Valve Regulated Lead Acid Battery

WPL28-12TN

Trickle use

Specifications

Nominal Voltage(V)

12V

Nominal Capacity

20 hour rate	(1.4A	to	10.50V)	28Ah
10 hour rate	(2.66A	to	10.50V)	26.6Ah
5 hour rate	(4.76A	to	10.20V)	23.8Ah
1C	(28A	to	9.60V)	17.73Ah
3C	(84A	to	9.60V)	11.2Ah

Weight

Approx. 9.18kg(20.2Lbs.)

Internal Resistance (at 1KHz)

Approx. 9.4 mΩ

Maximum Discharge Current for

5 seconds:420A

Charging Methods at 25℃(77℉)

Maximum Charging Current： 8.4A

Standby use:

Float Charging Voltage 13.5 to 13.8V

Coefficient -3.0mV/℃/cell

Operating Temperature Range

Charge	-15℃(5℉)	to	40℃(104℉)
Discharge	-15℃(5℉)	to	50℃(122℉)
Storage	-15℃(5℉)	to	40℃(104℉)

Charge Retention (shelf life) at 20℃(68℉)

1 month	92%
3 month	90%
6 month	80%

Case Material

ABS UL94 HB

Option: Flammability resistance of (UL94 V-0)

Design Life & Standard

Expected Trickle Design Life: 10 years at 20℃ according to Eurobat.

Terminal

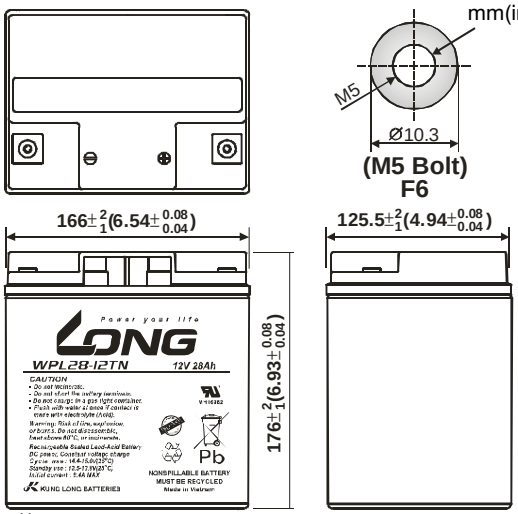
F6

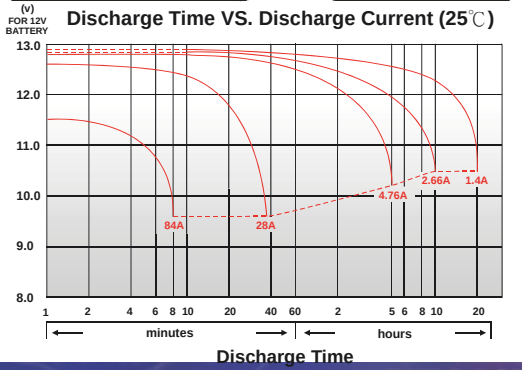
Dimensions

Length (L)	166+2-1 (6.54+0.08-0.04)
Width (W)	125.5+2-1 (4.94+0.08-0.04)
Height (H)	176+2-1 (6.93+0.08-0.04)
Overall Height (HT)	176+2-1 (6.93+0.08-0.04)

Description of torque value of hard ware for the terminals:

Recommended torque value	M5:5 N-m (51kgf-cm)
Maximum allowable torque value	M5:6 N-m (61kgf-cm)





Power your life

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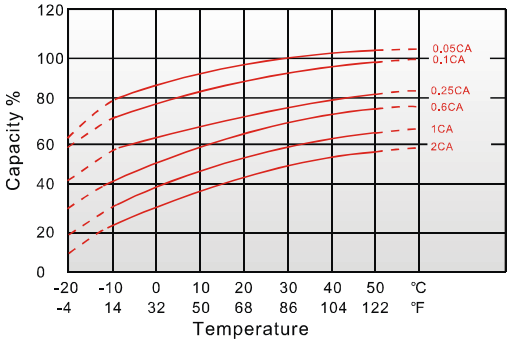
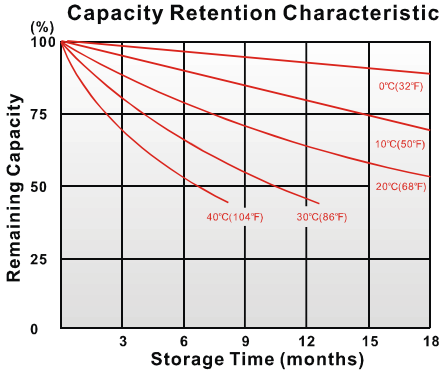
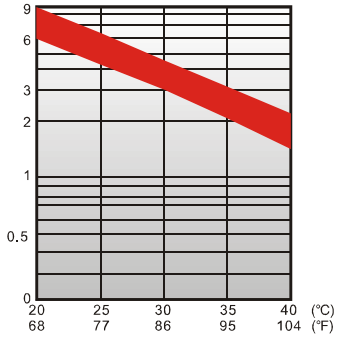
Effect of Temperature on Capacity 25℃(77℉)



Capacity Retention Characteristic



Trickle (or float) Service Life



- PERFORMANCE DATA

Discharge Rates in Watts to Various End Voltages at 25℃(77℉)

Time \ End Voltage		1.85V	1.75V	1.70V	1.65V	1.60V
5	min	153	164	172	183	194
10	min	131	133	138	144	146
15	min	103	105	108	110	112
20	min	89.8	91.0	94.7	96.7	97.7
30	min	62.4	64.4	66.3	67.4	98.5
45	min	42.7	47.4	43.2	49.2	50.9
60	min	36.8	41.4	42.0	42.5	43.5
90	min	25.0	25.9	26.0	26.2	26.7
120	min	19.8	21.1	21.3	21.5	21.7
180	min	14.2	14.8	15.0	15.3	15.5
240	min	11.9	12.1	12.2	12.3	12.5
300	min	10.1	10.2	10.3	10.4	10.6
480	min	6.80	7.20	7.28	7.53	7.68
600	min	5.31	5.32	5.33	5.34	5.35
1200	min	2.81	2.82	2.83	2.84	2.85

- Discharge Rates in Amperes to Various End Voltages at 25℃(77℉)

Time \ End Voltage		1.85V	1.75V	1.70V	1.65V	1.60V
5	min	83.0	88.5	93.0	99.0	105
10	min	70.0	71.2	73.5	76.8	78.3
15	min	53.6	54.7	56.0	57.0	58.1
20	min	46.8	47.3	48.9	49.9	50.5
30	min	32.2	33.3	34.1	34.9	36.0
45	min	22.1	23.9	24.6	25.3	26.2
60	min	18.7	21.2	21.7	22.2	22.9
90	min	12.8	13.2	13.6	13.8	14.1
120	min	10.2	10.7	10.8	10.9	11.0
180	min	7.11	7.42	7.52	7.62	7.73
240	min	5.92	5.97	6.20	6.31	6.42
300	min	4.98	5.11	5.15	5.20	5.22
480	min	3.38	3.47	3.49	3.53	3.55
600	min	2.62	2.66	2.67	2.68	2.69
1200	min	1.41	1.42	1.43	1.44	1.45

All data on the spec. sheet is an average value:
The tolerance range : X<6min(+15%~-15%), 6min≦X<10min(+12%~-12%),10min ≦X < 60min(+8% ~-8%), X≧60min(+5%~-5%)

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