

EX RT 5/7/11 kVA

Introducing the EX RT, an all purpose high performance Online UPS engineered for usage in the sensitive rack server enclosure applications to harsh industrial environments.



The EX RT is a dual feed, high availability UPS designed for the most sensitive high density server environments and environmentally harsh industrial applications. This high performance UPS is engineered for demanding customer applications requiring protection for critical IT systems, measuring instruments, PLCs, and industrial PC ecosystems. In terms of environment, this means a full compatibility with gensets and in some cases redundancy. The EX RT redundancy capability provides separate Normal and Bypass AC inputs, and hot standby functionality. The dual feed, manual bypass, hot-swap I/O box and intuitive front panel LCD control panel are just a few of the many differentiating features making the EX RT the ideal product for the 5 to 11 kVA power ranges.

High Reliability & Availability

- ▶ Internal bypass and manual bypass as standard
- ▶ Normal and bypass AC inputs as standard
- ▶ Redundancy with hot standby configuration without derating for the upstream EX RT
- ▶ Dual feed input source for IT mirroring in a double fault tolerant configuration

Industrial Grade Performance

- ▶ Large input voltage (120 –280 V) without using battery power
- ▶ 40-70 Hz input frequency range, converter as standard without derating
- ▶ Operating temperature: 0°C - 40°C permanently, 0°C – 45°C for 8 H without derating
- ▶ 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
- ▶ Bended battery cable to optimize depth when rack-mounted
- ▶ Rear brackets to ship the UPS into the rack enclosure
- ▶ 1 slot compatible with multiple MGE communication card protocols
- ▶ Full customization with the included software application packages
- ▶ Long backup time availabilities

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

High-availability

- ▶ Hot-swappable battery and UPS modules without interrupting the secured system
- ▶ Internal bypass and maintenance bypass included as standard to achieve the highest level of availability
- ▶ Redundant power feed from two independent sources (AC normal and bypass inputs can be common or separate)
- ▶ Large input voltage window: from 120 up to 280 Volts 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 format Tower/Rack (6U=power module + EXB).
- ▶ Management through various protocols (HTTP/SNMP/XML/Telnet).
- ▶ Integration with popular Network Management Systems (HP Openview, IBM Tivoli, CA Unicenter...)
- ▶ Integrated NEMA receptacles included with transformer configuration
- ▶ Rackable PDU (option) with NEMA or IEC sockets to facilitate power distribution within the enclosure

Ergonomics

- ▶ Multilingual scrolling LCD front bezel control panel
- ▶ Simple set-up (network or industrial mode) to give priority to 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 option to optimize the footprint of extended runtime solutions (automatic battery module detection)
- ▶ Genset compatibility
- ▶ Integration with Building Management Systems (Ibus), 6 voltage-free contacts for remote supervision
- ▶ Temperature and humidity supervision with Environment Sensor (option), which can trigger an orderly shutdown

Redundancy

- ▶ Easy to achieve hot standby system through two single units (N+2)
- ▶ Double fault tolerant redundancy known as IT mirroring of the UPS protection

Large choice of back-up times

- ▶ From 10 minutes to 2 hours with battery modules and up to 8 hours with the CLA charger module (CLA for use with external battery cabinet only)
- ▶ Space saving battery connector cables and extra long battery cables for separate battery racks are available
- ▶ Battery detection system allows auto-configuration of battery modules and UPS autonomy



High-end ergonomics

- ▶ Versatile, 6U Rack/tower design
- ▶ Backlit LCD 12 characters, multilingual
- ▶ Two stands to achieve a steady tower version
- ▶ Up to 6 EXB (battery modules) added to the UPS module to achieve up to 2 hour runtime
- ▶ Voltage-free contacts as standard for remote status monitoring



Versatile form factor

Large choice of options to meet customer needs

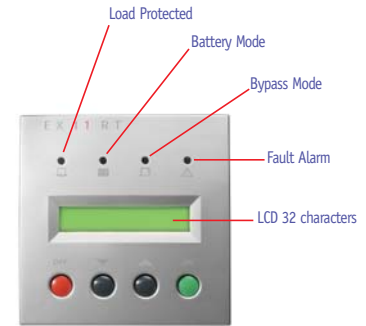
- ▶ Universal 3U Transformer Module: System Earth Arrangement, galvanic isolation for upstream and downstream UPS installation
- ▶ Battery Integration System for optimized footprint: up to 8 modules stacked on a caster kit: 1 UPS module + 6 EXB battery module + 1 transformer module
- ▶ 3U CLA module for long back-up time up to 8 hours
- ▶ Specific EXB battery module with EPO auxiliary built-in to achieve a true Emergency Power Off System

User-friendly installation and operation

- ▶ Load in KW/KVA is permanently displayed on the LCD
- ▶ Information accessible by scrolling up & down are : operating mode, battery capacity in %, voltage measurement, normal AC, bypass (separate AC) input/output, serial number and power rating identification
- ▶ Event logs and fault diagnostics to facilitate the 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 setting up: frequency, voltage-AC bypass transfer conditions



Front Panel LCD Control Panel

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

EX RT Back Panel



- 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 with all UPSs 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

Status information card

For UPS monitoring through voltage-free contacts + remote power-off function

MGE PowerServices™

Service Range

- ▶ **Warranty+:** warranty extension up to 5 years
- ▶ **Start UP+:** On-site UPS commissioning
- ▶ **Warranty+ Silver:** Warranty+ and Start Up+
- ▶ **Warranty Gold:** Warranty+, Start UP+ and maintenance visit

Dependent on country, consult www.mgeups.com/services

EX RT Specifications

5 kVA

7 kVA

11 kVA

Performances

Active power*	5KVA/4KW	7 KVA/ 4.9 KW	11 KVA/ 8 KW
Technology	online double conversion with PFC (Power Factor Correction) system		
Input-voltage range	155-280 V at 100 % rated output; 120-280 V at 70 % rated output		
Input frequency range	40-70 Hz, frequency converter as a standard		
Output voltage/Frequency	200 / 208 / 230 / 240 / 250 Volts / 50 / 60 Hz autoselect		
Overall efficiency (on line mode-ECO mode)/ harmonic current distortion	92 % - 97 % / <5%		
Crest factor/overload capacity	3:1 / 2 min if 102%<overload<1110%, 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: connection from 1 up to 6 battery modules EXB(3)

Standard back-up time	21 Minutes/12 minutes	12 minutes/7 minutes	9 minutes/5 minutes
70 % load/100 % load			
1 power mod. + 2 battery mod. EXB	53 Minutes/30 minutes	30 minutes/20 minutes	20 minutes/14 minutes
70 % load/100 % load			
1 power mod. + 6 battery mod. EXB	164 Minutes/118 minutes	118 minutes/72 minutes	87 minutes/53 minutes
70 % load / 100 % load(4)			

Connection

Power module Input/Output Terminal Block	10 mm_ / 6 AWG	13 mm_ / 4AWG
Maximum Wire Size (solid or stranded wire)	Step-Down Transformer for 120/208/240 VAC Output / PDU Option for NEMA / IEC Sockets	

Communication

Port type	6 voltage free dry contacts DB-9 rated at 2 A 48V DC, (1) RS 232, (1) RJ 45 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 UL/TÜV, 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	10.32 (6 U) X 17.49 X 25 / 192, for 5/7 kVA System, 211 for 11kVA Systems
Standard EX RT with Network Pack Form Factor	10.32 (6 U) X 17.49 X 25 / 209 for 5/7kVA System, 229 for 11kVA
SystemPower module EX RT	5.16 (3 U) X 17.49 X 25 / 49.6 for 5/7kVA System, 60.6 for 11 kVA System
Battery module EXB RT	5.16 (3 U) X 17.49 X 25 / 142 for 5/7kVA System, 151 for 11 kVA System
Charger module EX RT CLA	5.16 (3 U) X 17.49 X 25 / 26.5
Transformer module EX RT	5.16 (3 U) X 17.49 X 28 / 151

Part number and description

	5kVA	7 kVA	11 kVA
EX RT Standard Pack w/o XFMR	86050	86070	86010
EX RT Standard Pack w/ XFMR	86201	86203	86205
EX RT Network Pack w/o XFMR	86052	86072	86112
EX RT Network Pack w/ XFMR	86202	86204	86206
	Network Pack has standard back-up time delivered with SNMP/Webcard and rack integration kit		
Power Module EX 5/7/11RT	86215	86216	86217
	Power Module for non standard back-up time and CLA module, delivered without rack integration kit		
Battery Module EXB 5/7/11RT w/EPO	86207	86207	86209
Battery Module EXB 5/7/11RT w/EPO/Rails	86208	86208	86210
Rack kit for EX 5/7/11RT / EXB 5/7/11RT or Battery, CLA, and Transformer Module		8600/86002	
	Rack integration kit for mounting power/battery/transformer/CLA Module inside rack enclosure		
EX RT Transformer Module No Rails/Rails		86211/86212	
	Step-Down Isolation Transformer to provide 120/208/240 VAC Outputs		
Charger module: EX RT CLA No Rails/Rails		86213/86214	
	Used with an external high power battery cabinet to provide extended back-up time up to 8 hrs at full load		
Battery Integration Kit with Casters		86005	
	Stack kit delivered with inter-module fastening (max. 8 modules capacity), swivel wheels with brakes and leveling feet		

Warranty (US and Canada)

Parts and labor 2 years for power module, 1 year for batteries

* : Values w/o transformer 1 : Configurable 2 : At Pn for 230 V input/output 3 : Typical values after 3 discharge cycles, 3-5 years design life battery

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



MGE UPS SYSTEMS

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