

4.4.3. Analog Input – Single Ended

Function

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

Notable Features

- Extensive self-diagnostics
- Optional redundancy
- Fast loop scan
- Internal or external field power selection
- On board excitation power (no need for marshalling power)
- Galvanic Isolation (System to Field only with external user supplied power)

Detailed Specification- Analog Input (8C-PAINA1)

Parameter	Specification		
Input / Output Module	8C-PAINA1 - Analog Input without HART (16), Coated		
IOTA Modules	8C-TAIXA1	Non Redundant, Coated	6"
	8C-TAIXB1	Redundant, Coated	12"
Input Type	Current (2-wire or self-powered transmitters)		
Input Channels ¹	16 Channels (Single Ended type)		
A/D Converter Resolution	16 bits		
Input Range	4-20 mA (through 250 Ω)		
Voltage Rating	24 VDC		
Module Current Rating	105 mA		
Common Mode Rejection Ratio, dc to 60 Hz (500 Ω source imbalance)	70 dB		
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	\pm 30 Volts		
Crosstalk, dc to 60 Hz (channel-to-channel)	-60 dB		
Maximum Input voltage (any input referenced to common, no damage)	\pm 30 Volts		
Input Scan Rate	50 ms		
Hardware Accuracy (@ CMV = 0 V)	\pm 0.075% of full-scale (23.5 \pm 2 $^{\circ}$ C)		
	\pm 0.15% of full-scale (0 to 60 $^{\circ}$ C)		
Galvanic Isolation (any input terminal voltage referenced to common) ²	1000VAC RMS or \pm 1000 VDC		

Isolation Technique	Icoupler (in IOM)
Module Removal and Insertion Under Power	Supported
Transmitter Field Power Conditioning	Individually Protected Current Limiting Circuits. No fuse required
Note 1 – No differential / voltage inputs are supported.	
Note 2 – System to Field type isolation, option available only with external user supplied power	