

# Why Delta UPS?



The power behind competitiveness

## Delta 1-20 kVA UPS



<http://www.deltapowersolutions.com/>



# Delta Group

Leading expert in power management and thermal management solutions

Delta Group is the world’s leading provider of power management and thermal management solutions, as well as a major source for components, visual displays, industrial automation, networking products, and renewable energy solutions. Delta Group is focused on three main businesses: power electronics, energy management, and smart green life. Delta Group has sales offices worldwide and manufacturing plants in Taiwan, China, Thailand, Japan, Mexico, India, Brazil and Europe.

As a global leader in power electronics, Delta’s mission is, “To provide innovative, clean and energy-efficient solutions for a better tomorrow.” Delta is committed to environmental protection and has implemented green, lead-free production and recycling and waste management programs for many years.

More information about Delta Group can be found at <http://www.deltaww.com/>

**World no. 1** in Switching Power Supplies, DC Brushless Fans and Telecom Power Systems

**153** sales offices and **38** manufacturing facilities worldwide

**5%-6%** of annual sales revenues invested in R&D with over **7,000** engineers in **61** R&D centers worldwide

Awarded **7,100+** patents and received **47** internationally recognized design awards including iF, Reddot, and the Taiwan Excellence awards.

## No. 1 supplier of merchant power supplies

According to the IHS report, Delta Electronics remained the largest supplier of merchant power supplies with an estimated market share of 15.5% in 2016 of a global market value that was estimated to be \$23,555 M.

The Total Merchant Power Supply Market 2016 \$M Revenue		
Ranking	Company Name	2016
1	Delta Electronics	15.5%
2	Axxxxxn	7.5%
3	Lxxxxxx Technology	4.5%

Source: IHS report, AC-DC & DC-DC Merchant Power Supplies - 2017

# Global footprint

	Asia-Pacific	Americas	EMEA	Total
Sales Offices	96	20	37	153
Plant Sites	32	4	2	38
R&D Centers	43	7	11	61



# Awards

2007 - 2008  
Forbes Asia's  
Fabulous 50

2009  
Frost & Sullivan Green  
Excellence Award for  
Corporate Leadership

2014  
CPLI Climate Performance  
Leadership Index, CPLI

2011 - 2015  
Dow Jones  
Sustainability Indexes

# About MCIS (Mission Critical Infrastructure Solutions)

With its expertise and experience in power management and energy efficiency, the Mission Critical Infrastructure Solutions (MCIS) business of Delta Electronics Inc. positions itself as: “The power behind competitiveness”. MCIS plays an important role in making our customers’ businesses more competitive. We fulfill this role by providing highly reliable and efficient power management products and datacenter infrastructure solutions to ensure the continuity of our customers’ mission critical operations while reducing their Total Cost of Ownership (TCO). Delta MCIS is a powerful and trustworthy partner to companies that strive to outperform the competition.

The Delta MCIS portfolio covers products from UPS (uninterruptible power supplies) to data center infrastructure solutions – InfraSuite – with a comprehensive range of services.



**15+** years' experience in UPS design and manufacturing



## Datacenter Infrastructure Solutions

InfraSuite  
Fully integrated design and scalable system architecture

### Power Management

Integrated power distribution for optimal power management



### Rack & Accessories

Smart, modular design for optimizing space utilization



### Precision Cooling

Highly efficient, energy-saving temperature control



### Environment Management System

Have the entire data center at your fingertips





# Protect Your Critical Operations 24/7



**Poland**  
The Delta UPS safeguards one of the largest fixed line operators



**Russia**  
Delta's UPS protects one of Russia's most advanced medical healthcare centers



**Russia**  
The Delta UPS secures power to the most advanced datacenter in Russia



**China**  
The InfraSuite Datacenter Solution ensures the continuous operations of China's most modern TV tower



**U.K.**  
The Delta UPS safeguards one of the largest fixed line operators



**South Korea**  
The immigration office in the airport in Seoul uses Delta's UPS in their datacenters



**Germany**  
One of the major railway upgrade projects chose Delta UPS to secure their operations



**Taiwan**  
Delta's UPS and Precision Cooling products protect the leading semiconductor foundry in Taiwan



**Spain**  
The Delta UPS provides continuous power to one of the largest telecom operators



**Taiwan**  
The InfraSuite Datacenter Solution safeguards the datacenter of a major university in Taiwan



**Brazil**  
A world-leading consumer goods manufacturer in Brazil uses Delta's UPS to secure their production



**Australia**  
The Delta UPS powers a major water utility in Australia



**Angola**  
Delta's UPS ensures operations for one of Angola's largest datacenters



**South Africa**  
One of the major governmental datacenters in South Africa chose Delta's UPS to secure their operations



**India**  
A leading manufacturer of consumer packaging solutions uses Delta's UPS to secure stable power supply



**Thailand**  
The Delta UPS safeguards a large city monitoring operators in Thailand

# Amplon RT series, Single Phase 1/2/3 kVA



### Flexible configuration:

- Available in either a rack or tower configuration in 2U size cabinet - ideal for servers, VoIP, telecommunications and networking.
- Additional charger board can be added for long backup applications and reduced recharging time

### Easy to use:

- AC-start and battery-start capabilities
- Fulfill long backup time demand for mission critical applications
- Maintenance Bypass Box (MBB) available for continuous power supply to connected loads during battery replacement or other upgrades

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	± 2% (linear load)		
	Frequency	50/60 Hz ± 0.05 Hz		
	Voltage Harmonic Distortion	< 3% (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	AC-AC	90%	Up to 94%	
	ECO Mode	95%	Up to 97%	
Battery	Battery Voltage	12V/9Ah, 24Vdc	12V/9Ah, 48Vdc	12V/9Ah, 72Vdc
	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		
Compliance		CE/RCM/KC		
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	0 ~ 95% (non-condensing)		

\* When the UPS is de-rated to 90% of its capacity.  
\*\* When the total load reaches 75%.  
All specifications are subject to change without prior notice.

# Amplon RT series, Single Phase 5/6/10 kVA



### Double security

- 1+1 parallel redundancy or expansion to provide higher reliability without requiring additional hardware - ideal for servers, data centers, networking, VoIP and telecommunications.

### Easy to use

- AC-start and battery-start capabilities
- Multi-language LCD display with blue backlight.
- Optional external battery pack for longer backup time
- Remote management over network via software and optional communication accessories, e.g. SNMP card
- Maintenance Bypass Box (MBB) available for continuous power supply to connected loads during battery replacement or other upgrades

Model			RT-5K	RT-6K	RT-10K
Power Rating			5kVA/4.5kW	6kVA/5.4kW	10kVA/9kW
Input	Nominal Voltage	200/208/220/230/240 Vac			
	Voltage Range	156 ~ 280 Vac (full load); 100 ~ 155 Vac(50-100% load)			
	Current Harmonic Distortion	< 5% (full load)			
	Power Factor	> 0.99 (full load)			
	Frequency	40 ~ 70 Hz			
Output	Voltage	200/208/220/230/240 Vac			
	Voltage Harmonic Distortion	< 2% (linear load)			
	Voltage Regulation	± 1% (static); ± 2% (typical)			
	Frequency	50/60 Hz ± 0.05 Hz			
	Overload Capability	≤105%: Continuous; 106 ~ 110%: 10 minutes; 111 ~ 125%: 5 minutes; 126 ~ 150%: 30 seconds			
Battery & Charger	Battery Voltage	192 Vdc			
	Charge Current	Built-in: maximum 4A (adjustable); Additional charger board (optional): maximum 4A (internal installation)			
Communication Interfaces	Standard	RS 232 x 1 , SMART Slot x 1; MINI Slot x 1, Parallel Port x1, REPO/ROO			
Compliance	Safety	CE/RCM/KC			
Other Features	Parallel Redundancy	1+1			
	Common Battery Installation	Yes			
Efficiency	AC-AC	92%			
	ECO Mode	96%			
Environment	Operating Temperature	0 ~ 40°C			
	Relative Humidity	0 ~ 95% (non-condensing)			
	Audible Noise		< 58 dB	< 58 dB	< 58 dB
Physical	Dimensions (W x D x H)	UPS	440 x 671 x 89 mm	440 x 671 x 89 mm	440 x 623 x 131 mm
		Battery Pack	440 x 638 x 89 mm	440 x 638 x 89 mm	440 x 595 x 131 mm
	Weight	UPS	15 kg	15.5 kg	21.3 kg
		Battery Pack	36 kg	36 kg	66 kg

All specifications are subject to change without prior notice.

# Ultron EH series, Three Phase In – Single Phase Out 10/15/20 kVA



### Higher protection:

- Dual input design allows different power supply sources for enhanced availability
- Built-in manual bypass ensures continuous power to the load during maintenance
- Parallel expansion and N+X redundancy up to 4 units without requiring additional hardware
- Remote and local emergency power-off functions (EPO) to promptly manage the UPS when emergencies occur

### Easy to monitor:

- Multi-connectivity interface to support remote UPS monitoring and management
- Advanced management software to provide event alert management, remote shutdown, event log tracking and analysis
- Reliable battery management for better battery protection

Model		EH-10K	EH-15K	EH-20K
Power Rating		10kVA/8kW	15kVA/12kW	20kVA/16kW
Input	Nominal Voltage Voltage Range Power Factor Frequency	380/220 Vac, 400/230 Vac, 415/240 Vac (3 Phase, 4 - wire + G) 305 ~ 477 Vac (full load); 208 ~ 304 Vac (50 ~ 100% load) > 0.95 (full load) 45 ~ 65 Hz		
Output	Voltage Voltage Harmonic Distortion Voltage Regulation Frequency Overload Capability	220/230/240 Vac < 3% (linear load) ± 2% 50/60 Hz ± 0.1 Hz ≤105 %: continuous; 106 ~ 110%: 10 minutes; 111 ~ 125%: 1 minute; 126 ~ 150%: 30 seconds		
Battery & Charger	Battery Voltage Charge Current	240 Vdc Built-in: 4A, Additional Charger Board (optional): 4A		
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		
Conformance	Safety	CE		
Other Features	Emergency Power Off Maintenance Bypass Switch	Local and remote Built-in		
Efficiency	AC-AC ECO Mode	91% 96%		
Environment	Operating Temperature Relative Humidity Audible Noise IP Protection	0 ~ 40°C 5 ~ 95% (non-condensing) < 55 dB IP20	< 60 dB	< 60 dB
Physical	Dimensions (W x D x H) Weight	200 x 490 x 490 mm 26 kg	250 x 610 x 650 mm 45 kg	

All specifications are subject to change without prior notice.

# Ultron HPH series, Three Phase 20 kVA



### Outstanding performance

- 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

### Flexibility and convenience

- 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)
- Adjustable charging current and charging voltage meet different battery configuration requirements

Model		HPH-20K	HPH-20K-BN	HPH-20K-B
Power Rating		20kVA/kW		
Input	Nominal Voltage Voltage Range Frequency Power Factor Current Harmonic Distortion	380/220 Vac, 400/230 Vac, 415/240 Vac (3 phase, 4-wire + G) 300 ~ 477 Vac (full load), 228 ~ 300 Vac (70 ~ 100% load) 40 ~ 70 Hz > 0.99 (full load) < 3%		
Output	Voltage Voltage Regulation Voltage Harmonic Distortion Overload Capability Output Power Factor Frequency	380/220 Vac, 400/230 Vac, 415/240 Vac (3 phase, 4-wire + G) ±1 % < 1.5 % (linear load) ≤ 105%: continuous; 106 ~ ≤125%: 10 minutes; 106 ~ ≤125%: 1 minute; >150%: 1 second 1 50/60 Hz ± 0.05 Hz		
Battery	Battery Voltage Type Quantity Charge Current (Max.) Built-in Typical Backup Time*	240 Vdc Support SMF/VRLA/Tubular/Ni-Cd 32-50 pcs  5A		15 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		
Conformance	Safety	CE		
Other Features	Parallel Redundancy Emergency Power Off Maintenance Bypass Switch	Up to 4 units Local and remote Yes		
Efficiency	AC-AC ECO Mode	Up to 96% Up to 99%		
Environment	Operating Temperature Relative Humidity Audible Noise IP Protection	0 ~ 40°C 5 ~ 95% (non-condensing) < 55 dB IP20		
Physical	Dimensions (W x D x H) Weight	380 x 800 x 800 mm 66.5 Kg	490 x 830 x 1400 mm 351 kg	490 x 830 x 1400 mm 128 kg

HPH-B: UPS battery-integrated model with batteries inside  
HPH-BN: UPS battery-integrated model with no batteries inside  
All specifications are subject to change without prior notice.  
\* At 70% load with internal battery strings



# Delta InfraSuite Power Management Rack Power Distribution Unit (rPDU)



### Flexibility and convenience:

- Tool-less and zero-U installation to save valuable rack space
- LED current (rms value) display and overload warning indicators
- Branch circuit breaker protection
- Upgradeable firmware for maintaining optimal functions

Model	Input Phase	Plug Type	Cable Length	Conformance	Nominal Input Voltage (Vac)	Input Voltage Range	Rating Current per Input (A)	Output Voltage / Phase
PDU1311	1	IEC309-16A-3W	CE, CCC	2.4m	230/240	± 10 %	16	200-240 Vac / 1
PDU1315	1	IEC309-32A-3W	CE, CCC	2.4m	230/240	± 10 %	32	200-240 Vac / 1
PDU5315	1	IEC309-32A-3W	CE, CCC	2.4m	220/230/240	± 10 %	32	200-240 Vac / 1
PDU7311	1	IEC309-16A-3W	CE, CCC	2.4m	220/230/240	± 10 %	16	200-240 Vac / 1

Model	Number of Output Circuit Breakers	Outputs (Number)	LED	Communication Interface	Dimensions (W x D x H)	Weight
PDU1311	20A/2P One (UL489)	IEC320 C19 (3) IEC320 C13 (24)	Yes	RS232-1*, RS232-2**	48x1250x50/90 mm	4.56kg
PDU1315	20A/2P Two (UL489)	IEC320 C19 (4) IEC320 C13 (24)	Yes	RS232-1*, RS232-2**	48x1250x50/90 mm	5.44kg
PDU5315	20A/1P Two	IEC320 C19 (4) IEC320 C13 (24)	X	X	48x1250x50/90 mm	4.9kg
PDU7311	20A/1P One	IEC320 C13 (12)	X	X	440x44x55 mm	1.48kg

\* RS232-1 Connect to a PC for remote operation or a firmware upgrade  
\*\* RS232-2 Connect to an SNMP card or to another PDU

# Static Transfer Switch



### High availability:

- With SCR design and relay in parallel to increase reliability and handle high inrush current
- Short transfer time (6 ms)
- Built-in SNMP for remote management
- "Break before make" to prevent short circuits between two sources

Model	STS16002SR	STS30002SR
Rated Current	16A	30A*
Regulatory	CE / UL	CE / UL
Nominal Voltage	200/208/220/230/240 Vac	200/208/220/230/240 Vac
Display	LED	LED
Connection	Input : C20 * 2 pcs Output : C13 * 4 + C19 * 1 pcs	Input: IEC309 Output: IEC309 Input: Hardwired Output: Hardwired
Communication	SNMP	SNMP
Operating temperature	0 ~ 40°C	0 ~ 40°C
Storage temperature	-15 ~ 50°C	-15 ~ 50°C
Humidity	0 ~ 95% RH (non-condensing)	0 ~ 95% RH (non-condensing)
Audible Noise (at one meter)	< 40 dB	< 40 dB
Physical Dimensions (H x W x D)	43 x 440 x 385 mm	43 x 440 x 385 mm / 43 x 440 x 390 mm
Weight	4.85 kg	7.6 kg 6.2 kg

\* Under the condition of 35°C; if the environment temperature is 36 ~ 40°C, the product should be de-rated to 25.6A.  
All specifications are subject to change without prior notice.

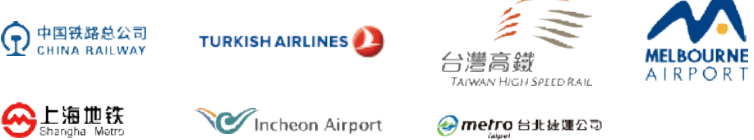
# Our customers



### IT Datacenter & Telecommunication



### Transportation



### Manufacturing



### Retail & Hospitality



### Banking & Finance





# Known for our quality

## Delta's manufacturing across the globe

The Delta Group's operations are global in scale with 38 manufacturing facilities in Taiwan, China, Thailand, India, Mexico, Brazil and Slovakia. We also have 61 R&D centers across the globe and 153 sales offices on all 5 continents.



## Delta's quality

Pursuing the highest quality and reliability of our products has been our primary target since Day 1. Every year Delta's manufacturing sites receive numerous awards and recognition as well as encouragement from our partners and clients, such as Dell, HPQ, IBM, Intel, Microsoft, NEC, GE, Sony and so on. Their continued partnerships and the awards received are the best demonstration of our emphasis on product quality.

All of our factories have received ISO 9001 and ISO 14001 international certificates which verify that our production conforms to the corresponding quality standards and evaluation. "Do things right the first time" is the belief that we always insist upon. Delta continues to provide the best quality control in terms of product development and manufacturing with our primary goal of satisfying our customers.



2010 HUAWEI  
Technical Support Award



2011 SONY VAIO  
Remarkable Supply Performance



2016 Lenovo  
Excellent Supplier Award



2012 Texas Instruments  
Continued Partnership



2014 CISCO  
OEM/ODM Partner of the Year



2013 SHARP  
Best Supplier Award



2013 Rockwell Automation  
Market Supplier of the Year



2013 WKK  
Best Supplier of the Year



2015 Panasonic  
Long-Term Support Appreciation



2016 EPSON  
Excellent Partner and Good Quality

## Accredited laboratory

Delta's outstanding product design capability comes from our R&D team and its various precision measurement instruments. Our R&D centers utilize diverse advanced equipment and programs including CAD to facilitate circuit simulation, mechanical design, and PCB layout. Delta has nine well-equipped laboratories to conduct environment-related substance analysis, precision measurement, failure analysis, soldering techniques, electromagnetic compatibility and interference tests, material chemical analysis, quality engineering, safety tests, and more. In addition, we also have laboratories with controlled temperature and humidity to perform with numerous reliability tests.



ORT (Ongoing reliability test)



EMC / EMI (electromagnetic compatibility & interference)



Acoustic test




Pulse lightning discharge

# Why Delta UPS?




## Quality

- With four main manufacturing sites and 23 R&D centers, Delta's large-scale production follows comprehensive quality management to do things right the first time and deliver the best quality
- All manufacturing sites are certified with ISO 9001 and ISO 14001 and conform to the highest quality control in terms of product development and production to achieve customer satisfaction.
- With six laboratories accredited by the China National Accreditation Service for Conformity Assessment (CNAS) all of our products go through the tightest checks.



## Performance

- Wide input voltage range reduces the chance of battery use and extends battery life
- High input power factor increases utilization of utilities and reduces total cost
- High output power factor provides more real power to critical loads
- Higher efficiency lowers operating costs
- Lower harmonic distortion saves on upstream investment
- Compact design saves more space for critical equipment



## Service

- 3-year warranty
- Service line during office hour 0900 - 1800 on working days to answer your question
- Customer-needs-oriented, available with comprehensive and professional service and technical support





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