

4.3.2. I/O Module Sizes

IOTA Sizing is nominal (6in = 152mm, 9in = 228mm, 12in = 304mm). I/O modules are associated with their respective IOTAs in the table below. The I/O Module is supported by one or more IOTAs. Below section also provides an overview of various available IO modules, IOTA, IOTA size and redundancy features.

I/O Module (Coated)	IOTA (Coated)	Description	Circuits	Size (in “)	Red.
8C-PAIH54		High-level AI HART, Differential	16		✓
	8C-TAIDA1	AI IOTA		9	
	8C-TAIDB1	AI IOTA Redundant		12	✓
8C-PAIHA1		High-level AI HART, Single-ended	16		✓
8C-PAINA1		High-level AI w/o HART, Single-ended	16		✓
		8C-TAIXA1	AI IOTA	6	
		8C-TAIXB1	AI IOTA Redundant	12	✓
8C-PAIMA1		Low-level AI – RTD & TC	16		
	8C-TAIMA1	Low-level AI IOTA		9	
8C-PAOHA1		Analog Output HART	16		✓
8C-PAONA1		Analog Output w/o HART	16		✓
		8C-TAOXA1	AO IOTA	6	
		8C-TAOXB1	AO IOTA Redundant	12	✓
8C-PDILA1		Digital Input 24V	32		✓
8C-PDISA1		Digital Input Sequence of Events	32		✓
8C-PDIPA1		Digital Input 24V Pulse Accumulation	32		✓
		8C-TDILA1	DI 24V IOTA	9	
		8C-TDILB1	DI 24V IOTA Redundant	12	✓
8C-PDODA1		DO 24V Bussed Out	32		✓
	8C-TDODA1	DO 24V Bussed IOTA		9	
	8C-TDODB1	DO 24V Bussed IOTA Redundant		12	✓
	8C-SDOX01	DO Relay Extension ¹		15	✓
Note 1- DO Relay Extension board is used along with DO IO module with IOTA (Redundant or non-redundant). Refer Section 4.4.11 for more details.					

4.4. Specifications for Series 8 I/O

Specifications for Series 8 I/O modules are shown below.

4.4.1. Analog Input with HART - Differential

Function

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

Notable Features

- Extensive self-diagnostics
- Optional redundancy
- Supports either Single Ended / Differential Inputs
- HART-capable, multivariable instruments and multiple modems for fast collection of control variables
- Fast loop scan

Detailed Specification- Analog Input with HART - (8C-PAIH54)

Parameter	Specification		
Input / Output Module	8C-PAIH54 - Analog Input with HART (16), Coated		
IOTA Modules	8C-TAIDA1	Non Redundant, Coated	9"
	8C-TAIDB1	Redundant, Coated	12"
Input Type	Voltage, Current (2-wire or self-powered transmitters), Single ended or Differential inputs		
Input Channels ¹	16 Channels (All 16 Single Ended or Differential type)		
A/D Converter Resolution	16 bits		
Input Range ¹	0 to 5 V, 1 to 5 V, 0.4 to 2 V, 4-20 mA (through 250 Ω)		
Voltage Rating	24 VDC		
Module Current Rating	310 mA		
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		
Normal Mode Rejection Ratio, at 60 Hz	19 dB		
Normal Mode Filter Response	Single-pole RC, -3 dB @ 6.5 Hz		
Crosstalk, dc to 60 Hz (channel-to-channel)	-60 dB		
Input Impedance (voltage inputs)	> 10 M Ω powered		
Maximum Normal Mode Input (any input referenced to common, no damage)	$\pm$ 30 Volts		