

# CBS ArcSafe®

*Distance Is Safety®*

A Group CBS Company

## RSA-167

Allen Bradley 1494F-P1-NP Series A  
Non-Metallic Molded Plastic Operating Handle  
(Recessed Mounted)



## Distance *is* Safety®

WHAT STANDS  
BETWEEN YOU AND  
ARC-FLASH DANGER?

**WE  
DO.**

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Rev. 7/20/2015

Installation and Operation

## 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.

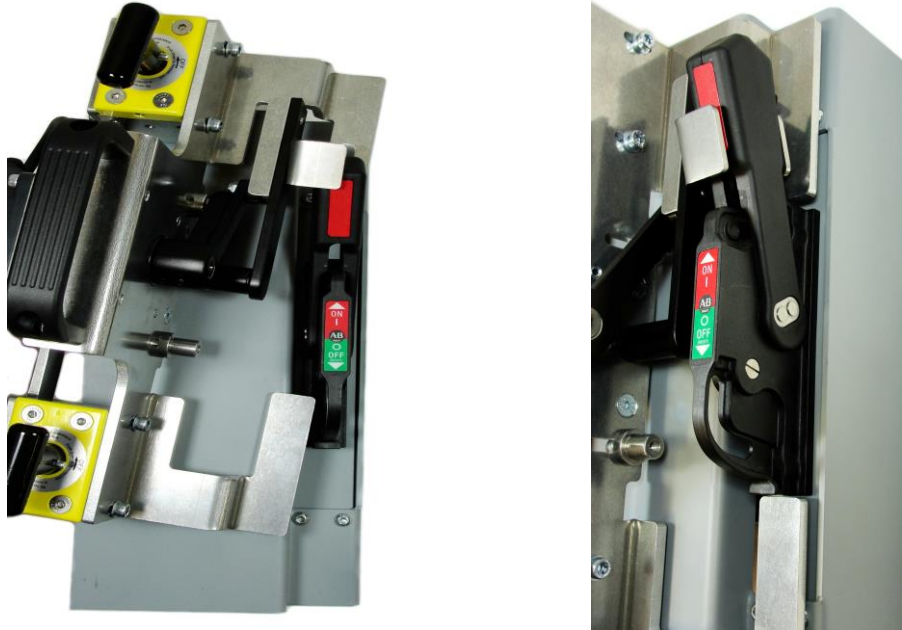
1. Ensure that the switch is free from any obstruction that may interfere with the proper installation of the RSA.



2. Prior to installation of the RSA, manually jog the motor arm to the correct position corresponding to the switch's current position. This will allow the motor arm to slide over the switch with ease during operation. Jog the arm the full amount of travel until it rests against the adjustable travel stop preventing further rotation. Please refer to the Operation section for more information.

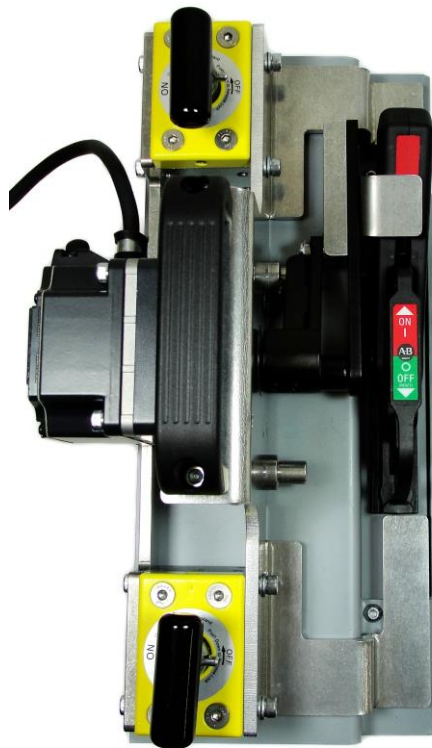


- Next, install the RSA by first sliding the stainless steel handle grip over the switch's handle as shown in the middle image below while at the same time seating the device against the panel. Ensure that both the upper (below left) and lower (below right) locators are properly positioned around the switch body to prevent movement during operation as shown.



- Place the motor control box onto the panel in a location that will not interfere with operation.
- To attach the RSA, ensure that both magnets are seated flush against the switch panel, then turn the handles of the two twist-lock magnets 180° clockwise.

The RSA 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 switch is ON and needs to be turned OFF then push and hold the TRIP button on the RSO-I until the switch opens fully.
7. If the switch is OFF and needs to be turned ON then push and hold the CLOSE button on the RSO-I until the switch is closed fully.



## 3 Adjustments

The RSA comes adjusted from the factory to fit most common configurations, and should not need to be adjusted in most cases. However, if adjustments do need to be performed, it is recommended that they be done on de-energized and isolated equipment to prevent possible damage or injury.

### 3.1 Travel Limits

The RSA has travel stops on it to prevent over-travel and damage of the handle operator during operation.

1. Loosen the two bolts on the travel stops, as shown.

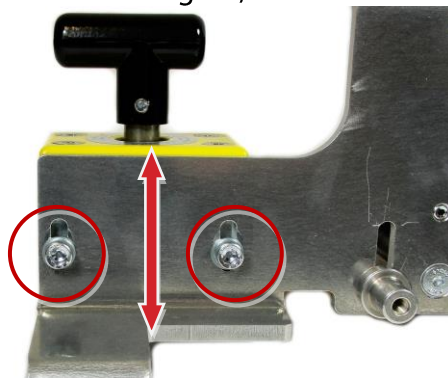


2. Attach the RSA as described in the Installation section.
3. With the the switch in the OPEN/OFF position, slide the lower travel stop up until it contacts the RSA's actuator arm and tighten it's bolt.
4. With the the switch in the CLOSED/ON position, then slide the upper travel stop up until it contacts the RSA's actuator arm and tighten it's bolt.

### 3.2 Magnet Depth

The depth of the magnets can be adjusted to accommodate minor differences in equipment installation.

1. Loosen the two bolts on each side of each magnet, as shown.



2. Attach the RSA as described in the Installation section.
3. Slide the magnets up or down as required to ensure that the bottom of each magnet sits flush against the equipment door.
4. Re-tighten any bolts loosened in step 1.





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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).