CBS ArcSafe®

Distance Is Safety®

A Group CBS Company

RSA-163D

For ABB Flange Handle Operator
K7FCH, K7FCH4
Also Siemens Max-Flex Handle Operator MFHM Series
Recessed Mount, Large Red/Black Handle

WARNING
RSA should not be used without first engaging applicable interlocks.

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WHAT STANDS
BETWEEN YOU AND
ARC-FLASH DANGER?

WE
DO.

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

1 Installation

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.

ATTENTION!

For double switches as shown in the image above, the RSA will mount to the switch door on the opposite side of the switch to be operated. I.E. in order to operate the switch on the right, the RSA will be mounted next to the switch on the left.

2. Prior to installation of the RSA, manually rotate the motor arm to the correct position corresponding to the breaker handle's current position.
   a. If actuating the right-side switch and the switch is ON or the left-side switch and the switch is OFF, rotate the arm of the RSA to its upward position (below right).
   b. If actuating the right-side switch and the switch is OFF or the left-side switch and the switch is ON, rotate the motor arm of the RSA to its downward position (below left).
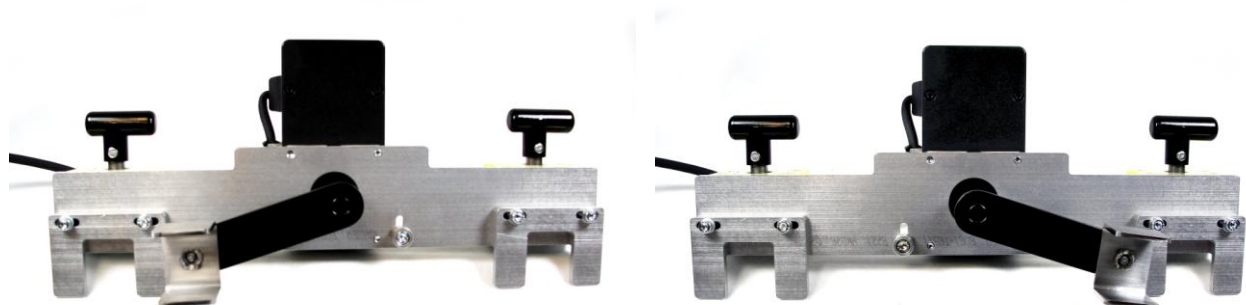
3. Slide the RSA over the breaker handle, then place the RSA on the switchgear face, ensuring the handle adaptor fits inside the breaker handle as shown below. Ensure that the RSA is on the opposite side of the switch to be actuated (Below left, green for left-hand orientation to operate the right switch; yellow for right-hand orientation, to operate the left switch).

4. Place the motor control box on the switch gear door so that the cord is clear of any moving parts on the RSA or switch.
5. Ensure that the upper locator is seated over the breaker handle lockout tab. If the locator is not seated properly, it may be adjusted according to the instructions in the Adjustments section of this manual.
6. 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

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2 Operation

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:
   a. If the RSA is in the left-hand installed position (installed to the left side of the switch) then push and hold the TRIP button on the RSO-I AR until the switch opens.
   b. If the RSA is in the right-hand installed position (installed to the right side of the switch) then push and hold the CLOSE button on the RSO-I AR until the switch opens.
7. If the switch is OFF and needs to be turned ON:
   a. If the RSA is in the left-hand installed position (installed to the left side of the switch) then push and hold the CLOSE button on the RSO-I AR until the switch is closed.
   b. If the RSA is in the right-hand installed position (installed to the right side of the switch) then push and hold the TRIP button on the RSO-I AR until the switch is closed.
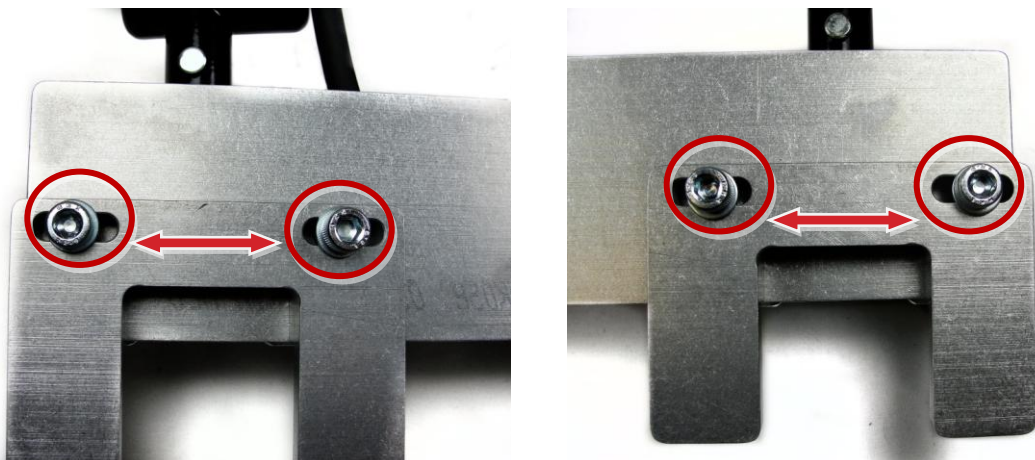
3 Adjustments

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 Locator Adjustment

The locator on the RSA can be adjusted in order to account for minor differences in equipment layout.

1. Loosen the screws holding each locator in place, as shown.

2. Slide each locator left or right as necessary to position it so it adequately avoids any obstructions, and sits flush against the switch lockout tab.
3. Re-tighten the screws loosened in step 1.

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3.2 Travel Adjustment

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

1. Install the RSA on the face of the breaker as described in the Installation section.
2. Loosen the lock nuts on the backs of the two travel stops.
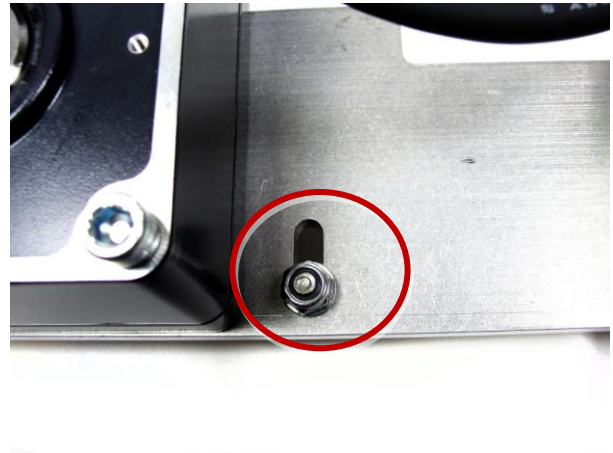
3. Attach the RSA to a de-energized breaker according to the instructions in the Installation section.
4. With the breaker handle and RSA operator arm fully in the ON position, slide the corresponding travel stop up until it contacts the arm as shown, and tighten the bolt. Note: Travel stop for the RSA in left-hand installed orientation shown for reference.

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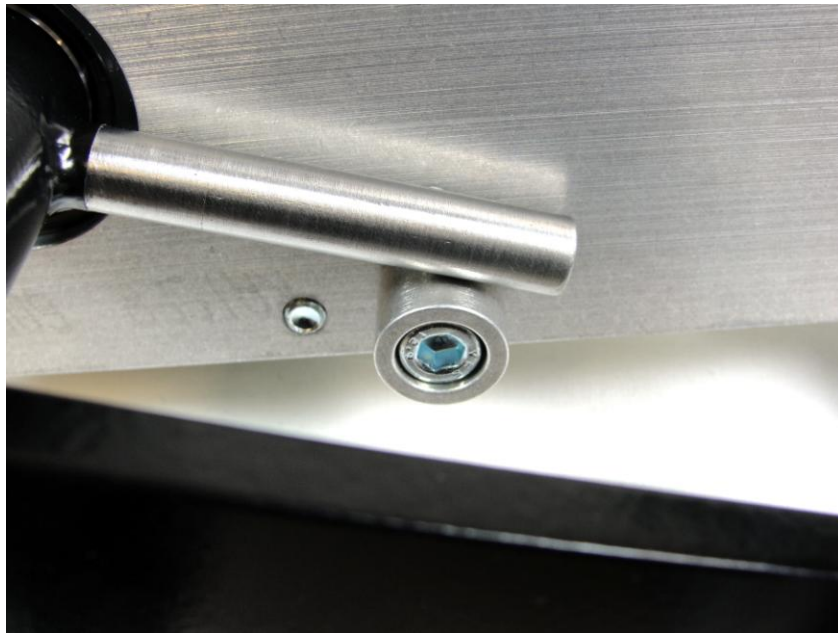
5. With the breaker handle and RSA operator arm fully in the OFF position, slide the corresponding travel stop up until it contacts the arm as shown, and tighten the bolt. Note: Travel stop for the RSA in left-hand installed orientation shown for reference.

Notes

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RSA-163D
Installation and Operation

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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 arcflash 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).