

Motive Battery

Energy Storage Battery

Reserve Battery

Motorcycle Battery



Industry Battery-General Purpose AGM Battery-TN Series

TN12-90

(12V 90Ah)

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 7~9 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

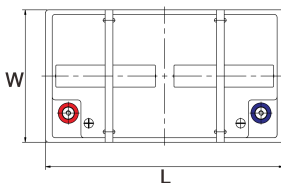
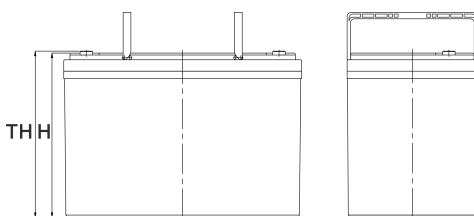
Unit:mm

Length 306±2mm / 12.05inch

Width 168±2mm / 6.61inch

Container Height 208±3mm / 8.19inch

Total Height 211±3mm / 8.31inch



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

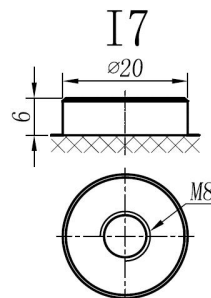
Terminal

Unit:mm

Terminal Type: I7

Weight

25.8kg 56.88lbs



ISO9001 ISO14001 OHSAS18001

This document is subject to change without prior notification

Motive Battery Energy Storage Battery Reserve Battery Motorcycle Battery

TN12-90

Specification

| | | |
|---|---|---|
| Nominal Voltage | 12V | |
| Rated Capacity(25°C) | 94Ah | 20hr Rate(1.80V/cell) |
| | 90Ah | 10hr Rate(1.80V/cell) |
| | 77Ah | 5hr Rate(1.75V/cell) |
| | 72Ah | 3hr Rate(1.70V/cell) |
| | 55Ah | 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 | 27A (0.3C) | |
| Max. Discharge Current (5S) | 1080A | |
| Internal Resistance | 5mΩ | |
| 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 | 154.2 | 121.2 | 103.1 | 86.2 | 68.5 | 51.9 | 42.47 | 27.05 | 21.39 | 17.47 | 14.08 | 12.26 | 9.95 | 8.504 | 4.640 |
| 1.80V/cell | 207.0 | 154.9 | 124.6 | 101.9 | 80.9 | 60.3 | 47.58 | 29.52 | 23.02 | 18.66 | 15.13 | 13.15 | 10.56 | 9.009 | 4.685 |
| 1.75V/cell | 233.4 | 170.2 | 136.1 | 109.6 | 84.0 | 62.6 | 49.77 | 30.62 | 23.44 | 19.07 | 15.50 | 13.51 | 10.74 | 9.099 | 4.730 |
| 1.70V/cell | 257.0 | 185.5 | 145.3 | 115.2 | 87.4 | 65.1 | 51.34 | 31.84 | 24.10 | 19.58 | 15.91 | 13.79 | 10.89 | 9.189 | 4.820 |
| 1.67V/cell | 283.4 | 200.2 | 154.5 | 122.4 | 92.2 | 66.7 | 53.07 | 32.73 | 25.12 | 20.25 | 16.35 | 14.10 | 11.06 | 9.378 | 4.883 |
| 1.60V/cell | 312.5 | 217.3 | 165.2 | 130.4 | 97.3 | 69.5 | 54.95 | 33.83 | 25.89 | 20.88 | 16.89 | 14.41 | 11.17 | 9.477 | 4.910 |

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 | 154.2 | 121.2 | 103.1 | 86.2 | 68.5 | 51.9 | 42.47 | 27.05 | 21.39 | 17.47 | 14.08 | 12.26 | 9.95 | 8.504 | 4.640 |
| 1.80V/cell | 207.0 | 154.9 | 124.6 | 101.9 | 80.9 | 60.3 | 47.58 | 29.52 | 23.02 | 18.66 | 15.13 | 13.15 | 10.56 | 9.009 | 4.685 |
| 1.75V/cell | 233.4 | 170.2 | 136.1 | 109.6 | 84.0 | 62.6 | 49.77 | 30.62 | 23.44 | 19.07 | 15.50 | 13.51 | 10.74 | 9.099 | 4.730 |
| 1.70V/cell | 257.0 | 185.5 | 145.3 | 115.2 | 87.4 | 65.1 | 51.34 | 31.84 | 24.10 | 19.58 | 15.91 | 13.79 | 10.89 | 9.189 | 4.820 |
| 1.67V/cell | 283.4 | 200.2 | 154.5 | 122.4 | 92.2 | 66.7 | 53.07 | 32.73 | 25.12 | 20.25 | 16.35 | 14.10 | 11.06 | 9.378 | 4.883 |
| 1.60V/cell | 312.5 | 217.3 | 165.2 | 130.4 | 97.3 | 69.5 | 54.95 | 33.83 | 25.89 | 20.88 | 16.89 | 14.41 | 11.17 | 9.477 | 4.910 |

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

TN12-90

(12V 90Ah)

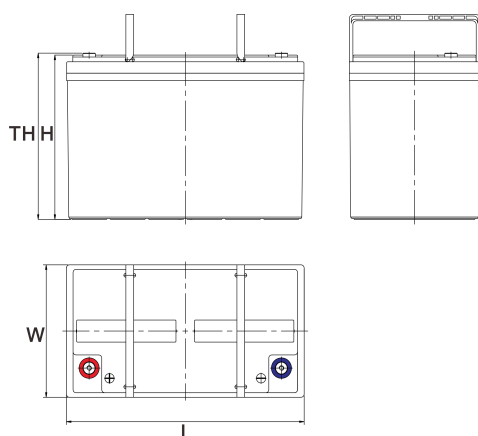
产品特点

- ◆ 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7~9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 | 306±2mm |
| 宽 | 168±2mm |
| 高 | 208±3mm |
| 总高 | 211±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

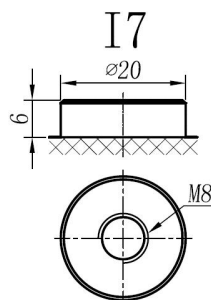
端子类型

单位:mm

端子类型 I7

重量

25.8kg 56.88lbs



内容如有改动，恕不另行通知



ISO9001 ISO14001 OHSAS18001

天能电池集团有限公司

长兴天能进出口有限公司

www.tiannenggroup.com

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浙江省长兴画溪工业区包桥路18号天能集团 邮编：313199

动力电池

储能电池

备用电池

摩托车电池



TN12-90

规格书

| | | |
|-----------------|--|---|
| 额定电压 | 12V | |
| 容量(25°C) | 94Ah | 20hr Rate(1.80V/cell) |
| | 90Ah | 10hr Rate(1.80V/cell) |
| | 77Ah | 5hr Rate(1.75V/cell) |
| | 72Ah | 3hr Rate(1.70V/cell) |
| | 55Ah | 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 | 27A (0.3C) | |
| 最大放电电流 (5S) | 1080A | |
| 电阻 | 5mΩ | |
| 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 | 154.2 | 121.2 | 103.1 | 86.2 | 68.5 | 51.9 | 42.47 | 27.05 | 21.39 | 17.47 | 14.08 | 12.26 | 9.95 | 8.504 | 4.640 |
| 1.80V/cell | 207.0 | 154.9 | 124.6 | 101.9 | 80.9 | 60.3 | 47.58 | 29.52 | 23.02 | 18.66 | 15.13 | 13.15 | 10.56 | 9.009 | 4.685 |
| 1.75V/cell | 233.4 | 170.2 | 136.1 | 109.6 | 84.0 | 62.6 | 49.77 | 30.62 | 23.44 | 19.07 | 15.50 | 13.51 | 10.74 | 9.099 | 4.730 |
| 1.70V/cell | 257.0 | 185.5 | 145.3 | 115.2 | 87.4 | 65.1 | 51.34 | 31.84 | 24.10 | 19.58 | 15.91 | 13.79 | 10.89 | 9.189 | 4.820 |
| 1.67V/cell | 283.4 | 200.2 | 154.5 | 122.4 | 92.2 | 66.7 | 53.07 | 32.73 | 25.12 | 20.25 | 16.35 | 14.10 | 11.06 | 9.378 | 4.883 |
| 1.60V/cell | 312.5 | 217.3 | 165.2 | 130.4 | 97.3 | 69.5 | 54.95 | 33.83 | 25.89 | 20.88 | 16.89 | 14.41 | 11.17 | 9.477 | 4.910 |

| 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 | 154.2 | 121.2 | 103.1 | 86.2 | 68.5 | 51.9 | 42.47 | 27.05 | 21.39 | 17.47 | 14.08 | 12.26 | 9.95 | 8.504 | 4.640 |
| 1.80V/cell | 207.0 | 154.9 | 124.6 | 101.9 | 80.9 | 60.3 | 47.58 | 29.52 | 23.02 | 18.66 | 15.13 | 13.15 | 10.56 | 9.009 | 4.685 |
| 1.75V/cell | 233.4 | 170.2 | 136.1 | 109.6 | 84.0 | 62.6 | 49.77 | 30.62 | 23.44 | 19.07 | 15.50 | 13.51 | 10.74 | 9.099 | 4.730 |
| 1.70V/cell | 257.0 | 185.5 | 145.3 | 115.2 | 87.4 | 65.1 | 51.34 | 31.84 | 24.10 | 19.58 | 15.91 | 13.79 | 10.89 | 9.189 | 4.820 |
| 1.67V/cell | 283.4 | 200.2 | 154.5 | 122.4 | 92.2 | 66.7 | 53.07 | 32.73 | 25.12 | 20.25 | 16.35 | 14.10 | 11.06 | 9.378 | 4.883 |
| 1.60V/cell | 312.5 | 217.3 | 165.2 | 130.4 | 97.3 | 69.5 | 54.95 | 33.83 | 25.89 | 20.88 | 16.89 | 14.41 | 11.17 | 9.477 | 4.910 |