



PAUL SCHERRER INSTITUT

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Automated power supply commissioning

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Abstract:

At PSI's new X-ray free-electron laser facility (SwissFEL), around 800 magnet power supplies have to be installed and commissioned. In order to simplify this process and to reduce commissioning time, a software tool was created to configure multiple power supplies in a row, without any user interaction. It automatically identifies the load properties and sets the digital controller parameters for most of these power supplies. In addition, it helps to discover and document unusual behavior, by measuring the current ripple and carrying out a range of reproducible step response tests.