

The Flight Research Project

Research on electric drives for motor gliders



Equipment used from the portfolio of Schulz-Electronic:
· 2 bidirectional DC power supplies type TC.GSS 400.400.S in racks, including BatSim- and BatControl software

The Challenge

For a research contract in the field of aerospace, existing battery trolleys needed to be replaced by DC sources – so-called high energy sources – suitable for flexible uses.

A university in Baden-Württemberg issued a public call for tender when looking for a partner for this project – and found Schulz-Electronic ...

The Solution

Particularly in the area of research, inexperienced students can cause dangerous situations with battery trolleys that have voltages up to 500 V DC and outputs that are sometimes in excess of 30 kWh. Here no risks can be taken. However, a high voltage source needs to be available which is mobile and – unlike battery trolleys – does not need recharging after every experiment.

For this reason Schulz-Electronic used source-sink devices by Regatron. The bidirectional TC.GSS power supplies are used to operate a two-part system which delivers either 800 V / 100 A or 400 V / 200 A, depending on how it is connected (in series / in parallel). Thanks to two separate mobile racks, each subsystem can be operated independently.

Additionally software packages are integrated into the plant that enable it to be operated as a battery simulator or as a battery test system. To do this, for ease of connection the Slave's AC plug can be connected to the Master.

Especially important: numerous specially developed and implemented protection mechanisms ensure that students can also use the system without danger.



At www.schulz-electronic.de you can find out more about our projects. And of course you're welcome to get in touch with us any time you need a (special) solution – we will always be pleased to listen to your requirements!