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State of the Art of M-SSSC technology

SC B4 PS 3-2 Q 3.2

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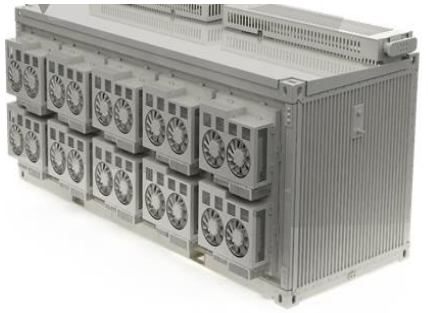
Current Technology Details

*State of the art **single phase, modular Static Synchronous Series Compensator** (SSSC) injects a leading or lagging voltage in quadrature with the line current.*

M-SSSC front view



M-SSSC rear view

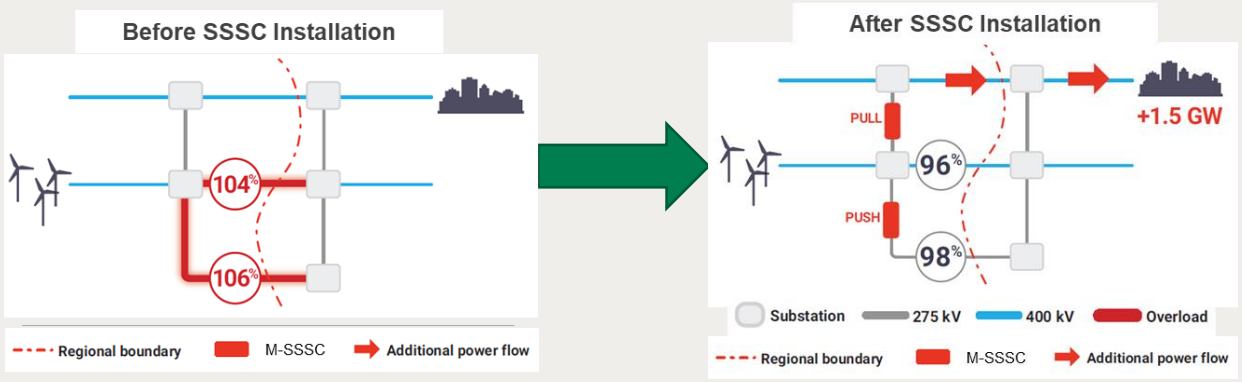
SSSC Models						
Models[a]	Max Continuous Current (A RMS)	Max Voltage Injection[b] (V RMS)	Max 2 Hour Injection Current (A RMS)	Dimensions with Corona Rings (L x W x H) (cm)	Mass (kg)	Max 1 sec Fault Rating (kA RMS)
10-1800	1800	± 5660	2160	490 x 220 x 218	6600	63
10-3600	3600	± 2830	4320	490 x 220 x 218	6600	63

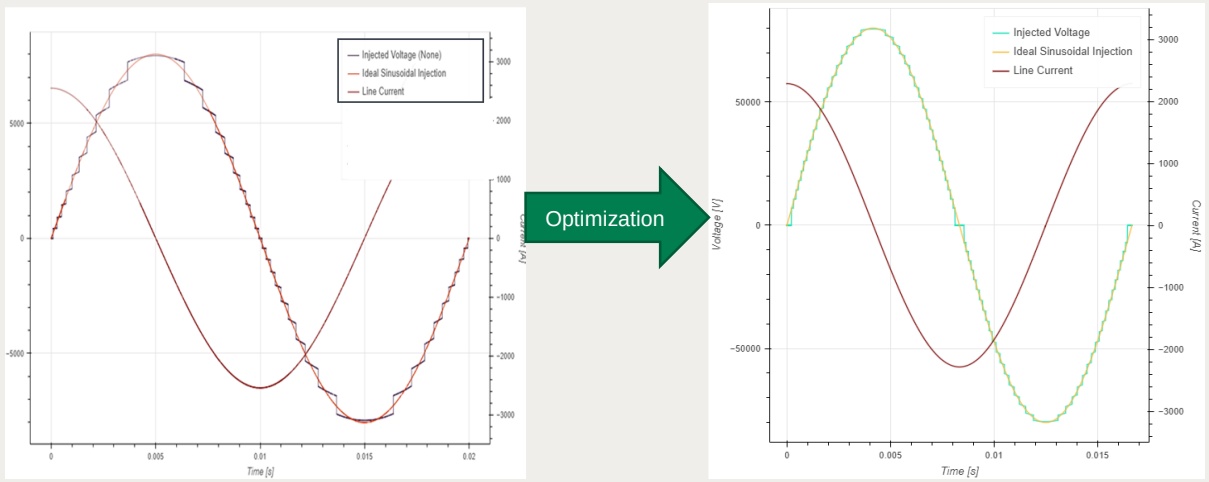
(a) First number is reactive power rating in MVAr, the second is max continuous current rating in A RMS.

(b) At both 50 Hz and 60 Hz

(c) 63 kA is a maximum for these SSSC models. The fault rating capabilities are defined by the bypass rating.

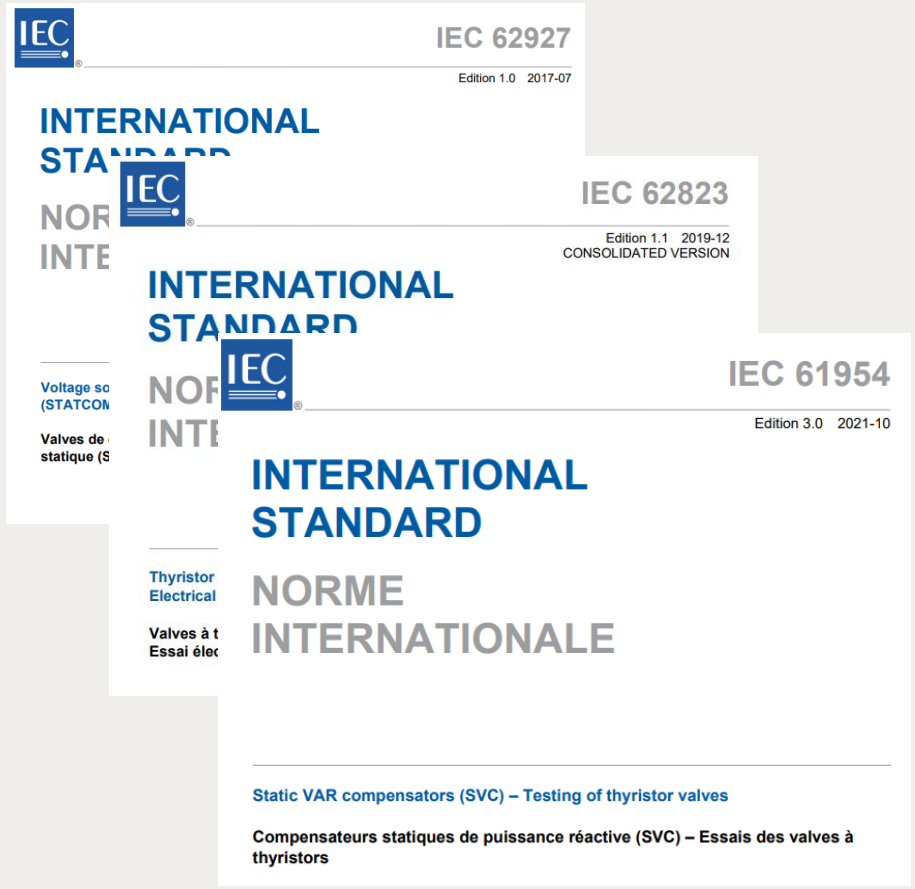
Constraints-Modular Approach





- The smaller modular deployments can help reduce space constraints, planning and resource constraints.
- For M-SSSC, harmonic contributions can be reduced through switching optimization and distribution of devices to avoid harmonic limit breaches.

Standard Development



- No IEC or IEEE standard exists for SSSC or M-SSSC
- STATCOMs, SVC, TCSC all have a set of standards that are agreed as industry standard.
- Only parts of the standards apply.
- This can lead to difficulty in technical assure
- This leads to differences in what tests are feasible and required.