

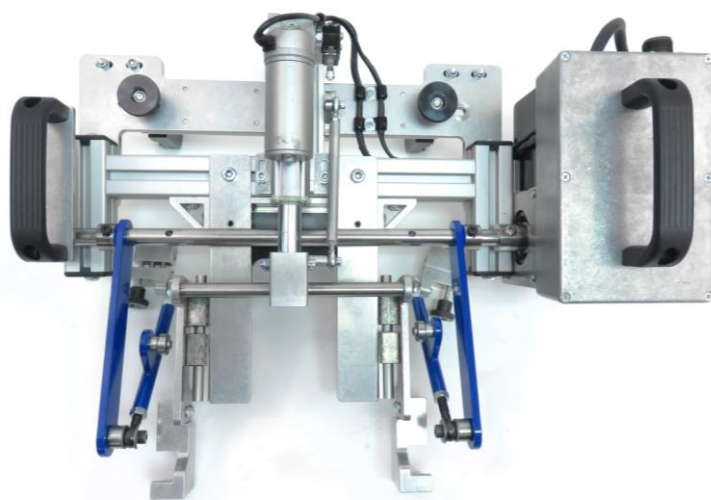
CBS ArcSafe®

Distance Is Safety®

A Group CBS Company

RRS-3 AKD-5(SE1)

For GE AK-1-25 ACB



Installation and Operation

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

Rev. 5/26/2016

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

Published and distributed by:
CBS ArcSafe®
2616 Sirius Road
Denton, Texas 76208

A division of:
GroupCBS, Inc.®
P.O. Box 1557
Gainesville, Texas 76241

Copyright CBS ArcSafe® 2013

Printed in the United States of America
Reproduction, adaptation, or translation without prior written permission is prohibited except as is allowed by law.

About the User's Guide

This user's guide describes the functions and features of the CBS ArcSafe® RRS-2 tooling for the Merlin Gerin FG1. This technical document is intended to act as a simplified reference for users of the equipment; allowing for safe, quick, and efficient use of the RRS-2 tooling features.

DANGER!

This is a red hazard alert warning box; red hazard alert boxes contain information pointing out potential hazards to personnel and equipment.

ATTENTION!

This is a green information box; green information boxes are used to place emphasis on valuable information the user will want to pay particular attention to.



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).

DANGER!

Ensure that switchgear is properly maintained and in good working order before using the RSO on your switchgear. Contact your local group CBS service provider at www.gcbs.com to assist in proper care and maintenance for your switchgear.

1 Installation

DANGER!

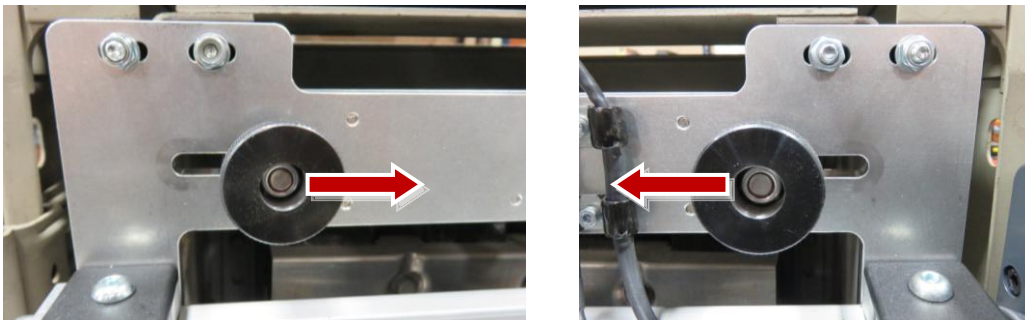
Ensure that the equipment to be remotely operated matches the equipment shown and described on the cover page. If the equipment does not match, please contact CBS ArcSafe® for more information regarding remote operating applications for the equipment in question.

ATTENTION!

The location of certain items such as mimic bus, stickers, and/or placards may interfere with the installation of the remote operating equipment. These items may need to be removed or repositioned for proper installation.

1.1 Installation

1. Ensure that the breaker is free from any obstruction that may interfere with the proper installation of the RRS-3.
2. Loosen the locking knobs on the RRS-3, and slide them in to prepare the RRS-3 for installation on the breaker.



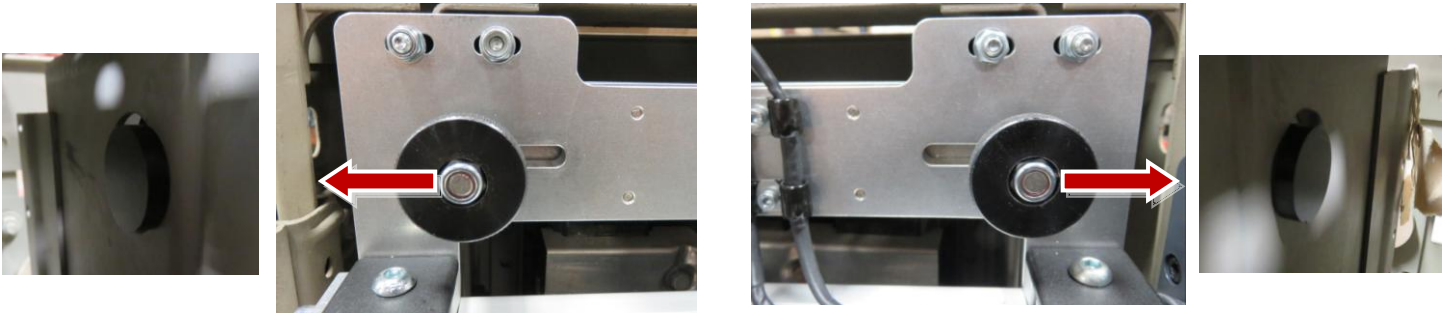
3. Next, place the RRS-3 on the breaker. Ensure the locator is seated over the handle operator escutcheon, as indicated below, and that the locators in the upper corners of the RRS-3 are flush to the inside of the breaker carrier. If they are not flush, see the Adjustments section for details on adjusting them.

NOTE:

Disregard the dangling racking handle operators, they will be installed onto the breaker later in the installation process.



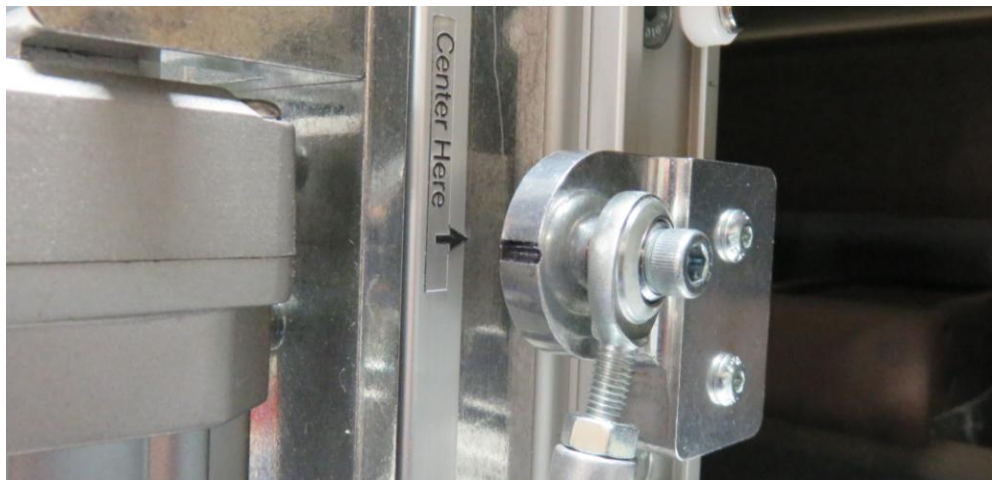
- Lock the RRS-3 into place on the breaker by sliding the locking knobs outward through the holes in the breaker carrier, as indicated below, and then tightening them down. Ensure that the slot in the locking peg fits over the edge of the hole, as shown in the two outer images below.



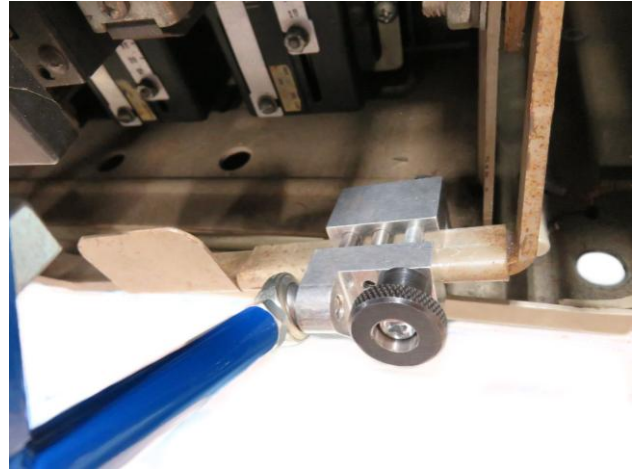
- Next, connect the RSO-IV to the RRS-3, and turn on the power.
- Using the RSO-IV, jog the actuator on the tooling until the arrow indicator is aligned with the notch shown in the image below. For more information regarding operation, please see the Operation section.

ATTENTION!

The motor cam switch must be made before the actuator will move. Press and hold the applicable button on the pendant until the cam switch is made before attempting to jog the actuator into position.

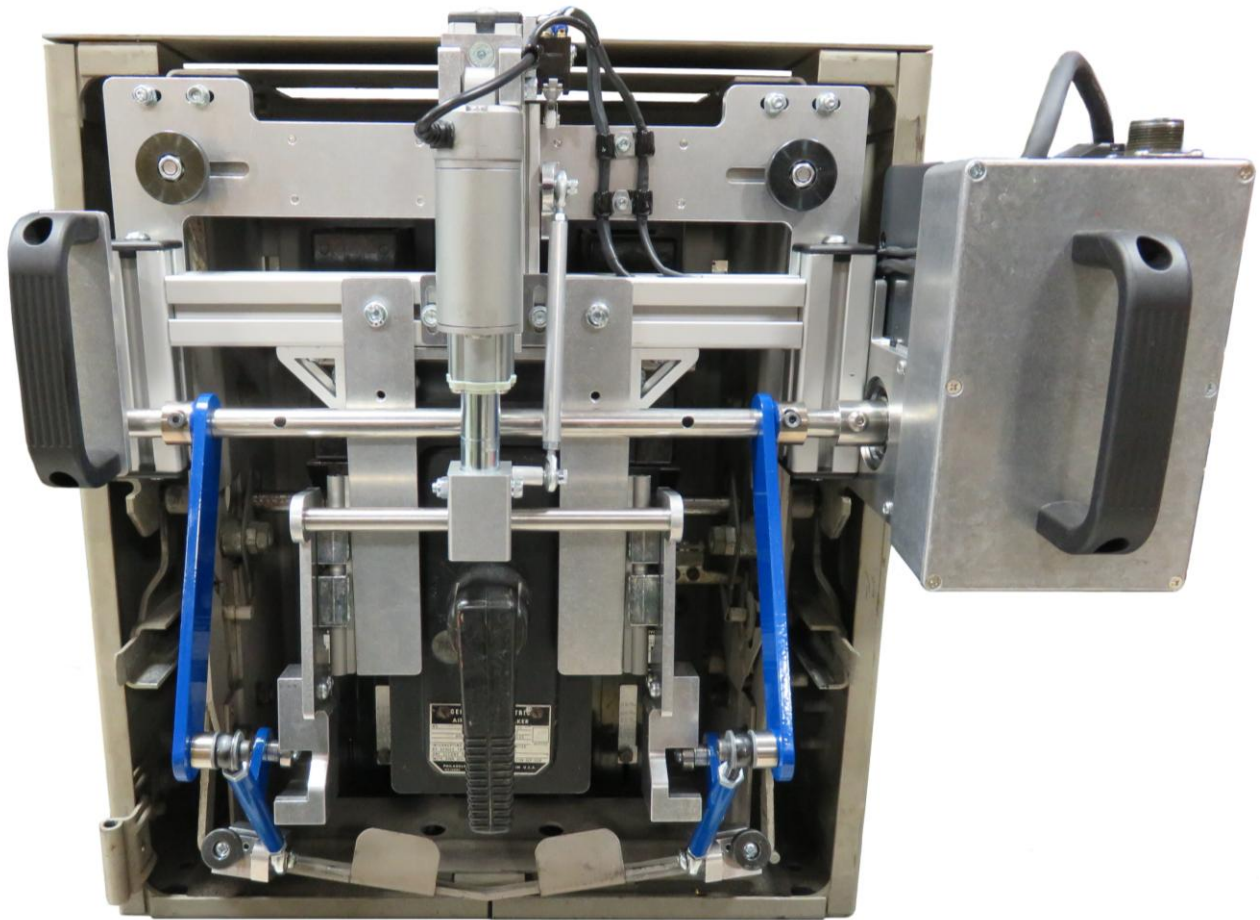


- With the actuator aligned to the arrow, carefully rotate both of the arms downward toward the racking handle until both of the handle adapters are just resting on the racking handle.
- Loosen the knurled knob on each handle adapter and, using both hands, carefully rotate the arms and place handle adapters over the racking handle. Tighten the knob securely on each handle adapter to fix them into place as shown in the images below.



9. Lastly, ensure that the device is setup as shown in the image on the following page.

The RRS-3 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-IV are fully charged or that the unit is plugged into AC power.

For detailed instructions on the operation of the RSO-IV please see the RSO-IV Manual.

1. Ensure that the RRS-3 is properly installed. See the Installation section of this manual for detailed instructions.
2. Connect the cable from the RSO-IV to the motor control box on the RRS-3
3. Turn the power switch on the RSO-IV to the ON position.
4. Program the settings for the RRS-3 into the RSO-IV. These settings can be found on the placard on the RRS-3. For more information on programming the RSO-IV please refer to the RSO-IV Technical Manual.
5. Exit the arc flash boundary.
6. Once the current limits have been properly set, press and release the REMOVE button on the RSO-IV control panel or remote pendant to rack the breaker out.
7. Press and release the INSTALL button on the RSO-IV control panel or remote pendant to rack the breaker in.



3 Adjustments

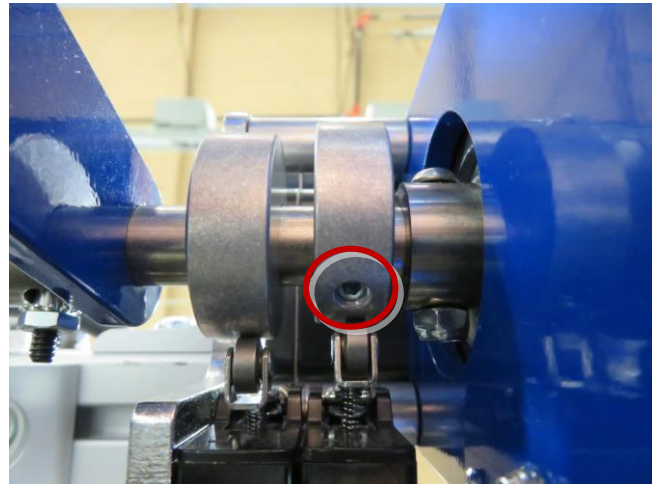
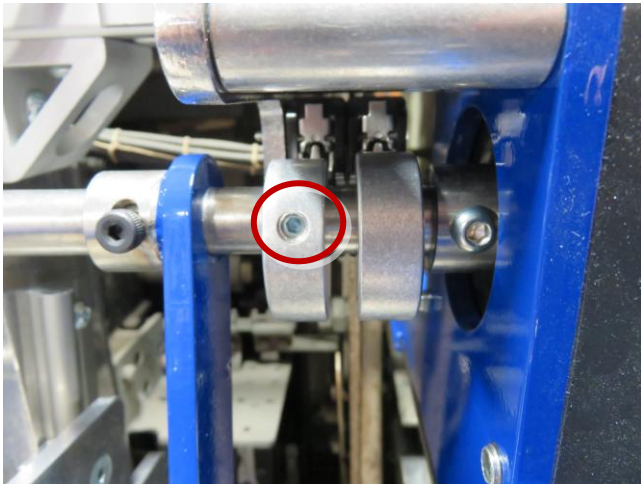
DANGER!

All adjustments should be made on a spare or de-energized breaker. If no spare is available then follow all precautions regarding personnel and equipment safety for live equipment.

3.1 Cam Lobe Adjustment

The cam lobes on the motor shaft can be adjusted to limit or extend the travel of the motor during the racking phase. If adjusting the cam lobes, be sure to adjust in very small increments.

1. Loosen the set screw on the cam lobe to be adjusted. The left cam lobe will adjust the install travel limit while the right cam lobe will adjust the remove travel limit (Turn the cam lobe in the direction of travel to reduce travel limit)



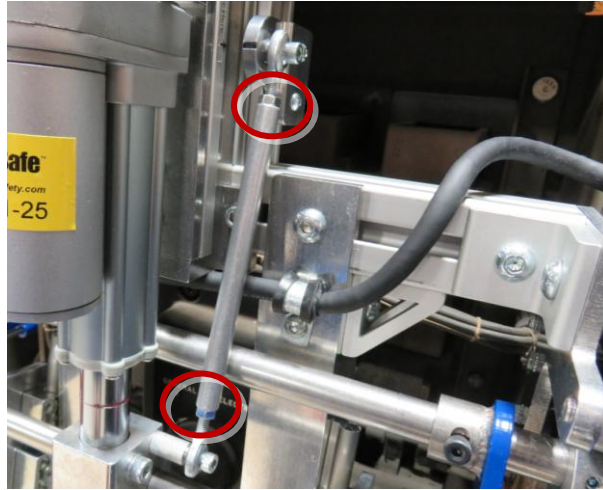
2. Rotate the cam lobe the desired amount.
3. Re-tighten the set screw on the cam lobe and re-check travel.

3.2 Actuator adjustment

3.2.1 Actuator Limit Switch

The actuator limit switch can be adjusted to allow the actuator to pull the handle farther upwards before racking process begins.

1. Loosen the upper and lower nuts which hold the turnbuckle in place as shown.

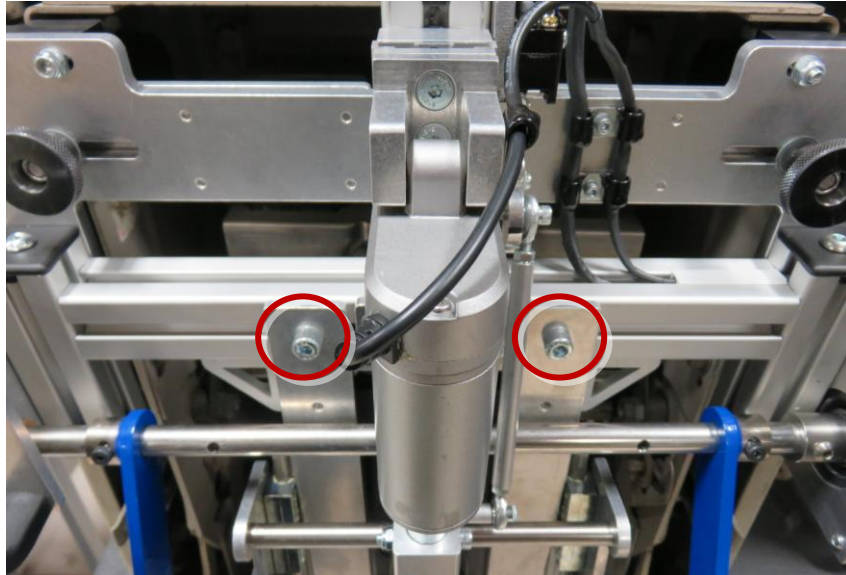


2. Adjust the turnbuckle to shorten or lengthen the distance between the carriage and the limit switch trigger.
3. Once adjustments have been made, tighten upper and lower nuts to secure turnbuckle.

3.2.2 Actuator Adjustment

The actuator can be raised or lowered to allow for more or less force to be put on the breaker handle.

1. Loosen the two lower bolts located on the frame to the left and right of the actuator.



2. Slide the actuator up or down to the desired position.
3. Re-tighten the bolts to secure the actuator in place.

Notes



Distance Is Safety®

A Group CBS Company

RRS-3 AKD-5(SE1)
Installation and Operation

2616 Sirius Road
Denton, TX 76208
Tel: 877-4-SAFETY
Fax: 940-382-9435
Website: www.CBSArcSafe.com
Email: info@CBSArcSafe.com

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).