140ACI04000 High Density Analog in I/O Module

Overview

The 140ACI04000 is a 16 channel analog input module which accepts mixed current inputs.

Specifications

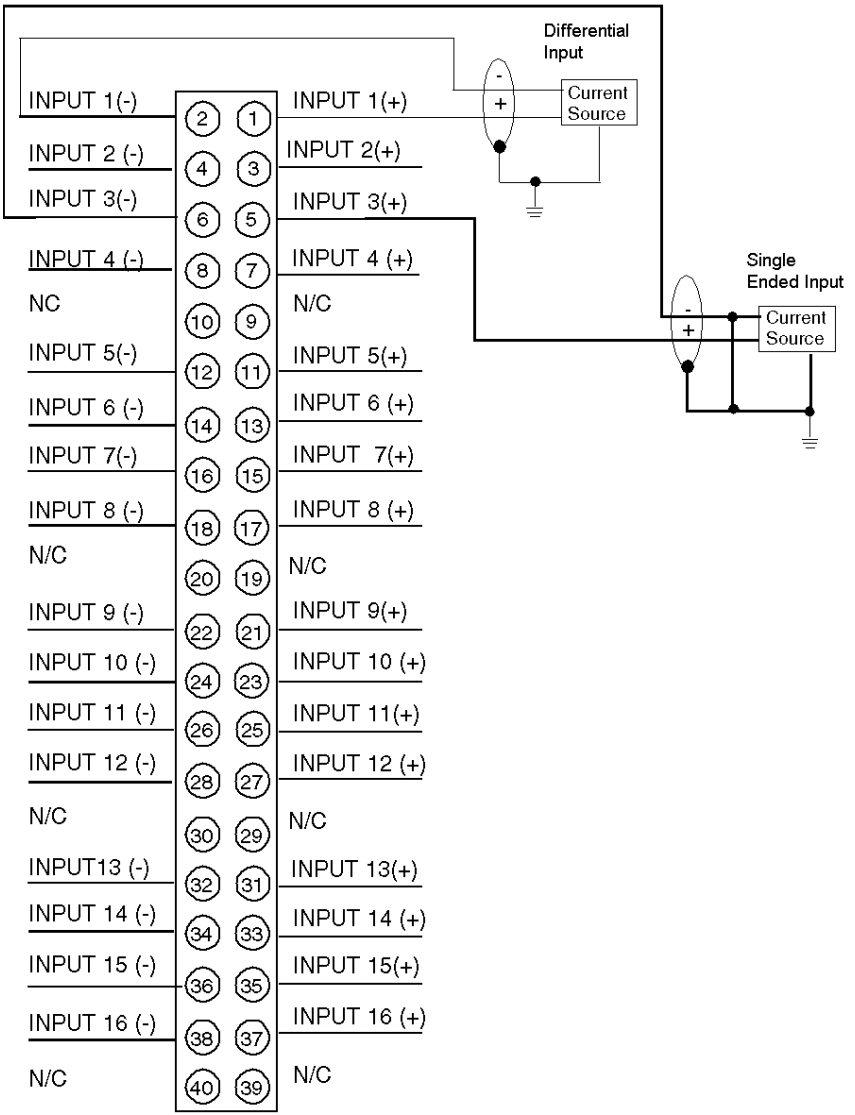
The following table shows the specifications for the ACI04000 analog input module.

Specifications	
Number of Channels	16 Differential or 16 externally tied single ended
LEDs	Active: Indicates Bus communication is 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	17 Words In
Current Input	
Linear Measuring Range	0 ... 25 mA, 0 ... 25,000 counts 0 ... 20 mA, 0 ... 20,000 counts 4 ... 20 mA, 0 ...16,000 counts 4 ... 20 mA, 0 ... 4,095 counts
Absolute Maximum Input	30 mA
Input Impedance	250 Ω nominal
Accuracy Error @ 25° C	+/- 0.125% of full scale
Linearity (0 to 60° C)	+/- 6µA max, 0 ... 25 mA, 0 ... 25,000 counts +/- 6µA max, 0 ... 20 mA, 0 ... 20,000 counts +/- 6µA max, 4 ... 20 mA, 0 ... 16,000 counts +/- 12µA max, 4 ... 20 mA, 0 ... 4,095 counts
Accuracy Drift w/Temperature	Typical: +/- 0.0025% of full scale / ° C Maximum: +/- 0.005% of full scale / ° C
Common Mode Rejection	> -90 dB @ 60Hz
Input Filter	Single pole low pass, -3 dB cutoff @ 34 Hz, +/- 25%
Isolation	
Field to bus	1780 Vac for 1 minute
Operating Voltage	
Channel to Channel	30 Vdc max
Update Time	15ms for all 16 channels
Fault Detection	Broken wire in 4 ... 20 mA mode
Bus Current Required	360 mA

Specifications	
Power Dissipation	5 W
External Power	Not required for this module
Fusing	
Internal	None
External	User discretion

Wiring Diagram

Wiring diagram for the 140ACI04000 module.



External Wiring Recommendations

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 environnements, 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.

Diagnostics

1. Unused inputs may cause the activation of the F LED. To avoid this occurence, the unused channels should be configured in the 0...25 ma range.
2. This module produces an error signal F if any one channel detects a broken wire condition in the 4...20 mA range.