)



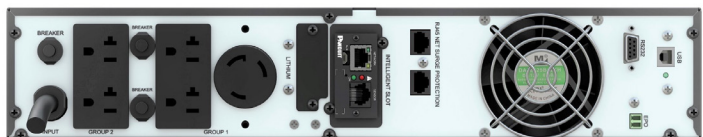
U02N11L (Rear)



U03N12L (Rear)



U03N11L (Rear)



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