

# Eaton EX RT UPS



Versatile form factor

The Eaton® EX RT UPS is a UPS designed for sensitive high-density server environments and harsh industrial applications. Specifically engineered to meet demanding customer applications in IT systems, measuring instruments, PLCs and industrial PC markets, the EX RT is fully compatible with genset redundancy requirements in most instances. The manual bypass, hot-swap I/O box and intuitive LCD control panel are just a few of the many differentiating features that make the EX RT the ideal product for the 5–11 kVA power range.

## High reliability and availability

- Internal static bypass
- Input/output (I/O) box with manual bypass

## Industrial grade performance

- Large input voltage range without using battery power
- 40–70 Hz input frequency range
- Operating temperature: 0°–40°C permanently, 0°–45°C for eight hours
- Standalone solution with modular design for industrial needs

## Optimized solution for infrastructure network integration

- Rack kit for an optimized mounting with 3U height per module
- Communications slot compatible with multiple communication card protocols
- Software application packages are fully customized
- Long backup time availability—up to 8 hours and UL924 listed solutions

## Services

- Warranty: Two years, parts and labor (US and Canada)
- On-site services available for startup, preventive maintenance and more
- Extended warranty contracts: Warranty+ 1, Warranty+ 3

## The solution for high-density rack server enclosures and industrial environments

### High availability

- Hot-swap battery and UPS modules prevent interruptions
- Internal and maintenance bypass are standard to achieve the highest level of availability
- Large input voltage window without using battery power
- Automatic battery test and protection against deep discharges



Clear coat battery packaging with thru holes for diagnostic and testing



Hot-swappable I/O Box



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## Compatibility with any environment

### Data room

- Versatile rack or tower in 6U, including the power and battery modules
- Management through various protocols such as HTTP/SNMP/XML/Telnet
- Integration with popular network management systems like HP Openview, IBM Tivoli, CA Unicenter
- Integrated NEMA receptacles included with transformer configuration
- Optional rackmount PDU with NEMA or IEC sockets to facilitate power distribution within the enclosure

### Ergonomics

- Multilingual scrolling LCD front bezel control panel
- Simple setup on network or industrial mode permits system shutdown or service continuity in case of overload or short circuit
- Event log for easy fault detection

### Battery backup

- Battery modules up to eight hours with the CLA\* charger module
- Space saving battery connector cables and extra long battery cables for separate battery racks
- Battery detection system automatically configures battery modules and UPS
- UL 924 emergency lighting and equipment battery cabinets available (90-minute runtime)

\*CLA for external battery cabinet only

### High-end ergonomics

- Versatile 6U rack or tower design
- Multilingual LCD
- Two stands improve stability of the tower
- Up to five extra battery modules to extend runtime up to two hours
- Voltage-free contacts are included for remote status monitoring

### Industry and infrastructure

- Battery integration system optimizes the footprint of extended runtime solutions with automatic battery module detection
- Genset compatibility
- Integration with building management systems (Jbus), six voltage-free contacts for remote status monitoring
- Temperature and humidity supervision with an environment sensor triggers an orderly shutdown

## Large choice of options to meet customer needs

- Universal 3U transformer module: System earth arrangement, galvanic isolation for upstream and downstream UPS installation
- Battery integration system for optimized footprint: up to eight modules stacked on a caster kit—one UPS module, six EXB battery modules and one transformer module
- 3U CLA module for backup times up to eight hours

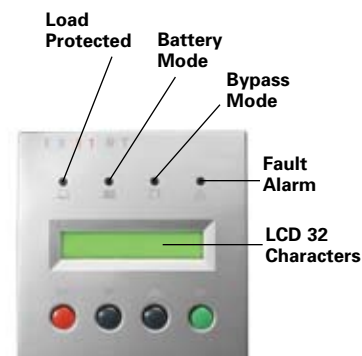
### User-friendly installation and operation

- Load metering in kW/kVA is permanently displayed on the LCD
- Operating mode, battery capacity in percentage, voltage measurement, normal AC, bypass (separate AC) input/output, serial number and power rating identification are available by scrolling up or down
- Event logs and fault diagnostics facilitate maintenance and repair

### Full customization through a configuration panel in Personal Solution-Pac

- CLA, hot standby, ECO mode, frequency converter setup
- Low battery, battery test frequency, disable deep discharge protection
- AC bypass input tolerance settings for: frequency, voltage-AC bypass transfer condition

### EX RT with Battery Integration Kit



**Front panel LCD control panel**  
LCD, rotating (tower/rack format), multilingual, backlit

### Communications software and connectivity

- Power management suite (included) comes with network-based shutdown software (Windows, Linux, MacOS, VMware ESX, Microsoft Hyper-V) and local or remote supervision up to five nodes
- Network Management Card (NMC) connects the UPS to an Ethernet 10/100 network, raising SNMP or XML alarms and supervising the UPS using a simple browser interface
- NMC environment sensor monitors the temperature, humidity and two relay contacts via SNMP or HTML
- Enterprise Power Manager supervisor provides comprehensive management of multiple UPSs and PDUs using a Windows PC (vendor neutral)
- NMS integration kits include HP OpenView, IBM Tivoli Netview, CA Unicenter, etc.
- Status information card monitors for voltage-free contacts and Remote Power Off (RPO) function
- NetWatch 5.0 software automatically shuts down UPS-protected devices, such as servers

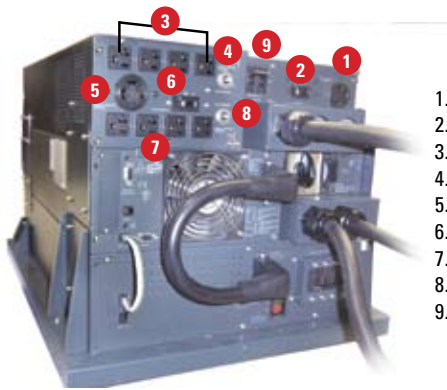
### Eaton customer service and support

- Flex and PowerTrust on-site services from factory-trained personnel for startup, preventive maintenance and more
- Extended warranty contracts
  - Warranty + 1
  - Warranty + 3
- UPSgrade™ program for substitution of an old UPS (vendor neutral), includes the EX RT 5 kVA model



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

### EX RT Back Panel (Transformer Module/Power Module/Battery Module)



1. L6-30R (Load 1)
2. Load 1 breaker 30A
3. (4) 5-20R 120V (load 2)
4. Load 2 Mini-breaker 15A
5. L6-30R (Load 3)
6. Load 3 breaker 30A
7. (4) 5-20R 120V (load 4)
8. Load 4 Mini breaker 15A
9. Output breaker

### EX RT Back Panel (Battery Module /Power Module)



1. Slot for communication cards
2. Output contracts communication port
3. Remote Emergency Power Off communication port (REPO)
4. Connectors for automatic detection of battery modules
5. RS232 communication port
6. Battery module connectors to the UPS or the battery modules)
7. Manual bypass switch
8. Output terminal block
9. Normal AC source switch
- 10 Normal AC source terminal block
- 11 Bypass AC source terminal block
- 12 Battery circuit-breaker

### EX RT BATTERY BACKUP TIMES (IN MINUTES)\*

Load (VA/Watts)	Internal Batteries	+1 EBM	+2 EBMs	+3 EBMs	+4 EBMs	+5 EBMs
<b>EX RT 5000</b>						
500/400	170	358	540	740	892	1220
1000/800	91	170	260	355	505	540
1500/1200	49	110	170	240	290	355
2000/1600	33	84	120	170	235	260
2500/2000	25	60	100	122	170	225
3000/2400	21	46	75	110	135	170
3500/2800	16	39	64	95	119	140
4000/3200	13	31	57	84	105	120
4500/3600	11	27	52	68	92	110
5000/4000	9	25	45	60	84	100
<b>EX RT 7000</b>						
700/490	121	266	447	578	756	889
1400/890	57	125	203	244	364	453
2100/1470	37	80	124	185	245	287
2800/1960	28	61	101	128	169	232
3500/2450	21	53	83	108	132	164
4200/2940	15	37	66	90	110	133
4900/3430	12	30	55	75	98	118
5600/3920	10	24	45	61	77	102
6300/4410	8	22	38	53	69	86
7000/4900	7	20	32	45	57	72
<b>EX RT 11000</b>						
1100/800	90	191	293	392	525	637
2200/1600	40	93	143	199	261	312
3300/2400	25	61	96	135	172	201
4400/3200	18	43	71	99	120	142
5500/4000	14	30	53	84	102	113
6600/4800	11	24	44	60	86	102
7700/5600	9	20	34	51	67	87
8800/6400	7	17	27	43	56	68
9900/7200	6	15	24	35	48	60
11000/8000	5	14	22	30	42	53

\* Backup times are approximate and may vary with equipment, configuration, battery age, temperature, etc.

## EX RT MODELS

Catalog Number	Style Number	Form Factor	Rating (VA/Watts)	Output Voltage	Input Connection	Output Receptacle	Dimensions (H x W x D, inches)	Weight (lb)
EXRTG5000-XL6UMS	86505	Rack/Tower	5000/4000	HV	Hardwired	Hardwired	10.32 (6U) x 17.49 x 26.25	192.0
EXRTG7000-XL6UMS	86507	Rack/Tower	7000/4900	HV	Hardwired	Hardwired	10.32 (6U) x 17.49 x 26.25	192.0
EXRTG11000-XL6UMS	86511	Rack/Tower	11000/8000	HV	Hardwired	Hardwired	10.32 (6U) x 17.49 x 26.25	211.0
EXRTL5000-XL9UMS	86506	Rack/Tower	5000/4000	LV	Hardwired	Hardwired + (2) NEMA L6-30R + (8) NEMA 5-20R	15.48 (9U) x 17.49 x 26.25	365.0
EXRTL7000-XL9UMS	86508	Rack/Tower	7000/4900	LV	Hardwired	Hardwired + (2) NEMA L6-30R + (8) NEMA 5-20R	15.48 (9U) x 17.49 x 26.25	365.0
EXRTL11000-XL9UMS	86512	Rack/Tower	11000/8000	LV	Hardwired	Hardwired + (2) NEMA L6-30R + (8) NEMA 5-20R	15.48 (9U) x 17.49 x 26.25	384.0

HV = High-voltage (208, 240, etc.) and LV = Low-voltage (120V), also provides 208/240V

## Technical specifications<sup>1</sup>

TOPOLOGY	Online with automatic bypass
PERFORMANCES	
Nominal Input Voltage	120–280V at <70% rated output
Input Voltage Range	156–280V at 100% rated output
Input Frequency Range	40–70 Hz, frequency converter as a standard
Output Voltage/Frequency	200/208 <sup>2</sup> /220/230/240/250V; 120V output voltage available with transformer; 50/60 Hz autoselect
Overall Efficiency (Online Mode–ECO Mode)/Harmonic Current Distortion	90–97%/<5%
Crest Factor/Overload Capacity	3:1 / 2 min if 102%<overload<110%, 1 min if 110%<overload<125%, 30 sec if 125%<overload<150%, 500 msec if overload >150%
Battery Test	Weekly without load interruption <sup>3</sup>
Operating Temperature	45°C for 8 hr, 0°–40°C continuous

### CONNECTION

Block Power Module	
Input/Output Terminal Block	Hardwired
Maximum Wire Size (Solid or Stranded Wire)	5/7 kVA: 10 mm/6 AWG 11 kVA: 13 mm/4 AWG
Step-Down Transformer	120/208/240 Vac output
Output Configuration	Terminal block, plus (2) NEMA L6-30R (208V), (8) NEMA 5-20R; optional PDUs for additional NEMA or IEC receptacles

### COMMUNICATION

Port Type	(6) voltage-free dry contacts DB-9 rated at 2A 48V DC, (1) RS 232, (1) RJ11 for RPO (Remote Power Off)
Slot	(1) slot for Mini-Slot communication card [Network Management Card (SNMP/Web), NMC ModBus/JBus, MC Contacts/Serial]

### STANDARDS AND CERTIFICATION

Performance and Safety	IEC 62040-1/CEI 60950/UL 1778 and CSA 22.2 Standards
EMC	IEC 62040-2; EN 50091-2; FCC class A

<b>WARRANTY</b>	Two years, parts and labor (US and Canada)
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1. Due to continuing product improvement programs, specifications are subject to change without notice
2. Default voltage
3. Configurable to daily or monthly

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Argentina: 54.11.4343.6323  
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México: 52.55.5488.5252

## EX RT INDIVIDUAL MODULES AND OPTIONS

Part Number and Description	5 kVA/4 kW	7 kVA/4.9 kW	11 kVA/8 kW
<b>EX RT Power and Battery Modules</b>			
Power Module with rails	86215	86216	86217
Battery Module with rails	86207	86207	86209
UL924 Battery Module	86218	86219	86220
<b>EX RT Transformer</b>			
7 kVA Transformer with rails		86311	
11 kVA Transformer with rails			86211
<b>EX RT CLA Charger Module</b>			
CLA Charger with rails	86214	86214	86214
<b>Battery Integration Kit with Casters</b>			
Stack kit with inter-module fastening, swivel wheels, brakes, leveling feet	86005	86005	86005



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Italy: 39.02.66.04.05.40  
Norway: 47.23.03.65.50  
Portugal: 55.11.3616.8500  
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