DigiSVC™

A microprocessor based Static Var Compensator

DigiSVC™

AMI Automation is a world class company with design, engineering and manufacturing experience that allows implementing Static Var Compensation (SVC) solutions.

The main purpose of the DigiSVC™ is to improve power factor, mitigate harmonics, voltage fluctuation and the flicker resulting from the operation of highly disturbing loads, like motors and electric arc furnaces in Steelmaking operations.

The DigiSVC™ regulates the voltage controlling the amount of reactive power absorbed or injected to the power system. For example, it will connect the corresponding stage when the system voltage is low, or the load is inductive. Consequently, the demand of reactive energy required by a lagging load will be furnished by the DigiSVC™, therefore eliminating the need that the distribution lines deliver it. Because of that, the voltage drop is reduced, and the load voltage terminal is improved.

The control system handles the connection of the stages based in TCR, AC thyristor bank and/or harmonic filters. These interruptors switch and enable the TCR and the harmonic filters into the circuit. If any, existing capacitors and reactors may be reutilized.

The control system is custom designed by AMI, based on the key requirements for system performance and is extensively tested and simulated during a FAT and the commissioning to ensure the guaranteed performance and the benefits.

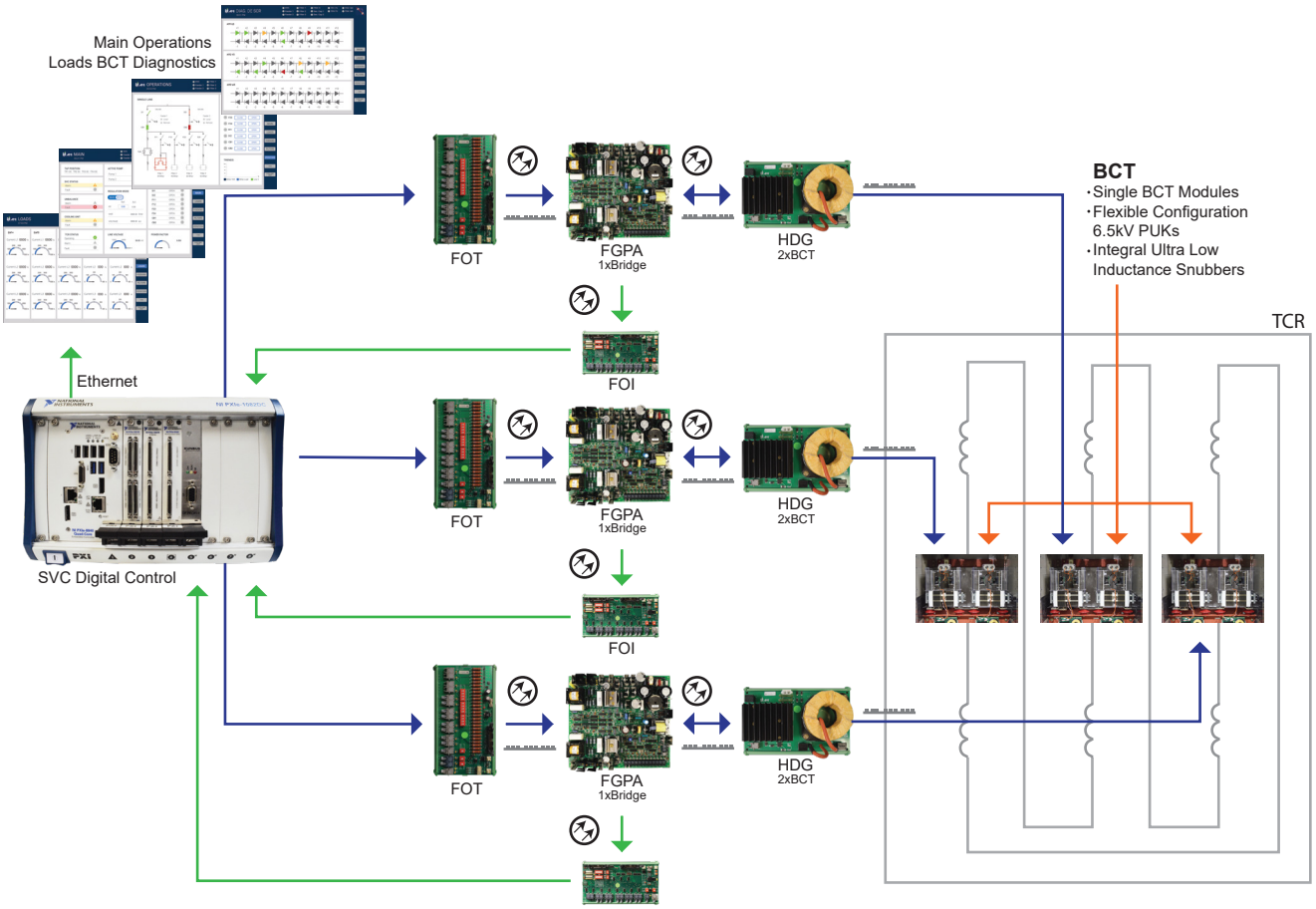
The main system parts are*:

- SVC Digital Control
- Auxiliaries
- Harmonic filters
- Thyristors Valve
- Protection Relays
- Redundancy

*Modules are dependent on specific requirements

Benefits:

- Allowing operation, a precise and accurate control for VARs and network power
- Increase the power transfer capacity
- Steady state and dynamic stability with long response times
- Optimized power compensation
- Near instantaneous response to system voltage fluctuations
- Harmonic elimination and voltage distortion reduction
- Three phase load balance
- Bringing power factor closer to unity
- Better equipment usage (transformers and cables)



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