

PowerSafe™
CA



**PERFORMANCE
SPECIFICATIONS**

EnerSys™
Power/Full Solutions



PowerSafe™ CA

The PowerSafe™ CA battery has been carefully engineered to meet the varying power needs of the utility market. The lead-antimony alloy grids maximize performance in high cycling applications. The lead-antimony design alloy also enables the CA battery to tolerate higher temperatures than standard lead-calcium designs. This makes the CA battery ideal for challenging utility switchgear applications.

Its 0.28 inch positive grids are one of the thickest in the industry, making it an excellent long discharge battery. At the same time, its nearly square plate configuration enhances high rate performance. Coupling these two operating characteristics with multi-cell construction to minimize floor space makes the CA ideally suited for the complex duty cycle requirements of the switchgear application.

The PowerSafe CA now features the Slide-Lock™ post seal design. The slightly taller jar allows for more free electrolyte, a longer watering interval and now enables the PowerSafe CA to deliver 100% initial capacity. The PowerSafe CA's space efficient footprint remains the same, as the length and width have not changed. The PowerSafe CA was designed for easier maintenance since all the posts and connectors reside above the cell cover; maintenance routines, including individual cell monitoring and intercell resistance measurements are simplified. The individual cell post feature along with the Slide-Lock™ post seal and 100% initial capacity make the CA the battery of choice for utility switchgear applications.

Features

- Slide-Lock™ post seal design.
- Added electrolyte reserve reduces watering requirements.
- Individual posts to monitor individual cell performance in a multi-cell container.
- Thick grids provide excellent long discharge rate performance and long life.
- Square plate configuration enhances high rate performance.
- 100% initial capacity.
- Applications: switchgear, utility, telecommunications.
- 20 year life expectancy in float service at 77°F ambient temperature.
- Capacity from 50 to 200 Ah.

Specifications

- Plate thickness:
Positive: 0.28 in/7.1 mm
Negative: 0.14 in/3.6 mm
- Plate dimensions:

	Height	Width
Pos:	7.75 in/197 mm	8.00 in/203 mm
Neg:	7.75 in/197 mm	8.00 in/203 mm
- Sediment space: 1.0 in/25.4 mm
- Electrolyte over plates: 2.38 in/60.5 mm
- Container: Styrene Acrylonitrile Copolymer, optional PC
- Cover: Made from flame retardant PVC, (UL94-VO/L.O.I. 28%)
- Separators: Microporous rubber
- Retainers: "Vitrex" - glass fiber
- Post seal type: Slide-Lock™
- Plate Suspension Type:
Positive: Bottom supported
Negative: Bottom supported
- Vent Type: Flame arrestor, fused alumina
- Float voltage setting:
Acceptable min/max: 2.15/2.22 VPC
Recommended: 2.20 VPC
- Specific gravity: 1.215 (1.250 available upon request)
- Bolt connectors: Stainless steel, standard english measure, hex-head
- Intercell connectors: lead-plated copper

NOTE: All inter-cell, inter-tier, inter-step, end-to-end inter-rack, and back-to-back inter-rack connectors for standard configurations are included with every battery. Across-aisle inter-rack connectors are not included.

General Specifications

TYPE*	NOM. Ah CAP	Nominal Dimensions						Weights - Volumes								
		Length**		Width		Height		Unpacked		Domestic Packed		Electrolyte Only / 1.215 S.G.				Short Circuit Current Amps
		in	mm	in	mm	in	mm	lbs	kg	lbs	kg	lbs	kg	gal	l	
2CA-3M	50	7.0	178	9.0	229	14.8	375	42	19.1	48	21.8	11	5.0	1.1	4.2	494
3CA-3M	50	7.0	178	9.0	229	14.8	375	57	25.9	63	28.6	16	7.3	1.6	6.1	494
2CA-5M	100	7.0	178	9.0	229	14.8	375	51	23.1	56	25.4	10	4.5	1.0	3.7	972
3CA-5M	100	7.0	178	9.0	229	14.8	375	74	33.6	79	35.8	15	6.8	1.5	5.7	972
2CA-7M	150	12.2	310	9.0	229	14.8	375	76	34.5	85	38.6	22	10.0	2.2	8.3	1434
3CA-7M	150	12.2	310	9.0	229	14.8	375	114	51.7	123	55.8	33	15.0	3.3	12.5	1434
2CA-9M	200	12.2	310	9.0	229	14.8	375	88	39.9	95	43.1	22	10.0	2.1	7.9	1862
3CA-9M	200	12.2	310	9.0	229	14.8	375	132	59.9	138	67.6	33	15.0	3.2	12.1	1862

* Prefix number indicates cells per unit. Suffix number indicates total plates per cell.

** 0.25" must be added between cells for spacing purposes when calculating total battery length.

1.215 Specific Gravity

Discharge Rates in Amperes per Cell** to 1.75Vpc at 25°C (77°F)*

Type	NOM. Ah CAP ¹	Minutes			Hours								
		1	15	30	1	1.5	2	3	4	5	8	12	24
2CA-3M	50	68	45	35.2	25.5	20.2	16.8	12.9	10.4	8.8	6.3	4.4	2.5
3CA-3M	50	68	45	35.2	25.5	20.2	16.8	12.9	10.4	8.8	6.3	4.4	2.5
2CA-5M	100	136	89	70.3	51.0	40.4	33.6	25.7	20.7	17.6	12.5	9.1	5.0
3CA-5M	100	136	89	70.3	51.0	40.4	33.6	25.7	20.7	17.6	12.5	9.1	5.0
2CA-7M	150	204	134	105.4	76.5	60.6	50.4	38.6	31.1	26.4	18.8	13.6	7.5
3CA-7M	150	204	134	105.4	76.5	60.6	50.4	38.6	31.1	26.4	18.8	13.6	7.5
2CA-9M	200	272	178	140.6	102.0	80.8	67.2	51.4	41.4	35.2	25.0	18.1	10.0
3CA-9M	200	272	178	140.6	102.0	80.8	67.2	51.4	41.4	35.2	25.0	18.1	10.0

1.215 Specific Gravity

Discharge Rates in Amperes per Cell** to 1.81Vpc at 25°C (77°F)*

Type	NOM. Ah CAP ¹	Minutes			Hours								
		1	15	30	1	1.5	2	3	4	5	8	12	24
2CA-3M	50	51	38	30.0	22.3	18.0	15.3	11.8	9.8	8.4	5.9	4.3	2.4
3CA-3M	50	51	38	30.0	22.3	18.0	15.3	11.8	9.8	8.4	5.9	4.3	2.4
2CA-5M	100	102	75	59.9	45.5	36.0	30.5	23.6	19.5	16.7	11.8	8.5	4.7
3CA-5M	100	102	75	59.9	45.5	36.0	30.5	23.6	19.5	16.7	11.8	8.5	4.7
2CA-7M	150	153	113	81.8	66.8	54.0	45.8	35.4	29.3	25.1	17.7	12.8	7.1
3CA-7M	150	153	113	81.8	66.8	54.0	45.8	35.4	29.3	25.1	17.7	12.8	7.1
2CA-9M	200	204	150	119.8	89.0	72.0	61.0	47.2	39.0	33.4	23.6	17.1	9.4
3CA-9M	200	204	150	119.8	89.0	72.0	61.0	47.2	39.0	33.4	23.6	17.1	9.4

1.215 Specific Gravity

Discharge Rates in Amperes per Cell** to 1.84Vpc at 25°C (77°F)*

Type	NOM. Ah CAP. ¹	Minutes			Hours								
		1	15	30	1	1.5	2	3	4	5	8	12	24
2CA-3M	50	45	33	27.1	20.3	16.5	14.1	11.0	9.1	7.9	5.6	4.1	2.2
3CA-3M	50	45	33	27.1	20.3	16.5	14.1	11.0	9.1	7.9	5.6	4.1	2.2
2CA-5M	100	89	67	54.1	40.6	33.1	28.1	22.0	18.3	15.7	11.2	8.1	4.5
3CA-5M	100	89	67	54.1	40.6	33.1	28.1	22.0	18.3	15.7	11.2	8.1	4.5
2CA-7M	150	134	100	81.2	61.0	49.6	42.2	33.0	27.4	23.6	16.8	12.2	6.7
3CA-7M	150	134	100	81.2	61.0	49.6	42.2	33.0	27.4	23.6	16.8	12.2	6.7
2CA-9M	200	178	134	108.2	81.3	66.2	56.3	43.9	36.5	31.4	22.4	16.2	9.0
3CA-9M	200	178	134	108.2	81.3	66.2	56.3	43.9	36.5	31.4	22.4	16.2	9.0

1.215 Specific Gravity

Discharge Rates in Amperes per Cell** to 1.88Vpc at 25°C (77°F)*

Type	NOM. Ah CAP. ¹	Minutes			Hours								
		1	15	30	1	1.5	2	3	4	5	8	12	24
2CA-3M	50	36	28	23.2	17.8	14.6	12.5	9.9	8.3	7.2	5.2	3.8	2.1
3CA-3M	50	36	28	23.2	17.8	14.6	12.5	9.9	8.3	7.2	5.2	3.8	2.1
2CA-5M	100	72	56	46.4	35.5	29.2	25.0	19.8	16.6	14.4	10.4	7.6	4.2
3CA-5M	100	72	56	46.4	35.5	29.2	25.0	19.8	16.6	14.4	10.4	7.6	4.2
2CA-7M	150	108	84	69.6	53.3	43.8	37.5	29.7	24.9	21.6	15.6	11.4	6.2
3CA-7M	150	108	84	69.6	53.3	43.8	37.5	29.7	24.9	21.6	15.6	11.4	6.2
2CA-9M	200	144	112	92.7	71.0	58.4	50.0	39.6	33.2	28.8	20.8	15.1	8.3
3CA-9M	200	144	112	92.7	71.0	58.4	50.0	39.6	33.2	28.8	20.8	15.1	8.3

*Amperes values listed represent 100% of the cell's capacity.
 **1.215 S.G. electrolyte at 77°F (25°C) includes intercell connector drop.
¹Nominal Amp hour capacity at the 8 hour rate.
 All data subject to change without notice.



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