

# CBS ArcSafe®

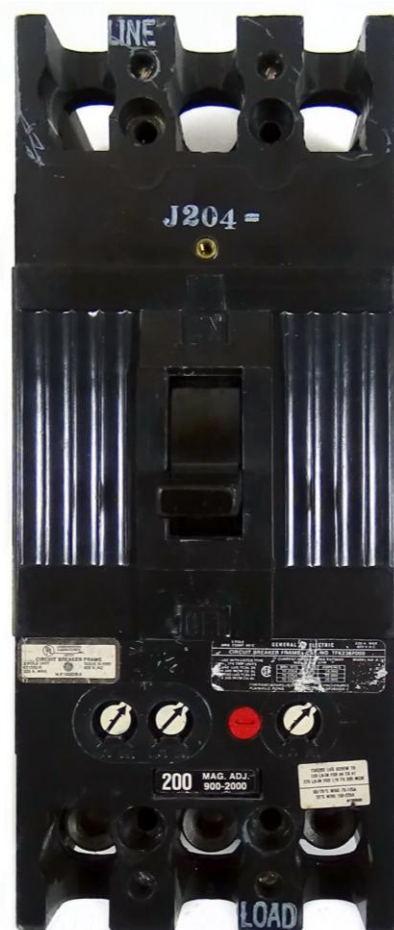
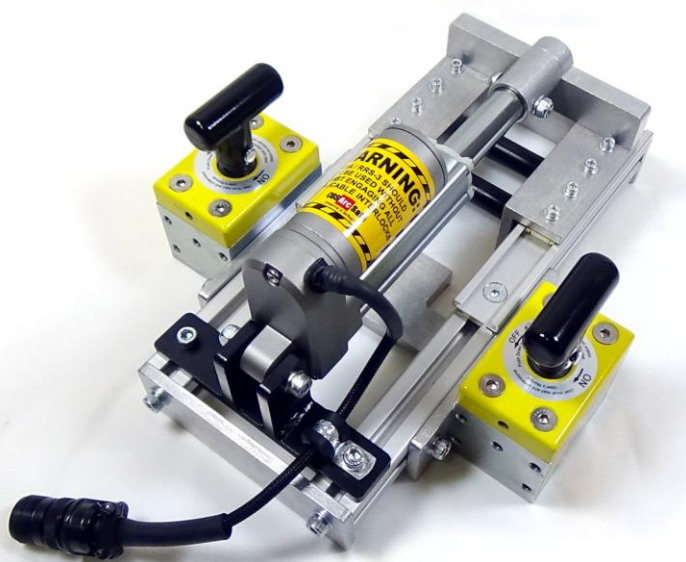
*Distance Is Safety®*

A Group CBS Company

Installation and Operation

## RSA-187B

For GE MCCB - F Line, 225A Frame Size  
Type THFK/TF/TFC/TFJ/TFK/TFL  
(Flushed Mounted)



**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. 10/31/2014

## 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.

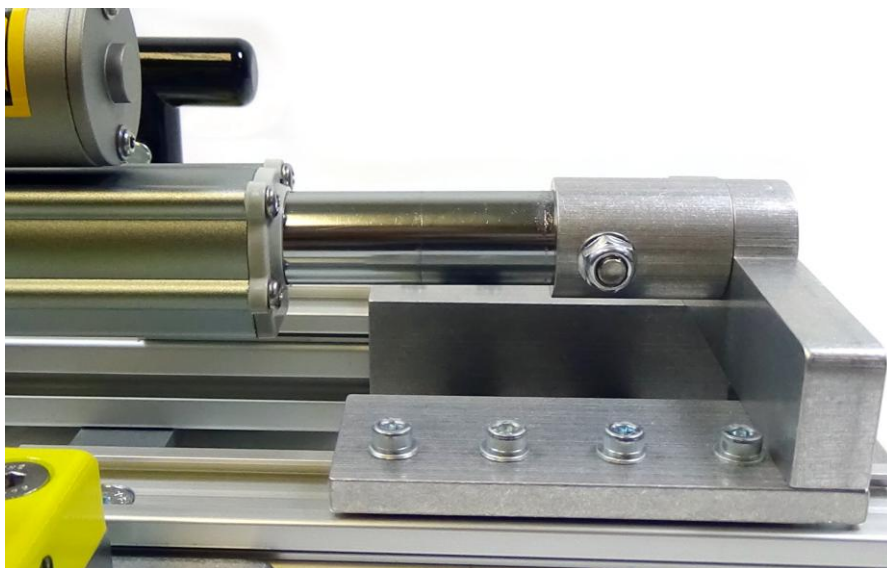
## ATTENTION!

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.

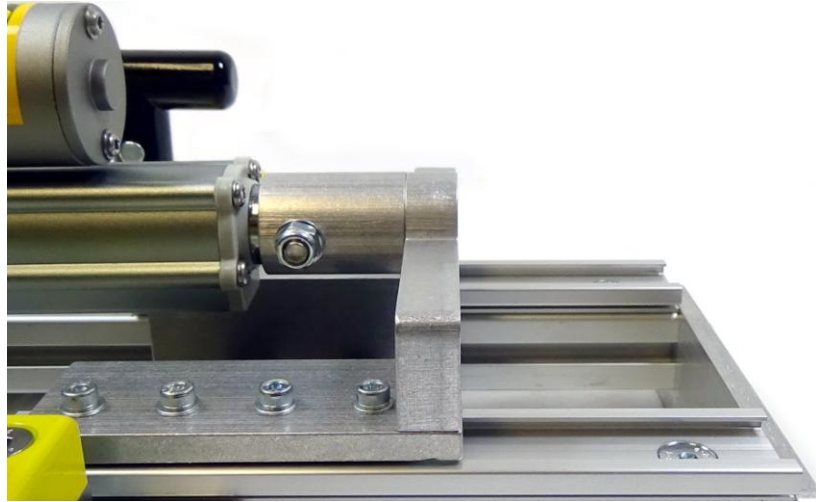
1. Ensure that the breaker is free from obstructions that may interfere with proper installation of the RSA



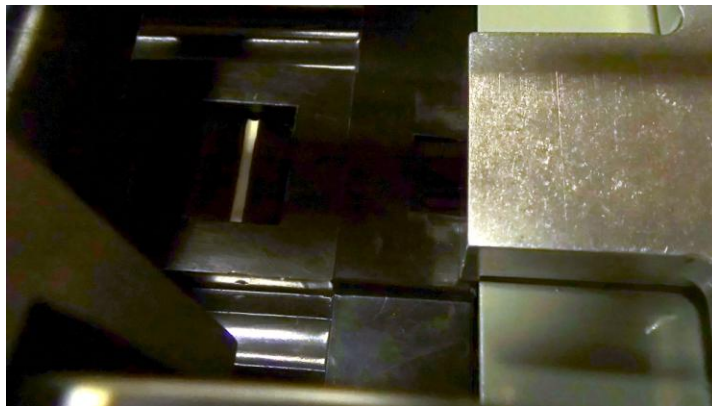
2. Position the actuator on the RSA to match the switch state, prior to installation. See the Operation section on how to operate the RSA.
  - a. If the switch is ON and needs to be turned OFF, then the actuator needs to be fully extended.



- b. If the switch is OFF and needs to be turned ON, then the actuator needs to be fully retracted.



- c. If the switch has TRIPPED, then the actuator needs to be partially extended, to fit over the switch as needed.
3. Position the RSA on the breaker, ensuring that the locator on the RSA is flush against the lower edge of the breaker and hooked on the cabinet door lip, as shown.



4. Ensure the magnets are fully seated against the breaker door and then turn the handles of the twist-lock magnets 180° to lock the RSA in place.

The RSA is now ready for 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 the Installation section 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. Press and hold CLOSE to turn the switch ON.
7. Press and hold TRIP to turn the switch OFF.



## 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 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 plate, as shown below.

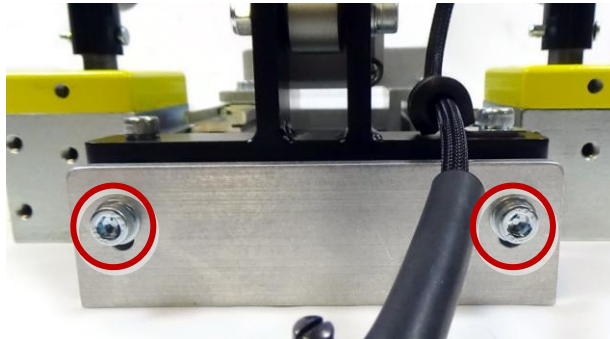


2. Slide the magnet left or right as necessary to position it so it adequately avoids any obstructions.
3. Re-tighten the bolts.

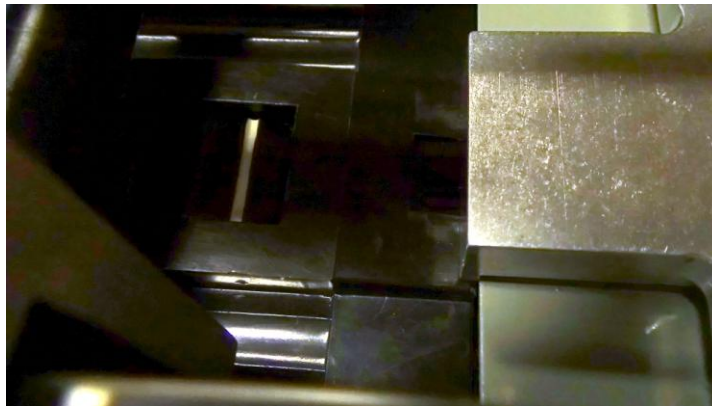
## 3.2 Locator Adjustment

The depth of the locators on the RSA can be adjusted slightly to accommodate some obstructions on the witch panel.

1. Loosen the two bolts on each locator plate.



2. Slide each locator up or down as required to achieve proper alignment of the RSA actuator.
5. Install the RSA as described in the Installation section to ensure that the parts align as desired. Ensure that the actuator on the RSA seats properly on the panel, and that the magnets are seated flush against their mounting surfaces.
6. Also ensure the breaker the locator on the RSA is flush against the lower edge of the breaker and hooked on the cabinet door lip, as shown.



- 3.
4. Remove the RSA, and re-tighten the bolts loosened in Step 1.



### 3.3 Operator Position Adjustment

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

1. Loosen the two bolts on the operator plate.



2. Slide the operator up or down as required to achieve proper alignment and travel adjustment on the switch handle.
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.







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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).