

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

HONEYWELL

DC-TAIX51 51307713-176

ANALOG INPUT MODULE

Used with the applicable analog input module configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Honeywell Experion PKS Series C I/O User's Guide EDOC-X126

If you want...	Then you must select...
Non-HART and Non-GIIS standard 2 wire transmitter (4-20mA input)	CC-PAIN01 module
Non-HART and Non-GIIS (1-5V input)	PAIX02 module

The following table lists the compatibility matrix between AI modules and differential AI modules for redundant and non-redundant configuration.

IOM	Redundant IOTA	Non-Redundant IOTA	AI			HART	No. of differential inputs
			4-20ma	1-5V	0-5V		
CC-PAIN01	CC-TAIN11	CC-TAIN01	X				None
CC-PAIH02	CC-TAIX11	CC-TAIX01	X	X	X	X	Channels 13 through 16
CC-PAIH02	CC-TAID11	CC-TAID01	X	X	X	X	Channels 1 through 16 ⁽¹⁾
CC-PAIX02	CC-TAIX11	CC-TAIX01	X	X	X		Channels 13 through 16
CC-PAIX02	CC-TAID11	CC-TAID01	X	X	X		Channels 1 through 16
CC-PAIH51	CC-TAIX61	CC-TAIX51		X			None

IOM	Redundant IOTA	Non-Redundant IOTA	IS	No. of differential inputs
CC-PAIH02	CC-GAIX11	CC-GAIX21	X	Not applicable
CC-PAIX02	CC-GAIX11	CC-GAIX21	X	Not applicable



Attention

The following module types are superseded by a new version of the module.

- CC-PAIH01 superseded by CC-PAIH02
- CC-PAIX01 superseded by CC-PAIX02
- CC-PAOX01 superseded by CC-PAON01

3.3.2 Compatibility matrix between AO modules and differential AO modules

The following table lists the compatibility matrix between AO modules and differential AO modules for redundant and non-redundant configuration.

IOM	Redundant IOTA	Non-Redundant IOTA	AO 4-20mA	HART	IS
CC-PAOH01	CC-TAOX11	CC-TAOX01	X	X	
CC-PAOH01	CC-GAOX11	CC-GAOX21	X	X	X
CC-PAOX01	CC-TAOX11	CC-TAOX01	X		
CC-PAOX01	CC-GAOX11	CC-GAOX21	X		X
CC-PAON01	CC-TAON11	CC-TAON01	X		

4.5 Connecting IOMs and field devices through I/O Termination Assemblies

All connections between IOMs and field devices are through I/O Termination Assemblies (IOTAs). IOTAs are sometimes connected to ancillary hardware that pre-conditions the signal for use in Experion.

The following table defines the relationship between IOM type and the ancillary hardware.

Table 15: IOM types and ancillary hardware

If IOM type is	Then the ancillary hardware
DO Digital Output	takes the output signal and drives a set of relays
AI LLMUX	can be one to four Field Termination Assemblies.

These FTA's pre-condition and package the signals before they are received by the IOTA.

To simplify system hardware selection and to minimize spare parts requirements, IOMs can be used with various types of IOTAs. The following table provides a list of IOMs, their associated IOTAs, and ancillary hardware. All IOM models listed within the same cell can be installed on any of the IOTAs listed in the adjacent cell.



Attention

Connecting Series C IOM's into a Galvanically Isolated / Intrinsically Safe (GI/IS) environment requires specific GI/IS IOTAs.

Refer to the following for GI/IS IOTAs and the IOMs they support: "GI/IS IOTA models" on page 596

Table 16: IOMs, IOTAs, and ancillary cards

IOM block type	IOM model number	IOTA model number	IOTA description ⁷	IOTA supported FTAs or ancillary cards
AI-HART	Cx-PAIH01 Refer to Attention	Cx-TAIX01	AI, non-redundant	None
		Cx-TAIX11	AI, redundant	None
		Cx-GAIX11	AI, GI-IS, non-redundant	MTL4541 MTL4575
		Cx-GAIX21	AI, GI-IS, redundant	MTL4544
		CC-TAID01	Analog Input, Non-redundant, 16 ch. differential	
	Cx-PAIH51	Cx-TAIX51	AI, non-redundant	None
		Cx-TAIX61	AI, redundant	None
AI-HART Differential/ Single-ended	CC-PAIH02	Cx-TAIX01	Analog Input, Non-redundant, 4 ch. differential	None
		Cx-TAIX11	Analog Input, Redundant, 4 ch. differential	None
		Cx-GAIX11	Analog Input, GI-IS, Redundant, no differential, 4-20 mA only	MTL4544
		Cx-GAIX21	Analog Input, GI-IS, Non-redundant, no differential, 4-20 mA only	MTL4541 MTL4575
		CC-TAID11	Analog Input, Redundant, 16 ch. differential	None

5 Series C IOTA Pinouts

Related topics

- “Analog Input IOTA Models CC-TAIX01, CC-TAIX11” on page 78
- “Analog Input non-HART/HARTIOTA Models Cx-TAIX51, Cx-TAIX61” on page 89
- “Non-HART Analog Input IOTA (Models CC-TAIN01, CC-TAIN11)” on page 95
- “Differential Analog input IOTA (Models CC-TAID01 and CC-TAID11)” on page 102
- “Analog Output IOTA Models CC-TAOX01, CC-TAOX11, CC-TAON01 and CC-TAON11” on page 115
- “Analog Output HART IOTA Models Cx-TAOX51, Cx-TAOX61” on page 122
- “Low Level Analog Input Mux (LLMUX) IOTA Models CC-TAIM01” on page 126
- “Digital Input High Voltage IOTA Models CC-TDI110, CC-TDI120, CC-TDI220, CC-TDI230” on page 130
- “Digital Input High Voltage PROX IOTA Model Cx-TDI151” on page 135
- “Digital Input 24V IOTA Models CC-TDIL01, CC-TDIL11” on page 139
- “Digital Input 24V IOTA Models Cx - TDIL51, Cx - TDIL61” on page 147
- “Digital Output 24V IOTA Models CC-TDOB01, CC-TDOB11” on page 153
- “Digital Output 24V IOTA Models Cx-TDOD51, Cx-TDOD61” on page 158
- “Digital Output Relay Module IOTA Models CC-TDOR01, CC-TDOR11” on page 163
- “Digital Output Relay Extender board Models CC-SDOR01” on page 165
- “Speed Protection Module IOTA Model CC-TSP411” on page 169
- “Servo Valve Positioner Module IOTA Models CC-TSV211” on page 176
- “Universal Input/Output IOTA Models CC-TUIO01 and CC-TUIO11” on page 184
- “Universal Input/Output Phase 2 IOTA Models CC-TUIO31 and CC-TUIO41” on page 194
- “Low Level Analog Input (LLAI) Module IOTA model CC-TAIL51” on page 204
- “Pulse Input Module IOTA Model CC-TPIX11” on page 207
- “Upgrading Firmware in Series C I/O components” on page 209

5.2 Analog Input non-HART/HARTIOTA Models Cx-TAIX51, Cx-TAIX61

This series C Analog Input IOTA board is represented by the following information and graphic.

To access the parts information for the:

- module
- IOTA
- terminal plug-in assembly, and
- fuses

associated with this board and module, refer to Analog Input in the Recommended Spare Parts section.

Series C HART/non-HART Analog Input 6 inch, non-redundant IOTA is displayed in the following figure.

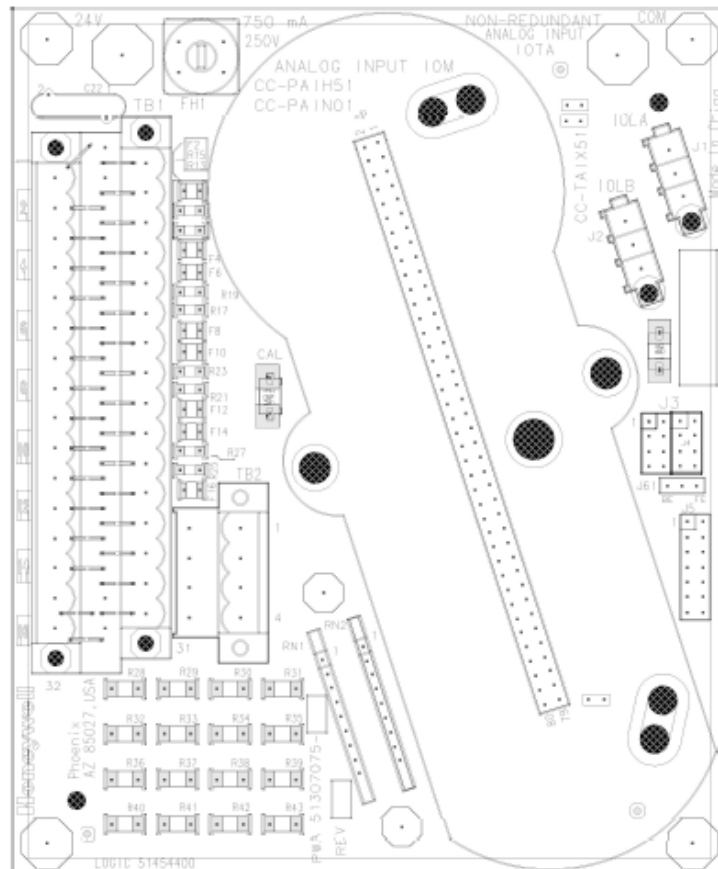


Figure 15: Series C HART/non-HART Analog Input 6 inch, non-redundant IOTA

Note: All I/O field terminations accept up to 14 gauge stranded wire.

To properly wire your module to the HART/non-HART Analog Input IOTA with terminal block 1 (TB1) and terminal block 2 (TB2), use the following table.

Table 22: AI 6 inch HART AI, non-redundant - terminal block 1

Terminal Block 1 (TB1)		
Channel	Return Screw	Power Screw(24V)
Channel 1	2	1
Channel 2	4	3

16.1 Series C recommended spares

The following table provides replacement parts, or parts that you may want to keep on hand for backup.

16.1.1 IOM removal and installation under power

The IOM has been designed to permit removal and installation under power (RIUP) without damaging the module or interrupting IOTA communications. Notice should be taken on how this may impact the active process.



CAUTION

We recommend that you proceed with extreme caution whenever replacing any component in a control system. Be sure the system is offline or in a safe operating mode.

Component replacements may also require corresponding changes in the control strategy configuration through Control Builder, as well as downloading appropriate data to the replaced component.

Refer to “Replacing an I/O module” on page 550 for IOM replacement and cautionary information.

Table 154: Recommended spare parts

Part name	Part number	Description		
ANALOG INPUT				
Series C AI IOM	CC- PAIH01	Series C Analog Input Module		
	CC-PAIH02	Series C HART Differential Analog Input Module		
	CC-PAIX02	Series C non-HART Differential Analog Input Module		
	CC-PAIN01	Series C non-HART Analog Input Module		
	CC-PAIH51	Series C Analog Input Module		
IOTA				
Non-Redundant. IOTA	CC- TAIX01 51308363-175	Analog Input, non-redundant, coated		
	Cx-TAIX51 51306979-175	Analog Input, non-redundant, coated		
Redundant. IOTA	CC- TAIX11 51308365-175	Analog Input, redundant, coated		
Terminal plug-in assembly				
16-terminal block plug-in assembly	51506273-216	2 per IOTA		
4-terminal block plug-in assembly	51506269-204	1 per IOTA		
Fuses				
Description	Part number	Quantity	Reference designator	Function
Fuse 750 mA, 5x20, fast acting	51190582-175	1 per non-red. IOTA	F1	The fuse covers the IOM and the power feeds to the field wiring. A blown fuse interrupts power to these.