

# M-24V60-TRX

PROTRXion Series | Data Sheet

**inVENTUS**<sup>™</sup>  
POWER

## Key Benefits

- Fast charging within 3hrs to increase productivity
- Long shelf life performance with shutdown mode
- Cold temperature functionality (-30°C) with optional integrated heater
- System fault mitigation protection
- CANopen / J1939 communication
- Compatible with many off-the-shelf industrial chargers



Designed & Engineered in the **USA**

## Market Applications



Professional Cleaning



Material Handling



Aerial Work Platform



Robotics



Light Electric Vehicle



Renewables & Energy Storage

### Electrical Specifications

|                         |   |
|-------------------------|---|
| Pack Voltage (Nom/Max)  | 25.6V / 28V   |
| Pack Energy             | 1.52kWh (60Ah)  |
| Specific Energy         | 84Wh/kg   |
| Continuous Power        | 1.9kW (75A)   |
| Recommended Charge CCCV | 30A / 28V   |
| Peak Power (<30secs)    | 6.14kW (240A)   |
| Cycle Life (@ 25°C)     | 3,000 @ 80% DoD                                       |
| Scalability             | Up to 15 packs in parallel<br>Up to 2 packs in series |

### Mechanical Specifications

|                           |   |
|---------------------------|---|
| BCI Size                  | Group 27  |
| Model                     | M-24V60-TRX                                       |
| Cell Chemistry            | LiFePO4   |
| Terminal Type (ISO)       | M8  |
| Dimensions (LxWxH)        | 299mm x 177mm x 230mm<br>(11.77" x 6.97" x 9.06") |
| Weight                    | 18.2kg (40lbs)                                    |
| Installation Orientation  | Horizontal / Vertical                             |
| Ingress Protection Rating | IP65  |
| Case Flammability Rating  | Flame Retardant UL94 V-0                          |

### Operational Specifications

|                      |  |
|----------------------|--|
| Charge Temp          | 0°C to 45°C<br>-20°C to 45°C (w/ heater)   |
| Discharge Temp       | -20°C to 60°C<br>-30°C to 55°C (w/ heater) |
| Storage Temp         | -20°C to 60°C                              |
| Humidity (Operating) | 5% to 95%                                  |
| Humidity (Storage)   | <70%                                       |

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

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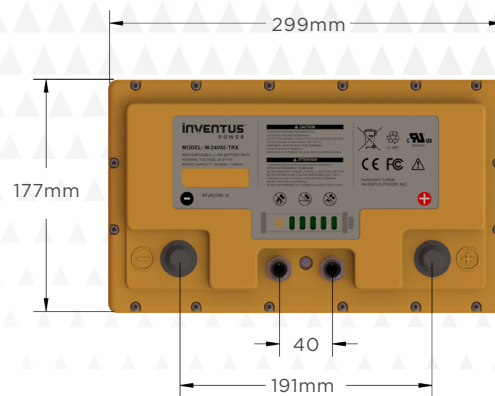
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## PROTRXion Series | Data Sheet



- Reverse polarity & short circuit protection
- BMS certified to functional safety standard UL/IEC 60730-1
- Advanced cell & pack module balancing
- Easy system integration (automated master/slave detection)
- Battery LED state of charge indicator
- Configurable communication speed from 125kbps up to 1Mbps

- UL1642 (Cell)
- UL2271 (Pack)
- IEC62133 (Cell/Pack)
- IEC62619
- FCC Class B
- CE
- UN38.3



Technical drawing of the M12 connector showing front and side views with dimensions.

**Front View (Left):**

- Overall width: SW18
- Overall height: 13.5
- Pin labels: PIN 1, PIN 2, PIN 3, PIN 4, PIN 5, PIN 6, PIN 7, PIN 8

**Side View (Right):**

- Overall length: 20.0
- Length of main body: 17.2
- Length of pin assembly: 2.8
- Length of pin: 3.5
- Pin diameter:  $\varnothing 0.9$
- Pin pitch:  $\varnothing 1.3$
- Pin 1 diameter:  $\varnothing 13.3$
- Pin 2 diameter: M12x1
- Pin 4 diameter:  $\varnothing 13.3$
- Pin 3 diameter:  $\varnothing 13.3$
- Pin 5 diameter:  $\varnothing 13.3$

**Legend:**

- 1: Pin 1
- 2: Pin 2
- 3: Pin 3
- 4: Pin 4
- 5: Pin 5

**Dimensions:**

- SW18
- 13.5
- 20.0
- 17.2
- 2.8
- 3.5
- $\varnothing 13.3$
- M12x1
- $\varnothing 0.9$
- $\varnothing 1.3$

**Text:**

M12, MALE, 8POLES

| Pin # | Symbol      | Description                   |
|-------|-------------|-------------------------------|
| 1     | VCANH       | CAN High (System)             |
| 2     | VCANL       | CAN Low (System)              |
| 3     | VWAKE       | Wake up input for discharging |
| 4     | VGND        | Ground reference              |
| 5     | VINTLK      | Interlock input for charging  |
| 6     | VCANH_BATT  | CAN High (Battery)            |
| 7     | VCANL_BATT  | CAN Low (Battery)             |
| 8     | VSUPPLY_24V | Unregulated 24V output        |