DALTON

Three Phase Input & Output UPS
Online Double Conversion UPS
Smart Pure Sinewave

E33 Series
(10 -160KVA)

2 YEARS WARRANTY

Dalton E33 Friendly Uninterruptible Power Supply is a combination of Dalton advanced digital Signal Processor (DSP) control online double conversion technology in accordance with VFI-SS-111 classification (as set out in standard IEC EN 62040-3) and a firm pursuit of a green manufacturing philosophy. With minimum space, fewer components and controlled levels of noise pollution, the E33 Series has a significantly reduced environmental impact. Therefore, it is feasible to design a UPS with reduced carbon footprint whilst achieving clean, continuous power for industrial and computing loads.

- Transformer less UPS Technology
- High Efficiency 96%
- Output Short Circuit and Overload Protection
- Maintenance Bypass Switch
- Dual Input
- Charge / discharge Current Indicator

- 3 Level IGBT Technology
- Optional SNMP Communication Port
- Output Current Limiting
- Rectifier With PFC Technology
- Smart Battery Management
- 15 Years Spare parts Support

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ADVANCED FUNCTIONAL LCD DISPLAY

Dalton E33 provides all round superior protection is fully digital signaling processor (DSP) controlled to provide quality supply, reduces the number of components and hence Increases reliability and improve performance. it remains easy to install and simple to operate from the front display panel and backlit LCD, showing input and output voltages, frequencies, battery readings and UPS operating status information.

INTELLIGENT MANAGEMENT & MAINTENANCE SYSTEM

The E33 Series has the most advanced built in management and maintenance system (MMS). The MMS has dynamic self diagnostics and analyses all the internal sub assemblies, providing the engineer with recommendations on what settings need adjustment and calibration. Fast PCB replacement with all settings and adjustments are easily uploaded via the engineer's laptop. The MMS system built into the UPS reduces the mean time to repair (MTTR) by almost half compared to other UPS systems. Four service meters track critical areas within the UPS alerting that maintenance is required.

Dalton provide a SNMP which is a popular protocol for network management. It used for collecting information from, and configuring, network devices, such as servers, printers, hubs, switches, and routers on an Internet Protocol network
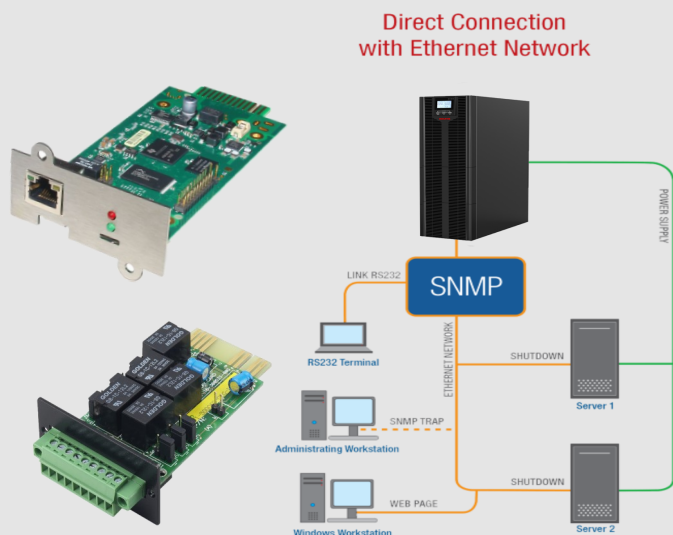
Advanced communications E33 is equipped with a back-lit graphic display (240x128 pixels) providing UPS information, measurements, operating states and alarms in different languages. It can also display wave forms and voltage/ current forms. The default screen displays UPS status, graphically indicating the status of the various assemblies (rectifier, batteries, inverter, bypass).
• Advanced multiplatform communications for all operating systems and network environments: PowerShield3 monitoring and shutdown software included for Windows operating systems 8, 7, Hyper-V, 2012, 2008, and previous versions, Mac OS X, Linux, VMWare ESXi, Citrix Xen Server and other Unix operating systems

High efficiency

Dalton E33 three-level NPC inverters are used across the power range (10-120) to achieve an operating efficiency of 96,5%. This technology halves (50%) the energy dissipated in a year by traditional UPS, with an efficiency level of 96%. Its exceptional performance makes it possible to recover the capital investment cost in less than three years of operation.

RJ45
SNMP
RS232
EPO
USB
Fan
Input breaker
Maintain switch
Terminal block cover
Terminal block
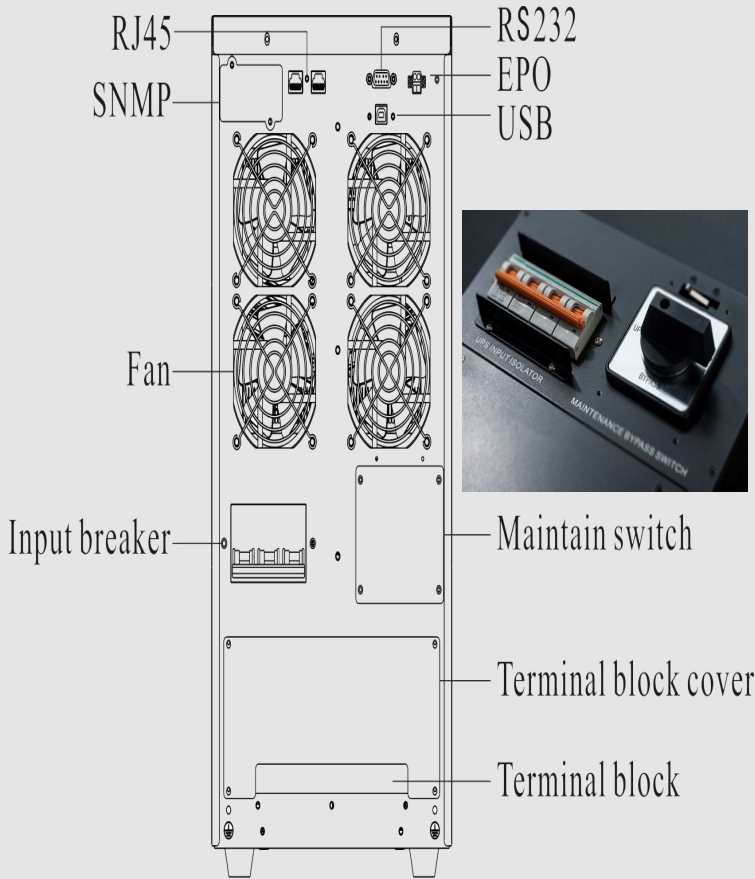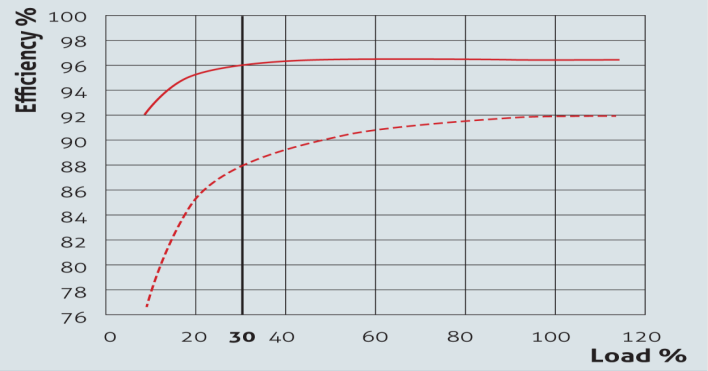
Zero Impact Source Easy Maintenance

Dalton E33 solves installation problems in systems where the power supply has limited power available, where he UPS is supported by a generator or where there are compatibility problems with loads that generate harmonic currents; E33 has a zero impact on its power source, whether this is the mains power supply or a generator: • input current distortion < 2,5%   • input power factor 0,99 • power walk-in function that ensures progressive rectifier start up• start-up delay function, to restart the rectifiers when mains power is restored if there are several UPS in the system. In addition, E33 plays a filtering and power factor correction role in the power network upstream of the UPS, as it eliminates harmonic components and reactive power generated by the power utilities. High efficiency State-of-the-art three-level NPC inverters.

• E33 gives ultra care of maintenance method with manual bypass switch it really easy for maintain each part of UPS now you can change batteries even smallest components with non stoppable power

Power Management
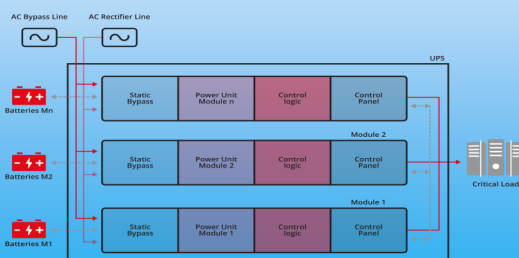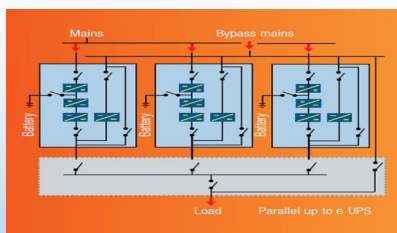
Parallel Configuration

E33 is characterized by great flexibility that allows it to satisfy the installation requirements, even if load gets higher or a redundancy level is needed. The UPS is able to synchronize with an external source or with an external switch via Load Bus Sync. The Parallel configuration is available up to 6 units, allowing users to increase the power according to effective load requirement.

Technical Specifications

Model	E3310	E3315	E3320	E3330	E3340	E3360	E3380	E33100	E33120	E33160
Rating Power	10KVA / 9KW	15KVA / 13,5KW	20KVA / 18KW	30KVA / 27KW	40KVA / 36KW	60KVA / 54KW	80KVA / 72KW	100KVA / 90KW	120KVA / 108KW	160KVA / 144KW

Input

Input system	380/400VAC 3P + N + G ± 20% (415 VAC +15%, - 25% optional)
Voltage range	190 - 520VAC (3-phase) @ 50% load 305 - 478VAC (3-phase) @ 100% load
Power factor	≥0.99
Frequency	40~60Hz (50Hz) /50~70Hz (60Hz)
Inrush current	Absent

Output

Output system	3 Phases + N & earth ground
Rated voltage	345/359/380/397/415VAC
Power factor	0.9
Voltage precision	± 1%
Voltage distortion	≤ 1% (linear load); ≤ 3% (non-linear load)
Output waveform	Pure sinewave
Output frequency	50/60}0.2 (battery mode)
Inverter overload capacity (Utility power, 25°C)	105%±5%≤load Overload warning only 105%±5% transfer to bypass in 10 mins; 125%±5% transfer to bypass in 30S; > 135%: transfer to bypass in 300 MS
Transfer time	0ms
Crest factor	3:1
Unbalanced load	100% - independent phase regulation
Parallel capability	Up to 6 units parallel
Frequency stability during battery operation	0,01%

DISPLAY / INTERFACE

LCD Display	LCD Display indicates frequency, voltage, load, battery voltage, etc. LED indicates running status
LED Status Indicator	Utility power; Battery discharge; Inverter On
EX Communication	MODBUS/RS485 and dry contact (RS232 and SNMP adapter are optional)
Display	LCD Normal display & 5.7 Inches LCD touch screen optional
Communication software	Windows XP/ 2003 and later version; Linux; Unix
Optional	SNMP Card/ Dry Contact AS400 Card/ CMC Card/ RS485 Card/ EMD Monitoring Device

Battery

Batteries voltage	240VDC	± 192VDC		2x(± 192VDC)	384VDC
Battery Inbuilt Quantity of Standard model	20 × 9Ah	32 × 7Ah	32× 9 Ah	64 × 7Ah	64 × 9Ah	None
Charging time	Standard model: 90% capacity restored in 4 hours; Long time model: depend on the capacity of battery
Charging capacity	Long time model: 7 A supplied (additional 7 A is optional) Standard model: 1 A, 2 A, 3.5 A settable
Battery type	Sealed maintenance-free lead –acid battery / Gel Battery / NiCd

General

Storage temperature	-25°C ~ 55°C (without batteries)
Operating temperature	0°C ~ 40°C
Humidity	20%~95%
Altitude	≤ 1000 m, derating 1% for each additional 100 m
Efficiency	≥ 96%, ECO mode 98%
Alarm	Overload, abnormal AC input, low battery, UPS failure
IP rating	IP20
Positioning	Min. 20cm rear space for fan ventilation
Standards	European Directives: L V 2006/95/CE low voltage Directive EMC 2004/108/CE electromagnetic compatibility Directive Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2 C2 Classification in accordance with IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111
Noise (dB)	≤ 50 dB / ≤ 55 dB / ≤ 60 dB / ≤ 65 dB
Protections	Low battery, overload, over temperature, short circuit, output over voltage, output low voltage

L*W*H (mm)	810 × 472 × 1050	910× 472 × 1260	910× 585 × 1115	900×600×1600

Weight (kg)	110	154	180	236	254	312	526	539	595	647

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