



More Power by  
Saving Energy

It's all about saving your money!



## Hybrid Dynamic Power Factor Correction Panel

The DSP controlled IGBT topology enables a perfect compensation on each phase for both inductive and capacitive loads. It also corrects Reactive Power Compensation under unbalance loading condition. Immune to harmonics, resonance and voltage level, it offers a maintenance free solution reusable in any network configuration.

***The SVGs are powered with sophisticated Artificial Neural Network based control algorithm to achieve set power factor in shorter times, with real-time loss minimization.***

CLARIANT Hybrid Dynamic Power Factor Correction provides an instantaneous and effective response to power quality. Hybrid Dynamic Power Factor Correction Panel adopts the configuration scheme of combining Static VAR Generator and switching Capacitor-Reactor and implements different reactive compensation schemes according to the actual needs of users on site, so as to achieve the best combination of price and effect.

# Advancements of Hybrid PFC-SVG Technology

01

## LT Side Power Factor Correction

PFC-SVG system dynamically supports the load reactive current locally, even with highly fluctuating loads. This assures unity power factor operation at all time, thereby, maximize power factor incentive.

02

## Power Factor Correction under Unbalanced Loading

Smart inverter architecture of SVG system ensures the unity power factor operation even under the presence of large single phase and/or two-phase loads.

03

## HT Side Power Factor Correction

Being connected on LT side of the transformer, SVG system can support the load dependent transformer internal reactive power requirement. This assures near unity power factor operation on HT side of the transformer, wherever HT billing is applicable.

04

## Current Balancing

SVG System can compensate negative sequence part of the load current, to maintain balance between three-phase input currents

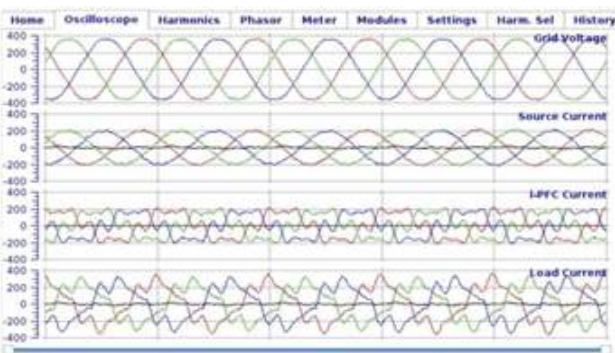
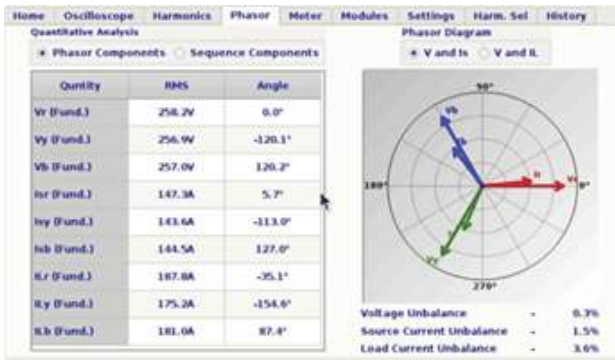
05

## Bi-directional Reactive Power Compensation

Compensates both inductive and capacitive reactive power of the loads

## Unique Features

- No Harmonic resonances/ amplifications.
- Faster Reaction Time (<100 micro seconds)
- Cloud Connectivity
- HMI Display with Fully functional Power Quality Analyzer with 15 channel Real Time Oscilloscope



Parameter	R-phase	Y-phase	B-phase	Neutral / 3-ph
Load Current (A)	213.5	197.9	202.5	10.4
Source Active Power (kW)	38.5	37.3	37.2	113.0
Load Active Power (kW)	41.0	37.7	39.8	118.5
Fund. Source Reactive Power (kVAR)	-3.5	-4.8	-4.6	-12.8
Fund. Load Reactive Power (kVAR)	33.6	30.6	29.7	93.9
Source Apparent Power (kVA)	38.9	37.7	37.7	114.3
Load Apparent Power (kVA)	55.2	50.9	52.1	158.2
True Source Reactive Power (kVAR)	5.0	5.9	5.8	16.9
True Load Reactive Power (kVAR)	36.9	34.1	33.6	104.8
Source Displacement Power Factor	0.996 (C)	0.992 (C)	0.993 (C)	0.994 (C)
Load Displacement Power Factor	0.773 (L)	0.775 (L)	0.800 (L)	0.784 (L)
Source True Power Factor	0.992	0.988	0.988	0.989
Load True Power Factor	0.743	0.740	0.763	0.749

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