

# MARSTEK

Power Anywhere & Anytime

MARSTEK VENUS E

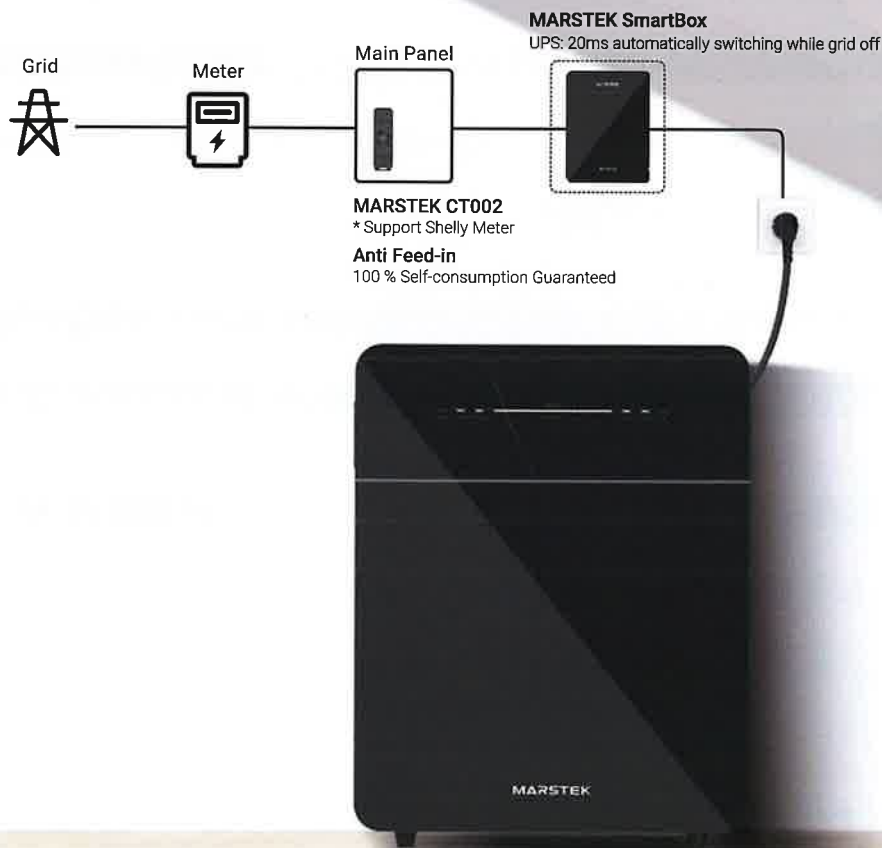
## AC Battery ESS

800W/2.5kW On-grid, Plug & Play, Backup 2.5kW  
5.12kWh LFP Battery, Cycle Life  $\geq 6000$

Compatible with Any PV System  
Anti Feed-in, 100% Self Consumption  
Maximum Money Saving with AI Optimization  
With MARSTEK CT002 / Shelly Smart Meter

Support Whole-home Single/Three Phase Backup  
Single-Phase: up to 3 Units Parallel, 7.5kW/15.36kWh  
Three-Phase: Each Phase up to 3 Units Parallel  
Total 9 Units Parallel, 22.5kW/46.08kWh  
With MARSTEK SmartBox

Support Integration with External EMS  
Open API/Modbus Protocol  
LAN/RS485/WIFI/BT



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Product Manual

## SPECIFICATIONS



|                                     |                                                                                                                 |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Model                               | MARSTEK VENUS-E                                                                                                 |
| <b>Battery Info</b>                 |                                                                                                                 |
| Rated Voltage                       | 51.2V (16S)                                                                                                     |
| Capacity                            | 5120Wh                                                                                                          |
| Life Cycle (Times)                  | >6000 (25°C)                                                                                                    |
| Battery Type                        | LiFePO <sub>4</sub>                                                                                             |
| DoD                                 | 90%                                                                                                             |
| <b>AC Input / Output (On Grid)</b>  |                                                                                                                 |
| Rated Input Power                   | 2.5kVA                                                                                                          |
| Rated Output Power                  | 2.5kVA / 800VA                                                                                                  |
| Operating Phase                     | L / N / PE                                                                                                      |
| Rated Grid Voltage                  | 230V                                                                                                            |
| Grid Voltage Range                  | 187V ~ 253V                                                                                                     |
| Rated Grid Frequency                | 50Hz                                                                                                            |
| Rated Grid Output Current           | 10.9A                                                                                                           |
| Power Factor                        | > 0.99 (Default) / 0.8 leading...0.8 lagging (Adjustable)                                                       |
| THDi                                | < 3%                                                                                                            |
| <b>Back-up (Off Grid)</b>           |                                                                                                                 |
| Rated Output Power                  | 2.5kVA                                                                                                          |
| Max. Apparent Output Power          | 3.5kVA, 10s                                                                                                     |
| Rated Grid Voltage                  | 230V                                                                                                            |
| Rated Output Current                | 10.9A                                                                                                           |
| Rated Output Voltage Frequency      | 50Hz                                                                                                            |
| THDu(Linear Load)                   | <3%                                                                                                             |
| <b>Efficiency</b>                   |                                                                                                                 |
| Battery-AC Side Max. Efficiency     | > 93.5%                                                                                                         |
| <b>Protection</b>                   |                                                                                                                 |
| Protection Level                    | I                                                                                                               |
| Overvoltage/Voltage Withstand Level | DC II / AC III                                                                                                  |
| <b>General</b>                      |                                                                                                                 |
| Isolation Type                      | Isolated                                                                                                        |
| Operating Temperature Range         | -20°C ~ + 55°C(Storage -30°C ~ + 85°C)                                                                          |
| Relative Humidity                   | 0 ~ 95%                                                                                                         |
| Ingress Protection                  | IP65                                                                                                            |
| Cooling Strategy                    | Natural Convection                                                                                              |
| Max. Operating Altitude             | 2000m                                                                                                           |
| On-grid Connection Standard         | NFEN50549-1, VDE4105/0124,G98,CE10-21,PETREE,PN-EN50549-1/-2,TORR25,UNE217001/217002,NTS631, AS47772            |
| Regulatory/EMC                      | IEC62040,IEC62477,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 |
| Dimension                           | 480*153*624mm                                                                                                   |
| Weight                              | 58 ± 0.5kg                                                                                                      |
| <b>Additional Data</b>              |                                                                                                                 |
| On-grid AC Connection               | Three-wire Household Plug (Euro16A)                                                                             |
| Back-up Connection                  | Three-hole socket (Euro socket)                                                                                 |
| Display                             | LED                                                                                                             |
| Supported Communication Interface   | LAN / WIFI / Bluetooth / RS485                                                                                  |