UPS 5, 6, 10 kVA Lithium-Ion

specifications

The 5, 6, 10 kVA single phase Lithium-Ion UPS at 208V/230V/240V 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, paralleling capability, 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 Infrastructure.

key features and benefits

Parallel functionality:	UPS protection can grow as your load grows - Connect up to four units in parallel for higher backup power
Online Double Conversion with fully digital control:	Provides stable and clean power with less ripple by filtering noise, automatic voltage regulation, frequency regulation, and surge protection
Wide input voltage range:	176-300 VAC covering extended voltage range, applicable for severe situation such as large power grid fluctuation
High efficiency:	Up to 98%, 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)
Rack/Tower convertible:	Supports rack/tower installation with rotatable colorful touchscreen LCD panel
Expandable battery packs:	User replaceable 4 external battery packs, extending the UPS backup running time
Intelligent Battery Management:	Three-stage battery charging method matching the most optimal curve and temperature compensated with advanced algorithms to prolonging the battery life
EPO function (Emergency Power Off):	Allows to quickly and easily 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
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
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.
Touch-Screen colorful LCD:	Colorful LCD with cold start button and LED indicators, providing intuitive display
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.
DCIM Cloud Ready (included with N Models*):	Support for technology allowing to easily, securely and quickly connect to Cloud DCIM with management, monitoring, control and alerting of Power Chain, Environmental, Cooling, Security, Asset, and Connectivity Infrastructure Assets.
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. U05N11L

UPS 5, 6, 10 kVA Lithium-Ion

product specifications

5, 6, 10 kVA 230 V Lithium-Ion

MODEL	U05N12L	U06N12L	U10N12L
Capacity (VA/Watts):	5000VA/5000W	6000VA/6000W	10000VA/10000W
Input: Output Phase Configuration:	L-N-PE : L-N-PE		
Topology:	Double Conversion On-Line		
Cooling:	Fan cooled		
Dimension W x D x H, in. (mm):	17.3 x 24.4 x 3.4 (440 x 621.5 x 86.5) (Pwr Module) + 17.3 x 24.4 x 3.4 (440 x 621.5 x 86.5) (Battery)		
Rack Height Dimension:	4 RU		
Product Weight:	TBD		
Installation Type:	Rack/Tower		
INPUT CHARACTERISTICS			
Input voltage nominal, VAC:	220, 230 (Default), 240		
Input voltage range at full load, VAC:	176-300		
Input voltage range derating to 50% load, VAC:	110-176		
Input Frequency Range, Hz:	40-70		
Input Power Factor:	>0.99 (full load)		
Harmonic distortion(THDi):	< 3%		
Input Connection:	Terminal (L+N+G)		
Surge protection:	IEC61000-4-5; 600Joules		
OUTPUT CHARACTERISTICS			
Output Power, Watts:	5000	6000	10000
Output power factor:	1.0		
Output Wave Form:	Pure Sine Wave		
On Line Efficiency (typical):	94.80%		95.30%
Economy mode efficiency:	97.50%		98.00%
Output voltage selections (Phase Voltage), VAC:	220, 230 (default), 240		
Output Voltage Regulation (Static):	± 1%		
Output Voltage Regulation (Dynamic):	± 5%		
Output Voltage THD w/ full linear load:	< 2% (Full Linear load)		
Output Voltage THD w/ non-linear load:	< 4% (Full nonlinear load)		
Output Frequency:	50/60 Hz ± 10% (Line mode) 50/60(default) Hz ± 0.1 Hz(Battery mode)		
Over Load Capability (Online mode):	105%~110%: UPS transfer to bypass after 60 minutes when the utility is normal 110%~125%: UPS transfer to bypass after 10 minutes when the utility is normal 125%~150%: UPS transfer to bypass after 1 minute when the utility is normal >150%: UPS transfer to bypass after 0.2 second when the utility is normal		
Over Load Capability (Battery mode):	105%~110%: UPS after 10 minute shut down 110%~125%: UPS after 1 minute shut down 125%~150%: UPS after 10 second shut down >150%: UPS after 0.2 second shut down		
Over Load Capability (Bypass mode):	105%~130%: Only Overload alarm 130%~150%: UPS after 10 minute shut down 150%~200%: UPS after 1 minute shut down >200%: after 0.2 second shut down		
Current Crest Ratio:	3:1		
Non-Programmable Receptacles outlets:	HW Terminal (L+N+G)		
Programmable Receptacles outlets:	(2)C19 + (3)C13		
TRANSFER TIME			
AC mode <->Batt. Mode:	0 ms typical		
Inverter <-> bypass:	0 ms typical		
BYPASS			
Bypass Voltage Range:	220 Vac Max.voltage: +25% (optional +10%,+15%,+20%)		
Bypass Frequency Range:	Frequency Protection Range: ±10%		
ECO Range:	Rated Voltage: ±10%		

UPS 5, 6, 10 kVA Lithium-Ion

product specifications

BATTERY			
Battery Type:	Lithium-ion		
Nominal DC Voltage, VDC:	192		
Backup Time (100% load) (1 EBP), mins.:	20	15.5	9
Backup Time (50% load) (1 EBP), mins.:	40	32	19
Charging current (max.), Amps:	12		14
Battery Recharging Time (to 90%), hrs:	1-3		
Hot Swappable Y/N:	Yes		
Ext. Battery Connector. Y/N:	Yes		
Maximum EBP quantity:	4		

COMMUNICATION SECTION AND USER INTERFACE	
Control panel LCD(English-Language):	3.5-inch touchscreen with gravity sensing
LCD:	Yes
RS232 port:	Yes
USB/HID port:	Yes
RS485 port:	Yes (for BMS)
SNMP Slot:	Yes
Emergency Power Off (EPO):	Yes

ENVIRONMENT		
Operating Temperature:	32°F - 104°F (0°C - 40°C)	
Storage Temperature:	-13°F - 131°F (-25°C - 55°C) (without batteries)	
Operating Humidity:	0 - 95% (non-condensing)	
Storage Humidity:	0 - 95% (non-condensing)	
Operating altitude:	0 - 1000 meters Normally operate >1000 meters Derating	
Protection Class:	IP20	
Audible Noise (Audible noise at 1 meter from surface of unit):	45dB	50dB

REGULATORY COMPLIANCE	
Environment:	ROHS 2.0
Safety:	CB: IEC 62040-1:2017, CE-LVD: EN 62040-1:2008+A1:2013
EMI:	IEC62040-2-2016/EN62040-2-2018 C2, UKCA, RCM
Transportation:	ISTA Procedure 2A

OTHERS	
Generator Compatible:	Yes
Overheat:	Line Mode: Switch to Bypass; Backup Mode: Shut down UPS immediately
Low battery voltage:	Alarm and Switch off
EPO:	Shut down UPS immediately
Audible & Visual alarms:	Line Failure, Battery Low, Overload, System Fault
Leakage current:	≤3.5mA
User Manual:	English Language
Parallel Operation Capability:	Yes
Maximum parallel quantity:	4
Protocol:	Customization
Color:	Black
Logo	Panduit

ACCESSORIES	
RS232 cable:	1 piece
USB cable:	1 piece
Mounting bracket:	1 set
Tower kit:	1 set
Rail kit:	1 set
EBP connection cable:	1 set

UPS 5, 6, 10 kVA Lithium-Ion

5, 6, 10 kVA 208, 240 V Lithium-Ion

MODEL	U05N11L	U06N11L	U10N11L
Capacity (VA/Watts):	5000 VA/5000 W	6000 VA/6000 W	10000 VA/10000 W
Input: Output Phase Configuration:	L1-L2-PE : L1-L2-PE		
Topology:	Double Conversion On-Line		
Cooling:	Fan cooled		
Dimension W × D × H (mm):	17.3 x 24.4 x 3.4 (440 x 621.5 x 86.5) (Pwr Module) + 17.3 x 24.4 x 3.4 (440 x 621.5 x 86.5) (Battery)		
Rack Height Dimension, in. (mm):	4 RU		
Product Weight:	TBD		
Installation Type:	Rack/Tower		
INPUT CHARACTERISTICS			
Input voltage nominal, VAC:	208 (Default), 240		
Input voltage range at full load, VAC:	176-300		
Input voltage range derating to 50% load, VAC:	110-176		
Input Frequency Range, Hz:	40-70		
Input Power Factor:	>0.99 (full load)		
Harmonic distortion (THDi):	< 3%		
Input Connection, feet (m):	Power Cord L6-30P, 10(3)	Terminal (L+L+G)	
Surgery protection:	IEEE/ANSI C62,41 Category A,Level 3 ;600Joules		
OUTPUT CHARACTERISTICS			
Output Power, W:	5000	6000	10000
Output power factor:	1.0		
Output Wave Form:	Sine wave		
On Line Efficiency (up to):	94.80%		95.30%
Economy mode efficiency:	97.50%		98.00%
Output voltage selections (Phase Voltage), VAC:	208 (default), 240		
Output Voltage Regulation (Static):	± 1%		
Output Voltage Regulation (Dynamic):	± 5%		
Output Voltage THD w/ full linear load:	< 2% (Full Linear load)		
Output Voltage THD w/ non-linear load:	< 4% (Full nonlinear load)		
Output Frequency:	50/60 Hz ± 10% (Line mode) 50/60(default) Hz ± 0.1 Hz (Battery mode)		
Over Load Capability (Online mode):	105%~110%: UPS transfer to bypass after 60 minutes when the utility is normal 110%~125%: UPS transfer to bypass after 10 minutes when the utility is normal 125%~150%: UPS transfer to bypass after 1 minute when the utility is normal >150%: UPS transfer to bypass after 0.2 second when the utility is normal		
Over Load Capability (Battery mode):	105%~110%: UPS after 10 minute shut down 110%~125%: UPS after 1 minute shut down 125%~150%: UPS after 10 second shut down >150%: UPS after 0.2 second shut down		
Over Load Capability (Bypass mode):	105%~130%: Only Overload alarm 130%~150%: UPS after 10 minute shut down 150%~200%: UPS after 1 minute shut down >200%: after 0.2 second shut down		
Current Crest Ratio:	3:1		
Non-Programmable Receptacles outlets:	2*L6-30R	HW terminal (L+L+G)	
Programmable Receptacles outlets:	2*L6-20R	2*L6-30R	
TRANSFER TIME			
AC mode <->Batt. Mode:	0 ms typical		
Inverter <-> bypass:	0 ms typical		
BYPASS			
Bypass Voltage Range:	208 VAC Max.voltage: +25% (optional +10%,+15%,+20%)		
Bypass Frequency Range:	Frequency Protection Range: ±10%		
ECO Range:	Rated Voltage: ±10%		

UPS 5, 6, 10 kVA Lithium-Ion

BATTERY			
Battery Type:	Lithium-Ion		
Nominal DC Voltage:	192 VDC		
Backup Time (100% load), mins.:	20	15.5	9
Backup Time (50% load), mins.:	40	32	19
Charging current (max.):	12A		14A
Battery Recharing Time (to 90%):	1-3		
Hot Swappable Y/N:	Yes		
Ext. Battery Connector. Y/N:	Yes		
Maximum EBP quantity:	4		

COMMUNICATION SECTION AND USER INTERFACE	
Control panel LCD(English-Language):	3.5-inch touchscreen with gravity sensing
LCD :	Yes
RS232 port:	Yes
USB/HID port:	Yes
RS485 port:	Yes (for BMS)
SNMP Slot:	Yes
Emergency Power Off (EPO):	Yes

ENVIRONMENT		
Operating Temperature:	0 - 40 °C	
Storage Temperature:	-13 °F - 131 °F (-25 °C - 55 °C) (without batteries)	
Operating Humidity:	0 - 95% (non-condensing)	
Storage Humidity:	0 - 95% (non-condensing)	
Operating altitude:	0 - 1000m Normally operate >1000m Derating	
Protection Class:	IP20	
Audible Noise (Audible noise at 1 meter from surface of unit):	45dB	50dB

REGULATORY COMPLIANCE	
Energy saving:	Enegy Star 2.0
Enviroment:	ROHS 2.0
Safety:	UL1778 5th Edition CSA C22.2 NO.107.3-14
EMI:	FCC Part 15, Subpart B, Class A ANSI C63.4-2014
Transportation:	ISTA Procedure 2A

OTHERS	
Generator Compatible:	Yes
Overheat:	Line Mode: Switch to Bypass; Backup Mode: Shut down UPS immediately
Low battery voltage:	Alarm and Switch off
EPO:	Shut down UPS immediately
Audible & Visual alarms:	Line Failure, Battery Low, Overload, System Fault
Leakage current:	≤3.5mA
User Manual:	English Language
Parallel Operation Capability:	Yes
Maximum parallel quantity:	4
Protocol:	Customization
Color:	Black
Logo:	Panduit

ACCESSORIES	
RS232 cable:	1 piece
USB cable:	1 piece
Mounting bracket:	1 set
Tower kit:	1 set
Rail kit:	1 set
EBP connection cable:	1 set

EBP specifications

MODEL	UVPL12H
Cell model:	26650 cylinder
Cell material:	LiFePO4
Nominal voltage, V:	3.2
Nominal capacity:	3Ah
Expected battery life, yrs:	8-10
BATTERY PACK	
Nominal voltage, VDC:	192
Nominal capacity:	12Ah
Max. charge current, Amps:	12
Max. discharge power, W:	11000
Communication port:	RS485
Dimension (W x D x H), in. (mm):	16.9 x 26.7 x 3.3 (430 x 680 x 85) 2 U
Weight, lbs. (kg):	72.3 (32.8)
Certificate:	IEC62619, UL1973, UN38.3, IEC62133, UL1642, CE, UKCA, RCM
Daisy chain capacity:	4

UPS accessories

Part Number	Description
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:	UPS rack mount kit for the 1-3 kVA and 5-20 kVA UPS
UTFMRDU:	Step-Down Transformer Distribution Unit is a voltage converter that provides 120 VAC output power from 208 VAC input.
EXTWLIUPS2:	5-10 kVA lithium-ion UPS 1 year extended warranty
EXTWLIBP2:	5-10 kVA lithium-ion battery pack 1 year extended warranty

U05N11L
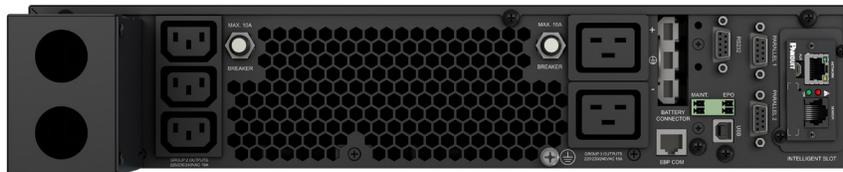
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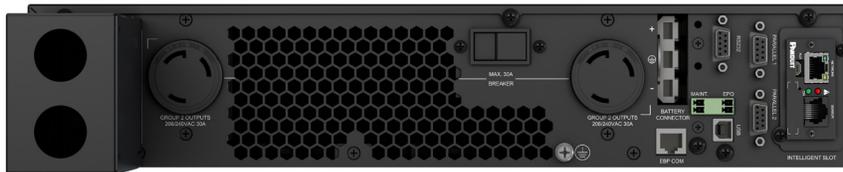
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