

Grid Code Compliance Testing: Design and operation of Fault-Ride-Through (FRT) testing equipment



Fig 1: Inside a 6 MVA LVRT and grid decoupling unit

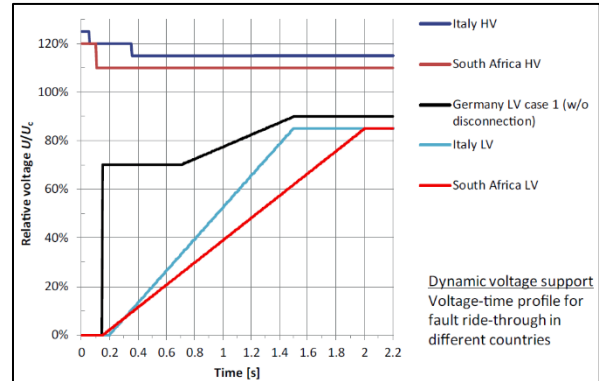


Fig 2: International FRT grid code requirements

Fraunhofer is one of the world's largest applied R&D organizations, with nearly 80 research units in all sectors of industry, 24500 employees and an annual outlay of Euros 2.1 Billion. Our global footprint is very strong, with offices and research centres in the Europe, USA and Asia. Some of our renowned innovations are the MP3 format, the white LED, the smallest of cameras. In the field of renewable, Fraunhofer holds the world record in solar cell efficiency, battery storage, and cover the entire spectrum of energy (Grid, Renewables, Storage, etc) across the value chain from materials to testing and certification. Fraunhofer has been active in India since the past several years, bringing innovative technologies and research competence to India. Fraunhofer in India is the chosen R&D and innovation technology partner of some of the major players in the field of Energy, Environment, Automotive, Electro-mobility, Materials, Production Technology of Government and Private Organizations.

Since 2011, *The Fraunhofer Institute for Energy Economics and Energy System Technology IEE* (www.iee.fraunhofer.de) is testing inverters for PV or storage systems as well as synchronous generators (CHP units) regarding fault-ride-through (FRT) behavior and grid code compliance. Our LVRT (low- or under-voltage FRT) test container with a rated power of 6 MVA is an in-house development. Hand-in-hand with the coming grid code requirements, HVRT (high- or over-voltage FRT) test equipment is currently designed and set-up.

Excessive experience is available concerning

- Conceptual design (incl. container construction, coil design and/or power electronics, switchgear and instrumentation design, operating concept and safety at work),
- Preparation of tenders for the components and assessment of bids,
- Monitoring of construction work, and
- Supervision of commissioning and acceptance.

Benefit from the long-time experience of Fraunhofer IEE in the field of FRT testing: Our service options range from support and supervision to turn-key solutions comprising the definition of requirements, the design and set-up of FRT test equipment suitable for your field of application or regulations. Additionally, we provide capacity building and hands-on training.

Kindly get in touch with us if you need any additional info on the subject.

Thanks and Regards,

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