Analog & Digital I/O Expansion Modules

Data Sheet 1927A

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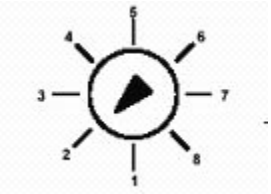
Description

The I/O Expansion Modules are designed to provide analog and digital inputs and outputs at remote locations. Each module plugs directly into the 5-pin bus connector on the side of the transceiver. This 5-pin bus connector provides power to the modules and communications with the transceiver. Up to 8 modules can be connected to each transceiver. Utilize the full power of your PLC by maximizing the I/O at your remote sites.

Figure 1. Analog and digital I/O expansion modules

Configuring I/O Module Addresses



Each pair of I/O modules, such as the RAD-IN-4A-I (2867115) and the RAD-OUT-4A-I (2867128), must share a unique module address. Once a module address has been assigned to a pair of I/O modules, that module address may not be used on any other pair of I/O modules on the same radio pair. Available addresses are numbers 1 through 8. If module addresses conflict or are improperly set within a connected group, an indication will be given by the status LED. When flashing rapidly, it indicates an "internal error" or a "module type mismatch". A "module type mismatch" occures when the module address selection for two different modules (i.e. one (1) digital module and one (1) analog module are set to the same address, or two (2) pairs of modules are sharing the same address.). When status LED is ON steady, module address settings are OK.

Analog Input Module
RAD-IN-4A-I **p/n 28 67 11 5**

Analog Output Module
RAD-OUT-4A-I **p/n 28 67 12 8**

Digital Input Module
RAD-IN-8D **p/n 28 67 14 4**

Digital Output Module
RAD-OUT-8D-REL **p/n 28 67 15 7**

Combination Module
RAD-IN+OUT-2D-1A-I **p/n 28 67 32 2**

Common Specificiations	
Temperature	-40 to 158°F (-40 to 70°C)
Humidity	20% to 90% (non-condensing)
Power	Supplied through transceiver
Wiring Connections	12-24 AWG
Mounting	DIN-rail mount
Case Material	Plastic
Approvals	Class I, Div. 2, Groups A,B,C,D; UL/C (pending on combination module only)
Environmental Rating	NEMA 1 (equivalet to IP 30)

Analog Output Module Specifications	
Outputs	Four (4) Analog Outputs
Range	4-20 mA
Minimum Loop Voltage Drop	10 V
Indicator LEDs	One (1) Status LED
Weight	3.9 oz (125 grams)
Channel Isolation	Optically Isolated
Short Circuit Protection	Yes
Repeatability	0.02% of full scale
Resolution	16 bit
Accuracy	0.12% of full scale
Compatibility	2-wire, 3-wire and 4-wire devices
Power Consumption	100 mA maximum

Digital Input Module Specifications	
Inputs	Eight (8) Digital Inputs
Input Voltage Range	5-36 VAC/DC
Input Impedance	20K ohms
Indicator LEDs	Nine (9) Status LEDs - one for module status and eight (8) for digital channel status
Weight	3.7 oz (120 grams)
Channel Isolation	Optical Isolation
Over-voltage Rating	100 VAC/DC maximum
Power Consumption	30mA maximum

Analog Input Module Specifications	
Outputs	Four (4) Analog Outputs
Range	4-20 mA
Input Impedance	< 200 ohms
Indicator LEDs	One (1) Status LED
Weight	3.6 oz (115 grams)
Channel Isolation	None - power supply connections are common with the transceivers power supply
Reverse Polarity Protection	Yes
Repeatability	0.02% of full scale
Resolution	16 bit
Over-voltage Rating	42 VDC maximum
Accuracy	0.2% of full scale
Compatibility	2-wire, 3-wire and 4-wire devices
Power Consumption	100 mA maximum

Digital Output Module Specifications	
Outputs	Eight (8) Digital Relay Outputs
Contact Ratings	2A @ 250 VAC/30 VDC Res.
Output Terminals	Normally Open Dry Contacts
Indicator LEDs	Nine (9) Status LEDs - one for module status and eight (8) for digital channel status
Weight	4.5 oz (145 grams)
Channel Isolation	Full Isolation
Power Consumption	160mA maximum

Combination Module Specifications	
Inputs/Outputs	One (1) Analog Input, One (1) Analog Output, Two (2) Digital Inputs and Two (2) Digital Outputs
Analog Channel Range	4-20mA
Analog Channel Input Impedance	< 200 ohms
Indicator LEDs	Five (5); One for Module Status and four (4) for Digital Channel Status
Weight	4.0 oz (130 grams)
Channel Isolation	All channels are isolated except for the Analog Input Channel
Reverse Poliarity Protection	Yes
Analog Channel Repeatability	0.02% of full scale
Analog Channel Resolution	16 bit
Analog Input Channel Over-voltage Rating	42 VDC maximum
Analog Channel Accuracy	0.2% of full scale
Analog Channel Compatibility	2-wire, 3-wire and 4-wire devices
Digital Input Channel Voltage	5-36 VDC/AC
Digital Input Channel Over-voltage	100 VAC.DC maximum
Digital Input Channel Input Impedance	20k ohms
Digital Output Channel Contact Rating	2A @ 250 VAC/30 VDC Res.
Digital Output Channel Type	Normally Open Dry Contacts
Power Consumption	120mA maximum

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