# Delta UPS - Modulon Family

DPH Series, Three Phase, 50 - 300/500 kVA, 480 V

### The world's leading power density in a compact footprint provides the ultimate in UPS power protection

In this IT intensive world with heavy data traffic driven by the cloud, 4G/5G and media streaming applications, IT managers are facing the challenges of increasing rack power density and limited datacenter space. Delta's innovative modularized UPS technologies provide the answer to customers' demand for high power density, high power performance, and ultimate availability. The brand-new Delta Modulon DPH series UPS achieves the industry's leading power density of 50 kVA / 50 kW per module, offering the smallest footprint and best space utilization. The Modulon DPH UPS is the ideal power protection for datacenters to achieve total cost of ownership (TCO) optimization.

#### **Excellent Power Performance**

- The industry's leading power density per module at 50 kVA in a 3U space, and the smallest footprint for 300 kVA in a single rack, achieves the best utilization compared with its peers
- High AC-AC efficiency up to 97% and ECO mode to 99% results in marked energy cost savings with Energy Star 2.0 certification
- Green mode features a load aggregation function that optimizes system efficiency

#### **Ultimate Availability**

- Fully modularized design and easy-swappable key modules ensure the minimum Mean Time To Repair (MTTR)
- Redundancy components and dual CAN bus deliver highest system availability and avoid single point of failure
- Modularized UPS grows with your business by parallel expansion up to 3 units for 1.5 MVA of total power capacity
- · Key components preventive maintenance reduces the risk of drop load

#### **High Manageability**

- User-friendly 10" color touch screen enables easy local UPS management
- · Inbuilt with remote access via SNMP, Modbus TCP/IP and Modbus RTU protocols
- Environment information such as security, water, fire, and temperature can be integrated into the UPS for easy monitoring via the LCD of the UPS
- Inbuilt waveform recorder captures failure symptoms of critical events for further diagnosis









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## **Delta UPS - Modulon Family**

### DPH Series, Three Phase, 50 - 300/500 kVA, 480 V

#### **Technical Specifications**

| Model  |  | DPH-300K-HV   | DPH-500K-HV   |
|--|--|---|---|
| Power Rating                                   | kVA / kW   | 50, 100, 150, 200, 250, 300   | 350, 400, 450, 500  |
|  | Power Module Quantity  | Up to 6 units   | Up to 10 units  |
| Input  | Nominal Voltage  | 480 V (3-phase, 3-wire + G)   |   |
|  | Voltage Range  | 408~552 Vac (full load)   |   |
|  | Current Harmonic Distortion  | ≤ 2.5%*   |   |
|  | Power Factor   | > 0.99  |   |
|  | Frequency Range  | 40~70 Hz  |   |
| Output   | Voltage  | 480 V (3-phase, 3-wire + G)   |   |
|  | Voltage Harmonic Distortion  | ≤ 0.5% (linear load)  |   |
|  | Voltage Regulation   | ±1% (static)  |   |
|  | Frequency  | 50/60 ± 0.05 Hz   |   |
|  | Overload Capability  | ≤ 105%: continuously; > 105~110%: 60 minutes;   |   |
|  |  | > 110~125%: 10 minutes; > 125%~≤ 150%: 1 minute   |   |
| Display  |  | 10" color touch screen  |   |
| Interface                                      | Standard   | Parallel port x 4, USB Type A x 2, USB Type B x 1, Modbus port x 1, Ethernet x 1, RS232 x 1, REPO x 1, Input dry contact x 4, Output dry contact x 6, Battery temperature sensor x 4, External with data dia a 4. Oracle and alot a 4.  |   |
|  |  |   |   |
|  |  | External switch detection x 4, Smart card slot x 1,   |   |
|  | Ontional   | -   | · ·   |
| Fficiency                                      | Optional   | Relay I/O card, Battery cabinet temper  | · ·   |
| Efficiency                                     | AC-AC Mode   | Relay I/O card, Battery cabinet tempera<br>Up to 97%  | · ·   |
| ,  | AC-AC Mode<br>ECO Mode   | Relay I/O card, Battery cabinet tempera<br>Up to 97%<br>99%   | ature sensor cable  |
| ,  | AC-AC Mode<br>ECO Mode<br>Nominal Voltage  | Relay I/O card, Battery cabinet temper<br>Up to 97%<br>99%<br>480 Vdc (Default, adjustable from 360   | ature sensor cable  |
| ,  | AC-AC Mode<br>ECO Mode<br>Nominal Voltage<br>Charge Voltage  | Relay I/O card, Battery cabinet temper<br>Up to 97%<br>99%<br>480 Vdc (Default, adjustable from 360<br>544 Vdc (Default, adjustable from 408  | ature sensor cable  |
| Battery  | AC-AC Mode<br>ECO Mode<br>Nominal Voltage<br>Charge Voltage<br>Protection of Battery Deep Discharge  | Relay I/O card, Battery cabinet temperature of the second | ature sensor cable  |
| Battery  | AC-AC Mode<br>ECO Mode<br>Nominal Voltage<br>Charge Voltage<br>Protection of Battery Deep Discharge<br>Operating Temperature   | Relay I/O card, Battery cabinet tempera<br>Up to 97%<br>99%<br>480 Vdc (Default, adjustable from 360<br>544 Vdc (Default, adjustable from 408<br>Yes<br>0~40°C  | ature sensor cable  |
| Battery  | AC-AC Mode<br>ECO Mode<br>Nominal Voltage<br>Charge Voltage<br>Protection of Battery Deep Discharge<br>Operating Temperature<br>Relative Humidity  | Relay I/O card, Battery cabinet temper<br>Up to 97%<br>99%<br>480 Vdc (Default, adjustable from 360<br>544 Vdc (Default, adjustable from 408<br>Yes<br>0~40°C<br>0~95% (non-condensing)   | ature sensor cable  |
| Battery  | AC-AC Mode<br>ECO Mode<br>Nominal Voltage<br>Charge Voltage<br>Protection of Battery Deep Discharge<br>Operating Temperature<br>Relative Humidity<br>Audible Noise   | Relay I/O card, Battery cabinet temper<br>Up to 97%<br>99%<br>480 Vdc (Default, adjustable from 360<br>544 Vdc (Default, adjustable from 408<br>Yes<br>0~40°C<br>0~95% (non-condensing)<br>< 75 dB**  | ature sensor cable  |
| Battery  | AC-AC Mode<br>ECO Mode<br>Nominal Voltage<br>Charge Voltage<br>Protection of Battery Deep Discharge<br>Operating Temperature<br>Relative Humidity<br>Audible Noise<br>IP Protection  | Relay I/O card, Battery cabinet temper<br>Up to 97%<br>99%<br>480 Vdc (Default, adjustable from 360<br>544 Vdc (Default, adjustable from 408<br>Yes<br>0~40°C<br>0~95% (non-condensing)<br>< 75 dB**<br>IP20  | ature sensor cable<br>Vdc to 552 Vdc)<br>V to 624 V)  |
| Battery<br>Environment                         | AC-AC Mode<br>ECO Mode<br>Nominal Voltage<br>Charge Voltage<br>Protection of Battery Deep Discharge<br>Operating Temperature<br>Relative Humidity<br>Audible Noise<br>IP Protection<br>Parallel Redundancy and Expansion   | Relay I/O card, Battery cabinet temper   Up to 97%   99%   480 Vdc (Default, adjustable from 360)   544 Vdc (Default, adjustable from 408)   Yes   0~40°C   0~95% (non-condensing)   < 75 dB**  | ature sensor cable<br>Vdc to 552 Vdc)<br>V to 624 V)  |
| Efficiency<br>Battery<br>Environment<br>Others | AC-AC Mode<br>ECO Mode<br>Nominal Voltage<br>Charge Voltage<br>Protection of Battery Deep Discharge<br>Operating Temperature<br>Relative Humidity<br>Audible Noise<br>IP Protection<br>Parallel Redundancy and Expansion<br>Emergency Power Off                  | Relay I/O card, Battery cabinet temper   Up to 97%   99%   480 Vdc (Default, adjustable from 360)   544 Vdc (Default, adjustable from 408)   Yes   0~40°C   0~95% (non-condensing)   < 75 dB**  | ature sensor cable<br>Vdc to 552 Vdc)<br>V to 624 V)  |
| Battery<br>Environment<br>Others               | AC-AC Mode<br>ECO Mode<br>Nominal Voltage<br>Charge Voltage<br>Protection of Battery Deep Discharge<br>Operating Temperature<br>Relative Humidity<br>Audible Noise<br>IP Protection<br>Parallel Redundancy and Expansion<br>Emergency Power Off<br>Battery Start | Relay I/O card, Battery cabinet temper<br>Up to 97%<br>99%<br>480 Vdc (Default, adjustable from 360<br>544 Vdc (Default, adjustable from 408<br>Yes<br>0~40°C<br>0~95% (non-condensing)<br>< 75 dB**<br>IP20<br>Modularized and system redundancy; I<br>Remote (default)<br>Yes   | ature sensor cable<br>Vdc to 552 Vdc)<br>V to 624 V)<br>Maximum 3 units                                       |
| Battery<br>Environment                         | AC-AC Mode<br>ECO Mode<br>Nominal Voltage<br>Charge Voltage<br>Protection of Battery Deep Discharge<br>Operating Temperature<br>Relative Humidity<br>Audible Noise<br>IP Protection<br>Parallel Redundancy and Expansion<br>Emergency Power Off                  | Relay I/O card, Battery cabinet temper   Up to 97%   99%   480 Vdc (Default, adjustable from 360)   544 Vdc (Default, adjustable from 408)   Yes   0~40°C   0~95% (non-condensing)   < 75 dB**  | ature sensor cable<br>Vdc to 552 Vdc)<br>V to 624 V)<br>Maximum 3 units<br>55.12 x 33.46 x 78.74 in.(default) |
| Battery<br>Environment<br>Others               | AC-AC Mode<br>ECO Mode<br>Nominal Voltage<br>Charge Voltage<br>Protection of Battery Deep Discharge<br>Operating Temperature<br>Relative Humidity<br>Audible Noise<br>IP Protection<br>Parallel Redundancy and Expansion<br>Emergency Power Off<br>Battery Start | Relay I/O card, Battery cabinet temper<br>Up to 97%<br>99%<br>480 Vdc (Default, adjustable from 360<br>544 Vdc (Default, adjustable from 408<br>Yes<br>0~40°C<br>0~95% (non-condensing)<br>< 75 dB**<br>IP20<br>Modularized and system redundancy; I<br>Remote (default)<br>Yes   | ature sensor cable<br>Vdc to 552 Vdc)<br>V to 624 V)<br>Maximum 3 units                                       |

\* When input vTHD is less than 1%.

\*\* At a distance of 3.28 ft (1 meter) of the UPS

All specifications are subject to change without prior notice.





50kVA in 3U space

User-friendly 10" color touch screen



Most compact footprint



Modularized topology, easily swappable and lowest MTTR





