

Highlights

- 4 (AIMS-4X) or 8 (AIMS-8X) Analog Input Channels
- Input Type Versions
 - **U** : Each Channel Independently Configurable for Thermocouples, RTD Pt100, Volts, mV and mA (No Jumper Settings)
 - **P** : All Channels RTD Pt100 (3-Wire)
 - **T** : Each Channel Independently Configurable for Thermocouples / mV
 - **D** : Each Channel Independently Configurable for DC V / mA
- Process Values Available as both 16-Bit Signed Integer & 32-Bit Single Precision Float
- 4 Programmable Soft Alarms for each Channel with LED Indicators
- All Channels Isolated from RS485 Port
- PC Tool for Easy Configuration and Parameter Settings

Features

- Fast Channel Update Rate
- 16 Bit Sigma-Delta ADC ($\pm 32,768$ Counts)
- High Accuracy, High Resolution, High Stability
- Automatic CJC for Thermocouple & LRC for RTD Inputs
- Software Linearization for Thermocouple & RTD Inputs
- User Settable Range Low & Range High for DC V/mV/mA Inputs
- Wide Supply Voltage Range : 20 ~ 34 VDC (24 VDC Nominal)



Specifications

Analog Input Channels	
Number of Channels	4 / 8
Input Types	Thermocouples : J, K, T, R, S, B, N RTD : Pt100, 3-Wire DC mV : 0 to 80 mV DC Volts : 0 to 1.25V, 0 to 5V, 1 to 5V, 0 to 10V DC mA : 0-20 mA, 4-20 mA
Accuracy	$\pm 0.25\%$ of reading
Corrections	<ul style="list-style-type: none"> • Cold-Junction Compensation for Thermocouples (Accuracy Better than $\pm 0.5^\circ\text{C}$) • Lead Resistance Compensation for RTD (Upto 22 Ohms in each lead)
Range	Thermocouple & RTD Pt100 : Refer Table-1 DC Volts / Current : -30000 to +30000 Counts
Zero Offset	User Adjustable over Full Range for Each Channel
ADC	16 Bit ($\pm 32,768$ Counts), Sigma-Delta ($\Sigma\Delta$)
Sampling Time	Version U : 250mS Per Channel (4 Samples per Second) Version P : 333mS Per Channel (3 Samples per Second) Version T : 100mS Per Channel (10 Samples per Second) Version D : 100mS Per Channel (10 Samples per Second)
Input Resistance	Differential Mode > 20 M Ω Common Mode > 10 M Ω
Common Mode Rejection	> 100dB at 50/60 Hz
Input Protection	ESD : 8KV EFT : 2KV Surge : 1KV
Input Conditioning	First Order Analog R-C Low-Pass Filter
Isolation	All Channels Isolated from RS485 Port 1500VAC for 1 second or 250VAC continuous

Alarms	
Numbers	4, Independent for Each Channel
Programmable Parameters	Type : Process Low, Process High Setpoint : Adjustable over Full Range Hysteresis : 1 to 3000 Unit Counts Inhibit : No, Yes
Serial Communication	
Port	RS485, 2-wire, Half Duplex, Start-Stop Synchronized
Protocol	Modbus RTU
Baud Rate	Settable : 2400, 4800, 9600, 19200, 38400, 57600, 115200
Parity	Settable : None, Even, Odd
Max. Units per Loop	31
Max. Distance	1200 Meters
Power Supply	
Type	Switch Mode (SMPS)
Line Voltage	20 ~ 32 VDC, nominal 24 VDC @ 350mA Min. Note : In case of looping multiple modules on one power source, make sure that the source is capable of supplying minimum 350mA current per module.
Consumption	10VA Max
Physical	
Mounting	DIN-Rail
Overall Dimensions	22.5(W) X 101(H) X 119(D), mm
Terminals	Screw Type, Pluggable
Weight	400 gm, Appx.
Environmental	
Operating Ambient	0 to 55°C & 5 to 90%RH Non-condensing
Storage Temperature	-10 to +70°C
Atmospheres	Not Suitable for use in Corrosive or Explosive Atmospheres. The Panel in which the Instrument is Mounted must be free of Electrically Conductive Pollution.

Table 1 : Temperature Ranges for Thermocouples & RTD

Input Type	Range (Min. to Max.)
Type J Thermocouple (Fe-K)	0 to +960.0°C / +32.0 to +1760.0°F
Type K Thermocouple (Cr-Al)	-200.0 to +1376.0°C / -328.0 to +2508.0°F
Type T Thermocouple (Cu-Con)	-200.0 to +387.0°C / -328.0 to +728.0°F
Type R Thermocouple (Pt/Pt-Rh13%)	0 to +1771.0°C / +32.0 to +3219.0°F
Type S Thermocouple (Pt/Pt-Rh10%)	0 to +1768.0°C / +32.0 to +3214.0°F
Type B Thermocouple	0 to +1826.0°C / +32.0 to +3218.0°F
Type N Thermocouple	0 to +1314.0°C / +32.0 to +2397.0°F
3-wire, RTD Pt100	-199.0 to +600.0°C / -328.0 to +1112.0°F

4 / 8 Channel Module

