MARSTEK
Power Anywhere & Anytime




# MARSTEK VENUS E 3.0

## 2.5kW 5kWh Plug-in Battery

**Power Your Needs**
Max. 800W / 2.5kW On-Grid Output

**Seamless Power Support**
2.5kW Bypass Backup for Essential Loads

**The Best AC Battery**
Smaller, Lighter, More Efficient

**Long-Lasting Energy Supply**
5.12kWh of Usable Capacity

**SmartBox Backup Solution**
Three-Phase Setup up to 7.5kW Power and 15.36kWh

**MARSTEK AI**
AI-Driven Energy Optimization

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## SPECIFICATIONS




| | |
|---|---|
| Model | MARSTEK VENUS E 3.0 |
| **Battery Parameters** | |
| Rated Voltage | 51.2 V (16S) |
| Capacity | 5.12 kWh |
| Cycle Life | >10,000 (25°C) |
| Battery Cell Type | $LiFePO_4$ |
| Depth of Discharge (DoD) | 90% |
| **AC Input / Output** | |
| Rated Input Power | 2.5 kVA |
| Rated Output Power | 2.5 kVA |
| Working Phase | L/N/PE |
| Rated Grid Voltage / Frequency | 220 V / 60 Hz |
| Grid Voltage Range | 179~242 V |
| Rated Grid Output Current | 10.9 A |
| Power Factor | >0.99 (default), 0.8 lagging...0.8 leading (adjustable) |
| THDi（Total Harmonic Distortion of Current） | <3% |
| **Backup (Off-Grid)** | |
| Rated Output Power | 2.5 kVA |
| Peak Output Power | 3.5 kVA (10 s) |
| Rated Output Voltage | 220 V / 60 Hz |
| Rated Output Current | 10.9 A |
| THDu (Linear Load) | <3% |
| **Efficiency** | |
| Battery Side - AC Side Maximum Efficiency | >93.5% |
| **Protection** | |
| Protection Class | I |
| Overvoltage Withstand Level | DC II /AC III |
| **General** | |
| Isolation Type | Isolated |
| Ambient Temperature Range | -20 °C ~ +55 °C (Storage: -30 °C ~ +85 °C) |
| Relative Humidity | 0 ~ 95% |
| IP Rating | IP65 |
| Cooling Method | Natural Cooling |
| Maximum Operating Altitude | 2000 m |
| Dimensions | 480 × 153 × 624 mm |
| Weight | 60 ± 0.5 kg |
| **Additional Data** | |
| AC Grid Connection | MST-grid Port |
| Off-Grid Socket Type | US NEMA Socket |
| Display | LED |
| Communication Interfaces | Wi-Fi, Bluetooth, Ethernet, RS-485 |
| Grid Connection Standards | NF-EN 50549-1, VDE 4105 / VDE 0124, G98, CEI 0-21, PETREE, PN-EN 50549-1/-2, TOR R25, UNE217001/217002, NTS631, AS 4777.2 |
| Regulatory & EMC Standards | IEC 62040, IEC 62477, IEC/EN 61000-6-1/2/3/4, IEC/EN 61000-3-2/3, EN 300 328, EN 301 489-1/17, EN 50665, CB 62619 |