

Pulsar series

650/850/1150/1250/1550/2000/2500/3000 VA

Eaton Evolution UPS



Rack (1U) and Tower models



Rack/Tower versatile (RT) models

Maximum availability

- The Eaton Evolution® UPS outlets are individually controlled to provide load shedding to maximize backup time and provide remote reboot and sequential startup
- Hot-swappable components—without interrupting the protected devices, the batteries and the full UPS can be hot-swapped with the optional HotSwap Maintenance Bypass (MBP) module
- Extended backup times—up to four extended battery modules can be added to the 2000 and 3000 VA models

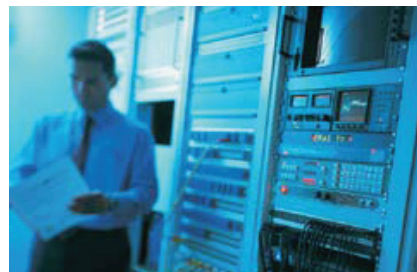


Total flexibility

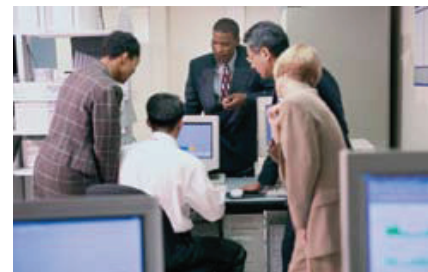
- Format—the Evolution is available in tower format, rack (1U) format or RT rack/tower convertible version
- Connections—extend the number of outlets to your Evolution with the optional FlexPDU and HotSwap MBP; they can be mounted on the side or on top of rackmount UPSs
- Interfaces—USB, serial RS232, remote On/Off and a slot for an optional communications card (Ethernet, ModBus or status)



Up to 1550 VA of power is packed into 1U of rack space



With its extremely compact size, the Evolution is the ideal solution for making the best use of the available space



With its many installation options, the Evolution is easily integrated into any environment: offices, point-of-sale terminals, 19-inch racks, etc.



Powering Business Worldwide

Manageability

- The Intelligent Power® Software Suite – for monitoring, management and shutdown of UPSs and connected devices, including virtual machines – is downloadable free of charge from eaton.com/intelligentpower
- Includes network-based modules for power management of servers (Windows, Linux, MacOS) or small blade servers (VMware ESX, Microsoft Hyper-V)
- NetWatch 5.0 software enables automatic shutdown of UPS-protected devices



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

Eaton customer service and support

- Two-year warranty, including batteries
- Standard exchange of product in case of failure, including batteries

Associated services:

- Warranty+: Three- or five-year extended warranty
- Battery replacement program
- UPSgrade™ program for substitution of an old UPS (vendor neutral)

Communications software and connectivity

- **Intelligent Power Software Suite** (included) comes with network-based shutdown software (Windows, Linux, MacOS, VMware ESX/ESXi/vSphere, Microsoft Hyper-V) and local or remote supervision up to 10 IP addresses
- **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
- **NMS integration kits** include HP OpenView, IBM Tivoli Netview, CA Unicenter, etc.
- **Management card contacts/serial** provide UPS status outputs via relay contacts, emergency stop and a second serial port
- **NMC ModBus/JBus card** combines SNMP, HTML and ModBus/JBus supervision
- **UPS control remote display** monitors UPS status up to 82 feet from the unit



FlexPDU and HotSwap MBP can be mounted in many different positions

Technical specifications¹

ELECTRICAL CHARACTERISTICS

Topology	Line-interactive high frequency (buck and boost)
Input voltage range (without batteries)	89–151V (adjustable to 80V-153V)
Input frequency range (without batteries)	56.5–70 Hz (60 Hz system) ² , 47–70 Hz (50 Hz system)
Output voltage	120V (+6/-10%) ³
Output frequency	50/60 HZ (± 0.1%)

CONNECTIONS

Remotely controlled individual receptacles	650–1550 VA: (2) 5-15R 1750–3000 VA: (2) 5-20R
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INTERFACES

Communication ports	(1) USB port, (1) RS232 serial port and relay contact ⁴ , (1) mini terminal block for remote ON/OFF (ROO) and remote power off (RPO)
Communications card slots	(1) slot for NMC Mini-Slot 2006 card, NMC ModBus/JBus or MC Contacts/Serial

OPERATING CONDITIONS, STANDARDS AND APPROVALS

Operating temperature	650–1150 VA: 32°–95°F 1250–3000 VA: 32°–104°F
Noise level	650–1550 VA: ≤40 dBA 1250–2000 VA: ≤45 dBA 2500–3000 VA: ≤50 dBA
Performance/Safety/EMC	IEC/EN 62040-1-1 (Safety), IEC/EN 62040-2 EN 50091-2 class A (EMC), IEC/EN 62040-3 (Performance), IEC/EN 61000-4-2, 61000-4-3, 61000-4-4; 61000-4-5, 61000-4-6, 61000-4-8 (EMI)
Approvals	UL, cUL, CE, CB report

1. Due to continuing product improvement programs, specifications are subject to change without notice
2. Up to 40 Hz in low-sensitivity mode (programmable using Personal Solution-Pac software)
3. Adjustable to 100 (10% derating of output/120/127V; default setting 120V +10/-15%)
4. USB and RS232 ports cannot be used simultaneously



Network Management Card and Intelligent Power Manager supervisory software

EVOLUTION: 120V NEMA 50/60 HZ MODELS

Catalog Number	Style Number	Form Factor	Rating (VA/Watts)	Input Connection	Output Receptacles	Dimensions (H x W x D, inches)	Weight (lb)
EVLL650T	81700	Tower	650/420	5-15P	(4) 5-15R	5.8 x 9.2 x 16.5	18.5
EVLL850T	81703	Tower	850/600	5-15P	(4) 5-15R	5.8 x 9.2 x 16.5	23.9
EVLL1150T	81705	Tower	1150/770	5-15P	(4) 5-15R	5.8 x 9.2 x 16.5	27.6
EVLL1550T	81709	Tower	1440/1100	5-15P	(4) 5-15R	5.8 x 9.2 x 19.4	36.4
EVLL650R-1U	81701	Rackmount (1U)	650/420	5-15P	(4) 5-15R	1.7 (1U) x 17.2 x 14.4	22.3
EVLL850R-1U	81704	Rackmount (1U)	850/600	5-15P	(4) 5-15R	1.7 (1U) x 17.2 x 20.2	35.5
EVLL1150R-1U	81706	Rackmount (1U)	1150/770	5-15P	(4) 5-15R	1.7 (1U) x 17.2 x 20.2	36.6
EVLL1550R-1U	81710	Rackmount (1U)	1440/1100	5-15P	(4) 5-15R	1.7 (1U) x 17.2 x 21.9	44.1
EVLSL2000-2U	81712	Tower/Rack (2U)	2000/1600	5-20P	(6) 5-20R	3.4 (2U) x 17.3 x 20.0	56.7

EVOLUTION S: 120V NEMA 50/60 HZ MODELS

Catalog Number	Style Number	Form Factor	Rating (VA/Watts)	Input Connection	Output Receptacles	Dimensions (H x W x D, inches)	Weight (lb)
EVLSL1250-XL2U	81708	Tower/Rack (2U)	1250/1150	5-15P	(6) 5-15R	3.4 (2U) x 17.3 x 20.0	53.6
EVLSL1750-XL2U	81711	Tower/Rack (2U)	1750/1600	5-20P	(6) 5-20R	3.4 (2U) x 17.3 x 20.0	58.6
EVLSL2500-XL2U	81714	Tower/Rack (2U)	2500/2250	L5-30P	(6) 5-20R, (1) L5-30R	3.4 (2U) x 17.3 x 25.0	74.5
EVLSL3000-XL2U	81715	Tower/Rack (2U)	3000/2700	L5-30P	(6) 5-20R, (1) L5-30R	3.4 (2U) x 17.3 x 25.0	74.5
EVLSL3000-XL3U	81716	Tower/Rack (3U)	3000/2700	L5-30P	(6) 5-20R, (1) L5-30R	5.1 (3U) x 17.3 x 19.1	75.6

EVOLUTION: 230V INTERNATIONAL MODELS

Catalog Number	Style Number	Form Factor	Rating (VA/Watts)	Input Connection	Output Receptacles	Dimensions (H x W x D, inches)	Weight (lb)
EVL1650T	68450	Tower	650/420	IEC C14 (10A Socket)	(4) IEC C13 (10A)	5.8 x 9.2 x 16.5	18.5
EVL1850T	68452	Tower	850/600	IEC C14 (10A Socket)	(4) IEC C13 (10A)	5.8 x 9.2 x 16.5	23.9
EVL11150T	68454	Tower	1150/770	IEC C14 (10A Socket)	(4) IEC C13 (10A)	5.8 x 9.2 x 16.5	27.6
EVL11550T	68457	Tower	1440/1100	IEC C14 (10A Socket)	(4) IEC C13 (10A)	5.8 x 9.2 x 19.4	36.4
EVL1650R-1U	68451	Rackmount (1U)	650/420	IEC C14 (10A Socket)	(4) IEC C13 (10A)	1.7 (1U) x 17.2 x 14.4	22.3
EVL1850R-1U	68453	Rackmount (1U)	850/600	IEC C14 (10A Socket)	(4) IEC C13 (10A)	1.7 (1U) x 17.3 x 20.2	35.5
EVL11150R-1U	68455	Rackmount (1U)	1500/770	IEC C14 (10A Socket)	(4) IEC C13 (10A)	1.7 (1U) x 17.3 x 20.2	36.6
EVL11550R-1U	68458	Rackmount (1U)	1440/1100	IEC C14 (10A Socket)	(4) IEC C13 (10A)	1.7 (1U) x 17.3 x 21.9	44.1
EVLSI2000-2U	68460	Tower/Rack (2U)	2000/1600	IEC C14 (10A Socket)	(8) IEC C13 (10A)	3.4 (2U) x 17.3 x 20.0	56.7

EVOLUTION S: 230V INTERNATIONAL MODELS

Catalog Number	Style Number	Form Factor	Rating (VA/Watts)	Input Connection	Output Receptacles	Dimensions (H x W x D, inches)	Weight (lb)
EVLSI1250-XL2U	68456	Tower/Rack (2U)	1250/1150	IEC C14 (10A Socket)	(8) IEC C13 (10A)	3.4 (2U) x 17.3 x 20.0	53.6
EVLSI1750-XL2U	68459	Tower/Rack (2U)	1750/1600	IEC C14 (10A Socket)	(8) IEC C13 (10A)	3.4 (2U) x 17.3 x 20.0	58.6
EVLSI2500-XL2U	68461	Tower/Rack (2U)	2500/2250	IEC C16 (10A Socket)	(8) IEC C13 (10A) (1) IEC C19 (16A)	3.4 (2U) x 17.3 x 25.0	74.5
EVLSI3000-XL2U	68462	Tower/Rack (2U)	3000/2700	IEC C16 (10A Socket)	(8) IEC C13 (10A) (1) IEC C19 (16A)	3.4 (2U) x 17.3 x 25.0	74.5
EVLSI3000-XL3U	68464	Tower/Rack (3U)	3000/2700	IEC C16 (10A Socket)	(8) IEC C13 (10A) (1) IEC C19 (16A)	5.1 (3U) x 17.3 x 19.1	75.6

EVOLUTION S OPTIONS

Catalog Number	Style Number	Description	Rating (VA/Watts)	Dimensions (H x W x D, inches)	Weight (lb)
EVLSL1750R-EBM2U	68470	Evolution S Extended Battery Module for 1250 & 1750 VA models (2U)	-	3.4 (2U) x 17.3 x 20.0	67.0
EVLSL3000R-EBM2U	68472	Evolution S Extended Battery Module for 2500/3000 VA models (2U)	-	3.4 (2U) x 17.3 x 25.0	91.9
EVLSI3000R-EBM3U	68471	Evolution S Extended Battery Module for 2500/3000 VA Tower/Rack (3U)	2500/3000	5.1 (3U) x 17.3 x 19.1	91.9

EVOLUTION BATTERY BACKUP TIMES (IN MINUTES)*

Load (VA/Watts)	Internal Batteries	Load (VA/Watts)	Internal Batteries
Evolution 650			
65/42	53	155/110	61
130/84	31	310/220	42
195/126	18	465/330	29
260/168	13	620/440	21
325/210	9	775/550	14
390/252	7	930/660	11
455/294	6	1085/770	8
520/336	4	1240/880	6
585/378	3	1395/990	5
650/420	2	1550/1100	4
Evolution 850			
85/60	80	200/140	71
170/120	46	400/280	43
255/180	26	600/420	26
340/240	21	800/560	20
425/300	15	1000/700	13
510/360	12	1200/840	11
595/420	8	1400/980	8
680/480	6	1600/1120	6
765/540	5	1800/1260	5
850/600	4	2000/1400	4
Evolution 1150			
115/77	77		
230/154	42		
345/231	22		
460/308	17		
575/385	12		
690/462	10		
805/539	7		
920/616	6		
1035/693	5		
1150/770	4		

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

EVOLUTION S BATTERY BACKUP TIMES (IN MINUTES)*

Load (VA/Watts)	Internal Batteries	+1 EBM	+2 EBMs	+3 EBMs	+4 EBMs
Evolution S 1250					
125/115	119	430	741	1052	1363
313/288	32	150	267	384	502
625/575	15	58	100	143	185
938/863	6	42	77	113	148
1250/1150	5	29	54	79	104
Evolution S 1750					
175/160	80	245	410	575	740
438/400	24	96	168	240	312
875/800	9	36	62	89	115
1313/1200	6	24	42	60	79
1750/1600	3	16	28	41	53
Evolution S 2500					
250/225	77	300	410	780	1064
625/563	28	122	207	309	412
1250/1125	11	55	100	150	206
2153/1938	6	31	59	90	120
2500/2250	3	23	42	63	85
Evolution S 3000					
300/270	70	242	448	634	820
750/675	24	105	180	255	330
1500/1350	10	44	73	101	130
2250/2025	5	25	47	69	91
3000/2700	3	17	32	47	62

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



Evolution 850 VA



Evolution 650 VA



Evolution S 1250 VA

- 1 Full user interface:
 - On/Off button for UPS and outlets
 - Load protected/not protected LED
 - Utilized power level/battery charge level
 - Status of load segments
- 2 Panel for replacing batteries without interrupting the output
- 3 (1) USB port, (1) serial port, remote On/Off and emergency stop inputs
- 4 EXB battery module connector
- 5 EXB modules recognized automatically
- 6 (4) 5-15R receptacles, including (2) programmable receptacles
- 7 (6) 5-20R, including (2) programmable receptacles
- 8 Communications card slot

