

stored energy solutions for a demanding world

**Narada**

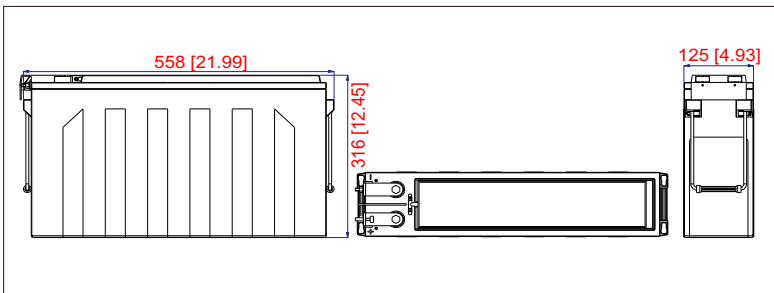
**Model: AG12V180**

**AcmeG Series**

The AcmeG range front access gel batteries is designed based on the Acme series. Using the polymer gel electrolyte with real front access structure. The state of the art internal and external design ensures AcmeG the high reliability and makes the installations quite simple and safe when placed on a standard relay rack tray or in a closed cabinet. The design float life is 12 years at 20°C(68°F).



**Dimensions—mm [inch]**



**Specifications**

Battery Model	AG12V180
Nominal Voltage	12V
Rated Capacity	180Ah - 18A for 10h to 1.80V/cell @25°C(77°F)
Typical Weight	60.5 kg
Internal Resistance	Approx 3.85mΩ
Temperature Ranges	Operation (maximum): -40°C to 50°C(-40°F to 122°F)
	Operation (recommended): 15°C to 25°C(59°F to 77°F)
	Storage: -20°C to 40°C(-4°F to 104°F)
Float Voltage	2.25V/cell@25°C(77°F)
Recommended Maximum Charging Current Limit	45 A
Equalize and Cycle Service	2.35V~2.40V/cell@25°C(77°F)
Self Discharge	The residual capacity is above 90% after 90 days storage(25°C/77°F)
Terminal	M6 Female
Terminal Hardware Torque	8 ± 1.0Nm
Container Material	ABS (V0 optional)

**Constant Current Discharge Characteristics Units: Amperes (25°C, 77°F)**

End voltage per cell	5MIN	15MIN	30MIN	45MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR	12HR	20HR	24HR
1.60V	506.5	317.6	209.0	153.8	125.6	72.8	51.6	40.7	34.6	29.2	23.1	18.6	16.0	9.90	8.30
1.67V	474.4	312.6	206.0	153.8	124.6	72.1	51.4	40.7	34.4	28.9	22.9	18.5	15.9	9.80	8.23
1.70V	457.3	306.5	203.0	152.8	123.6	71.8	51.2	40.6	34.3	28.8	22.8	18.4	15.8	9.71	8.19
1.75V	434.2	293.5	195.0	149.7	122.6	71.2	50.9	40.4	34.1	28.5	22.6	18.2	15.7	9.61	8.12
1.80V	389.9	269.3	183.9	142.7	118.6	69.6	50.0	40.0	33.5	28.0	22.5	18.1	15.6	9.61	8.08
1.83V	355.8	252.3	174.9	136.7	116.6	67.8	49.1	39.5	32.8	27.3	22.2	18.0	15.5	9.52	8.04
1.85V	337.7	240.2	170.9	131.7	113.6	66.0	48.2	39.0	32.3	27.0	21.9	17.9	15.4	9.52	7.99

**Discharge Data with Constant Power Units: Watts per cell (25°C, 77°F)**

End voltage per cell	5MIN	15MIN	30MIN	45MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR	12HR	20HR	24HR
1.60V	883.4	586.9	375.9	301.5	256.3	151.8	107.5	83.9	70.7	60.1	46.1	39.6	34.3	20.9	17.5
1.67V	835.2	570.8	372.9	299.5	255.3	151.8	107.5	83.6	70.4	59.9	46.0	39.5	34.2	20.8	17.4
1.70V	805.0	559.8	370.8	298.5	254.3	150.8	106.5	83.4	70.0	59.8	45.9	39.5	34.1	20.7	17.4
1.75V	743.7	538.7	363.8	294.5	250.2	149.7	106.5	82.9	69.6	59.5	45.6	39.4	34.0	20.5	17.3
1.80V	683.4	509.5	352.8	285.4	244.2	146.7	104.5	81.9	68.6	59.0	45.3	39.2	33.8	20.2	17.3
1.83V	663.3	482.4	341.7	277.4	237.2	142.7	102.5	80.9	67.6	58.4	45.1	38.9	33.6	20.0	17.2
1.85V	650.2	460.3	334.7	271.4	232.2	139.7	100.0	79.9	66.4	57.7	44.8	38.8	33.4	19.7	17.0

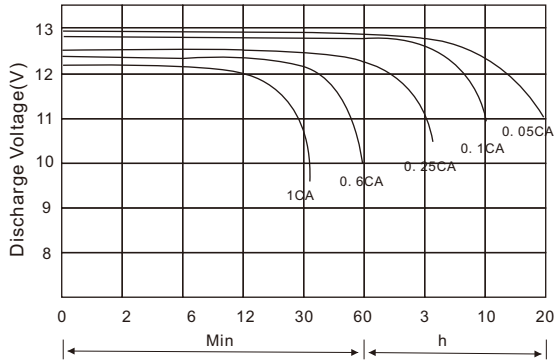
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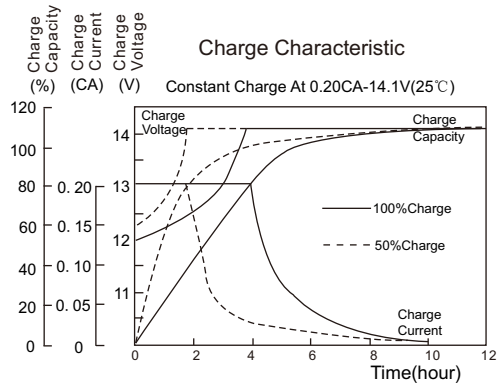
Model: **AG12V180**

**AcmeG Series**

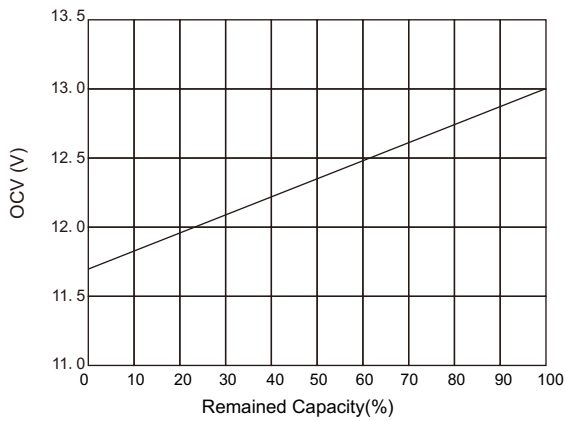
Terminal Voltage(V) vs. Discharge Time (25°C, 77°F)



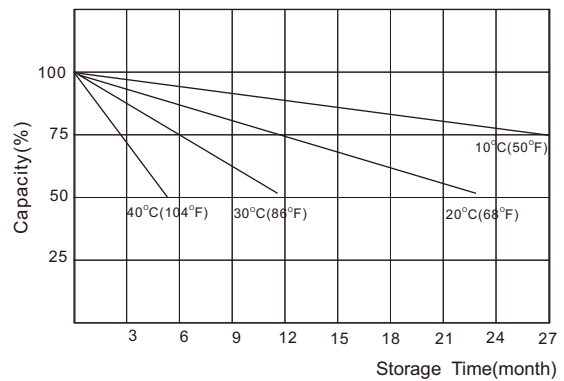
Battery Voltage vs. Charge Time



Relationship of OCV vs. State of Charge



Capacity Retention Characteristic



**Charging Procedures**

Application	Charge Voltage (V/Cell)			Max. Charge Current
	Temperature	Set Point	Allowable Range	
Cycle	25°C	2.40	2.35~2.40	0.25C
Standby	25°C	2.25	2.23~2.27	

**Discharge Current VS. Discharge Voltage**

Final Discharge Voltage V/Cell	1.80	1.70	1.55	1.30
Discharge Current (A)	0.2C ≥ (A)	0.2C < (A) < 0.5C	0.5C < (A) < 1.0C	(A) > 1.0C

**NARADA POWER SOURCE CO.,LTD.**  
 9F, Building A, No. 50 Zijinghua Road, Hangzhou, China  
 Tel:+86-571-28827013 Fax:+86-571-28828290  
 Website:www.naradabattery.com E-mail:intl@narada.biz

**NARADA ASIA PACIFIC PTE.LTD.**  
 65 Ubi Crescent #07-05 HOLA centre, Singapore  
 Tel: +65-6848 1191 Fax: +65-6749 3498  
 E-mail: sales@narada.com.sg

**NARADA EUROPE (UK) LIMITED**  
 Spectrum House, Dunstable Road, Redbourn,  
 St. Albans, Herts AL3 7PR  
 Tel: +44 (0)845 371 7095 Fax:+44 (0)845 612 2031  
 E-mail: sales@naradaeurope.com

