



1769 Compact I/O Discrete Output Modules

Overview

Series A 1769 discrete output modules and the combination I/O module, when used in the User Defined Safe State (UDSS) output configuration option for PROGRAM mode, do not operate in a manner consistent with 1756 ControlLogix™ output modules. This anomaly occurs when the 1769-ADN DeviceNet™ adapter is in PROGRAM mode.

The following 1769 modules exhibit this characteristic:

- 1769-0A8
- 1769-0B16
- 1769-0B16P
- 1769-0W8
- 1769-0V16
- 1769-0W8I
- 1769-IQ6X0W4

When the UDSS option is used in the FAULT mode, 1769 discrete output modules operate like 1756 ControlLogix output modules. Analog outputs also operate consistently with 1756 ControlLogix output modules.

The next release (Series B) output modules, expected in early December 2001, will eliminate this anomaly and operate consistently with ControlLogix output modules when using the UDSS configuration option.

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Scenarios

There are two scenarios where this anomaly can surface.

Scenario 1

- A. A newly commissioned 1769-ADN adapter with 1769 I/O modules that is in a scanner's list, but has never been placed in the RUN mode.
- B. You program the system and configure the outputs for the UDSS to occur during a mode change from RUN to PROGRAM with a specific output pattern (some ON and some OFF selected).

During the configuration download, the 1769 outputs should assume the UDSS pattern specified in step B above. However, Series A discrete outputs remain OFF (the preceding assumes the 1769-ADN was previously in the scanner's scan list). For these Series A outputs to assume the UDSS pattern you specified in step B, the system must first enter the RUN mode and then return to the PROGRAM mode.

Resolution

As long as the discrete outputs' UDSS pattern is set to OFF (module default), no issues exist. You could also use the Hold Last State option for a RUN to PROGRAM mode change. Using this option, the 1769 discrete output modules operate consistently with ControlLogix output modules.

Scenario 2

- A. A 1769-ADN adapter where the 1769 I/O have previously been in the RUN mode and the UDSS option is configured for a mode change from RUN to PROGRAM.
- B. When the system is placed in the PROGRAM mode, all 1769 outputs operate correctly and assume the ON/OFF UDSS (value for analogs) you configure (consistent with ControlLogix modules).
- C. While in PROGRAM mode, you download a new program with the UDSS option but with a different output pattern than the original/previous pattern.

During the new program/configuration download, the 1769 outputs should (per ControlLogix output module operation) assume the UDSS pattern specified in the new program configuration. However, the Series A 1769 discrete output modules remain in the original pattern. For Series A 1769 discrete outputs to assume the new program/configuration UDSS pattern, the system must first enter the RUN mode and return to the PROGRAM mode.

Resolution

Set the UDSS output ON/OFF pattern for the new program/configuration to the same pattern as the original program configuration.

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