

Installation and Operation

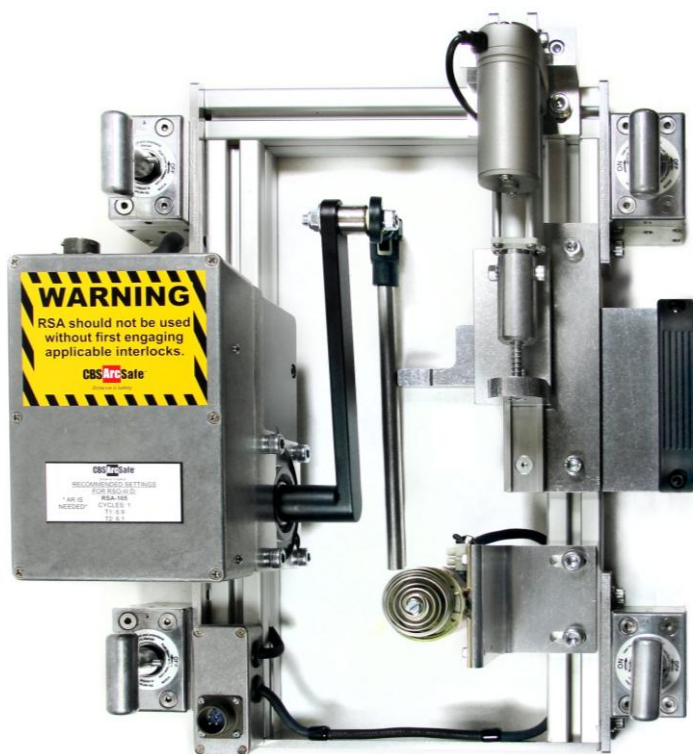
CBS ArcSafe®

Distance Is Safety®

A Group CBS Company

RSA-105

For LA/LAF 1600-2000 Amp (Yellow Zinc or
Gray Plastic Face, Manual Operated,
Includes LA/LAF-1600, 1600A, 1600AF, 1600B, 2000, 2000A)



Distance *is* Safety®

WHAT STANDS
BETWEEN YOU AND
ARC-FLASH DANGER?

**WE
DO.**

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Rev. 8/18/2015

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 to be operated is free from obstructions that may interfere with proper installation of the RSA



2. Remove the breaker charging handle, then remove the lock pin and charging handle adapter from the RSA, and insert the charging handle adapter from the RSA into the breaker's charge mechanism. Be sure to replace the lock screw from the breaker to hold the charging adapter in place.



3. Carefully place the RSA on the front of the breaker, ensuring that the frame of the RSA is fully seated against the breaker face, and that the upper support on the RSA is resting on the top of the breaker es-cutcheon as shown below.



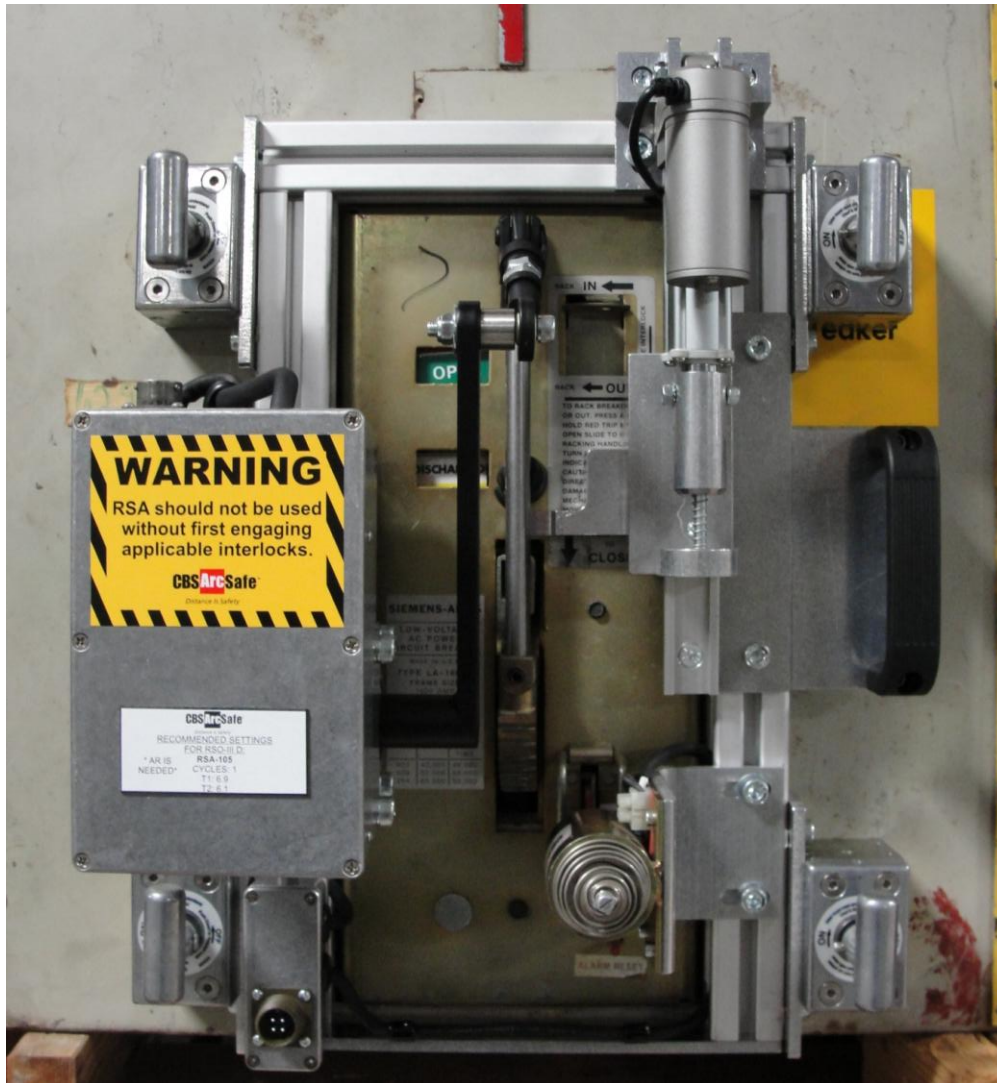
4. Ensure the Trip solenoid on the RSA is aligned over the trip button on the front of the switch (below left) and that the Close lever on the RSA is aligned properly over the Close lever on the breaker (below right).



5. Ensure the magnets are fully seated against the switch cover and then turn the handles of the twist-lock magnets 180° to lock the RSA in place.
6. Re-attach the charging handle to the RSA using the lock pin removed earlier.



The RSA is now ready for 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. Turn the power switch on the RSO-IIID to the ON position.
4. 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.
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. Press and hold the CHARGE/CLOSE button to actuate the charging arm and charge the mechanism, and then close the breaker.
8. Press the TRIP button to trip the breaker.



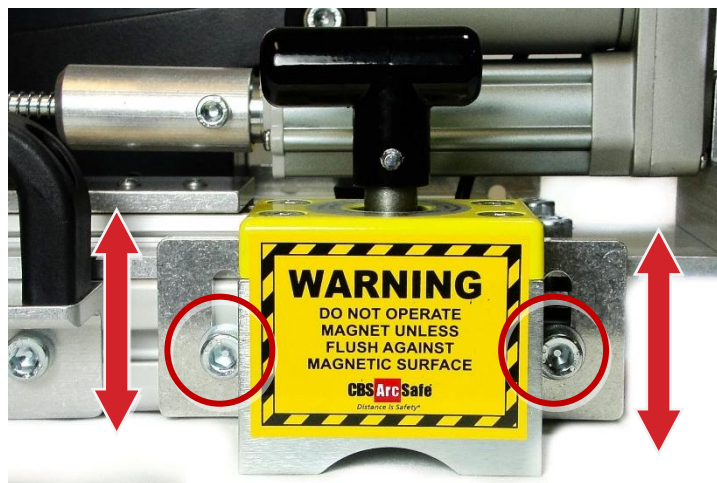
3 Adjustments

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 Depth Adjustment

The depth of the the RSA can be adjusted in order to ensure proper location of the RSA and the ability of the close lever to operate effectively.

1. Install the RSA on the face of the switch as described in the Installation section
2. Loosen the two bolts on each of the four magnet mounts, as shown below.



3. Slide the frame in or out as needed to ensure the frame of the RSA is properly located on the escutcheon and that the close lever is at the proper depth to freely and fully engage the close hood.

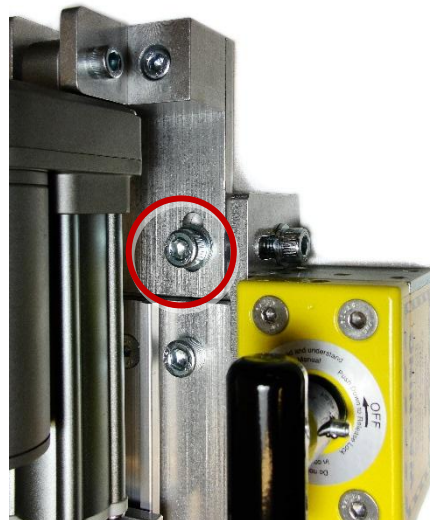


4. Re-tighten the bolts on each of the four magnet mounts.

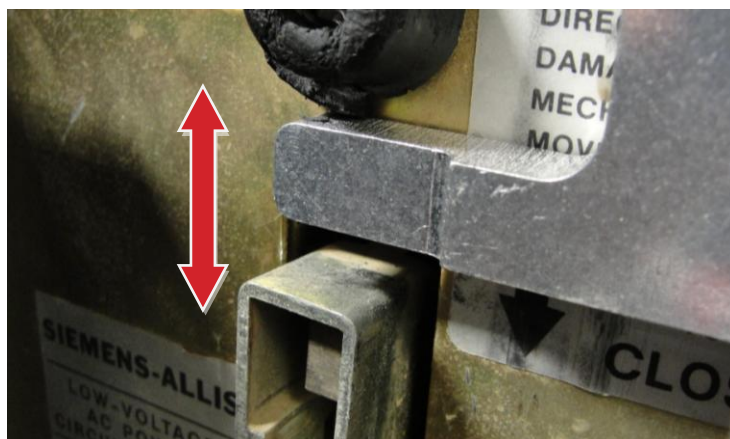
3.2 Actuator Adjustment

The actuator that operates the close lever can be adjusted to ensure proper clearance of the lever in relation to the close hood.

1. Loosen the two bolts on the actuator mount at the top of the RSA.



2. Raise or lower the actuator mount to ensure that there is a small gap between the close lever and the close hood, as shown.



3. Re-tighten the two bolts on the actuator mount.

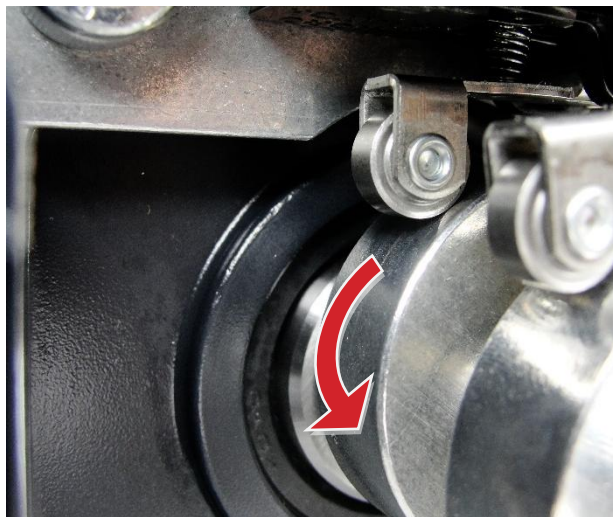
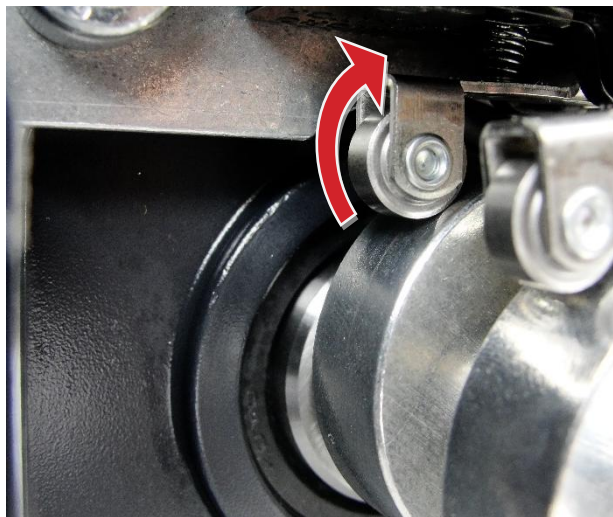
3.3 Travel Adjustment

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

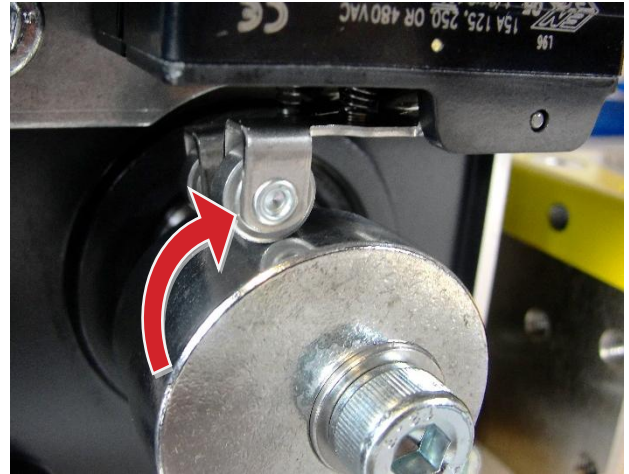
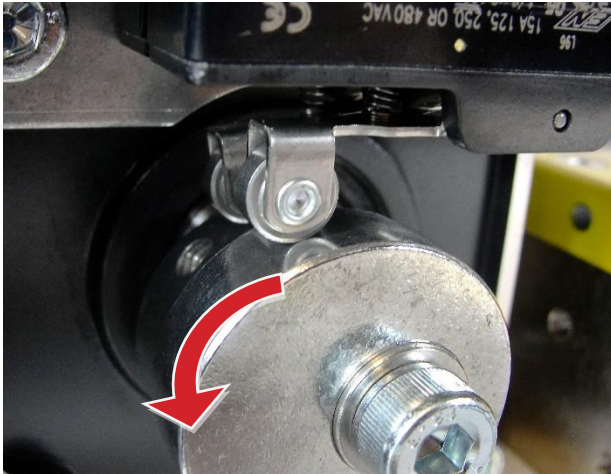
1. Loosen the lock screws on the backs of the two switch cams.



2. With the RSA charging arm in the UP position, rotate the inner limit switch cam until the limit switch is undepressed and clicks slightly, then rotate the cam back onto the switch until another slight click is heard, and the switch is depressed. Re-tighten the lock-screw on the cam.



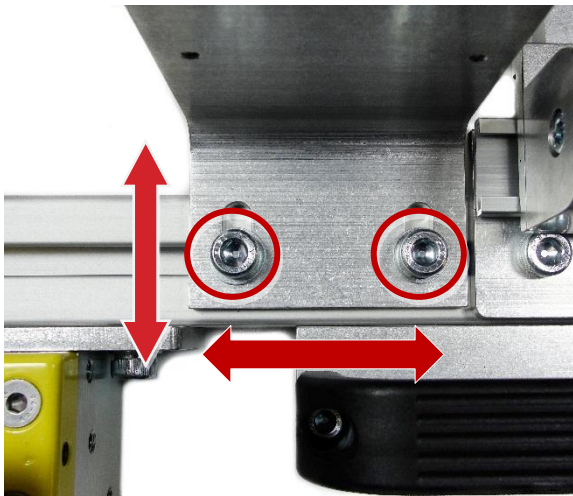
3. With the RSA charging arm in the DOWN position, rotate the outer limit switch cam in the direction of travel for the arm, until a slight click is heard. Re-tighten the lock screw.



3.4 Solenoid Position Adjustment

The position of the solenoid on this RSA can be adjusted to ensure that the plunger is aligned with the trip button.

1. Loosen the bolts on the solenoid mount and move the assembly up, down, left, or right to align the plunger over the trip button, as shown.

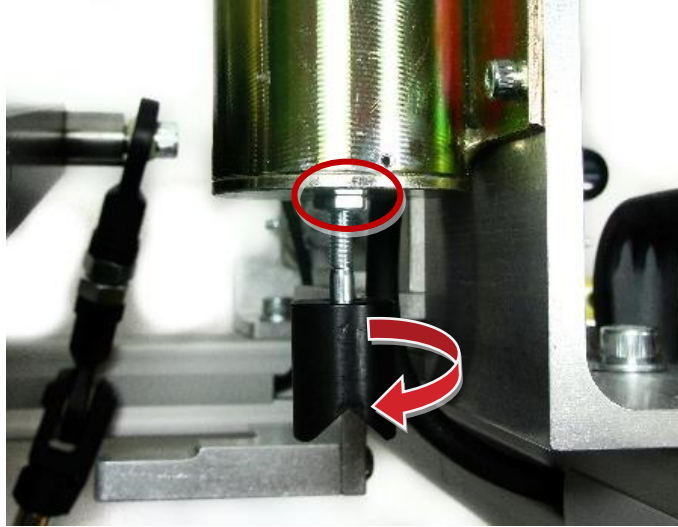


2. Re-tighten the two bolts on the solenoid mount.

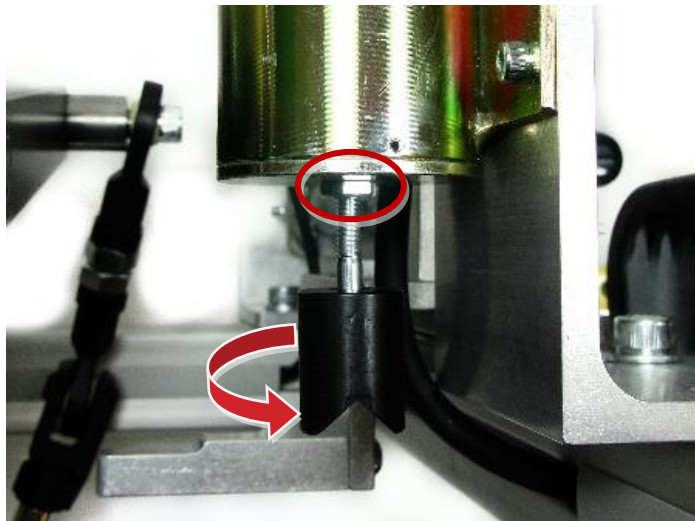
3.5 Plunger Depth Adjustment

The operation depth of the solenoid 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 appropriate 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 appropriate plunger with the RSO, and re-tighten the nut.



Notes

[illegible]

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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).