

Motive Battery

Energy Storage Battery

Reserve Battery

Motorcycle Battery



Maintenance Free VRLA AGM Battery - Long Life Type

TNL12-60

(12V 60Ah)

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
- Long life, low self-discharge rate and high reliability, 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

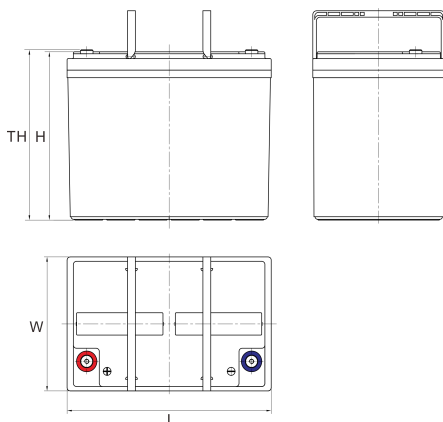
Unit:mm

Length 260±2mm / 10.24inch

Width 168±2mm / 6.61inch

Container Height 211±3mm / 8.31inch

Total Height 213.5±3mm / 8.41inch



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

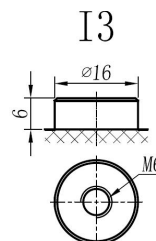
Unit:mm

Terminal Type: I3

Weight

20.7kg

45.77lbs



This document is subject to change without prior notification

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TNL12-60

Specificaion

Nominal Voltage	12V	
Rated Capacity(25°C)	64Ah	20hr Rate(1.80V/cell)
	60Ah	10hr Rate(1.80V/cell)
	53Ah	5hr Rate(1.75V/cell)
	50Ah	3hr Rate(1.70V/cell)
	38Ah	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	18A (0.3C)	
Max. Discharge Current (5'	720A	
Internal Resistance	7.4mΩ	
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	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	70.3	59.1	52.4	43.5	34.0	29.11	18.85	14.17	11.61	9.77	8.51	6.83	5.820	3.105
1.80V/cell	80.4	66.4	58.0	47.2	36.7	30.73	20.26	15.23	12.34	10.35	9.02	7.19	6.006	3.213
1.75V/cell	91.3	74.8	64.1	51.3	40.0	33.50	21.07	15.83	12.77	10.60	9.30	7.43	6.168	3.295
1.70V/cell	103.1	83.0	70.7	56.0	43.1	35.44	22.20	16.67	13.34	11.21	9.75	7.74	6.404	3.378
1.67V/cell	110.8	88.8	75.2	59.1	45.6	36.66	23.01	17.34	13.86	11.56	10.09	8.00	6.584	3.483
1.60V/cell	121.8	97.3	81.7	63.1	47.4	37.76	23.60	17.78	14.17	11.84	10.30	8.14	6.722	3.540

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

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	131.2	111.5	99.9	83.7	65.2	55.95	36.47	27.52	22.62	19.08	16.76	13.50	11.634	6.213
1.80V/cell	148.4	123.5	108.8	89.6	69.8	58.75	38.94	29.40	23.91	20.13	17.69	14.17	11.987	6.420
1.75V/cell	165.9	137.5	119.1	96.6	75.4	63.75	40.35	30.46	24.65	20.53	18.18	14.61	12.295	6.575
1.70V/cell	183.1	150.4	130.5	104.8	80.9	67.24	42.42	32.00	25.71	21.68	19.03	15.21	12.758	6.738
1.67V/cell	194.9	159.9	137.8	109.7	84.8	69.06	43.73	33.15	26.62	22.28	19.63	15.68	13.095	6.939
1.60V/cell	209.6	172.2	148.1	116.3	87.7	70.75	44.62	33.85	27.13	22.75	19.98	15.92	13.348	7.041

☐ 动力电池

■ 储能电池

■ 备用电池

☐ 摩托车电池



阀控式免维护AGM电池-长寿命系列

TNL12-60

(12V 60Ah)

产品特点

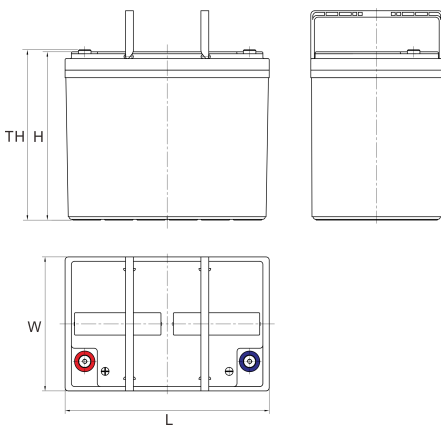
- ◆ 阀控式免维护设计，寿命期间无需加水或加酸
- ◆ 专利稀土合金板栅，减少气体产生，自放电率低，抗腐蚀能力出众
- ◆ 电池寿命长，自放电率低具有高可靠性，深放电恢复能力出色
- ◆ 高质量AGM隔板：防止微短路，延长循环寿命
- ◆ ABS壳盖：电池外壳强度高（阻燃壳体UL94-V0可选）



尺寸

单个尺寸

长	260±2mm
宽	168±2mm
高	211±3mm
总高	213.5±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

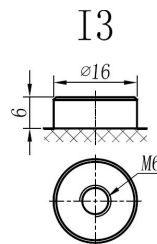
端子类型

单位:mm

端子类型 I3

重量

20.7kg 45.77lbs



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



TNL12-60

规格书

额定电压	12V	
容量(25°C)	64Ah	20hr Rate(1.80V/cell)
	60Ah	10hr Rate(1.80V/cell)
	53Ah	5hr Rate(1.75V/cell)
	50Ah	3hr Rate(1.70V/cell)
	38Ah	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	18A (0.3C)	
最大放电电流 (5S)	720A	
电阻	7.4mΩ	
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	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	70.3	59.1	52.4	43.5	34.0	29.11	18.85	14.17	11.61	9.77	8.51	6.83	5.820	3.105
1.80V/cell	80.4	66.4	58.0	47.2	36.7	30.73	20.26	15.23	12.34	10.35	9.02	7.19	6.006	3.213
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1.67V/cell	110.8	88.8	75.2	59.1	45.6	36.66	23.01	17.34	13.86	11.56	10.09	8.00	6.584	3.483
1.60V/cell	121.8	97.3	81.7	63.1	47.4	37.76	23.60	17.78	14.17	11.84	10.30	8.14	6.722	3.540

恒功率放电表 (25°C/77°F) 单位: W														
F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	131.2	111.5	99.9	83.7	65.2	55.95	36.47	27.52	22.62	19.08	16.76	13.50	11.634	6.213
1.80V/cell	148.4	123.5	108.8	89.6	69.8	58.75	38.94	29.40	23.91	20.13	17.69	14.17	11.987	6.420
1.75V/cell	165.9	137.5	119.1	96.6	75.4	63.75	40.35	30.46	24.65	20.53	18.18	14.61	12.295	6.575
1.70V/cell	183.1	150.4	130.5	104.8	80.9	67.24	42.42	32.00	25.71	21.68	19.03	15.21	12.758	6.738
1.67V/cell	194.9	159.9	137.8	109.7	84.8	69.06	43.73	33.15	26.62	22.28	19.63	15.68	13.095	6.939
1.60V/cell	209.6	172.2	148.1	116.3	87.7	70.75	44.62	33.85	27.13	22.75	19.98	15.92	13.348	7.041