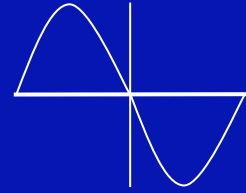




Z-Cap

Intelligent Zero Voltage Closing Control (ZVC)



VALQUEST
SYSTEMS, INC.

Features:

- Automatic timing adjustments based on closing feedback
- Independent temperature compensation of controller and capacitor switches
- Line frequency monitoring
- Microprocessor based solenoid operation analysis
- Precisely controlled local closing energy storage
- Digital waveform analysis

Bonus Features:

- Compatible with ABB, Siemens, Joslyn and Cooper solenoid operated switches
- Easily interfaced with any capacitor control or PLC
- Provides Switch Position and Control Ready status signals
- Configurable for delta, grounded wye and ungrounded wye capacitor banks.



Closing each switch at precisely the right time

Zero Voltage Closing:

- Improves power quality
- Diminishes harmonic distortion
- Decreases switching related voltage transients
- Reduces voltage peak surges
- Increases capacitor life by reducing inrush currents
- Eliminates damage to capacitor banks in close proximity



Automatic Capacitor Control with ZVC



Retrofit ZVC Control

Specifications

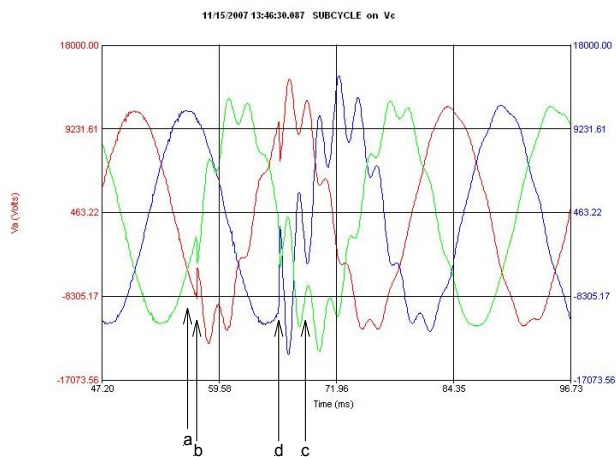
Parameter	Range	Units
Operating Temperature	-20 to 145	Degrees F
Humidity (Non-Condensing)	0 to 100	Percent
Operating Voltage	110 to 140	VAC
Power Usage	2	Watt
Enclosure	NEMA 4	Polycarbonate
Closing Accuracy	+/- 0.45	Millisecond

Configurations

Bank	Rotation	Voltage
Single Phase		Phase-Neutral
Three Phase Grounded Y	ABC	Phase-Neutral
Three Phase Grounded Y	ABC	Phase-Phase
Three Phase Grounded Y	CBA	Phase-Neutral
Three Phase Grounded Y	CBA	Phase-Phase
Three Phase Un-grounded Y	ABC	Phase-Phase
Three Phase Un-grounded Y	CBA	Phase-Phase

Recorded Voltage Waveforms

Without Z-Cap



- Zero point of A and B
- Actual close of A and B
- Zero point of B and C
- Actual close of B and C
- Close of switch at zero using Z-Cap

Using Z-Cap

