

SIRIUS ENERGY STORAGE MODULE TECHNICAL DATA SHEET

Part Number: 3550-48-B-1.7C-M-SD-A-DC Version Date: OCTOBER 2019

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| PERFORMANCE SPECIFICATIONS | Voltage (Nominal) | 48 V _{dc} |
| | Maximum Charge Voltage | 54 V _{dc} |
| | Discharge Cut-Off Voltage | 44 V _{dc} |
| | Total Energy | 3550 Wh |
| | Maximum Charge Rate | 125 A |
| | Maximum Discharge Rate | 125 A |
| ENVIRONMENTAL SPECIFICATIONS | Cell Operating Temperature ¹ | -30 °C to 80 °C |
| | Operating Humidity | Non-Condensing |
| MECHANICAL SPECIFICATIONS | Dimensions (w × d × h) | 600 mm × 534 mm × 200 mm |
| | Weight | 65 kg Approx. |
| | Module Casing Material | Aluminum |
| | Terminal Type | F12 |
| SMART FEATURES | Monitoring Data | Total Cell Voltage, Individual Cell Voltages, Current, Temperatures, SOC and Energy |
| | Remote control (optional) | Via Sirius Remote Control |
| | Communication and Connectivity | USB Port (Programmable ⁷) |
| | Alarm | Audible alarm in the event of Over/under-Voltage, Over-Current, Over Temperature |
| | Dry Contacts × 4 | DB9 port |
| SIRIUSVIEW SOFTWARE | Module Monitoring | Current, Voltage, Individual Cell Voltage, Temperatures, Total Energy delivered, SOC, Graphs |
| | System Monitoring | Modules Monitoring (connected in parallel or series) |
| MODULE SERVICE LIFE | Projected Cycle Life ^{2,3} | 1 million cycles |
| | Projected Calendar Life ^{3,4} | 45 years |
| | Shelf Life ⁵ | 10 years |
| | Warehousing | Can be stored at any SOC without affecting cycle life |
| SAFETY PERFORMANCE | Over/under voltage | Hardware protection, Module shut down |
| | Over Current | Hardware protection, Module shut down |
| | Over temperature | Hardware protection, Module shut down |
| | Additional Safety | SSR protection + DC circuit breaker |
| COMPLIANCE⁶ INFORMATION | EN55032:2015, EN55024:2010, EN61000-4-2:2009, EN61000 EN61000:2008+A2:2010 | |
| PRECAUTIONS | Alarm | In case of alarm, immediately rectify/attend to the cause of the alarm. |
| | Physical Damage | In case the module is physically damaged due to any event, do not install and energize the module under any circumstances and contact your Reseller. |
| | Short Circuit | Ensure precautions to prevent short-circuit under all circumstances. |
| | Galvanic isolation | When connecting to external devices ensure that galvanic isolation does not exceed 1000V. |

This technical data sheet may change without notice and at the sole discretion of Kilowatt Labs, Inc.

Solutions for: Microgrids | C&I and Residential Solar | Electric Vehicles | Utility Grade Storage

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| | Charge/Discharge Current | Under no circumstances must the charge/discharge current exceed 125A. |
| | Charging Voltage | Under no circumstances must the charging voltage exceed 55 V _{dc} for more than 60 seconds. |
| | Charge Cycle | During charge cycle ensure never to exceed constant voltage of 54 V _{dc} and constant current of 125A. |
| | Series Connection | <ul style="list-style-type: none"> • All modules must be at 100% SOC before connecting in series. • A maximum of 8 modules with Module Combiner can be connected in series. Please consult your Reseller when connecting the modules in series. Under no circumstances should more than 8 modules be connected in series without the Module Combiner. |
| | Parallel Connection | There is no limit on the number of Modules that can be connected in parallel. |
| | Series-Parallel Connection | Modules cannot be connected in Series-Parallel combination under any circumstance. |
| <p>¹The temperature range indicates the range in which the supercapacitor cells can operate. The performance of the cells may vary if they are continuously operated outside a temperature range of -10°C to 55°C, and/or at C-rates higher than the maximum charge/discharge rate specified in this spec sheet. The operating temperature range of the module varies based on the application. If the module is to be operated continuously outside a temperature range of -10°C to 55°C, and/or at C-rates higher than the maximum charge/discharge rate specified in the spec sheet, please consult Kilowatt Labs or its Reseller prior to deploying.</p> <p>²Projected life of supercapacitor cells. Cycle life will vary if cycled more than 4 times a day.</p> <p>³Additional terms and conditions, including a limited warranty, will apply at the time of purchase.</p> <p>⁴Projected Calendar life of supercapacitor cells from the date of first operation.</p> <p>⁵Shelf life is the life of the module (in years) from the date it is manufactured to the time it is first operated</p> <p>⁶CE certification is completed for supercapacitor cells.</p> <p>⁷Programmable features can be activated to program for appropriate version of Sirius View software.</p> <p>Product dimensions are for reference only unless otherwise identified and may change without notice.</p> <p>For critical applications, please contact your Reseller.</p> | | |