

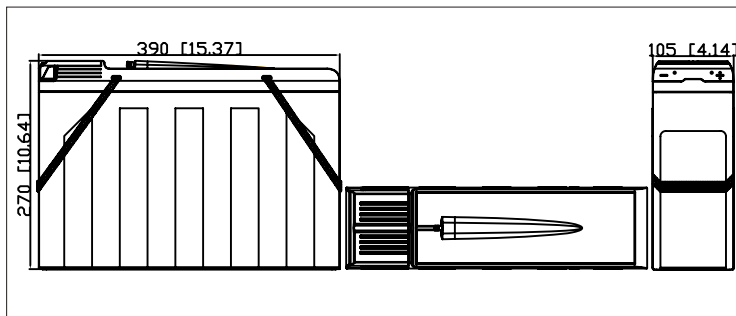
## Model: 12NDF85

ACME F SERIES

### General Features

The products are used as standby power for communication, power, military and broadcast and television system. They possess precise ABS glue seal technology between container and lid and patented post seal structure. The design float life is 12 years at 20°C(68°F).

### Dimension



### Parameter

Nominal Voltage	12V
Rated Capacity	85Ah (10hour rate) to 1.80V/cell @25°C(77°F)
Weight	31kg
Internal Resistance	About 6.47mohm
Operating Temperature Range	Discharge : -40°C~50°C(-40°F~122°F)
	Charge : -20°C~50°C(-4°F~122°F)
	Storage : -20°C~40°C(-4°F~104°F)
Recommended temperature	15°C~25°C(59°F~77°F)
Float Voltage	2.25V/cell@25°C(77°F)
Recommended Maximum Charging Current Limit	21.25A
Equalize and Cycle Service	2.35V~2.40V@25°C(77°F)
Self Discharge	The residual capacity is above 87% after 90 days storage(25°C/77°F)
Terminal	M6
Container Material	ABS

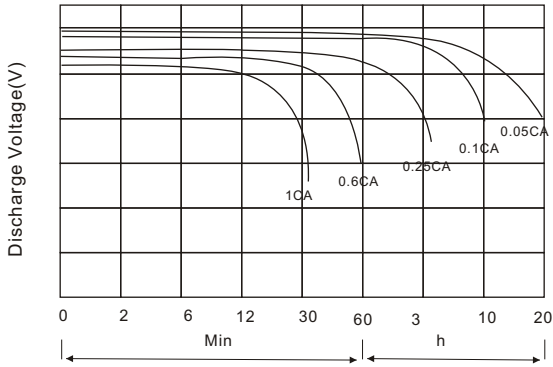
### Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

End voltage per cell	5MIN	15MIN	30MIN	45MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR	12HR	20HR	24HR
1.60V	318	171	104	75.0	60.6	34.8	25.2	19.8	16.7	14.4	11.0	9.06	7.64	4.79	4.00
1.67V	299	165	102	74.5	60.3	34.6	24.8	19.7	16.6	14.2	10.9	8.94	7.63	4.75	3.96
1.70V	296	162	100	73.9	59.8	34.3	24.6	19.6	16.4	14.1	10.9	8.93	7.55	4.73	3.96
1.75V	272	157	99.4	73.4	59.0	33.4	24.3	19.4	16.3	14.0	10.8	8.89	7.55	4.72	3.96
1.80V	244	146	95.2	70.4	57.4	33.2	24.2	19.3	15.9	13.7	10.7	8.80	7.49	4.68	3.95
1.83V	232	134	93.3	68.1	54.9	32.7	23.4	18.4	15.4	13.3	10.5	8.47	7.12	4.66	3.89
1.85V	218	130	86.7	65.3	53.2	31.5	22.8	18.2	15.0	13.0	10.1	8.40	7.04	4.58	3.85

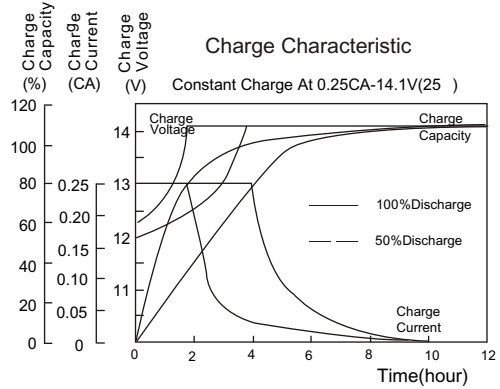
### Discharge Data with Constant Power Unit: W (25°C, 77°F)

End voltage per cell	5MIN	15MIN	30MIN	45MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR	12HR	20HR	24HR
1.60V	531	300	187	141	114	65.6	48.0	38.0	32.1	27.6	21.4	17.6	14.8	9.48	7.94
1.67V	512	295	186	140	113	65.5	47.3	37.9	32.1	27.5	21.3	17.4	14.8	9.44	7.93
1.70V	509	291	186	140	113	65.2	47.3	37.8	31.6	27.3	21.1	17.3	14.7	9.42	7.92
1.75V	475	289	185	139	111	64.9	46.8	37.8	31.6	27.2	20.9	17.3	14.7	9.40	7.92
1.80V	436	273	181	136	111	64.7	46.7	37.6	31.0	26.9	20.9	17.2	14.6	9.40	7.91
1.83V	416	251	178	132	107	63.9	45.6	36.3	30.4	26.1	20.7	16.8	14.2	9.37	7.85
1.85V	389	244	166	127	103	61.8	44.4	35.8	29.6	25.6	20.0	16.6	14.0	9.20	7.79

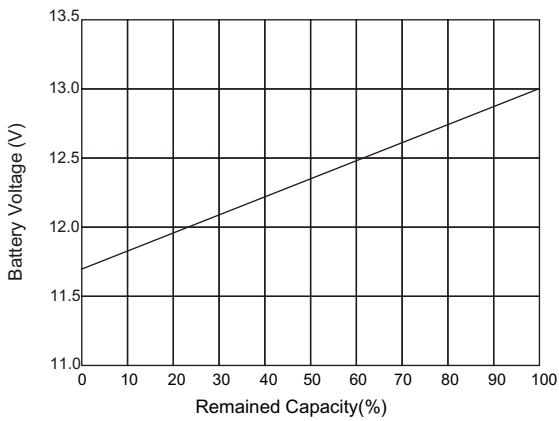
Terminal Voltage(V) and Discharge Time (25°C, 77°F)



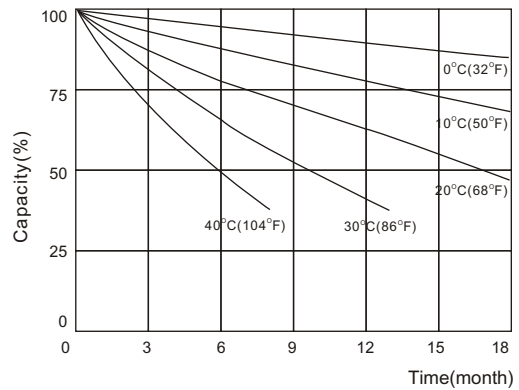
Battery Voltage and Charge Time



Relationship of OCV and 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	2.35~2.45	0.25C
Standby	25°C	2.25	2.23~2.27	

Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/Cell	1.75	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

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