Installation and Operation

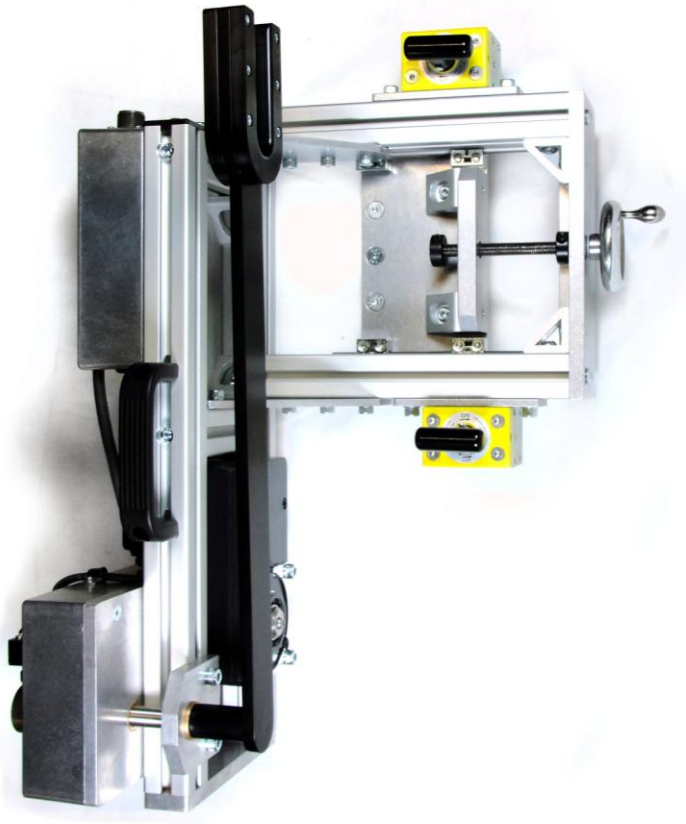
CBS ArcSafe®

Distance Is Safety®

A Group CBS Company

RSA-196

For Linkage-Operated Air Switch



Distance is Safety®

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

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Rev. 6/8/2015

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

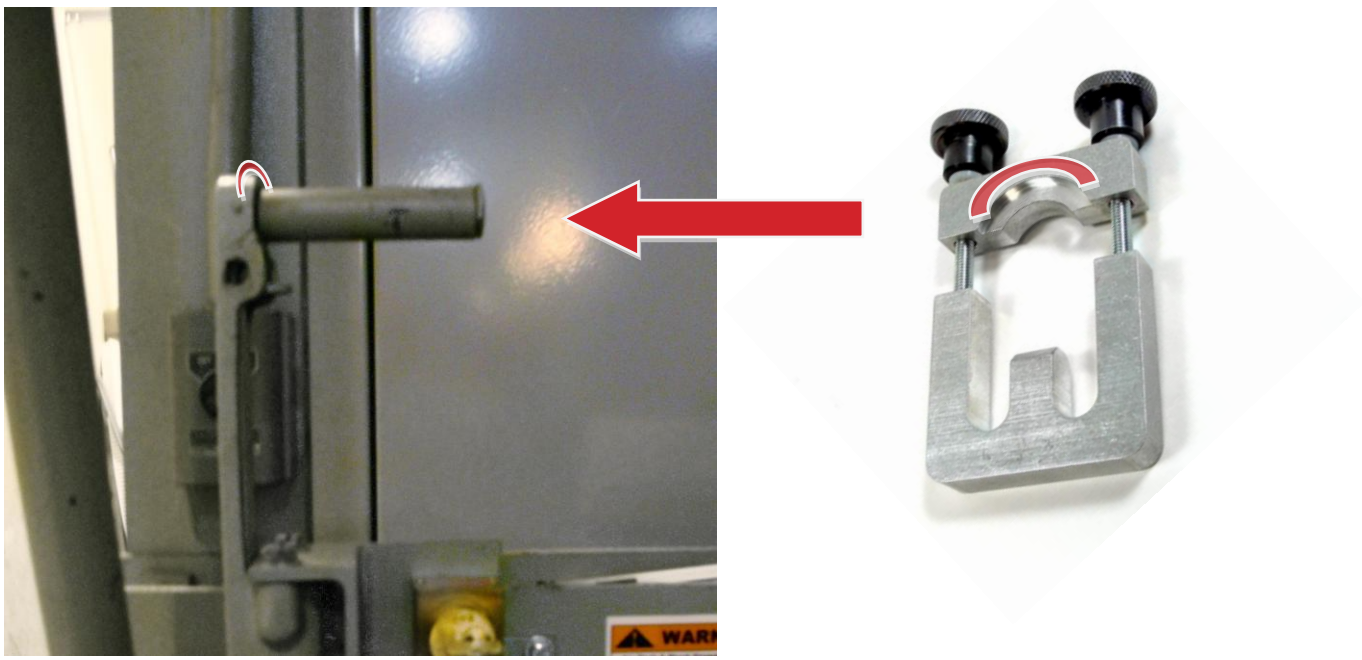
DANGER!

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.

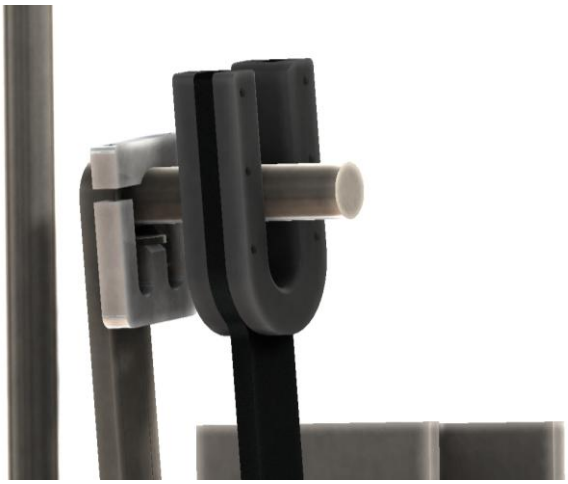
1. Ensure that the area around the switch is free from any obstruction that may interfere with the proper installation of the RSA.
2. To adjust the RSA for accommodating unavoidable obstructions such as bolt heads or lock-out mechanisms, see the Adjustments section, and make any applicable adjustments to the RSA before attempting to install.
3. Slide the interlock defeat tool onto the operator handle, with the recessed portion on the loose end of the tool toward the inside of the switch operator handle. Leave the interlock defeat loose on the handle at this time.



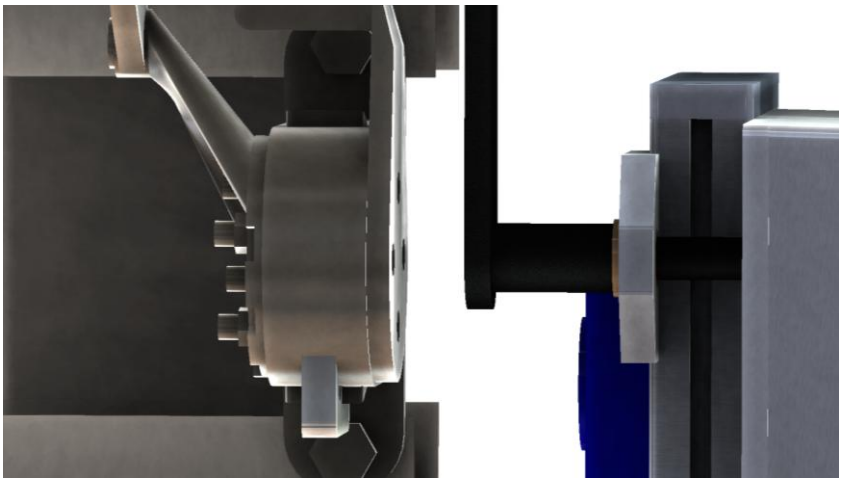
DANGER!

Fully installing the interlock defeat before installing the RSA on the switch can result in an unsafe condition which could allow the handle to move during installation of the RSA. Unexpected handle movement could cause an arc flash, resulting in serious injury.

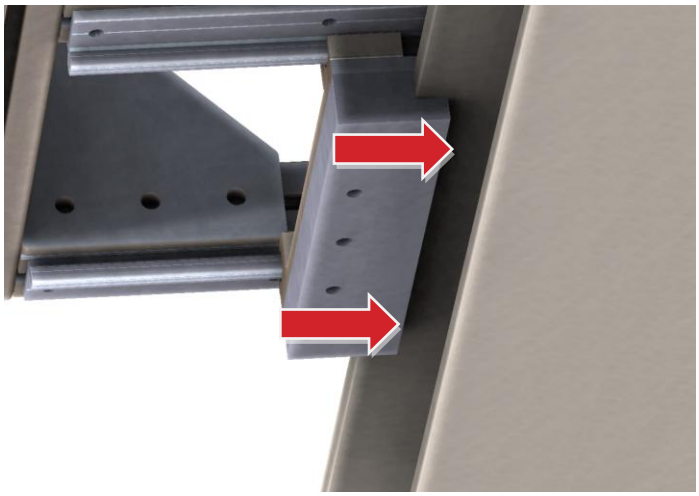
4. Align the RSA to the switch's operating handle, then slide the handle adapter of the RSA over the switch handle, and gently lower the RSA into place. Rotate the actuator arm carefully to re-align as needed.

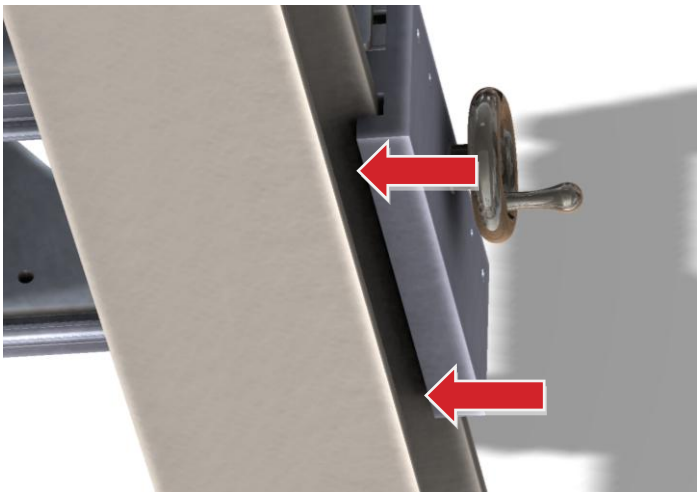


5. Ensure that the axis of rotation of the actuator arm on the RSA is aligned center-to-center with that of the switch, to ensure smooth error-free operation.



6. Turn the handles of the twst-lock magnets 180° clockwise to lock the RSA in place.
7. Next, engage the clamp on the base of the RSA to ensure that the device stays fixed in place during operations by first engaging one side of the clamp on the beam, then tightening the clamp wheel until the RSA is secure.





8. Once the RSA is locked in plase, secure the interlock defeat tool on the handle by sliding the interlock defeat over the interlock, then secure in place by tightening the two bolts on the defeat tool.

The RSA 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-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 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 CLOSED and needs to be opened, press and hold the TRIP button on the RSO-I AR until the switch is tripped.
7. If the switch is OPEN and needs to be closed, press and hold the CLOSE button on the RSO-I AR until the switch is closed.

3 Adjustments

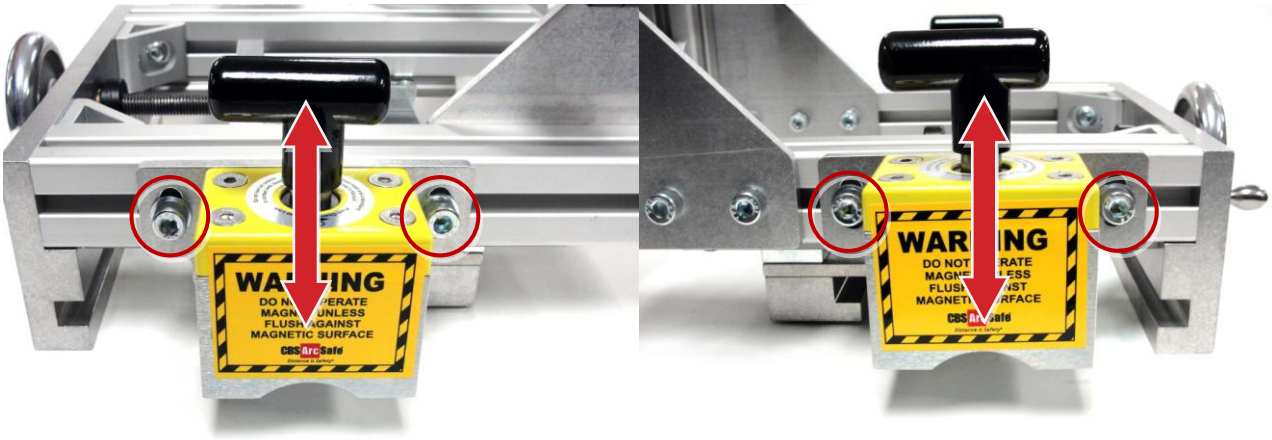
3.1 Magnet Adjustment

The twist-lock magnets on this RSA are fitted with slotted plates to allow adjusting the RSA to avoid interference due to bolt heads, or other items on the switchgear door. They can also be moved along the length of the RSA, or exchanged to completely different positions to accommodate different accessories on the switchgear.

3.1.1 Magnet Depth

To adjust the magnet depth:

1. Loosen the bolts in the magnet mounting plates for each magnet as shown.

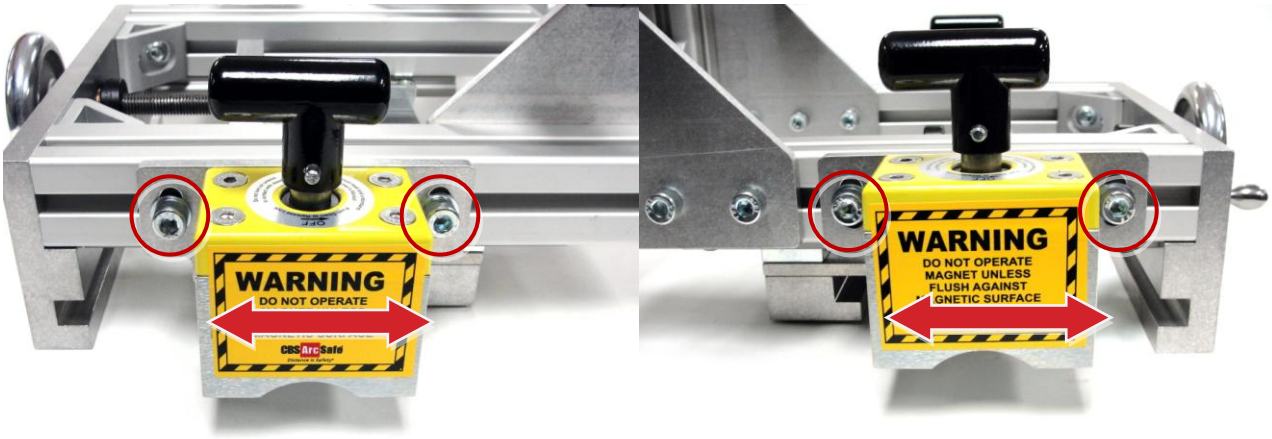


2. Slide the magnets up or down vertically to the desired depth.
3. Re-tighten the bolts.

3.1.2 Magnet Position

To adjust magnet position, for avoiding abstructions on the switchgear:

1. Loosen the bolts in the magnet mounting plates for each magnet as shown



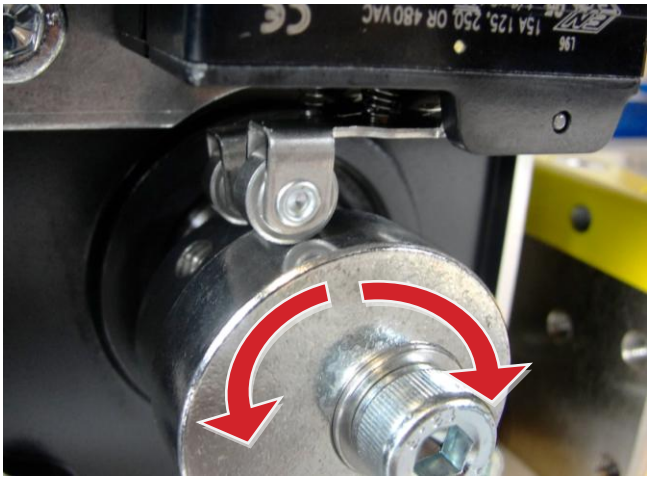
1. Slide the magnets left or right horizontally to the desired position.
2. Re-tighten the bolts.

3.2 Travel Adjustment

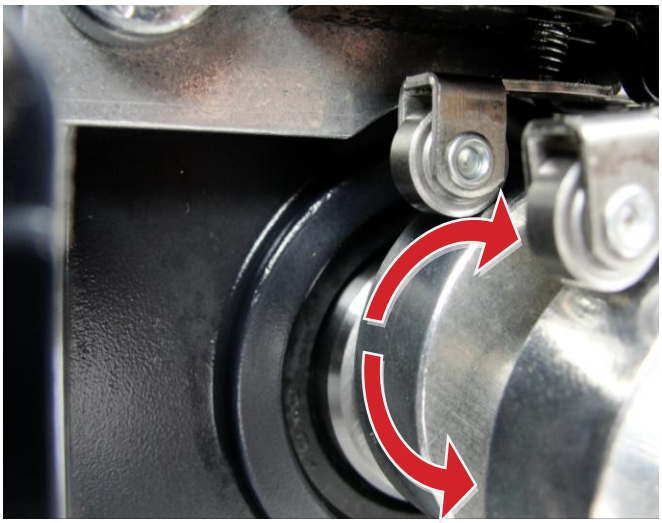
The travel length for the motor arm may be adjusted to avoid damage to the switch.

1. Install the RSA on the face of the switch as described in the Installation section.
2. Loosen the lock screws on the backs of the two switch cams.

3. With the RSA operator arm in the OPEN 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.



4. With the RSA operator arm in the CLOSED position, rotate the inner limit switch cam in the direction of travel for the arm, until a slight click is heard. Re-tighten the lock screw.



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).