

INSTRUCTION GUIDE

E9000 Low-Voltage Motor Control Center Remote Racking Device for Arc Flash Mitigation Units



GE legacy product documentation

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In 2018 ABB acquired General Electric Industrial Solutions (GEIS). E9000-Line motor control centers are now serviced and maintained by ABB. If you need spare parts or your installed equipment has aged and requires modernization or replacement – ABB is your first point of contact (look for contact details on the last page).

Remote racking device

The remote racking device is specially designed to operate with the full range of Arc Flash Mitigation (AFM) units. It is easily mounted with two heavy-duty bolts. High speed operation helps to ensure that the stabs are fully ENGAGED/ DISENGAGED within seconds. The operator controller gives clear information on the position of the stab at any point in time during operation. AFM remote racking devices come with a 40 feet cord length for operation outside the arc flash hazard zone. The remote racking device operates using torque-sensitive mechanism to protect your equipment from over or under racking. The power to the motor cuts off automatically when it reaches approximately 4.5 lb/ft.

- Duty Cycle = 1/min
- Racking time = approx. 25 sec
- Motor weight = 6.5 lbs
- Motor operator controller weight = 2 lbs
- Power cord length = 5.5 feet
- Motor to controller cord length = 40 feet

Figure 1a. Motor operator assembly with operator controller and power cord.



Figure 1b. Motor mounting screws and lead screw connector.



Description	Quantity
Motor operator assembly	1
Motor operator assembly	2
Operator controller with power cord	1
Lead screw connector*)	3

*) Only one screw connector will be used for racking operation. Additional 2 are spare.

WARNING: Before installing any accessories, turn the circuit breaker "OFF", disconnect it from all voltage sources. Never attempt to open the door before bringing the stab to completely "DISENGAGED" position.

Follow the procedure mentioned in this guide for proper remote racking operation.

Step 1: Check that the package contains all the parts listed in Table 1. If any components are missing, contact the Customer Service Center.

Step 2: Verify the input supply voltage. The remote racking system operates at a supply voltage of 110 VAC.



Figure 2a. Removing lead screw cover from door.



Figure 2b. Lead screw not accessible in disconnect "ON" condition.



Figure 2c. Lead screw cover after removing from door.

Step 3: Turn the circuit breaker "OFF" and remove the lead screw cut out cover from the door as shown in Figure 2 before mounting the motor on the unit door.

Step 4: All Arc Mitigation unit doors will have blind rivet nuts clinched to the door for easy mounting of motor.

Step 5: Insert the motor connector to the unit lead screw slot and align the motor mounting screws in the door by slightly rotating the motor assembly as shown in Figure 3.

Step 6: Fasten the motor on the door by the mounting screws provided with the kit as shown in Figure 4.

Step 7: Connect the power cord to 110V AC supply. The system gets powered on by switching "ON" the power switch on the controller.

Step 8: TO ENGAGE THE STAB: Make sure the circuit breaker is in "OFF" position & check the indicator flags on the door to make sure the stab is in completely DISENGAGED position. This can be verified by the mechanical indicators. In "DISENGAGED" position the stab indicator will be "GREEN" and the shutter indicator will be "GREEN" as shown in Figure 5.

a) Move the toggle switch towards the left as shown in the Figure 6a for engaging the stab.

b) Press the "RUN" push button (you do not need to hold). The controller commands the motor to rotate in a clockwise direction.

c) The status light flashes in "RED" representing the transit state.

d) It takes approximately 25 seconds to completely "ENGAGE" the stab. When the stab is completely engaged the motor stops automatically and the status light turns "RED" as shown in Figure 6b.



Figure 6a. Pendant operation details.



Figure 3. Mounting motor on door.



Figure 4a. Fastening motor on door.



Figure 4b. Assembled condition of motor on door.



Figure 5. Lead screw not accessible in disconnect "ON" condition.



Figure 6b. Controller showing ENGAGED condition.

Step 9: The ENGAGED position can also be verified by the mechanical indicators on the door. The stab and shutter indicator shows "RED" in ENGAGED position as shown in Figure 7.

Step 10: TO DISENGAGE THE STAB: Make sure the circuit breaker is in "OFF" condition and check the indicator flags on the door to make sure the stab is in the completely ENGAGED position. In the "ENGAGED" position the stab indicator will be "RED" and the shutter indicator will be "RED" as shown in Figure 7.

a) Move the toggle switch towards the right for disengaging the stab.

b) Press the "RUN" push button (you do not need to hold). The controller commands the motor to rotate in counter- clockwise direction.

c) The status light flashes in "RED" representing the transit state.

d) It takes approximately 25 seconds to completely "DISEN- GAGE" the stab. When the stab is completely disengaged the motor stops automatically and the status light turns "GREEN" as shown in Figure 8.

Step 11: The DISENGAGED position can also be verified by the mechanical indicators on the door.

The stab and shutter indicator shows "GREEN" in DISENGAGED position as shown in Figure 5.

Step 12: After completing the required operation ENGAGE/DISENGAGE switch OFF the controller and remove the motor from unit door by loosening the two fasteners.

Step 13: Restore the lead screw cover and ensure the cover is fastened properly.

Step 14: Store the remote racking device in a proper place for future use. Make sure the cables are handled carefully to avoid any damage to insulation.



Figure 7. Mechanical indicators showing ENGAGED condition.



Figure 8. Pendant showing DISENGAGED position.

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For further information, please visit

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