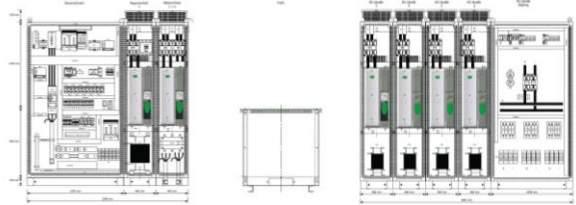


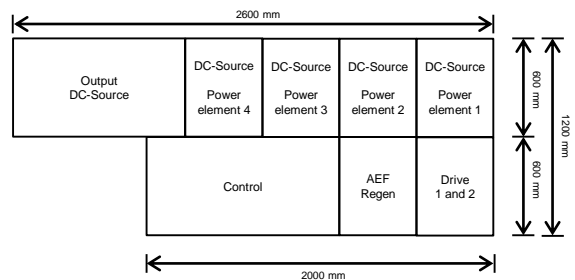
Battery Simulator as Power Supply

Technical data

- Regenerative battery simulation with variable DC link voltage
- Integrated Inverter for the load machine
- Protection concept with surface acceleration measurement and temperature monitoring

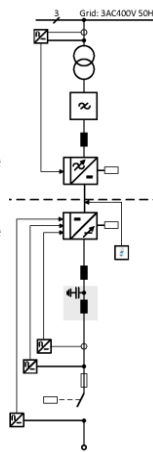


Nominal power	150 kW
Nominal current	800 A (4 modules à 200 A)
Output Voltage (DC)	30 – 700 V
Set point step response	< 10 ms
Accuracy dynamic	< 2 % (at 800 V DC)
Accuracy static	< 0.5 % (at 800 V DC)
Residual ripple	0.2 % (500 V DC)



Equipment

- Isolating transformer
- Inverter switching module by Emerson Control Techniques – Unidrive SPM in 3 variants:
- „AFE“: network side, recuperable
- DC-DC: 1 Master-, 3 Slavemodules, 200 A per module
- Inverter for load machine
- DC – filter system
- Safety-related speed and vibration monitoring
- Communication interface via EtherCAT and CAN



Measurement capabilities

Power	Diris A40
Current	Current converter, Shunt (Monitoring, control)
Acceleration	IFM vibration sensor VSE002
Temperature	Siemens Sirius
Insulation monitoring unit	Bender Isometer IRDH275

Current application/ Opportunities

- Inverter with control for high speed load machine



- Safety-relevant monitoring of, e.g. temperature and acceleration

- Use as a DC-Source for intermediate circuit voltages of inverters of devices under test, here: Semikron SKAI45A2 GD12-WCI Modul



- Flexible application at other test benches, e.g.: axle test bench

