

EX RT 5/7/11 kVA

Introducing the EX RT. An all purpose high performance on-line UPS for sensitive rack server enclosures and harsh industrial environments.

High Reliability & Availability

- ▶ Internal static bypass
- ▶ 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°C - 40°C permanently, 0°C - 45°C for 8 Hours
- ▶ Stand alone solution with modular design for industrial needs

Optimized Solution for Infrastructure Network Integration

- ▶ Rack kit for an optimized mounting with 3U height per module
- ▶ Brackets secure the UPS into the rack enclosure
- ▶ 1 slot compatible with multiple MGE communication card protocols
- ▶ Software application packages are fully customized
- ▶ Long backup time availabilities
- ▶ Input/Output box brackets secure the I/O box during hot swapping of power module

The EX RT 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, PLC's and industrial PC markets, our UPS is fully compatible with genset redundancy requirements in most instances. The manual bypass, hot swap I/O box and intuitive front panel LCD control panel are just a few of the many differentiating features that make the EX RT the ideal product for the 5 to 11 kVA power range.

M G E

Office Protection Systems

An Eaton Brand

The solution for high-density rack server enclosures and industrial environment

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 diagnostics and testing



Hot-swappable I/O Box

Compatibility with any environment

Data room

- ▶ Versatile rack or tower in 6U=power module + battery module
- ▶ 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 shut down or service continuity in case of overload or short circuit
- ▶ Event log for easy fault detection

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

Battery back-up

- ▶ Battery modules up to eight hours with the CLA* charger module *CLA for external battery cabinet only
- ▶ 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 (90 minute runtime) battery cabinets available

High-end ergonomics

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



Versatile form factor

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 + one transformer module
- ▶ 3U CLA module for back up times up to eight hours

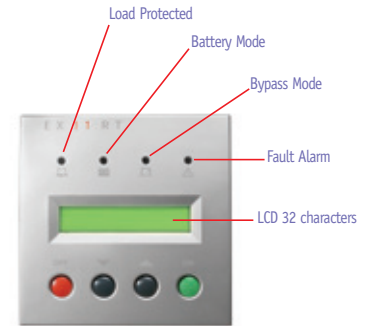
User-friendly installation and operation

- ▶ Load metering in kW/kVA is permanently displayed on the LCD
- ▶ Operating mode, battery capacity in %, 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 conditions

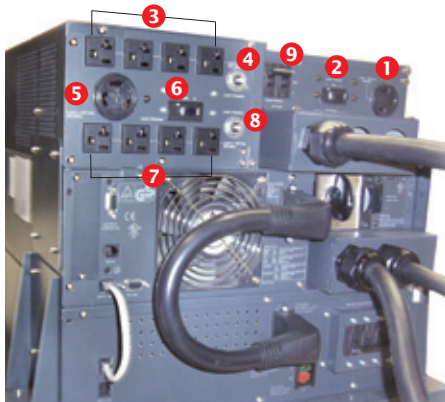
EX RT with Battery Integration Kit



Front Panel LCD Control Panel

LCD display, rotating (tower or rack format), multilingual, backlit

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



- 1 L6-30R (Load 1)
- 2 Load 1 Breaker 30A
- 3 (4) 5-15/20R 120V (Load 2)
- 4 Load 2 Mini-Breaker 15A
- 5 L6-30R (Load 3)
- 6 Load 3 Breaker 30A
- 7 (4) 5-15/20R 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 contacts communication port
- 3 Remote Emergency Power Off communication port (REPO)
- 4 Connectors for automatic detection of battery module(s)
- 5 RS 232 communication port
- 6 Battery module connectors (to the UPS or the other 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

Easy integration in high-density enclosures.

Software unrivaled anywhere in the industry.



Power Management

Solution-Pac software suite on CD
Included for server protection and local or remote UPS management

Options

Network Management Card

- ▶ For Ethernet 10/100 network connection, SNMP alerts and Web-based monitoring

Environment Sensor for SNMP/Web card

- ▶ SNMP and Web monitoring of temperature + humidity + status of 2 contacts

Management-Pac 2 software suite on CD

- ▶ NMS integration kit: HP OpenView, IBM Tivoli Netview, CA Unicenter

Enterprise Power Management

- ▶ Device Monitoring/Management Application

Status information card

- ▶ Monitors for voltage free contacts and remote power off function

MGE PowerServices™

- ▶ Installation and Start-Up
- ▶ Start-Up Only
- ▶ Extended Warranty Contracts
 - Warranty + 1
 - Warranty + 3

EX RT Specifications

5 kVA/4 kW

7 kVA/4.9 kW

11 kVA/8 kW

Performances

Technology	Online double conversion with PFC (Power Factor Correction) system		
Nominal Input Voltage	120-280 V at <70% rated output		
Input Voltage Range	156-280 V at 100 % rated output		
Input Frequency Range	40-70 Hz, frequency converter as a standard		
Output Voltage/Frequency	200/208*/220/230/240/250 Volts; 120 V Output Voltage available with transformer; 50/60 Hz autoselect		
Overall Efficiency (Online Mode-ECO Mode)/	90% - 97% /<5%		
Harmonic Current Distortion			
Crest Factor/Overload Capacity	3:1 / 2 min if 102%<overload<110%, 1 min if 110%<overload<125%, 30 sec if 125%<overload<150%, 500msec. If overload >150%		
Battery Test	weekly without load interruption ⁽¹⁾		
Operating Temperature	45°C for 8 Hrs. 0°C to 40°C continuous		

Back-up Times (in minutes at 50%/100% loads)

5 kVA/4 kW

7 kVA/4.9 kW

11 kVA/8 kW

Standard Battery	25/9	21/7	14/5
Standard Battery + 1 EXB	60/25	53/20	30/14
Standard Battery + 2 EXB	100/45	83/32	53/22
Standard Battery + 3 EXB	122/60	108/45	84/30
Standard Battery + 4 EXB	170/84	132/57	102/42
Standard Battery + 5 EXB	225/100	164/72	113/53

More back-up time available with CLA module, on request

Connection

Power Module Input/Output Terminal Block	Hardwired	Hardwired	Hardwired
Maximum Wire Size (Solid or Stranded Wire)	10 mm / 6 AWG	10 mm / 6 AWG	13 mm / 4 AWG
Step-Down Transformer	120/208/240 VAC Output		
Output Configuration	Terminal Block, plus (2) NEMA L6-30R (208V) (8) NEMA 5-15/20R Optional PDUs for additional NEMA or IEC receptacles		

Communication

Port Type	6 voltage free dry contacts DB-9 rated at 2 A 48V DC, (1) RS 232, (1) RJ11 for RPO (Remote Power Off)
Slot	1 slot for MGE transverse communication card (HTTP, XML, Webcard, Jbus...)

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
Certification	UL/TUV, GS mark, CB, C-Tick, CE

Dimensions (H x W x D) in inches/Weight in pounds

Standard EX RT (Power Module + Battery Module) Form Factor (High Voltage)	10.32 (6 U) X 17.49 X 26.25/192 for 5/7 kVA System, 211 for 11kVA System
Standard EX RT (Power Module + Battery Module + Transformer Module)	15.48 (9U) X 17.49 X 26.5/365 for 5/7 kVA Systems/384 for 11 kVA System
Form Factor (Low Voltage)	
Power Module EX RT	5.16 (3 U) X 17.49 X 26.25/49.6 for 5/7kVA Unit, 60.6 for 11 kVA Unit
Battery Module EXB RT	5.16 (3 U) X 17.49 X 25 / 142 for 5/7kVA Unit, 151 for 11 kVA Unit
Charger Module EX RT CLA	5.16 (3 U) X 17.49 X 23.75/25.40
Transformer Module EX RT	5.16 (3 U) X 17.49 X 25/173

Part Number and Description

5 kVA/4 kW

7 kVA/4.9 kW

11 kVA/8 kW

EX RT Standard Pack without Transformer (HV)	86050	86070	86110
EX RT Standard Pack with Transformer (LV)	86201	86203	86205

EX RT Power and Battery Modules

Power Module with rails	86215	86216	86217
Battery Module with rails	86207	86207	86209

EX RT Transformer

7 kVA Transformer with rails	-	86311	-
11 kVA Transformer with rails	-	-	86211

EX RT CLA Charger Module

CLA Charger with rails	86214	86214	86214
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Battery Integration Kit with Casters (max. 8 modules)

Stack kit with inter-module fastening, swivel wheels, brakes, leveling feet	86005	86005	86005
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Installation Rack Kits for EX RT/EXB 5/7/11 kVA

Power Module Rail Kit	86001	86001	86001
Battery Module, Transformer and CLA Charger Rail Kit	86002	86002	86002

Input Cord for 5 kVA System

8 foot cord with NEMA L6-30P (2)	72-153653-01	-	-
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Warranty/Parts and Labor (US and Canada)

Two year product warranty

*: Default Voltage 1: Configurable

