Installation and Operation

CBS ArcSafe®

Distance Is Safety®

A Group CBS Company

RSA-150

For ABB/BBC/ITE 7850 Series
Medium Voltage Motor Starter
(Air Contactor, Blue & Silver Label)

Distance is Safety®

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

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Rev. 3/11/2015

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!

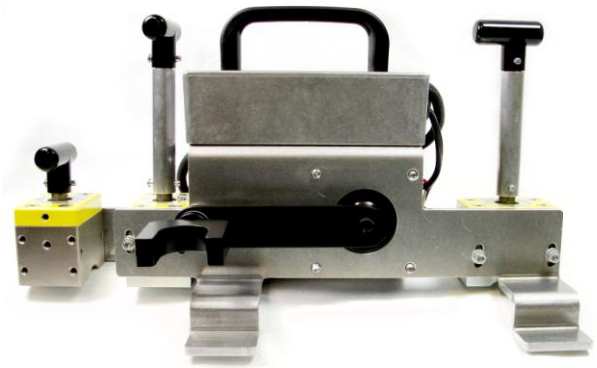
Before servicing any breaker, make sure that it matches the breaker discussed. If the breaker does not match the breaker described above, please call CBS ArcSafe® for more information.

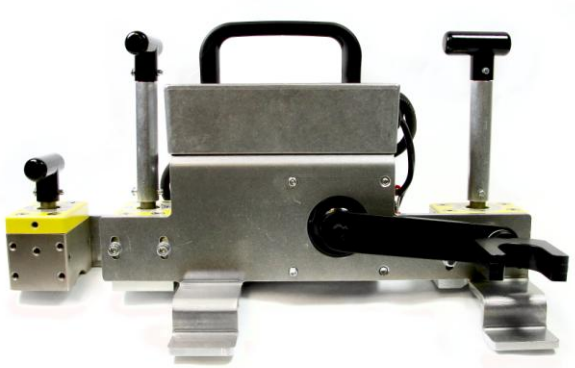
ATTENTION!

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.

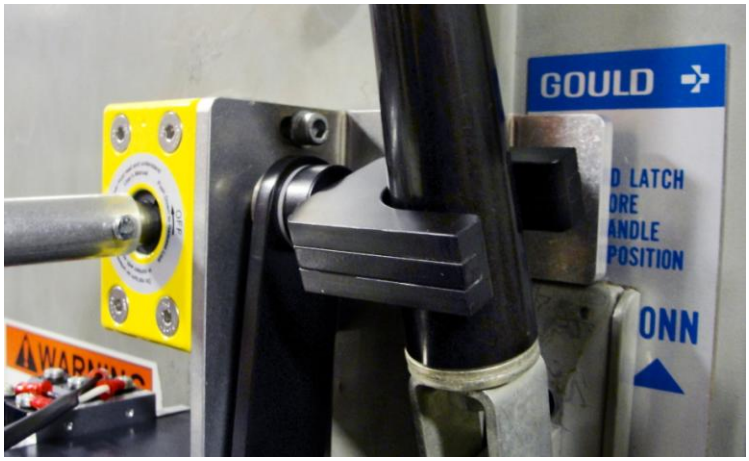
1. Ensure that the switch is free from any obstruction that may interfere with the proper installation of the RSA.

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. Rotate the actuator arm on the RSA to match the switch state, either disconnected (below left) or connected (below right).



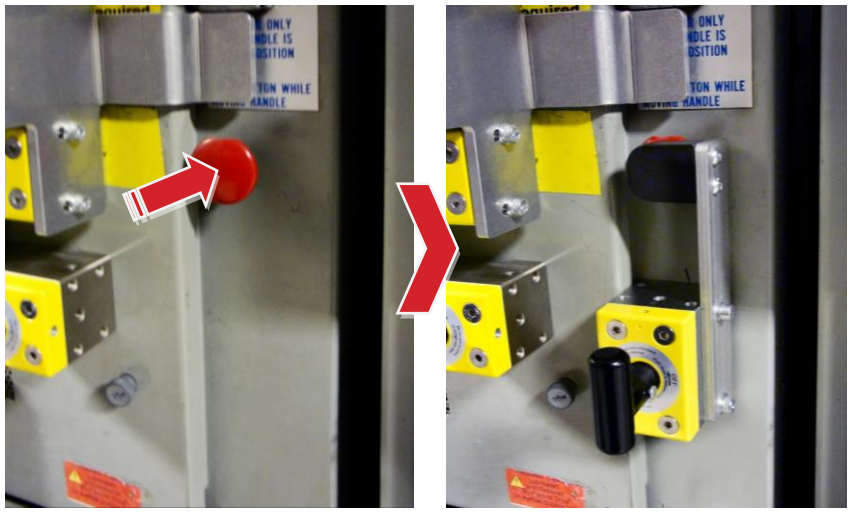


4. Align the RSA to the switch door on the opposite side of the switch's operating handle, then slide the handle adapter of the RSA over the switch handle as shown and gently rotate and lower the RSA into place. Rotate the actuator arm carefully to re-align as needed.

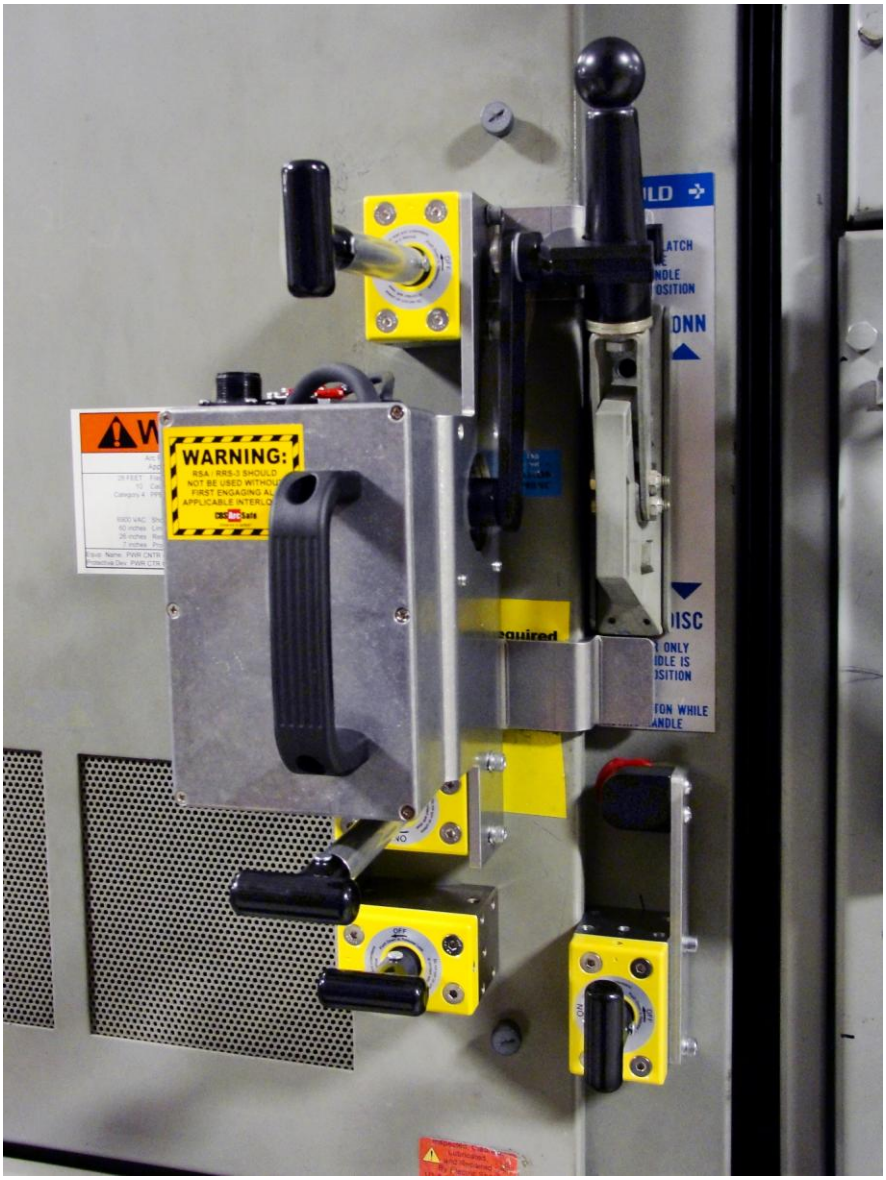


5. Ensure that the locators on the RSA are flush with the top and bottom of the switch escutcheon as well as the gear door, as shown.

6. Turn the handles of the twist-lock magnets 180° clockwise to lock the RSA in place
7. Once the RSA is locked in plase, install interlock defeat by pushing the red interlock button down using the interlock defeat tool, and then turn the handle of the twist-lock magnet 180° clockwise to lock the interlock defeat in place.



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 fully open.
7. If the switch is OPEN and needs to be close, press and hold the CLOSE button on the RSO-I AR until the switch is fully closed.

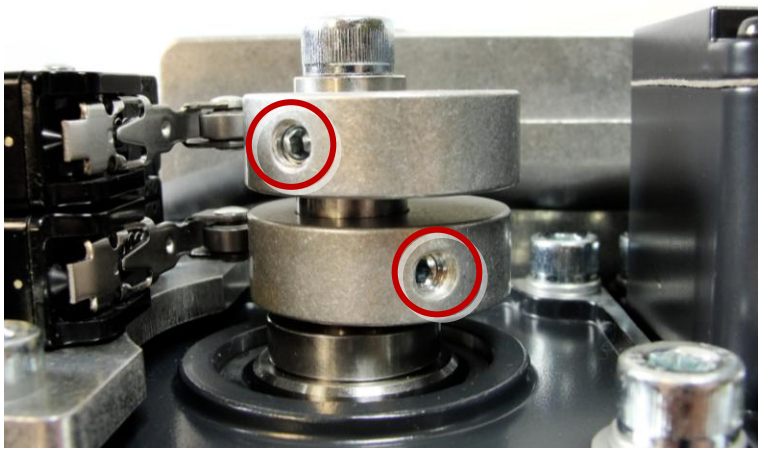
3 Adjustments

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.

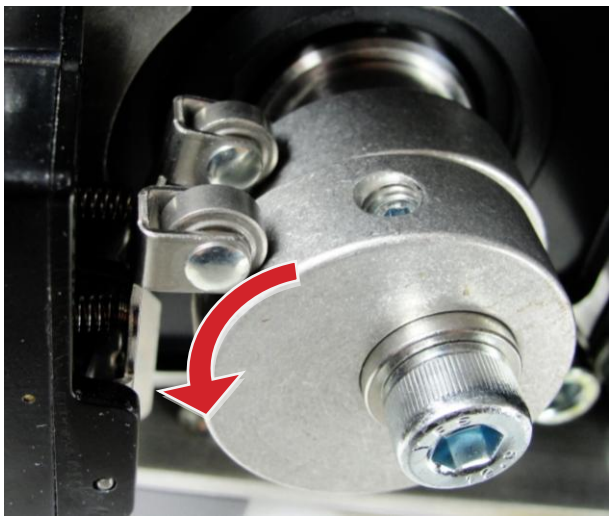
3.1 Travel Adjustment

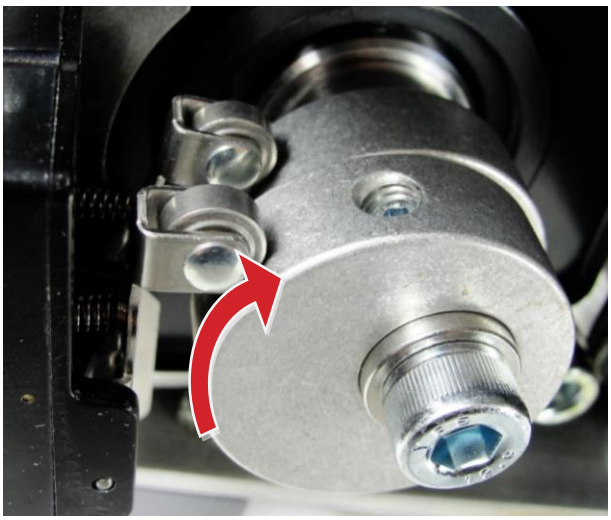
The travel length for the motor arm may be adjusted to avoid damage to the switch.

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.

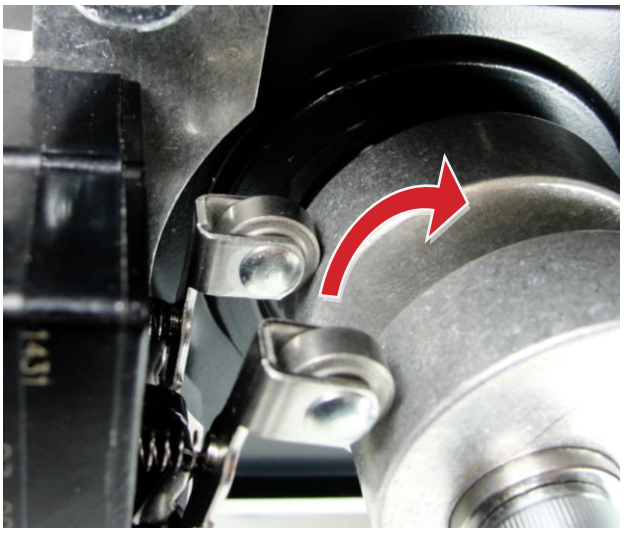


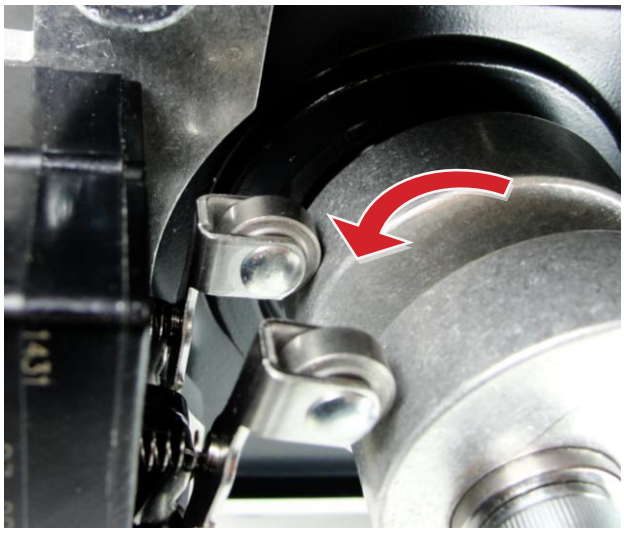
3. With the RSA operator arm in the OPEN/DISC position, rotate the outer limit switch cam until the limit switch is undepressed and clicks slightly, then rotate the cam back onto the switch until another slight click is heard, and the switch is depressed. Re-tighten the lock-screw on the cam.





4. With the RSA operator arm in the CLOSED/CONN 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.

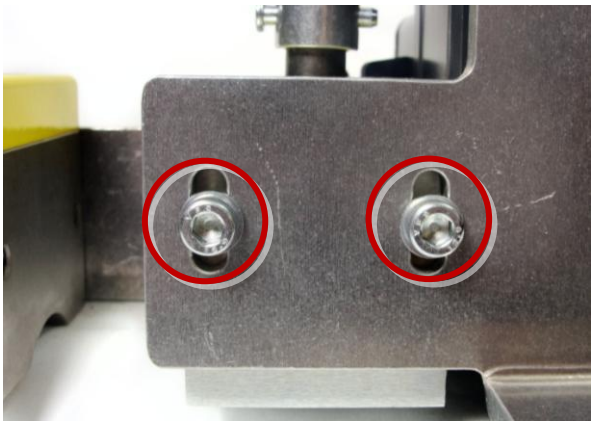


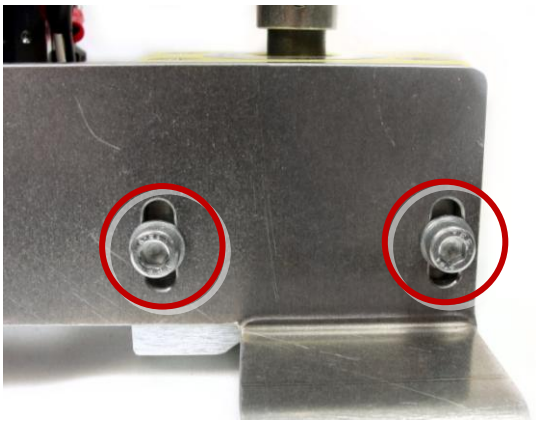


3.2 Magnet Adjustment

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

1. Loosen the two bolts on each magnet plate, as shown.





2. Slide the magnet up or down as needed to avoid any obstructions. Install the RSA as described in the Installation section if needed on a disconnected/offline switch.
3. Re-tighten the two 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).