



# PS12-85 (12V85Ah)

**POWERSEL**  
ENERGY SOLUTIONS

PS12-85 is a general purpose battery with 10 years floating design life, meet with IEC, JIS .BS and Eurobat standard. With heavy duty grid, thickness plates, special additives, PS series battery have long and reliable standby service life. Our PS series batteries keep high consistent for better performance in series usage.

## Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	85Ah@10hr-rate to 1.80V per cell @25°C
Weight	Approx. 26.0 Kg
Max. Discharge Current	850A (5 sec)
Internal Resistance	Approx. 5.2 mΩ
Operating Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Normal Operating Temperature Range	25°C±5°C
Float charging Voltage	13.6 to 13.8 VDC/unit Average at 25°C
Recommended Maximum Charging Current Limit	25.5A
Equalization and Cycle Service	14.6 to 14.8 VDC/unit Average at 25°C
Self Discharge	POWERSEL Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using.
Terminal	Terminal F12/F15
Container Material	A.B.S. (UL94-HB), Flammability resistance of UL94-V1 can be available upon request.



MH28539



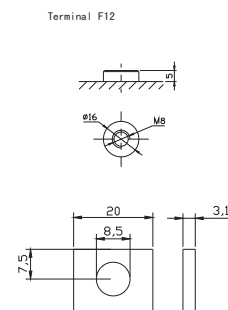
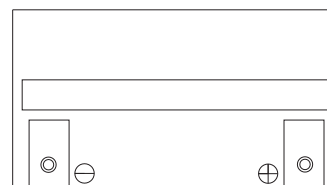
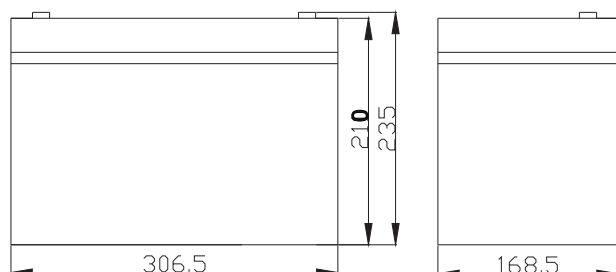
G4M20206-0910-E-16



ISO9001:2000 Certificate

## Dimensions

Unit: mm Dimension: 306.5(L)×168.5(W)×210(H)



## Constant Current Discharge Characteristics: A (25°C)

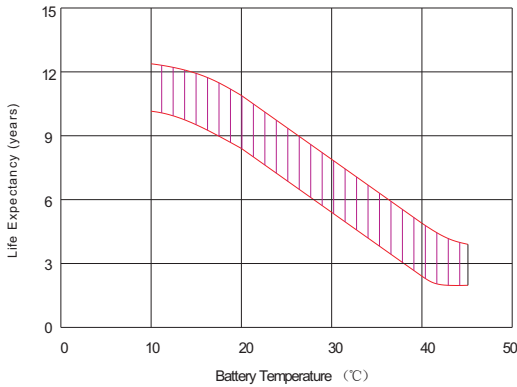
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	284.8	209.7	163.5	99.61	55.25	33.04	22.82	18.90	15.91	10.87	9.015	4.810
10.0V	276.6	199.5	160.1	97.89	55.00	32.79	22.73	18.81	15.82	10.78	8.928	4.723
10.2V	268.4	192.5	157.6	96.08	54.49	32.54	22.55	18.73	15.72	10.69	8.842	4.635
10.5V	241.0	177.6	150.1	95.36	53.98	32.30	22.47	18.55	15.54	10.60	8.755	4.548
10.8V	217.5	162.0	138.3	93.73	52.70	31.72	21.85	18.11	15.26	10.43	8.668	4.460
11.1V	185.7	144.7	124.1	87.75	50.07	30.31	20.89	17.24	14.60	9.985	8.408	4.198

## Constant Power Discharge Characteristics: W(25°C)

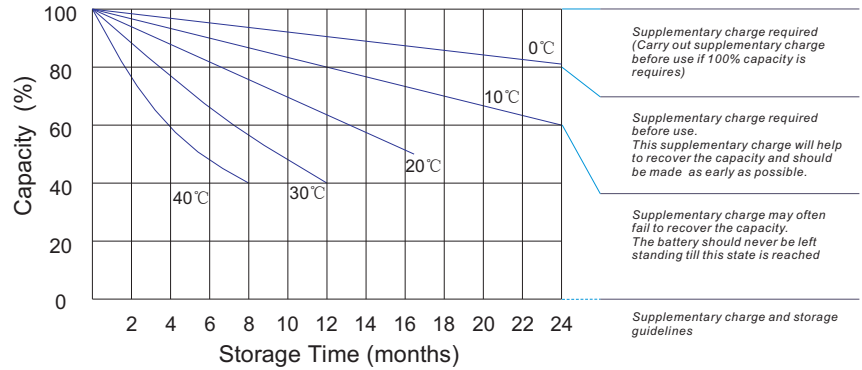
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	3005	2233	1782	1118	638.4	389.4	271.5	225.3	189.8	129.8	107.7	57.67
10.0V	2945	2165	1753	1104	636.9	387.4	271.6	225.0	189.3	129.2	107.1	56.67
10.2V	2912	2108	1734	1096	632.0	385.0	270.4	224.5	188.7	128.3	106.1	55.62
10.5V	2651	1963	1654	1089	626.3	382.2	269.4	222.4	186.5	127.2	105.1	54.57
10.8V	2414	1809	1528	1071	614.8	377.4	262.0	217.4	183.1	125.1	104.0	53.52
11.1V	2121	1636	1376	1009	588.4	363.4	250.7	206.9	175.2	119.8	100.9	50.38

All mentioned values are average values.

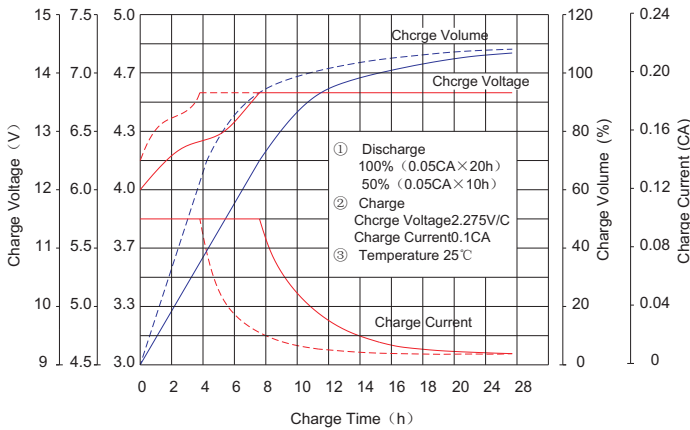
### Effect of temperature on long term float life



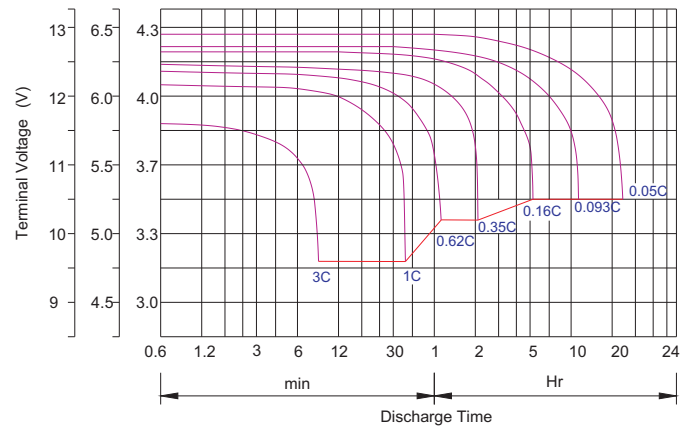
### Storage characteristic



### Charge characteristic Curve for standby use



### Discharge characteristic Curve



### Capacity Factors With Different Temperature

Battery Type		-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
GEL Battery	6V&12V	50%	70%	83%	85%	90%	98%	100%	102%	104%	105%
	2V	60%	75%	85%	88%	92%	99%	100%	103%	105%	106%
AGM Battery	6V&12V	46%	66%	76%	83%	90%	98%	100%	103%	107%	109%
	2V	55%	70%	80%	85%	92%	99%	100%	104%	108%	110%

### Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1.75V	1.70V	1.60V
Discharge Current (A)	(A) ≤ 0.2C	0.2C < (A) < 1.0C	(A) ≥ 1.0C

**Charge the batteries at least once every six months, if they are stored at 25°C.**

Charging Method:

Constant Voltage	-0.2Cx2h+2.4-2.45V/cellx24h, Max. Current 0.3CA
Constant Current	-0.2Cx2h+0.1CAx12h
Fast	-0.2Cx2h+0.3CAx4.0h

### Maintenance & Cautions

<b>Float Service:</b>
※ Every month, recommend inspection every battery voltage.
※ Every three months, recommend equalization charge for one time.
Equalization charge method:
Discharge: 100% rate capacity discharge.
Charge: Max. current 0.3CA, constant voltage 2.4-2.45V/Cell charge 24h.
※ Effect of temperature on float charge voltage: -3mV/°C/Cell.
※ Length of service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging voltage.