Honeywell

Technical Information

Experion Series-C I/O Specification

EP03-490-520

Release 520

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4. I/O Module Sizes

IOTA Sizing is nominal (6in = 152mm, 9in =228mm, 12in =304mm, 18in = 457mm)I/O modules are associated with their respective IOTAs in the table below. An I/O Module is supported by one or more IOTAs.

I/O Module	IOTA	Description	Circuits	Size (in ")	Red.
CC-PAIH01		High-Level AI HART	16		√
	CC-TAIX01	AI IOTA		6	
	CC-TAIX11	AI IOTA Red		12	√
CC-PAIH02 CC-PAIX01 / 02		High-level AI HART High-level AI w/o HART	16		√
	CC-TAIX01	AI IOTA		6	
	CC-TAIX11	AI IOTA Red		12	√
	CC-TAID01	AI IOTA – 16 Channel Differential		9	
	CC-TAID11	AI IOTA Red – 16 Channel Differential		12	√
CC-PAIH51		High-level AI HART	16		√
	CC-TAIX51	AI IOTA		6	
	CC-TAIX61	AI IOTA Red		12	√
CC-PAIN01		High-level AI w/o HART	16		√
	CC-TAIN01	AI IOTA		6	
	CC-TAIN11	AI IOTA Red		12	√
CC-PPIX01		Pulse Input w/ Fast Cut-off	8		√
	CC-TPIX11	PI IOTA Red		12	√
CC-PAIM01		PMIO LL Mux	64		
	CC-TAIM01	PMIO LL Mux IOTA		6	
	FTA				
	Mx-TAMT04	LL Mux TC FTA	16	12	
	Mx-TAMT14	LL Mux TC FTA w/Remote CJR	16	12	
	Mx-TAMR04	LL Mux RTD FTA	16	12	
CC-PAIL51	CC-TAIL51	Low-level AI	16	9	
CC-PPIX01	CC-TPIX01	Pulse Input	8	12	√

5.2. Analog Input with HART – CC-PAIH51

Function

The Analog Input Module accepts high level current inputs from transmitters and sensing devices.

Notable Features

- Extensive self-diagnostics
- Optional redundancy
- Supplies non-incendive field power (No external user supplied power)
- Suitable for Configure / Status for HART devices
- HART-capable, multivariable instruments for fast collection of control variables
- Fast loop scan
- Non-Incendive Power

Detail Specifications – Analog Input with HART

Parameter	Specification		
Input / Output Model	CC-PAIH51 - High-Level Analog Input with HART		
IOTA Models	CC-TAIX51	Non Redundant	6”
	CC-TAIX61	Redundant	12”
Input Type	Current (2-wire or self-powered transmitters)		
Input Channels [1]	16 Channels (ALL Single Ended).		
Common Mode Rejection Ratio, dc to 60 Hz (500 Ω source imbalance)	70 dB		
Common Mode Voltage, dc to 60 Hz	-6 to +5 V peak		
A/D Converter Resolution	16 bits		
Input Range [1]	4-20 mA only (through 200 Ω)		
Normal Mode Rejection Ratio, at 60 Hz	19 dB		
Normal Mode Filter Response	Single-pole RC, -3 dB @ 6.5 Hz		
Maximum Normal Mode Input	± 30 Volts		
Crosstalk, dc to 60 Hz (channel-to-channel)	-60 dB		
Input Scan Rate	50 ms		
Hardware Accuracy (@ CMV = 0 V)	± 0.075% of full-scale (23.5°± 2°C) ± 0.15% of full-scale (0 to 60°C)		
Transmitter Field Power Conditioning	Individually Protected Current Limiting Circuits for Class 1, Div 2 non-incendive interfacing. No fusing required		
Note 1: No differential / voltage inputs are supported.			

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 Vali-dation	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	