



Motor or Solenoid operated  
for optimum application flexibility



**UltraVac™**  
Solid Dielectric Vacuum Switches



## Ultra-Flexible UltraVac™ Solid Dielectric Vacuum Switches

UltraVac™ switches from Trinetics® set the standard for flexibility, durability and reliability. With high dielectric strength, easy installation and proven performance beyond ANSI standards, UltraVac™ switches are ideal for demanding, long-life applications.

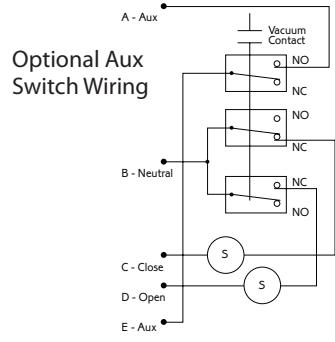
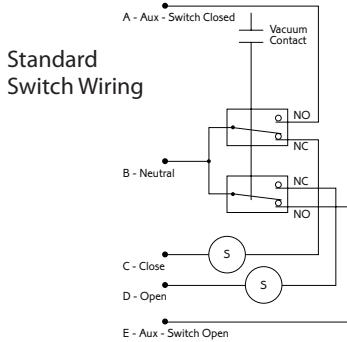
Available with motor or solenoid operators. Designed for 15kV, 25kV and 35kV systems at 200A continuous.

### Ultra-Flexible Installation and Operation

- 15kV, 25kV and 35kV, 200A applications
- Choice of motor or solenoid operators
- Manual OPEN/CLOSE operation built in
- V-bushing design with uniform terminal height
- Optional compact design for pad banks and other confined space applications.
- Maintenance-free operation



### Dual Solenoid Operator Connections



### Dual Solenoid Operator

- Positive latching cam prevents detaching due to shock and vibration
- Durable and maintenance-free design with few moving parts



### Ease of Installation

- Drop-in replacement for oil switches
- Manual OPEN/CLOSE with visible indication
- V-bushings allow easy connections and can be rotated 360°
- Standard 5-pin or factory configurable receptacle
- 16/3 SO control cables
- Eye bolt clamps accommodate up to 2/0 AWG covered wire
- Various auxiliary switch and control cable configurations.
- Vertical or horizontal mounting in pad bank applications with pole, wall, lug, capacitor frame, substation or cross-arm mounting

## Benefits in Brief

### Ownership Cost

- 50,000\* operations solenoid; 30,000\* motor
- Maintenance-free design
- Impact and weather resistant epoxy bushings
- Corrosion resistant tank coating

\*Operation = 1 full Open/close cycle

### Safe and Flexible Installation

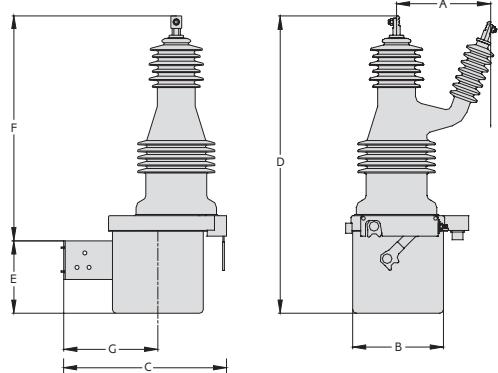
- Manual OPEN/CLOSE with visible indication
- Restrike-free interrupter
- Standard 5-pin or factory configurable receptacle
- Multiple control and auxiliary choices

### Interchangeability

- Drop-in replacement for oil switches
- V-bushings can be rotated to fit existing space
- Vertical or horizontal mounting in pad banks
- Will fit virtually any pole, pad or substation requirement

### High Reliability

- Choice of field-proven motor or dual solenoid operators
- Large vacuum gap and bottle volume
- Solid dielectric bushings
- Meets or exceeds all ANSI specifications



#### Creepage Distance

Terminals to Ground

33"

Terminal to Terminal

30"

#### Dimension Letter:

A 9.8"

B 9.7"

C 16.9"

D 30.8"

E 7.5"

F 23.3"

G 9.8"

### Operational Flexibility and Integrity

- Motor or solenoid operators available
  - 120V or 240V motor; 120V solenoid
- High visibility OPEN/CLOSE indicator
- Switches can be operated:
  - Automatically by an intelligent controller
  - Electrically by single or double throw switch
  - Manually by the operation lever
- Large 0.40 in. vacuum gap and 16 cu. in. bottle volume
- Restrike-free interrupter
  - Best-in-class C2 rating, no restrikes in 1,200 sequential test operations

### Rugged Construction

- Mechanical operation life exceeds ANSI standards
- Impact and weather resistant cycloaliphatic epoxy
- Corrosion resistant tank coating exceeds ANSI C57.12.31 requirements
- Wildlife protective boots

### Motor Operator

- Low current
- Wide range of supply voltage options
- Large installed base
- Long history of dependability



## UltraVac™ Specifications

Model	Solenoid Operator	Motor Operator
Rated Maximum Voltage, for grounded banks, phase-to-ground, kV, RMS	24.0	22.0
Rated Maximum Voltage, for ungrounded banks, phase-to-phase, kV, RMS	27.6	20.0
Impulse Withstand Voltage, kV BIL	125/150	125/150
Terminal-to-Ground Creep Distance, in.	33	33
Low Frequency Installation Level Withstand Test, 60 Hz:		
1 Minute Dry, kV	60	60
10 Seconds Wet, kV	50	50
Continuous Current, Amps	200	200
Capacitive Switching Current, Amps	200	200
Momentary Current Rating, Amps Asymmetrical	9,000	9,000
Short Time Current Ratings:		
1/2 Second, Amps Symmetrica	6,000	6,000
1 Second, Amps Symmetrical I	4,500	4,500
Nominal Operating Voltage, VAC 50/60 Hz	120	120
Operating Voltage Range, VAC 50/60 Hz*	see *NOTE below	100 to 130
Operating Current Rating, Amps**	12.5	3.0
Switch Operating Time, sec (open/close)	0.031 to 0.045	2.5 to 4.0
Maintenance Free Operations (open/close))	50,000	30,000
Environment	Temperature: -40° to 149°F (-40° to 65°C) Humidity: 95% (non-condensing)	
Weight (Lbs.)	45	45

\*NOTE: UltraVacs with solenoid operators are designed to operate with a maximum of 10% line drop at 120V nominal (+10% to -15% allowable voltage variation).

\*\*NOTE: Minimum switch cable wire size is 14AWG based on NEC Table 310.16 for 60C rating for operation of 12-14A, or 20A with a temperature correction factor of 0.71 (14.2A). 12AWG control cable and 10AWG 120V cables are also recommended.

## Motor Operator Connections

