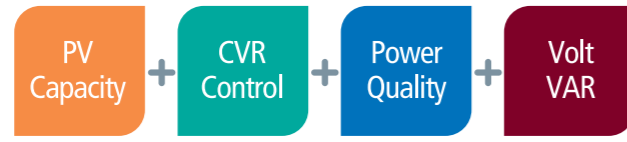


What if one device could solve...



Introducing **D-VAR VVO™**

The D-VAR VVO™ System: Building on over 15 years of AMSC experience in manufacturing and deployment of D-VAR® dynamic reactive power solutions to enable utility networks to never stop moving.

HIGH LEVEL TECH SPECS

Connection	Three phase floating wye, three phase grounded wye, single phase grounded wye
Installation Location:	Along feeder or in substation
Connection Voltage:	Up to 13.8kV direct connect (no transformer required)
Operating Range (Voltage):	0.5 pu – 1.25 pu (@12.47kV)
System Frequency:	50/60Hz
Nominal kVAR Rating (+/-)	500kVAR-1MVAR 3ph (@12.47kV) 167-333kVAR 1ph (@12.47kV)
Overload Rating:	1.3X nominal for 1 minute
Harmonics:	<3.5% THD (IEEE 519 compliant)
Rated Losses:	1% of output, typical
Standby Losses:	<1.6kW switch closed, zero current injected

FEATURES

- Sub Cycle Response
- Extremely low power losses
- Quiet operation
- Low cost feeder installation

About AMSC®

AMSC (NASDAQ: AMSC) generates the ideas, technologies and solutions that meet the world's demand for smarter, cleaner ... better energy. Through its Windtec Solutions, AMSC enables manufacturers to launch best-in-class wind turbines quickly, effectively and profitably. Through its Gridtec Solutions, AMSC provides the engineering planning services and advanced grid systems that optimize network reliability, efficiency and performance. The company's solutions are now powering gigawatts of renewable energy globally and enhancing the performance and reliability of power networks in more than a dozen countries. Founded in 1987, AMSC is headquartered near Boston, Massachusetts with operations in Asia, Australia, Europe and North America.

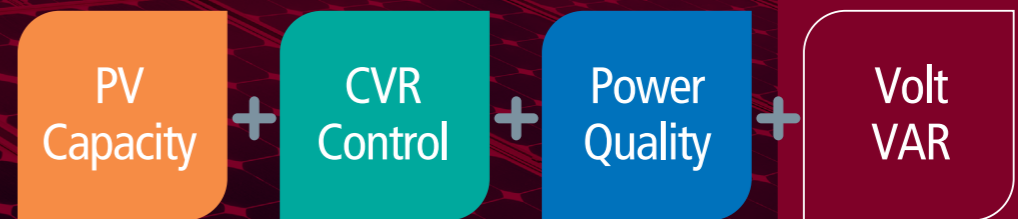
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smarter, cleaner
... better energy



D-VAR VVO™ System



Introducing **D-VAR VVO™**



The Challenge

Federal incentives, greatly reduced equipment costs, or a global awareness of the impact of burning fossil fuels, are key drivers in the rapid increase in the installation of Distributed Energy Resources (DER) including photo voltaic (PV) and small wind generation on the distribution systems.

As penetrations of DER increase, the problems caused by DER are also increasing and are in some cases causing utilities to limit the amount of DER that can be installed on their distribution grids. These problems include:

- **Voltage flicker due to rapidly varying wind speed or cloud cover**
- **Inability to regulate voltage due to rapidly changing generation levels and reverse power flow**
- **Increased maintenance on traditional voltage management systems such as voltage regulators, capacitor banks, and transformer load tap changers due to rapid changes and generation and voltage**

AMSC has the solution...

The AMSC D-VAR VVO™ series is a 15kV distribution class shunt compensation solution that provides utilities & project developers with a purpose-built tool to address applications that demand fast and precise volt/ VAR compensation. The D-VAR VVO builds upon over 15 years of AMSC experience in manufacturing and deployment of D-VAR® dynamic reactive power solutions in utility networks.

The D-VAR VVO power electronic devices operate by injecting a controlled amount of reactive current (inductive or capacitive) into the grid connection point. The device can be configured to operate in control modes to best suit the application including voltage control, VAR control, power factor control, and scheduled sequencing between modes.

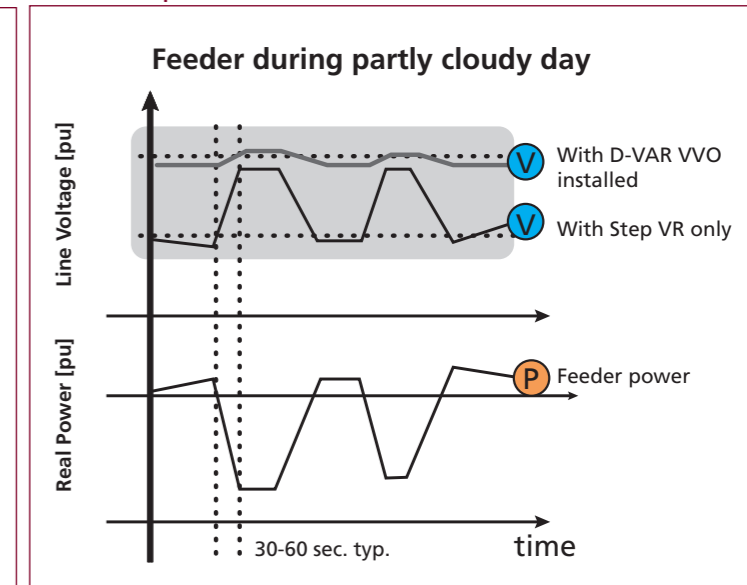
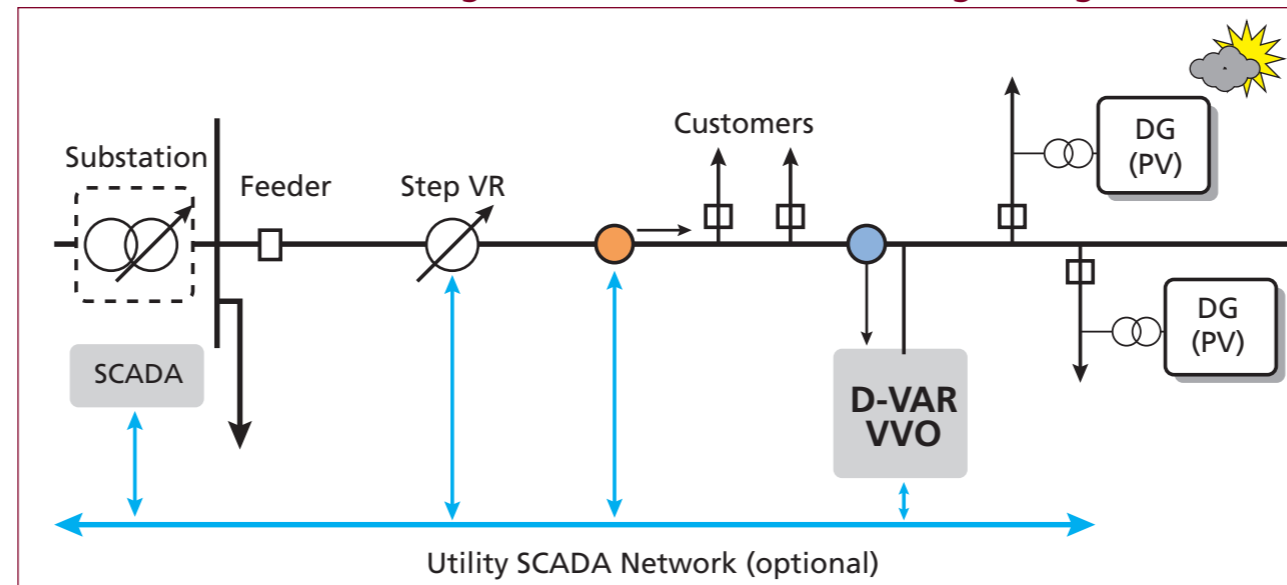
Initially available in a pole-mounted form factor (contact the factory for pad mount), the solution is compatible with proven installation and service practices for distribution systems. The compact and easy-to-install modules allow deployment of solutions in the right location, at the right size and with minimal site costs. Units can be configured to achieve three phase ratings from +/-500kVAR up to +/- 2MVAR at a single location (up to 333kVAR single phase).



D-VAR VVO™ System Benefits:

- Low-Cost upgrade for DG hosting capacity
- Solve flicker and power quality problems
- Interconnect solar/ DG plants in existing feeders
- Eliminate CVR performance bottlenecks

Eliminate flicker and voltage violations in circuits with growing distributed solar adoption



Ensure conservation voltage reduction ROI on feeders with power quality constraints

