

Motor or Solenoid operated  
for optimum application flexibility



**UltraVac®**  
Solid Dielectric Vacuum Switches

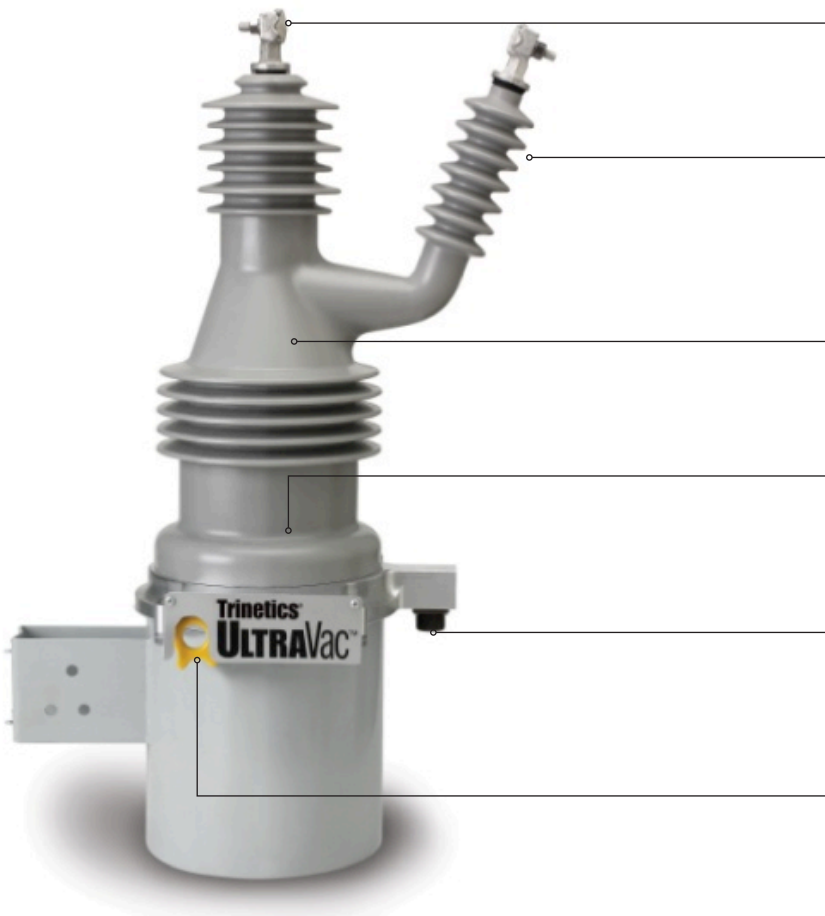


# UltraVac® Solid Dielectric Vacuum Switches

UltraVac® switches from Trinetics® set the standard for flexibility, durability and reliability. With high dielectric strength, easy installation and proven performance beyond ANSI C37.66 standards, UltraVac® switches are ideal for demanding, long life applications.

## Features:

- 15kV, 25kV, and 35kV applications
- 200A and 400A
- 110kV BIL, 125 BIL, and 150kV BIL
- Choice of motor or solenoid operators
- Manual OPEN/CLOSE operation built in
- V-arm bushing or compact style design
- Maintenance-free operation



### Eye bolt clamps accomodate 8AWG up to 2/0 AWG covered wire

- Wildlife protectors included as standard

### Weather resistant cycloaliphatic epoxy bushings

- V-arm bushings designed with uniform terminal height can be rotated 270° to fit existing space
- Compact design version available for pad and confined space applications

### Time proven vacuum interrupter

- C2 restrike rating for solenoid operated switch

### Operation

- Motor or solenoid operation
- 120V, 240V, or 125Vdc control voltage

### Auxiliaries

- 5-pin receptacle is standard
- Optional auxiliary contacts available

### Manual OPEN and CLOSE handle

- Highly visible switch position indicator

## Solenoid Operator

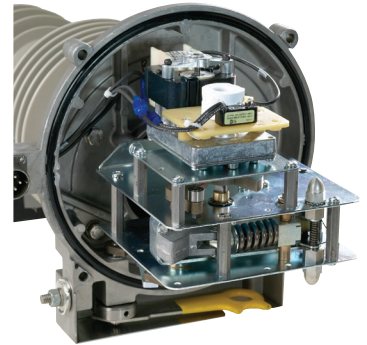
- Available with 120Vac, 240Vac, or 125Vdc control voltage
- Low operating current - 120V at 9A, 240V at 4.5A
- 200A and 400A available (400A is a dual solenoid)
- Positive latching cam prevents delatching due to shock and vibration
- Durable and maintenance-free design
- Simultaneous opening rated when electrically operated

## Motor Operator

- Available with 120Vac or 240Vac control voltage
- Low operating current - 120V at 3A, 240V at 1.5A
- 200A available
- Large installed base
- Long history of dependability



Solenoid Operator



Motor Operator

## Benefits in Brief:

### Low ownership cost

- 50,000 operations\* solenoid; 30,000 motor
- Maintenance-free design
- Weather resistant epoxy bushings

### Safe Installation and Flexibility

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

\*Operation = 1 full Open and Close cycle

### Interchangeability

- Drop-in replacement for oil switches
- 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 solenoid operators
- Optional corrosion resistant tank coating exceeds ANSI C57.12.31
- Interrupter with class C2 restrike category
- Meets or exceeds all ANSI C37.66 specifications
- Patent pending cam based solenoid design

## UltraVac® Capacitor Switch Selection

Operator Type	kV Class	Rated Max Voltage Line to Line (kV, RMS)		kV BIL	Available Design	Auxiliary Option	Part Number <sup>1</sup>
		Ungrounded Banks	Grounded Banks				
<b>200A</b>							
Motor	15	15.5	23.4	110	V-Arm or Compact	None	33247501
				125	V-Arm or Compact	None	33249401
	25	20	41.5	125	V-Arm or Compact	None	33247601
				150	V-Arm or Compact	None	33248401
Solenoid	15	17.8	26.8	110	V-Arm or Compact	Form C SPDT <sup>2</sup>	33247102
				125	V-Arm or Compact	Form C SPDT <sup>2</sup>	33247202
	25	27.6	41.5	150	V-Arm or Compact	Form C SPDT <sup>2</sup>	33247402
<b>400A</b>							
Solenoid	15	15.5	23.4	110	Compact Only	Form C SPDT <sup>2</sup>	33257102C
				125	Compact Only	Form C SPDT <sup>2</sup>	33257202C
	25	27.6	41.5	150	Compact Only	Form C SPDT <sup>2</sup>	33257402C

STANDARD: Two wildlife protectors, Manual open and close handle included. Contact factory for options not listed above.

1. Add a "C" suffix to the standard part number at time of order for Compact version
2. Form C SPDT contains A & B Contacts with LV supply common neutral

## Creepage Distance

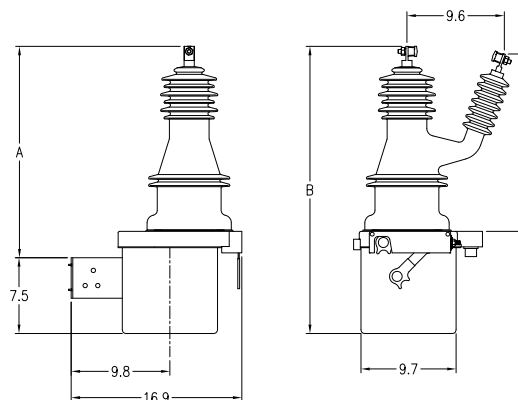
	Standard UltraVac		Compact UltraVac	
	15kV (M) <sup>i</sup>	25kV (M) <sup>ii</sup> 15 & 25kV (S)	15kV (M)	25kV (M) 15 & 25kV (S)
Terminal to Terminal (in/mm)	30/762	30/762	19/483	19/483
Terminal to Ground (in/mm)	27/685	33/838	11.5/292	18/457

## Dimensions

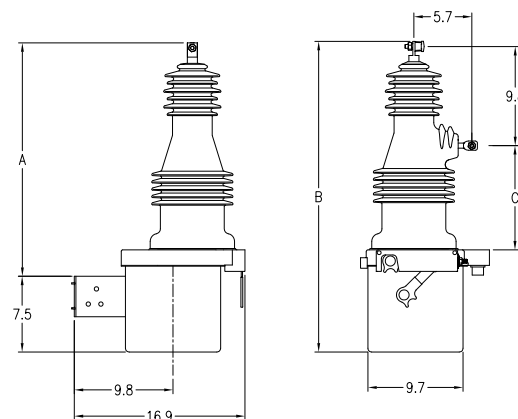
	Dimensions (in.)					
	Standard UltraVac			Compact UltraVac		
	A	B	C	A	B	C
15kV, 200A	20.9	28.6	17.6	20.9	28.6	8.1
15kV, 200A (S) 25kV, 200A (M & S)	23.1	30.8	19.7	23.1	30.8	10.3
15kV, 400A (S) 25kV, 400A (S)	N/A	N/A	N/A	23.1	30.8	10.3

i: (M) - Motor Operated

ii: (S) - Solenoid Operated



Standard V-Arm UltraVac



Compact UltraVac



## UltraVac® Specifications

Specifications	Units	Standard UltraVac				Compact UltraVac					
		Motor		Solenoid		Motor		Solenoid		Solenoid 400A	
		15kV	25kV	15kV	25kV	15kV	25kV	15kV	25kV	15kV	25kV
Rated maximum voltage, 50/60Hz for ungrounded capacitor banks, line-to-line	kV rms	15.5	20	17.8	27.6	15.5	20	17.8	27.6	15.5	27.6
Rated maximum voltage, 50/60Hz for grounded capacitor banks, line-to-line	kV rms	23.4	41.5	26.8	41.5	23.4	41.5	26.8	41.5	23.4	41.5
Impulse Withstand Voltage, Line-to-ground	kV BIL	110   125	125   150	110	125   150	110   125	125   150	110	125   150	110	125   150
Impulse Withstand Voltage, Open contact	kV BIL	110   125	125   150	110	125   150	110   125	125   150	110	125   150	110	125   150
Power Frequency withstand voltage, 60 Hz											
Dry, 1.0 minutes	kV	50	60	50	60	50	60	50	60	60	70
Wet, 10 seconds	kV	45	50	45	50	45	50	45	50	50	60
Continuous current 50/60Hz	A	200		200		200		200		400	
Capacitive switching current (50/60Hz)	A	200		200		200		200		400	
Fault making peak current	A	9,000		15,000		9,000		15,000		32,500	
Fault making current, symmetrical RMS	A	6,000		6,000		6,000		6,000		12,500	
Short time withstand current											
1.0 s, symmetrical RMS	A	4,500		6,000		4,500		6,000		8,500	
High Frequency Peak											
Transient making current	A	12,000		12,000		12,000		12,000		16,000	
Transient in-rush frequency	Hz	6,000		6,000		6,000		6,000		6,000	
Operating current rating											
@120VAC	A	3		9		3		9		8	
@240VAC	A	1.5		4.5		1.5		4.5		4	
@125VDC	A	-		9		-		9		8	
Operating voltage range*											
120VAC	V	100 to 130		96 to 140		100 to 130		96 to 140		104 to 140	
240VAC	V	200 to 260		192 to 280		200 to 260		192 to 280		208 to 280	
125VDC	V	-		106 to 144		-		106 to 144		106 to 144	
Nominal open/close time	s	4		0.1		4		0.1		0.1	
Weight	lbs	42	45	45		42	45	45		45	
	kg	19	20	20		19	20	20		20	
Operating temperature range	deg F	-30 to +104		-58 to +149		-30 to +104		-58 to +149		-22 to +149	
	deg C	-35 to +40		-50 to +65		-35 to +40		-50 to +65		-30 to +65	
Humidity	%	100		100		100		100		100	
Mechanical Life (No. of operations)		30,000		50,000		30,000		50,000		50,000	
Restrike category per IEEE 37.66 standards	Class	C2		C2		C2		C2		C2	
Terminal Type		Eye bolt clamps				Eyebolt clamps				NEMA 2-hole	
Standards		ANSI/IEEE C37.66				ANSI/IEEE C37.66				ANSI/IEEE C37.66	
Material		Cycloaliphatic Epoxy Resin				Cycloaliphatic Epoxy Resin				Cycloaliphatic Epoxy Resin	

\*Operating voltage is at the pins of the connector of the switch during an open or close operation

