

2.2.6. Analog Output with HART

The Analog Output (AO) Module delivers high-level constant current to actuators and recording/indicating devices.

Notable Features

- Extensive self diagnostics
- Optional redundancy
- HART-capable, multivariable devices
- Safe-state (FAILOPT) behaviors configurable on a per channel basis




Safe-state Behavior (FAILOPT)

Series 8 AO module supports the FAILOPT parameter on a per channel basis. The user can configure each channel to either HOLD LAST VALUE, or SHED to a SAFE VALUE. The Output will always go to zero, the safe state, if the IOM device electronics fails.

Open-wire Detection

This Series 8 IO function can detect and annunciate open field wire with a Channel Soft Failure indication.

Detail Specifications – Analog Output with HART

Parameter		Specification	
Input / Output Module		8C-PAOHA1 - Analog Output with HART, Coated 8U-PAOHA1 - Analog Output with HART, Uncoated	
IOTA Modules	8C-TAOXA1	Non-Redundant, Coated	6"
	8U-TAOXA1	Non-Redundant, Uncoated	6"
	8C-TAOXB1	Redundant, Coated	12"
	8U-TAOXB1	Redundant, Uncoated	12"
Output Type		4-20 mA	
Output Channels		16	
Output Ripple		< 100 mV peak-to-peak at power line freq, across 250 Ω load	
Load Resistance		50-800 Ω	
Voltage Rating		24 VDC	
Module current rating		205 mA	
Temperature	Operating Temperature	0 to 60 $^{\circ}\text{C}$	
	Storage temperature	-40 to 85 $^{\circ}\text{C}$	
Resolution		$\pm 0.05\%$ of Full Scale	
Module Removal and Insertion Under Power		Supported	
Calibrated Accuracy		$\pm 0.2\%$ of Full Scale (25 $^{\circ}\text{C}$) including linearity	
Directly Settable Output Current Range		2.9 mA to 21.1 mA	
Maximum Open Circuit Voltage		22 V	
Response Time(DAC input code to output)		settles to within 1% of final value within 80 ms	
Gap (0 mA) of Output to Field on Switchover		10 ms maximum (applies to Redundancy only)	
Agency certifications			
		 Class I, Division 2, Group A, B, C, D; T4 Class I, Zone 2 AEx/ Ex nA II C T4	
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