Installation and Operation

CBS ArcSafe®

Distance Is Safety®
A Group CBS Company

RSA-51A

For Siemens/Siemens-Allis - RL/RLE/RLF
3200-5000A Gray/Black or Yellow Zinc Face
Manual Operated, Includes RL/RLE/RLF-3200, 4000, 5000

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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

1. Ensure that the breaker is free from obstructions that may interfere with proper installation of the RSA

2. Remove the manufacturer's charging handle by loosening the set screw and pulling it upward.
3. Position the RSA on the breaker, ensuring that the locator on the RSA is flush against the left and top sides of the breaker, as shown.
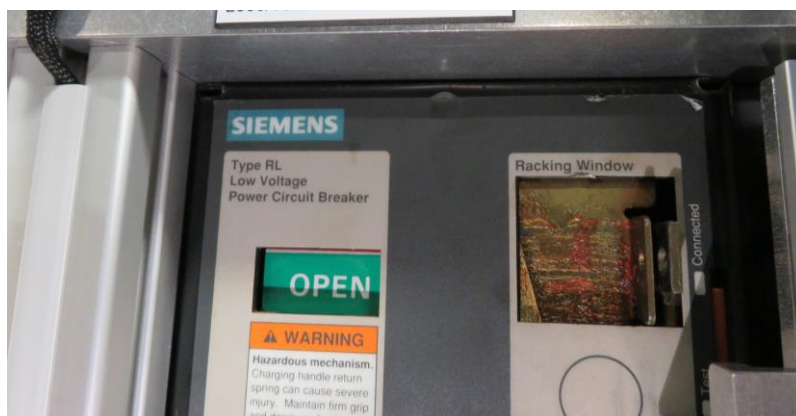
4. Ensure that the close tab (if present) is located between the close hood and any handle lockout, as shown. If the handle lockout is not present, ensure the lever arm is positioned over the top of the clse tab.
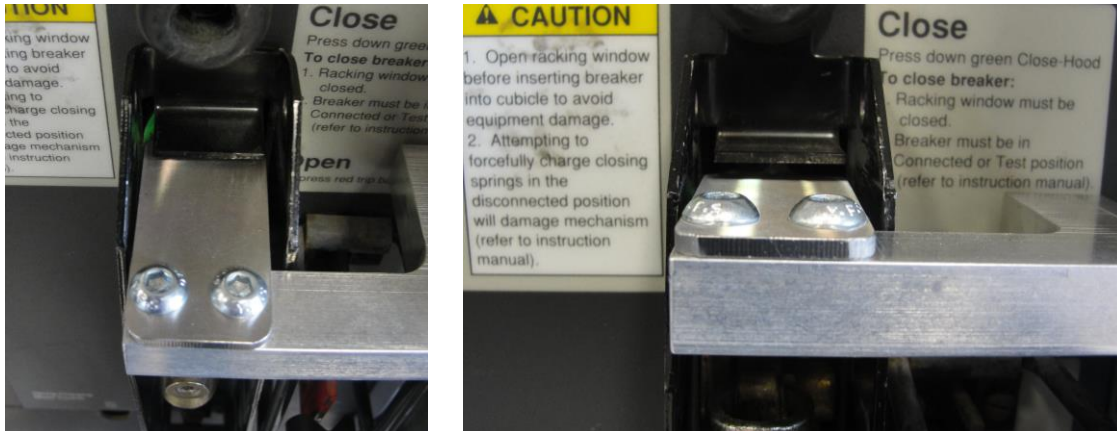
5. Ensure the solenoid on the RSA is aligned over the trip lever, with the lever aligned to the grove in the solenoid plunger.

6. Ensure the magnets are fully seated against the breaker door and then turn the handles of the twist-lock magnets 180° to lock the RSA in place.

The RSA is now ready for operation.

2 Operation

1. Ensure that the RSA is properly installed. See the Installation Section for detailed instructions.
2. Connect the cables from the RSO-IIID to the RSA.
3. Turn the power switch on the RSO-IIID to the ON position.
4. Program the settings for the RSA into the RSO-IIID, if applicable. These settings will be found on a placard on the RSA. For more information on programming the RSO-IIID please refer to the RSO-IIID Technical Manual.
5. Ensure that the Auto-Retract (AR) function is set according to the instructions on the setting placard on the RSA. For detailed information on the AR function see the RSO-IIID instruction manual
6. Exit the arc flash boundary
7. Once the timers have been properly set (if applicable), press and hold the CHARGE/CLOSE button to close the breaker.
8. Press the TRIP button to trip the breaker with the trip button.

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 Adjustment

The depth of each magnet on the RSA can be adjusted in order to avoid interference from items mounted to the breaker door.

1. Loosen the two bolts on each magnet plate that needs to be adjusted, as shown.

2. Install the RSA as described in the Installation section of this manual.
3. Slide the loosened magnets up or down as necessary to position each one so they adequately account for any depth differences. Ensure the magnets sit flush against the gear door.
4. To adjust the position of a magnet, unlock the twist-lock magnet to be adjusted, alide it along the rail on the RSA to a new position, and re-set depth and re-lock the magnet.
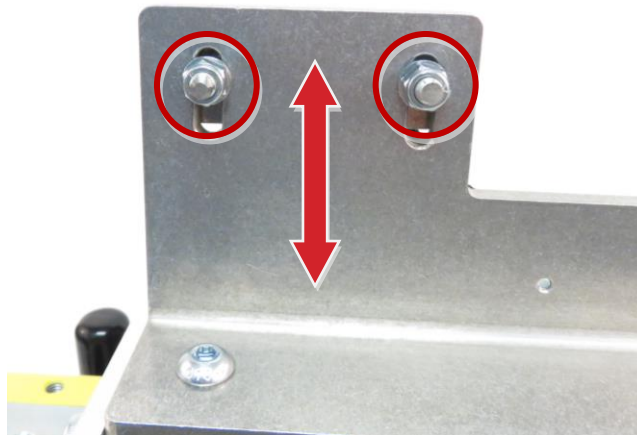5. Re-tighten any loosened bolts.

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3.2 Close Actuator Depth Adjustment

The Close Actuator on this RSA can be adjusted to accommodate minor equipment differences.

DANGER!
Only perform this operation on de-energized equipment. The adjustment requires operating the Close paddle on the breaker.

1. Loosen the two bolts on the actuator plate.

2. Install the RSA as described in the Installation section of this manual.
3. Turn AR OFF on the RSO, and then press and hold the Close button on the RSO until the actuator is at full extension. Slide the actuator down until the trip paddle on the breaker is fully depressed.
4. Re-tighten the bolts to lock the Close Actuator in place.
5. Remove the RSA from the breaker.

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3.3 Plunger Depth Adjustment

The operation depth of the solenoids on this RSA can be adjusted to accommodate differences in the button-press depth requirements.

1. To increase the solenoid plunger depth, loosen the nut on the solenoid plunger, and turn the black end counter-clockwise. Test the depth by operating the plunger with the RSO, and re-tighten the nut.

2. To decrease the solenoid plunger depth, loosen the nut on the solenoid plunger, and turn the black end clockwise. Test the depth by operating the plunger with the RSO, and re-tighten the nut.

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3.4 Solenoid Position Adjustment

The location of the solenoids on the RSA can be adjusted in order to ensure they make optimum contact with the breaker pushbuttons.

1. Loosen the bolts holding the solenoid mount in place, as shown.
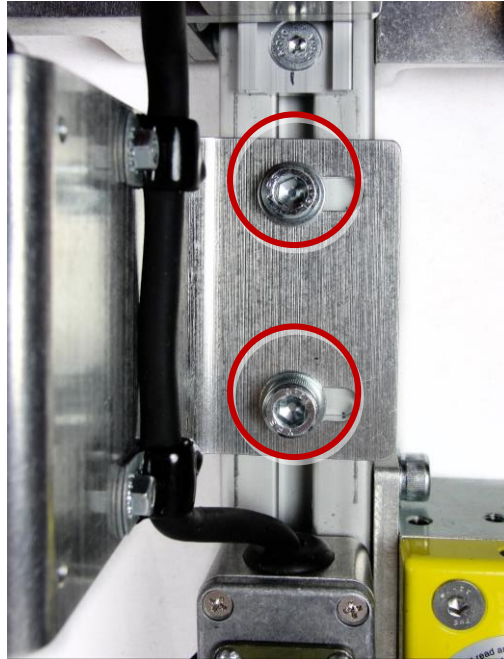
2. Install the RSA, as described in the Installation section of this manual.

3. Slide the solenoid assembly up or down as required to properly align the solenoid with the center of the trip button.

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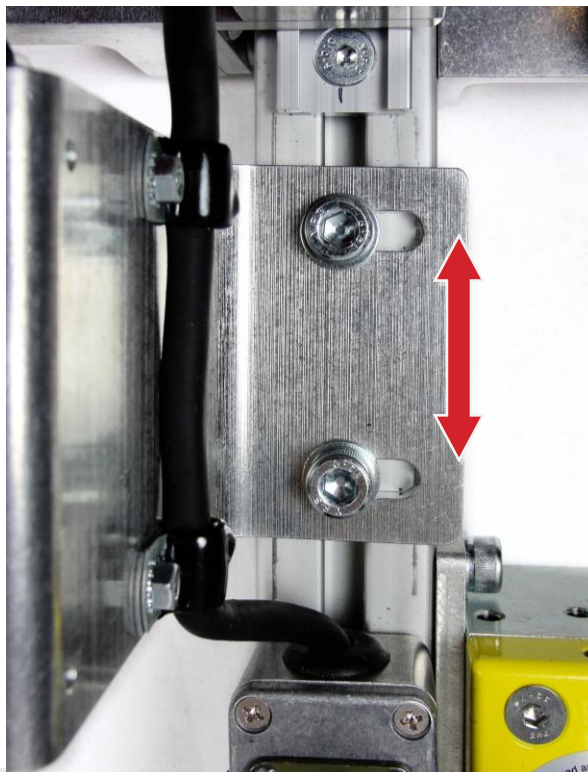
4. Slide the solenoid assembly left or right as required to properly align the V-notch on the solenoid plunger with the breaker trip button, as described in the Installation section.

5. Re-tighten any loosened bolts.

Notes
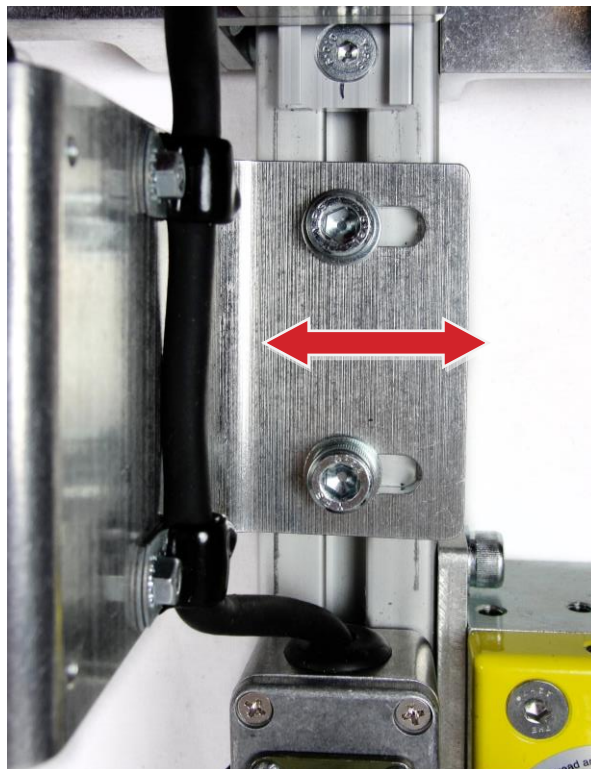
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DANGER!

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).