# **CBS** Arc Safe<sup>®</sup>

A Group CBS Company



# Distance is Safety

(877)472 - 3389

WHAT STANDS BETWEEN YOU AND ARC-FLASH DANGER?



# **Highlighted Products**

# See our remote switching and racking solutions for these common apparatus

#### AB Centerline 2100 Allen-Bradley motor





Secure Connect feature can be remotely racked using our award-winning SecureConnect portable solution. Vintage gear is racked with the Remote Racking System (RRS-2-BE); switching operations are achieved through Remote Switch Kits (RSK-ABL1 or RSK-ABL2).







#### **Breaker Control Switch**

**Breaker Control Switch operations** are enabled by the Remote Switch Kit (RSK-CS series), which includes actuator, handheld controller, case, and more.



#### Magnum DS/SB

Eaton/Cutler-Hammer MDS/SB low-voltage circuit breakers can remotely charge/close/trip using the Remote Switch Actuator (RSA-48). The Remote Switching Kit (RSK-MDS30) handles close/trip applications. Racking can be done remotely with the RRS-3-MDS or with built-in video with the RRS-3-MDSR1.







DS/DS II

Many common load break switches can be remotely actuated using one of our popular Remote Switch

Actuators, including the

RSA-147, RSA-116,

and RSA-116A.

**Load Break Switches** 





#### DS/DS II Cutler-Hammer/ Westinghouse/Square D DS-line air circuit breakers can be remotely racked using the portable Remote Racking System (RRS-3-DSR1 or RRS-3-DS). Full charge/ close/trip operations are

covered by the Remote Switch Actuator (RSA-12A). Close/trip operations are provided by the Remote Switching Kit (RSK-DS10).

### **Molded** Case **Circuit Breakers**

Many common MCCBs, from 10 A to 3000 A, can be remotely actuated using one of our Remote Switch Actuators, including the RSA-113G, RSA-164K, and RSA-20F.





# Masterpact NW

Merlin Gerin/Square D Masterpact NW ICCB can be remotely racked in/out while using the **Remote Racking System** (RRS-3-NW). Full charge/ close/trip operations are covered with the

Remote Switch Actuator (RSA-120), while the Remote Switching Kit (RSK-NW20) covers only close/trip operations.





RRS-1 **Our Universal Remote Racking** System (RRS-1) offers an industryleading number of solutions for rotary-style switchgear. This unit is designed for removing or inserting low- and medium-voltage drawout rotary circuit breakers while the operator remains outside the arc-flash boundary.





#### **Pringle Switch**

Pringle Switches with and without a push-button shunt trip can be remotely actuated using the Remote Switch Actuator (RSA-135 Series).





# **CBS** Arc Safe<sup>®</sup>

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CBS ArcSafe products keep technicians outside of the arc-flash hazard boundary while performing potentially dangerous electrical tasks. With the largest selection of remote switching and racking solutions available, we are the industry leader in electrical remote operations. As a Group CBS Company, CBS ArcSafe provides you access to the industry's largest inventory of low- and medium-voltage switchgear. We have parts, on-site service, comprehensive repair, and "need-it-now" delivery capabilities.



## We take pride in being available and capable of responding anytime, anywhere.

- Largest selection of remote switching and racking equipment for low- and medium-voltage circuit breakers, motor control centers, and other applications.
- On-site demonstrations, training, and in-depth site evaluations provided by our Product Specialists and Group CBS affiliates.
- Equipment Training: OEM training by CBS ArcSafe is included in the purchase of select equipment. For existing customers, we recommend OEM retraining every three years and/or as staff attrition occurs. 2021 NFPA 70E Article 110.6(3) states that retraining in safety-related work practices shall be performed at intervals not to exceed three years. In addition to training, you can visit our CBS ArcSafe YouTube channel for demonstration videos for a variety of devices.

# For after-hours or emergency support, contact us 24/7 via our emergency phone number: (877) 472-3389.

Assistance is also available from other Group CBS companies, which are listed on the back cover. We continue to develop new solutions for our customers on a daily basis. If you do not see what you need in our catalog, give us a call.

# **CBS ArcSafe Facilities**

**All CBS ArcSafe equipment is manufactured in the United States** at our Denton, TX headquarters and Charleston, WV facility, ensuring the highest quality components and systems. Our capabilities include production at scale and custom solutions to meet specific customer design requirements.

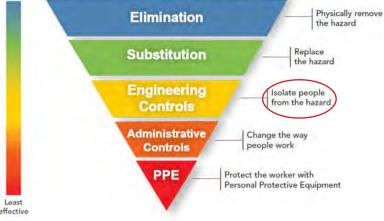
Capabilities include product engineering, SolidWorks/CAD design, CNC milling, 3D printing, programming, and water jet and laser cutting.

# NFPA 70E compliance

Most



# Hierarchy of Controls









# **Remote Switch Actuators (RSA)**

CBS ArcSafe® Remote Switch Actuators (RSAs) are designed to remotely charge, close, and/ or trip various styles and types of electrical equipment. An RSA can be custom built for any electrical device. RSAs are quickly attached by strong magnets, eliminating the need for modifications to your switchgear. This results in safe and efficient operations. Magnets also allow workers to easily move the RSA from one application to another.



**RSA-48** Eaton, Cutler-Hammer Magnum DS, SB (Door Closed, 800-4000 A)



**RSA-113** 



**RSA-116** 

#### **OPTIONAL FEATURES**

- Radio remote with up to 300-foot range
- Wireless video camera system with LCD monitor
- Rugged protective case assembly

## BENEFITS

- Lightweight, portable construction
- Mechanical and/or electrical safety protection
- Adjustable to fit unique electrical equipment configurations
- Fast and easy to set up
- Reduces need for a full-body arc-flash suit
- Adds safety and helps comply with NFPA 70E
- No modifications required

# Remote Switch Kits (RSK)



Chicken Switch® Remote Switch Kits (RSK) are portable devices designed to remotely operate circuit breakers, control switches, and motor control centers. RSKs are ideal in environments where weight and portability are a consideration. With no need to purchase a separate power source, the price point and packaging are appealing.



RSK-CS01 **Electroswitch Series** 24, 24P, General Electric SB, SBM, SB-1, SB-9, SB-10, Westinghouse Type W, Shallco



RSK-K15

Operated)



PowerBreak (with Close button on left side of charging handle)



Complete kit includes actuator, handheld controller,

\*Wireless control available on most models.

All CBS ArcSafe products are compatible with all switchgear manufacturers, including: Eaton

ABB, BBC, ITE K-Line (2000

A & below, Electrically

ABB

Series 26

- **Allis-Chalmers**
- Alstom
- BBC
- **Cutler-Hammer**
- **Federal Pioneer**

Federal Pacific Electric

- General Electric
- Hyundai
- ITE

- McGraw-Edison **Merlin Gerin**
- Mitsubishi
- Powell
- Reyrolle

**Siemens-Allis** 

- Square D
- Toshiba

Siemens

Westinghouse

NOTE: All manufacturers' names, trademarks, and part numbers are used for reference purposes only. CBS ArcSafe, Inc. is not an authorized distributor or representative of manufacturers shown. Designated trademarks, brand names and brands appearing herein are the property of their respective owners.



# **Remote Racking System** For Rotary Circuit Breakers



By permitting the automatic racking of the circuit breaker from a remote location, the CBS ArcSafe® remote racking system replaces the manual racking operation and removes the operating personnel from manual contact with the circuit breaker. The unique design of the CBS ArcSafe remote racking system, with its specially manufactured drive shafts and tooling, enables the system to operate with all types of circuit breakers produced by the major switchgear manufacturers. The CBS ArcSafe remote racking system can operate with draw-out types of air, SF6, oil, and vacuum circuit breakers that have either a horizontal or vertical racking operation.

### **BENEFITS**

- Remote operation places operator outside the arc-flash protection boundary
- Compatible with low- and medium-voltage circuit breakers produced by all major switchgear manufacturers
- Use with horizontal and vertical types of air, SF6, oil, and vacuum circuit breakers
- Height and angle of the drive is easily adjusted
- Quick-release drive shafts and couplings simplify setup
- Redundant over-racking protection provided
- Seamless transfer of AC/DC power
- Hand-truck design provides easy mobility

### **SPECIFICATIONS**

<b>WEIGHT</b> 200 lbs
<b>BATTERY LIFE</b> > 50 Operations*
SYSTEM VOLTAGE 24V DC
INPUT VOLTAGE $\dots$ 120±10% VAC, 47-63 Hz <sup>+</sup>
MAXIMUM AC CURRENT 12.2 A
DRIVE MOTOR POWER 250 W
DRIVE ASSEMBLY SPEED 80 RPM
CHARGE TIME Approx. 6 hours
<b>DIMENSIONS</b> 74" H x 26" W x 38.1" D
<b>OPERATING DISTANCE</b> 35 feet <sup>‡</sup>

\*Number of operations is dependent on the nature of the operation <sup>†</sup>May be custom ordered to match different local power standards \*Standard configuration, contact CBS ArcSafe® for other options

US PATENT NO 8 151 452B2

For Extraction-Style and Rotary-Type Circuit Breakers

# **Optional Equipment**

## **CCM Radio Remote**

The Current Control Module (CCM) radio remote option allows users to operate the RRS and monitor the racking status wirelessly from up to 300 feet away. Ideal for users with extended distance requirements or those who wish to monitor the status of the racking operation remotely.

**High Lift** 

The high lift option is

any equipment with a

than 66 inches off the

required to remotely rack

racking mechanism more

ground. Ideal for users who

wish to rack breakers with

extremely high racking

mechanisms that would

otherwise cause issues during manual operation.



monitor. Ideal for users who will be visually separated from the RRS during the remote operation.



**Remote Racking Systems** 

## **Power Slide**

The power slide system utilizes a motor to raise and lower the drive assembly instead of the standard handle. Ideal for applications



requiring users to quickly and easily switch between racking heights for different breakers.

# LED Light

The LED light accessory adds a forward-facing, high-intensity liaht source

with pan and tilt capability to the front of the RRS. Ideal for personnel setting up the RRS or installing RRS tooling in low-light environments.

#### users to monitor the remote racking operation from up to 300 feet away using an RRS-mounted camera and stand-alone

The wireless/wired video system allows



# Low-Speed/Jog

The low-speed/jog option consists of a high-torque/ low-speed gearbox, as well as manual jog control for the RRS operation. Ideal for applications requiring added torque output and/or more precise control.





# RRS-2

# Remote Racking System

The CBS ArcSafe RRS-2 is a portable and highly configurable remote racking system built to rack all circuit breakers with non-rotary racking mechanisms while keeping the operator outside of the arc-flash boundary. The operator is able to manipulate the breaker-specific tooling, available for numerous makes and models of switchgear, via either a wired or wireless pendant station from up to 300 feet away. Prior to ordering, CBS ArcSafe recommends an on-site evaluation be performed by a company representative in order to ensure the proper equipment may be provided for each customer based on their particular switchgear and specific reguests.

## SPECIFICATIONS

WEIGHT ..... 160 lbs BATTERY LIFE ..... > 50 Operations\* SYSTEM VOLTAGE ..... 24V DC INPUT VOLTAGE ..... 120±10% VAC, 47-63 Hz<sup>†</sup> MAXIMUM AC CURRENT ..... 12.2 A EXT. ACTUATOR FORCE ..... 600 lbs EXT. ACTUATOR SPEED ..... 1.0"/second CHARGE TIME ..... Approx. 6 hours DIMENSIONS ..... 60" H x 26" W x 36" D OPERATING DISTANCE ..... 35 feet<sup>‡</sup>



\*Number of operations is dependent on the nature of the operation; 'May be custom ordered to match different local power standards; 'Standard configuration, contact CBS ArcSafe® for other options

# **RRS-2BE** Remote Racking System For Motor Control Center Buckets Only



The RRS-2 BE is designed specifically for motor control center (MCC) bucket removal applications where users normally would be required to perform the install or remove operation manually — exposing them to the potential hazards of an arc flash and its lethal consequences. Designed to be extremely versatile, the RRS-2 BE is suited for use in all environments — from grueling applications in a power-generation facility to clean rooms at a high-tech manufacturing plant.









#### BENEFITS

Setup and operation of the RRS-2 BE are very similar to that of the standard RRS-2, allowing users who are familiar with RRS-2 operation to transition between the two easily with no additional training required. RRS-2 BE benefits include:

- Large linear actuator has been replaced with a compact, adjustable travel linear actuator more suited to the forces required for MCC buckets instead of large breakers
- Steel frame of the RRS-2 has been modified to accept the specialized tooling required for MCC bucket install and remove operations
- Dual channel-enabled operation allows users to carefully control the MCC bucket install and remove operations
- Two-station high-reach vertical adjustment is capable of reaching MCC buckets up to 80" high. The included wireless remote control allows users to operate the unit from up to 300 feet away

#### SPECIFICATIONS

WEIGHT ... 105 lbs BATTERY LIFE ... > 50 Operations\* SYSTEM VOLTAGE ... 24V DC INPUT VOLTAGE ... 120±10% VAC, 47-63 Hz<sup>+</sup> CHARGE TIME ... Approx. 4 hours DIMENSIONS ... 74" H x 25" W x 32" D

**OPERATING DISTANCE...** 300 feet<sup>‡</sup>

\*Number of operations is dependent on the nature of the operation †May be custom ordered to match different local power standards ‡Radio remote control standard on RRS-2 BE

# **RRS-3** Single-Use Portable Remote Racking Systems

CBS ArcSafe Single-Use Remote Racking Systems (RRS-3) are designed to remotely rack a single style of circuit breaker utilizing a portable, stand-alone device. The RRS-3 units are most commonly assisted by strong magnets, meaning that no modifications are required to the switchgear. This also allows operators to easily move the RRS-3 from one breaker to another.

The RRS-3 system is an inexpensive single-application remote racking system that allows the operator to install and remove a breaker while standing 25 to 75 feet away with a hand-control unit. Each CBS ArcSafe RRS-3 is custom built to your electrical equipment so that it can safely operate your switchgear.

















# Remote Switch Operators (RSO)



## RSO-IIID-M18

- 1. Operating pushbuttons, such as circuit breaker trip and close buttons
- 2. Operating charging handles requiring single or multiple cycles
- Engaging or disengaging mechanical interlocks, such as circuit breaker interlock foot-pedals



# UPDATED DESIGN

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#### **RSO-IAR-M18**

**BENEFITS** 

configurations Fast and easy to set up

No modifications required

Lightweight, portable construction

Adjustable to fit unique equipment

Mechanical and electrical safety protection
Mechanical clutch over-racking protection

Reduced need for a full-body arc-flash suit

Adds safety and helps comply with NFPA 70E

- 1. Operating pushbuttons, such as circuit breaker trip and close buttons
- 2. Operating levers, such as those found on motor control center buckets
- 3. Operating handles requiring single strokes
- 4. Operating rotary and pistol-grip switches, such as breaker control switches



#### RSO-IV-M18

- 1. Works with RRS-3 Single-Use Remote Racking Systems
- 2. Installing and removing any switchgear utilizing a rotary racking mechanism
- 3. Installing and removing any switchgear utilizing a non-rotary racking mechanism
- Engaging or disengaging mechanical or electrical interlocks, such as circuit breaker interlock foot-pedals or buttons
- 5. NEW Blue Indicator beacon alerts user when input settings have been reached



RSO Updated Desigr





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Advanced Electrical & Motor Controls AEAMC.com HEADQUARTERS: Irving, TX – Ph: 972-253-7783

## **Arkansas Electrical Outlet**

Aeoglobal.com Forrest City, AR – Ph: 870-633-4997

**CBS** ArcSafe

CBSArcSafe.com Denton, TX – Ph: 940-382-4411 Charleston, WV – Ph: 304-965-9220

CBS Nuclear Services CBSNuclear.com Matthews, NC – Ph: 704-882-1875

Carolina Precision Switchgear CPSwitchgear.com Concord, NC – Ph: 704-596-4242

<mark>Circuit Breaker Analyzer</mark> CBAnalyzer.com Addison, TX – Ph: 972-290-0074

Circuit Breaker Sales & Repair CBSalesAndRepair.com HEADOUARTERS: La Porte, TX – Ph: 281-479-4555 REGIONAL SERVICE SHOP: Gonzales, LA – Ph: 225-673-2278

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Denver Service Shop Denver, CO — **Ph: 720-981-4580** 

Detroit Service Shop Livonia, MI – **Ph: 734-357-8005** 

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SolidStateRepair.com <u>Denton</u>, TX – Ph: 877-TRIP-FIX

## **Vacuum Interrupters**

VacuumInterruptersInc.com Farmers Branch, TX – Ph: 214-442-5877

### **CBS Field Services**

CBSFieldServices.com HEADQUARTERS: Phoenix, AZ – Ph: 888-395-2021

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