

Fault-limiting Interrupter with immediate recovery for Cost-effective connection of Distributed Generators



GridON - a world leader in fault current limiting technology - is offering a novel electronic Fault Current Limiting Interrupter which enables cost-effective connection of Distributed Generation and combined heat and power (CHP) co-generators to the grid, and sale of excess generation capacity to distribution network operators.

The ever increasing penetration of Distributed Generation (DG) leads to rising fault current levels which exceed protection ratings, hence delays the approval of DG connections. While some generation sources contribute little fault current (e.g. inverter based generation), synchronous ones (such as CHP) contribute significant fault current. Consequently, requests to connect DG and CHP sources are often rejected by grid operators due to lack of fault current headroom in their networks. To enable faster approval and connection of industrial generators and Independent Power Producers (IPP), the fault current contribution from such DG sources need to be reduced to near zero. In some cases, connections are made possible through conventional resource-intensive and disruptive network reinforcement, with substantial cost and delays to both network operators and the IPPs. This leaves available DG capacity underutilized, thus inhibiting improvements in network capacity and energy diversification.



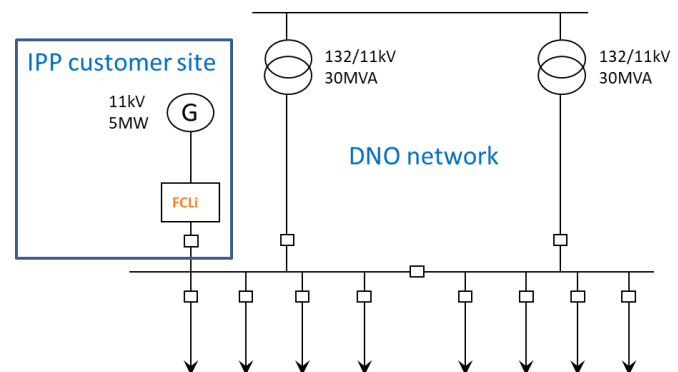
Following years of field proven experience of its fault current limiters in service, GridON is introducing a novel product family for low-to-medium voltage networks - based on standard power-electronics devices. This new Fault Current Limiting Interrupter (FCLi) is a series-connected solid-state device which instantaneously interrupts the AC current upon detection of short circuit conditions. The FCLi limits and interrupts excessive fault currents from the generation source to the grid - before the first current peak. It also limits short circuit currents from the grid to the generator. Once the short-circuit condition is cleared, the FCLi is immediately ready to resume normal conduction.

By controlling excessive fault currents, the FCLi enables fast and cost-effective connection of IPPs, and sale of excess generation capacity to the grid. Return on investment in an FCLi is expected within one year.

Western Power Distribution and UK Power Networks have recently contracted GridON to provide 5MW FCLi and 2.4MW FCLi (respectively) for connecting their customers' generators to an 11kV network.

5MW generator connection

FCLi enables connection of 5MW generators at 11kV with nominal current rating of 328A, reducing the fault current contribution to near zero.



About GridON Ltd

GridON is a leading provider of Fault Current Limiting solutions for increased capacity in electricity networks and for cost-effective connection of distributed generation and renewable energy sources. Short circuit currents in electricity grids are rising with new generation sources added to meshed networks, often exceeding existing switchgear ratings. GridON provides fault mitigation solutions for network operators, independent power producers, and industrial customers.

GridON is offering scalable solutions from medium to very high transmission voltage ratings.

GridON's commercially available saturated-core Fault Current Limiters (FCL) have been operating flawlessly in live networks for more than 5 years, proving the reliability and maturity of the product, and are being offered in partnership with Wilson Transformer Company - Australia's leading manufacturer of high-quality transformers.

GridON's solid-state Fault Current Limiting Interrupters (FCLi) are offered for low-to-medium voltage networks. Designed with compact footprint and low price tag, the FCLi is a cost-effective solution for connecting distributed generation sources and for increasing power capacity in industrial plants.

GridON's FCL and FCLi improve grid resilience and reliability and significantly lower capital expenditures and operating costs, while eliminating network upgrades and early retirement of fit-for use equipment.

For further information, please visit www.GridON.com or email sales@GridON.com or call +972.3.711.1183