

# CBS ArcSafe®

*Distance Is Safety®*

A Group CBS Company

Installation and Operation

## RSA-72

For Spectra Series Molded Case Circuit Breaker

SK Frame: 300-1200A

Includes SKD, SKH, SKL, SKP

Flush Mount With Handle Extension & Kirk Lock



**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](http://www.cbsarcsafe.com)

Rev. 4/4/2017

## 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 breaker is free from any obstruction that may interfere with the proper installation of the RSA.



2. Position the actuator of the RSA to match the breaker handle before installation.
  - a. If the breaker is ON and the breaker is to be turned OFF, ensure that the actuator is retracted by pressing and holding the TRIP button on the RSO-I AR. If the slide appears to be misaligned with the control switch, slowly retract the slide by pressing the CLOSE button on the RSO-I AR briefly to align with the switch.
  - b. If the breaker is OFF and the breaker is to be turned ON, ensure that the actuator is extended by pressing and holding the CLOSE button on the RSO-I AR. If the slide appears to be misaligned with the control switch, slowly extend the slide by pressing the TRIP button on the RSO-I AR briefly to align with the switch.
  - c. If the breaker was opened by a TRIP signal, than the slide must be aligned with the control switch by pressing the TRIP button on the RSO-I AR to extend the actuator, and and CLOSE button on the RSO-I AR to retract the actuator. See the Operation section for more information.

3. Remove the breaker handle extension (if present).
4. Place the RSA over the switch on the circuit breaker and ensure that the locator is seated around the switch escutcheon, and the switch is between the travel stops before operating.



5. Secure the RSA to the breaker by turning the handle of each magnet 180 degrees clockwise, locking the RSA in place.
- The RSA is now ready for remote operations.

## 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 the Installation section 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 set according to the placard on the RSA. If not specified, leave AR turned OFF.
6. Press and hold CLOSE to turn ON the breaker.
7. Press and hold TRIP to turn OFF the breaker.





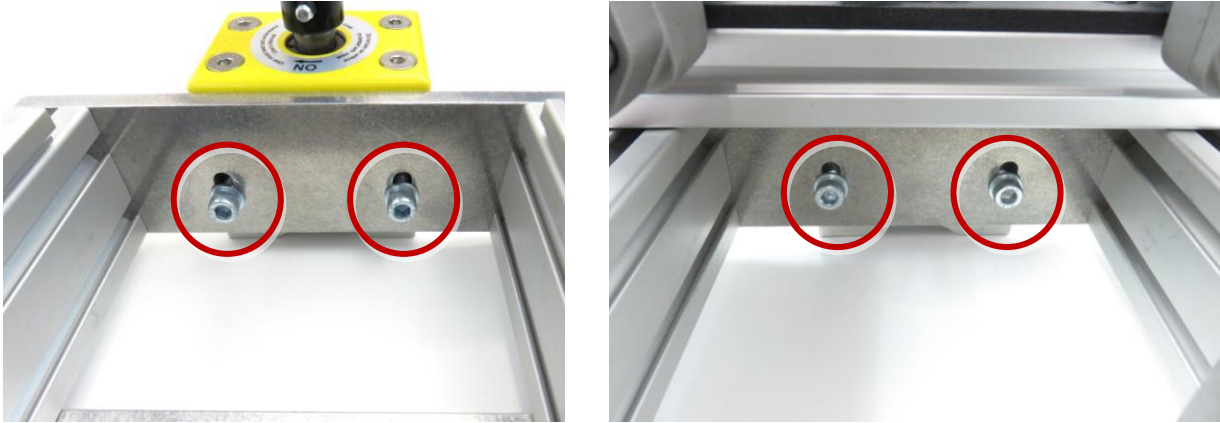
## 3 Adjustments

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 Magnet Depth

The depth of each magnet can be adjusted to allow for slightly different mounting depths of the RSA.

1. Loosen the two bolts attached to each magnet.

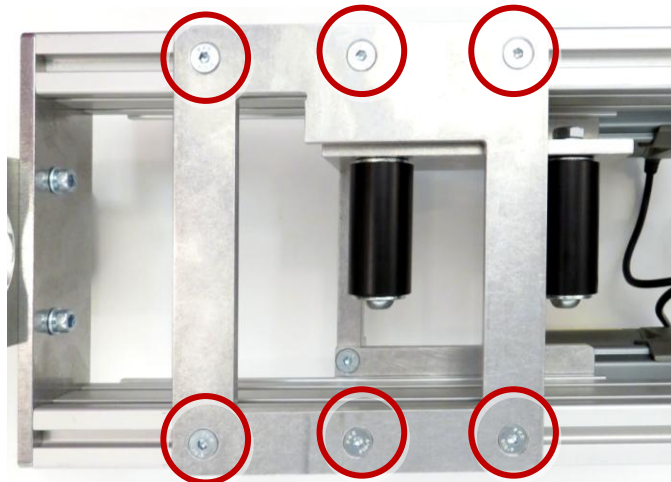


2. Install the RSA as described in the Installation section.
3. Slide the magnets as required to place the RSA at the required mounting depth.
4. Re-tighten the bolts loosened during adjustment.

### 3.2 Locator Adjustment

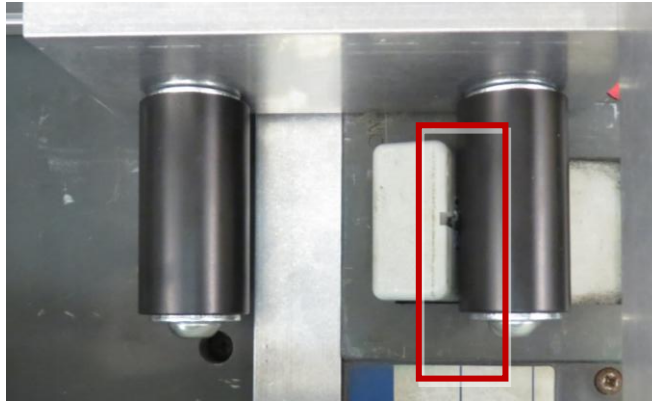
The position of the locator on this RSA can be adjusted to allow for slight changes in switch travel, without adjusting the travel stops.

1. Loosen the six bolts on the locator plate, as shown.



2. With the switch in the ON position, install the RSA as described in the Installation section.

- Slide the locator plate so that the ON travel stop is contacting the switch.

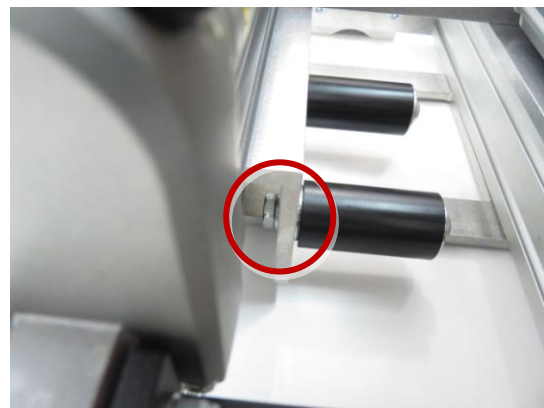
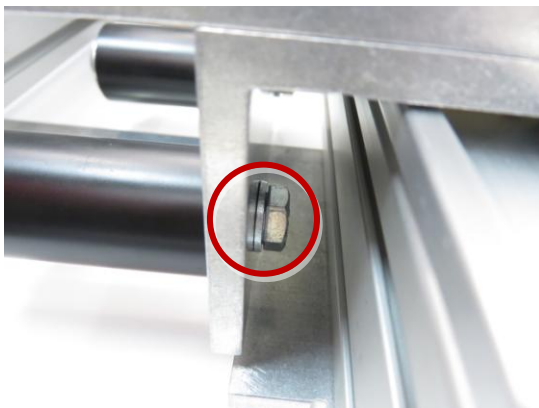


- Re-tighten the bolts loosened during adjustment, and test to ensure proper travel.
- If needed, loosen the bolts on the locator as described above, and repeat steps 2-4 with the breaker in the OFF position (and adjusting the OFF travel stop).

### **3.3 Travel Adjustment**

The amount of switch travel can be adjusted on this RSA via the following procedure:

- Loosen the hex bolt holding each travel stop in place, as indicated belowshown.



- Install the RSA as described in the Installation section.
- After installation, actuate the switch to the the ON position, and then slide the travel stop so the switch fully comes to rest at the end of actuator travel, but is still contacting the actuator. Tighten the bolt on the travel stop
- Actuate the switch to the the OFF position, and then slide the travel stop so the switch fully comes to rest at the end of actuator travel, but is still contacting the actuator. Tighten the bolt on the travel stop.
- Try to actuate the switch, to ensure that the switch is allowed to travel freely and fully in both directions. If the switch travels freely in both directions, then adjustment is complete.
- If the switch cannot travel freely, repeat the instructions above, adding a small amount of space between the switch and travel stop during adjustment.





# Notes

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RSA-72  
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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).