

CBS ArcSafe®

Distance Is Safety®

A Group CBS Company

Installation and Operation

RSA-57D

For Square D MCCB - L/Q4 Frame

125-400A No Door Panel
Includes LA, LH, LY, Q4 Frames



Distance *is* Safety®

WHAT STANDS
BETWEEN YOU AND
ARC-FLASH DANGER?

**WE
DO.**

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Rev. 4/24/2019

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

The RSA-57D assembly is made of two components: the RSA-57D and the mounting plate. The mounting plate must be installed on the circuit breaker first and then the RSA-57D attaches to the mounting plate during operation. The mounting plate is intended to be left on the circuit breaker after installation while the RSA-57D may be removed and stored at the convenience of the user.

1.1 Mounting Plate Installation

DANGER!

The RSA-57D mounting plate must be installed or removed while equipment is de-energized or taken out of service. Installing or removing the RSA-57D mounting plate on live equipment may result in injury or death and damage to equipment.

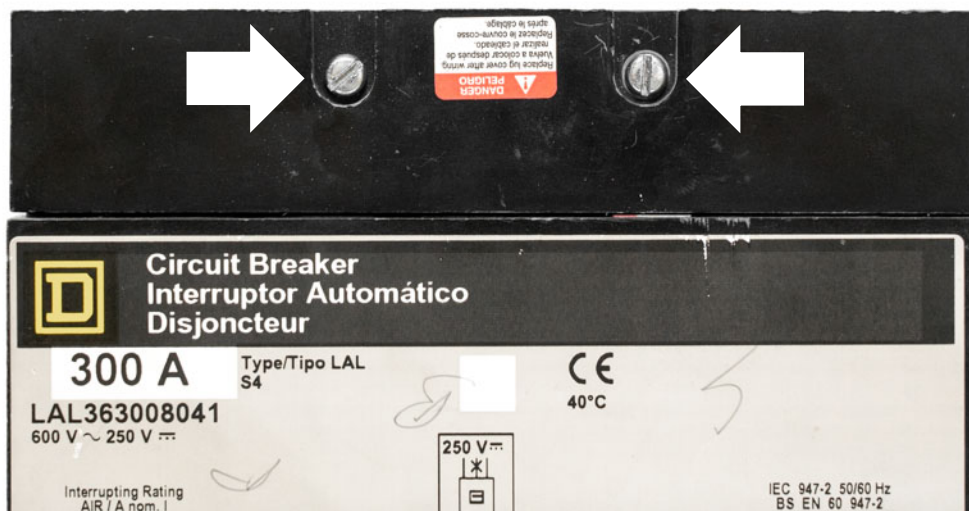
DANGER!

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!

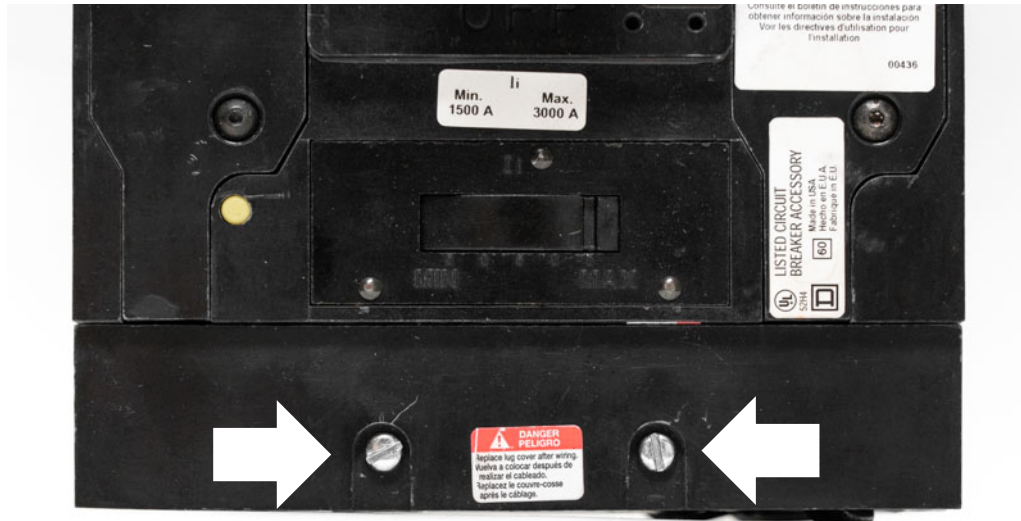
The location of certain items such as mimic bus, stickers, and/or placards may interfere with the proper installation of the RSA mounting plate. Please remove or reposition these items before installing the mounting plate.

1. Locate the (2) screws indicated by the arrows near the top of the circuit breaker.



2. Remove the (2) screws. Take care not to dislodge the plastic bar beneath the screws.

3. Locate the (2) screws indicated by the arrows near the bottom of the circuit breaker.



4. Remove the (2) screws. Support the plastic block beneath the screws to prevent it from falling.

5. Place the mounting plate over the circuit breaker so that the lip of the circuit breaker housing around the circuit breaker handle fits through the large mounting plate opening. The smaller mounting plate opening should be oriented toward the bottom of the circuit breaker.
6. Replace the (4) screws removed from the circuit breaker with the (4) provided #6-32 button head socket cap screws as indicated below. Place a small drop of Loctite 242 (provided) on the threaded end of each screw and then insert the screw through the mounting plate and plastic bar. **ONLY TIGHTEN EACH SCREW UNTIL THE SCREW HEAD CONTACTS THE SURFACE OF THE MOUNTING PLATE. DO NOT OVER-TIGHTEN.**



7. When all (4) screws are in place and the mounting plate is secure against the face of the circuit breaker the mounting plate is ready to receive the RSA-57 for operation.

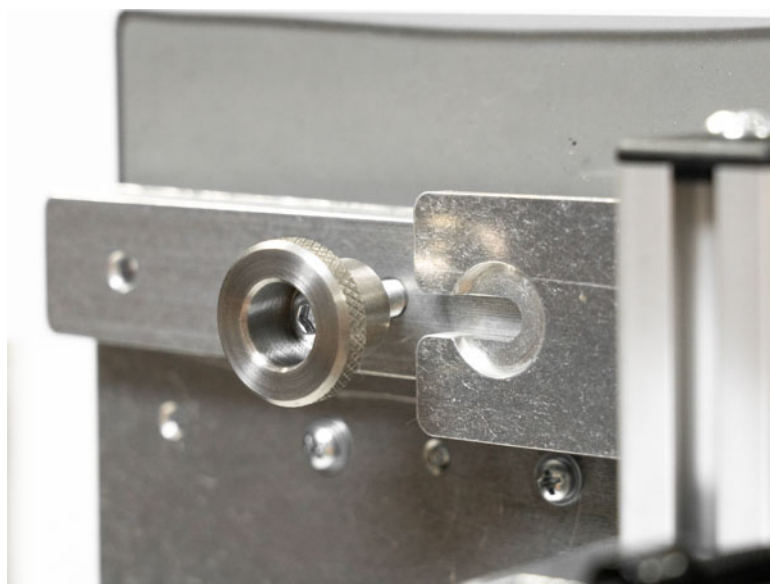
1.2 RSA-57D Installation

If the circuit breaker is OFF (OPEN) and will be turned ON (CLOSED) by the RSA-57D, the actuator of the RSA-57D must be in the extended position before installation on the circuit breaker.

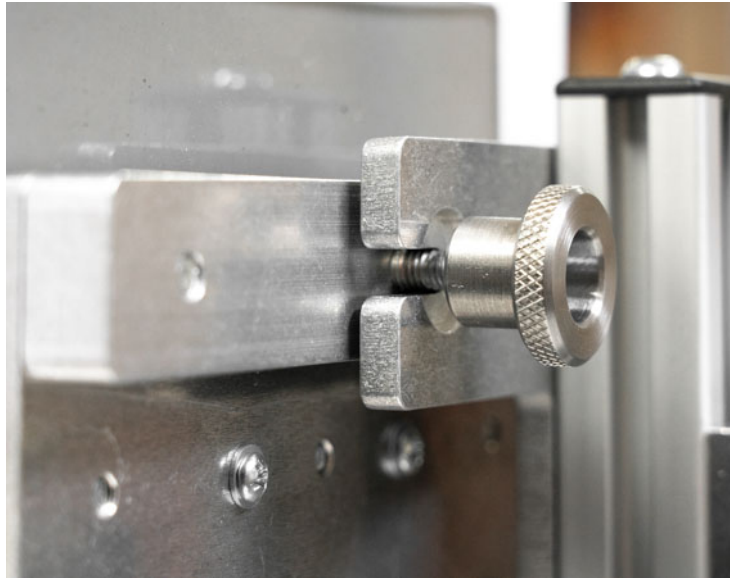
If the circuit breaker is ON (CLOSED) and will be turned OFF (OPEN) by the RSA-57D, the actuator of the RSA-57D must be in the retracted position before installation on the circuit breaker.

Refer to Section 2, Operation, for instructions on how to electrically operate the RSA-57D and extend or retract the actuator.

1. Once the mounting plate is securely installed, loosen the (2) thumbwheels on the top and bottom of the mounting plate.
2. Position the RSA-57D on the right side of the mounting plate so that the slotted tabs on the top and bottom of the RSA-57D frame align with the mounting plate thumbwheel posts as shown below.



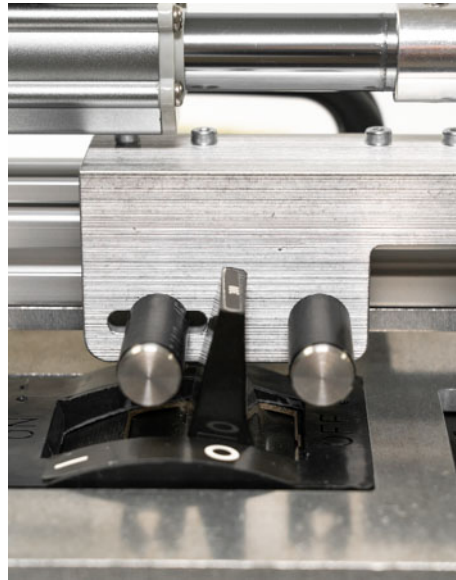
3. Slide the RSA-57D to the left until the slotted tabs are seated against the thumbwheel posts.



1. Tighten the (2) thumbwheels until they are handtight against the RSA-57D frame. The body of the thumbwheels should fit in the counterbored area of the RSA-57D frame.



2. Check that the circuit breaker handle is correctly positioned between the posts of the RSA-57D handle operator.



3. When the RSA-57D is secured to the mounting plate and the circuit breaker handle is correctly positioned between the posts of the RSA-57D handle operator the RSA-57D is ready to operate.



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.

4. Ensure that the RSA is properly installed. See Section 1 for detailed instructions.
5. Plug the four-pin threaded cable from the RSO-I AR into the RSA.
6. Exit the arc flash boundary
7. Turn the power switch on the RSO-I AR to the ON position.
8. Ensure that the Auto Retract (AR) function is set according to the placard on the RSA. If not specified, the default is OFF.
9. If the breaker is ON and needs to be turned OFF then push and hold the TRIP button on the RSO-I to extend the actuator until the breaker is tripped.
10. If the breaker is OFF and needs to be turned ON then push and hold the CLOSE button on the RSO-I to retract the actuator until the breaker is closed.



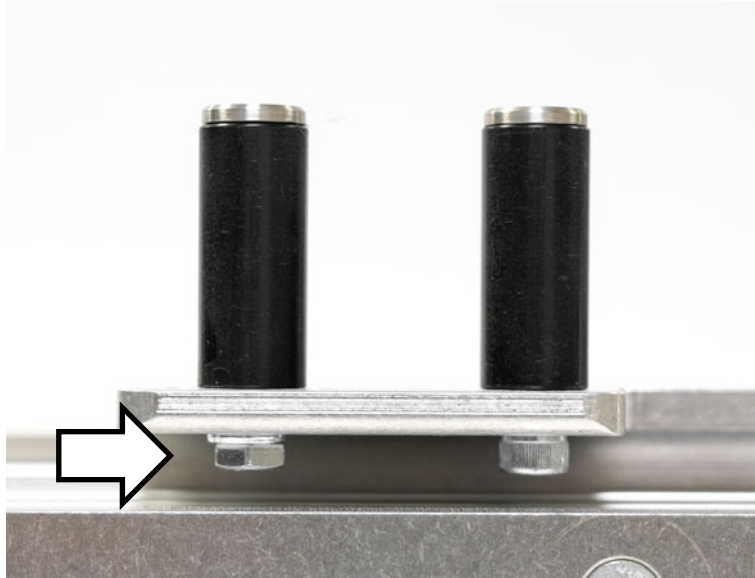
3 Adjustments

The RSA-57D is adjusted to customer specifications by CBS ArcSafe before shipment but some adjustments may be performed in the field.

3.1 Handle Operator Post Adjustment

One of the handle operator posts may be adjusted to fine tune the TRIP (OPEN) operation of the RSA-57D.

1. Loosen the hex head bolt as indicated below.



2. Move the post to adjust the TRIP (OPEN) operation.



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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).