



Have sun!

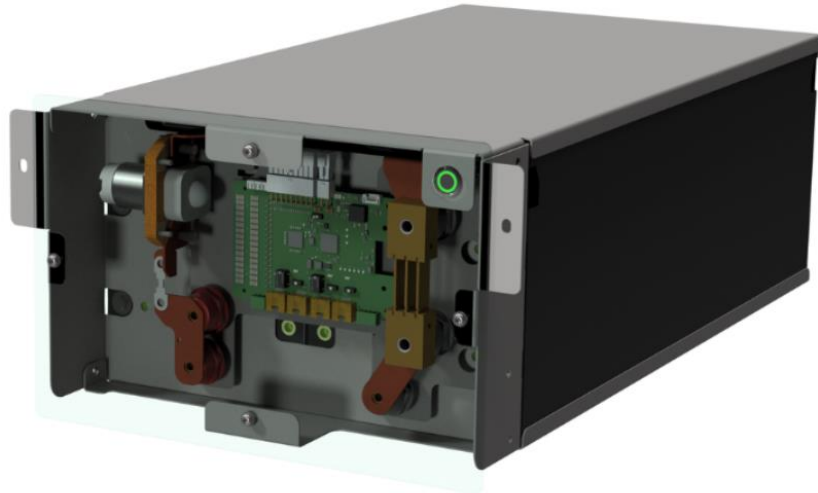
Solar MD Product Presentation

By Kyle Swanepoel



SS4143

Cell Chemistry	Lithium Iron Phosphate (LiFePO4)
Cell Manufacturer	CATL
Rated Capacity	14.3 kWh
Nominal Power	10.0 kW
Usable Battery Energy @0.3C	13.0 kWh
Nominal Voltage	51.2 V
Number of Battery Modules	1
Weight	118 kg
Operational Voltage	44.8 - 55.6 Vdc
Communication	CANBUS / RS485
Dimensions (W x D x H)	675 x 185 x 605 mm
Cycle Life @25°C	≥6000
Charging Efficiency	99%
Operational Temperature	0°C to +50°C
Transport	UN3480 & UN38.3
Storage Duration	6 months @25°C
Safety Standard Compliance	IEC 62619 / UN38.3 / UL1642
Cell Certificate	TUV / CE / RCM / UL1642



SS214	
Cell chemistry	Lithium Iron Phosphate (LiFePO4)
Cell manufacturer	CATL
Rated capacity	14.3kWh
Nominal Power	10.0kW
Usable Battery Energy @0.3C	13.0kWh
Nominal Voltage	51.2V
Number of battery modules	1
Weight per module	115kg
Operational Voltage	44.8 - 55.6Vdc
Communication	CANBUS / RS485
Dimensions W x D x H	364mm x 700mm x 234mm
Cycle life @25°C	≥6000
Charging Efficiency	99%
Operational temperature	0°C to +50°C
Transport	UN3480 & UN38.3
Storage duration	6 months @25°C
Safety standard compliance	IEC 62619 / UN38.3 / UL1642
Cell certificate	TUV / CE / UL1642



SS4083	
Cell Chemistry	Lithium Iron Phosphate (LiFePO4)
Cell Manufacturer	CALB
Rated Capacity	8.3 kWh
Nominal Power	7.5 kW
Usable Battery Energy @0.3C	7.51 kWh
Nominal Voltage	51.2 V
Number of Battery Modules	1
Weight	70 kg
Operational Voltage	44.8 - 55.6 Vdc
Communication	CANBUS / RS485
Dimensions (W x D x H)	389 x 183 x 635 mm
Cycle Life @25°C	≥4000
Charging Efficiency	99%
Operational Temperature	0°C to +50°C
Transport	UN3480 & UN38.3
Storage Duration	6 months @25°C
Safety Standard Compliance	IEC 62619 / UN38.3 / UL1642
Cell Certificate	TUV / CE / UL1642



Solar MD HV – Energy storage solutions

Solar MD SS70XX spec range

The Solar MD HV range of batteries range from the SS7011 to the SS7024, each battery is fully modular with the addition of SS6143 modules.

SS7011	
Cell chemistry	Lithium Iron Phosphate (LiFePO4)
Cell manufacturer	CATL
Rated capacity	114.4kWh
Nominal Power	80.0kW
Usable Battery Energy @0.3C	104.0kWh
Nominal Voltage	409.6V
Number of battery modules	8
Weight per module	115kg
Total weight	985kg
Operational Voltage	358.4 - 444.8Vdc
Communication	CANBUS / RS485 / Ethernet
Dimensions W x D x H	848mm x 704mm x 1245mm
Cycle life @25°C	≥6000
Charging Efficiency	99%
Operational temperature	0°C to +50°C
Transport	UN3480 & UN38.3
Storage duration	6 months @25°C
Safety standard compliance	IEC 62619 / UN38.3 / UL1642
Cell certificate	TUV / CE / UL1642



SS7024	
Cell chemistry	Lithium Iron Phosphate (LiFePO4)
Cell manufacturer	CATL
Rated capacity	243.1kWh
Nominal Power	170.0kW
Usable Battery Energy @0.3C	221.0kWh
Nominal Voltage	870.4V
Number of battery modules	17
Weight per module	115kg
Total weight	2055kg
Operational Voltage	761.6 - 945.2Vdc
Communication	CANBUS / RS485 / Ethernet
Dimensions W x D x H	848mm x 704mm x 2221mm
Cycle life @25°C	≥6000
Charging Efficiency	99%
Operational temperature	0°C to +50°C
Transport	UN3480 & UN38.3
Storage duration	6 months @25°C
Safety standard compliance	IEC 62619 / UN38.3 / UL1642
Cell certificate	TUV / CE / UL1642

myPower24 Monitoring Platform

The screenshot displays the myPower24 monitoring platform interface. At the top left, the mypower24 logo and a navigation arrow are visible. The top right corner shows the user name 'Kyle Swanepoel'. A dark sidebar on the left contains a menu with the following items: Dashboard, My charts, My Devices (highlighted in orange), Events, System Events, Advanced User, Admin User, Beta, Production, and Start chat. The main dashboard area is a grid of 12 device cards, each representing a different component of the solar system. Each card includes an icon, a status indicator (a green link icon with a number), the device name, a small image of the device, and the manufacturer's name. The cards are: 1. Outputs (4 links, Solar MD (Pty) Ltd.); 2. Storage (2 links, Solar MD (Pty) Ltd.); 3. Grid-Support Inverter (2 links, 1 link, Sinexcel); 4. Loggers (1 link, SolarMD (pty) Ltd.); 5. Power Manager (1 link, Solar MD dev team); 6. Battery Inverter On-Grid (2 links, AEG Power Solutions GmbH); 7. Hybrid Inverters (1 link, Ateess); 8. Grid-Support Inverter (1 link, SUNGROW); 9. Battery Inverter On-Grid (1 link, Kehua); 10. Battery Inverter On-Grid (1 link, Ateess); 11. AEG Battery Converter SC Flex (2 links, AEG Power Solutions GmbH); 12. Ateess HPS (1 link, Ateess); 13. Sungrow SC630TL (1 link, SUNGROW); 14. Kehua BCS (1 link, Kehua); 15. Ateess PCS (1 link, Ateess). At the bottom left, there are links for 'TERMS AND CONDITIONS', 'PRIVACY', and 'WHAT'S NEW', along with the text 'd3sign by SolarMD (Pty) Ltd. team. Build: 8.0.1 2023-06-23 05:42'. The mypower24 logo is also present at the bottom left. At the bottom right, there is a footer with 'All Rights Reserved' and logos for IBC SOLAR, Competence Center, and solarMD.

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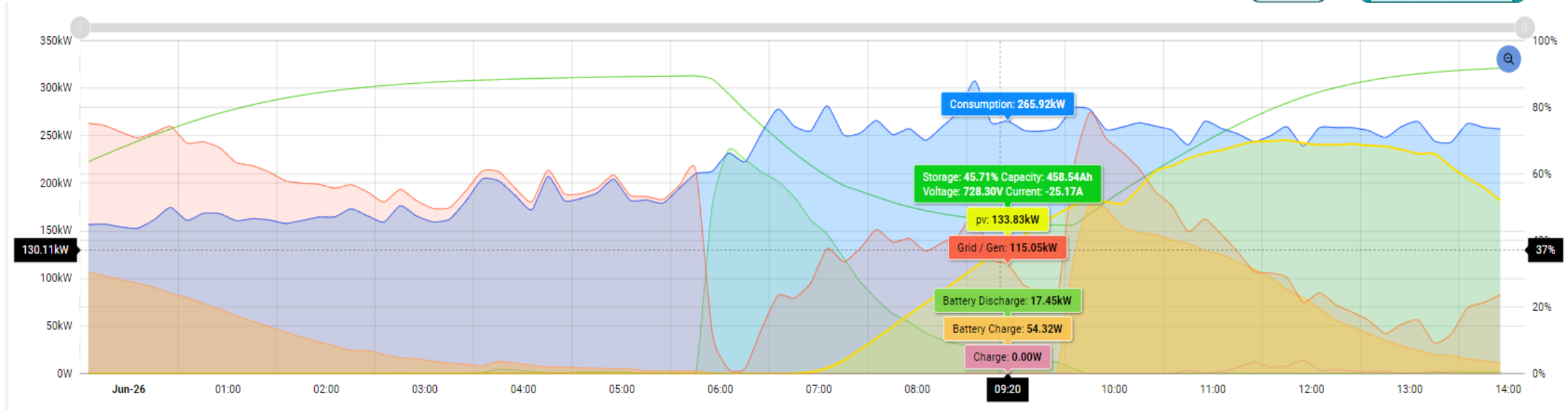
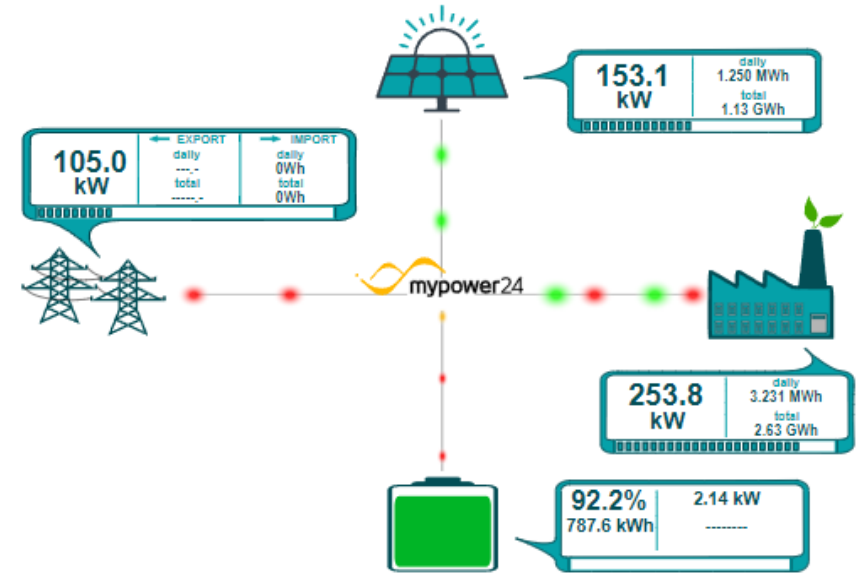
myPower24 Monitoring Platform

The screenshot displays the myPower24 Monitoring Platform interface. On the left is a dark sidebar with navigation options: Dashboard, My charts, My Devices, Events, System Events, Advanced User (selected), Logger List, Loggers Map, User List, Device Search, Plant List, History Data Edit, Admin User, Beta, Production, and Start chat. The main area shows a grid of monitoring components:

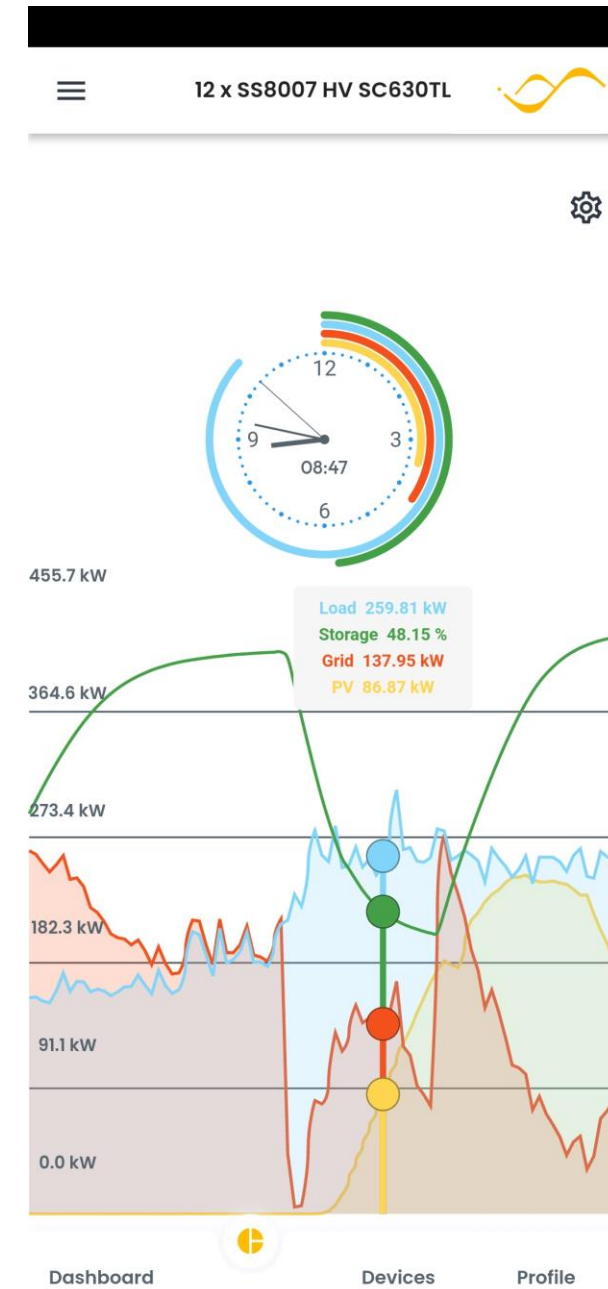
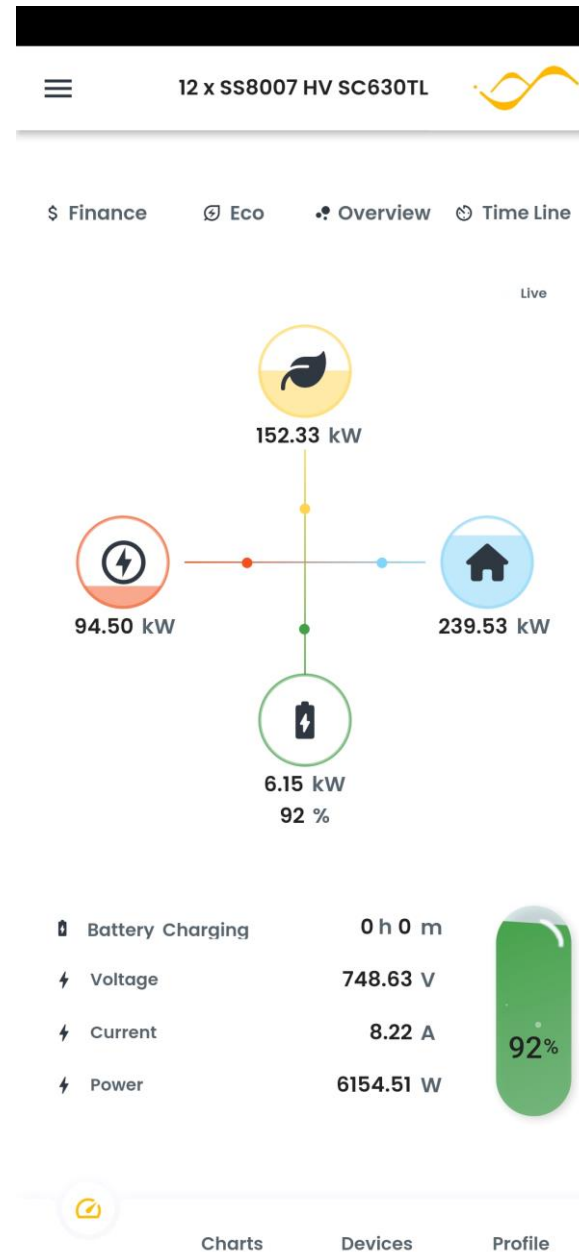
- Outputs:** 2 outputs, featuring a Relay.
- ENERGY METERS:** 1 SMA Energy Meter.
- BATTERY CHARGER:** 10 Winline UXR EV Charger.
- STORAGE:** 11 Li-Ion H8 Series, Solar MD (Pty) Ltd.
- GRID-SUPPORT INVERTER:** 1 Sungrow SC630TL, SUNGROW.
- GRID-TIED INVERTER:** 3 Sungrow String Inverter SG Series, Sungrow.
- LOGGERS:** 1 Logger myPower, SolarMD (pty) Ltd.
- VIRTUAL DEVICES:** 1 Power Manager, Solar MD dev team.

At the bottom left, there are links for TERMS AND CONDITIONS, PRIVACY, and WHAT'S NEW, along with the text "d3sign by SolarMD (Pty) Ltd. team. Build: 8.0.1 2023-06-23 05:42". The mypower24 logo is also present. At the bottom right, there is a copyright notice "All Rights Reserve" and logos for IBC SOLAR, Competence Center, and solarMD.

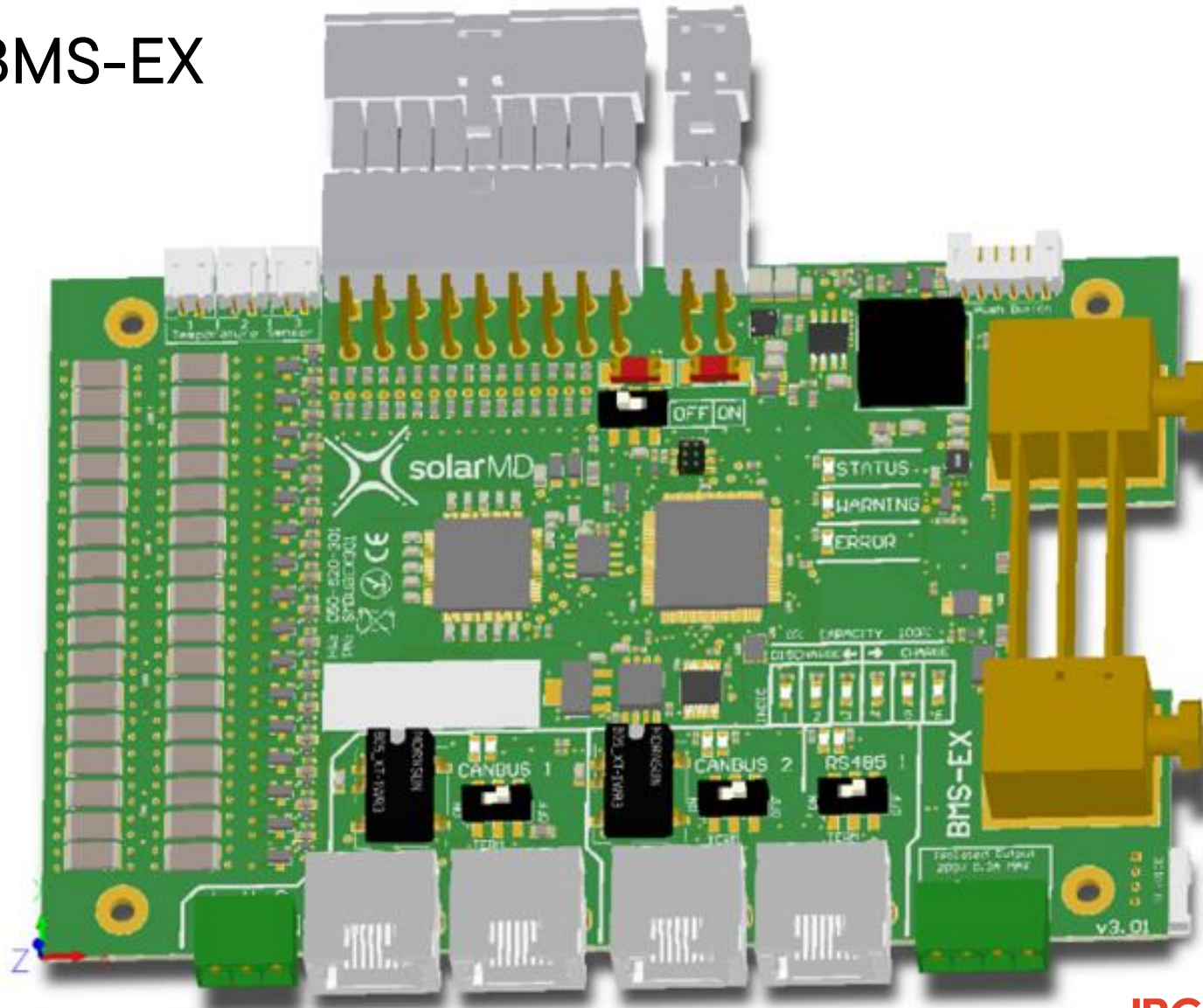
myPower24 Monitoring Platform



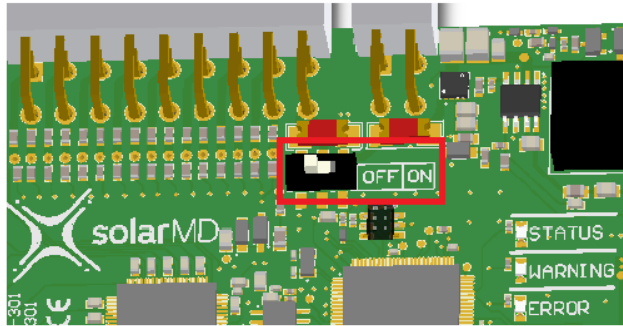
myPower24 Monitoring Platform



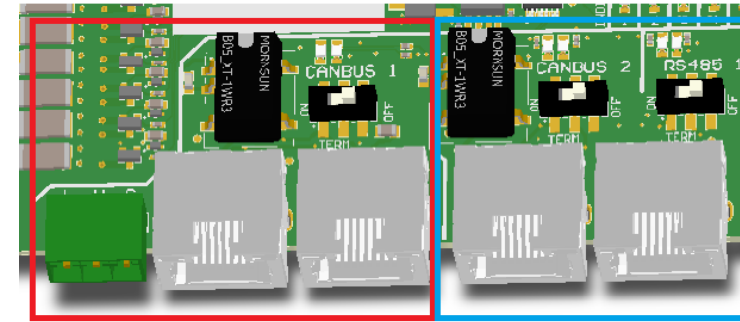
Solar MD BMS-EX



Solar MD BMS-EX – sectional view

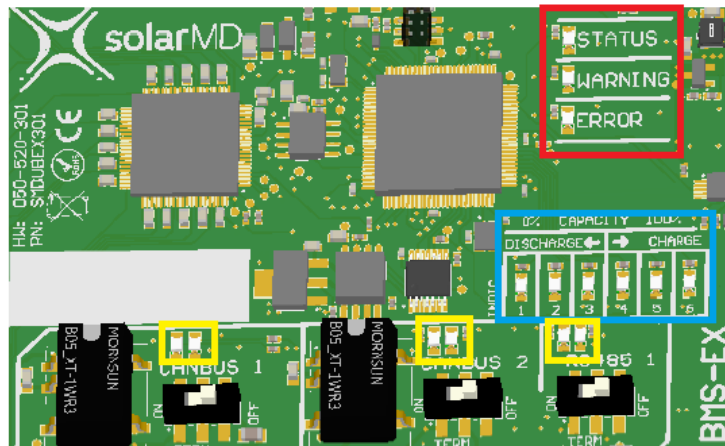


ON/OFF Switch



CAN BUS 1

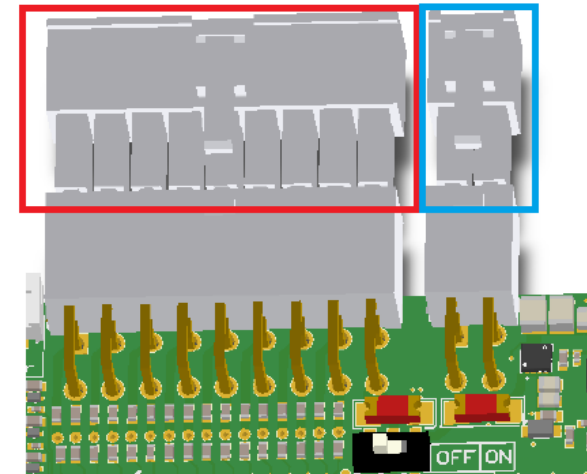
CAN BUS 2 / RS485



BMS status

Indication LEDs

Communication LEDs



Cell voltage taps molex connector

Relay contactor power connector

Introduction to BMS functions

Each battery module has a BMS which is used for communication with the BMU, as well as perform internal functions in the module. Its functions include cell voltage measurement, cell equalization management, HV management, collection and storage, charging and discharging management, thermal management and communication.

Functions

- ✓ Measuring the individual cell voltages and module temperature in real time.
- ✓ To measure and calculate individual battery module voltages.
- ✓ Passively balances individual cells within the module under the conditional settings determined by the BMU.
- ✓ Responsible for relaying critical cell voltage levels to the BMU for charge/discharge protection.
- ✓ Handles inter-modular CANBUS communication to the BMU.


Collection and storage function of the BMS-EX

The BMS-EX is used to collect and record all relevant cell and module data to the BMU, which is relayed through the Logger V2 for diagnosis and monitoring:


- ✓ ChargeCapacity: accumulated charging capacity.
- ✓ DischargeCapacity: accumulated discharging capacity.
- ✓ TempMax: Maximum temperature of cells.
- ✓ TempMin: Minimum temperature of cells.
- ✓ Module Temp: Temperature of the module.
- ✓ Vmax: Maximum voltage of cell.
- ✓ Vmin: Minimum voltage of cell.

myPower24 Monitoring Platform

1/1
General Info Actual values Cluster values Settings Installer Settings Advanced Battery Production BMS PRODUCTION Firmware DEVELOPER Live Chart RCD CALC Chart Production Chart



SMDBEX20107267



SMDBEX20111902

ACTUAL VALUES	
BATTERY STATE	ON
PACK VOLTAGE	53.437 V
CURRENT	10.673 A
POWER	0.570 KW
CAPACITY	72.72 %
203.60 AH	
ENERGY	10.42 / 14.3 KWH
REMAINING CHARGE TIME	--d 07h:14m
TOTAL CYCLES	117.86

CHARGING LIMITS	
CHARGE CONTROL STATUS	No Limit
CHARGE CONTROL	100 %
CHARGE CURRENT LIMIT	200.0 A
CHARGE CAPACITY DERATING	Off
CHARGE VOLTAGE DERATING	Off
CHARGE TEMP DERATING	Off

DISCHARGING LIMITS	
DISCHARGE CONTROL STATUS	No Limit
DISCHARGE CONTROL	100 %
DISCHARGE CURRENT	200.0 A
DISCHARGE CAPACITY DERATING	Off
DISCHARGE VOLTAGE DERATING	Off
DISCHARGE TEMP DERATING	Off

CELL INFO	
MIN CELL VOLTAGE VALUE:	3.338V @ cell1
MAX CELL VOLTAGE VALUE:	3.340V @ cell2
CELL VOLTAGE DIFFERENCE:	Δ 2 mV

CELL INFO DETAIL			
Cell	Voltage	ΔV	Balancing
1	3.338 V	+0 mV	OFF
2	3.340 V	+2 mV	OFF
3	3.340 V	+2 mV	OFF
4	3.340 V	+2 mV	OFF
5	3.340 V	+2 mV	OFF
6	3.340 V	+2 mV	OFF
7	3.340 V	+2 mV	OFF
8	3.340 V	+2 mV	OFF
9	3.339 V	+1 mV	OFF
10	3.340 V	+2 mV	OFF
11	3.340 V	+2 mV	OFF
12	3.340 V	+2 mV	OFF
13	3.340 V	+2 mV	OFF
14	3.340 V	+2 mV	OFF
15	3.340 V	+2 mV	OFF
16	3.340 V	+2 mV	OFF

TEMPERATURES	
TEMP MCU:	24.00 °C
TEMP SHUNT 1:	21.00 °C
TEMP CELL INPUT 1:	21.00 °C
TEMP CELL INPUT 2:	21.00 °C
TEMP CELL INPUT 3:	N/A °C
TEMP BALANCING GROUP 1~4:	20.00 °C
TEMP BALANCING GROUP 5~8:	20.00 °C
TEMP BALANCING GROUP 9~12:	18.00 °C
TEMP BALANCING GROUP 13~16:	20.00 °C


PROTECTION UNIT	
MAIN RELAY STATUS	RELAY CLOSED - ENERGY SAVING MODE
MAIN RELAY CURRENT	32 MA




BALANCING INFORMATION	
BALANCING STATUS	VB OUT_OF_RANGE

BMS COMS	
SMD CAN ID:	640
Interface Stat	

COUNTERS	
TOTAL CHARGE	0.4 Ah
TOTAL CHARGE OVT	80451.1 Ah
TOTAL CHARGE OC	0.0 Ah
TOTAL DISCHARGE	66001.9 Ah
TOTAL DISCHARGE OVT	80736.9 Ah
TOTAL DISCHARGE OC	0.3 Ah

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EQ BE SI BC PN



myPower24 Monitoring Platform

ACTUAL VALUES	
BATTERY STATE	ON
PACK VOLTAGE	53.450 V
CURRENT	11.523 A
POWER	0.616 kW
CAPACITY	73.07 %
	204.60 AH
ENERGY	10.48 / 14.3 KWH
REMAINING CHARGE TIME	--d 07h:06m
TOTAL CYCLES	117.86

CHARGING LIMITS	
CHARGE CONTROL STATUS	No Limit
CHARGE CONTROL	100 %
CHARGE CURRENT LIMIT	200.0 A
CHARGE CAPACITY DERATING	Off
CHARGE VOLTAGE DERATING	Off
CHARGE TEMP DERATING	Off
DISCHARGING LIMITS	
DISCHARGE CONTROL STATUS	No Limit
DISCHARGE CONTROL	100 %
DISCHARGE CURRENT	200.0 A
DISCHARGE CAPACITY DERATING	Off
DISCHARGE VOLTAGE DERATING	Off
DISCHARGE TEMP DERATING	Off

CELL INFO	
MIN CELL VOLTAGE VALUE:	3.339V @ cell1
MAX CELL VOLTAGE VALUE:	3.341V @ cell4
CELL VOLTAGE DIFFERENCE:	Δ 2 mV
PROTECTION UNIT	
MAIN RELAY STATUS	RELAY CLOSED - ENERGY SAVING MODE
MAIN RELAY CURRENT	31 mA
BALANCING INFORMATION	
BALANCING STATUS	VB OUT_OF_RANGE

myPower24 Monitoring Platform


CELL INFO DETAIL			
Cell	Voltage	ΔV	Balancing
1	3.338 V	+0 mV	OFF
2	3.340 V	+2 mV	OFF
3	3.340 V	+2 mV	OFF
4	3.340 V	+2 mV	OFF
5	3.340 V	+2 mV	OFF
6	3.340 V	+2 mV	OFF
7	3.340 V	+2 mV	OFF
8	3.340 V	+2 mV	OFF
9	3.340 V	+2 mV	OFF
10	3.340 V	+2 mV	OFF
11	3.340 V	+2 mV	OFF
12	3.340 V	+2 mV	OFF
13	3.340 V	+2 mV	OFF
14	3.340 V	+2 mV	OFF
15	3.340 V	+2 mV	OFF
16	3.340 V	+2 mV	OFF

TEMPERATURES	
TEMP MCU:	24.00 °C
TEMP SHUNT 1:	21.00 °C
TEMP CELL INPUT 1:	21.00 °C
TEMP CELL INPUT 2:	21.00 °C
TEMP CELL INPUT 3:	N/A °C
TEMP BALANCING GROUP 1~4:	20.00 °C
TEMP BALANCING GROUP 5~8:	20.00 °C
TEMP BALANCING GROUP 9~12:	18.00 °C
TEMP BALANCING GROUP 13~16:	20.00 °C

COUNTERS	
TOTAL CHARGE	0.4 Ah
TOTAL CHARGE OVT	80451.1 Ah
TOTAL CHARGE OC	0.0 Ah
TOTAL DISCHARGE	66001.9 Ah
TOTAL DISCHARGE OVT	80736.9 Ah
TOTAL DISCHARGE OC	0.3 Ah

myPower24 Monitoring Platform

Controlled Device Settings.

Controlled Device: **Goodwe** 

- None
- SMA
- Victron
- Sunsynk
- Goodwe
- SAJ
- Growatt
- EV_GEN_CHARGER

Cluster Custom Coms Advance /RS485.

CANBUS Baudrate:

Modbus Slave Address:

Modbus Baudrate:

Modbus Parity: **None**

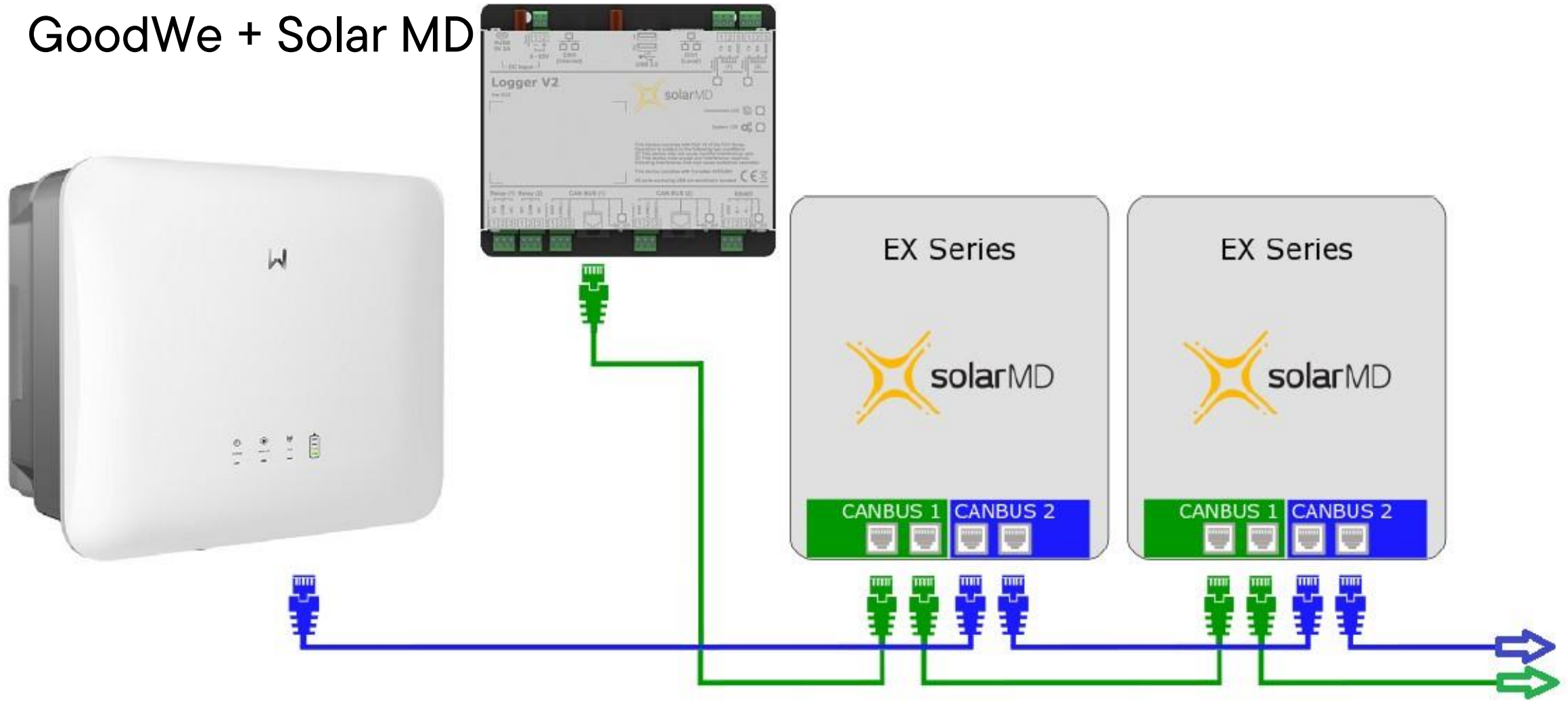
Modbus Stop Bits: **2 Stop Bits**

CLUSTER STATE	
ROLE IN CLUSTER:	Master
TOTAL BATTERIES IN CLUSTER:	2
DC CONNECTED BATTERIES:	2
ONLINE BATTERIES:	2
OFFLINE BATTERIES:	0

LIVE DATA	
AVERAGE CAPACITY:	73 %
TOTAL CURRENT:	19 A
AVERAGE VOLTAGE:	53.51 V
CHARGE CONTROL CURRENT:	100% / 299.0A
DISCHARGE CONTROL CURRENT:	100% / 299.00A
CHARGE CONTROL VOLTAGE:	100% / 56.00V
DISCHARGE CONTROL VOLTAGE:	100% / 42.0V

ADVANCED DATA	
MIN CELL VOLTAGE	3338 mV
MAX CELL VOLTAGE	3352 mV
Refresh Cluster Idx	

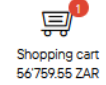
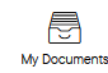
GoodWe + Solar MD



IBC Solar Online Shop – Solar MD



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PV modules

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Storage

Solar MD

BYD

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Accessories

E-Mobility

On Sale!

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Services



Solar MD 14.3kWh wall mount
SS4143

Item: 5202200001

Availability

type of battery

LITHIUM



1

Shopping cart



Solar MD 200A Fuse

Item: 5202200002

Availability

type of battery

LITHIUM



1

Shopping cart



Solar MD 100A Fuse

Item: 5202200003

Availability

type of battery

LITHIUM



1

Shopping cart



Solar MD 14.3kWh rack mount (SS214)
SS214

Item: 5202200004

Availability

type of battery

LITHIUM



1

Shopping cart



Solar MD SS7011 - HV 114.4 kWh
8 x 14.3 kWh

Item: 5202200005

Availability

type of battery

LITHIUM



1

Shopping cart



Solar MD SS7013 - HV 128.4 kWh
9 x 14.3 kWh

Item: 5202200006

type of battery

LITHIUM



Have sun!

IBC SOLAR South Africa (Pty) Ltd.

Suite 603, The Point Centre
76 Regent Street, Sea Point
Cape Town, South Africa, 8005

+27(0)87 470 0765
info@ibc-solar.co.za
www.ibc-solar.co.za