

# CBS ArcSafe®

*Distance Is Safety®*

A Group CBS Company

Installation and Operation

## RSA-74

For Boltswitch VM Series  
600V Pressure Contact Switch



**Distance is Safety®**

WHAT STANDS  
BETWEEN YOU AND  
ARC-FLASH DANGER?

**WE  
DO.**

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## 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.

## 1.1 Mounting Base Installation

This RSA includes a permanent mounting base that must be installed on the breaker prior to operation with the RSA.

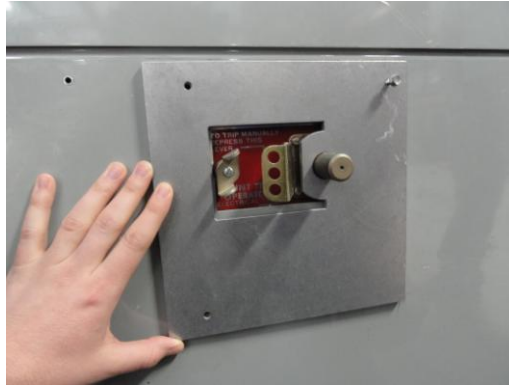
1. Ensure that the area around the breaker is free from any obstruction that may interfere with the proper installation of the RSA Base Plate.



2. Remove the handle from the switch by removing the two bolts at the base of the handle, as shown below.



3. With the handle removed, place the aluminum drilling template over the handle shaft and level it. Then, drill three pilot holes in the locations indicated by the template.



4. Remove the template, and install the black permanent bracket as shown below (with the aluminum posts to the left, and the black hoops to the right), using the three holes that were pre-drilled to guide the first three self-tapping screws, ensuring that the bracket is kept level. Once the bracket is fixed in place, drive in the remainder of the self-tapping screws through the holes in the bracket.



5. Once the bracket is fully installed, re-install the breaker handle that was removed earlier. The Mounting Base is now ready for RSA installation.

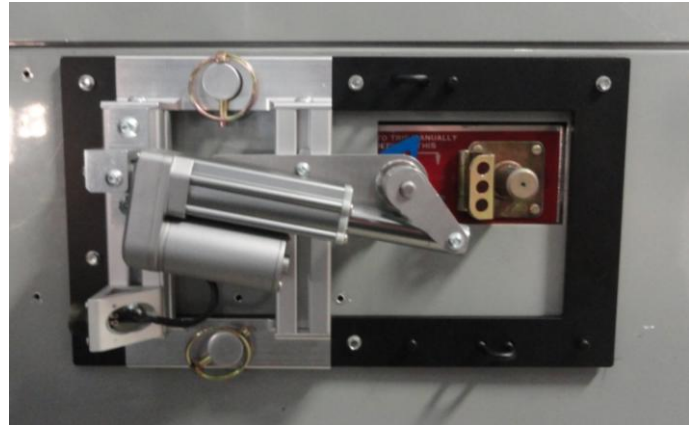


## 1.2 Operator Installation

1. First, install the Trip Assembly by sliding it over the two aluminum mounting posts on the Mounting Base. If the Mounting Base is not yet installed, see Section 1.1: Mounting Base Installation.
2. Be sure that the two pins on the trip mechanism on the breaker fit into the two matching slots on the RSA's Trip Assembly.



3. Finally, secure the Trip Assembly using the two pins included with the RSA.  
**Note:** If only tripping the breaker, it is not necessary to install the Charge/Close assembly, and the operator can proceed directly from here to the Operation section of this manual.

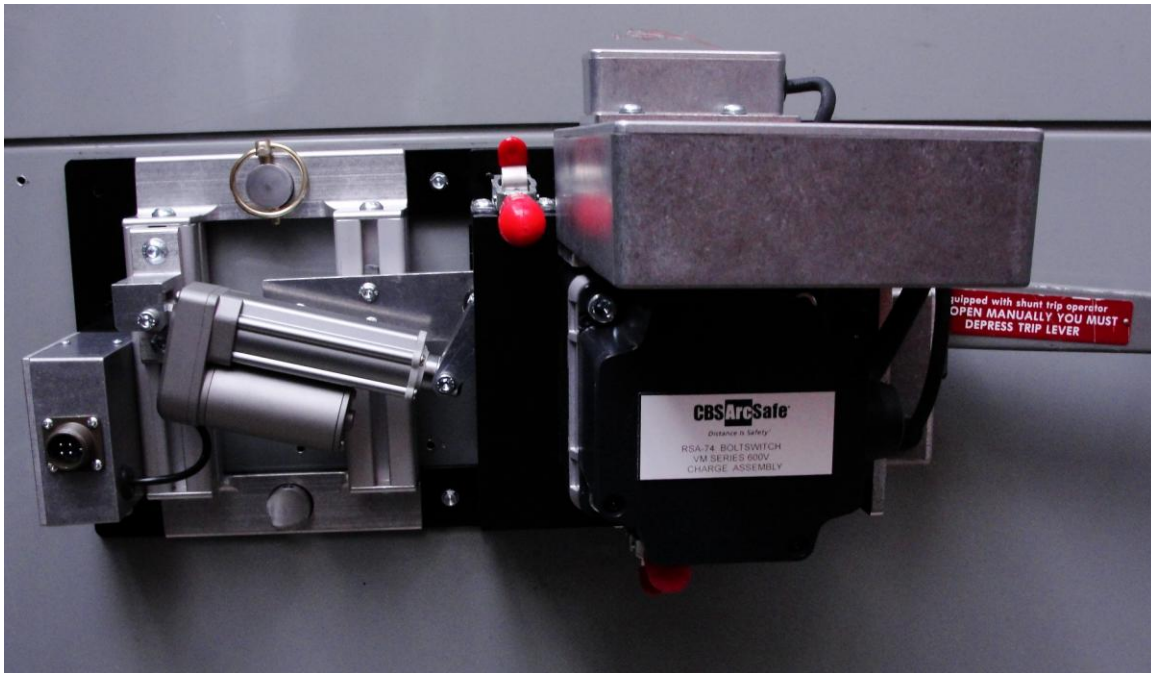


4. Next, install the Charge/Close assembly onto the Mounting Base by aligning the three small pins and two hoops to the appropriate holes/slots on the assembly.



5. Ensure the Charge/Close assembly sits flush against the Mounting Base, and then secure it using the two pull-action latches.

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-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, if applicable. These settings will be found on a 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. Once the timers have been properly set press the CHARGE/CLOSE button to actuate the switch arm and charge the switch mechanism, and then close the switch.
8. Press the TRIP button to trip the switch with the trip actuator.



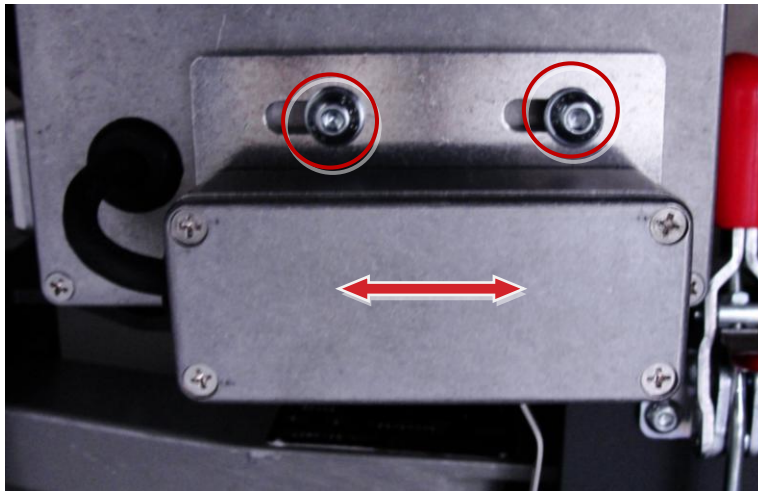
## 3 Adjustments

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 Limits

The RSA has travel stops on it to prevent over-travel and damage of the handle operator during operation. Users wishing to adjust the travel limits of the RSA should see the following instructions.

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



2. With the breaker arm in the OPEN position, slide the limit switch plate so that the switch contact's RSA's actuator arm until a slight audible click is heard.
3. With the breaker arm in the CLOSED position, slide the limit switch plate so that the switch contact's RSA's actuator arm until a slight audible click is heard.
4. Re-tighten the bolts from Step 1.











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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).