

# CBS ArcSafe®

Distance Is Safety®

A Group CBS Company

Installation and Operation

## RSA-166G

For Square D Heavy Duty Safety Switch

30A & 60A - H/HU-221/222/321/322/361-DS

(Series F6; NEMA 4, 4X, 5 Stainless Steel Enclosure)



Distance *is* Safety®

WHAT STANDS BETWEEN YOU AND ARC-FLASH DANGER?

WE DO.

2616 Sirius Road | Denton, TX 76208 | (877) 4-SAFETY | www.cbsarcsafe.com

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## More Products by CBS ArcSafe®

### **RRS-1 – Universal Remote Racking System (Rotary)**

The CBS ArcSafe® RRS-1 is a universal remote racking system capable of remotely installing and removing rotary style draw out circuit breakers without requiring any modification to the existing switchgear. Operation of the simple to use RRS-1 is quite intuitive and requires only minimal setup. When used properly, the RRS-1 allows technicians to remain outside of the arc flash boundary during the potentially dangerous racking operation.

### **RRS-2 – Universal Remote Racking System (Non-Rotary)**

The CBS ArcSafe® RRS-2 is a universal remote racking system capable of remotely installing and removing non-rotary style draw out circuit breakers without requiring any modification to the existing switchgear. Operation of the simple to use RRS-2 is quite intuitive and requires only minimal setup. When used properly, the RRS-2 allows technicians to remain outside of the arc flash boundary during the potentially hazardous racking operation.

### **RRS-3 – Application Specific Remote Racking System (Rotary And Non-Rotary)**

The CBS ArcSafe® RRS-3 product line is made up of various application specific remote breaker racking devices. Each standalone system allows service personnel to remotely install and remove a particular type of circuit breaker safely while stationed safely outside of the arc flash boundary during the potentially dangerous operation. The lightweight and compact design of the RRS-3 systems makes them ideal for hard to access areas where space is at a premium.

### **RRS-4 – PLC Based Universal Remote Racking System (Rotary)**

The CBS ArcSafe® RRS-4 universal remote racking system is an updated PLC based version of the best selling RRS-1. The dual mode, source programmable, PLC based control system offers two different operating modes to choose from based on user preference or the application. The RRS-4 is capable of remotely installing and removing rotary style draw out circuit breakers without requiring any modification to the existing switchgear, allowing users to remain outside of the arc flash boundary during the potentially hazardous racking operation.

### **RSA – Remote Switch Actuator**

The CBS ArcSafe® Remote Switch Actuator (RSA) product line is made up of various application specific remote operating devices. These products allow service personnel to remotely perform all aspects of an operation for a particular type of electrical equipment from outside the arc flash boundary – reducing or eliminating the possibility of serious injury or death resulting from an arc flash.

### **RSO – Remote Switch Operator**

During a remote operation, the CBS ArcSafe® RSO functions as both the power supply and user interface for the device being remotely operated by the user. When paired with an applicable CBS ArcSafe® device, this portable standalone system allows service personnel to remotely perform a racking or switching procedure from outside the arc flash boundary – reducing or eliminating the possibility of injury or death resulting from an arc flash

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# 1 Installation

## DANGER!

Before servicing any breaker, make sure that it matches the breaker discussed. If the breaker does not match the breaker described above, please call CBS ArcSafe® for more information.

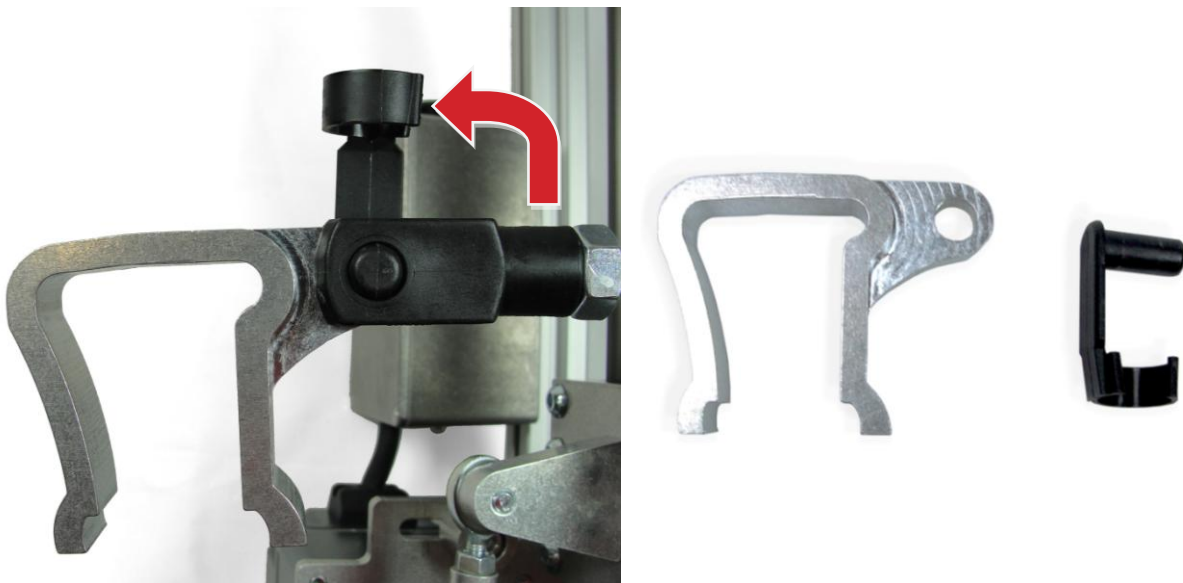
## ATTENTION!

The location of certain items such as mimic bus, stickers, and/or placards may interfere with the proper installation of the RSA. Please remove or reposition these items before installing the RSA.

1. Ensure that the switch is free from any obstruction that may interfere with the proper installation of the RSA.



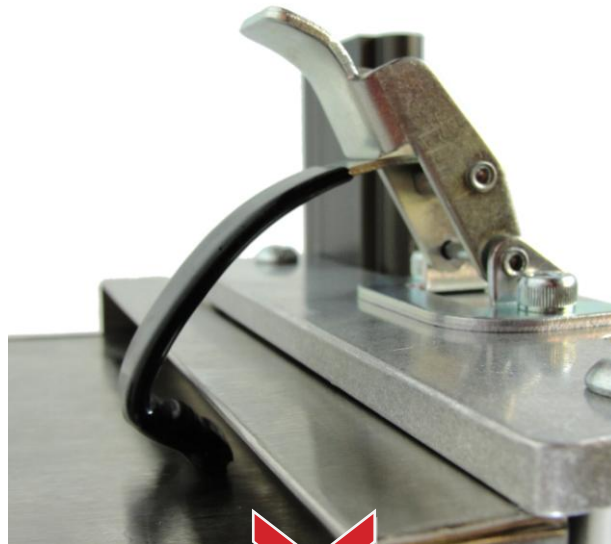
2. Prior to installation of the RSA-166G, remove the charging handle adapter from the RSA by removing the quick disconnect clevis pin. This will be re installed later.



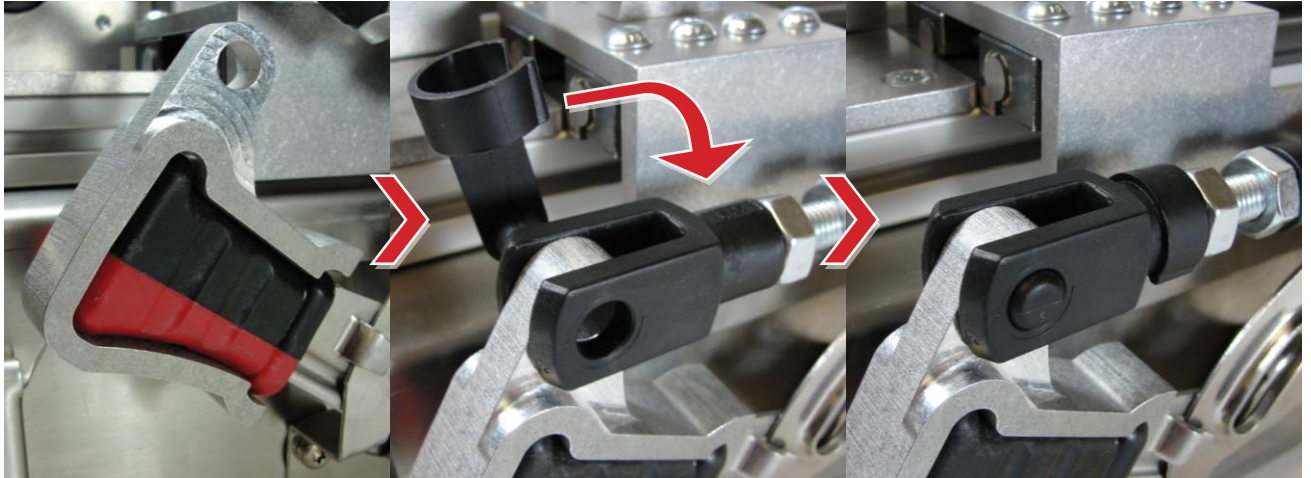
3. Place the RSA-166G on the face of the breaker by sliding the lower ledge of the RSA over the breaker door, as shown below (left). Ensure the locator plate is flush with the side of the breaker as shown below (right).



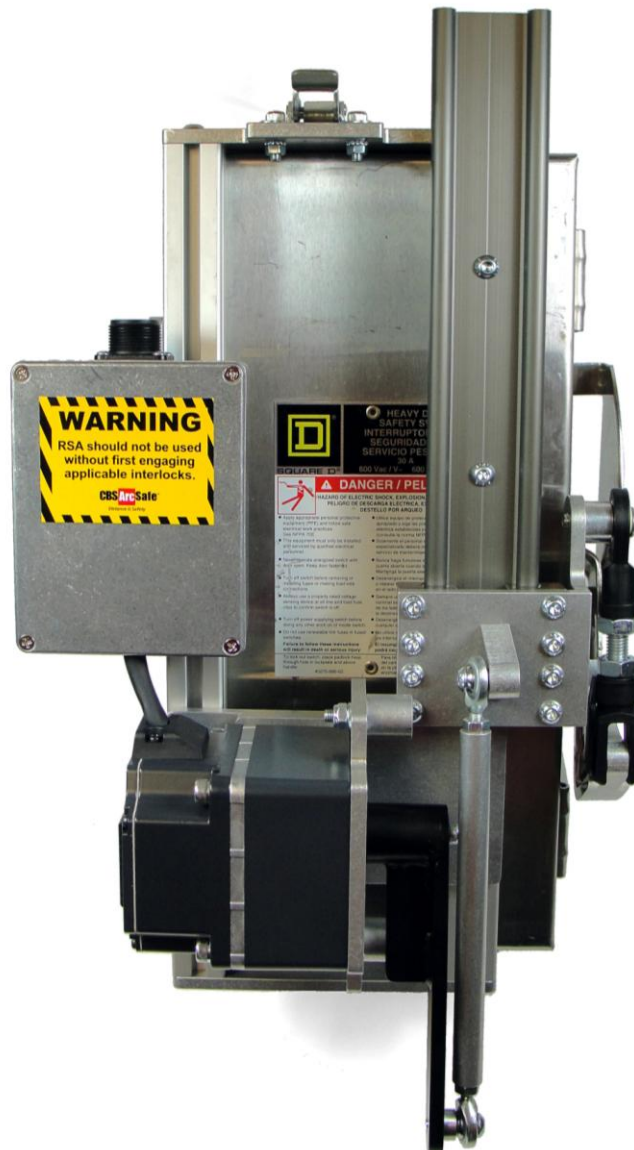
4. Next, close the clasp on the top of the RSA over the top of the breaker door, as shown below.



5. Place the charging arm adapter, removed in step 2, over the charging handle of the breaker, and replace the clevis pin.



The RSA-57K is now ready for remote operation



## 2 Operation

### ATTENTION!

Please ensure that all cables are clear of moving parts. Failure to do so may result in damage to cables and/or actuator.

### ATTENTION!

Please ensure that the batteries to the RSO-I AR are fully charged or that the unit is plugged into AC power.

For detailed instructions on the operation of the RSO-I AR please see the RSO-I AR Manual.

1. Ensure that the RSA is properly installed. See Section 3 for detailed instructions.
2. Plug the RSO-I AR into the motor control box.
3. Exit the arc flash boundary
4. Turn the power switch on the RSO-I AR to the ON position.
5. Ensure that the Auto Retract (AR) function is OFF
6. If the breaker is ON and needs to be turned off, then press and hold the TRIP button on the RSO-I AR until the breaker is tripped.
7. If the breaker is OFF and needs to be turned ON then push and hold the CLOSE button on the RSO-I AR until the breaker is closed.

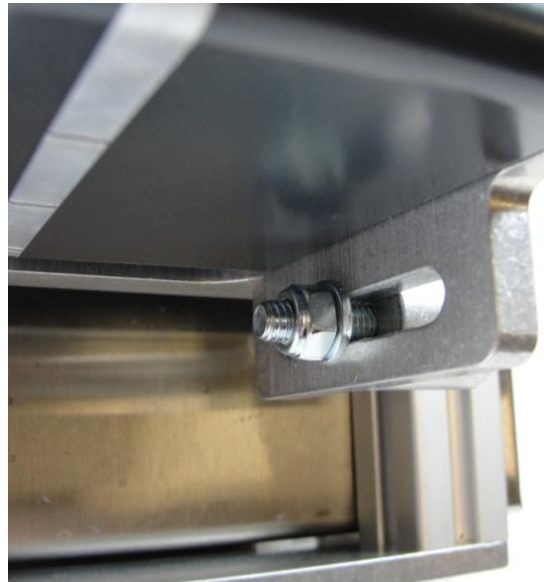
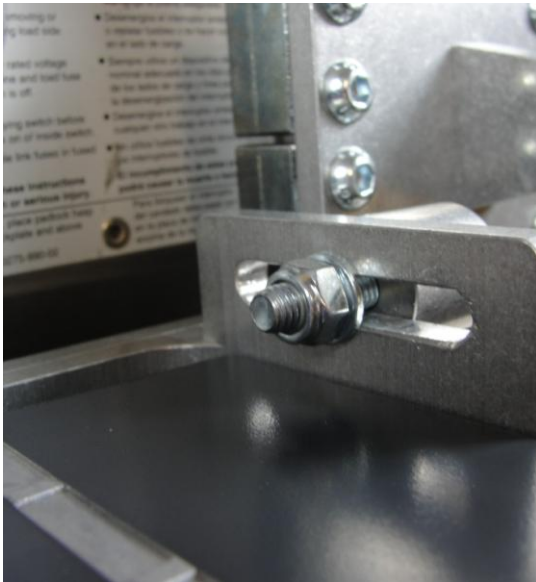


## 3 Adjustments

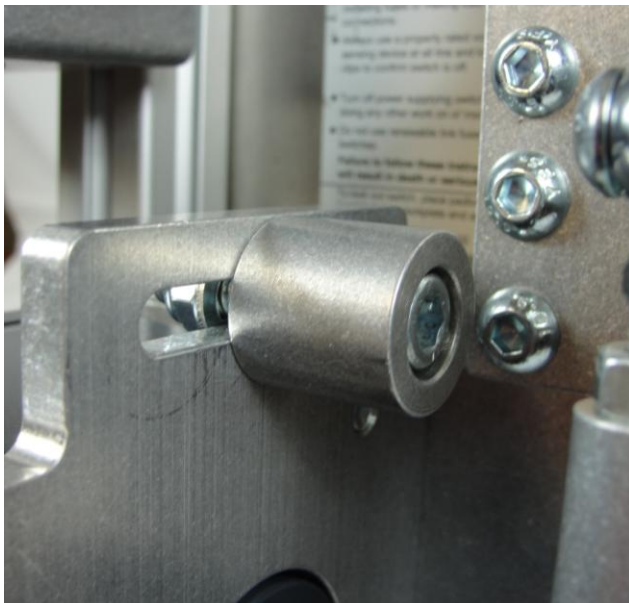
### 3.1 Travel Adjustment

The travel length for the motor arm may be adjusted avoid damage to the breaker.

1. Install the RSA on the face of the breaker as described in the Installation section.
2. Loosen the bolts on the backs of the two motor stops.



3. With the breaker in the ON position slide one of the upper motor stop toward the arm until it touches, then tighten the bolt.
4. Switch the breaker to the OFF position, and slide the lower stop toward the arm until it touches, and tighten the bolt.















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**DANGER!**

Ensure that personnel using this equipment are adequately trained in the operation of the switchgear they are planning to work with; that they are correctly stationed outside the arc flash boundary; and that they comply with all applicable Federal, State, Local, and In-house safety regulations and procedures. Attention should be given to distance, angle, and personal protective equipment (PPE).