

Eaton MX UPS



High performance UPS scalable from 5–20 kVA

Availability

- Two front access hot-swappable sub-modules (power and battery) for maintenance without system shutdown
- Large input voltage and frequency ranges to avoid using the batteries unnecessarily
- Automatic failover for power availability even if the UPS fails
- Automatic battery test (test period can be set)

Flexibility

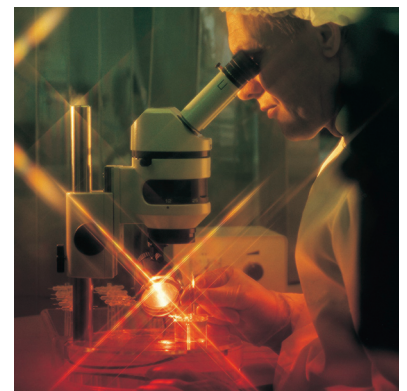
- Can be used as a free-standing tower unit or 19-inch rack-mounted: only 3U for the Eaton® MX UPS 5 kVA and 10U/16U for Eaton MX Frames
- Multilingual LCD with mimic and LEDs for rapid view of the UPS status, diagnostics and event log
- Outputs: NEMA L6-30R, 30A outlets and terminal block for hardwired installations
- Backup time: five minutes up to two hours by adding 3U battery modules

Minimum total cost of ownership (TCO)

- Compatibility with last generation server power supplies
- MX Frame is a modular system with 5 kVA units paralleled to provide up to 20 or 15 kVA with redundancy

Ideal protection for:

- Departmental networks
- Rack cabinets
- Blade servers
- Storage networks
- Telecom—Switches/VoIP



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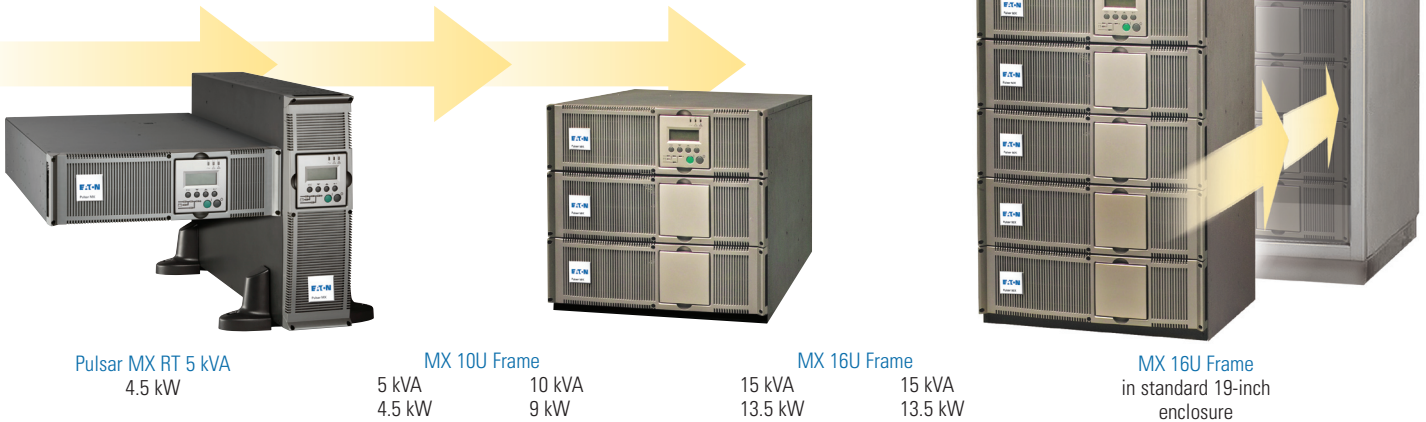
Powering Business Worldwide

Eaton MX... pay as you grow!

Seamless migration from 5 kVA to 20 kVA at optimized cost

The MX is a truly scalable optimized rack solution that allows you to add power as your business grows. You are able to easily expand your system from 5 kVA up to 20 kVA, while protecting your initial investment, by simply adding an MX Frame and/or more submodules. The base unit provides 208V, which is now the standard for next-generation blade servers and enterprise IT equipment. Add one or several modular 2U transformers to power any remaining 120V devices in 5 kVA increments.

Also, you can build in the level of redundancy into the system that is required for your mission-critical application.



Add POWER AND BATTERY SUB-MODULES to complete a 20 kVA 16U Frame

Designed For Blade Server Environment

The MX has been designed with virtualization in mind. It comes with a free power management suite that provides unrivaled benefits.

- You can deploy network shutdown modules (NSMs) for the various operating systems (OSs) on the blades through the host VMware ESX or Microsoft Hyper-V OS. A single installation, instead of multiple ones, saves time and money.
- The NSM software can also manage any kind of redundant arrangement, whether it is at the server level or the UPS level. Avoid premature shutdown of your IT system while you still have several levels of redundancy available.
- Up to five UPSs can be remotely monitored using the free copy of the EPM power infrastructure management tool included. Fifty-device or unlimited versions are also available.
- UPS-protected devices, such as servers, can be shutdown automatically with NetWatch 5.0 software.

Services

- Two-year warranty, including batteries
- Associated services
- Extended warranties (three and five years)
- Commissioning



Eaton NetWatch Client 5.0 has tested compatible with Cisco Unified Communications Manager 4.3. Go to www.eaton.com/PQ/cisco for disclaimer.

Network Management Card Mini-Slot: part number 66102



MX + Transformer 5000, 120V output: part number 87150



Environmental Sensor: part number 66846



Pulsar MX EXB battery extension module: part number 87103



Scalability—Add the backup time you need!

MX Frame: Extended runtime recommendations

With the MX Frame, you are able to add battery modules to get the amount of backup time that you need. Please refer to the chart below for your extended battery configuration options.

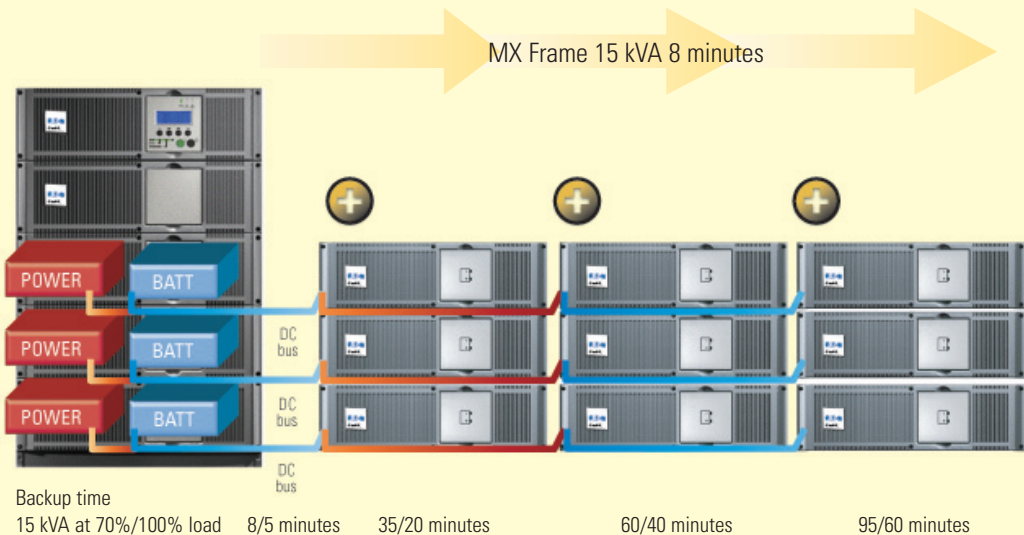
Note: For configurations with extended battery modules, output power factor is 0.7.

How to order a MX 16U Frame with extended runtime		UPS with 1 runtime extension			UPS with 2 runtime extensions			UPS with 3 runtime extensions		
		Qty	Part No.	Description	Qty	Part No.	Description	Qty	Part No.	Description
10U 10 kVA Frame	5 kVA	1	87015	5 kVA UPS bundle (upgradeable to 10 kVA)	1	87015	5 kVA UPS bundle (upgradeable to 10 kVA)	1	87015	5 kVA UPS bundle (upgradeable to 10 kVA)
		1	68528	6-foot battery cable	1	68528	6-foot battery cable	1	68528	6-foot battery cable
		1	87103	Ext. battery module (3U)	2	87103	Ext. battery module (3U)	3	87103	Ext. battery module (3U)
	10 kVA	1	87010	10 kVA UPS bundle	1	87010	10 kVA UPS bundle	1	87010	10 kVA UPS bundle
		2	68528	6-foot battery cable	2	68528	6-foot battery cable	2	68528	6-foot battery cable
		2	87103	Ext. battery module (3U)	4	87103	Ext. battery module (3U)	6	87103	Ext. battery module (3U)
16U 20 kVA Frame	15 kVA	1	87415	15 kVA UPS bundle (upgradeable to 20 kVA)	1	87415	15 kVA UPS bundle (upgradeable to 20 kVA)	1	87415	15 kVA UPS bundle (upgradeable to 20 kVA)
		3	68528	6-foot battery cable	3	68528	6-foot battery cable	3	68528	6-foot battery cable
		3	87103	Ext. battery module (3U)	6	87103	Ext. battery module (3U)	9	87103	Ext. battery module (3U)
	20 kVA	1	87420	10 kVA UPS bundle	1	87420	10 kVA UPS bundle	1	87420	10 kVA UPS bundle
		4	68528	6-foot battery cable	4	68528	6-foot battery cable	4	68528	6-foot battery cable
		4	87103	Ext. battery module (3U)	8	87103	Ext. battery module (3U)	12	87103	Ext. battery module (3U)

Options	Part No.	Description
For freestanding installation, add: (various configurations available—consult factory for options)	87410	Caster kit for MX Frames—wheels/floormounts/seismic brackets to attach directly to MX Frame
	86005	Caster cart/integration kit—platform with wheels/floormounts/seismic brackets to stack EXBs and/or Frame
For 120V output, add: (various configurations available—consult factory for options)	87102	MX 5000 RT (2U) Transformer—plug-and-play (one or two for 10U to frame/up four for 16U frame)
	87482	MX-K 20 kVA Transformer—hardwired input and output



Example: Battery extension for MX Frame 15 kVA configuration



Specifications

	Standalone RT 5 kVA (3U)	Scalable Frame (10U)	Scalable Frame (16U)
Inputs	Online double-conversion with power factor correction, convection cooled static bypass switch		
Technology	Terminal block w/standard NEMA L6-30P, 10' cord		
Input connections	Terminal block	Terminal block	Terminal block
Nominal voltage	200/208 (default) /220/230/240/250 V		
Voltage range without using battery ⁽¹⁾	120-280 V		
Input frequency range, THDI	40-70 Hz, <7%		

Outputs	Terminal block + (4) NEMA L6-30R	Terminal block + (4) NEMA L6-30R	Terminal block + (8) NEMA L6-30R
Output connections	200/208/230/240/250V, 50/60 Hz autoselect, frequency converter as standard, <2%, 97%		
Output voltage and frequency, THDU, efficiency ⁽²⁾			

Transformer 5000 120V

Input connection	NEMA L6-30P			
Output connections	(2) NEMA L5-20R, (6) NEMA 5-20R			

Backup time⁽³⁾

MX standard backup time	5 min				
MX + EXB / MX + 2 EXB / MX + 3 EXB	22/41/62 min	22 min (1 EXB)/41 min (2 EXB)/62 min (3 EXB)	22 min (2 EXB)/41 min (4 EXB)/62 min (6 EXB)	22 min (3 EXB)/41 min (6 EXB)/62 min (9 EXB)	22 min (4 EXB)/41 min (8 EXB)/62 min (12 EXB)

Communications

Slots	(1) Mini-Slot compatible w/Mini-Slot NMC, NMC ModBus/JBus, MC Contacts/serial	(2) Mini-Slot compatible w/Mini-Slot NMC, NMC ModBus/JBus, MC contacts/Serial	(2) Mini-Slot compatible w/Mini-Slot NMC, NMC ModBus/JBus, MC contacts
Ports	Remote power off (RJ12), (5) output contacts (DB-9), setup using Solution-Pac ⁽⁴⁾ USB and DB-9 serial ports EXB module detection (RJ45)		

Operating conditions, standards & approvals

Performance, safety, EMC, surge protection	IEC/EN 62 040-3, IEC/EN 62 040-1-1, IEC/EN 62 040-2 class A, UL 1778 and CSA 22.2			
Operating temperature, noise, approvals	0°C to 40°C continuous, 45 dbA ⁽⁵⁾ , UL, cUL, TÜV, GS mark, CB, C-Tick, CE, IEC 61 931			

Dimensions/weight

MX RT standard backup tower/rack configuration (H x W x D)*	5.14 x 17.5 x 27.6 (130.6 x 444.5 x 700)	20.9 x 17.5 x 29.1 (531 x 445 x 738)	31.3 x 17.5 x 29.1 (795 x 445 x 738)
Rackmount 3U x*	5.14 x 17.5 x 27.6 (130.6 x 444.5 x 700)	16.7 x 17.5 x 29.1 (424 x 445 x 738)	27.1 x 17.5 x 29.1 (688 x 445 x 738)
Weight	125.7 lb/57 kg	190 lb/86 kg	280 lb/127 kg
MX RT Transformer 5000 rack configuration (H x W x D)*, weight	1 per UPS	3.5 (2U) x 17.5 x 25.6 (88.9 x 444.5 x 650), 84 lb/38 kg	up to 2
MX EXB battery unit rack config (W x H x D)*, weight		up to 3	up to 4
		5.14 (3U) x 17.5 x 25.6 (130.6 x 444.5 x 650), 154 lb/70 kg	maximum three per power module

* inches (mm)

Warranty

Two-year⁽⁶⁾

Part numbers

MX UPS—standard backup time ⁽³⁾	87050	87015 ⁽⁷⁾	87010 ⁽⁸⁾	87415 ⁽⁹⁾	87420 ⁽¹⁰⁾
MX UPS—standard backup time with 120V Transformer (2U)	87150				
MX EXB RT: battery extension module (3U)	87103				
MX Frame—empty			87011		87021
Caster/Floor Mount Kit for MX Frame				87410	
Frame Rail Kit				87418	
MX Transformer 5000 RT with rails (2U)		87102			
MX-K 20 kVA Transformer (hardwired input/output with casters)					87482
MX Power/electronics sub-module		87100			
MX Battery/sub-module		87101			
Battery Integration System		86005			
MX 6-foot battery cable		68528			
MX/EX RT Rail Kit		86002			

1: At 70% load

2: Economy mode, 91% in normal mode

3: At 70% nominal rating with power factor 0.7 typical values after three charge/discharge cycles, with three- five-year-old batteries. Weekly battery test without interrupting the load (daily or monthly if required). EXB compatible with 0.8 power factor loads

4: Solution-Pac CDROM supplied as standard

5: 50 dbA above 5 kVA

6: Depending on the country, see www.eaton.com/powerquality

7: 87015 = 87011 (empty MX 10U Frame) + (1) 87100 + (1) 87101

8: 87010 = 87011 (empty MX 10U Frame) + (2) 87100 + (2) 87101

9: 87415 = 87021 (empty MX 16U Frame) + (3) 87100 + (3) 87101

10: 87420 = 87021 (empty MX 16U Frame) + (4) 87100 + (4) 87101



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