



## Order Specifications for Transmission Switching Applications

Document OS-002  
Revised September 20, 2023

Please contact our Application Engineering personnel at (704)-392-1396 if you require assistance in completing the Order Specification or if you have requirements other than what is shown. If we must contact you to confirm your information, please provide a contact name and number. If more than one switch type is required, please fill out a separate Order Specification sheet for each switch type.

Organization \_\_\_\_\_ Contact (Name) \_\_\_\_\_

Phone # \_\_\_\_\_ E-Mail Address \_\_\_\_\_

### 1. Switch Requirements

1.1. Quantity of switches required (3x phases per switch) \_\_\_\_\_

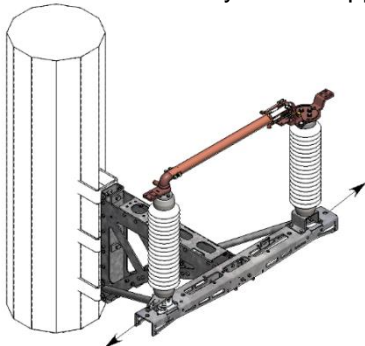
1.2. Required Switch ratings:

kV	15	23	34.5	46	69	115	138	161	230	Other
BIL (kV)	110	150	200	250	350	550	650	750	900	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

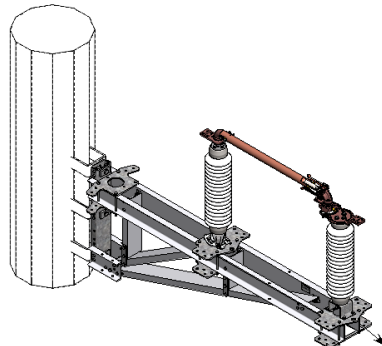
Amps	600	1200	2000	3000
Mom. (kA)	40	61	100	100
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 2. Switch Applications:

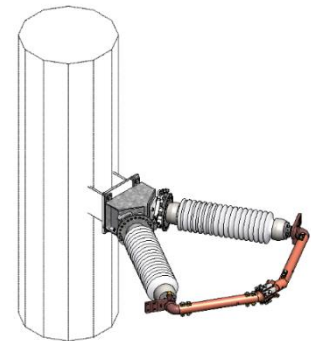
2.1. 1-Way Switch Applications:



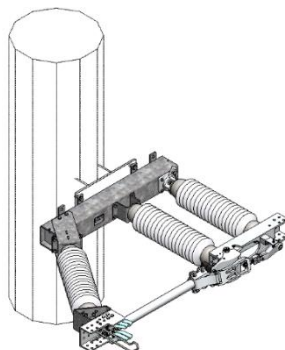
☐ 1-Way (Type G)



☐ In-Line (Type GA)

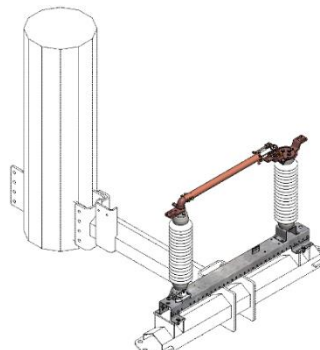


☐ Center-Vee (Type C-V)



☐ Vertical Break (Type VIP) (Specify Material)

☐ Aluminum ☐ Copper ☐ Hybrid



☐ Side Break (Type SM)



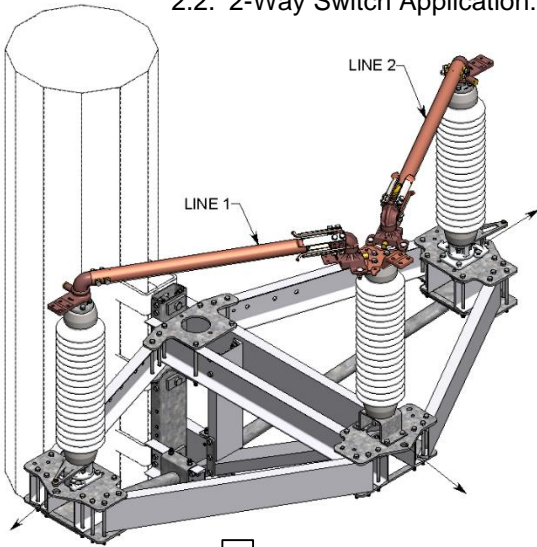
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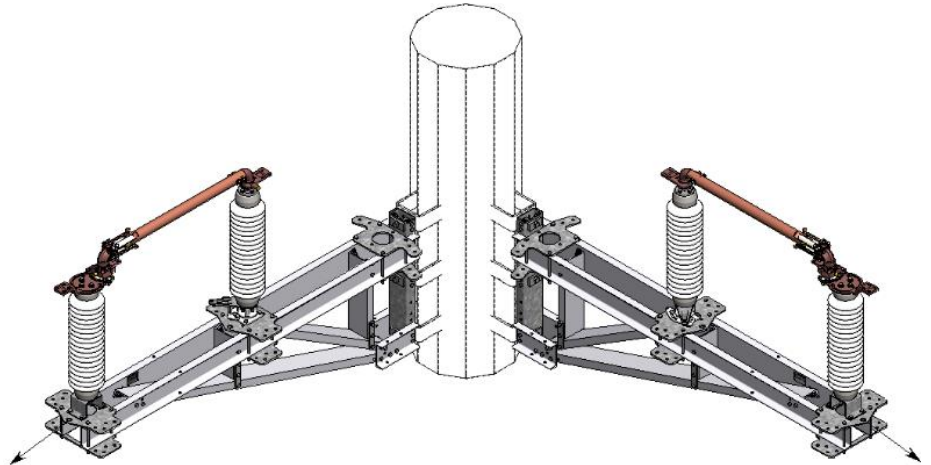
2.1.1. For 1-Way applications, specify switch configuration:

- ☐ Phase-Over-Phase    ☐ Staggered    ☐ Pole-Top  
☐ Mid-Pole    ☐ Multi-Structure  
☐ Other \_\_\_\_\_ (Provide Drawing)

2.2. 2-Way Switch Application:

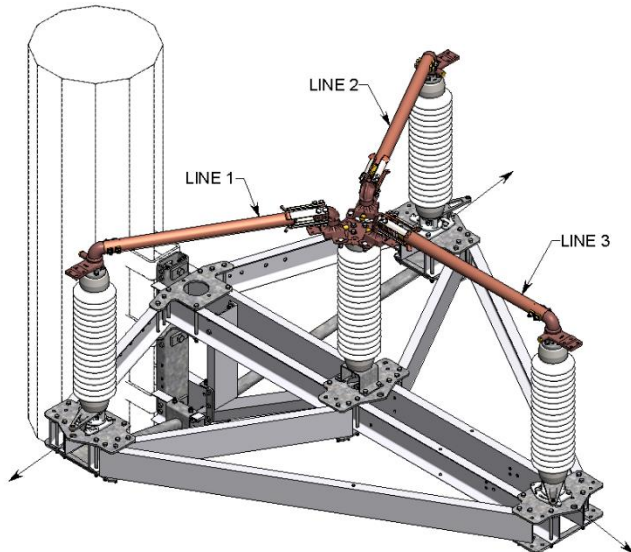


☐ 2-Way (Type G)

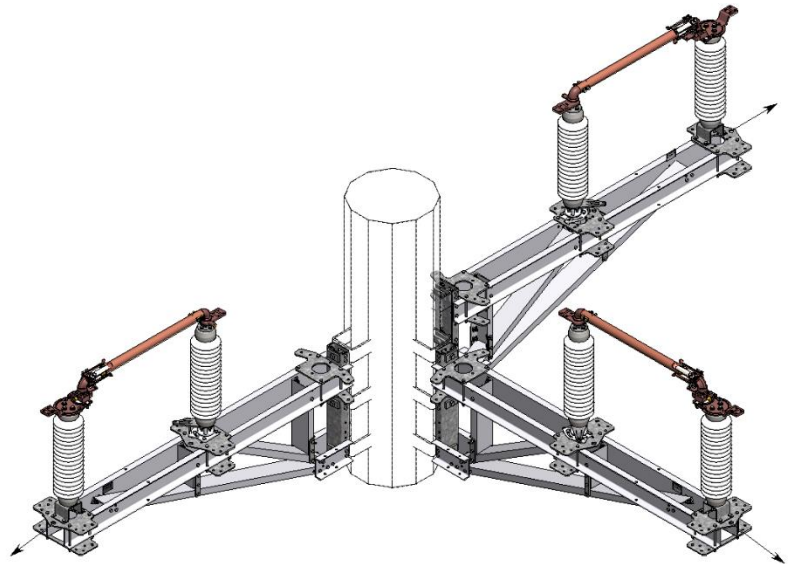


☐ 2-Way (Requires 2x Type GA)

2.3. 3-Way Switch Applications:



☐ 3-Way (Type G)



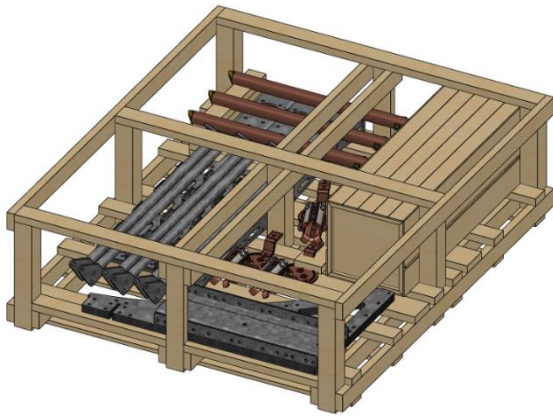
☐ 3-Way (Requires 3x Type GA)



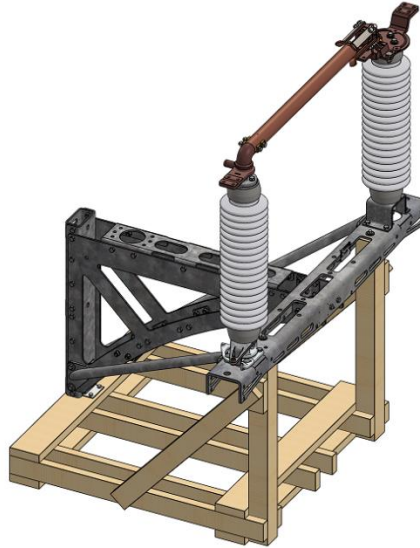
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### 2.4. Specify Shipping method:



☐ Crates



☐ Pre-Assembly



☐ Unitized

Please send specifications for other shipping requirements not listed.

- Crates - Single Phases are shipped broken down in crates.
- Pre-Assembly - Single Phases are shipped assembled individually (Default for C-V, VIP & SM)
- Unitized – Single Phases are shipped assembled and adjusted on a backbone or truss.

### 2.5. Shunted; Line cannot be opened (2 & 3-Way only):

☐ Line 1    ☐ Line 2    ☐ Line 3 (3-Way Only)    ☐ None

## 3. Insulators

- 3.1. ☐ Porcelain    ☐ Polymer    ☐ Not included  
(Polymer not recommended for switches rated 138kV and above)

Select all that apply:

- 3.2. ☐ Standard Strength    ☐ High Strength    ☐ Resistive Glaze
- 3.3. ☐ Extra Leakage distance; if so, specify distance: \_\_\_\_\_
- 3.4. ☐ If other or special, specify TR or Catalog Number: \_\_\_\_\_
- 3.5. Specific manufacturer(s) (if required): \_\_\_\_\_



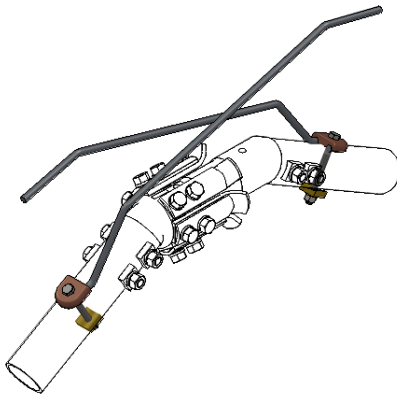
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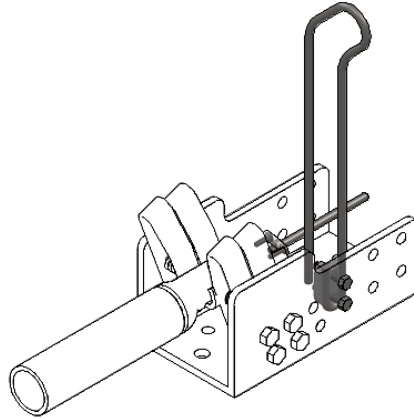
### 4. Interrupting Devices

#### 4.1. No load breaking capability required:

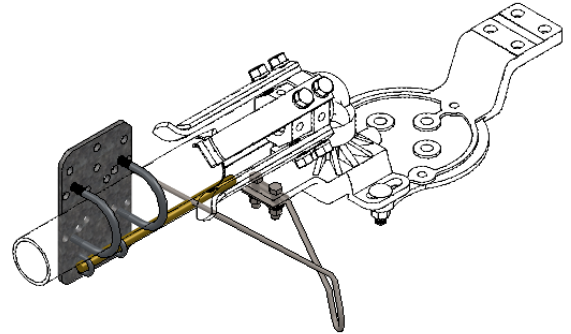
4.1.1. Wipe horns are a standard attachment on Center VEE (C-V), Vertical Breaks (VIP) and Side Break switches (SM). Wipe horns have no interrupting capability and are used as a first and last point of contact during operation.



☐ Center VEE (C-V)



☐ Vertical Break (VIP)



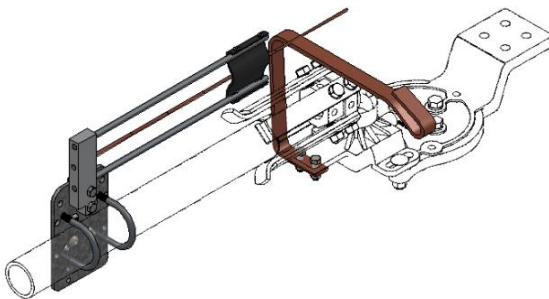
☐ Side Break (SM)

#### 4.2. Line Dropping:

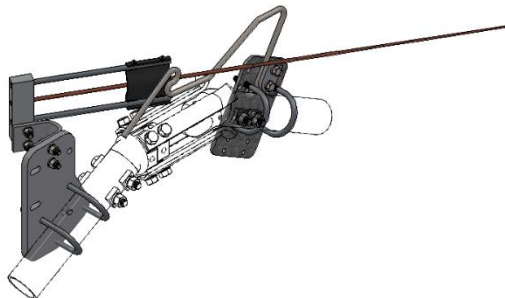
Fill out table below for line dropping requirements:

	Recovery Voltage	Amps	Length of line (mi)
Expected			

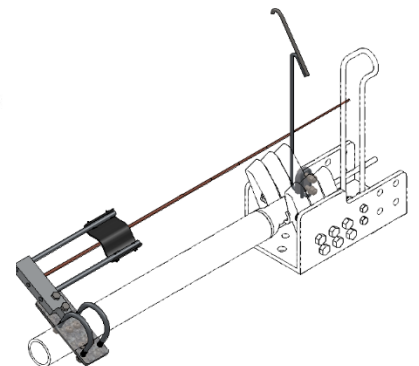
4.2.1. Arcing Horns: High-speed, snap-out arcing horns are a standard attachment for 1-Way (Type G/GA), 2-Way and 3-Way switches and used for a limited amount of line charging current. Type C-V, VIP and SM switches can all be upgraded to have snap-out arcing horns. Contact SEECO for the threshold for arcing horns.



☐ Type G/GA & SM



☐ Center VEE (C-V)



☐ Vertical Break (VIP)

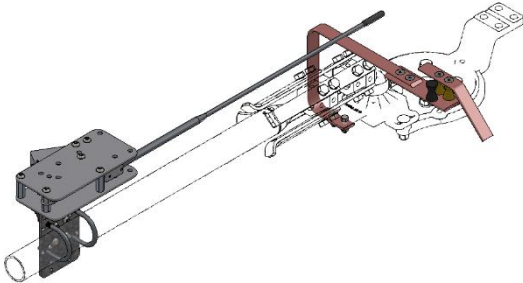




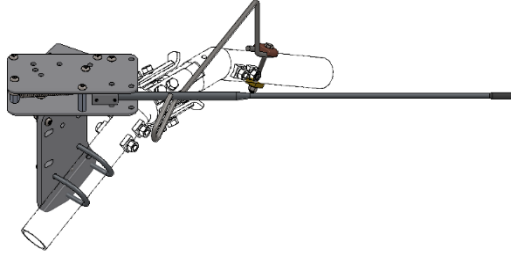
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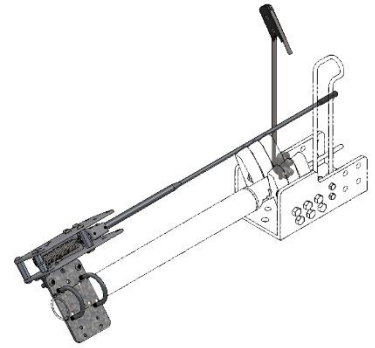
4.2.2. High Velocity Whips (HVWs): For interrupting a greater amount of line charging current. All switch types can be upgraded to have HVWs. Contact SEECO for the threshold for HVWs.



☐ Type G/GA & SM



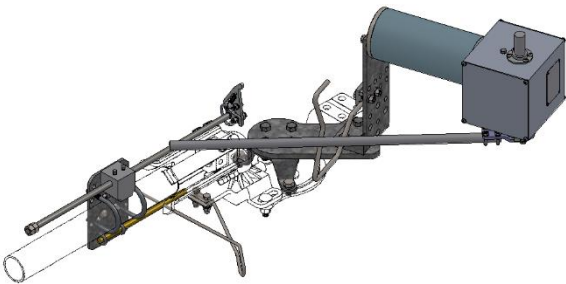
☐ Center VEE (C-V)



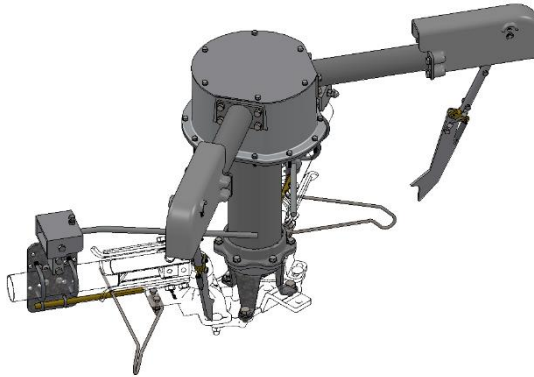
☐ Vertical Break (VIP)

### 4.3. Single-Bottle Monoruptrs®:

4.3.1. Single-Bottle interrupters (Monoruptrs®) are used for loop splitting applications where the recovery voltage does not exceed 30kV. Single-Bottle interrupters also serve as a full load break for switches rated 34.5kV and below. Single-Bottle interrupters are available for Type G, SM and VIP switches.



☐ 1-Way Type G/GA & SM



☐ 2 & 3-Way (Type G)



☐ Vertical Break (VIP)

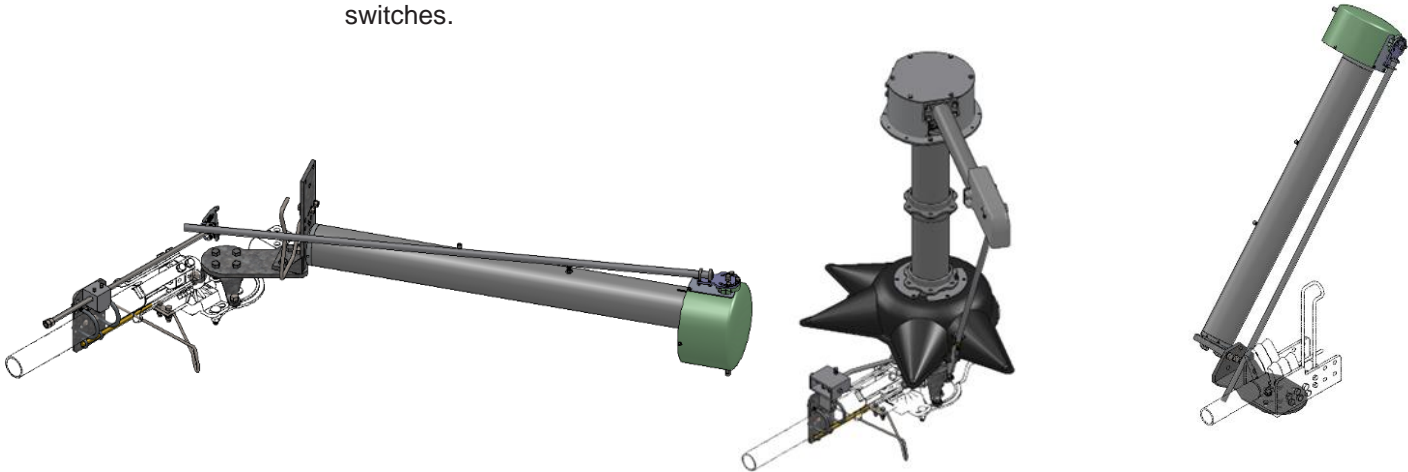


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## 4.4. Multi-Bottle Monoruptrs®:

4.4.1. Multi-Bottle interrupters (Monoruptrs®) are used when full load break is required for switches rated 46kV and above. The minimum number of bottles needed is determined by the voltage rating of the switch. The side-mounted interrupter can be used in place of the vertically stacked bottles to reduce phase spacing on 1-Way switches.

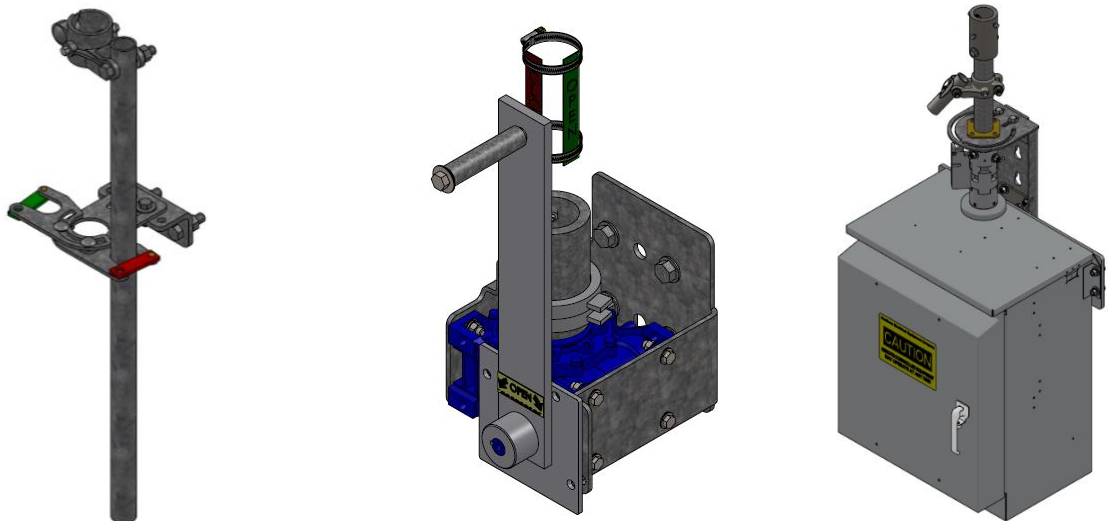


☐ 1-Way Type G/GA & SM      ☐ 1, 2 & 3-Way Type G/GA & SM      ☐ Vertical Break (VIP)

kV	46	69	115	115	138	161	230
# of Bottles	2	3	4	5	5	6	8
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 5. Switch Operator Type

5.1. Transmission switches are furnished with a swing handle and lock segment by default. If a different operator is required, specify below: For motor operators, refer to Order Specification for Motor Operator ([OS-001-1](#)) available online [www.seecoswitch.com](http://www.seecoswitch.com).



☐ Swing Handle & Lock Segment      ☐ Worm Gear (Specify ratio)      ☐ Motor Operator

☐ 10:1    ☐ 30:1    ☐ 50:1



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### 6. Structure

- 6.1. ☐ Wood Pole      ☐ Laminated Wood Pole      ☐ Concrete Pole  
☐ Steel Pole      ☐ Steel Pole w/ Brackets      ☐ Lattice Tower

Other: \_\_\_\_\_; (Provide Drawing)

- 6.2. ☐ Expected above grade height: \_\_\_\_\_ feet

- 6.3. ☐ Shield Wire Present

- 6.4. ☐ Distribution under build; if so, specify orientation and elevation  
relative to switch: \_\_\_\_\_

- 6.4.1. ☐ Additional Underbuilds present: specify orientation and  
elevation relative to switch: \_\_\_\_\_

- 6.5. ☐ Mechanical or electrical clearance concerns; if so, specify: \_\_\_\_\_

- 6.6. ☐ Structure prints available, if so, please provide

Dimensional data, phase spacing, and allowable strain loads (conductor pull-off angles and tensions) for standard applications are available online ([www.seecoswitch.com](http://www.seecoswitch.com)), or by contacting SEECO.

- 6.7. Expected Dimensions:

Vertical distance between phases \_\_\_\_\_ feet

Vertical distance from top phase to shield wire \_\_\_\_\_ feet

Vertical distance from ground to bottom phase \_\_\_\_\_ feet

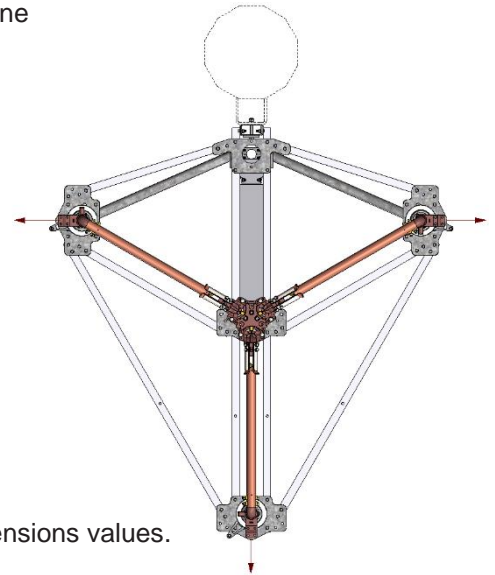
- 6.8. Tension (Type G/GA switches only):

Maximum Tension: 10,000#; Ultimate Tension: 16,500#

Limited to Straight-Line Pull. For angular tensions, contact the manufacturer. Tension must be equal on both sides.

For non-standard pull-offs, please provide a diagram/sketch.

Stabilizer kit may be required based on structure mounting or tensions values.



### 7. Operating Environment

- 7.1. Proposed geographical location of switch: \_\_\_\_\_

- 7.2. Geographical location of switch is considered NESC:

☐ Light      ☐ Medium      ☐ Heavy

- 7.3. Altitude of switch will be \_\_\_\_\_ feet above sea level

- 7.4. Seasonal temperature extremes will vary from \_\_\_\_\_ °F to \_\_\_\_\_ °F

- 7.5. Will the switches be subject to a salt-laden environment:

☐ Yes      ☐ No



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### 8. Optional Features

If additional information is needed regarding the functionality of these options contact SEECO.

Select all that apply:

8.1. Tin-plated terminal pads: (Not available for Aluminum or Hybrid VIP)

☐ Required

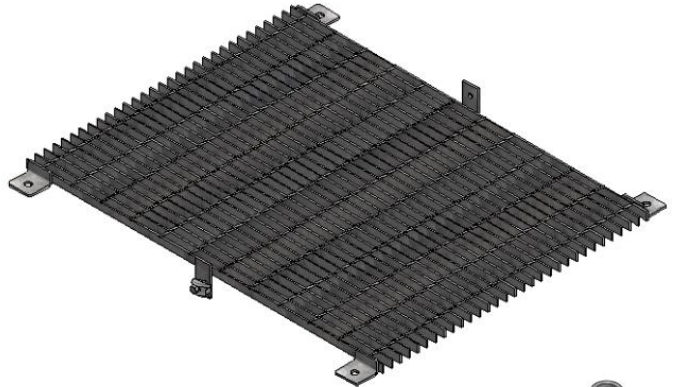
8.2. Silver-coated blade ends: (Not available for VIP)

☐ Required

8.3. Ground Platform Qty: \_\_\_\_\_

☐ 3' x 4' (Default) ☐ 3' x 5'

☐ 4' x 6' ☐ Other (Specify)



8.4. Insulating Section:

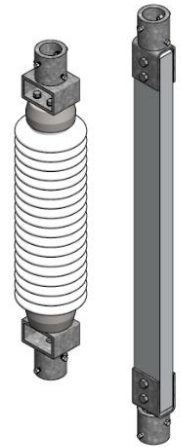
Porcelain: Qty: \_\_\_\_\_

☐ TR-205 ☐ TR-210 ☐ TR-214

☐ TR-216 ☐ TR-286

Fiberglass: Qty: \_\_\_\_\_

☐ 8'



8.5. Open/Closed Designator:

☐ Required

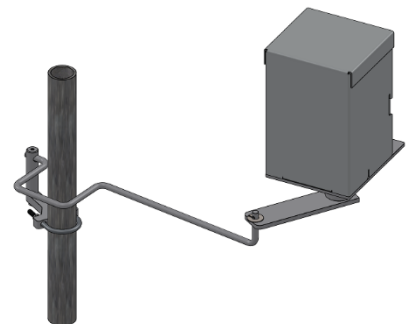


8.6. External Auxiliary Switches; Qty: \_\_\_\_\_

Specify number of switches required

☐ 2 ☐ 4 ☐ 6 ☐ 8

☐ 10 ☐ 12 ☐ 14 ☐ 16





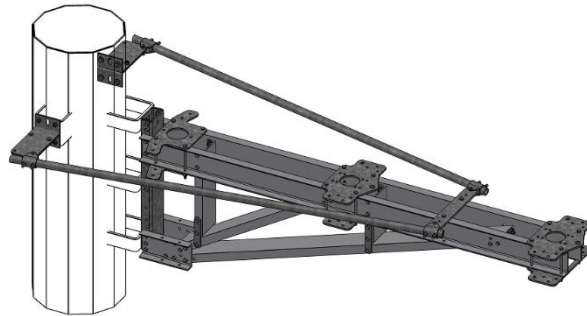


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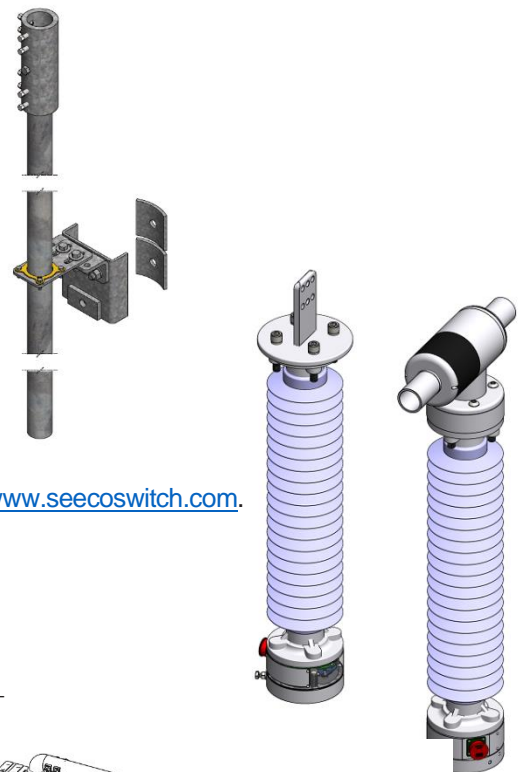
8.7. Stabilizer Kit: (Available for 1, 2, & 3-Way Type G/GA switches)

☐ Required



8.8. Extension Kit; Qty: \_\_\_\_\_

☐ 10'-6" ☐ 21'-0"



8.9. Sensors required:

(Refer to Sensor Order Spec Sheet ([OS-006](#)) available at [www.seecoswitch.com](http://www.seecoswitch.com).)

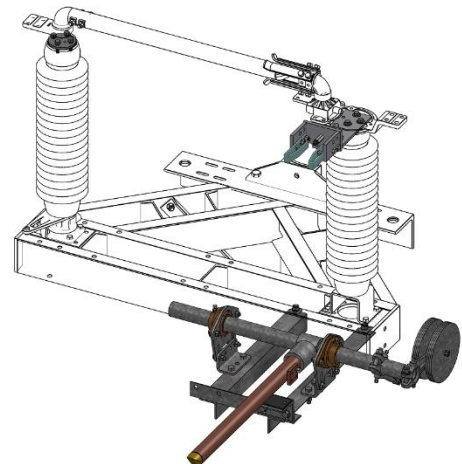
☐ Required

8.10. Ground Switch; See Section 2.2 & 2.3 for lines. Qty: \_\_\_\_\_

☐ Line 1 ☐ Line 2 ☐ Line 3

For 1-way, specify which end:

☐ Hinge ☐ Jaw



8.11. Keyed Mechanical/Electrical Interlock: Qty. \_\_\_\_\_

Select all that apply:

☐ Keyed ☐ Mechanical ☐ Electrical