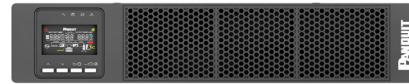## overview

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

| | |
|---|---|
| **Rack/Tower convertible** | Support rack/tower installation with rotatable colorful LCD display |
| **Online double conversion with fully digital control (EMEA unit only)** | Provides stable and clean power with less ripple by filtering noise, automatic voltage regulation (AVR) and surge protection |
| **Wide input voltage range** | (110-300Vac Online models) (75-146Vac Line Interactive models), covering more voltage range, applicable for severe situation such as large power grid fluctuation |
| **High efficiency** | Up to 96.5% for Online models and up to 97% for Line-interactive models, 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) |
| **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** | Loads connected to the programmable group will lose power firstly, saving more energy and extending the runtime for critical 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/ups. |

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

# SmartZone™ UPS 1-3kVA Lithium Ion

## 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 |
| **OUTPUT** | | | | |
| 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 | | |
| **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 | | 1.8 m (6 ft.) | | |
| Number of Power Cords | | Schuko CEE 7/EU1-16P and BS1363A | | |
| **BATTERY** | | | | |
| 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 | | |

# SmartZone™ UPS 1-3kVA Lithium Ion

## 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 |
| **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 | | 95 BTU/hr. | 142 BTU/hr. | 334 BTU/hr. |
| Protection Class | | IP20 | | |
| Noise level | | <55dB at 1 m | | |
| **CONFORMANCE** | | | | |
| 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) | | |
| **CUSTOMER SERVICE** | | | | |
| Warranty | | 5 years (UPS & Battery) | | |
| **SUSTAINABLE OFFER STATUS** | | | | |
| RoHS | | Compliant | | |
| Proposition 65 Warning | | See Safety Sheet (IM053) | | |
| **PHYSICAL** | | | | |
| 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 | | |

# SmartZone™ UPS 1-3kVA Lithium Ion

## 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 | 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 | Line mode | 105%-110%, last warning<br>110%-120%, alarm for 10s and shutdown<br>>120%, shut down immediately | | |
| | Battery mode | 105%-110%, last warning<br>110%-120%, alarm for 10s and shutdown<br>>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;<br>(2) NEMA 5-20R |
| Bypass | | Internal | | |
| **INPUT** | | | | |
| 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) | | |
| **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.) | | 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 |

# SmartZone™ UPS 1-3kVA Lithium Ion

## 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%) | | |
| 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 | | |

## CONFORMANCE

| | |
|---|---|
| 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 |

## CUSTOMER SERVICE

| | |
|---|---|
| Warranty | 5 years (UPS & Battery) |

## SUSTAINABLE OFFER STATUS

| | |
|---|---|
| RoHS | Compliant |
| Proposition 65 Warning | See Safety Sheet (IM053) |

## PHYSICAL

| | | | |
|---|---|---|---|
| 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

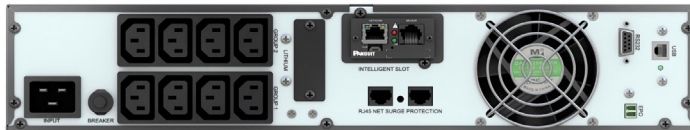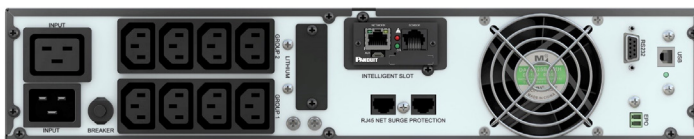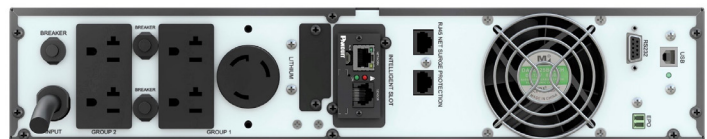| | |
|---|---|
| URC005 | Relay card (MiniAS400) (12 V) (for 1 to 10kVA single phase UPS units) |
| UNCP01 | Panduit® Intelligent Network Management Card (iNMC)<br>See iNMC specs for more details |
| UTOWFT | Tower stabilizer brackets |
| URMKIT1 | Rack mount rail kit for 1-3kVA UPS and EBP |

### U01N12L (Rear)
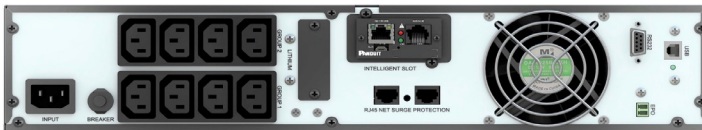
### U01N11L (Rear)

### U02N12L (Rear)

### U02N11L (Rear)

### U03N12L (Rear)

### U03N11L (Rear)

For a copy of Panduit product warranties, log on to www.panduit.com/warranty

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