

Eaton E Series DX

20, 30, 40 kVA



Product introduction

The Eaton® E Series DX is a three-phase, double conversion uninterruptible power supply (UPS), and is available in 20, 30 and 40kVA output power rates with internal batteries capable to provide runtime up to 15 min. Its design fits perfectly to any environment where uninterrupted power feed is required to secure critical equipment's continuous operation. The E Series DX UPS provides a perfect solution for power protection, and solves power quality problems such as surges, spikes, voltage fluctuations, harmonic distortion, clutter interference and frequency fluctuations.

With E series DX, each phase is independently double converted and regulated. In addition, PFC (power factor control) controller is used for real time control and data processing, ensuring high availability at all times. Further extent reliability is accomplished by introducing intelligent charge mode which significantly prolongs service life of batteries. Also, possibility to have dual feed on UPS input adds availability thus increases reliability of system.

As an added benefit, IP21 compliant design makes E Series DX a perfect fit to industrial and other applications, where harsh environmental conditions may set extent requirements to mechanical design. Optional filter is also available for further protection against the smallest damaging particles.

Advanced power protection for:

- IT and networking environments
- wiring closets
- enterprise server applications
- small industrial applications



Powering Business Worldwide



N+X redundancy (supports parallel with the same battery)

More capacity and availability can be achieved by parallel connection of E Series DX. E Series DX accommodates paralleling of up to four modules for redundancy or capacity. By incorporating dual battery feed and advanced battery controls, it utilizes common battery for parallel configurations.

Smaller footprint thanks to internal batteries

During power outage and other interruptions internal batteries provide emergency power to safeguard operations. Internal batteries also eliminate the need for costly and space-consuming external battery cabinets. Eaton E Series DX now incorporates internal batteries to provide a runtime from 5 to 15 minutes depending on the power rating.

Intelligent battery charge and recharge management

With intelligent battery management system, charger parameters can be automatically adjusted based on varying environmental and load conditions to maximize battery service life and minimize time required to re-charge. In addition, various optimized modes are available based on the type and amount of batteries, providing extended battery life and reducing re-charge time if additional batteries are added.

Dual feed input

Dual feed input or dual AC source input, is available with E Series DX. AC input source is selectable by user based on the installation requirements.

Communications and remote management

Standard E Series DX model is always equipped with an intelligent communications slot and RS-232 and RS-485 ports. Optional communications and SNMP/WEB cards are also available to enable remote monitoring and remote management.

Excellent electrical performance

With total efficiency reaching 92 percent in normal mode, the E Series DX can achieve up to 98 percent efficiency in high-efficiency mode, reducing electrical costs and total cost of ownership.

With a wide input voltage range of 210 to 475 Vac, the E Series DX is able to operate in harsh electrical environments, providing enhanced availability by utilizing intelligent IGBT-based high-frequency technology to achieve greater than a .99 power factor. Harmonic distortion is less than five percent.

Further providing peace of mind in harsh electrical environments, the E Series DX provides enhanced overload protection. In fact, the E Series DX can operate for ten minutes at a 110 to 125 percent overload and one minute at a 150% overload with short circuit protection.



SNMP Webpower card

Technical specifications

Input	
Nominal Voltage	400 Vac (L-L) 230 Vac (L-N)
Frequency	40-65 Hz (self-adaptive to 50 Hz and 60 Hz)
Wiring	3-Phase + N + PE
THD i	<5%
Power factor	>0.99
Dual-line input	Support
Battery	
Type	Maintenance free VRLA batteries
Backup time	Up to 15 min with internal batteries
Battery nominal voltage (lead-acid)	360 V (30x12 V, 180 cells) 384 V (32x12 V, 192 cells)
Output	
Voltage	400 Vac (L-L) 230 Vac (L-N)
Frequency	50/60 Hz
Phase	Three-phase four wire + grounding
Power factor	0.8
Overload capability	125%, 10 min. 150%, 1 min.

Operation environment	
Temperature	0°C to 40°C
Humidity	20% to 90%
Efficiency	
Line mode	92%
HE (high efficiency)	98%
Display	
LCD	Chinese/English UPS state and operation introduction. Input voltage, output voltage, current, frequency, charger voltage and current, fault and warning display.
LED	UPS operation state
Warning equipment	
	Buzzer alarm and light double LED
Communication interface	
	RS-232, AS/400, RS485, service, EPO, compensate interface for battery temperature, intelligent slot
Compliance with standards	
Safety (CB certified)	IEC62040-1, EN60950-1
EMC	IEC 62040-2, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5

Description	kVA	Model description	Part number	Net weight (kg)	Gross weight (kg)	Dimensions (WxDxH mm)
Standard models using external battery solution	20	Eaton E Series DX 20 kVA	EDX20K4E	82	122	420 X 643 X 956
	30	Eaton E Series DX 30 kVA	EDX30K4E	135	210	450 X 700 X 1150
	40	Eaton E Series DX 40 kVA	EDX40K4E	140	215	450 X 700 X 1150
Standard models with space for internal batteries	20	Eaton E Series DX 20 kVA B	EDX20K4EB	120	166	420 X 700 X 1245
	30	Eaton E Series DX 30 kVA B	EDX30K4EB	195	255	470 X 700 X 1730
	40	Eaton E Series DX 40 kVA B	EDX40K4EB	195	255	470 X 700 X 1730
Standard models with internal batteries installed	20	Eaton E Series DX 20 kVA BI	EDX20K4EBI	272	320	420 X 700 X 1245
	30	Eaton E Series DX 30 kVA BI	EDX30K4EBI	515	575	470 X 700 X 1730
	40	Eaton E Series DX 40 kVA BI	EDX40K4EBI	515	575	470 X 700 X 1730

Runtime for UPS with internal batteries p.f. 0.7 (typical IT server/computer load)

Battery	Qty	20	30	40	kVA
7 Ah 12 V	2 x 30	6	–	–	min
9 Ah 12 V	2 x 30	10	–	–	min
7 Ah 12 V	3 x 32	–	6	–	min
9 Ah 12 V	3 x 32	–	10	–	min
7 Ah 12 V	4 x 32	–	11	6	min
9 Ah 12 V	4 x 32	–	15	10	min

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