

Accelerating Connection of Distributed Generation

Growing demand for connecting Distributed Generation (DG) sources has been facing major challenges – in particular mitigation of extra fault current introduced with DG connection to distribution grids. Network operators will not authorize connection of gas generation, biogas cogeneration and other renewable resources, without proven means for protecting the distribution network from excessive fault currents.

Independent power producers are often required to make significant capital and resource investments in order to limit the added fault current, and subsequently get permits for connection. Such requirements often result in significant postponement of the connection and to loss of potential revenues. In some cases, where the distribution network is already over-subscribed for new connections, it may not be possible for a new plant to connect at all.

GridON is offering a cost-effective Fault Current Limiter (FCL) solution for expanding decentralized generation sources. Following nearly four years of successful field operation in live distribution networks, GridON is announcing a new family of cost-effective fault current limiters for mid-to-high voltage applications. GridON's established technology has been further enhanced to offer an economical product with smaller footprint - for decentralized and renewable power producers, distribution grid operators, and industrial customers. The development of the new product was co-funded by the Horizon 2020 programme of the European Union.

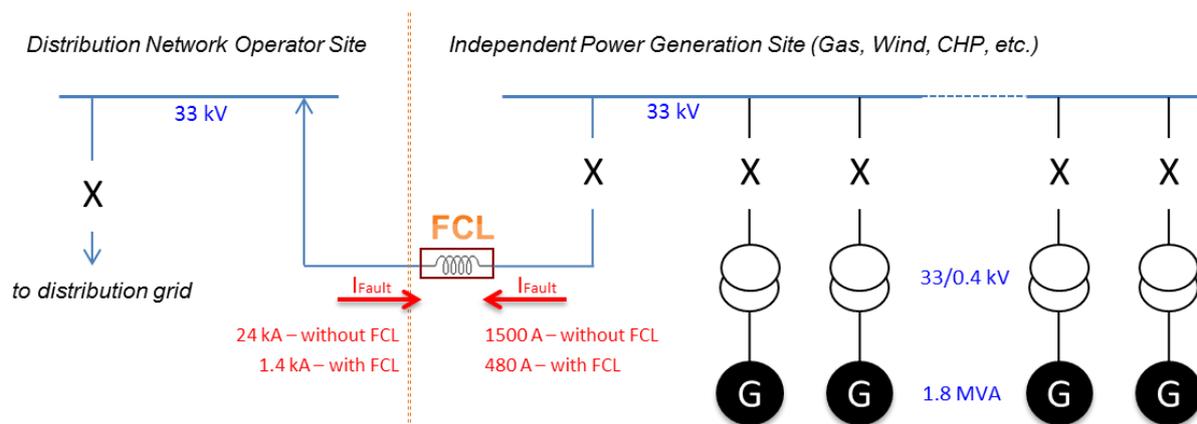


The FCL instantly suppresses excessive current and recovers to normal load promptly upon fault clearance - being always ready for consecutive short circuit events. The FCL increases network capacity and improves grid resilience and reliability, while significantly lowering capital expenditures and operating costs. The FCL is reliable and robust, and is easy to install and maintain.

GridON's FCLs enable increased supply from additional generation and renewable energy sources. Independent power producers are now able to apply this novel FCL for cost effective and reliable connection of decentralized energy sources, and to fully control excessive fault currents. GridON's FCL accelerates connection time, while reducing associated costs.

Decentralized Generation application example:

A typical distributed generation source (like gas and wind) is being connected to 11-33kV grids. Following is an example of a 20MVA gas generation plant, connecting to a 33kV distribution network. The prospective fault current from the independent power producer side is 1,500A, while the network operator's requirement is keeping additional fault current under 600A at all times. An FCL installed in the point of common connection to the network will guarantee that all fault currents will be limited under 600A level.



About GridON Ltd

GridON offers fault current limiters for network operators, power producers and industrial customers. By suppressing excessive fault currents, GridON's FCLs enable increased supply by cost-effective network meshing and connection of power generation and renewable energy sources. The FCL improves grid resilience and reliability and significantly lowers capital expenditures and operating costs, while eliminating network upgrades and early retirement of fit-for use equipment.

GridON's FCL is based on combining industry-standard, proven transformer technology with unique and proprietary concept of electro-magnetic flux alteration on a saturated iron core. The fail-safe system responds instantaneously to faults, suppresses fault current for its entire duration, and recovers immediately following fault clearance – being always ready for consecutive fault events.

GridON's commercial FCLs have been operating flawlessly in live networks for nearly 4 years, proving the reliability and maturity of the product. GridON is offering scalable FCL solutions from distribution to very high transmission voltage ratings, in partnership with Wilson Transformer Company - Australia's leading manufacturer of high-quality transformers.

GridON was awarded the Global Cleantech 100 and the UK Energy Innovation in 2013, and received the prestigious ACES Smart Grid and GE ecomagination Powering the Grid awards in 2012.

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