INTELART
Robust in Automation

IM342
Technical Sheet

Analog Input Module

■ Caution

	1. The product/system described in this documentation may be operated only by personnel qualified for the specific task in accordance with the relevant documentation. 2. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.
	1. Inspect wiring of equipment before each use. Replace damaged or frayed electrical cords immediately. Use a reliable power supply. 2. Minimize the potential for dust, metallic particles, water or any chemical spills on or near the equipment. 3. DO NOT disassemble or modify any part of the equipment. 4. DO NOT use and/or install the equipment in places with the following conditions: ■ Humidity or temperature out of the specified range ■ vibration or shock ■ dust or corrosive gas or liquid 5. DO NOT touch the cords, terminals or any electric part when the equipment power is on. Wait at least one minute after the power off to assure that all capacitors are discharged.

■ Hardware Parameters

Analog Inputs	Inputs count	4
	Measuring type	Linear DC: 0 to 10 V, 0 to 24 mA
	Sampling rate	25 ms
	Destruction limit (Voltage)	30 V
	Destruction limit (Current)	70 mA
	Resolution	12 bit
	Input resistance (Voltage)	>145 kΩ
	Input resistance (Current)	>250 Ω
	Measuring principle	Pseudo Differential
	Hardware interrupt	Yes. Under flow, Over flow
Ambient Conditions	Storage temperature	-15 to 75 ˚C
	Operating temperature	0 to 55 ˚C
	Relative humidity	Max 90 %, No Condensation
Miscellaneous	Weight	Approx. 90 g

Smoothing

When you install an input analog signal board, a property named "Smoothing" will be appeared in properties window in order to enable some filtering and signal conditioning options.

■ Address Space

The value of input channels and output channels and some configurations will be accessible via an address space. There are bunch of predefined mapped tags in order to read or write a value in the address space. The following table illustrates the type and purpose of each mapped tag.

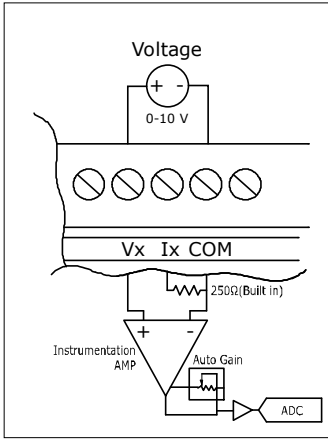| Category	Name	Data Type	Address	Function
	Input Space (I)			
Analog Inputs	AI00	REAL	%ID0	Gets the value of channel 0 value
	AI01	REAL	%ID4	Gets the value of channel 1 value
	AI02	REAL	%ID8	Gets the value of channel 2 value
	AI03	REAL	%ID12	Gets the value of channel 3 value

■ Diagnostic

All input channels has a LED indicating the status of that channel. The following table explains the states of each relevant LED.
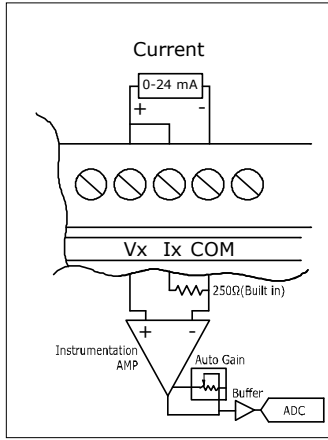
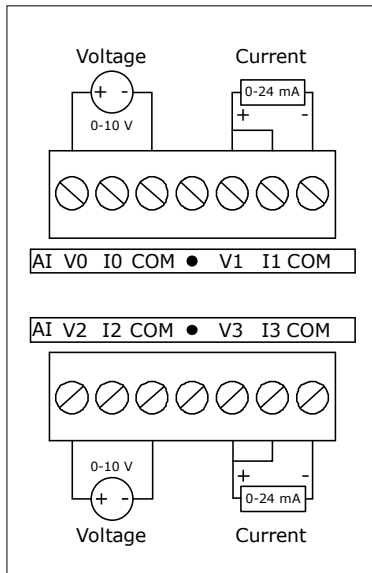| LED	Indicating	Solution
☐ Off	Power missing or hardware failure.	Check the main power supply Verify that the module is installed correctly
■ On	The module is configured and is in RUN mode.	--
✹ Flashes	Indicates an error (Out of range error, configuration error etc.)	Verify that the module is installed correctly Ensure that the input or output value be in eligible range.

■ Wiring

The following block diagram shows you information about wiring of the module.

Voltage

+ −

0-10 V

Vx Ix COM

250Ω(Built in)

Instrumentation AMP

Auto Gain

ADC

Analog Voltage Inputs Diagram

Current

0-24 mA

+ −

Vx Ix COM

250Ω(Built in)

Instrumentation AMP

Auto Gain

Buffer

ADC

Analog Current Inputs Diagram

Voltage

+ −

0-10 V

Current

0-24 mA

+ −

AI V0 I0 COM ● V1 I1 COM
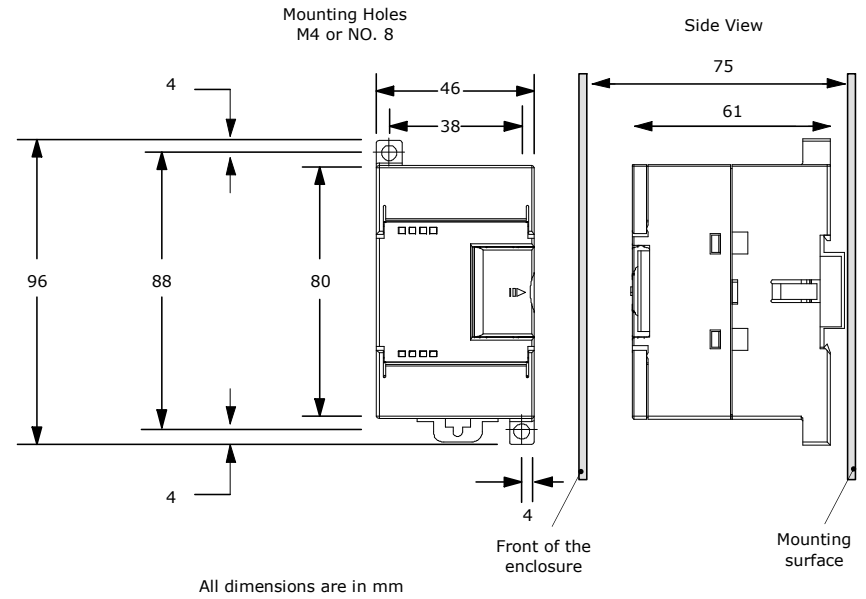
AI V2 I2 COM ● V3 I3 COM

0-10 V

+ −

+ −

0-24 mA

Voltage

Current

Wiring Sample

■ Dimensional Drawing

The dimensions of the module are available in this section. For install the module and its main device follow the below dimensional drawing.

Mounting Holes M4 or NO. 8

Side View

4

46

38

75

61

96

88

80

4

4

Front of the enclosure

Mounting surface

All dimensions are in mm