

M-48V60-TRX

PROTRXion™ Series | Technical 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



Certified to ECE R100/R10
for EU on-road electric vehicle applications



- **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

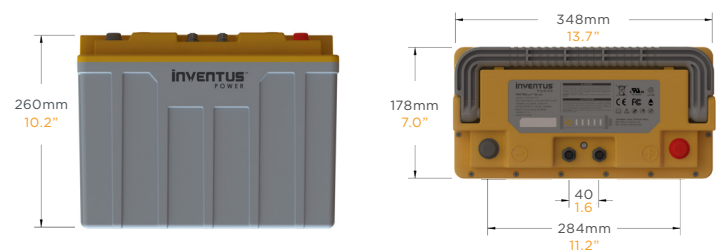
Cell Chemistry	Nickel Cobalt Manganese
Pack Voltage (Nom/Max)	51.7V / 58.1V
Pack Energy	3.2kWh (62Ah)
Specific Energy	169Wh/kg
Continuous Power	3.1kW (60A)
Recommended Charge CCCV	20A / 58.1V
Peak Power (<10sec)	7.24kW (140A)
Cycle Life (@ 25°C)	2,000 @ 80% DoD
Scalability	Up to 10 packs in parallel

Operational Specifications

Charge Temp	0°C to 45°C -35°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%

*IP65 when communication ports are left unmated

Mechanical Specifications



BCI Size	Group 5D
Terminal Type (ISO)	M8 (Neg), M10 (Pos)
Terminal Torque (Nm)	17 ± 1 (Neg), 22 ± 1 (Pos)
Weight	19.0kg (41.9lbs)
Installation Orientation	Horizontal / Vertical
Ingress Protection Rating	IP67*
Case Flammability Rating	Flame Retardant UL94 V-0

Certifications

- UL2580 (Cell)
- UL2271 (Pack)
- IEC62133 (Cell/Pack)
- IEC62619
- IEC60730 Class B
- FCC Class B
- CE
- UN38.3
- ECE R100
- ECE R10

Market Applications



Light Electric Vehicle



Aerial Work Platform



Material Handling



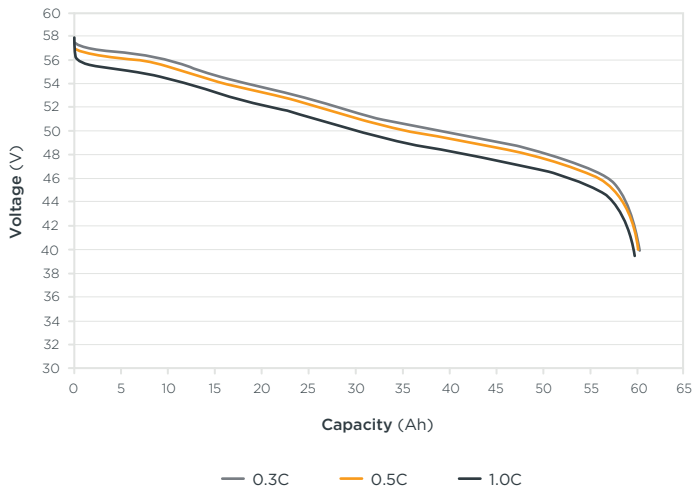
Robotics



Renewables & Energy Storage

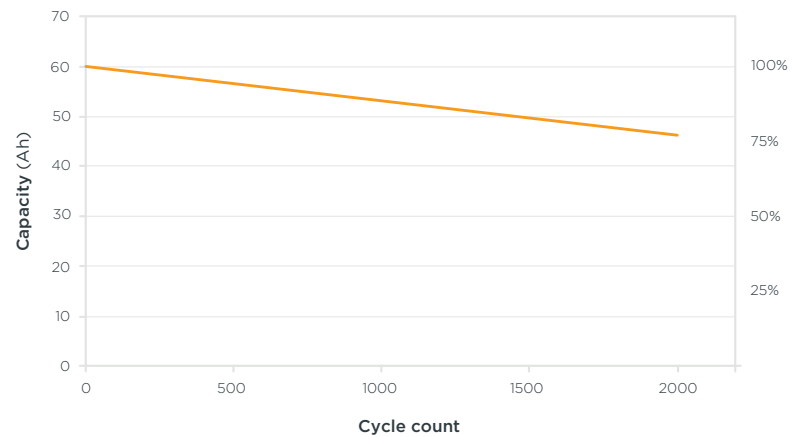
Capacity vs. Discharge Rate

Test condition: Ambient Temperature



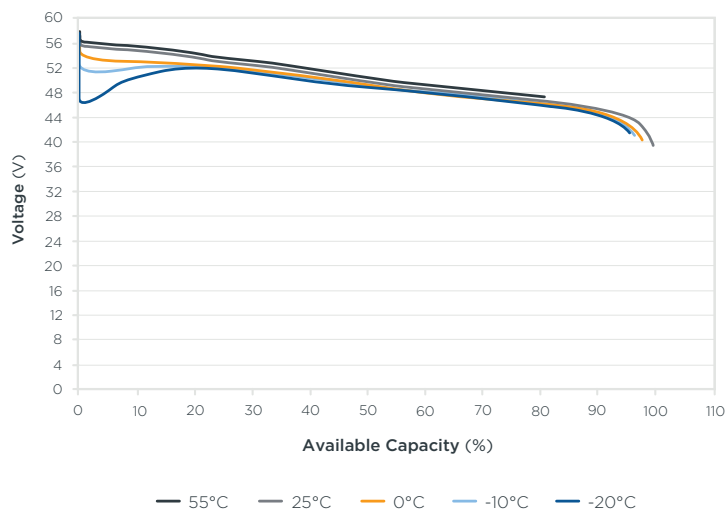
Cycle Life @ 80% DoD

Charge 0.3C, discharge 1C at 25°C



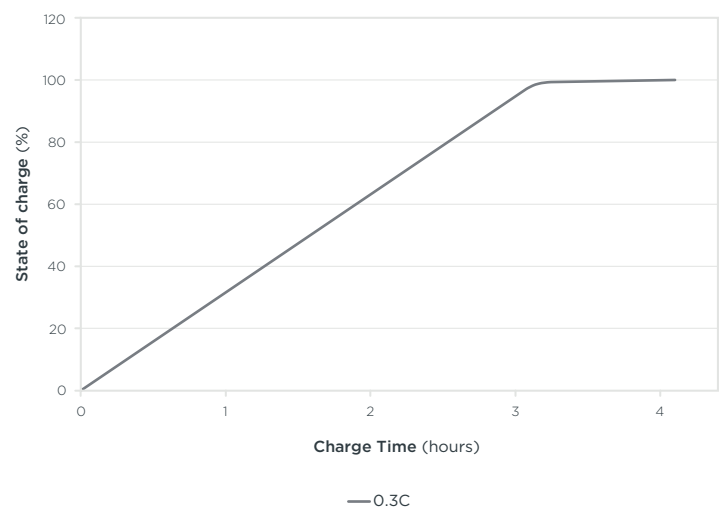
Voltage and Capacity vs. Temperature

Discharge current: 1.0C



Charging Performance

Test condition: Ambient Temperature



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**Request
more Information**

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