

D Series: UPS UPTO - 300KVA - Three / Three Phase

All in one D Series UPS

High Power UPS Systems,

Now in India

Properties : Standard Properties

- 1GBT rectifier inverter technology
- Input power factor correction (>0,99)
- Low input current THD (<%5)
- Dynamically wide input voltage range depends on the load
- Intelligent battery management
- Adjustable charging current
- Temperature compensated battery charging
- Automatic and manual battery test
- Accurate battery capacity and remaining time on display
- Safe battery test by reducing rectifier voltage without switching off rectifier
- Compatible with the maintenance free batteries
- Adjustable output frequency: 50 / 60 Hz
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- Static and manual (maintenance) bypass
- 7 programmable voltage free dry contacts
- Compatible with generators
- Emergency power off (EPO)
- A wide range of communication options
- RS232 and RS485 protocols
- MOD-bus connection
- SNMP / Web compatible
- Overload and short circuit protection
- Multi DSP control
- 512 event log and operational status record
- Ambient temperature, date and time on display
- Advanced multi-lingual dual LCD panels
- Small footprint and easy maintenance access
- Highly reliable regenerative filtering
- High crest factor (3:1)
- Isolation Transformer (Optional)

Optional Accessories

- Parallel board for parallel operation'
- Remote monitoring panel
- SNMP adapter
- Isolation transformer
- External maintenance by-pass panel

Today's embedded applications demand a unique set of features, product life cycle and performance. Uniline follows new technologies and needs of today's contemporary life. D Series UPS is designed to meet the growing demands of a new generation of leading-edge embedded products.

In addition to offering high performance, flexibility and robust functionality, D Series UPS' value is mainly based upon:

- **High Technology**
- **Low Cost**
- **Best Total Customer Experience**

Advantage

- Ideal for a wide range of applications with its high technology, high reliability and efficiency and functional structure.
- IGBT rectifier and inverter based, low THDi, high input power factor (PF >0.99); manufactured from 40 to 300 KVA single modules.
- D series UPS' are parallelable.

Lower overall cost of ownership with high efficiency

The more efficient the UPS the less electrical bill you pay. Since a true online UPS runs through energy conversion to supply its load, a percentage of the Input power is dissipated in the form of heat. An efficient system keeps this loss to minimum so that the gain becomes high to supply maximum possible energy to the load. D Series UPS provides up to 93% efficiency due to high input power factor and inverter design. As a result overall costs decrease and lifespan of the system gets longer.

IGBT Rectifier with PFC (Power Factor Correction)

With the aid of advanced IGBT rectifier, input power factor close to 1 (>0.99) and input current harmonic distortion less than 5% are achieved resulting in reduced costs. Ensures clean and sinusoidal input current, avoids pollution of the upstream power supply.

Intelligent Battery Management-Guarantees Enhanced Battery Life

DSP controlled battery management provides the possible maximum battery lifespan. Battery monitoring gets real time information of battery capacity and remaining time that facilitates you to proactively plan maintenance operations to avoid any unexpected failures. Besides, UPS tests the batteries at certain adjustable intervals without switching off the rectifier thus even if the batteries malfunction; it guarantees consistent operation of inverter for the critical loads supplied. Temperature compensated battery charging continuously monitors temperature changes in battery cabinets and adjusts the charging rate accordingly that greatly extends the battery life. Moreover, "Hot Swap" feature is available allowing battery change without disconnecting the UPS.

Total Digital Control System

In D Series UPS structure, in order to control and operate all power stages at their ultimate performance, two DSPs are dedicated. Various complex feedback algorithms, data acquisition, communication protocols are sensed by simultaneously working DSPs. The DSP controlling technology supplies useful features such as high efficiency and reliability.

Features of D Series Parallel Operation

- Parallel feature is optional depending on customer requirements
- Each unit fitted with a bypass static switch
- An extra isolated parallel board
- Accurate current sharing by using DSP based advanced algorithm
- Ring connection Sensing the remove of the parallel cable
- Hot swap / Easy power upgrade
- Observing the whole system on each unit's LCD panel
- Starting / stopping the whole system on each unit's front panel
- Automatic bypass transfer when external bypass switch used
- Synchronization of two separate parallel groups / units

Communication Solutions

A wide range of common communication options are available with D Series UPS that ensure your command and control over the installed UPS systems wherever they are located worldwide.

- SNMP: Network Solution
- Dry Contacts (Programmable Relay Unit)
- Custom Contacts
- Connection with EPC with RS232 and RS485 ports
- Remote Monitoring Panel 'Modbus

Interactive Display

A gorgeous user interface consists of interactive multi-lingual displays. The display above shows energy flow over its mimic diagram and the position of the circuit breakers. all the parameters of input / output and battery. Menus are observed on this LCD.

Single or Dual Input Operation

The dual input power allows the user to take advantage of a secondary power source. In this configuration, while feeding the rectifier input from the main source, the static and maintenance bypass can be fed from a secondary source. Each unit is facilitated with this feature that can be achieved with a little modification.

TECHNICAL SPECIFICATIONS

Rated power (in KVA)	60	80	100	120	160	200	250	300
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INPUT DATA

380 / 400 / 415 V AC three phase

Voltage range

+ 20 %, - 15 % at full load

Dynamic voltage range

Depends on the load

Frequency

50 / 60 Hz

Frequency range

± 10 %

Power factor ≥ 0.99

Total harmonic distortion (THDu) $\leq 5\%$

OUTPUT DATA

Voltage: 380 / 400 / 415 VAC three phase

Voltage regulation: $\pm 1\%$ static, $\pm 3\%$ dynamic at 100 % load change, < 2 ms recovery time

Frequency 50 / 60 Hz

Frequency tolerance $\pm 0.1\%$ (auto - synchronized), $\pm 1\%$ (synchronized with the mains)

Power factor 0.8

Total harmonic distortion (THDu) $\leq 2\%$ (at linear load) $\leq 5\%$ (non - linear load)¹

Crest factor 3:1

Overload 125 % rated load for 10 min, 150 % rated load for 1 min.

GENERAL DATA

Topology True on - line, double conversion with SPWM controlled 1GBT rectifier and inverter

Efficiency $\leq 93\%$ (on - line mode)², $\geq 98\%$ (eco mode)

Parallel technology Optional

Redundancy Optional

Control Multi DSP

Type of protection IP20

Standards EN 62040 - 1 (safety), EN 62040 - 2 (EMC)

Static & maintenance by-pass Standart (dual input 60, 80 optional, 100-300 standard)

MONITORING AND CONTROL DATA

Power management display (PMD) Interactive display screen, push buttons

Communication port RS232 / RS485

Communication port (dry port) Programmable 7 contacts

Advance communication Modbus, Web, SNMP (optional)

Control and monitoring software SNMP universe software (optional)

PHYSICAL DATA

Ambient temperature 0°C to 45°C

Relative humidity 0 % - 95 % (noncondensing)

Noise level <dB (at 1m) < 55 < 55 < 60 < 65

Operation altitude < 2000m

Color RAL 7012

Dimensions (W x H x D) mm 530 x 1450 x 860 630 x 1450 x 1110 780 x 1850 x 1260

Weight without battery (kg) 282 324 422 434 680 690 724 840