

ROC800-Series Alternating Current I/O Module

The Alternating Current I/O Module (AC I/O) enables a ROC800-Series Remote Operations Controller to control various AC output field devices and monitor various AC input field values.

AC Discrete Inputs

When configured as an input, a channel can detect the presence of an AC signal between 90 and 245 V ac at 47 to 63 Hz. In discrete input mode, the module monitors the status of various AC sources. Each channel can also be software-configured to function as a latched DI, which remains in active state until reset. Other parameters can gather statistical information on the number of transitions and the time accumulated in the on or off state. The fastest read-time for each channel within the module is 20 times per second.

AC Discrete Outputs

When configured as an output, a channel uses a solid-state, normally open relay rated at 0.5 Amps holding and 1.0 Amps in-rush current. Any AC switched out is directly related to the AC switched in. Using ROCLINK™ 800 Configuration Software you can configure the module as latched, toggled, momentary, or Timed Duration Outputs (TDOs). Other parameters report the approximate load, overcurrent conditions, and AC input status. Discrete outputs can be configured to retain either the last value on reset or a user-specified fail-safe value.

Switchable I/O and LEDs

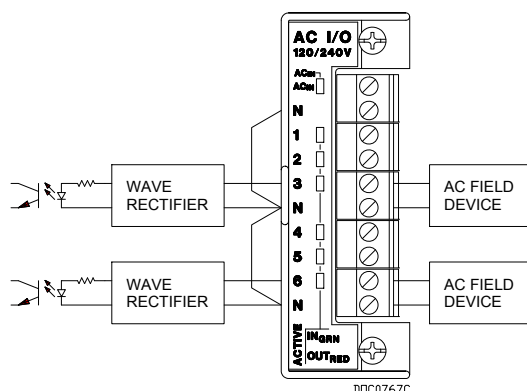
The module has one bank of 6 DIP switches, which controls the input/output status of each of the six channels. Placing a switch in the ON position sets the corresponding channel to output mode. Placing a switch in the OFF position sets the channel to input mode. Dual-color light-emitting diodes (LEDs) indicate the current status for each channel. Red means AC is being output. Green means AC has been detected on an input channel.

Compatibility and Installation

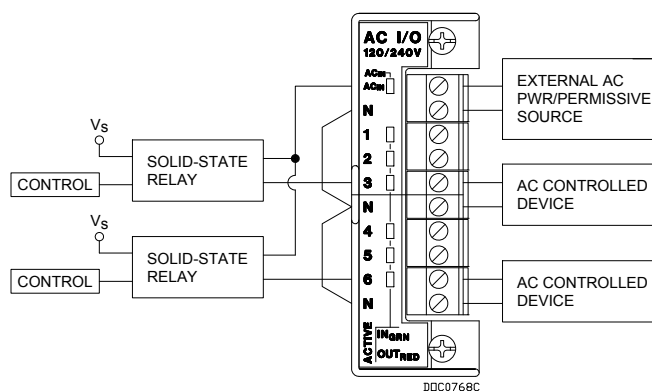
You can easily install or remove the module from the module slots at any time by removing the two captive screws accessible from the front of the unit. AC I/O modules can be installed in the following module slots.

	Series 1 ROC809 / DL8000	Series 1 ROC82 7	Series 2 ROC809 / DL8000	Series 2 ROC82 7
Slot	Any	1, 2, 3	Any	Any

AC I/O modules are hot-swappable, meaning you can remove a module and install another module of the same kind under power. The modules are hot-pluggable, meaning you may install them directly into unused module slots under power.



AC I/O Module (Inputs)



AC I/O Module (Outputs)

All modules have removable terminal blocks for convenient wiring and servicing. The terminal blocks can accommodate up to 12 American Wire Gauge (AWG). Because of the potentially hazardous nature of AC power, this module has green terminal blocks to help prevent accidents.

The AC I/O module has its own integrated short-circuit protected power supply. AC field circuitry is completely isolated from all other device circuitry. AC power is also isolated from other modules.

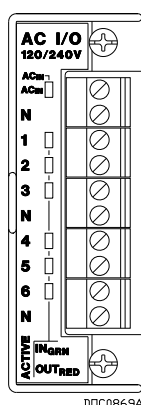
Because of the extensive use of current-limiting short-circuit protection and surge protection techniques, the module does not require fuses. This results in less maintenance for remote locations. However, this module requires a manual reset after a fault clears.

Notes:

- The AC I/O module is compatible with devices using a **PM-12 power module only**. You cannot use the AC I/O module in devices that use a PM-24 power module.
- The neutral terminals on the AC I/O module are common neutrals. **Only one phase of AC can be connected to a module.**

ROC800: AC I/O Module

Field Wiring Terminals



Terminal	Label	Definition
1	AC In	AC Input
2	N	AC Neutral
3	1	Channel 1
4	2	Channel 2
5	3	Channel 3
6	N	AC Neutral
7	4	Channel 4
8	5	Channel 5
9	6	Channel 6
10	N	AC Neutral

Discrete Inputs

Quantity	Six channels, hardware DIP switch selectable as input or output
Type	Optically isolated
Minimum Scan Period	50 milliseconds
Input Impedance	65 K Ω
Maximum Input Overload Voltage	245 V ac

Discrete Outputs

Quantity	Six channels, hardware DIP switch selectable as input or output
Type	Isolated, solid-state switch
Output Voltage Range	90 to 245 V ac, voltage switched out is the input at AC In
Maximum On-State Current	0.5 Amps holding and 1.0 Amps in-rush across complete operating temperature
Maximum Channel Activation Time	½ cycle
Over-Current Protection	Each channel measures and shuts off on over-current

Isolation

Field to Logic	2500 V dc, 1 minute minimum
Field to Power	2500 V dc, 1 minute minimum
Module to Module	2500 V dc, 1 minute minimum

Power

Consumption	Main power supply loading at the battery terminals:	
	No Channels Active	600 mW
	Additional Loading Per Active Channel	150 mW

Physical

LEDs	Six dual-color (green=input / red=output) LEDs indicate the status of the channels One single color (green) AC input only.	
Wiring	Up to 12 AWG at the removable terminal block Note: Shielded wire required	
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	85 g (3.0 oz)	

Environmental

Same as the unit in which it is installed

Approvals

Same as the unit in which it is installed

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