



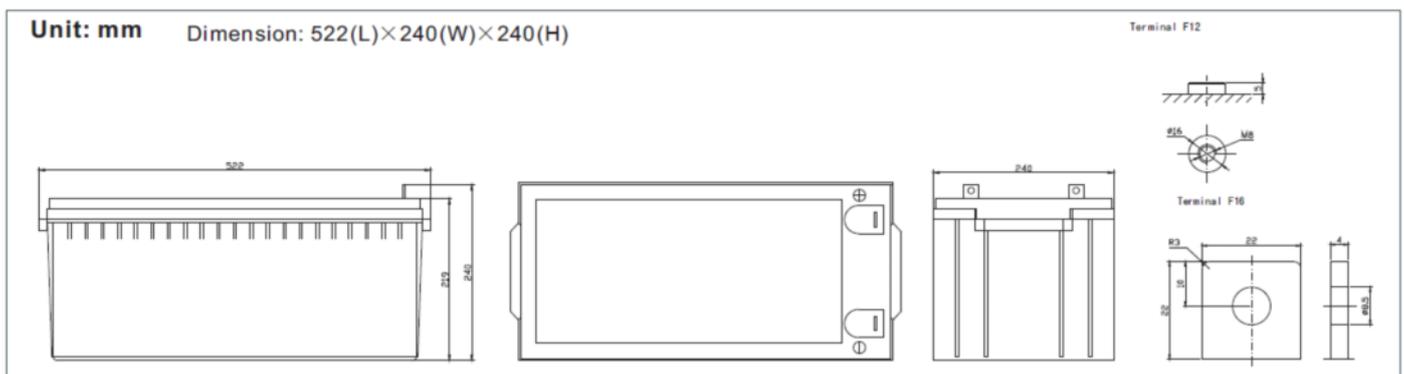
Technical Data: LP230-12

The LP230-12 is a general purpose battery with 10 years floating design life, meeting IEC, JIS, BS and Eurobat standards. With heavy duty, grid thickness plates, special additives, this series of batteries have a long life and reliable standby service life.

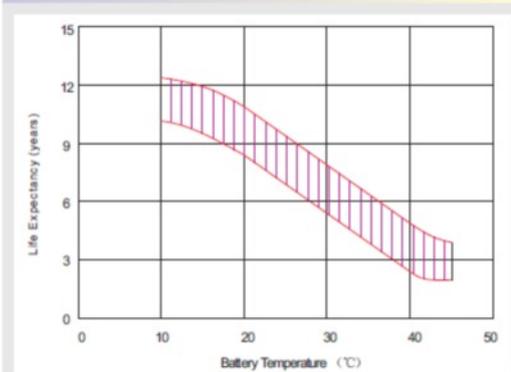
Specification:

Cells Per unit	6
Voltage per unit	12
Capacity	230Ah@20hr-rate to 1.75V per cell @ 25°C
Weight	Approx. 60.0 Kg
Max. Discharge Current	2000A (5Sec)
Internal Resistance	Approx 4.0mΩ
Operating Temperature range	Discharge: -20°C ~ 60°C Charge: 0°C ~ 50°C Storage: -20°C ~ 60°C
Normal Operating Temp. Range	25°C ± 5°C
Float Charging Voltage	13.6 to 13.8VDC/ unit average at 25°C
Recomm. Max Charging Current	60A
Equalization and Cycle Service	14.6 to 14.8VDC/ unit average at 25°C
Self Discharge	Can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge battery before using.
Terminal	Terminal F12/F16
Container Material	A.B.S.(UL94-HB) Flammability resistance of U94-V1.

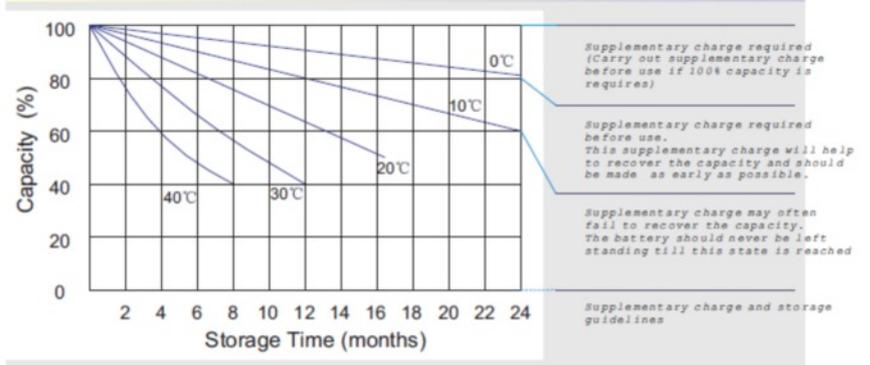
Dimensions



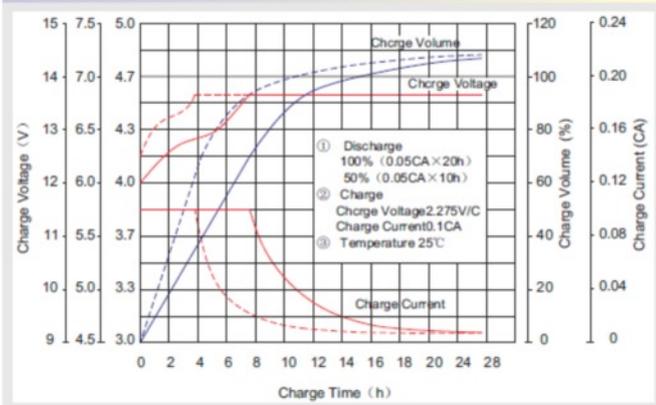
Effect of temperature on long term float life



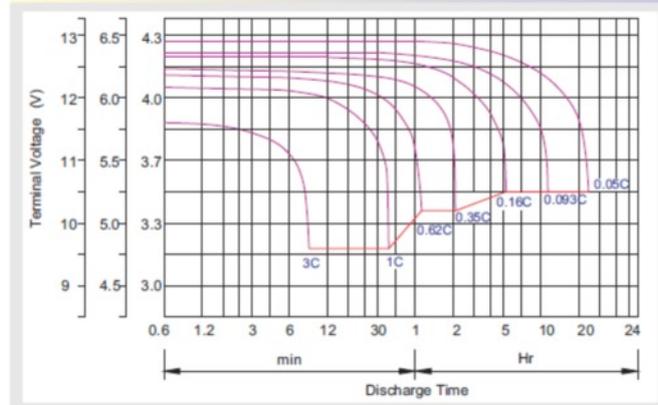
Storage characteristic



Charge characteristic Curve for standby use



Discharge characteristic Curve



Constant Current Discharge Characteristics: A (25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	696.54	514.56	374.40	230.00	130.00	72.618	52.200	43.200	35.360	24.844	21.006	11.109
10.0V	677.91	489.60	366.72	226.20	129.40	72.072	52.000	43.000	35.152	24.642	20.804	10.907
10.2V	638.80	472.32	360.96	224.20	128.20	71.526	51.600	42.800	34.944	24.440	20.602	10.705
10.5V	573.62	435.84	343.68	218.60	127.00	70.980	51.400	42.400	34.528	24.238	20.400	10.503
10.8V	533.76	397.44	316.80	209.00	124.00	69.706	50.000	41.400	33.904	23.834	20.198	10.301
11.1V	464.64	355.20	284.16	195.80	117.80	66.612	47.800	39.400	32.448	22.824	19.592	9.6950

Constant Power Discharge Characteristics: W(25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.6V	6633.9	5001.1	3682.2	2595.6	1486.8	835.38	602.40	499.20	409.34	288.28	236.20	124.76
10.0V	6498.4	4776.7	3605.7	2563.2	1479.6	832.10	601.20	498.00	406.85	287.07	233.78	123.55
10.2V	6134.3	4617.5	3556.7	2533.2	1468.8	824.46	597.60	495.60	405.60	284.65	232.57	122.34
10.5V	5523.8	4266.7	3391.5	2475.6	1454.4	816.82	594.00	492.00	401.86	282.23	230.14	121.13
10.8V	5122.4	3874.0	3116.1	2362.8	1418.4	804.80	579.60	478.80	395.62	276.17	227.72	119.92
11.1V	4421.7	3440.5	2782.6	2214.0	1344.0	767.68	550.80	456.00	375.65	266.48	220.45	115.07

Capacity Factors With Different Temperature

-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
46%	66%	76%	83%	90%	98%	100%	103%	107%	109%

Discharge Current VS. Discharger 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 6 months, if they are stored at 25°C