Installation and Operation

CBS ArcSafe®

Distance Is Safety®

A Group CBS Company

RSA-96

For Emax Low Voltage Power Circuit Breakers
800-6000A, All Sizes (E1, E2, E3, E4, E5, E6)

Distance is Safety®

WHAT STANDS BETWEEN YOU AND ARC-FLASH DANGER? WE DO.

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Rev. 9/19/2017

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!

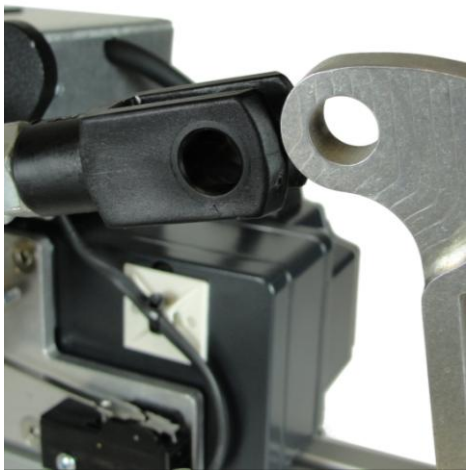
Before servicing any breaker, make sure that it matches the breaker discussed. If the breaker does not match the breaker described above, please call CBS ArcSafe® for more information.

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. Prior to installation of the RSA-96, 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-96 on the face of the breaker, and ensure the RSA is firmly seated flush against the panel and breaker.

4. To attach the RSA, ensure that the magnets are seated flush against the switch panel, then turn the handles of the twist-lock magnets 180° clockwise
5. Verify that the Close/Trip solenoids are properly aligned with the Close/Trip buttons locator on the breaker.

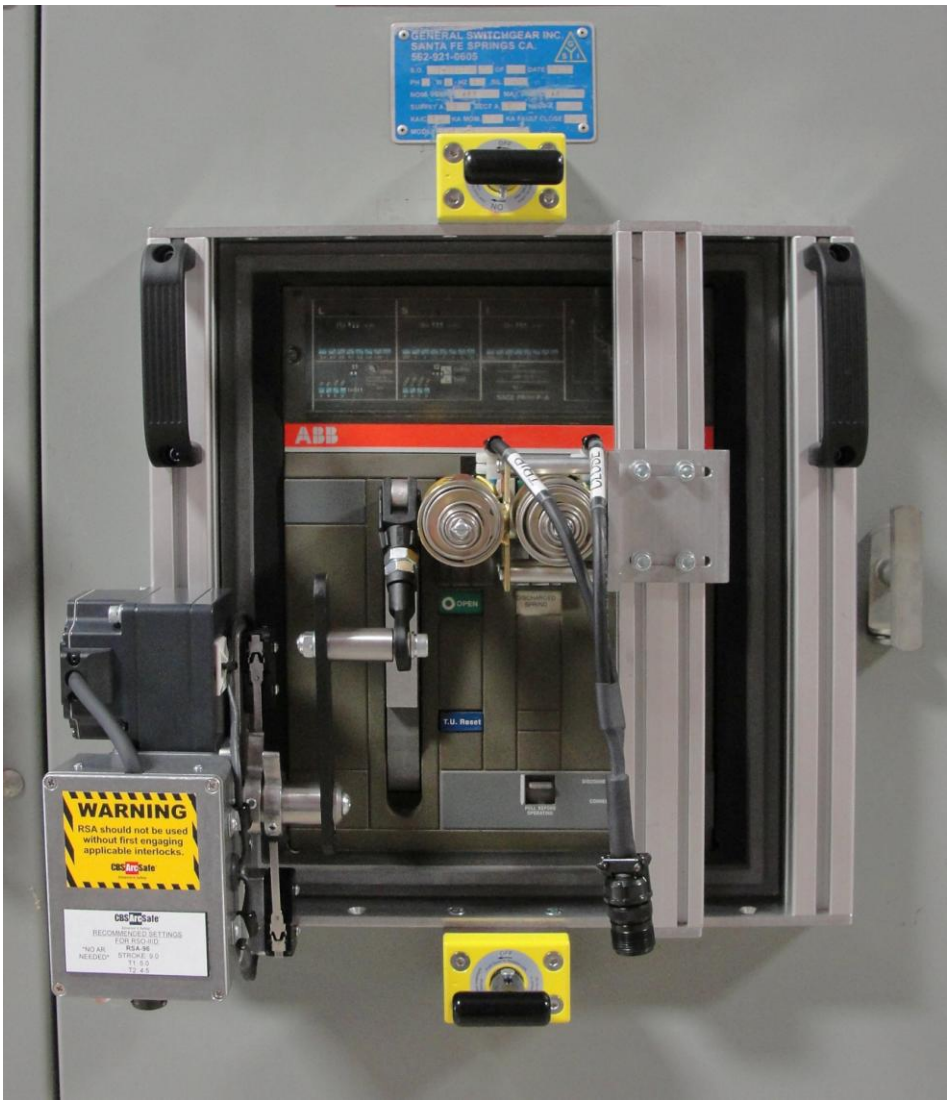
6. Pull the breaker's charge arm away from the breaker slightly, and place the charging arm adapter, removed in step 2, over the charging handle of the breaker.

ATTENTION!

Do not pull the arm so far away from the breaker that this actuates the charging arm one full stroke. This will negatively affect the operation later in the process.

7. Next, rotate the motor shaft and linkage enough to mate properly with the charging arm adapter. Once aligned, secure them together with the clevis pin removed in Step 2.

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-IIID are fully charged or that the unit is plugged into AC power.

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

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. The three pin twist type cable will attach to the motor control box on the RSA.
4. Turn the power switch on the RSO-IIID to the ON position.
5. Ensure that the Auto-Retract (AR) function is turned on. For detailed instructions on the AR function see the RSO-IIID manual
6. Program the settings for the RSA into the RSO-IIID. These settings can be found on the placard on the RSA. For more information on programming the RSO-IIID please refer to the RSO-IIID Technical Manual.
7. Exit the arc flash boundary
8. Once the timers have been properly set press the CHARGE/CLOSE button to actuate the motor arm and charge the breaker.
9. Press CLOSE to close the breaker.
10. Press TRIP to trip the breaker.

3 Adjustments

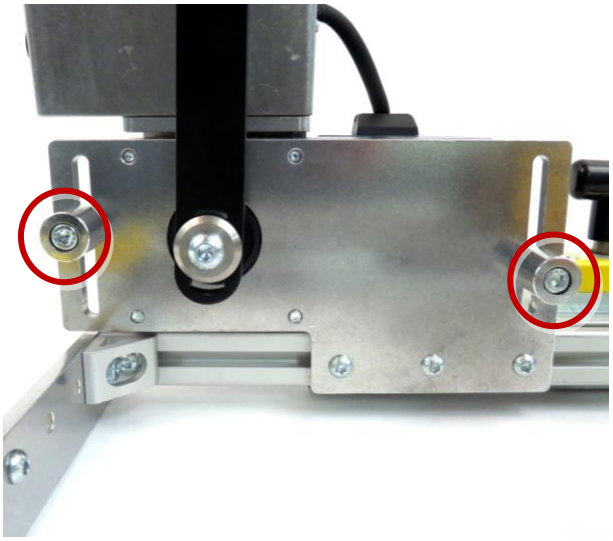
3.1 Charge Handle Travel Adjustment

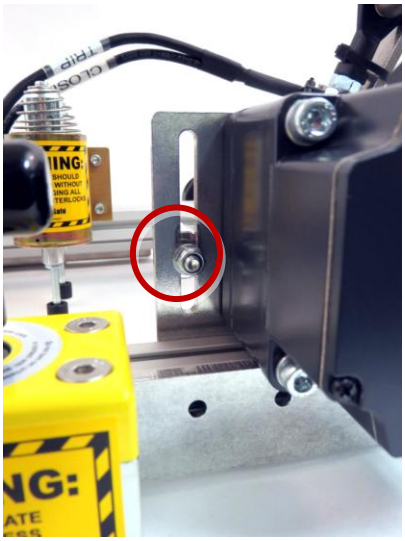
DANGER!

When adjusting the location of the cam lobes which compress the micro-switches, make sure not to over compress the micro-switch. Over compression of the micro-switch can cause the switch to become non-responsive. This can cause the charging arm of the RSA-96 to over travel, which can damage the breaker.

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

1. Loosen the bolts on the mechanical travel stops, as indicated below.



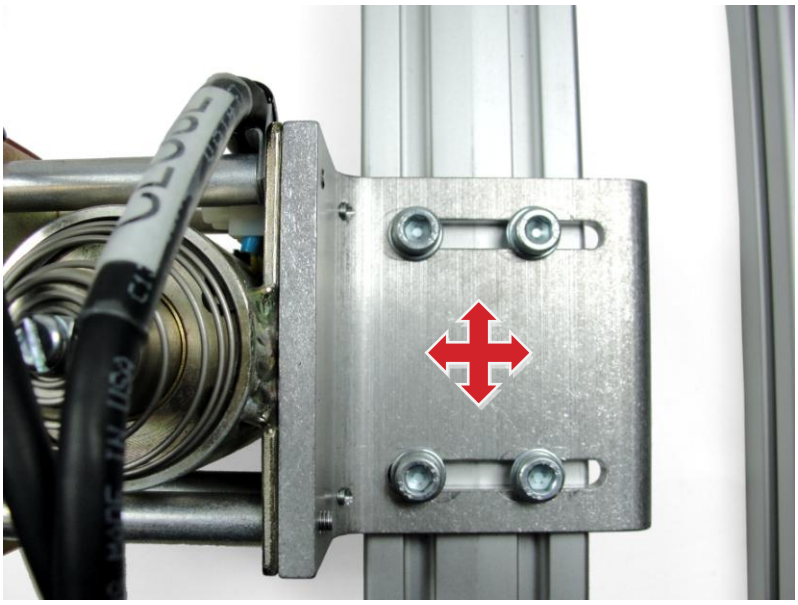


2. To set the downward travel of the charging arm, manually pull the arm downward until it is at a 90° angle with the cabinet. While holding the arm in the 90° position, slide the lower travel stop up so it just makes contact with the arm, and then tighten the bolt.
3. To set the upward travel of the charging arm, manually push the arm upward until it is nearly flush with the breaker face. While holding the arm in the upper position, slide the upper travel stop up so it just makes contact with the arm, and then tighten the bolt.

3.2 Close/Trip Solenoid Position Adjustment

To adjust the lateral position of the Close and Trip solenoids, do the following:

1. Loosen the four screws holding the solenoid plate in place



2. To adjust lateral position, slide the solenoid assembly to the left or right, until the solenoid plungers are both aligned horizontally to the buttons on the breaker.
3. To adjust vertical position, slide the solenoid assembly up or down, until the solenoid plungers are both aligned vertically to the buttons on the breaker.
4. Once adjustment is finished, re-tighten the four screws

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).