

# TOMMATECH LFP LITHIUM BATTERY



**BTR-MRN-12.8V-100AH**



**BTR-MRN-12.8V-280AH**



**BTR-MRN-12.8V-200AH**



**BTR-MRN-25.6V-100AH**



TommaTech's new generation low-voltage lithium batteries offer unique solutions in energy storage. In addition to a long lifespan of up to 8000 cycles, TommaTech Lithium Batteries stand out with their high energy density, superior quality and performance, as well as their functional and environmentally friendly design.



#### High Performance

Superior performance with new generation  $\text{LiFePO}_4$  battery technology



#### Active Smart Management System

Efficient usage structure with active balancing, especially through BMS technology



#### Long Service Life

Lifespan of up to 8000 cycles



#### Innovative Design and Heat-Resistant Structure

Aesthetic, compact, and durable plastic case design



#### Communication

Bluetooth



#### IP20-IP65 Protection Class

Metal case and terminal components compliant with IP20-IP65 standards



#### Sustainable Energy

Thanks to the ability to be charged from solar panels, it is an environmentally friendly and sustainable energy source.

TommaTech Lithium Batteries are uniquely designed based on a heat-resistant and high-performance  $\text{LiFePO}_4$  battery architecture. At the same time, lithium batteries equipped with temperature sensors are offered to users with a durable plastic casing. Designed with a safety and quality concept, TommaTech Lithium Batteries utilize a BMS (Battery Management System) with balancing features. Batteries using Al-Cu alloy conductive bars enable parallel connections without performance loss.



# TOMMATECH LFP LITHIUM BATTERY

## TECHNICAL SPECIFICATIONS

| VOLTAGE - CAPACITY                | BTR-MRN-12.8V-100Ah | BTR-MRN-12.8V-200Ah | BTR-MRN-12.8V-280Ah | BTR-MRN-25.6V-100Ah |
|-----------------------------------|---------------------|---------------------|---------------------|---------------------|
| Nominal Voltage [V]               | 12.8                | 12.8                | 25.6                | 25.6                |
| Nominal Capacity [Ah]             | 102                 | 204                 | 102                 | 204                 |
| Nominal Energy [Wh]               | 1305.6 <sup>1</sup> | 2611.2 <sup>1</sup> | 2611.2 <sup>1</sup> | 5222.4 <sup>1</sup> |
| Recommended Charge Current [A]    | 50 <sup>2,3</sup>   | 80 <sup>2,3</sup>   | 50 <sup>2,3</sup>   | 100 <sup>2,3</sup>  |
| Maximum Charge Current [A]        | 75 <sup>2,3</sup>   | 100 <sup>2,3</sup>  | 75 <sup>2,3</sup>   | 150 <sup>2,3</sup>  |
| Recommended Charge Voltage [V]    | 14.2                | 14.2                | 28.4                | 28.4                |
| Maximum Charge Voltage [V]        | 14.6                | 14.6                | 29.2                | 29.2                |
| Recommended Discharge Current [A] | 50 <sup>2,3</sup>   | 80 <sup>2,3</sup>   | 50 <sup>2,3</sup>   | 100 <sup>2,3</sup>  |
| Maximum Discharge Current [A]     | 75 <sup>2,3</sup>   | 100 <sup>2,3</sup>  | 75 <sup>2,3</sup>   | 150 <sup>2,3</sup>  |
| Discharge Cut-off Voltage [V]     | 11.1±0.2            | 11.1±0.2            | 22.4±0.2            | 22.4±0.2            |

### BATTERY / CELL

|                                    |                           |
|------------------------------------|---------------------------|
| Cycle Life                         | 8000 <sup>2,3,4,5,6</sup> |
| Gravimetric Energy Density [Wh/kg] | 165                       |
| Volumetric Energy Density [Wh/L]   | 350                       |
| Internal Resistance [mΩ]           | 0.27-0.40 <sup>7</sup>    |

### STANDART

|                                       |                            |
|---------------------------------------|----------------------------|
| Overcharge Protection                 | Yes                        |
| Overdischarge Protection              | Yes                        |
| Overcurrent Protection                | Yes                        |
| Short Circuit Protection              | Yes                        |
| Overtemperature Protection            | Yes                        |
| Temperature Sensor                    | Yes                        |
| Adjustable Charge / Discharge Current | Yes                        |
| Battery Chemistry                     | LFP Prismatic              |
| Safety                                | IEC 61960 / 62133-2 / RoHS |

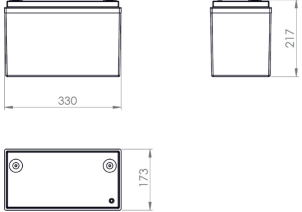
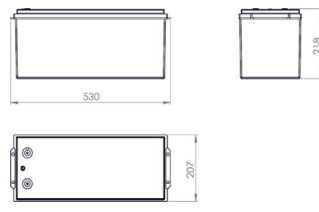
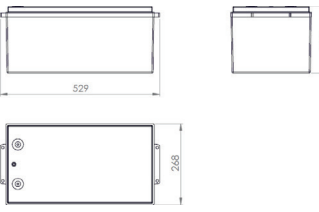
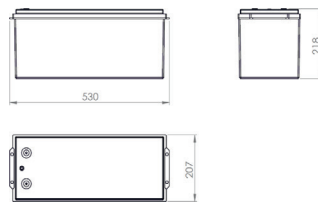
### WORKING CONDITIONS

|                              |             |
|------------------------------|-------------|
| Charge Temperature [°C]      | 0 ~ +60     |
| Discharge Temperature [°C]   | -20 ~ +60   |
| Storage Temperature [°C]     | 0 ~ +35     |
| Humidity (Non-condensing)    | Maximum %85 |
| Protection Class             | IP20-IP65   |
| Planned Product Life [Years] | >15         |
| Warranty Period [Years]      | 5           |

### OTHER

|                         |  |             |             |             |
|-------------------------|--|-------------|-------------|-------------|
| Dimensions (W×D×H) [mm] | 330x175x220                                  | 522x270x230 | 535x206x220 | 522x270x230 |
| Weight (Kg)             | 11±0.5                                       | 20.5±0.5    | 28.5±0.5    | 20.5±0.5    |
| Battery Connection      | Positive (+) and Negative (-) Screw Terminal |             |             |             |
| Series Connection       | N/A  |             |             |             |
| Parallel Connection     | Available (max. 8 pieces)                    |             |             |             |
| Communication           | Bluetooth                                    |             |             |             |
| Display                 | N/A  |             |             |             |
| External Cabinet        | Plastic Case                                 |             |             |             |

## PHYSICAL PROPERTIES

| BTR-MRN-12.8V-100AH   | BTR-MRN-12.8V-200Ah   | BTR-MRN-12.8V-280Ah  | BTR-MRN-25.6V-100Ah   |
|---|---|--|---|
|  |  |  |  |

Unit : mm

1) Usable Energy

2) 0.5C

3) 25°C ± 2°

4) 50% SOC (State Of Charge)

5) 75% D.O.D (Depth Of Discharge)

6) 80% EOL (End Of Life)

7) 17% ± 3% SOC (State Of Charge)

\*TommaTech GmbH reserves the right to change product specifications without prior notice.

\*\*In modular lithium batteries, the lower base accessory is provided separately upon request.