



AES® SERIES

For Renewable Energy Storage and PSoC Applications



The AES features the advanced DCS technology for maximum cycle life in a space efficient, cost effective package. The DCS technology coupled with an advanced C&D Nano-Carbon® enhanced negative electrode provides time proven results and unmatched, industry leading cycle life, even in partial state of charge (PSoC) operation.

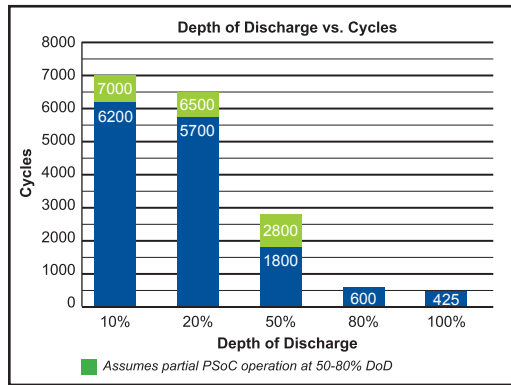
FEATURES AND BENEFITS

- High density pasted plates for high cycle life
- Nano-Carbon Enhanced active material to maximize cycle performance and PSoC operation
- Low calcium Lead/Tin alloy plates for efficient gas recombination for long life in both cycling and float applications
- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance
- Multicell design for economy of installation and maintenance
- Reduced headspace driving higher energy density, in cabinet or rack applications
- Can be used in any orientation (not inverted)
- High-strength, leak-free polymer container allows for non-restricted shipping: Water: non-hazardous per IMDG Amendment 27 Surface: non-hazardous per DOT-CFR title 49, 171-189 Air: IATA/ICAO, provision A67
- Helium leak tested & dielectric tested to ensure seal integrity
- UL-recognized component
- Battery hardware and removable carrying handles included
- Meets IEC 61427 for PV applications
- Multitier racks and cabinets available (see brochure 12-1064)

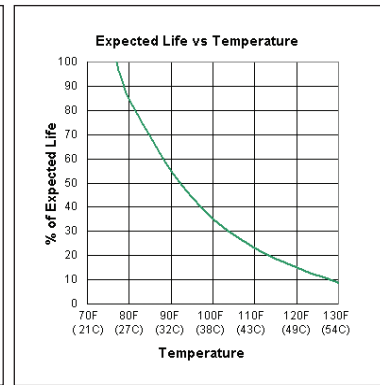
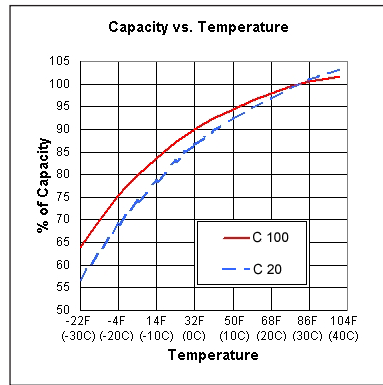
SPECIFICATIONS

Cells Per Unit	6
Nominal Voltage Per Unit	12
Electrolyte	Absorbed H ₂ SO ₄ , SG = 1.300
Operating Temperature Range (with temperature compensation)	Discharge: -40°F (-40°C) to +160°F (71°C) Charge: -10°F (-23°C) to +140°F (60°C)
Optimal PSoC Operation	80-40% SoC
Normal Operating Temperature Range	+68°F (20°C) to +80°F (27°C)
Recommended Maximum Charging Current Limit	30 amperes per 100 Ah @ C ₂₀
Float Charging Voltage	13.5 to 13.8 VDC/unit Average at 77°F (25°C)
Equalization and Cycle Service Charging Voltage	14.4 to 14.8 VDC/unit Average at 77°F (25°C)
Recommended Equalization for PSoC operation	Min = once every 3 months Max = once per week
Maximum AC Ripple (Charger)	0.5% RMS or 1.5% P-P of float charge voltage recommended for best results
Self Discharge	Battery can be stored up to 6 months at 77°F (25°C) before a freshening charge is required. Batteries stored at temperatures greater than 77°F (25°C) will require recharge sooner than batteries stored at lower temperatures. See C&D bulletin 41-7272, Self-Discharge and Inventory Control for details.
Accessories	Inter-unit connectors, racks and cabinet systems are available.
Terminal	Inserted Terminal (Copper Alloy) 10-32 UNF 1/4-20 UNC bolt
Terminal Hardware Initial Torque	30 in.-lbs (3.4 N-m) 110 in.-lbs (12.4 N-m)

INDUSTRY LEADING CYCLE LIFE



BATTERY CHARACTERISTICS



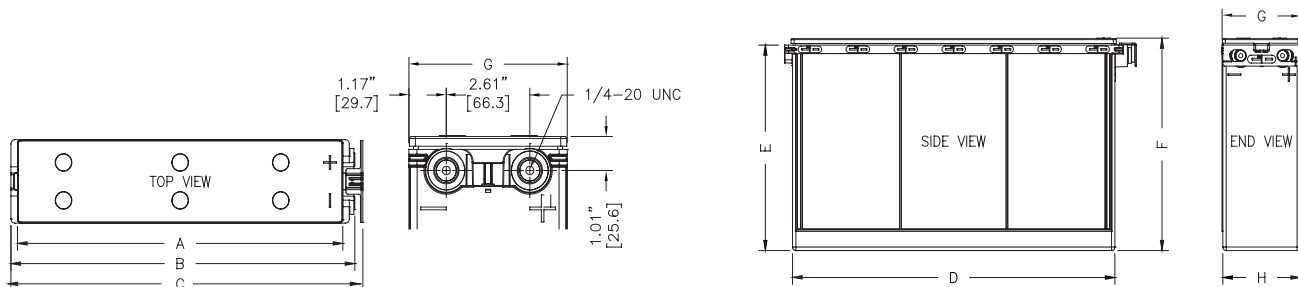
DIMENSIONS & WEIGHTS

	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Weight
AES-390	7.76 (197.1)	7.54 (191.4)	5.19 (131.9)	5.02 (127.6)	6.52 (165.7)	6.80 (172.7)	27 lbs. (12 kg)
AES-600	9.0 (228.6)	8.86 (225.1)	5.48 (139.2)	5.31 (134.8)	7.89 (200.3)	8.07 (205.1)	40 lbs. (18 kg)
AES-900	10.27 (260.9)	10.17 (258.4)	6.83 (168.9)	6.65 (168.9)	7.89 (200.3)	8.01 (203.5)	54 lbs. (25 kg)
AES-1060	12.51 (317.8)	11.95 (303.5)	6.83 (173.4)	6.65 (168.9)	7.94 (201.6)	8.06 (204.8)	64 lbs. (30 kg)
AES-1210	13.42 (340.9)	12.75 (323.7)	6.80 (172.7)	6.54 (166.0)	8.40 (213.2)	8.52 (216.4)	69 lbs. (31 kg)

Battery Termination

AES-390	AES-600	AES-900	AES-1060	AES-1210

Notes: 1.) [xxx.x] represents dimensions in millimeters.

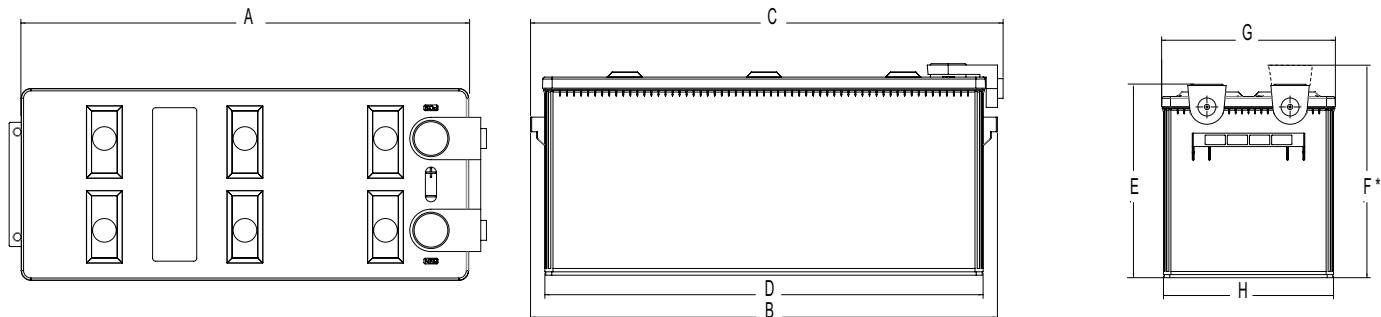


AES-1880F & AES-2170F

MODEL	A in	A mm	B in	B mm	C in	C mm	D in	D mm	E in	E mm	F in	F mm	G in	G mm	H in	H mm
AES-1880F	20.35	516.86	21.51	546.25	22.01	559.05	20.16	512.17	10.73	272.47	11.14	282.96	4.95	125.73	4.86	123.39
AES-2170F	20.35	516.86	21.51	546.25	22.01	559.05	20.16	512.17	12.19	309.55	12.60	320.04	4.95	125.73	4.86	123.39

* All dimensions in inches and (millimeters). All dimensions are for reference only. Contact a C&D Representative for complete dimensions information.

* Note: Batteries to be mounted with 0.5 IN (12.5MM) spacing minimum and free air ventilation.



* To top of terminal cover boot

MODEL	A		B		C		D		E		F		G		H	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
AES-2530F	19.68	499.8	20.74	526.8	20.99	533.2	19.47	494.4	8.80	223.5	10.10	256.5	8.44	214.4	8.26	209.8

*All dimensions are for reference only. Contact a C&D representative for complete dimensional information.

PERFORMANCE RATINGS

AES-390

Constant Current Discharge Ratings - Amperes @ 77°F (25°C)										
Operating Time to End Point Voltage (in hours)										
End Voltage Per Cell	1.00	3.00	4.00	5.00	8.00	12.00	20.00	24.00	100.00	
1.90	15.90	7.30	5.80	4.80	3.25	2.27	1.42	1.19	0.30	
1.85	17.40	7.71	6.15	5.14	3.43	2.41	1.52	1.28	0.32	
1.80	18.40	8.10	6.49	5.40	3.57	2.47	1.57	1.34	0.34	
1.75	19.70	8.70	7.00	5.80	3.80	2.64	1.64	1.38	0.34	

AES-600

Constant Current Discharge Ratings - Amperes @ 77°F (25°C)										
Operating Time to End Point Voltage (in hours)										
End Voltage Per Cell	1.00	3.00	4.00	5.00	8.00	12.00	20.00	24.00	100.00	
1.90	23.00	11.50	9.25	7.80	5.20	3.58	2.19	1.83	0.46	
1.85	26.50	12.30	9.85	8.26	5.45	3.75	2.33	1.96	0.50	
1.80	28.00	12.70	10.10	8.48	5.60	3.88	2.45	2.06	0.51	
1.75	29.60	13.00	10.35	8.66	5.75	4.00	2.50	2.10	0.52	

AES-900

Constant Current Discharge Ratings - Amperes @ 77°F (25°C)										
Operating Time to End Point Voltage (in hours)										
End Voltage Per Cell	1.00	3.00	4.00	5.00	8.00	12.00	20.00	24.00	100.00	
1.90	34.00	15.50	12.30	10.30	7.00	5.00	3.20	2.70	0.69	
1.85	38.20	17.70	14.30	11.90	8.10	5.60	3.50	2.95	0.74	
1.80	41.00	18.80	15.00	12.50	8.50	5.90	3.70	3.10	0.77	
1.75	43.50	19.50	15.50	12.90	8.70	6.00	3.75	3.15	0.78	

AES-1060

Constant Current Discharge Ratings - Amperes @ 77°F (25°C)									
Operating Time to End Point Voltage (in hours)									
End Voltage Per Cell	1.00	3.00	4.00	5.00	8.00	12.00	20.00	24.00	100.00
1.90	36.50	16.80	13.70	11.60	8.00	5.75	3.80	3.25	0.85
1.85	40.60	19.00	15.50	13.20	9.10	6.45	4.13	3.50	0.91
1.80	44.00	20.70	16.80	14.20	9.60	6.75	4.30	3.67	0.94
1.75	47.00	22.00	17.70	14.80	9.90	6.97	4.40	3.70	0.95

AES-1210

Constant Current Discharge Ratings - Amperes @ 77°F (25°C)									
Operating Time to End Point Voltage (in hours)									
End Voltage Per Cell	1.00	3.00	4.00	5.00	8.00	12.00	20.00	24.00	100.00
1.90	38.50	17.70	14.40	12.20	8.44	6.08	4.00	3.40	0.91
1.85	42.00	19.70	16.00	13.60	9.38	6.80	4.48	3.80	0.99
1.80	45.40	21.50	17.50	14.90	10.33	7.44	4.78	4.04	1.03
1.75	49.20	23.30	19.00	16.12	11.13	7.85	5.00	4.22	1.06

AES-1880F

Constant Current Discharge Ratings - Amperes @ 77°F (25°C)									
Operating Time to End Point Voltage (in hours)									
End Voltage Per Cell	1.00	3.00	4.00	5.00	8.00	12.00	20.00	24.00	100.00
1.90	60.60	31.80	26.20	22.00	15.20	10.80	6.89	5.82	1.49
1.85	70.90	34.30	27.70	23.20	16.10	11.40	7.34	6.22	1.61
1.80	82.20	36.40	29.30	24.50	16.80	11.80	7.54	6.42	1.67
1.75	89.10	38.10	30.10	25.20	17.70	12.10	7.69	6.54	1.69

AES-2170F

Constant Current Discharge Ratings - Amperes @ 77°F (25°C)									
Operating Time to End Point Voltage (in hours)									
End Voltage Per Cell	1.00	3.00	4.00	5.00	8.00	12.00	20.00	24.00	100.00
1.90	70.00	36.80	30.30	25.40	17.60	12.50	8.00	6.73	1.77
1.85	82.00	39.70	32.10	26.90	18.60	13.20	8.50	7.20	1.91
1.80	95.00	42.00	33.90	28.30	19.40	13.70	8.70	7.42	1.98
1.75	103.00	44.00	34.90	29.10	19.80	14.00	8.90	7.56	2.00

AES-2530F

Constant Current Discharge Ratings - Amperes @ 77°F (25°C)									
Operating Time to End Point Voltage (in hours)									
End Voltage Per Cell	1.00	3.00	4.00	5.00	8.00	12.00	20.00	24.00	100.00
1.90	92.00	44.33	36.25	30.60	20.50	14.33	9.03	7.63	1.98
1.85	110.00	48.67	39.50	33.30	22.38	15.63	9.90	8.33	2.16
1.80	119.00	51.00	41.00	34.40	23.06	16.04	10.15	8.58	2.24
1.75	125.00	52.67	42.25	35.20	23.50	16.42	10.40	8.79	2.28

Note: Specifications subject to change without notification.

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