

# CBS ArcSafe®

*Distance Is Safety®*

A Group CBS Company

Installation and Operation

## RSA-233A

For Terasaki TemPower Type AT

Low Voltage Air Circuit Breaker, 630-4000A

& Hyundai Type HAT

Low Voltage Air Circuit Breaker, 630-5000A



**Distance is Safety®**

WHAT STANDS  
BETWEEN YOU AND  
ARC-FLASH DANGER?

**WE  
DO.**

2616 Sirius Road | Denton, TX 76208 | (877) 4-SAFETY | [www.cbsarcsafe.com](http://www.cbsarcsafe.com)

Rev. 12/17/2016

## 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.

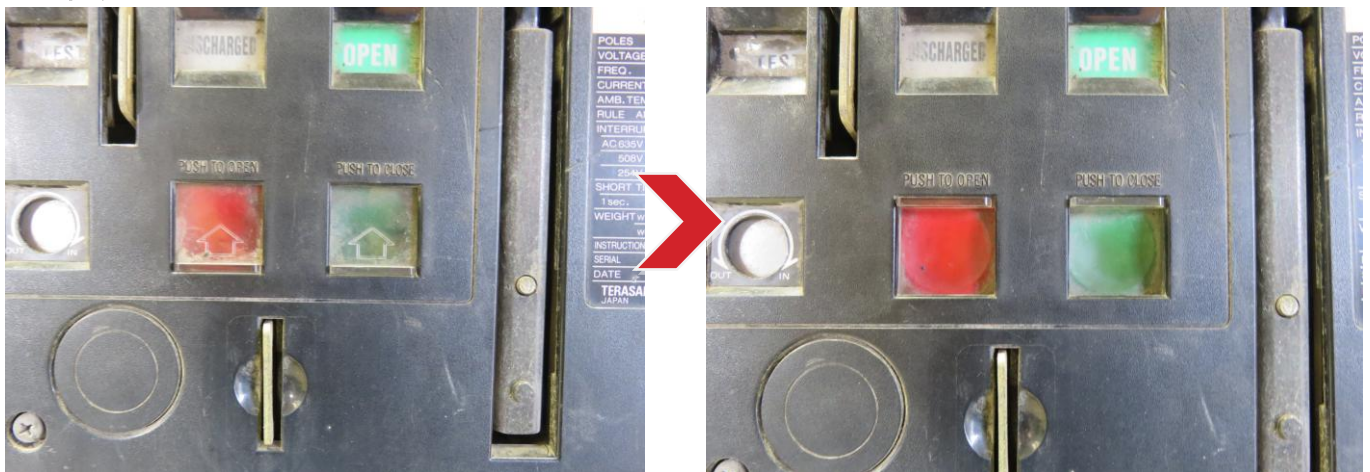
## ATTENTION!

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.

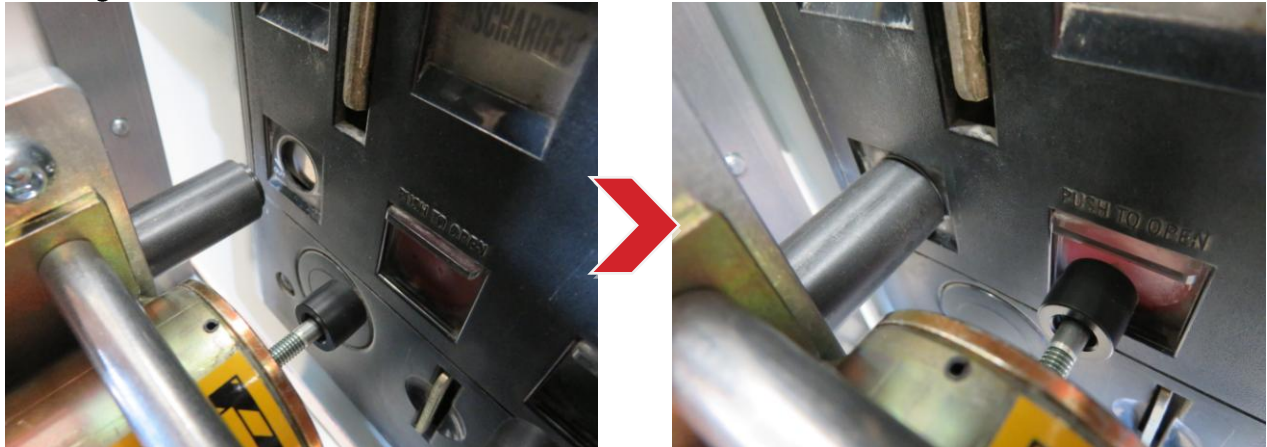
1. Ensure that the breaker is free from any obstruction that may interfere with the proper installation of the RSA.



2. Before installin the RSA, open the access doors on the Close and Open pushbuttons on the breaker, and ensure that they will stay in the retracted position so they do not interfere with operation of the RSA.



3. Place the RSA on the face of the breaker. Ensure that the locator pin seats into the opening for the racking mechanism, as indicated below.



### **DANGER!**

Do NOT open the door to the racking mechanism when installing this RSA. Opening the door to the racking mechanism will cause the breaker to Trip.

4. Ensure that the three magnets seated flush and contacting metal, and then secure the RSA to the breaker by turning the handles of the three magnets 180 degrees clockwise.
5. Ensure that both solenoids are correctly aligned over the breaker pushbuttons as shown. If the solenoid positions need to be adjusted, see the Adjustments section.



The RSA is ready for remote operations.



## 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.
1. Connect the cables from the RSO-IIID to the RSA.
2. Turn the power switch on the RSO-IIID to the ON position.
3. Exit the arc flash boundary
4. Press CLOSE button to close the breaker.
5. Press the TRIP button to trip the breaker.



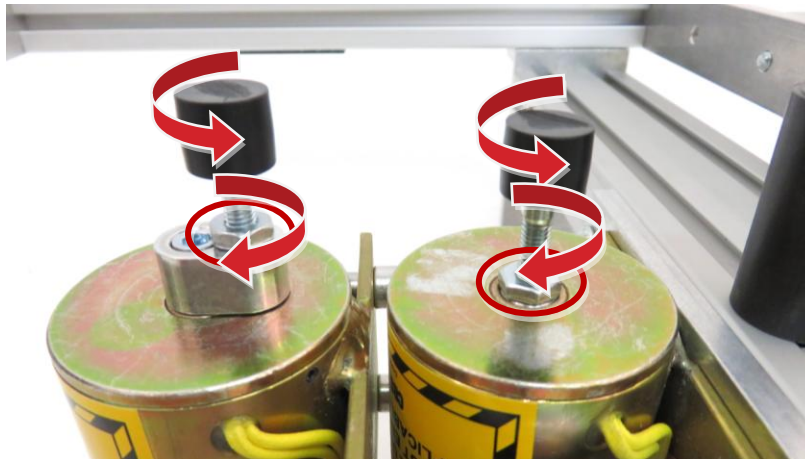
## 3 Adjustments

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.

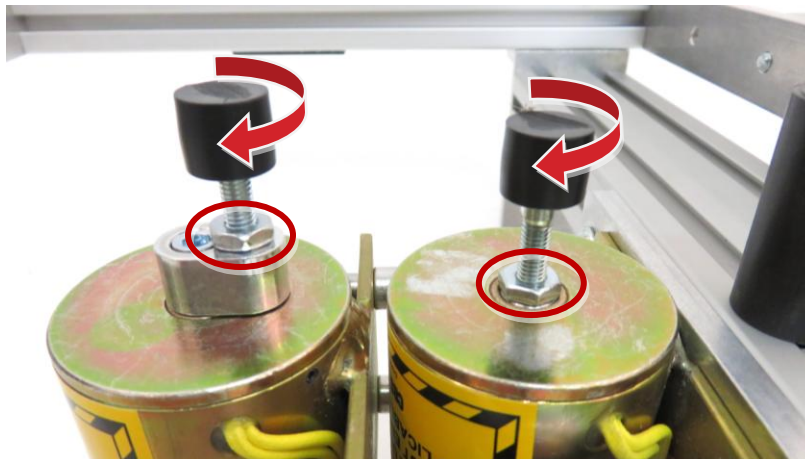
### 3.1 Plunger Depth Adjustment

The operation depth of the solenoids on this RSA can be adjusted to accommodate differences in the button-press depth requirements.

1. To increase the solenoid plunger depth, loosen the nut on the solenoid plunger, and turn the black end counter-clockwise. Test the depth by operating the appropriate plunger with the RSO, and re-tighten the nut.



2. To decrease the solenoid plunger depth, loosen the nut on the solenoid plunger, and turn the black end clockwise. Test the depth by operating the appropriate plunger with the RSO, and re-tighten the nut.



## 3.2 Solenoid Position Adjustment

The location of the solenoids on the RSA can be adjusted in order to ensure they make optimum contact with the breaker pushbuttons.

1. Loosen the two bolts on the solenoid plate, as shown.

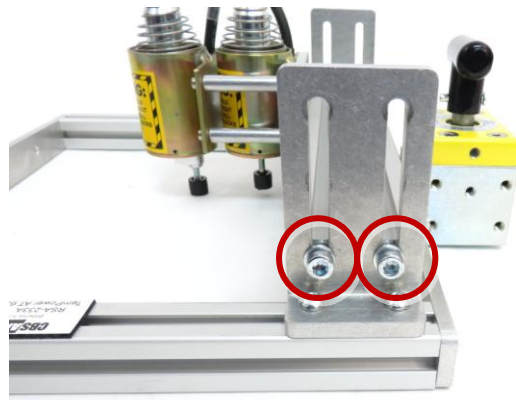
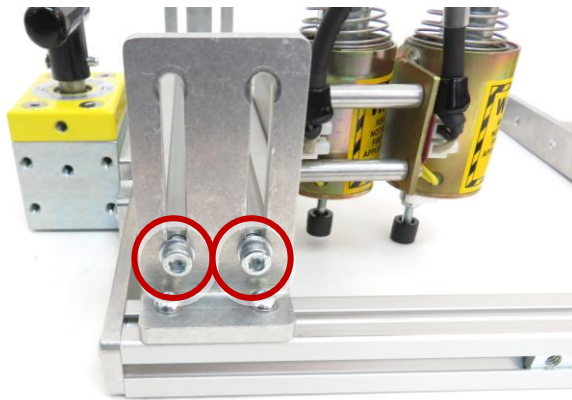


2. Slide the solenoid assembly up or down as required to properly align the solenoids with the breaker pushbuttons, as described in the Installation section.
3. Re-tighten any loosened bolts.



### 3.3 Solenoid Depth Adjustment

1. Loosen the two bolts at each end of the RSA holding the solenoid mount in place, as indicated below.

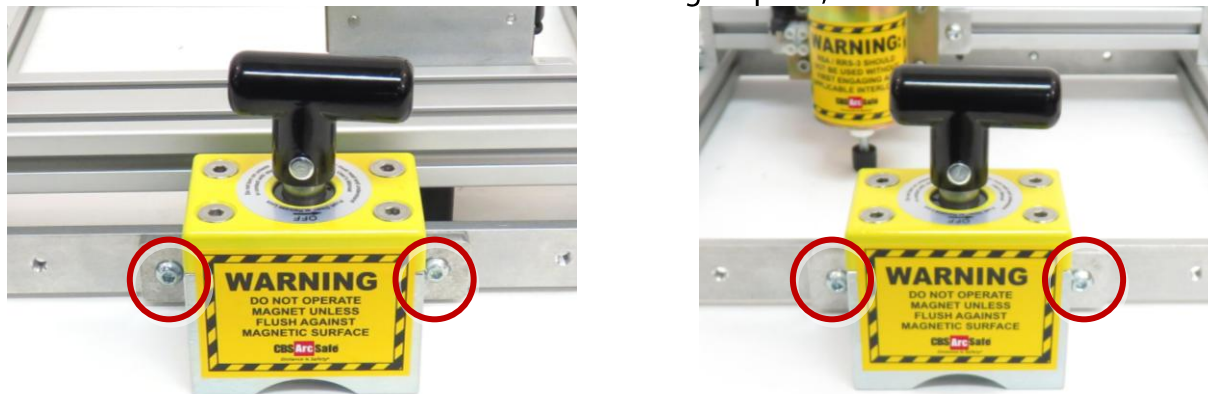


2. Install the RSA on the breaker to be operated, as described in the Installation section of this manual.
3. While aligning the solenoids, slide the solenoid mount in or out as necessary so that the solenoid plungers are resting just above, but do not contact, the pushbuttons on the breaker.
4. Re-tighten the bolts after adjustment is complete.

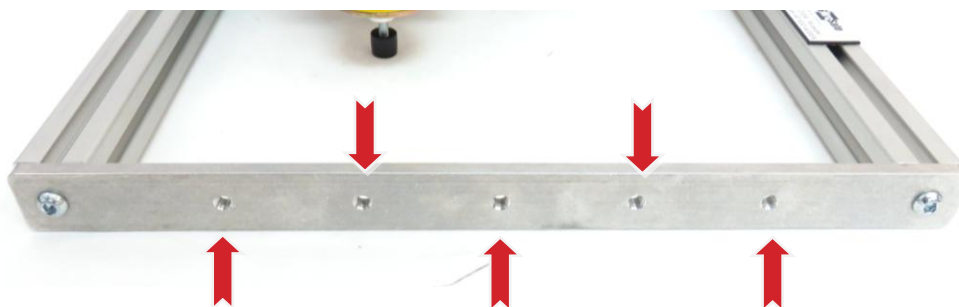
### 3.4 Magnet Adjustment

The location of the top magnet on the RSA can be adjusted in order to avoid interference from items mounted to the breaker door. Note: the RSA may come from the factory configured with the magnets mounted to the top and bottom, or the sides of the RSA. Contact CBS ArcSafe with any questions regarding magnet configuration.

1. Loosen and then remove the two bolts on each magnet plate, as shown below.



2. Move the magnet left or right as necessary to position it so it adequately avoids any obstructions using the provided adjustment holes.



3. If additional flexibility is needed, the magnet can be installed using the provided tee-nuts in the top and bottom extrusion on the RSA.



4. After moving or adjusting the magnets, make sure all bolts are tightened securely.





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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).