Allen-Bradley 81001-451-63-R

01 Define the service boundary

1 Map the affected assembly

Record 81001-451-63-R, the 1500 A device class and all 3 matching labels. Keep each device associated with its original phase and drive diagnostic position.

2 Preserve the diagnostic context

Capture the fault and the stage at which it occurred: initial contactor closure, startup or post-reset checks. The same physical assembly can have different causes for low and high feedback.

Current class	1500 A
Devices in group	3
Assembly	matched triple

02 Prepare the installation

1 Isolate the power structure

Use the approved medium-voltage drive isolation, discharge and prove-dead procedure. Physical access and tests require qualified drive-service personnel.

2 Retain the matched group

Keep the 3 devices identified as one matched triple. Do not exchange a single unmatched device merely because its current marking is the same.

Feedback stays low	Investigate feedback loss
Feedback stays high	Investigate gating loss

03 Restore connections and settings

1 Inspect the optical paths

Check gate and feedback fibers for seating, pinching and damage. Include the DPM-to-OIB connection when the gating-loss procedure identifies an upstream command problem.

2 Check the firing supply

Use the prescribed safe test setup to verify the associated nominal 20 V source and its firing-card connectors. The Offline diagnostic window is 19.6-20.4 V.

Gate supply	19.6-20.4 V Offline check
Physical paths	Command, feedback, firing-card power

04 Verify the operating response

1 Perform the device checks

Use the specified SGCT resistance procedure. A kilohm result does not by itself prove a healthy device; compare it with the diagnostic state and other device results.

2 Correlate gating and feedback

Inspect gate-driver LEDs and complete the approved Gating Test for the exact drive. Identify whether returned feedback changes as expected at each affected position.

Test evidence	Resistance, LEDs and Gating Test
Release	Resolve fault and associated causes

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05 Release and retain the evidence

1 Resolve associated causes

Investigate any related motor-filter-capacitor or supply fault before release. Changing the matched set does not repair damaged optical wiring or a failed auxiliary source.

2 Retain the restoration record

Keep the 81001-451-63-R matching labels, position map and diagnostic results with the maintenance record. Restart using the installed drive procedure only after all affected paths pass.

Technical basis: Rockwell Automation PowerFlex 7000 Troubleshooting Guide, 7000-TG002L-EN-P, February 2020.

Related product navigation

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These are related references, not confirmed substitutes or an automatically approved assembly.