Installation and Operation

CBS ArcSafe®
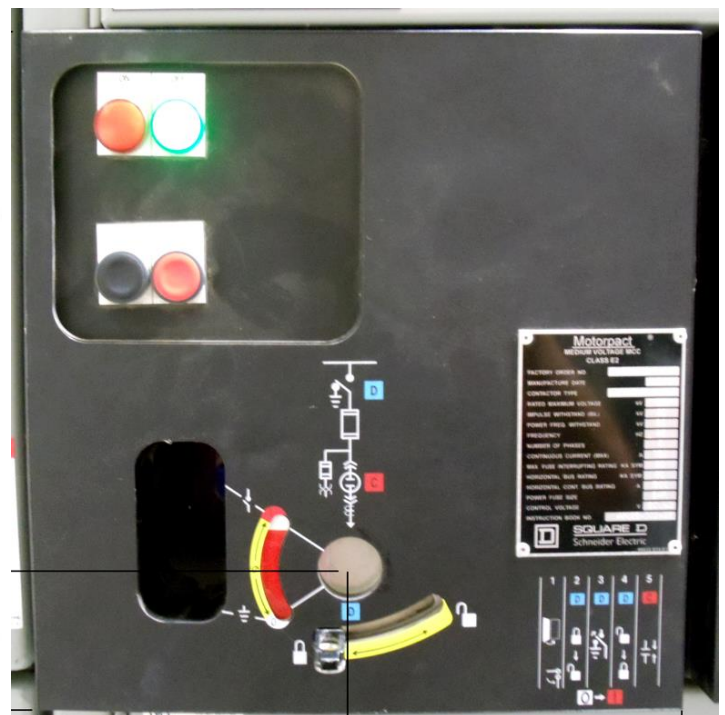### Distance Is Safety®
A Group CBS Company

RSA-50

For Square D - Medium Voltage Motor Starter
Isolation Switch Operation Only

WARNING:
RSA / RRS-3 SHOULD NOT BE USED WITHOUT FIRST ENGAGING ALL APPLICABLE INTERLOCKS

RSA-50: SQUARE D Motorpact

Distance is Safety®

WHAT STANDS BETWEEN YOU AND ARC-FLASH DANGER?

WE DO.

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

2. If not already properly oriented, rotate the operating adapter shaft on the RSA to match the state of the switch. See the Operation section of the manual for specific instructions on operating the RSA.

3. Place the RSA on the face of the breaker and ensure that the operating adapter shaft is fully seated in the operating socket.

4. Ensure that the locators on the RSA are properly positioned, and seated flush against the breaker housing.

> **DANGER!**
> If the RSA's operating adapter shaft and locators are not properly seated, attempting to operate the switch with the RSA may cause binding which can damage the RSA or the switch mechanism. Before operating, be sure that the operating adapter and locators are flush and that the operating adapter shaft is at the proper depth. See the adjustments section to adjust the locator depth for proper positioning of the operating adapter shaft.

5. Ensure the mounting magnets on the RSA are flush against their mounting surfaces, and then secure the RSA to the switch by turning the handles of the twist-lock magnets 180° clockwise.

6. The RSA is now ready for remote operation.

2 Operation

1. Ensure that the RSA is properly installed. See section 1 for detailed instructions.

2. Using the four pin threaded style connector, connect the RSO-I AR into the corresponding plug on the motor control box located on the RSA

3. Exit the arc flash boundary with the RSO-I AR.

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 in the CLOSED position and needs to be OPENED, then press and hold the TRIP button on the RSO-I AR until the operator reaches the OPEN travel stop.

7. If the switch is in the OPEN position and needs to be CLOSED, then press and hold the CLOSE button on the RSO-I AR until the operator reaches the CLOSE travel stop.
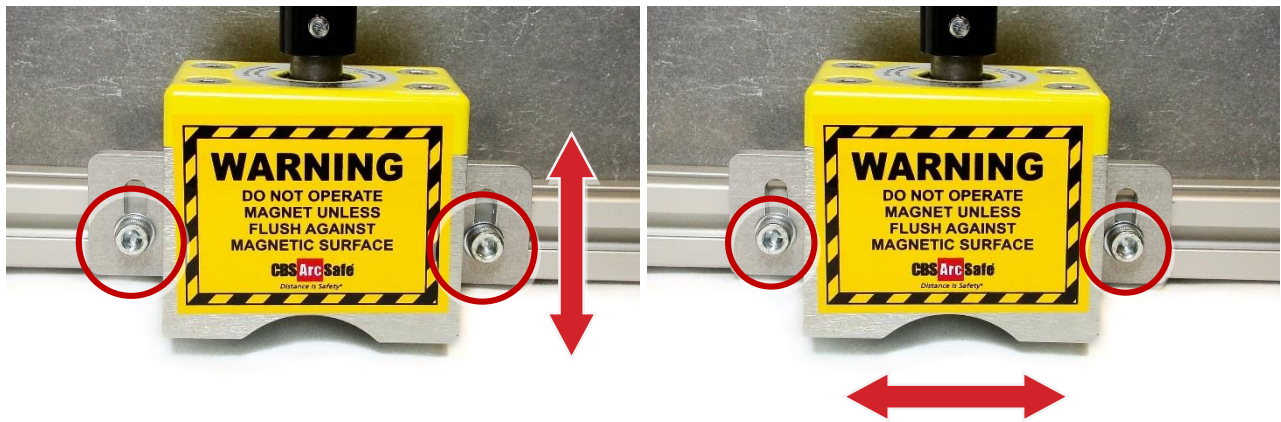
3 Adjustments

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 and location of the magnets on the RSA can be adjusted in order to avoid interference from items mounted to the switch door.

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

2. Slide the magnet left, right, up or down as necessary to position it so it adequately avoids any obstructions and the mangnets sit flush against the switch door with the RSA fully engaged.

3. Re-tighten the bolts.

3.2 Travel Adjustment

The travel length for the motor may be adjusted to avoid damage to the operator handle.

1.   Install the RSA on the face of the breaker 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 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.

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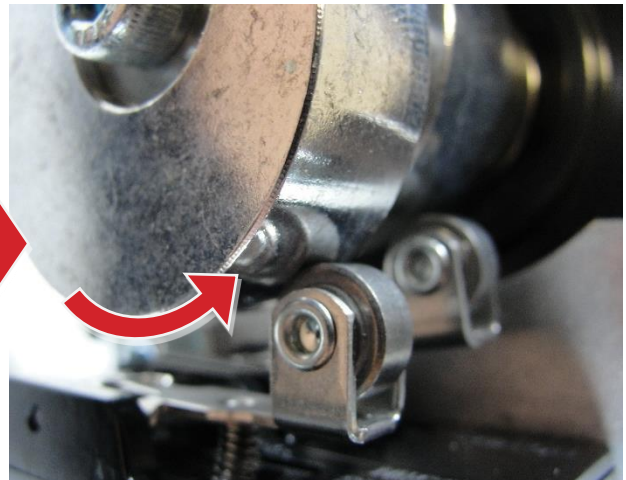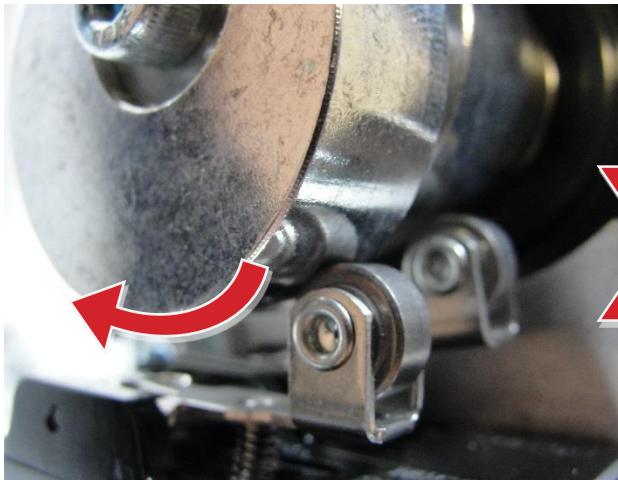
4. With the RSA operator arm in the CLOSED position, rotate the inner limit switch cam until the limit switch is undepressed and clicks slightly, then rotate the cam back onto the switch until another slight click is heard, and the switch is depressed. Re-tighten the lock-screw on the cam.
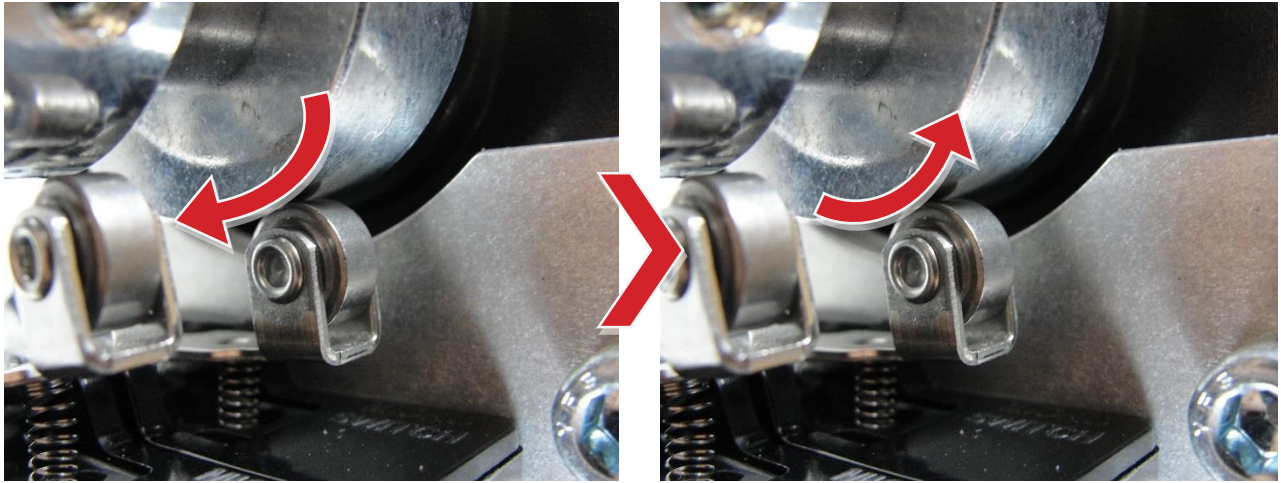
3.3 Operator Position Adjustment

The position of the handle operator on the RSA can be adjusted slightly to accommodate differences in handle layout.

1. Loosen the four bolts on the operator plate.
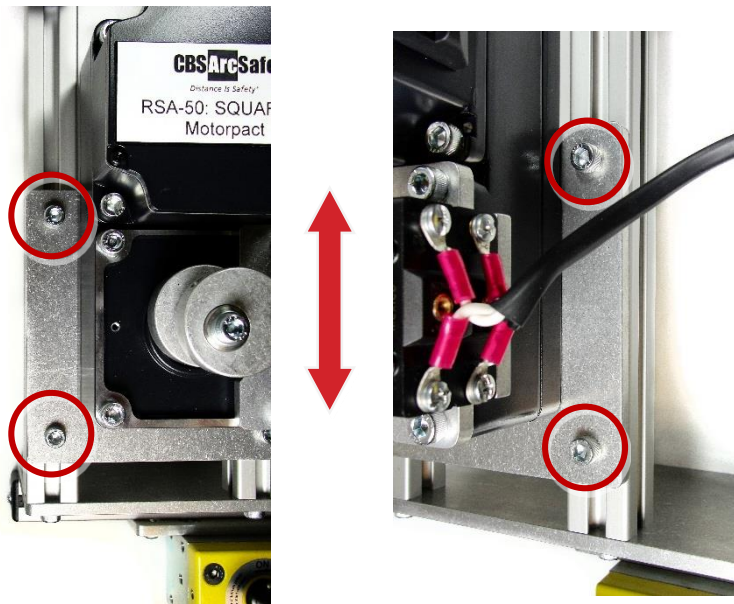
2. Slide the operator up or down as required to achieve proper alignment.

3. Install the RSA as described in the Installation section to ensure that the parts align as desired.

4. Re-tighten the bolts loosened in Step 1.

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).