

140ACI03000 I/O Analog In Module

Overview

The Analog Input 8 Channel Unipolar module accepts mixed current and voltage inputs. Required jumpers between the input and sense terminals for current input measuring are included with the module.

Specifications


The following table shows the specifications for the ACI03000 analog input module.

Specifications	
Number of Channels	8 Differential
LEDs	Active: Indicates bus communication present.
	F: Indicates channel fault. NOTE: This module produces a fault signal F if any one channel detects a broken wire condition in the 4 ... 20 mA range.
Required Addressing	9 Words In
Voltage Input	
Linear Measuring Range	1 ... 5 Vdc
Absolute Maximum Input	50 Vdc
Input Impedance	> 20 M Ω
Current Input	
Linear Measuring Range	4 ... 20 mA
Absolute Maximum Input	25 mA
Input Impedance	250 Ω +/- 0.03%
Resolution	12 Bits
Accuracy Error @ 25° C	Voltage Mode Typical: +/- 0.05% of full scale Maximum: +/- 0.1% of full scale
	Current Mode Add +/- 0.03% to voltage specification
Linearity	+/- 0.04%
Accuracy Drift w/Temperature	Typical: +/- 0.0025% of full scale / °C
	Maximum: +/- 0.005% of full scale / °C
Common Mode Rejection	> -72 dB @ 60Hz
Input Filter	Single pole low pass, -3 dB cutoff @ 15 Hz, +/- 20%

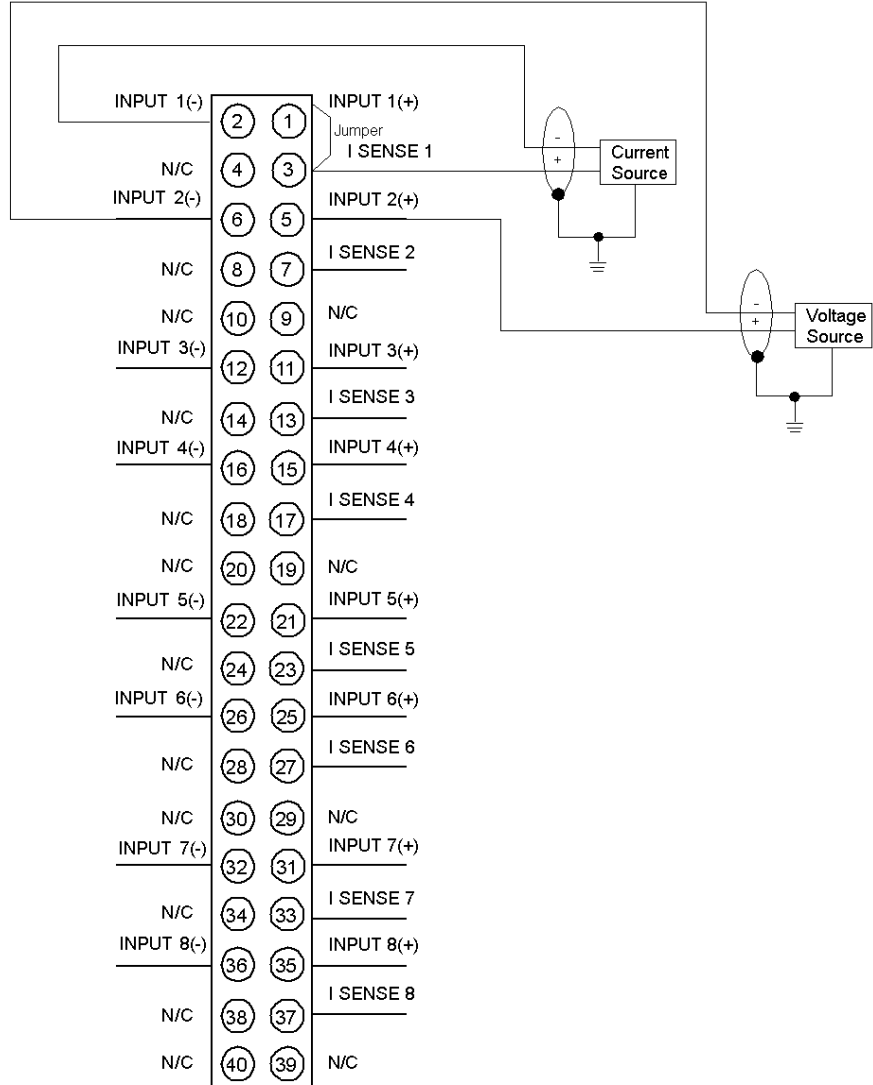
Specifications	
Isolation	
Channel to Bus	1000 Vdc, 3000 Vpp, for 1 minute
Operating Voltage	
Channel to Channel	30 Vdc max
Update Time	5 ms for all channels
Fault Detection	Broken wire (4 ... 20 mA mode) or under voltage range (1 ... 5 V)
Bus Current Required	240 mA
Power Dissipation	2 W
External Power	Not required for this module

NOTE: Calibration is not required for this module.

Wiring Diagram

 CAUTION
<p>Possible Equipment Failure</p> <p>When configured for voltage inputs (no jumper installed between INPUT(+) and ISENSE terminals), if a broken field wire occurs, readings will be non-zero and not predictable.</p> <p>Failure to follow these instructions can result in injury or equipment damage.</p>

The following figure shows the wiring diagram for the 140ACI03000 module.



External Wiring Recommendation

1. The user supplies the current and voltage sources (installation and calibration of fuses are at the discretion of the user).
2. Use shielded signal cable. In noisy environments, twisted shielded cable is recommended.
3. Shielded cables should be connected to the PLC's ground.
4. A Shield Bar (STB XSP 3000 and STB XSP 3010/3020) should be used to connect the shielded cable to ground (*see page 782*).
5. The maximum channel to channel working voltage cannot exceed 30 Vdc.
6. N / C = Not connected.

Diagnostic

1. Unused inputs may cause the activation of the F LED. To avoid this occurrence, please wire unused channels in voltage mode to a channel that is in use.
2. This module produces an error signal F if any channel detects a broken wire condition in the 4-20 mA range or a under voltage condition in the 1-5 V range.