

# M-48V60-TRX

PROTRXion™ Series | Data Sheet

**inVENTUS**  
POWER



**Automotive Grade Cells**  
from top tier manufacturers



**Fast charging**  
within 3 hours



**Long shelf life performance**  
with shutdown mode



**Cold temperature functionality**  
(-35°C) with optional integrated heater



**BMS certified to functional safety standard UL/IEC 60730-1**



Designed &  
Engineered in  
the **USA**

- **Supports regenerative braking**
- **Soft Start Control** (System Pre-charge)
- **Patented Virtual BMS** with Advanced Module Balancing Technology
- **Universal Communication Protocol** (CANopen/J1939)
- **UL2580** Shock & Vibration + Thermal Propagation Mitigation
- **Compatible with many off-the-shelf chargers**

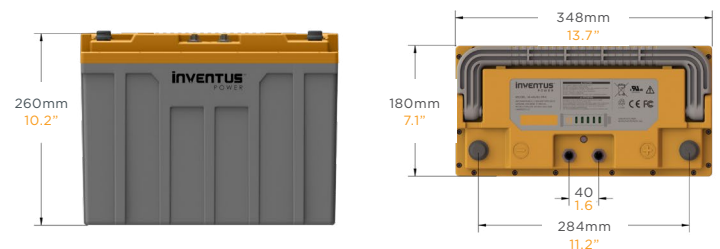
## Electrical Specifications

Cell Chemistry	Nickel Cobalt Manganese
Pack Voltage (Nom/Max)	50.8V / 58V
Pack Energy	3.1kWh (60Ah)
Specific Energy	165Wh/kg
Continuous Power	3.1kW (60A)
Recommended Charge CCCV	20A / 58V
Peak Power (<10sec)	7.1kW (140A)
Cycle Life (@ 25°C)	2,000 @ 80% DoD
Scalability	Up to 10 packs in parallel

## Operational Specifications

Charge Temp	0°C to 45°C -20°C to 45°C (w/ heater)
Discharge Temp	-20°C to 55°C -35°C to 55°C (w/ heater)
Storage Temp	-20°C to 60°C
Humidity (Operating)	5% to 95%
Humidity (Storage)	<70%

## Mechanical Specifications



BCI Size	Group 5D
Terminal Type (ISO)	M8 (Neg), M10 (Pos)
Terminal Torque (Nm)	17 ± 1 (Neg), 22 ± 1 (Pos)
Weight	18.7kg (41.1lbs)
Installation Orientation	Horizontal / Vertical
Ingress Protection Rating	IP65 (IP67 when mated)
Case Flammability Rating	Flame Retardant UL94 V-0

## Certifications

- UL2580 (Cell)
- UL2271 (Pack)
- IEC62133 (Cell/Pack)
- IEC62619
- FCC Class B
- CE
- UN38.3

NOTE: Please contact [info@inventuspower.com](mailto:info@inventuspower.com) to obtain the PROTRXion™ User Guide for proper installation and handling.

## Market Applications



Professional  
Cleaning



Light Electric  
Vehicle



Aerial Work Platform



Material Handling



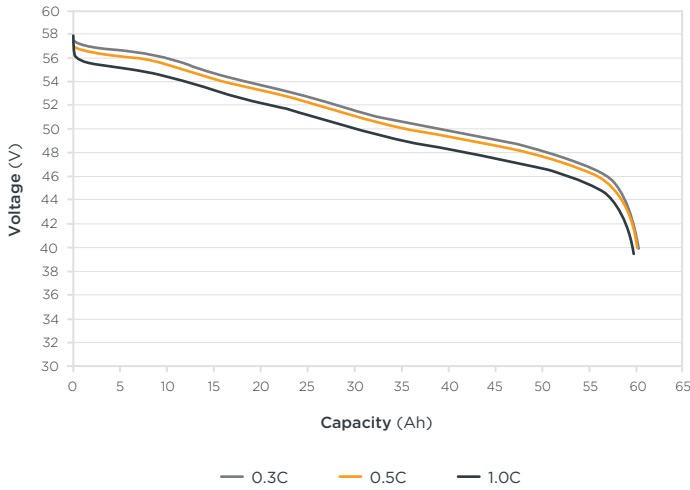
Robotics



Renewables &  
Energy Storage

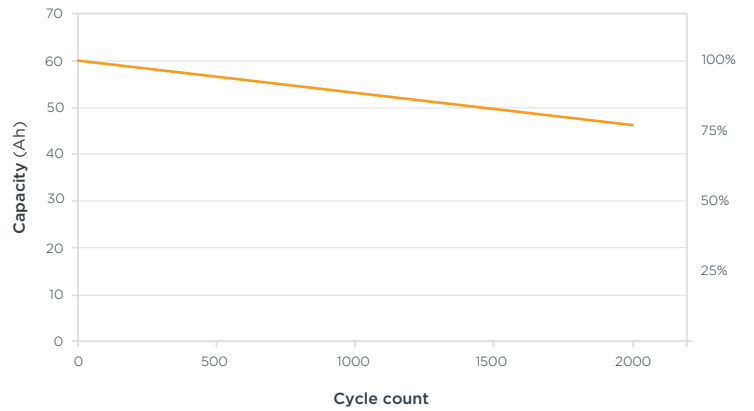
## Capacity vs. Discharge Rate

Test condition: Ambient Temperature



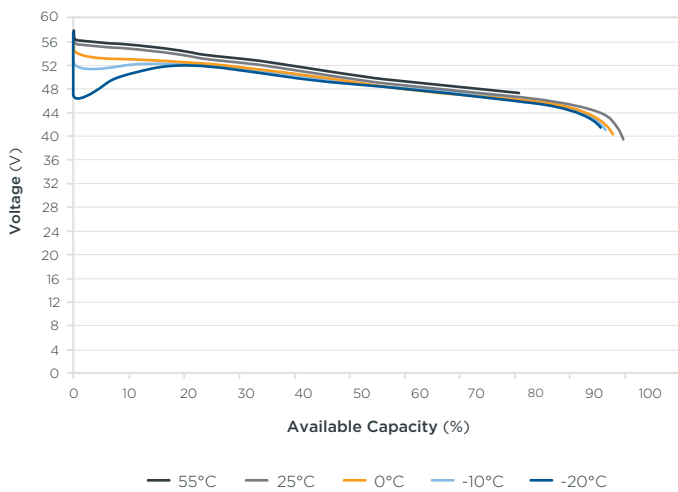
## Cycle Life @ 80% DoD

Charge 0.3C, discharge 1C at 25°C



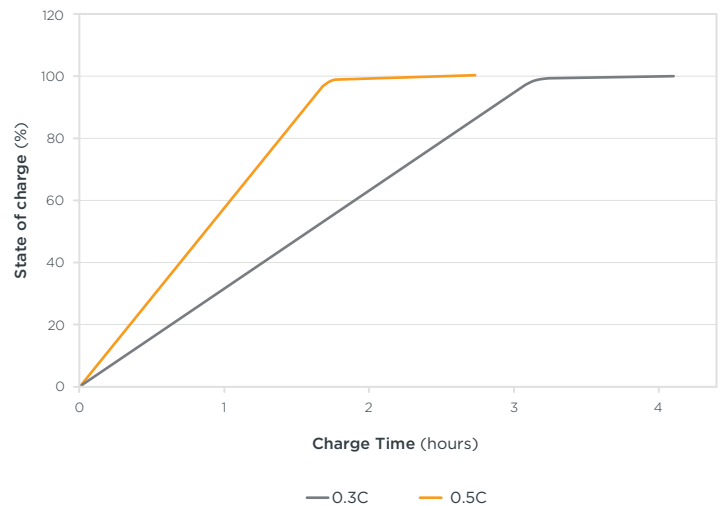
## Voltage and Capacity vs. Temperature

Discharge current: 1.0C



## Charging Performance

Test condition: Ambient Temperature



Inventus Power reserves the right to make adjustments to this document at any time, without notice or obligation. All data in this publication is for reference use only. Models may vary from shown.



Request more Information

inventuspower.com | info@inventuspower.com | +1 877.423.4242