

Motive Battery

Energy Storage Battery

Reserve Battery

Motorcycle Battery



Industry Battery-General Purpose AGM Battery-TN Series

TN12-2.3

(12V 2.3Ah)

GENERAL FEATURES

- ♦ Oxygen recombination technology: maintenance-free, no need to add water or acid
- ♦ The patent grid alloy: less gassing, low self-discharge, excellent corrosion resistance
- ♦ Design life is 3~5 years at 25°C under standby application, deep discharge recoverability
- ♦ High quality AGM separator: extend cycle life and prevent micro short circuit
- ♦ ABS container: increase the strength of battery (Flame-retardant ABS UL94-V0 is optional)

Dimension

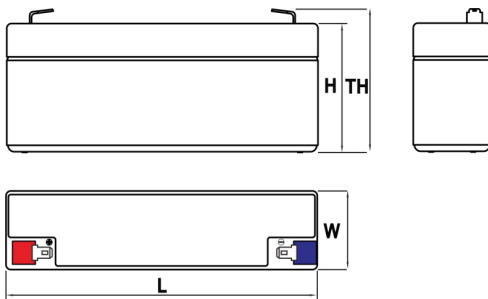
Unit:mm

Length 178±2mm / 7.01inch

Width 35±2mm / 1.38inch

Container Height 60±3mm / 2.36inch

Total Height 66±3mm / 2.6inch



Application

- ♦ Uninterrupted Power Supply (UPS)
- ♦ Communications and electric equipment
- ♦ Emergency lighting equipment
- ♦ Fire alarm and security system
- ♦ Robots, control equipment, and other factory automation equipment
- ♦ Emergency power supply (EPS)
- ♦ Portable VTR/TV, radio and so on
- ♦ Power tools, lawn mowers, vacuum cleaners
- ♦ Cameras and photographic equipment
- ♦ Portable measuring equipment
- ♦ Portable telephone sets
- ♦ Various power toys and hobby equipment
- ♦ Lighting equipment

Terminal

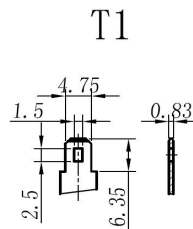
Unit:mm

Terminal Type: T1

Weight

0.97kg

2.14lbs



This document is subject to change without prior notification

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TN12-2.3

Specification

Nominal Voltage	12V	
Rated Capacity(25°C)	2.3Ah	20hr Rate(1.80V/cell)
	2.14Ah	10hr Rate(1.80V/cell)
	1.96Ah	5hr Rate(1.75V/cell)
	1.77Ah	3hr Rate(1.70V/cell)
	1.42Ah	1hr Rate(1.60V/cell)
Container Material	ABS (Flame-retardant ABS UL94-V0 is optional)	
Operating Temperature Range	Discharge	-20 ~ +50°C
	Charge	0 ~ +40°C
	Storage	-15 ~ +40°C
Capacity Effected by Temperature	40°C / 104°F	106%
	25°C / 77°F	100%
	0°C / 32°F	86%
	-10°C / 14°F	65%
Charge	Float Voltage	2.23 -2.27V/cell@25°C, Tem.Coefficient : -3mV/cell/°C
	Equalize Voltage	2.35 -2.40V/cell@25°C, Tem.Coefficient : -3mV/cell/°C
	Cycle Voltage	2.40 -2.50V/cell@25°C, Tem.Coefficient : -5mV/cell/°C
Max. Charging Current	0.69A (0.3C)	
Max. Discharge Current (5S)	34.5A	
Internal Resistance	90mΩ	
Self-Discharge	<3%, TN series stored at 25 °C require a supplementary charge every six months, the charging interval would shrink when the ambient temperature went higher	

Discharge Performance

Constant Current Discharge Table (25°C/77°F) Unit: A

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	4.4	3.1	2.5	2.2	1.8	1.4	1.13	0.69	0.52	0.43	0.37	0.32	0.25	0.207	0.114
1.80V/cell	5.4	3.7	2.9	2.5	2.0	1.5	1.22	0.73	0.55	0.45	0.38	0.33	0.26	0.214	0.115
1.75V/cell	6.4	4.2	3.3	2.7	2.1	1.6	1.28	0.76	0.57	0.47	0.39	0.34	0.27	0.218	0.116
1.70V/cell	7.3	4.6	3.5	2.9	2.2	1.7	1.33	0.79	0.59	0.48	0.40	0.35	0.27	0.222	0.118
1.67V/cell	8.1	4.9	3.7	3.1	2.3	1.7	1.39	0.82	0.60	0.49	0.41	0.35	0.28	0.225	0.120
1.60V/cell	8.5	5.1	3.9	3.2	2.4	1.8	1.42	0.84	0.62	0.50	0.42	0.36	0.28	0.229	0.121

Constant Power Discharge Table (25°C/77°F) Unit: W

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	8.3	5.9	4.9	4.3	3.5	2.7	2.19	1.34	1.03	0.85	0.72	0.63	0.50	0.416	0.230
1.80V/cell	10.1	6.9	5.6	4.8	3.8	2.9	2.34	1.42	1.07	0.89	0.75	0.65	0.52	0.428	0.231
1.75V/cell	11.8	7.8	6.1	5.2	4.0	3.1	2.45	1.47	1.11	0.91	0.76	0.66	0.53	0.434	0.232
1.70V/cell	13.3	8.5	6.6	5.5	4.2	3.2	2.54	1.52	1.14	0.93	0.78	0.67	0.53	0.439	0.235
1.67V/cell	14.5	9.0	6.9	5.7	4.3	3.3	2.63	1.56	1.16	0.94	0.79	0.68	0.54	0.443	0.237
1.60V/cell	14.9	9.2	7.1	5.8	4.4	3.3	2.67	1.60	1.18	0.96	0.80	0.69	0.55	0.448	0.237

□ 动力电池

■ 储能电池

■ 备用电池

□ 摩托车电池



阀控式免维护铅酸蓄电池-通用型

TN12-2.3

(12V 2.3Ah)

产品特点

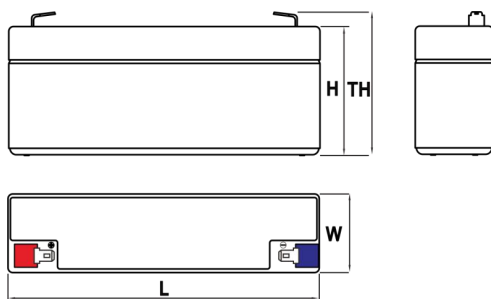
- ◆ 阀控式免维护设计，寿命期间无需加水或加酸
- ◆ 专利稀土合金板栅，减少气体产生，自放电率低，抗腐蚀能力出众
- ◆ 在25°C下，产品浮充设计寿命为3~5年，优良的深放电恢复能力
- ◆ 高质量AGM隔板：防止微短路，延长循环寿命
- ◆ ABS壳盖：电池外壳强度高（阻燃壳体UL94-V0可选）



尺寸

单个尺寸

长	178±2mm
宽	35±2mm
高	60±3mm
总高	66±3mm



产品应用

- ◆ 不间断电源(UPS)
- ◆ 通信和电力设备
- ◆ 紧急照明设备
- ◆ 火灾报警及安防系统
- ◆ 机器人、控制设备及其他机械自动化设备
- ◆ 应急电源系统
- ◆ 便携式音频设备
- ◆ 电动工具，割草机，真空吸尘器
- ◆ 照相设备
- ◆ 便携式测量工具
- ◆ 便携式通话设备
- ◆ 各式电动玩具及娱乐设施
- ◆ 照明设备

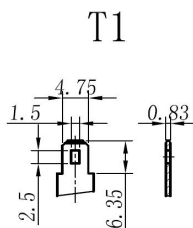
端子类型

单位:mm

端子类型 T1

重量

0.97kg 2.14lbs



ISO9001 ISO14001 OHSAS18001

内容如有改动，恕不另行通知

□ 动力电池

■ 储能电池

■ 备用电池

□ 摩托车电池



TN12-2.3

规格书

额定电压	12V	
容量(25°C)	2.3Ah	20hr Rate(1.80V/cell)
	2.14Ah	10hr Rate(1.80V/cell)
	1.96Ah	5hr Rate(1.75V/cell)
	1.77Ah	3hr Rate(1.70V/cell)
	1.42Ah	1hr Rate(1.60V/cell)
壳体材料	ABS (阻燃ABS壳体可选)	
使用温度范围	放电	-20 ~ +50°C
	充电	0 ~ +40°C
	储存	-15 ~ +40°C
不同温度下 电池容量系数	40°C / 104°F	106%
	25°C / 77°F	100%
	0°C / 32°F	86%
	-10°C / 14°F	65%
充电	浮充电压	2.23 - 2.27V/单格@25°C, 温度补偿系数: -3mV/单格/°C
	均充电压	2.35 - 2.40V/单格@25°C, 温度补偿系数: -3mV/单格/°C
	循环使用电压	2.40 - 2.50V/单格@25°C, 温度补偿系数: -5mV/单格/°C
最大充电电流	0.69A (0.3C)	
最大放电电流 (5S)	34.5A	
电阻	90mΩ	
自放电	<3%, TN系列储存在25°C时需每6个月进行一次补充充电, 环境温度更高时则充电间隔时间越短	

放电性能

恒电流放电表 (25°C/77°F) 单位: A															
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	4.4	3.1	2.5	2.2	1.8	1.4	1.13	0.69	0.52	0.43	0.37	0.32	0.25	0.207	0.114
1.80V/cell	5.4	3.7	2.9	2.5	2.0	1.5	1.22	0.73	0.55	0.45	0.38	0.33	0.26	0.214	0.115
1.75V/cell	6.4	4.2	3.3	2.7	2.1	1.6	1.28	0.76	0.57	0.47	0.39	0.34	0.27	0.218	0.116
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1.67V/cell	8.1	4.9	3.7	3.1	2.3	1.7	1.39	0.82	0.60	0.49	0.41	0.35	0.28	0.225	0.120
1.60V/cell	8.5	5.1	3.9	3.2	2.4	1.8	1.42	0.84	0.62	0.50	0.42	0.36	0.28	0.229	0.121

恒功率放电表 (25°C/77°F) 单位: W															
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	8.3	5.9	4.9	4.3	3.5	2.7	2.19	1.34	1.03	0.85	0.72	0.63	0.50	0.416	0.230
1.80V/cell	10.1	6.9	5.6	4.8	3.8	2.9	2.34	1.42	1.07	0.89	0.75	0.65	0.52	0.428	0.231
1.75V/cell	11.8	7.8	6.1	5.2	4.0	3.1	2.45	1.47	1.11	0.91	0.76	0.66	0.53	0.434	0.232
1.70V/cell	13.3	8.5	6.6	5.5	4.2	3.2	2.54	1.52	1.14	0.93	0.78	0.67	0.53	0.439	0.235
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1.60V/cell	14.9	9.2	7.1	5.8	4.4	3.3	2.67	1.60	1.18	0.96	0.80	0.69	0.55	0.448	0.237