

# Instruction Manual

## RakTek™ SDR1 Remote Racking Operator for Square D\*\* Model 6 Closed Door Racking (CDR) Low Voltage Motor Control Center (LVMCCs)



**Model: SDR-1**  
US Patent Pending

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**MARTEK**

*Arc Flash Safety*



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# Use and Operating Instructions

## SDR-1 Remote Racking Operator for Square D Model 6 Low Voltage Closed Door Racking (CDR) Motor Control Centers.

### 1.0 Introduction

The SDR-1 is designed to remotely Rack In/Rack Out Square-D Model 6 Closed Door Racking (CDR) Motor Control Centers. The actuator is temporarily installed over the CDR push button and racking handle socket. The unit easily and securely clamps onto the MCC with the simple engagement of a lever. The 30' cable and remote control operator allows the user to be positioned well outside of the Arc Flash Hazard Zone.

Included:	Options
SDR-1 Acutator (1) Control Unit inside Carrying Case (1) GFCI Power Connector (1) 30' Operating Cable (1)	50' Operating Cable



SDR-1 Actuator



Control Unit inside  
Carrying Case



GFCI Power  
Connector



Operating Cable

## 2.0: Safety Information:

### **⚠ DANGER**

#### **HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

- This equipment must only be installed by qualified personnel.
- Only use this equipment after reading and understanding all of the instructions contained in this manual.
- Follow electrical safe work practices. See NFPA 70E or CSA Z462

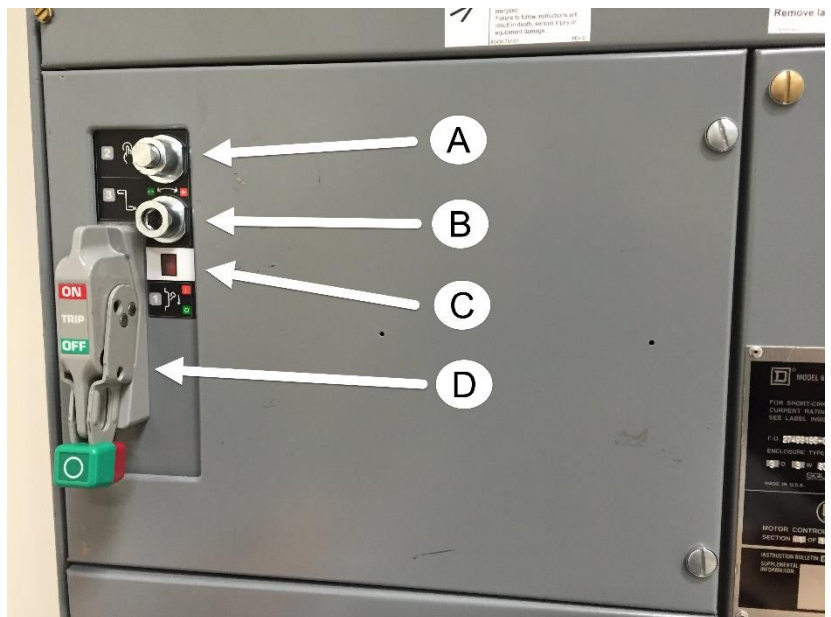
**FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN DEATH OR SERIOUS INJURY**

### **NOTICE:**

The SDR-1 is for use with **Square D Model 6 Closed Door Racking (CDR) Motor Control Center** units only. Do not attempt to use on any other MCC.

#### **Square D Model 6 CDR Motor Control Center:**

- A. CDR Pushbutton
- B. Racking Handle Socket
- C. Indicator Window
- D. Circuit breaker operator mechanism (disconnect switch)



## 2.1 Arc Flash Safety Hazards

The hazards associated with electrical arc-blasts are well documented. Studies conducted by numerous industries and professional organizations have sought to quantify the intensity of arc-blast, the risks to personnel, and various methodologies for mitigating the risks.

Without a doubt, increasing the distance between the arc and a human is the single greatest favorable factor in reducing injuries.

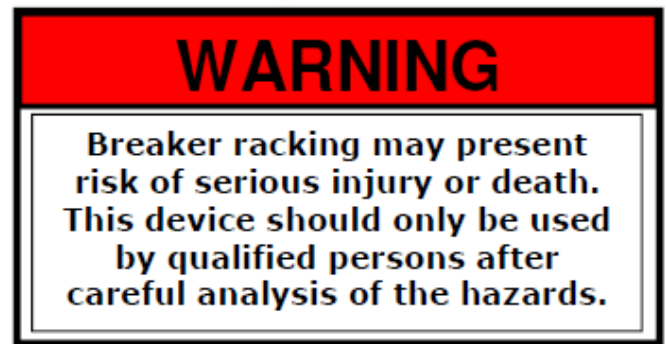
Remote racking is not a cure all, but rather one more tool available for protecting workers while they are performing electrical switching.

Using the SDR-1 remote racking device may not negate the need for additional personal protective measures. The user is ultimately responsible for evaluating each situation to determine if additional protective measures are needed.

## 2.2 Safety Precautions:

Carefully read and comply with all safety instructions listed below.

- The SDR-1 is powered from an AC source, always use the (included) GFCI-equipped power cord. If the GFCI trips two consecutive times, discontinue use and contact the manufacturer.
- The unit must be protected from water intrusion.



## 3.0 Operating Instructions

**Step 1:** Plug AC Adapter into the control unit and power source.



**Step 2:** Attach the yellow control cable to the control panel and actuator. (Be careful to correctly orient the alignment keys on both the actuator and control panel before tightening.)



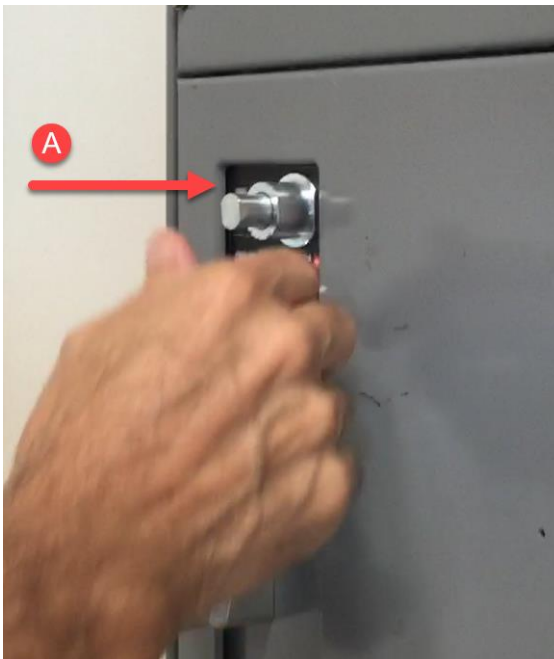


**Step 3:** Power ON the control unit. The system will not operate until the actuator is appropriately seated on the MCC. The yellow LED indicator on the actuator will blink rapidly until the actuator is appropriately seated on the MCC.



**Step 4:** Position the actuator on the MCC. The yellow blinking LED indicator on the actuator will turn off when appropriately seated and engaged. In addition, the digital display on the control unit will indicate that the actuator is not yet seated.

- A. Make certain disconnect switch is in OFF position. Then press CDR Push Button on MCC.

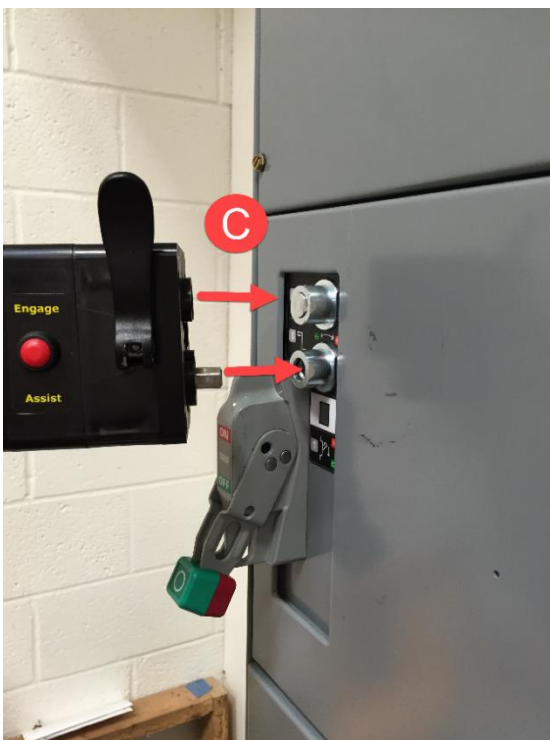




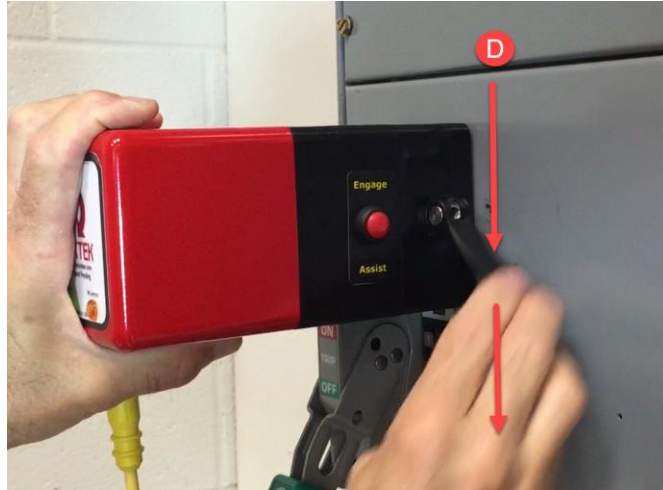
B. Lift locking lever on the actuator.



C. Insert the SDR1 racking shaft into the racking handle socket. (*Note: Press the **Engage Assist** button to aid in engaging the racking shaft with the racking handle socket.*) Engage Assist causes the racking shaft to slowly rotate.



- D. Once the SDR1 unit is seated (yellow LED not flashing), lower the locking lever to secure the actuator to the MCC.



- E. The digital display on the should now say “Ready”



**Step 5:** Prepare to operate.

- A. With the actuator attached to the MCC, move with the control unit to a safe distance.
- B. Ensure that you (and other coworkers) are free and clear of the arc flash hazard zone.**

**Step 6:** Operating the SDR1

- A. Select which motion is required (“Rack In” or “Rack Out”)



- B. Press the Red “Initiate Racking” button to execute the command.



- C. When the cycle is complete, the control unit will display “Complete”. Also, the green indicator light will illuminate on the actuator. **NOTE: Check MCC indicator window to ensure complete cycle.**



**Step 7: Removing the actuator:**

- A. Lift locking lever on right side of actuator
- B. Pull actuator straight off of the MCC.



## 4.0 Storage

Return all components to case for secure storage. Store in an easily accessible area.



## 5.0 Troubleshooting:

SYMPTOM	SOLUTION
There is no power to the control panel.	The SDR1 control unit requires an AC power source. Ensure that the power cord is plugged into a live power source and the control unit. If still no power, depress the reset button on the GFCI adapter. If it's still not working, contact MarTek Ltd.
There is power to the SDR1 control unit (in the case) but no power to the actuator.	Check that the yellow operator cable is securely fastened to both the control unit and to the actuator.
I can't get the actuator to go onto the MCC.	Make the disconnect switch is in the <b>OFF</b> position. Then make sure you have depressed the CDR Push Button on the MCC and have lifted the locking lever on the right side of the actuator. If the racking shaft isn't engaging, press the <b>Engage Assist</b> button on the SDR1 to help it engage the racking handle socket. Finally, make sure you have lowered the locking lever on the actuator once seated.
The LED on the actuator continues to blink after I've got it seated on the MCC.	The actuator is not properly seated. Remove the actuator and make sure that you've depressed the CDR push button on the MCC. If that is depressed and it's still not seated, it's likely that the racking shaft is not engaging the racking handle socket. Try seating it again and use the <b>Engage Assist</b> button to get the racking shaft to engage the racking handle socket.
I have attempted to operate the SDR-1, but the motor seems to stall out.	Check the position of the breaker via the indicator window on the MCC. You may be attempting to rack in the wrong direction. If so, cycle the power on the control unit and rack in the correct direction.
The SDR1 has completed its cycle, but the MCC indicator doesn't show that the breaker is fully opened or closed.	Remove the SDR-1 and repeat the operation to ensure the cycle is completed.

## 6.0 Product Specifications

Power Source	120 V, 60hz power source. GFCI AC Adapter Included
Operating Cable	30' Standard Included, 50' Available as an option
Projected Life	10,000+ operations
Carrying case	<p>Manufactured by Pelican with the following features:</p> <p>Two Press &amp; Pull Latches</p> <p>Double-layered, Soft-grip Handle</p> <p>Two Padlockable Hasps</p> <p>Vortex® Valve</p> <p>Flush Powerful Hinges</p> <p>Lightweight Strong HPX® Resin</p> <p>Watertight</p> <p>Meets airline regulations for carry-on luggage</p> <p>Exterior Dimensions 16.20" x 12.70" x 6.60" (41.1 x 32.2 x 16.8cm)</p>
Weight	<p>SDR1 Actuator – 2.8lbs / 1.27kg</p> <p>Complete unit with carrying case – 11.75lbs / 5.33kg</p>
Max. Operating Torque	100 in.lb.
Average Operating Cycle Time	9.65 sec.



## 7.0 Warranty Information

MarTek Ltd. guarantees all products manufactured by MarTek Ltd. only against defects in materials and/or workmanship for a period of twelve (12) months commencing on the date the product is received by the customer. THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

MarTek Ltd. will, at its option and its cost (excluding shipping expenses), repair, replace or refund the purchase price of any product manufactured by MarTek Ltd. which has a defect in materials and/or workmanship. THIS IS CUSTOMER'S EXCLUSIVE REMEDY FOR BREACH OF WARRANTY. IN NO EVENT WILL MARTEK LTD'S LIABILITY FOR DAMAGES (WHETHER ARISING FROM BREACH OF CONTRACT OR WARRANTY, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE) EXCEED THE PURCHASE PRICE OF THE PRODUCT CONCERNED NOR WILL MARTEK LTD. BE LIABLE FOR PUNITIVE, INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOST PROFITS) EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

MarTek Ltd. reserves the right to disallow warranty repairs if the unit has been disassembled or misused, as determined by MarTek Ltd. in good faith. Please contact us at (800)-248-4958 for a return authorization.

## 8.0 Contacting the Manufacturer

For any questions, repairs, or parts replacement please contact the manufacturer using any of the methods below.

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4782 Chimney Drive  
Charleston, WV 25302

Phone: 304-965-9220  
Toll Free: 800-248-4958  
Fax: 304-965-9220

email: [sales@marteklimited.com](mailto:sales@marteklimited.com)