



## StratoForse-24

### Start Battery

#### Sodium Ion Technology Datasheet v1.0

Thank you for choosing the Aeson Power sodium-ion (NFPP) technology for your vehicle.

#### Application

The StratoForse Series are automotive sodium-ion start batteries suitable for cars, SUV's, 4x4's and light commercial vans. They are not designed for UPS/standby or deep cycle applications.

| Item                   | Features                             | Specifications                                                       |
|------------------------|--------------------------------------|----------------------------------------------------------------------|
| Series Characteristics | Series                               | StratoForse-24                                                       |
|                        | Application                          | Automotive 24V start battery                                         |
|                        | Technology                           | Sodium Ion (Na)                                                      |
|                        | Cathode Material                     | Polyanionic                                                          |
|                        | Chemistry                            | $\text{Na}_4\text{Fe}_3(\text{PO}_4)_2(\text{P}_2\text{O}_7)$ (NFPP) |
|                        | Communication                        | No BMS or Bluetooth                                                  |
|                        | Warranty Period                      | Refer to Series Warranty Document                                    |
| Electrical             | Nominal Voltage                      | 24V                                                                  |
|                        | Cell Voltage                         | 2.85V                                                                |
|                        | Cell Quantity                        | 8                                                                    |
|                        | Nominal Capacity (Ah)                | Refer to Model List                                                  |
|                        | Usable Capacity                      | 100%                                                                 |
|                        | Cold Cranking Amps (CCA)             | Refer to Model List                                                  |
|                        | Reserve Capacity (9.0V min.)         | Refer to Model List                                                  |
|                        | Battery Capacity @ 25°C (6.0V min.)  | Refer to Model List                                                  |
|                        | Battery Capacity @ 25°C (10.5V min.) | Refer to Model List                                                  |
|                        | Energy                               | Refer to Model List                                                  |
|                        | Engine Starts                        | N/A                                                                  |

|            |                               |                                                                                                                                                                                          |
|------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electricas | Cycles                        | 2,700 – 50% DoD @ 1C @ 25°C                                                                                                                                                              |
|            | Internal Resistance           | <30 mΩ                                                                                                                                                                                   |
|            | Voltage Range (Working)       | 12V ~ 29.2V                                                                                                                                                                              |
|            | Maximum Voltage               | 30.4V                                                                                                                                                                                    |
|            | Charge Voltage (Recommended)  | 29.2V                                                                                                                                                                                    |
|            | Absorption Voltage            | N/A                                                                                                                                                                                      |
|            | Float Voltage                 | 27.4V                                                                                                                                                                                    |
|            | Charge Rate - Max.            | 1C                                                                                                                                                                                       |
|            | Discharge Rate – Max.         | 2C                                                                                                                                                                                       |
|            | Charging Temperature Range    | 0°C ~ +80°C                                                                                                                                                                              |
|            | Discharging Temperature Range | -30°C ~ +80°C                                                                                                                                                                            |
|            | Storage Temperature Range     | Short term: -30°C ~ +45°C<br>Long term: 0°C ~ +40°C                                                                                                                                      |
|            | Self-discharge Rate           | ≈ 3% per month                                                                                                                                                                           |
|            | Transportation Voltage        | 0.0V                                                                                                                                                                                     |
|            | Charger Type (Recommended)    | Lithium, but do not use recondition mode. You can also use lead battery, but do not use de-sulphation or recondition mode.<br>Constant current or Power Supply mode is also recommended. |
| Mechanical | Dimensions (L x W x H)        | Refer to Model List - mm                                                                                                                                                                 |
|            | Weight                        | Refer to Model List – kg                                                                                                                                                                 |
|            | Case Material                 | Polypropylene (PP)                                                                                                                                                                       |
|            | Case Hold Down Type           | Base side or End                                                                                                                                                                         |
|            | Carry Handle                  | Yes                                                                                                                                                                                      |
|            | Terminal Types                | SAE AP (standard)<br>JIS (Standard or Small)                                                                                                                                             |
|            | Terminal Layouts              | L = Left Hand Negative<br>R = Right Hand Negative (facing front)                                                                                                                         |
|            | Terminal Material             | Aluminium with Copper                                                                                                                                                                    |
|            | IP Rating                     | 65                                                                                                                                                                                       |

|                  |                                                       |                                                                                                                                                                                         |
|------------------|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mechanical       | Circuit Protection                                    | Internal fuse                                                                                                                                                                           |
| Special Features | Parallel Connection ONLY                              | Yes, up to 3 batteries                                                                                                                                                                  |
|                  | Series Connection ONLY                                | Yes, up to 2 batteries                                                                                                                                                                  |
|                  | Maintenance Free                                      | Yes                                                                                                                                                                                     |
|                  | Fully Sealed                                          | Yes                                                                                                                                                                                     |
|                  | Acid Free                                             | Yes                                                                                                                                                                                     |
|                  | No Spill                                              | Yes                                                                                                                                                                                     |
|                  | Fire Safety                                           | High. Cathode material structural rigidity + electrochemical stability                                                                                                                  |
|                  | Environmental Rating                                  | High. Recyclable Materials                                                                                                                                                              |
| Certification    | Certifications, Standards Compliance and Registration | CE-EMC, UN38.3, IEC61000, EESS, IEC62619* E/N 50342*, JB/T 12666-2015*<br>* Compliant - passed testing, but no certification because no specific international Sodium Ion standard yet. |
| BMS              | Over-charge protection                                | N/A                                                                                                                                                                                     |
|                  | Over-discharge protection                             | N/A                                                                                                                                                                                     |
|                  | Short-circuit protection                              | N/A                                                                                                                                                                                     |
|                  | Temperature protection                                | N/A                                                                                                                                                                                     |

**This Model List shows all the models in the Series to provide information specific to the individual batteries.**

| Model:<br>StratoForse-24 | Cold Cranking<br>Amps:<br>CCA | Marine<br>Cranking<br>Amps:<br>MCA | Energy<br>:<br>Wh | Reserve<br>Capacity<br><br>Minutes:<br>(18.0V min.) | Battery<br>Capacity @<br>25°C:<br>Ah (12.0V<br>min.) | Dimensions (L x<br>W x H):<br>mm | Weight<br>±<br>0.5kg:<br>Kgs |
|--------------------------|-------------------------------|------------------------------------|-------------------|-----------------------------------------------------|------------------------------------------------------|----------------------------------|------------------------------|
| H5/LN2-24                | 450                           | 550                                | 480               | 42                                                  | 20                                                   | 242 x 175 x 190                  | 6.6                          |
| H9/LN6-24                | 850                           | 1000                               | 960               | 86                                                  | 40                                                   | 394 x 175 x 190                  | 12.0                         |

---

## Contact Details

This product is manufactured by Aeson Power Pty Ltd (ABN: 94 631 781 121) of:

63/67 Smeaton Ave, Dandenong South, Victoria, AUSTRALIA 3175

If you have any queries in relation to this document, you can contact Aeson Power:

Website: [www.aesonpower.com.au](http://www.aesonpower.com.au)

Email [info@aesonpower.com.au](mailto:info@aesonpower.com.au)

Phone +61 3 9545 5993

