



Powerware

Powerware® Battery Cabinets for Powerware 9315 UPS

Product Focus

80-500 kVA



Series 685 Battery Cabinet



Series 1085 Battery Cabinet

Features

- Top and bottom wire entry provides installation flexibility
- Casters enhance portability
- A DC-rated circuit breaker within each cabinet provides protection and servicing isolation
- Each circuit breaker features:
 - An auxiliary switch for UPS sensing of circuit breaker closure
 - A 24 VDC shunt trip to accommodate a remote EPO circuit
- Options
 - Lineup and match configurations are available for Powerware 9315 (80–160 kVA)
 - Internal pass-through wiring for lineup and match configurations
 - An internal wireway for power and control wiring reduces installation expenses

Eaton offers two models of battery cabinets for its Powerware 9315 series of UPS, the Series 685 and Series 1085. These cabinets line up and match 9315 systems, and offer a range of runtimes.

Flexibility

- Cabinets feature a wide range of available battery sizes, optimized to meet application runtime needs
- Up to four cabinets may be daisy-chained together for extended battery runtimes
- Integral configurations, which line-up and match, are standard for Powerware 9315 (80–160 kVA)
- Remote configurations are standard for Powerware 9315 (200–500 kVA)

Serviceability

- “Front access only” enhances servicing and installation
- Modular battery packaging facilitates periodic servicing accessibility
- Each battery string contains a DC Disconnect, so multi-string DC systems can be serviced while the UPS is still online

Reliability

- Cabinets are UL 1778 listed
- Flame retardant batteries meet UL94V2 for computer room installations

Battery Runtime (minutes)

POWERWARE 9315 (80-500 kVA, 50 Hz)

Model Number					9315-80			9315-130			9315-160			9315-200		9315-250				9315-400			
kVA					50.0	65.0	80.0	100.0	130.0	100.0	130.0	160.0	200.0	200.0	200.0	200.0	250.0	250.0	300.0	300.0	400.0	400.0	
kW					40.0	52.0	64.0	80.0	104.0	80.0	104.0	128.0	160.0	180.0	160.0	180.0	200.0	225.0	240.0	270.0	320.0	360.0	
Battery Type	Number	Cabinet Series	Installed Weight lb. (kg)	Width* in. (mm)																			
J14	1	685	1915 (869)	27 (686)	12	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
J17	1	685	2450 (1111)	27 (686)	14	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
J27	1	1085	3150 (1429)	43 (1092)	32	22	16	8	-	10	7	-	-	-	-	-	-	-	-	-	-		
C28	1	1085	3250 (1474)	43 (1092)	32	22	17	9	-	12	7	-	-	-	-	-	-	-	-	-	-		
J31	1	1085	3495 (1585)	43 (1092)	38	27	20	11	7	14	9	5	-	-	-	-	-	-	-	-	-		
C33	1	1085	3595 (1631)	43 (1092)	39	28	21	12	7	16	10	5	-	-	-	-	-	-	-	-	-		
J37	1	1085	3765 (1708)	43 (1092)	44	32	25	15	9	18	12	8	-	-	-	-	-	-	-	-	-		
C39	1	1085	3925 (1780)	43 (1092)	45	33	26	16	10	19	13	8	-	-	-	-	-	-	-	-	-		
J47	1	1085	4800 (2177)	43 (1092)	62	45	33	19	11	24	15	9	-	-	-	-	-	-	-	-	-		
C50	1	1085	4840 (2195)	43 (1092)	60	45	34	20	13	26	17	11	-	-	-	-	-	-	-	-	-		
J14	2	685	3830 (1737)	54 (1372)	30	22	16	9	6	11	8	-	-	-	-	-	-	-	-	-	-		
J17	2	685	4900 (2223)	54 (1372)	41	29	21	9	5	13	7	-	-	-	-	-	-	-	-	-	-		
J27	2	1085	6300 (2858)	86 (2184)	74	54	42	27	17	32	22	16	9	7	9	7	5	-	-	-	-		
C28	2	1085	6500 (2942)	86 (2184)	72	54	42	27	19	33	23	17	9	7	9	7	5	-	-	-	-		
J31	2	1085	6990 (3171)	86 (2184)	85	61	48	31	22	38	27	20	11	9	11	9	7	6	-	-	-		
C33	2	1085	7190 (3255)	86 (2184)	84	62	49	32	23	39	28	21	12	10	12	9	8	6	-	-	-		
J37	2	1085	7530 (3416)	86 (2184)	94	70	57	39	28	44	32	25	15	11	15	11	11	8	7	5	-		
C39	2	1085	7850 (3554)	86 (2184)	94	71	58	39	29	44	33	26	16	13	16	13	11	9	7	5	-		
J47	2	1085	9600 (4354)	86 (2184)	143	103	82	53	38	62	45	33	19	15	19	15	13	9	8	6	-		
C50	2	1085	9680 (4384)	86 (2184)	131	97	77	52	39	60	45	34	20	17	20	17	14	11	9	7	-		
J27	3	1085	9450 (4286)	129 (3277)	117	87	68	44	32	52	39	29	17	13	17	13	12	9	9	7	-		
C28	3	1085	9750 (4409)	129 (3277)	114	85	67	44	32	52	39	30	18	14	18	13	13	10	9	7	-		
J31	3	1085	10485 (4756)	129 (3277)	136	99	79	50	38	59	44	35	21	18	21	18	15	12	11	9	6		
C33	3	1085	10785 (4878)	129 (3277)	134	99	78	51	38	59	45	36	22	19	22	19	16	13	12	9	6		
J37	3	1085	11295 (5123)	129 (3277)	150	112	89	60	45	68	52	42	27	22	27	22	19	15	15	11	9		
C39	3	1085	11775 (5328)	129 (3277)	149	112	89	60	45	69	52	42	27	23	27	23	20	17	16	12	10		
J47	3	1085	14400 (6532)	129 (3277)	232	171	129	86	63	99	75	58	37	29	37	29	26	21	19	15	11		
C50	3	1085	14520 (6633)	129 (3277)	208	154	122	81	61	95	71	56	37	30	37	30	27	22	20	16	12		
J27	4	1085	12600 (5715)	172 (4369)	168	120	94	62	46	74	54	42	27	21	27	21	19	15	14	11	9		
C28	4	1085	13000 (5876)	172 (4369)	159	118	93	62	46	72	54	42	27	22	27	21	20	16	14	12	10		
J31	4	1085	13980 (6341)	172 (4369)	187	137	109	73	52	85	61	48	32	27	32	27	24	19	18	14	11		
C33	4	1085	14380 (6502)	172 (4369)	186	137	109	73	53	85	61	48	33	28	33	28	25	20	19	15	12		
J37	4	1085	15060 (6831)	172 (4369)	211	154	118	77	61	94	70	57	39	32	39	32	30	24	23	19	15		
C39	4	1085	15700 (7101)	172 (4369)	208	154	118	79	61	94	70	57	39	33	39	33	30	25	24	20	15		
J47	4	1085	19200 (8709)	172 (4369)	326	239	185	119	88	143	102	82	54	46	54	46	41	32	31	26	19		
C50	4	1085	19360 (8761)	172 (4369)	289	214	169	113	84	131	97	77	54	46	54	46	41	33	31	27	20		
Nominal DC Link Voltage					480	480	480	420	420	480	480	480	420	420	420	420	420	420	420	420	420	420	

*All cabinets are 73.5 inches (1867 mm) high and 31.5 inches (800 mm) in depth; Add 2 inches (51 mm) to cabinet width if remote configuration.

Additional Features & Benefits



- Quick disconnects between battery tray assemblies reduce battery maintenance time
- Manufacturer supplied wiring with quick disconnects provides plug and play capability for lineup and match configurations
- Removable battery tray assemblies provide “front access only” and reduce battery maintenance time
- Mechanical lugs, located adjacent to the internal wire-way, reduce installation time for remote configurations
- The circuit breaker features shunt trip and A/B auxiliaries for UPS remote control and sensing capability
- A DC-rated circuit breaker in each battery cabinet allows multiple battery strings to be serviced independently of each other, assuring backup power is always available to the UPS

Series 1085 Battery Cabinet with doors removed.

Battery Runtime (minutes)

POWERWARE 9315 (80-500 kVA, 60 Hz)

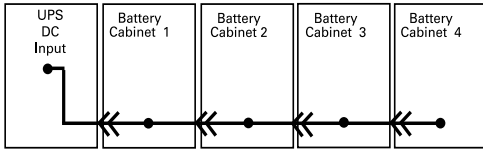
Model Number		9315-80			9315-160			9315-225		9315-300				9315-500			
kVA kW		50.0 40.0	65.0 52.0	80.0 64.0	100.0 80.0	130.0 104.0	160.0 128.0	225.0 180.0	225.0 202.0	225.0 180.0	225.0 202.0	300.0 240.0	300.0 270.0	400.0 320.0	400.0 360.0	500.0 400.0	500.0 450.0
Battery Type	Number Parallel Strings	Cabinet Series	Installed Weight lb. (kg)	Width* in. (mm)													
J10	2	1085	2545 (1154)	43 (1092)	17	-	-	-	-	-	-	-	-	-	-	-	-
J14	1	685	1915 (869)	27 (686)	12	8	-	-	-	-	-	-	-	-	-	-	-
J17	1	685	2450 (1111)	27 (686)	14	7	-	-	-	-	-	-	-	-	-	-	-
J27	1	1085	3150 (1429)	43 (1092)	32	22	16	10	7	-	-	-	-	-	-	-	-
C28	1	1085	3250 (1474)	43 (1092)	32	22	17	12	7	-	-	-	-	-	-	-	-
J31	1	1085	3495 (1585)	43 (1092)	38	27	20	14	9	5	-	-	-	-	-	-	-
C33	1	1085	3595 (1631)	43 (1092)	39	28	21	16	10	5	-	-	-	-	-	-	-
J37	1	1085	3765 (1708)	43 (1092)	44	32	25	18	12	8	-	-	-	-	-	-	-
C39	1	1085	3925 (1780)	43 (1092)	45	33	26	19	13	8	-	-	-	-	-	-	-
J47	1	1085	4800 (2177)	43 (1092)	62	45	33	24	15	9	-	-	-	-	-	-	-
C50	1	1085	4840 (2195)	43 (1092)	60	45	34	26	17	11	-	-	-	-	-	-	-
J14	2	685	3830 (1737)	54 (1372)	30	22	16	11	8	-	-	-	-	-	-	-	-
J17	2	685	4900 (2223)	54 (1372)	41	29	21	13	7	-	-	-	-	-	-	-	-
J27	2	1085	6300 (2858)	86 (2184)	74	54	42	32	22	16	9	7	9	7	-	-	-
C28	2	1085	6500 (2942)	86 (2184)	72	54	42	33	23	17	9	7	9	7	-	-	-
J31	2	1085	6990 (3171)	86 (2184)	85	61	48	38	27	20	12	9	12	9	7	5	-
C33	2	1085	7190 (3255)	86 (2184)	84	62	49	39	28	21	13	10	13	10	7	5	-
J37	2	1085	7530 (3416)	86 (2184)	94	70	57	44	32	25	15	12	15	12	9	7	-
C39	2	1085	7850 (3554)	86 (2184)	94	71	58	44	33	26	17	15	17	15	10	7	-
J47	2	1085	9600 (4354)	86 (2184)	143	103	82	62	45	33	20	16	20	16	11	8	5
C50	2	1085	9680 (4384)	86 (2184)	131	97	77	60	45	34	22	18	22	18	13	10	6
J27	3	1085	9450 (4286)	129 (3277)	117	87	68	52	39	29	17	14	17	14	11	9	6
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J31	3	1085	10485 (4756)	129 (3277)	136	99	79	59	44	35	22	18	22	18	14	10	8
C33	3	1085	10785 (4878)	129 (3277)	134	99	78	59	45	36	24	20	24	20	15	13	9
J37	3	1085	11295 (5123)	129 (3277)	150	112	89	68	52	42	28	22	28	22	18	14	12
C39	3	1085	11775 (5328)	129 (3277)	149	112	89	69	52	42	29	24	29	24	19	16	13
J47	3	1085	14400 (6532)	129 (3277)	232	171	129	99	75	58	38	31	38	31	25	19	15
C50	3	1085	14520 (6573)	129 (3277)	208	154	122	95	71	56	38	32	38	32	26	21	17
J27	4	1085	12600 (5715)	172 (4369)	168	120	94	74	54	42	28	22	28	22	17	14	11
C28	4	1085	13000 (5876)	172 (4369)	159	118	93	72	54	42	28	23	28	23	18	15	12
J31	4	1085	13980 (6341)	172 (4369)	187	137	109	85	61	48	32	27	32	27	22	18	14
C33	4	1085	14380 (6502)	172 (4369)	186	137	109	85	61	48	33	28	33	28	23	19	15
J37	4	1085	15060 (6831)	172 (4369)	211	154	118	94	70	57	40	33	40	33	28	22	18
C39	4	1085	15700 (7101)	172 (4369)	208	154	118	94	70	57	40	34	40	34	28	23	19
J47	4	1085	19200 (8709)	172 (4369)	326	239	185	143	102	82	55	48	55	48	38	31	25
C50	4	1085	19360 (8761)	172 (4369)	289	214	169	131	97	77	54	47	54	47	35	29	23
Nominal DC Link Vlotage					480	480	480	480	480	480	480	480	480	480	480	480	480

*All cabinets are 73.5 inches (1867 mm) high and 31.5 inches (800 mm) in depth; Add 2 inches (51 mm) to cabinet width if remote configuration.

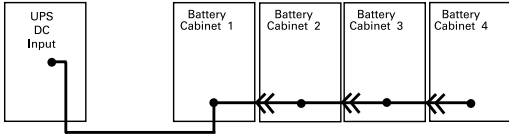
Available Wiring Configurations

9315-80 through 160

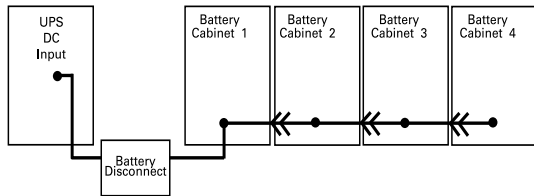
1. In this lineup and match configuration, the battery cabinets are bolted and connected to each other with the UPS using manufacturer-supplied hardware and wiring.



2. In this remote configuration, the first battery cabinet is connected to the UPS using customer-supplied wiring. The battery cabinets are bolted and connected to each other using manufacturer-supplied hardware and wiring.

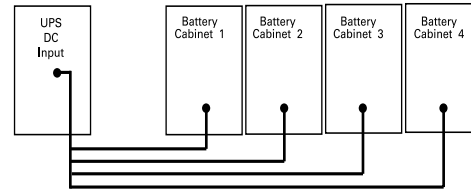


3. In this remote configuration, the first battery cabinet is connected to the UPS through a battery disconnect using customer-supplied wiring. The battery cabinets may be bolted to each other using manufacturer-supplied hardware.

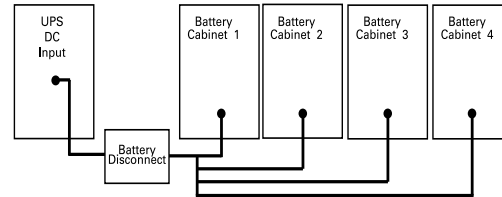


9315-200 through 500

1. In this remote configuration, the battery cabinets are individually connected to the UPS using customer-supplied wiring. The battery cabinets may be bolted to each other and the UPS using manufacturer-supplied hardware.



2. In this remote configuration, the battery cabinets are individually connected to the UPS through a battery disconnect using customer-supplied wiring. The battery cabinets may be bolted to each other and the UPS using manufacturer-supplied hardware.



Environmental requirements for operation of the battery system are:

Ambient temperature range: 10–40°C (50–104°F)

Recommended operating range: 20–25°C (68–77°F)

Maximum relative humidity: 95%

Key factors that affect battery life

1. Ambient temperature

The rated output capacity of a battery is based on an ambient temperature of 25°C (77°F). It is important to realize that any variation from this operating temperature can alter the performance of the battery and shorten its expected life. A good rule of thumb when determining battery life in relation to temperature is that for every 8.3°C (15°F) average annual temperature above 25°C (77°F), the life of the battery is reduced by 50 percent.

2. Cycling

During a utility power failure (severe brownout or blackout conditions), the UPS operates on battery power. Once utility power is restored, the battery is recharged for future use. This entire 'loop' is considered a discharge cycle. When installed, the battery is at 100 percent of rated capacity. Each discharge and subsequent recharge reduces the relative capacity of the battery by a small percentage.

The length of the discharge cycle will determine the reduction in battery capacity.

3. Maintenance and service

The gradual decrease in battery capacity can be monitored and evaluated through voltage checks, load testing and retorquing connections, as part of a periodic maintenance program. Without regular maintenance and service checks, your UPS battery may experience:

- Heat-generating resistance at the terminals
- Improper loading
- Reduced protection
- Premature failure

With proper maintenance and service, the end of battery life can be determined and replacements scheduled without any interruption or loss of backup power.

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Italy: 39.02.66.04.05.40
Norway: 47.23.03.65.50
Sweden: 46.8.598.940.00
United Kingdom: 44.1753.608.700

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