Discrete Output Module (ROC800-Series)

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

The DO module provides five channels of discrete outputs. The DO channels are solid-state normally-open switches rated at 200 mA across the complete operating temperature. Each channel can be software configured as a latched, toggled, momentary, or Timed Duration Output (TDO). The DO can be configured to either retain the last value on reset or set to a user-specified fail-safe value.

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 I/O modules are self-resetting after a fault clears.

The DO module provides 2500 Vdc of isolation from other modules and the backplane, including power and signal isolation.

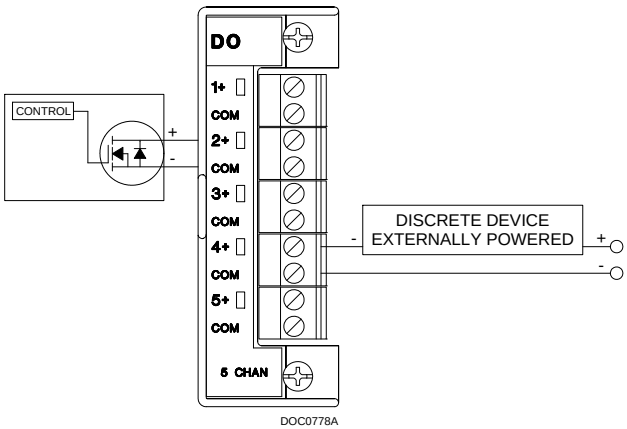
Light-emitting diodes (LEDs) indicate the status for each channel of the module.

Compatibility and Installation

DO modules can be installed in any module slot on a ROC800 unit with a Series 1 or Series 2 CPU. The 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 DO module is also self-identifying via ROCLINK™ 800 Configuration Software.

The DO 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).

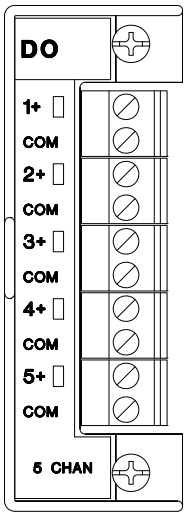


Discrete Output Wiring

D301592X012

ROC800-Series Discrete Output Module

Field Wiring Terminals



DOC0910A

Terminal	Label	Definition
1	1+	Positive Discrete Output
2	COM	Discrete Output Return
3	2+	Positive Discrete Output
4	COM	Discrete Output Return
5	3+	Positive Discrete Output
6	COM	Discrete Output Return
7	4+	Positive Discrete Output
8	COM	Discrete Output Return
9	5+	Positive Discrete Output
10	COM	Discrete Output Return

Outputs

Quantity	5 channels
Type	Isolated, solid-state switch
Output Voltage Range	0 to 32 Vdc
Maximum On-State Current	0.2 A @ 32 Vdc per output across complete operating temperature
Maximum Off-State Leakage	0.01 mA @ 32 Vdc
Over Current Protection	Self-resetting circuitry on each channel
Minimum Channel Activation Time	4 milliseconds

Power

Consumption	Main power supply loading at the Battery Terminals (at 12.0 Vdc)	No Channels Active	20 mA
	Additional loading that may apply	Per Active Channel	1.5 mA
		Per Active LED	1.5 mA
Isolation	Field to Logic	2500 Vdc, 1 minute minimum	
	Field to Power	2500 Vdc, 1 minute minimum	
	Module to Module	2500 Vdc, 1 minute minimum	

1. If all channels are at 100% output and R load is < 100 ohms on each channel, then the unit's operating temperature range must be reduced by 1 degree Celsius/channel when maximum battery voltage is applied to the unit.
2. Accuracy after calibration includes: Linearity, Hysteresis, Repeatability, Stability, Gain, and Offset error.

Technical Specifications

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)
Weight	52.2 g (1.84 oz)
Wiring	12 to 22 American Wire Gauge (AWG) at the removable terminal block
LEDs	5 green LEDs indicate the status of the channel
Environmental	
Same as the ROC800-Series unit in which it is installed	
Approvals	
Same as the ROC800-Series unit in which it is installed	

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