

Features

- Battery conditioner
- For E-Mobility production automation
- Digital regulation concept
- High functionality
- Programmable output parameter Vout/Iout
- Flexible and reliable

Industrial Application

MA11000 Series

11kW Battery Charger + Conditioner



Module Features Table

Input Voltage Range [VAC]	Output Voltage [VDC]	Output Current [A]	Ripple and Noise [%]	Efficiency typ. [%]
180-480	12	4	1	93

Charge-Discharge Table

Output Voltage Charge [VDC]	Output Current Charge [A]	Output Voltage Discharge [VDC]	Output Current Discharge [A]	Charge Power [kW]	Discharge Power [kW]
4-300	1-80	4-300	0-40	11	3.5

Input voltage

180-480V 3AC

Input current

25A

Input frequency

47/63Hz

Efficiency

93% @ nominal power

Switching operating frequency

100kHz typ.

Regulation

Line & load regulation $\pm 3\%$

Power factor

>0.96 Vin Pnom

Input protections

- Inrush current limitation $<50\text{ApK}$ @ 300VAC
- Fuse 40A on PCB
- RFI filter

Leakage current to GND

$<0.5\text{mA}$

Auxiliary Output

- 12VDC/4A

Output protections

- Overload protection
- Overvoltage protection 35% over the set point level
- Short circuit protection

Hold up time

10ms

Start up time

1s

Output power

11kW

Operating temperature

0°C to +45°C

Storage temperature

-20°C to +60°C

Temperature drift

0.01%/K

Long term stability

Better than 1% after 24 hours

Humidity

30% - 100% non condensing
Altitude 5000m

Dielectric withstand voltage

- Input - P.E.: 1750VAC

Isolation

- Output - P.E.: 500VDC

Comply with

- EN 61000-6-3
- EN 61000-6-1
- EN 62368-1
- EN 61010
- EN 60068-2-6
- EN 61326 Class B
- CE

Weight

TBD

Connections

- Mains connection through AMP connector
- Output connection through WAGO connector
- AUX Output / Communication through male connector 16pins
- 120V Voltage Measurement connector WURTH (tbd)

Disconnects:

In case of an overvoltage, overcurrent and the interrupted communication the PSU is disconnected.

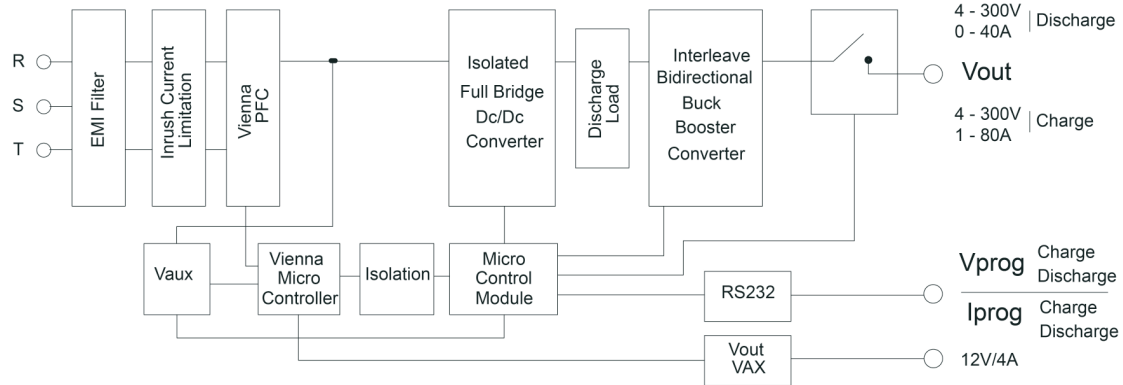
Communication

Through RS232 Interface
Baudrate 115200 PBS
Level 3.3V

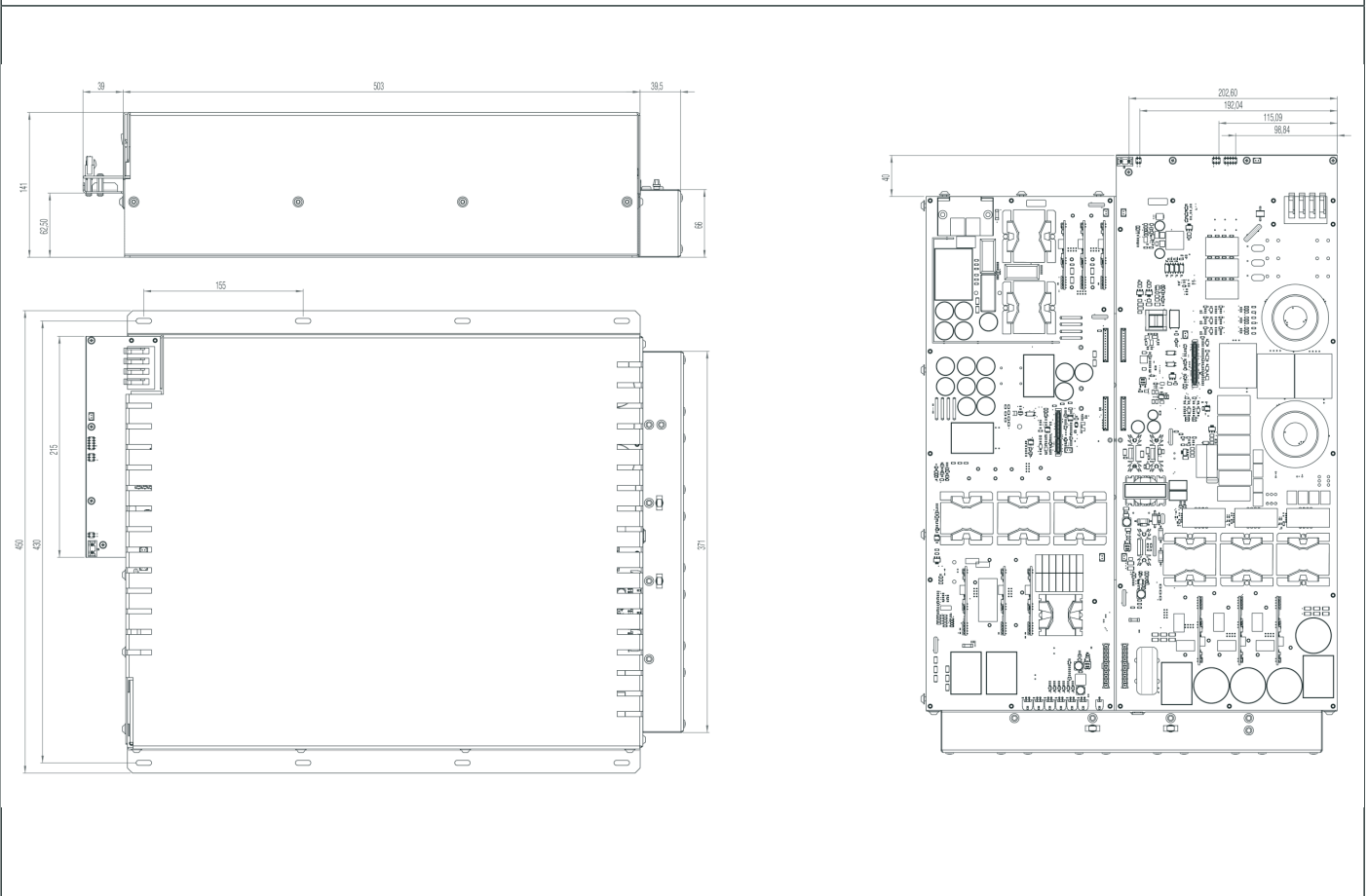
Conformal Coating AVR 80

Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)

BLOCK DIAGRAM



DIMENSION AND PHYSICAL CHARACTERISTICS



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