

## Low Voltage Litthium-ion Battery



### QS LV5-04

**Max.  
12**

51.2V 5.12kWh  
Max. 4 parallel stacking  
Max. 12 parallel  
operating in a system

**1  
C**

1C charging/discharging

**IP65**

IP65(outdoor)

**Blind  
Plugging**

Blind-plug design for  
quick install/replace



Safety and long lifespan, high efficiency and high-power density.



Support high discharge power, module level Auto-balancing, under-voltage Automatic Restart.



Intelligent BMS, providing complete protection.



Whole module non-toxic, pollution-free.



Battery module auto networking, Automatic IP addressing, easy maintenance Free stand design and saving installation space.



Remotely monitoring and upgrade, support IOT function for smarter and more efficient battery pack operation and maintenance.

## QS LV5-05

| MODEL                               | QS LV5-05                                                                         | 2 X QS LV5-05                                                                     | 3 X QS LV5-05                                                                       | 4 X QS LV5-05                                                                       |
|-------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Schematic Drawing                   |  |  |  |  |
| Total Energy [kWh]                  | 5.12                                                                              | 10.24                                                                             | 15.36                                                                               | 20.48                                                                               |
| Battery Module                      | 51.2V 5.12kWh                                                                     |                                                                                   |                                                                                     |                                                                                     |
| Number of Modules                   | 1                                                                                 | 2                                                                                 | 3                                                                                   | 4                                                                                   |
| Cell Type                           | LFP (LiFe PO <sub>4</sub> )                                                       |                                                                                   |                                                                                     |                                                                                     |
| Nominal Voltage [V]                 | 51.2                                                                              | 51.2                                                                              | 51.2                                                                                | 51.2                                                                                |
| Operating Voltage Range [V]         | 40-58.4                                                                           | 40-58.4                                                                           | 40-58.4                                                                             | 40-58.4                                                                             |
| Max. Charge / Discharge Current [A] | 100                                                                               | 200                                                                               | 260                                                                                 | 260                                                                                 |
| Continue Discharge Output [kW]      | 5.12                                                                              | 10.24                                                                             | 13.312                                                                              | 13.312                                                                              |
| Dimensions [W*D*H mm]               | 740*240*565                                                                       | 740*240*885                                                                       | 740*240*1205                                                                        | 740*240*1525                                                                        |
| Approximate Weight [KG]             | 67                                                                                | 119                                                                               | 171                                                                                 | 223                                                                                 |

## General Specifications

|                              |                                                                                                                                               |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Recommend Depth of Discharge | 90%                                                                                                                                           |
| LED Indicator                | 4 LED (SOC: 25%-SOC, 100% blue), 2 LED (working green, alarming red)                                                                          |
| IP Rating of Enclosure       | IP65                                                                                                                                          |
| Operating Temperature        | Optional: Charge: 0°C - 50°C/Discharge: -20°C - 50°C(without heating film)<br>Charge: -20°C - 50°C/Discharge: -20°C - 50°C(with heating film) |
| Storage Temperature          | 0°C - 35°C                                                                                                                                    |
| Humidity                     | ≤ 95%                                                                                                                                         |
| Altitude                     | ≤ 2000m                                                                                                                                       |
| Cycle Life                   | 10 + years, ≥6000 cycles (70% EOL, 25°C)                                                                                                      |
| Installation                 | Floor-mounted , Stack                                                                                                                         |
| Communication Port           | CAN                                                                                                                                           |
| Certification                |                                                                                                                                               |

[1] DC Usable Energy, test conditions: 90% DOD, 1C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.

[2] The current is affected by temperature and SOC.

### Introduction

Queen Solar Residential Li-ion Battery System QS LV5-05 is a Low voltage lithium battery with an integrated battery system that stores your energy for backup protection the grid goes down.

The compact, minimalist construction features versatile mounting options for indoor or outdoor spaces.

This series is especially suitable for application scene of high power, limited installation space, restricted load-bearing and long cycle life.

This series has built-in BMS battery management system, which can manage and monitor cells information including voltage, current and temperature. What's more can balance cells charging and discharging to extend cycle life.

Multiple battery modules can connect in parallel to expand capacity and power for larger capacity an longer power supporting duration requirements.

## Module

### Low Voltage Break box

|                                |                                                                                                                                               |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Voltage              | 40-58.4Vdc                                                                                                                                    |
| Max Charge / Discharge Current | 260A                                                                                                                                          |
| Ingress Protection             | IP65                                                                                                                                          |
| Operating Temperature          | Optional: Charge: 0°C - 50°C/Discharge: -20°C - 50°C(without heating film)<br>Charge: -20°C - 50°C/Discharge: -20°C - 50°C(with heating film) |
| Storage Temperature            | 0°C - 35°C                                                                                                                                    |
| Dimension (W*D*H)              | 740*240*170mm                                                                                                                                 |
| Approximate Weight             | 11KG                                                                                                                                          |



### Battery Module

|                                |                                                                                                                                               |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Battery Type                   | LiFePO <sub>4</sub> (LFP)                                                                                                                     |
| Nominal Voltage                | 51.2Vdc                                                                                                                                       |
| Nominal Capacity               | 100Ah                                                                                                                                         |
| Nominal Energy                 | 5.12kWh                                                                                                                                       |
| Max Charge / Discharge Current | 100A                                                                                                                                          |
| Operating Temperature          | Optional: Charge: 0°C - 50°C/Discharge: -20°C - 50°C(without heating film)<br>Charge: -20°C - 50°C/Discharge: -20°C - 50°C(with heating film) |
| Storage Temperature            | 0 °C - 35 °C                                                                                                                                  |
| Ingress Protection             | IP65                                                                                                                                          |
| Dimension (W*D*H)              | 740*240*320mm                                                                                                                                 |
| Approximate Weight             | 50.5KG                                                                                                                                        |



### Base

|                    |              |
|--------------------|--------------|
| Dimension (W*D*H)  | 740*240*75mm |
| Approximate Weight | 5.5KG        |



Research and Development Version-Not Final Specifications