



Eaton 9355 UPS 20 and 30 kVA Technical Specs

- [Battery Runtimes](#)
- [Model Selection Guide](#)
- [Options](#)
- [X-Slot Connectivity Options](#)

Technical Specifications for 20 and 30 kVA¹

Power

Ratings (kVA/Watts)	20 kVA/18 kW and 30 kVA/27 kW at 0.9 power factor
Topology	Double conversion

Electrical Input

Nominal input voltage	208V/120V, 220V/127V +10, -15% 480V/277V, 600V (480+600 with transformer) 400V models also available
Operating frequency	50/60 Hz (45 to 65 Hz)
Input power factor	0.99 typical
Input current distortion	<5% THD

Electrical Output

Nominal output voltage	208/120, 220/120 Vac
Output voltage regulation	±1% static; ±4% dynamic with 100% step load recovery within 1 ms response time
Efficiency	91%, typical
Heat dissipation (BTU/hr)	20 kVA models 6,762 @ 208V and 220V input 10,450 @ 480V and 600V (with input isolation transformer) 30 kVA models: 9,220 @ 208V and 220V input 13,831 @ 480V and 600V (with input isolation transformer)

Battery

Battery type	9 Ah, sealed, lead-acid, maintenance-free
Battery runtime	See battery backup time chart
Battery replacement	Field-replaceable
Charger	Default is 8A

General

Diagnostics	Full system self-test at startup
UPS bypass	Automatic on overload or UPS failure
Parallel for redundancy	Yes, using Powerware Hot Sync technology and capacity
Dimensions and weights	See model selection table
Overload	150% for 5 sec / 125% for 1 min (online), 110% for 10 min

Communications

LCD display	Graphical LCD with blue backlight
LEDs	(4) LEDs for notice and alarm
Audible alarms	Yes
Communication ports	(1) RS-232, (1) relay contact, (1) REPO, (2) environmental input
Communication slot	(2) X-Slot communication bays
Power management software	Bundled Software Suite CD

Environmental

Operating temperature	50–104°F (10–40°C), 45°C with 7.5% derating; Optimal battery performance: 77°F (25°C)
Storage temperature	32–77°F (0–25°C); Recommended battery storage: 59–77°F (15–25°C)
Relative humidity	5–95%, non-condensing
Audible noise	<58 dBA at 1 meter depending on load
Altitude	<3000m

Certifications

Safety certifications	IEC 62040-1-1, IEC 60950, EN 62040-1-1, UL 1778, NOM-0190SCP8-1993
EMC compliance	EN 50091-2 Class A
Quality	ISO 9001: 2000 and ISO 14001:1996
Markings	UL, cUL, NOM-NYCE

1. Due to continuous product improvements, program specifications are subject to change without notice.

Battery Run Times (in minutes)

VA	Watt	UPS + Internal 1 Battery	Internal Battery + EBC - 36	Internal Battery + (1) EBC - 72	Internal Battery + (2) EBC - 72
30000	27000	11	31	56	89
29000	26100	11	33	58	90
28000	25200	12	35	60	93
27000	24300	12	38	62	95
26000	23400	13	40	65	98
25000	22500	14	43	68	101
24000	21600	14	46	71	103
23000	20700	15	48	74	106
22000	19800	16	51	76	109
21000	18900	17	53	79	111
20000	18000	18	56	82	114
19000	17100	19	58	85	117
18000	16200	20	62	88	120
17000	15300	22	66	92	130
16000	14400	24	71	96	142
15000	13500	26	75	101	154
14000	12600	28	79	105	166
13000	11700	31	84	110	178
12000	10800	35	88	114	201
11000	9900	38	94	119	256
10000	9000	42	101	134	251
7500	6750	58	117	188	347
5000	4500	90	188	294	543

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

Model Selection Table

Power Rating (kVA/kW) ¹	Input/Output Voltage	Feed	UPS Part Number ²	Options Cabinet(s)	Base Runtime ³	Dimensions (HxWxD, in.)	Weight (lb.) ⁴
20/18	208/208	Single	KB2013100000010	None	18	66 x 20 x 34.1	1160
20/18	208/208	Single ⁶	KB2013100000010	KBT001100000010 ⁵ KBT001100000010	18	66 x 40 x 34.1	1695
20/18	208/208	Dual ⁶	KB2013100000010	KBT002100000010 ⁵	18	66 x 60 x 34.1	2230
20/18	220/220 ⁷	Single	KB2013200000010	None	18	66 x 20 x 34.1	1160
20/18	480/208	Single	KB2013100000010	KBT001200000010 ⁵ KBT002200000010	18	66 x 40 x 34.1	1695
20/18	480/208	Dual	KB2013100000010	KBT001200000010 ⁵	18	66 x 60 x 34.1	2230
20/18	600/208	Single	KB2013100000010	KBT001300000010 KBT001300000010 ⁵	18	66 x 40 x 34.1	1695
20/18	600/208	Dual	KB2013100000010	KBT002300000010 KBT001200000010 ⁵	18	66 x 60 x 34.1	2230
20/18	480/480	Single	KB2013100000010	KBT003200000010 ⁵	18	66 x 60 x 34.1	2230
30/27	208/208	Single	KB3013100000010	None	11	66 x 20 x 34.1	1160
30/27	208/208	Single ⁶	KB3013100000010	KBT001100000010 ⁵ KBT001100000010 ⁵	11	66 x 40 x 34.1	1695
30/27	208/208	Dual ⁶	KB3013100000010	KBT002100000010	11	66 x 60 x 34.1	2230
30/27	220/220 ⁷	Single	KB3013200000010	None	11	66 x 20 x 34.1	1160
30/27	480/208	Single	KB3013100000010	KBT001200000010 ⁵ KBT001200000010 ⁵	11	66 x 40 x 34.1	1695
30/27	480/208	Dual	KB3013100000010	KBT002200000010	11	66 x 60 x 34.1	2230
30/27	600/208	Single	KB3013100000010	KBT001300000010 KBT001300000010 ⁵	11	66 x 40 x 34.1	1695
30/27	600/208	Dual	KB3013100000010	KBT002300000010 KBT001200000010 ⁵	11	66 x 60 x 34.1	2230
30/27	480/480	Dual	KB3013100000010	KBT003200000010	11	66 x 60 x 34.1	2230

1. 50/60 Hz auto-sensing.

2. 220V units are wye connected 220/127V input and 220/127V output, three-phase, 4-wire plus ground.

3. Add 47 lb for 2-high configurations or 50 lbs for 3-high configurations to determine shipping weight.

4. An input neutral is required for all configurations unless the input isolation transformer is used.
5. For parallel systems, change CTO digit #5 to a "2" and include Parallel Tie Cabinet. Eaton startup is required for factory warranty of parallel configuration.

Options

Description	Part Number	Input/Output Voltage (V)	Dimensions (H x W x D, inches)	Weight (lb) ¹
2 String Line & Match Extended Battery Cabinet (36 batteries)	103005183	-	66.0 x 20.0 x 34.1	1105
4 String Line & Match Extended Battery Cabinet (72 batteries)	103004868	-	66.0 x 20.0 x 34.1	2060
Option Cabinet, Containing Maintenance Bypass, with No Transformer	KBT000000000010	208/208	66.0 x 20.0 x 34.1	205
Wall-mount Parallel Tie Cabinet 2-Breaker MBP (400A Bus, 200A Neutral, 1 350A MBP, & (4) 110A MOBs)	124100026-001*	208/208	48.0 x 20.0 x 5.8	150
Wall-mount Parallel Tie Cabinet with MIS Breaker (350A MBP, 350A MIS, & (4) 110A MOBs)	124100026-002*	208/208	57.0 x 24.0 x 11.3	235
Wall-mounted Remote EPO Switch	103002939	-	-	-
Seismic Mounting Kit for UPS and Options Cabinets (not compatible with battery cabinets)	103004896	-	-	-
CAN Bridge Parallel Card	103004336*	-	-	-

UPS Optional Output Breaker (125A, Change Digit #5 in CTO number to "3" for RT systems)

1. This is a net weight; please add 40 lb for the shipping weight of the panels and 50 lb for panels with panelboard provisions.
Notes: Up to 3 EBMs can be added to each UPS for extended runtime.

Three-breaker maintenance bypass panels

225A Bus, 200A Neutral, and 125A MBP, MIB, 110A MIS ³	124100028-001	208/208	48.0 x 20.0 x 5.8	120
With integral 120 KA TVSS (100A Bus, 200A Neutral, and 60A MBP, MIB, MIS) ³	124100028-002	208/208	60.0 x 20.0 x 5.8	120
With 36-pole distribution provisions (Eaton GHB 14 kAIC) ³	124100028-003	208/208	72.0 x 20.0 x 5.8	210
With 36-pole distribution provisions and integrated SPD (Eaton GHB 14 kAIC) ³	124100028-004	208/208	90.0 x 20.0 x 5.8	225

1. This is a net weight; please add 40 lb for the shipping weight of the panels and 50 lb for panels with panelboard provisions.
Note: Please specify preference for breakers.

Built-in Connectivity Options

Description ¹	Value for CTO Digit 8	Part Number (if ordered separately)
None (No Pre-installed X-Slot card)	0	-
Power Xpert Gateway Card	3	103007974-5591
Modbus Card-X-Slot	4	103005425-5591
Relay Interface Card-X-Slot (AS/400 Compatible)	5	1018460
Industrial Relay and Display Drive Card X-Slot	6	103003055

Note: UPS has two X-Slots, one of which can be populated or factory installed, with the second X-Slot accessory supplied separately.