Medium Voltage
Active Voltage Conditioner (AVC)

1MVA to 50MVA, 38kV max., High Power, High Performance Digital Voltage Conditioning Solution

Description

The Active Voltage Conditioner (AVC) from Vectek Electronics is an inverter based system that protects sensitive industrial and commercial loads from voltage disturbances. It provides fast, accurate voltage sag correction plus continuous voltage regulation and load voltage compensation.

The Medium Voltage AVC is an ideal solution for complete facility protection. Its standard outdoor enclosure saves valuable indoor floor space.

It has an operating efficiency exceeding 98% and provides extremely fast response to three-phase sags down to 50%, and single-phase sags down to 25% on the ac supply network.

Standard models are optimised for sag correction, voltage balance and flicker reduction.

All AVC models also provide continuous regulation within 10% of the nominal utility voltage.

Options

- Harmonic Voltage Correction
- Transformer mounted externally
- Low voltage versions available to target dedicated internal loads
- Indoor NEMA 1 solutions available

Key Features

- Easy 3 wire in, 3 wire out installation
- Three-phase sag correction down to 50%
- Single-phase sag correction down to 25%
- Continuous voltage regulation
- Unbalanced voltage correction
- PQ metering c/w waveform capture
- User adjustable set point
- Fast (sub-cyclic) response
- Full digital implementation
- Simple user controls
- Rugged overload capability
- Fuse clearing ability
- Short circuit protected
- Extensive diagnostics
- Fault log
- Voltage event log
- 100% redundant air conditioning

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Active Voltage Conditioner (AVC)

Technical Specifications

Load Capacity
- 1MVA – 50MVA+

Rated Voltage
Nominal Supply Voltage
- 2300 – 38,000V, 50/60Hz
- 3 phase, 3 or 4 wire plus ground
- Other voltage options

Maximum Supply Voltage
- 110% of nominal supply voltage

Minimum Supply Voltage
- 50% of nominal (running)
- 75% of nominal (starting)

Correction
AVC-S (Standard)
- 30% 3-phase, 50% 1-phase-to-ground (boost) for at least 30 sec.
- 15% – 50% 3-phase correction available. Customized to site data
- +10% three-phase continuous

Voltage Regulation
- Output voltage set point adjustable
- +/- 1%, up to 10% correction continuously
- +/- 2.5% at 30% correction

Response (to sag event)
- Initial correction provided within 1ms, completed within 8 msecs

Efficiency
- 98 - 99%

Environment
- Operating temperature: 0 – 50°C
- Cooling: 100% redundant airconditioning
- Relative humidity 0 – 90% (non condensing)

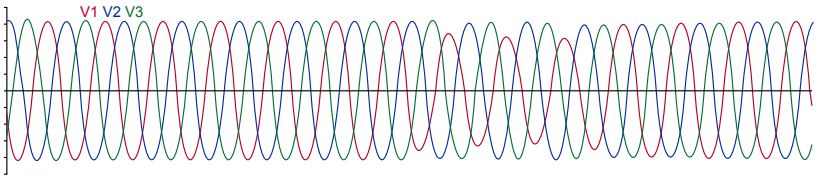
Bypass
- AVC Load rating (kVA)*1
- 125% for 10 minutes
- 150% for 1 minute
- inverter to bypass <0.5ms

*1 The AVC provides continuous correction and only transitions to and from bypass under fault or overload conditions, or when manually starting and stopping.

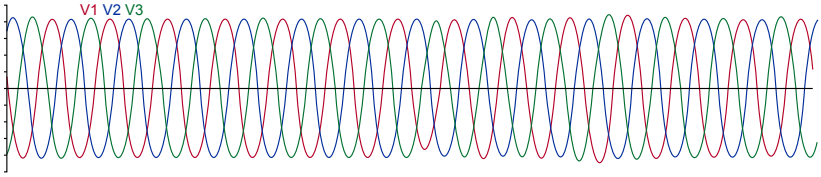
Protection
- Inverter input semiconductor fuses
- Inverter and transformer thermal protection
- Input voltage out of tolerance protection
- Output overload protection
- Output short circuit protection

Controls (inputs and outputs)
- 4 line LCD with input and output voltage and current displayed
- Full parameter control from keypad
- Voltage set point adjustable in 0.1% steps
- RUN control to start and stop converter
- Clean contacts indicating fault, run and overload status
- External customer enable

Inside MV section of AVC



Input to Plant from the Utility:



Output From Active Voltage Conditioner to Plant

Exclusive North American Partner of VECTEK

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tame your power—keep your profits
570 Hood Road, Suite 20
Markham, Ontario L3R 4G7 Canada
Tel: 416 849·2299 Fax: 416 849·2298
info@omniverter.com www.omniverter.com