



The power behind competitiveness

Delta UPS Catalogue

Uninterruptible Power Supply



www.onesmartfactory.com



About Delta

Corporate Mission

To provide innovative, clean, and energy-efficient solutions for a better tomorrow.

Delta was founded in 1971. Delta offers energy efficient power products, switching power supplies with efficiency over 90%, telecom power with up to 98%, and PV inverters with up to 98.8% efficiency. We have also developed the world's first server power supply certified as 80 Plus Titanium. We regularly invest over 8% of our annual sales revenues in R&D and have worldwide R&D facilities in China, Europe, India, Japan, Singapore, and the U.S.

Delta is a frequent recipient of international awards and related recognition for innovation, design, energy management and corporate social responsibility. Since 2011, Delta has been selected each year for the prestigious Dow Jones Sustainability™ World Index (DJSI World Index). In 2020, Delta was also recognized by CDP with two "A" leadership level ratings for its substantial contribution to climate change and water security issues.

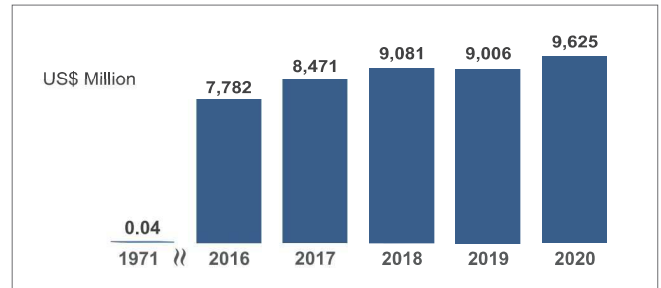
Delta continues to deliver strong and stable financial performance, achieving a compound annual growth rate of around 30.0% since 1971.



Bruce Cheng
Founder and
Honorary Chairman



Yancey Hai
Chairman

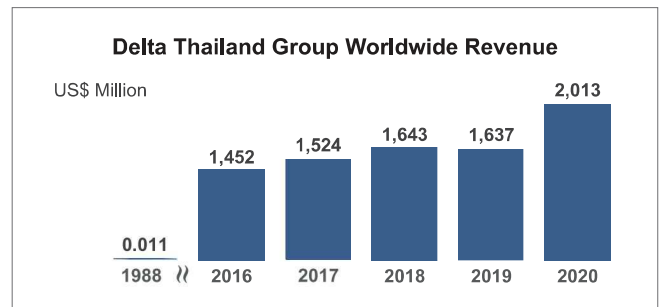


Delta Thailand Overview

- Founded in 1988
- Thailand's largest listed electronics manufacturer
- Business management center for Southeast Asia, India and Australia/ New Zealand markets
- Product development management center for Bangkok (Thailand), Soest/ Teningen (Germany), UK, USA, India, Singapore and Bucharest (Romania).
- Manufacturing management center to synergize advanced technologies and highly efficient production across manufacturing plants in Thailand, India, Slovakia and Myanmar.



Chang Tsai-hsing (Jackie)
President



Global Operations

Delta Group has 176 sales offices, 38 plant sites, and 75 R&D centers with over 9,000 R&D engineers throughout the world.



	Asia-Pacific	Americas	EMEA	Total
Sales Offices	107	24	45	176
Plant Sites	31	4	3	38
R&D Centers	52	9	14	75

Business Categories



Power Electronics

- Components
- Embedded Power
- Fans & Thermal Management
- Automotive Electronics



Automation

- Merchant & Mobile Power
Innergie

- Industrial Automation
- Building Automation



Infrastructure

- ICT Infrastructure
- Energy Infrastructure & Industrial Solutions
vivitek

Green Solutions



Delta provides integrated energy-saving solutions to build a better world for future generations.

Industrial Automation and Smart Manufacturing

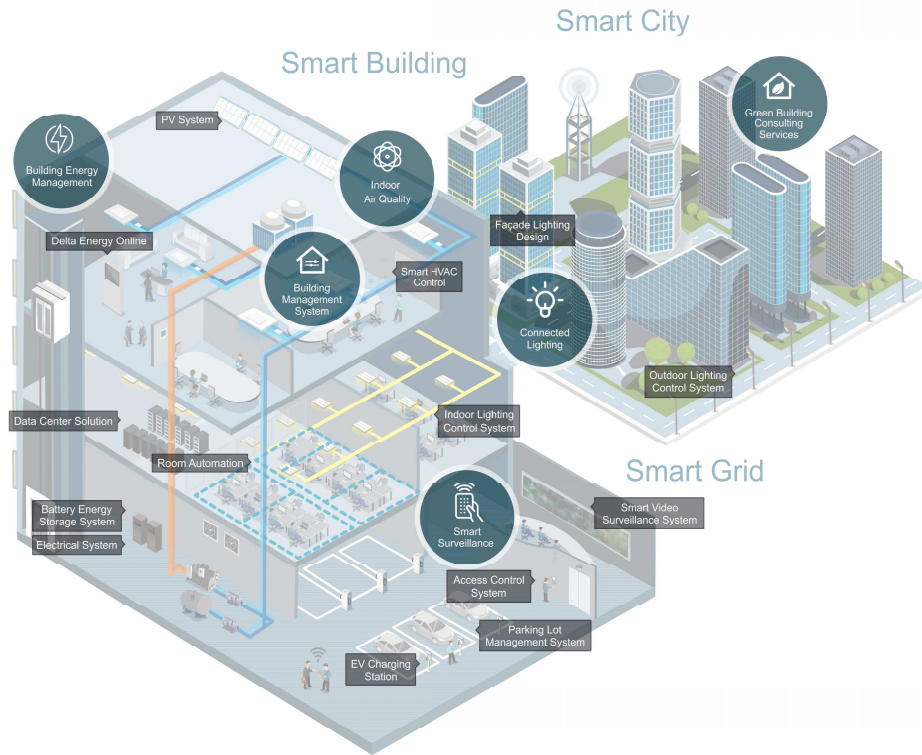
Industrial Automation Solution

Data Analytics & Optimization	IIoT Cloud-based Platform		Big Data Analysis		Artificial Intelligence (Edge/Cloud)		Modeling & Simulation				
Management	DIAMMP Manufacturing Management Platform Industrial PC		DIAMES Manufacturing Execution System DIAView Supervisory Control and Data Acquisition System (SCADA)		DIASPC Statistical Process Control DIALink Equipment IoT Platform		DIAPMS Preventative Maintenance System DIABCS Block Control System				
Networking	IIoT Industrial Cloud Router			Ethernet Solution			Industrial Fieldbus Solution				
Integration Software - DIAStudio											
Control & Sensing	PLC		Motion Control			HMI		Robot Controller		Machine Vision System	
	PLC-Based Motion Controller		CAD/CAM Computer-Aided Design/Manufacturing			CNC Controller		PC-Based Motion Controller		Motion Control Card	
Drives Motion Equipment	AC Motor Drive		Servo System (AC Servo Drive & Motor)			Planetary Gearbox		Servo Press		Industrial Robot	
	AC Motor Drive		Servo System (AC Servo Drive & Motor)			Linear Stage		Industrial Power Supply		Robot Workstation	
										Pressure Sensor Smart Sensor Encoder	
										Gas Flow Meter Power Meter Temperature Controller	
										Pick & Place Soldering Inspection Screw Driving	

Building Automation

IoT-based Smart Building Solution

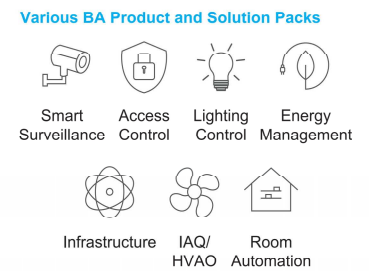
Delta's building solutions provide the best energy efficiency for a smart and sustainable building.



Our Products



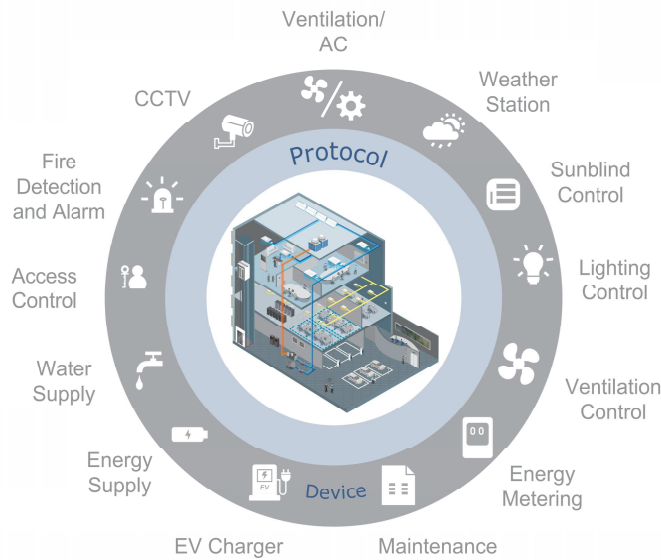
Our Offerings



Our Practices

System Integration Services

HVAC



Surveillance

Lighting Control

Infrastructure

Room Control

Data Center



Display and Monitoring

Delta's visual display applications include projection and video wall solutions. Our projection solutions fulfill a wide range of professional applications, such as multimedia interaction, large-scale auto blending projection and 3D projection mapping. For control rooms and public information display systems, Delta offers innovative laser-light source DLP slim cubes video wall and LED display solutions integrated with DVCS (Distributive Vision Control Systems) for large area video walls.

High Performance Projector

Delta's high performance projectors include the world's first 8K projector. Our projectors can customize brightness with optimal lamp/ ballast selection. The projectors come with multiple optional lenses to meet versatile installation flexibility and featured with edge blending and warping capability. Delta also offers tailored colorimetry/contrast to meet home cinema or E-cinema requirement, and specialty design to meet simulator partners' requirements.

Multimedia Projector

As a leading professional design and manufacturing team, we offer total system solution service in commercial and multimedia projection display world.

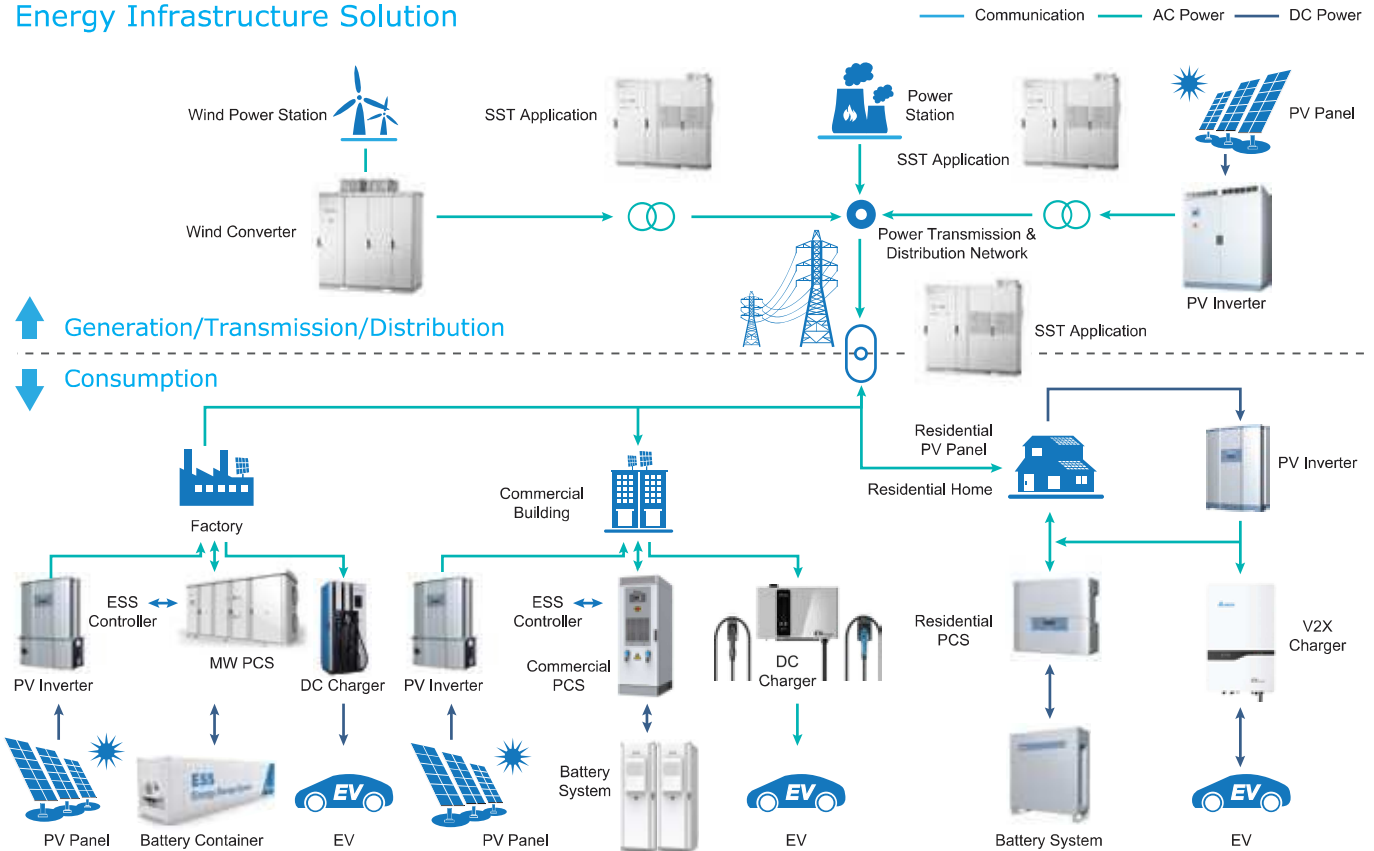
- Offer total system solution service in commercial and multimedia projection display world
- Projector designs to fulfill different kind of needs

DLP, LED and LCD Video Wall

- DLP; an extensive product portfolio with over 40 "off-the-shelf" products
- LCD; designed to deliver even the largest images with stunning clarity with its super-slim bezel
- LED; latest indoor LED products are high resolution LED display

Renewable Energy

Energy Infrastructure Solution







EV Charging

EV Charging Infrastructure Solution



- Scalable and customizable solution
- Optimize CapEX and OPEX to maximize charging efficiency and profitability
- Optimize energy efficiency with smart charging and energy allocation
- Reducing peak load impact on grid

Management System	Energy Storage	Solar Inverter	EV Charger
<ul style="list-style-type: none"> • Manage multiple energy sources • Optimize energy consumption • Avoid overloading 	<ul style="list-style-type: none"> • Peak shaving & load shift • Backup power • Bi-directional; demand-response enabled 	<ul style="list-style-type: none"> • Provide clean energy • Integrate with energy storage & management system 	<ul style="list-style-type: none"> • Supply electricity to EVs • Backup power for buildings  <p>Specification</p> <ul style="list-style-type: none"> • AC Charger (7.4/ 11/ 22kW) • DC Charger (25/ 50/ 150kW)

Delta UPS - Amplon Family



Applicable Sectors



School



Infrastructure



SME



POS



Banking



Retail

MX Series, Line-interactive 1.1/2/3 kVA

The Amplon MX line-interactive UPS provides pure sine-wave quality compatibility in versatile application in order to protect devices and prevent small-and-medium businesses from power failure and voltage variations in small footprint. The Amplon MX series features enhanced output power factor 0.9, AVR Efficiency up to 96.5%, resulting in a greater power supply for critical loads at significantly less operating cost.

Features:

- Microprocessor-based line interactive design for fast response to power disturbances
- Programmable load bank disconnects non-critical loads when a blackout occurs and reserves more battery power for critical loads
- Automatic voltage regulator (AVR) delivers stable output voltage during brownouts or over-voltages
- Wide input voltage range allows the UPS to work in harsh electrical environments
- Hot-swappable battery design to protect equipment during battery replacement
- Supports both rack and tower installation
- Excellent management through a user-friendly graphical and easy-shift LCD display to suit different installation format
- Supports multiple communication interfaces, including USB port, RS-232, Mini Slot, Surge Protection, REPO for enhanced monitoring and manageability
- Output power factor is up to 0.9 to provide more real power to critical loads
- High efficiency normal mode reach at 98% and 98.5% for 3kVA
- Wide input range and protection against over voltage prolongs battery life



Technical Specification

Model		MX-1.1K	MX-2K	MX-3K
Power Rating		1100VA / 990W	2000VA / 1800W	3000VA / 2700W
Input	Voltage Range	200V: 150-234V / 208V: 156-243V / 220V: 162-268V 230V: 170-280V / 240V: 177-290V		
	Nominal Frequency	50/60 Hz (Auto-Detection)		
	Connection	IEC C14	IEC C20	
	Phase	Single phase with ground		
Output	Voltage	200 / 208 / 220 / 230 / 240 Vac		
	Voltage Regulation	±1.5% (Batt. Mode)		
	Frequency Range (Batt. Mode)	50 Hz or 60 Hz ± 1 Hz		
	Connection	IEC C13 (4+4)		IEC C13 (4+4) IEC C19 (1)
	Overload	103% ~ 120%: 5 minutes (1 minute @ Battery mode), 120% ~ 150%: 10 seconds, >150%: UPS shutdown immediately		
	Current Crest Ratio	3:1		
	Harmonic Distortion	Linear load (full load) ≤2%, Non-linear load (full load) ≤5%		
	Waveform (Batt. Mode)	Pure Sinewave		
Battery	Battery Type	12V/9Ah Sealed lead-acid battery		
	Numbers	2	4	6
	Recharge Time	4 hours recover to 90% capacity		
Interface	Standard	RS-232 Port x 1, USB Port x 1, MINI Slot x 1, Surge Protection, REPO		
Efficiency	Normal Mode	98%		98.5%
	AVR Mode	96.5%	96.5%	
Environment	Operating Temperature	0 ~ 40°C		
	Relative Humidity	20 ~ 90 % RH (non-condensing)		
	Noise Level	< 45 dBA	< 45 dBA @ Normal mode, < 55 dBA @ Battery mode	
Physical	Dimensions (W x D x H)	438 x 410 x 88 mm	438 x 510 x 88 mm	438 x 630 x 88 mm
	Net Weight (kg)	14.1	21.3	32.1
Price	Bath(Ext. Vat)	12,000.00	15,000.00	22,000.00

All specifications are subject to change without prior notice.



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IECQ Certificate of
Hazardous Substance
Process Management



Delta UPS - Amplon Family

N Series, Single Phase 1/2/3 kVA



Applicable Sectors



Server



Network



POS



Banking

The Amplon N series is a true online double-conversion UPS that can provide your critical equipment with reliable, stable sine wave power. It features significant advantages, including an output power factor of 0.9 and up to 93% AC-AC efficiency for greater energy savings. The Amplon N series provides a safe power supply guaranteed for mission critical applications such as work stations, POS, ATMs, servers, and more.

Features:

- True online double-conversion topology and zero transfer time to battery ensure high reliability
- Advanced DSP (Digital Signal Processor) controller for fast computation capability and a simplified control circuit for enhanced stability
- Wide input voltage range allows the UPS to work in harsh electrical environments
- Generator compatibility ensures continuous and reliable power
- High input power factor (> 0.99) and low input harmonic distortion (iTHD $< 3\%$) save upstream investment
- Output power factor up to 0.9 presents a stronger load capacity
- AC-AC efficiency up to 93% and high efficiency of 91% at 50% load results in marked energy cost savings
- Compact design saves more space for critical equipment
- Excellent local communications through LCD display
- Intelligent battery management maximizes battery performance and sustains battery life
- Mini slot and USB port enhance monitoring and manageability



Technical Specification

Model		N-1K	N-2K	N-3K
Power Rating		1kVA/0.9kW	2kVA/1.8kW	3kVA/2.7kW
Input	Nominal Voltage	220/230/240 Vac		
	Voltage range	175 ~ 280 Vac (full load); 80 ~ 175 Vac (50 ~ 100% load)		
	Frequency	40 ~ 70 Hz		
	Power Factor	> 0.99 (full load)		
	Current Harmonic Distortion	< 3%		
Output	Power Factor	0.9		
	Voltage	220/230/240 Vac		
	Frequency	50/60 Hz ± 0.05 Hz		
	Voltage Harmonic Distortion	< 3% (linear load)		
	Overload Capability	< 105%: continuous; 105 ~ 125%: 1 minute; 125 ~ 150%: 30 seconds		
	Receptacle	IEC C13 x 4	IEC C13 x 6, C19 x 1	
Efficiency	AC-AC	91%	Up to 93%	
Battery	Battery Voltage	24 Vdc	48 Vdc	72 Vdc
	Typical Backup Time	4.5 minutes (full load); 13 minutes (half load)		
	Recharge Time	3 hours to 90%		
	Charge Current	1.5A		
Audible Noise		< 43 dB	< 48 dB	
Display		LCD panel		
Communication Interfaces		MINI Slot x 1, USB Port x 1		
Conformance	Safety	CE, RCM, KC		
Physical	Dimensions (Wx Dx H)	145 x 320 x 225 mm	190 x 390 x 325 mm	
	Weight	9 kg	18.6 kg	24.4 kg
Environment	Operating Temperature	0 ~ 40° C		
	Relative Humidity	0 ~ 95% (no condensing)		
Price	Bath(Ext. Vat)	17,500.00	29,000.00	38,000.00

The above specifications are for SEA & EMEA models.

All specifications are subject to change without prior notice.



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IECQ Certificate of Hazardous Substance Process Management



Delta UPS - Amplon Family

N Series, Single Phase 6/10 kVA



Applicable Sectors



Server



Network



Security



Telecom



POS



Banking

The Amplon N series 6-10kVA UPS is a single-phase on-line UPS with pioneering technology that provides output power factor up to unity and AC-AC efficiency to a maximum 95%. Its remarkably compact dimensions reserve more room for critical equipment such as workstations, POSs, ATMs, office appliances, small server rooms, and production equipment. The Amplon N series superior features include a N+X parallel redundancy function and variable fan speed control to guarantee high system availability and best Total Cost of Ownership (TCO).

Features:

- The smallest dimensions in its class saves significant space for more critical equipment
- A pioneer in unity power factor (kVA=kW) to maximize power availability
- The highest AC-AC efficiency up to 95% and efficiency of 98% in ECO mode for exceptional energy cost savings
- Automatic speed regulation function with multi-stage fan speed control to maximize system efficiency, significantly reduce audible noise, and prolong the service life of the fans
- True online double-conversion topology and zero transfer time to battery to ensure high reliability
- Parallel configuration for expansion and N+X redundancy up to 4 units
- Advanced DSP (Digital Signal Processor) controller for fast computation capabilities and a simplified control circuit for enhanced stability
- Generator compatibility to ensure continuous and reliable power
- Excellent local communications through user-friendly LCD display and LED indicators
- Intelligent battery management to maximize battery performance and extend battery life
- Various types of communication interfaces for monitoring and manageability



Technical Specification

Model		N-6K	N-10K
Power Rating		6kVA/6kW	10kVA/10kW
Input	Nominal Voltage	200/208/220/230/240 Vac	
	Voltage Range	200/208 (de-rating to 90%) : 100 Vac ~ 280 Vac* 220/230/240 : 100 Vac ~ 280 Vac**	
	Frequency	40 Hz ~ 70 Hz	
	Power Factor	> 0.99 (full load)	
	Current Harmonic Distortion	< 3%	
Output	Power Factor	1	
	Nominal Voltage	200/208/220/230/240 Vac	
	Frequency	50/60 Hz ±0.05 Hz	
	Voltage Harmonic Distortion	< 2% (linear load)	
	Overload capability	< 105%: continuous; 105 ~ 125%: 2 minutes; 125 ~ 150%: 30 seconds	
Efficiency	AC-AC	Up to 95%	
	ECO mode	Up to 98%	
Battery	Battery Voltage	192 ~ 264 Vdc adjustable	
	Charge current	1.5 ~ 8A selectable	
Audible Noise		< 50 dB	
Display		LED indicators and LCD display	
Communication Interfaces		REPO x 1, RS-232 Port x1, USB Port x1, Parallel Port x 2, Smart Slot x 1	
Physical	Dimensions (W x D x H)	190 x 390 x 325 mm	
	Weight	10.1 kg	12.7 kg
Environment	Operating Altitude	1000 meters (without de-rating)	
	Operating Temperature	0 ~ 40°C (at 100% load) 45 ~ 55°C (de-rating to 80%)	
	Relative Humidity	5 ~ 95% (non-condensing)	
Price	Bath(Ext. Vat)	56,000.00	94,000.00

Note:

* Linear de-rating between 40 ~ 90% load at 100 ~ 175Vac.

**Linear de-rating between 40 ~ 100% load at 100 ~ 194Vac.

The above specifications are for SEA models.

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Process Management



Delta UPS - Amplon Family

RT Series, Single Phase

1/2/3 kVA



Applicable Sectors



Server



Telecom



Industrial



Network



VoIP



Storage



Medical

The Amplon RT 1-3kVA series is an online double-conversion UPS providing consistent sine-wave power to your critical equipment. It supports personal computers, networks, servers, VoIP and telecommunications. RT 1-3kVA series features an output power factor of 0.9 and best-in-class AC-AC efficiency up to 94% resulting in greater energy savings. Optional external battery pack can be connected for longer backup time to keep your applications safe and running smoothly at all times.

Features:

- True online double-conversion topology and zero transfer time to battery ensure high reliability
- Watch-dog design of DSP (Digital Signal Processor) increases reliability
- Cold-start capability provides temporary battery power when the utility power is out
- Fan failure detection alerts users to failed fans
- Hot swappable batteries ensure continuous operation even when batteries are being replaced
- Optional external battery pack for easy scaling of longer backup time
- High output power factor 0.9 provides more real power to critical loads
- High input power factor ($pf > 0.99$) and low harmonic distortion ($iTHD < 5\%$) save upstream investment
- Up to 94% AC-AC efficiency and 97% efficiency in ECO mode result in marked energy cost savings
- Wide input voltage range reduces the chance of using the battery and extends battery life
- Intelligent battery management sustains battery life and performance
- Fan speed control by load level maximizes efficiency and reduces audible noise
- Load segment control allows less-critical loads to be disconnected during blackouts and saves battery runtime for important loads
- Convertible rack and tower configuration in 2U size cabinet
- Excellent local communications through rotatable LCD display
- Intelligent management software connectivity via RS232 or USB port



Technical Specification

Model		RT-1K	RT-2K	RT-3K
Power Rating		1kVA/0.9kW	2kVA/1.8kW	3kVA/2.7kW
Input	Nominal Voltage	200*/208*/220/230/240 Vac		
	Voltage range	175 ~ 280 Vac (full load); 120 ~ 175 Vac (70 ~ 100% load)		
	Frequency	40 ~ 70 Hz		
	Power Factor	> 0.99 (full load)		
	Current Harmonic Distortion	< 5%		
Output	Power Factor	0.9		
	Voltage	200*/208*/220/230/240 Vac		
	Voltage Regulation	± 1% (linear load)		
	Frequency	50/60 Hz ± 0.05 Hz		
	Voltage Harmonic Distortion	< 2% (linear load)		
	Overload Capability	< 105%: continuous; 105 ~ 125%: 1 minute; 125 ~ 150%: 15 seconds		
	Receptacle	IEC C13 x 6	IEC C13 x 6 IEC C19 x 1	IEC C13 x 6 IEC C19 x 1
Efficiency	Online Mode	90%	Up to 94%	
	ECO Mode	96%	Up to 97%	
Battery	Battery Voltage	24 Vdc	48 Vdc	72 Vdc
	Typical Backup Time**	6.5 minutes	7.5 minutes	
	Charge Current	1.5A	2A	2A
	Recharge Time	3 hours to 90%		
Audible Noise		< 40 dB	< 43 dB	< 46 dB
Display		LCD display and LED indicators		
Communication Interfaces		SMART Slot x 1, RS-232 Port x 1, USB Port x 1, REPO x 1		
Comformance		EN 62040-1, CE, TISI, RCM, EAC		
Dimensions (W x D x H)	UPS	440 x 335 x 89 mm	440 x 432 x 89 mm	440 x 610 x 89 mm
	External Battery Pack	440 x 335 x 89 mm	440 x 432 x 89 mm	440 x 610 x 89 mm
Weight	UPS	12 kg	18 kg	28 kg
	External Battery Pack	15 kg	27 kg	44 kg
Environment	Operating Temperature	0 ~ 50°C***		
	Relative Humidity	5 ~ 95% (non-condensing)		
Price	Bath(Ext. Vat)	20,000.00	32,500.00	39,000.00

* When the UPS is de-rated to 90% of its capacity.

** When the total load reaches 75%.

*** 40 ~ 50°C with 80% de-rating

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Delta UPS - Amplon Family



Applicable Sectors



Server



Network



Banking



Telecom



Data Center



Industrial

RT Series 5/6/8/10 kVA, Single Phase 15/20 kVA, Three Phase

The Amplon RT Series 5-20kVA is an online double-conversion UPS that provides best-in-class designs in compact 2U size, high power density, system efficiency, and versatile configurations to fulfill customers' requirements. RT Series 5-20kVA UPS is the first in the market that offers standard Li-ion external battery cabinets, which deliver better power density and sustainability. Along with the parallel capacity of up to four units, the new series is the ideal small power UPS for mission-critical applications, such as servers, data centers, telecommunications, and manufacturing.

Features:

- True online double-conversion topology and zero transfer time to battery provides 24/7 full-time protection
- Unity output power factor guarantees no de-rating with loads and provides permanent 100% kW
- Best-in-class AC-AC efficiency of up to 96.5% and 99% in ECO mode lowers energy costs
- Automatic fan speed control maximizes system efficiency and significantly reduces audible noise and prolongs battery life
- Fan failure detection sends early warnings to facilitate predictive maintenance of UPS
- Programmable load bank disconnects non-critical loads when a blackout occurs and reserves more battery power for critical loads
- Up to four units parallel capacity allows redundancy and load expansion
- Hot swappable batteries ensure continuous operation even when batteries are being replaced
- VRLA and Li-ion External Battery Cabinet (EBC) are available for scalable runtime
- The Maintenance Bypass Breaker (MBB) is optional for easy UPS replacement without powering down critical systems
- The rRPP (Rack Remote Power Panel), which can be integrated with standard server racks, simplifies power output distribution and power monitoring
- Common battery configuration is supported in UPS parallel mode to save installation space and additional battery costs



Technical Specification

Model		RT-5K	RT-6K	RT-8K	RT-10K	RT-15K3P	RT-20K3P
Power Rating		5kVA/5kW	6kVA/6kW	8kVA/8kW	10kVA/10kW	15kVA/15kW	20kVA/20kW
Input	Voltage Range	100 ~ 280V (Single phase, 2-wire + G) 100 ~ 175V with linear de-rating 50 ~ 100%				138 ~ 485V (Three phase, 4-wire + G) 138 ~ 305V with linear de-rating 40 ~ 100%	
	Frequency	40 ~ 70 Hz					
	Power Factor	> 0.99 (full load)					
	iTHD	< 3%					
	Input connection	Input terminal x 1				Input terminal x 1, Bypass Input terminal x 1	
Output	Power Factor	Unity					
	Voltage	200, 208, 220, 230, 240 Vac (Single phase)				380/400/415 Vac (Three phase), or 220/230/240 Vac (Single phase)	
	Frequency	50/60Hz ±0.05Hz					
	Voltage Harmonic Distortion	≤ 2% (linear load)					
	Overload Capability	≤ 105%: continuous; 106 ~ 125%, 5 min.; 126 ~ 150%, 1 min.; > 150%: 500ms				≤ 105%: continuous; 106 ~ 125%: 2 min.; 126 ~ 150%: 30 sec; > 150%: 200ms	
Receptacle	Standard Runtime Model	C13x6, C19x2, Terminal x 1 Load bank: C19x1		C13x6, C19x4, Terminal x 1 Load bank: C19x1			
	Extended Runtime Model	Terminal x 1 Load bank: Terminal x 1				Terminal x 1	
Efficiency	AC-AC	Up to 95.5%				Up to 96.5%	
	ECO Mode	Up to 99%					
Battery Voltage	Standard Runtime Model	192 Vdc	192 Vdc	240 Vdc	240 Vdc	±144 Vdc*, ±192 ~ 264 Vdc	
	Extended Runtime Model	144 Vdc*, 192 ~ 264 Vdc					
Charger Current	Standard Runtime Model	1A (default)		1.5A (default)		Up to 8A	
	Extended Runtime Model	Up to 8A					
Typical Backup Time (VRLA bat.)	Standard Runtime Model	75% load	7.5 min.	5.5 min.	9 min.	6 min.	Depending on different configurations required by customers
		Full load	5 min.	3 min.	5 min.	3.5 min.	
	Extended Runtime Model	Depending on different configurations required by customers					
Audible Noise		48 dB		50 dB		54 dB	
Display		Graphical and multi-lingual LCD					
Communication Interfaces		MINI Slot x 1, Parallel Port** x 2, USB Port x 1, RS232 Port*** x 1, RS485 Port x 1, REPO/ROO Port x 1, Dry Contact x 4					
Dimensions (W x D x H)	Standard Runtime Model	440 x 665 x 176 mm		440 x 750 x 218 mm		440 x 730 x 88.2 mm	
	Extended Runtime Model	440 x 430 x 88.2 mm		440 x 565 x 88.2 mm			
Weight	Standard Runtime Model	54 kg	54 kg	85.5 kg	85.5 kg	22 kg	22.5 kg
	Extended Runtime Model	10.9 kg	10.9 kg	15.2 kg	15.2 kg		
Environment	Operating Temperature	0 ~ 55° C****					
	Relative Humidity	5 ~ 95% (non-condensing)					
Price	Bath(Ext. Vat)	100,000.00	110,000.00	120,000.00	180,000.00	N/A	N/A
(Extended runtime)	Bath(Ext. Vat) (Exclude Batt.)	60,000.00	75,000.00	100,000.00	120,000.00	150,000.00	165,000.00

* De-rating to 70% load

** Only applicable to RT 5-10kVA Extended Runtime Model and RT 15/20kVA

*** Not applicable to RT 20kVA

**** When the operating temperature is at 40 ~ 55° C, the UPS will be de-rated to 75% of its capacity

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Delta UPS – Ultron Family



HPH Series, Three Phase 20 - 120 kVA

The Ultron HPH is a true online double-conversion UPS offering the best-in-class combination of maximum available power, unbeatable energy efficiency and superior power performance for small data centers and other mission critical applications requiring highly reliable power protection. With fully rated power (kVA=kW); the Ultron HPH provides maximum available power without de-rating the UPS. Thanks to three level inverter and Delta's innovative three phase PFC topology, it features low iTHD <3%, up to 96 % AC-AC efficiency and 99% efficiency in ECO mode resulting in significant TCO (Total Cost of Ownership) savings. Facilitating increased availability through special watch-dog design, the Ultron HPH is an ideal solution for protecting your mission critical operations.

Applicable Sectors



Data Center



Telecom



Industrial



Network



Security



Lab



Medical



Metro



Banking

Features:

- Fully rated power (kVA=kW) for maximum power availability
- Leading AC-AC efficiency up to 96% saves energy costs
- Low harmonic pollution (iTHD<3%) and high input power factor (>0.99) reduce upstream investment costs
- Wide input voltage range allows the UPS to operate in harsh electrical environments and extends battery life
- DSP based technology enables reduction in the number of electronic components to lower failure rate
- Redundant auxiliary power and fan design* enhance system reliability
- A wide choice of configurations, such as N+X redundancy and hot stand-by
- Adjustable charging current and charging voltage meet different battery configuration requirements
- Flexible battery configuration optimizes battery investment
- Front-door battery replacement with hot-swappable battery tray design supports easy and quick replacement without turning the unit off (HPH-B / BN)
- Swappable interior architecture enables quick and easy maintenance*
- Multi-connectivity interface supports remote UPS monitoring and management

* Applied for 60-120kVA models



Technical Specification

Model		HPH-20K HPH-20K-BN/B	HPH-30K HPH-30K-BN/B	HPH-40K HPH-40K-BN/B	HPH-60K	HPH-80K	HPH-100K	HPH-120K
Power Rating		20kVA/kW	30kVA/kW	40kVA/kW	60kVA/kW	80kVA/kW	100kVA/kW	120kVA/kW
Input	Nominal Voltage	380/220 Vac; 400/230 Vac; 415/240 Vac (3 phase, 4-wire + G)						
	Voltage Range	300~477 Vac (full load); 228~300 Vac (70%~100% load)			332~477 Vac (full load); 228~332 Vac (63%~100% load)			
	Frequency	40 ~ 70 Hz						
	Power Factor	> 0.99 (full load)						
	Current Harmonic Distortion	< 3%						
Output	Voltage	380/220 Vac; 400/230 Vac; 415/240 Vac (3 phase, 4-wire + G)						
	Voltage Regulation	± 1 %						
	Voltage Harmonic Distortion	< 1.5% (linear load)			< 2% (linear load)			
	Overload Capability	≤ 105%: continuous; 106% ~ ≤125%: 10 minutes; 126% ~ ≤150%: 1 minute; >150%: 1 second						
	Output Power Factor	1						
	Frequency	50/60 Hz ± 0.05 Hz						
Battery	Battery Voltage	240 Vdc						
	Type	Support SMF/VRLA/Tubular/Ni-Cd						
	Quantity	32-50 pcs			32-46 pcs***			
	Charge Current (Max.)	5A	9A	9A	10A	15A	20A	20A
	Built-in							
	Additional charger board (optional)				20A	20A	40A	40A
	Typical Backup Time **	15 min	10 min	9.5 min				
Communication Interfaces		SMART Slot x 1, MINI Slot x 1, Parallel Port x 2, RS232 Port x 1, REPO Port x 1, Charger Detection Port x 1, Input Dry Contact x 2, Output Dry Contact x 6, USB Port x 1*						
Conformance	Safety	CE, RCM						
Other Features	Parallel Redundancy	Up to 4 units						
	Emergency Power Off	Local and remote						
	Maintenance Bypass Switch	Yes						
Efficiency	AC-AC	Up to 96%			> 96% (HPH 40-120K peak efficiency is tested by TÜV)			
	ECO Mode	Up to 99%						
Environment	Operating Temperature	0 ~ 40 °C						
	Relative Humidity	5 ~ 95 % (non-condensing)						
	Audible Noise	< 55 dB	< 60 dB	< 65 dB				
	IP Protection	IP20						
Physical	Dimensions (W x D x H)	380 x 800 x 800 mm			520 x 800 x 1175 mm	520 x 800 x 1760 mm		
	Weight	66.5 kg	86.06 kg	86.5 kg	186.5 kg	191 kg	312 kg	312 kg
Physical (BN / B)	Dimensions (W x D x H)	490 x 830 x 1400 mm						
	Weight (with batt.)	351 kg	371 kg	371 kg				
	Weight (without batt.)	128 kg	148 kg	148 kg				
Price	Bath(Ext. Vat)				Ask for price			

HPH-B: UPS integrated battery model has batteries inside
 HPH-BN: UPS integrated battery model has no batteries inside

* Applied for models HPH-60/80/100/120K
 ** At 70% load with internal battery strings
 *** UPS needs de-rating for battery quantity 32-36 pcs. Please contact authorized Delta personnel

All specifications are subject to change without prior notice.



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TÜVRheinland®
Precisely Right.

Delta Ultron HPH 40~120kVA Efficiency is tested by TÜV



Delta UPS – Ultron Family



HPH Series, Three Phase 20 - 60 kVA, 208/120V

The Ultron HPH is a true online double-conversion UPS offering the best-in-class combination of maximum available power, unbeatable energy efficiency and superior power performance for small data centers and other mission critical applications. With fully rated power (kVA=kW), the Ultron HPH provides maximum available power without de-rating the UPS. Thanks to the three level IGBT topology for both PFC (power factor correction) and inverter, the Ultron HPH features up to 94% AC-AC efficiency. Delta's advanced digital PFC control also contributes low iTHD < 3% and high input power factor > 0.9 resulting in significant TCO (Total Cost of Ownership) savings. Facilitating increased availability and power performance, the Ultron HPH is an ideal solution for protecting your mission critical operations.

Features:

- Fully rated power (kVA=kW) for maximum power availability
- Leading AC-AC efficiency up to 94% saves energy costs
- Low harmonic pollution (iTHD<3%) and high input power factor (>0.99) reduce upstream investment costs
- Parallel expansion and N+X redundancy up to 4 units
- Redundant auxiliary power and fan design enhance system reliability
- Optional IPX1 level protection
- A wide choice of configurations, such as N+X redundancy and hot stand-by
- Adjustable charging current and charging voltage meet different battery configuration requirements
- Flexible battery configuration optimizes battery investment
- Front-door battery replacement with hot-swappable battery tray design supports easy and quick replacement without turning the unit off
- Swappable interior architecture and front access servicing enables quick and easy maintenance
- Multi-connectivity interface supports remote UPS monitoring and management

Applicable Sectors



Datacenter



Telecom



Industrial



Banking



Lab



Medical



Network



Security



Metro



Technical Specification

Model		HPH-20K-LV-B	HPH-30K-LV-B	HPH-40K-LV-B	HPH-60K-LV-B
		HPH-20K-LV-BN	HPH-30K-LV-BN	HPH-40K-LV-BN	HPH-60K-LV-BN
Power Rating		20kVA/20kW	30kVA/30kW	40kVA/40kW	60kVA/60kW
Input	Nominal Voltage	208/120Vac, 220/127Vac (3 phase, 4-wire + G)			
	Voltage Range	125~253Vac(L-L) / 72~146Vac(L-N)*			
	Frequency Range	40~70 Hz			
	Power Factor	> 0.99 (full load)			
	Current Harmonic Distortion	< 3%			
Output	Voltage	208/120Vac, 220/127Vac (3 phase, 4-wire + G)			
	Voltage Regulation	± 1%			
	Voltage Harmonic Distortion	< 3% (linear load)			
	Overload Capability	<105% continuous; 105%~125%: 10minute; 125~150%: 1minute; >150%: 0.5 second			
	Output Power Factor	1			
	Frequency	50/60 Hz ± 0.05 Hz			
Battery	Battery Quantity	Adjustable ± 11~13pcs (default 12 pcs)			
	Type	Support SMF and VRLA			
	Charge Current (Max.)	10A			
	Charge Voltage	Float charge 163 ± 3 Vdc ; Boost charge 168 ± 3 Vdc (default 12 pcs)			
	Backup Time**	9.5 min (9Ah*48pcs)	9.5 min (9Ah*72pcs)	6.5 min (9Ah*72pcs)	5.2 min (9Ah*96pcs)
Communication Interfaces		SMART Slot x 1, MINI Slot x 1, Parallel Port x 2, RS232 Port x 1, REPO Port x 1, Charger Detection Port x 1, Input Dry Contact x 2, Output Dry Contact x 6			
Display		LED indicators and Multi-language LCD display			
Conformance	Safety	UL, cUL, Energy Star			
Other Features	Parallel Redundancy	Up to 4 units			
	Emergency Power Off	Local and remote			
Efficiency	AC-AC Mode	Up to 94%			
	ECO Mode	Up to 98%			
Environment	Operating Temperature	0 ~ 40°C			
	Ambient Storage Temperature	-20 ~ 40°C			
	Relative Humidity	0 ~ 95% (non-condensing)			
	Audible Noise	< 65 dB		< 70 dB	
Physical	Dimensions (W x D x H)	520 x 800 x 1380 mm		520 x 800 x 1760 mm	
	Weight (with battery)	340 kg	420 kg	450 kg	530 kg
	Weight (without battery)	196 kg	204 kg	224 kg	242 kg
Price	Bath(Ext. Vat)	400,000.00	640,000.00	680,000.00	Ask for price
	Bath(Ext. Vat) (No Battery)	Ask for price	Ask for price	Ask for price	Ask for price

HPH-20K-LV-B: UPS integrated battery model has batteries inside
 HPH-20K-LV-BN: UPS integrated battery model has no batteries inside

* When input voltage range is 72~108Vac(L-N) and 125~187Vac(L-L), the sustainable loading is from 63% to 100% of UPS capacity.
 ** At 70% load with internal battery strings.

All specifications are subject to change without prior notice.



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Delta UPS – Ultron Family

HPH Series, Three Phase 160 - 200 kVA



The brand-new Ultron HPH series 160-200kVA is a true online double-conversion UPS offering the best-in-class combination of power performance and efficiency for medium data centers, pan-IT, and other mission critical applications. Thanks to Delta's R&D expertise and excellent engineering capabilities, the Ultron HPH features up to 96.5% AC-AC efficiency, low iTHD < 3%, and high input power factor > 0.99 resulting in significant total cost of ownership (TCO) savings. Highlights of the highly reliable Ultron HPH series UPS design include key component redundancy and proactive battery health detection. With its combination of superior availability and power performance, the Ultron HPH 160-200kVA is the top choice for power protection of sustainable medium business operations.

Features:

- High AC-AC efficiency of up to 96.5% and ECO mode to 99% for significant energy cost savings
- Low harmonic pollution (iTHD < 3%) and high input power factor (> 0.99) reduces upstream investment costs
- Optional redundant controller supports dual CAN bus and ring connection for high system availability
- Proactive battery aging detection for high reliability
- Easy event log check via touch panel and firmware upgrade via USB port
- Parallel expansion and redundancy up to 8 units, 1.6MVA of total power capacity
- Flexible battery configuration 30~46 pieces optimizes battery investment
- Supports either top or bottom cable entry in the single cabinet. The unique fixed symmetric terminal design avoids cable bending issues to enhance cable reliability
- User-friendly 10" colored LCD with touch panel enables easy local UPS management
- Environment information such as security, water, fire and temperature can be integrated into the UPS for easy monitoring via the LCD of the UPS
- If the UPS is equipped with Delta's battery management system, the battery information can be integrated into the UPS and monitored via LCD

Applicable Sectors



Datacenter



Telecom



Industrial



Banking



Lab



Medical



Network



Security



Metro



Technical Specification

Model		HPH-160K	HPH-200K
Power Rating		160kVA* / 150kW	200kVA / 200kW
Input	Nominal Voltage	220/380 Vac, 230/400 Vac, 240/415 Vac (3-phase, 4-wire + G)	
	Voltage Range	176 ~ 276Vac (full load)	
	Current Harmonic Distortion	≤3% **	
	Frequency	40 ~ 70 Hz	
Output	Voltage	220/380 Vac, 230/400 Vac, 240/415 Vac (3-phase, 4-wire + G)	
	Voltage Harmonic Distortion	≤0.5% (linear load)	
	Frequency	50/60 Hz	
	Frequency Regulation	±0.05 Hz (battery mode)	
	Overload Capability	≤125%: 10 minutes ; ≤150%: 1 minute	
Display		10" color touch screen	
Interface	Standard	RS232 x 1, Parallel port x 2, USB x 3, RS485 x 1, Relay I/O card slot x 1, REPO x 1, Input dry contact x 4, Output dry contact x 6, Battery temperature sensor x 4, External switch detection x 4, RJ45 x 1, Ethernet x 1	
	Optional	Relay I/O card, Battery cabinet temperature sensor cable	
Confirmation	Safety	CE, RCM	
Efficiency	AC-AC Mode	Up to 96.5%	
	ECO Mode	99%	
Battery	Nominal Voltage	±240 Vdc	
	Charge Voltage	±272 Vdc (adjustable from 204V to 312V)	
	Battery number configuration	30 ~ 46pcs (default: 40pcs)	
Environment	Operating Altitude	1000 meters (without derating)	
	Operating Temperature	0 ~ 40°C	
	Audible Noise	<70 dB	
	Relative Humidity	0 ~ 95% (non-condensing)	
Others	Parallel Redundancy and Expansion	Maximum 8 units	
	Remote Emergency Power Off	Yes	
	Battery Start	Yes	
Physical	Dimensions (W x D x H)	600 x 1100 x 1600 mm	
	Weight	339 kg	376 kg
Price	Bath(Ext. Vat)	Ask for price	

* The power rating is adjustable from default 160kVA to 150kVA via touch panel

** When input vTHD is less than 1%



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