ROC800-Series Discrete Output Relay Module

The Discrete Output Relay (DOR) module for the ROC800-Series Remote Operations Controller (ROC800) provides the ROC800 with the ability to control various discrete output field devices.

The DOR module provides five channels of discrete outputs. DOR modules use mechanical (SPST) latching relays to provide a set of normally-open dry contacts capable of switching 2 A at 32 Volts dc across the complete operating temperature. Each channel can be software configured as a latched, toggled, momentary, or Timed Duration Output (TDO). The DOR can be configured to either retain the last value on reset or set to a user-specified fail-safe value. Light-emitting diodes (LEDs) indicate the current status for each channel of the module.

The need for fuses has been eliminated on the Input/Output (I/O) modules through the extensive use of current-limiting short-circuit protection and surge protection techniques. This results in less maintenance for remote locations. The modules are self-resetting after a fault clears.

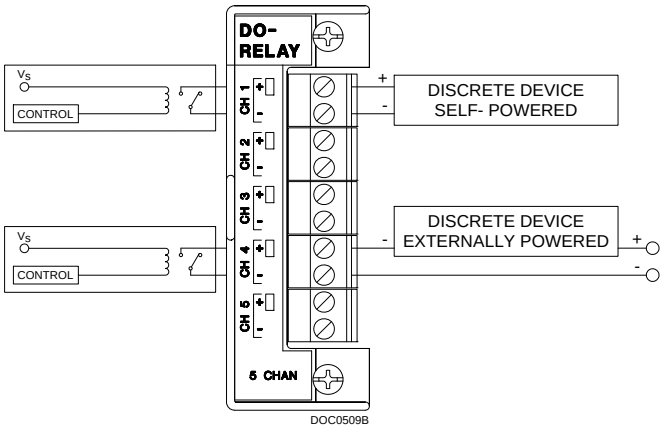
The DOR module provides isolation from other modules and the backplane. The module has an integrated short-circuit protected isolated power supply. This power supply allows the field circuitry to be completely isolated from the backplane and the Central Processor Unit (CPU).

Compatibility and Installation

DOR modules can be installed in any module slot on a ROC800 unit with a Series 1 or Series 2 CPU. The DOR module can easily be installed or removed from the module slots at any time by removing the two captive screws accessible from the front of the unit.

The module is hot-swappable, meaning the module can be removed and another module of the same type can be installed under power. The module is hot-pluggable, meaning it may be installed directly into an unused module slot under power. The DOR module is also self-identifying via ROCLINK™ 800 Configuration Software.

The DOR module has removable terminal bocks for convenient wiring and servicing. The terminal blocks can accommodate a wide range of wire gauges from 12 to 22 American Wire Gauge (AWG).



Discrete Output Relay Wiring

D301593X012

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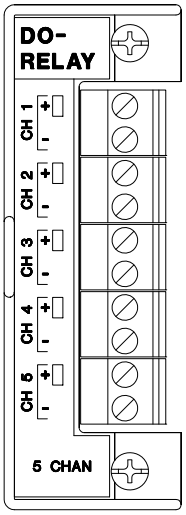
Field Wiring Terminals



DOC0903A

Terminal	Label	Definition
1	CH 1+	CH 1 Positive
2	CH 1-	CH 1 Negative
3	CH 2+	CH 2 Positive
4	CH 2-	CH 2 Negative
5	CH 3+	CH 3 Positive
6	CH 3-	CH 3 Negative
7	CH 4+	CH 4 Positive
8	CH 4-	CH 4 Negative
9	CH 5+	CH 5 Positive
10	CH 5-	CH 5 Negative

Outputs

Quantity	5 channels.		
Type	Isolated, mechanical (SPST) latching relay.		
Contact Rating	0 to 32 Volts dc.		
Maximum Current	2.0 A, @ 32 Volts dc per output across complete operating temperature.		
Minimum Channel Activation Time	48 milliseconds		

Power

Consumption	Main power supply loading at the Battery Terminals (at 12.0 V dc):		
	No Channels Active	6.8 mA	
	Additional loading that may apply	During Active Transition	150 mA for 10 milliseconds.
		Per Active LED	1.5 mA
Isolation	Field to Logic	1500 V dc, 1 minute minimum	
	Field to Power	1500 V dc, 1 minute minimum	
	Module to Module	1500 V dc, 1 minute minimum	

Physical

Dimensions	26 mm W by 75 mm H by 133 mm D (1.03 in. W by 2.96 in. H by 5.24 in. D).
LEDs	5 green LEDs indicate the status of the channels
Weight	59.0 g (2.08 oz).
Wiring	12 to 22 AWG at the removable terminal block.

Environmental
Same as the unit in which it is installed.
Approvals
Same as the unit in which it is installed.

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