

# S-48V60-TRX-HD

PROTRXion™ Series | Technical Data Sheet

**inVENTUS**<sup>TM</sup>  
POWER



**Certified to global functional safety standards**



**Fast charging**  
within 2 hours with leading charger OEMs



**Long shelf life**  
24 months from shipment



**Scalable to increase runtime**



**Automotive grade cells**  
from top tier manufacturers



- **Patented virtual BMS**  
Single battery platform with advanced modular network
- **UL2580 Shock & Vibration + Thermal Propagation Mitigation**
- **Universal Communication Protocol (CANopen)**
- **State-of-the-art module balancing technology**
- **Soft start control**  
(System pre-charge)
- **Compatible with many off-the-shelf chargers**

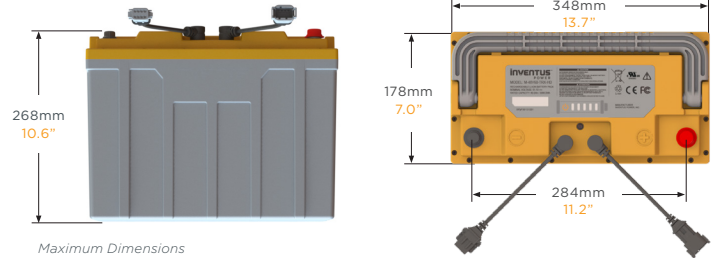
## Electrical Specifications

|   |                         |
|---|-------------------------|
| Cell Chemistry                            | Nickel Cobalt Manganese |
| Pack Voltage (Nom/Max)                    | 51.7V / 57.4V           |
| Pack Energy                               | 3.2kWh (62Ah)**         |
| Specific Energy                           | 168Wh/kg                |
| Continuous Power                          | 6.2kW (120A)            |
| Recommended Charge CCCV                   | 17A / 57.4V             |
| Peak Power (<10sec)                       | 20.7kW (400A)           |
| Cycle Life<br>(Based on cell data @ 25°C) | 2,000 @ 80% DoD         |
| Scalability                               | Up to 600Ah             |

## Operational Specifications

|                      |               |
|----------------------|---------------|
| Charge Temp          | 0°C to 45°C   |
| Discharge Temp       | -20°C to 55°C |
| Storage Temp         | -20°C to 60°C |
| Humidity (Operating) | 5% to 95%     |
| Humidity (Storage)   | <70%          |

## Mechanical Specifications



|                           |                          |
|---------------------------|--------------------------|
| Terminal Type (ISO)       | M8 (Pos & Neg)           |
| Terminal Torque (Nm)      | 17 ± 1 (Pos & Neg)       |
| Weight (Nom)              | 19.1kg (42.1lbs)         |
| Installation Orientation  | Horizontal / Vertical    |
| Ingress Protection Rating | IP67*                    |
| Case Flammability Rating  | Flame Retardant UL94 V-0 |

## Certifications

- UL2580 (Cell)
- UL2271 (Pack)
- IEC62619
- FCC Class B
- CE
- UN38.3
- IEC60730 Class B
- ECE R100
- ECE R10

\*IP65 if communication cables left unmated

\*\* Usable capacity will depend on charge voltage, the depth of discharge, age, and other environmental conditions.

**Market Applications**



Light Electric Vehicle



Aerial Work Platform



Robotics



Material Handling

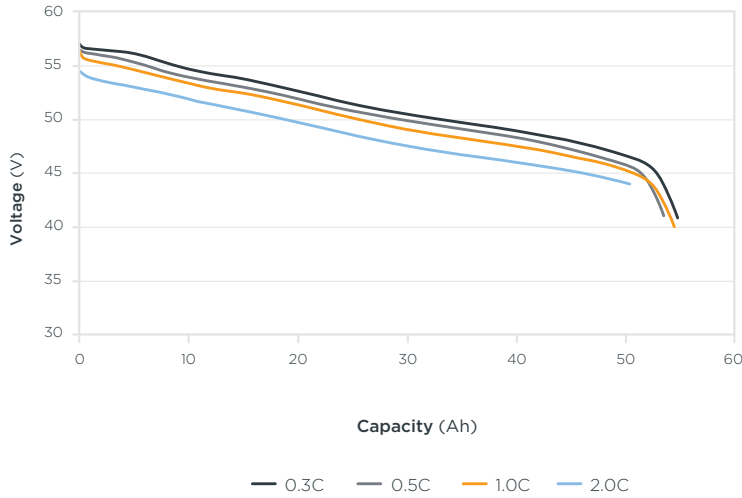
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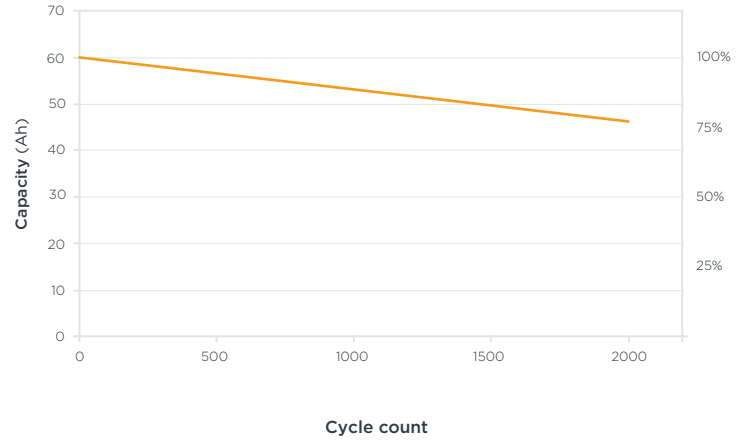
## Capacity vs. Discharge Rate

Test condition: Ambient Temperature



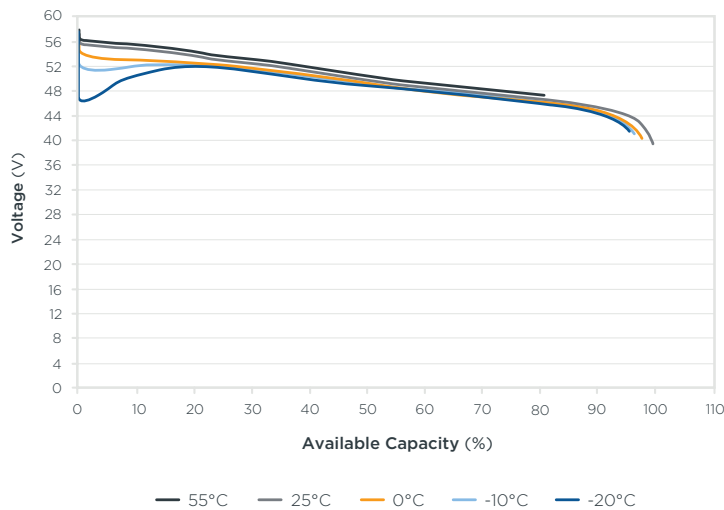
## Cycle Life

Based on cell data: charge 0.3C, discharge 1C at 25°C & 80% DoD



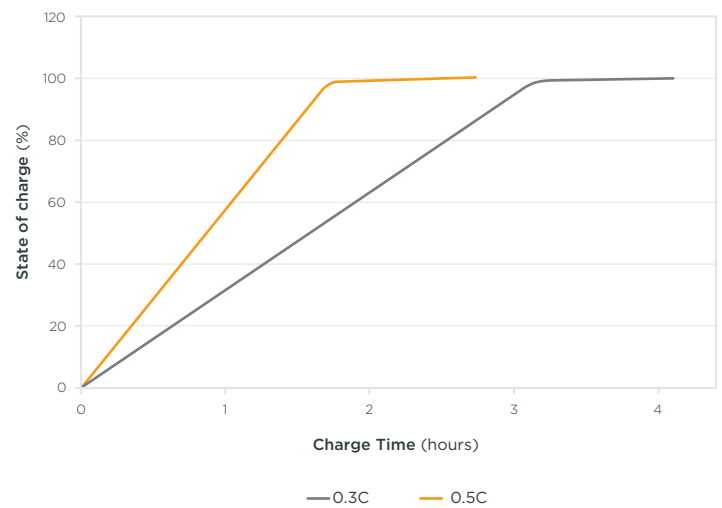
## Voltage and Capacity vs. Temperature

Discharge current: 1.0C



## Charging Performance

Test condition: Ambient Temperature



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Request  
more Information

[inventuspower.com](http://inventuspower.com) | [info@inventuspower.com](mailto:info@inventuspower.com) | +1 877.423.4242

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