

Experion Series-C I/O Specification



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CC-PAOH01 CC-PAOX01		Analog Output 16pt HART Analog Output 16pt w/o HART	16		√
	CC-TAOX01	AO IOTA		6	
	CC-TAOX11	AO IOTA Red.		12	√
CC-PAOH51		Analog Output 16pt HART	16		√
	CC-TAOX51	AO IOTA		6	
	CC-TAOX61	AO IOTA Red		12	√
CC-PAON01		Analog Output 16pt w/o HART	16		√
	CC-TAON01	AO IOTA		6	
	CC-TAON11	AO IOTA Red		12	√
CC-PDIL01 CC-PDIS01		Digital Input 24V Digital Input Sequence of Events	32		√
	CC-TDIL01	DI 24V IOTA		9	
	CC-TDIL11	DI 24V IOTA Red.		12	√
CC-PDIL51		Digital Input 24V	32		√
	CC-TDIL51	DI 24V IOTA		9	
	CC-TDIL61	DI 24V IOTA Red.		12	√
CC-PDIH01		Digital Input High Voltage	32		√
	CC-TDI110	DI 110V IOTA		9	
	CC-TDI120	DI 110V IOTA Red.		12	√
	CC-TDI220	DI 220VAC IOTA		9	
	CC-TDI230	DI 220VAC IOTA Red.		12	√
CC-PDOB01		DO - 24V Bussed Out	32		√
	CC-TDOB01	DO 24V Buss IOTA		9	
	CC-TDOB11	DO 24V Buss IOTA Red.		12	√
	CC-TDOR01	DO Relay IOTA		6	
	CC-TDOR11	DO Relay IOTA Red.		12	√
	CC-SDOR01	DO Relay Extension Board		12	
CC-PUIO01		Universal Input Output	32		√
	CC-TUIO01	Universal Input Output IOTA		12	
	CC-TUIO11	Universal Input Output IOTA Red.		18	√
CC-PUIO31		Universal Input Output	32		√

5.11. Analog Output – CC-PAON01

Function

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

Notable Features

- Extensive self-diagnostics
- Optional redundancy
- Safe-state (FAILOPT) behaviors configurable on a per channel basis
- Output read-back and alarm on discrepancy
- Non-incendive output

FAILOPT

Series C 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 C IO function will be able to detect and annunciate open field wire with a Channel Soft Failure indication

Detail Specifications - High Level Analog Output

Parameter	Specification		
Input / Output Model	CC-PAON01 - High-Level Analog Output		
IOTA Models	CC-TAON01	Non-Redundant	6"
	CC-TAON11	Redundant	12"
Output Type	4-20 mA		
Output Channels	16		
Output Ripple	< 100 mV peak-to-peak at power line frequency, across 250 Ω load		
Output Temperature Drift	0.005% of Full Scale/°C		
Output Readback Accuracy	±4% of Full Scale		
Output Current Linearity	± 0.05% of Full Scale nominal		
Resolution	± 0.05% of Full Scale		
Calibrated Accuracy	± 0.35% of Full Scale (25°C) including linearity		
Directly Settable Output Current Range	0 mA, 2.9 mA to 21.1 mA		
Maximum Resistive Load (24 V supply = 22 VDC through 28 VDC)	800 ohms		
Maximum Output Compliant Voltage (24 V supply = 22 VDC through 28 VDC)	16 V		
Maximum Open Circuit Voltage	22 V		
Response Time(DAC input code to output)	Settles to within 1% of final value within 80 ms		

Parameter	Specification
Gap (0 mA) of Output to Field on Switchover	10 ms maximum (applies to Redundancy only)

6. Function Matrix

The following tables assist in selecting I/O Modules and IOTAs with similar functional characteristics

AI Function Matrix

Series-C IO			Function							
IOM	NR IOTA	Red IOTA	AI 4-20ma	HART Conf / Status	HART on CTL	HART Fast Ctl	AI 0-5V 1-5V	Int. IS	NR IOTA Size	Differential Inputs
CC-PAIH01 CC-PAIH02	CC-TAIX01	CC-TAIX11	◆	◆	◆	◆	◆		6"	13 - 16
CC-PAIH02	CC-TAID01	CC-TAID11	◆	◆	◆	◆	◆		9"	1 - 16
CC-PAIH01 CC-PAIH02	CC-GAIX21	CC-GAIX11	◆	◆	◆			◆	6"	NA
CC-PAIH51	CC-TAIX51	CC-TAIX61	◆	◆					6"	NA
CC-PAIX01 CC-PAIX02	CC-GAIX21	CC-GAIX11	◆			◆	◆	◆	6"	NA
CC-PAIX01 CC-PAIX02	CC-TAIX01	CC-TAIX11	◆			◆	◆		6"	13 - 16
CC-PAIX02	CC-TAID01	CC-TAID11	◆			◆	◆		9"	1 - 16
CC-PAIN01	CC-TAIN01	CC-TAIN11	◆						6"	None
CC-PUIO31	CC-TUIO31	CC-TUIO41	◆	◆	◆				9"	None

AO Function Matrix

Series-C IO			Function							
IOM	NR IOTA	Red IOTA	AO 4-20ma	HART Conf / Status	HART on CTL	HART Fast CTL	Output Validation	Open Wire Det.	NR IOTA Size	Int IS
CC-PAOH01	CC-TAOX01	CC-TAOX11	◆	◆	◆		◆	◆	6"	
CC-PAOH01	CC-GAOX21	CC-GAOX11	◆	◆	◆		◆	◆	9"	◆
CC-PAOH51	CC-TAOX51	CC-TAOX61	◆	◆				◆	6"	
CC-PAOX01	CC-TAOX01	CC-TAOX11	◆				◆	◆	6"	
CC-PAOX01	CC-GAOX21	CC-GAOX11	◆				◆	◆	9"	◆
CC-PAON01	CC-TAON01	CC-TAON11	◆				◆	◆	6"	
CC-PUIO31	CC-TUIO31	CC-TUIO41	◆	◆	◆	◆	◆	◆	9"	

DI Function Matrix

			Function						
IOM	NR IOTA	Red IOTA	24V	HV	SOE	Fast Scan	Open Wire	Isolation	IS
CC-PDIL01	CC-TDIL01	CC-TDIL11	◆			◆	◆	1500V	
CC-PDIL51	CC-TDIL51	CC-TDIL61	◆			◆		1000V	
CC-PDIS01	CC-TDIL01	CC-TDIL11	◆		◆	◆	◆	1500V	
CC-PDIL01	CC-GDIL21	CC-GDIL11	◆			◆	◆	Inf.	◆
CC-PDIH01	CC-TDI110	CC-TDI120		110V			◆	1500V	
CC-PDIH01	CC-TDI220	CC-TDI230		220V			◆	1500V	
CC-PUIO31	CC-TUIO31	CC-TUIO41	◆		◆	◆	◆	None	

DO Function Matrix

				Function					
IOM	NR IOTA	Red IOTA	Support IOTA	Open Wire Det	Short Prot.	Output Type	Out. I	Isolation	IS
CC-PDOB01	CC-TDOB01	CC-TDOB11		◆	◆	Source	0.5A	1500V	
CC-PDOB01	CC-TDOR01	CC-TDOR11	CC-SDOR01	◆		Dry Contact	3A	Inf.	
CC-PDOB01	—	CC-GDOL11	CC-SDXX01	◆	◆	Source	48ma	Inf.	◆
CC-PDOD51	CC-TDOD51	CC-TDOD61		◆	◆	Sink	0.1A	1000V	
CC-PUIO31	CC-TUIO31	CC-TUIO41	◆	◆	◆	Source	0.5A	None	