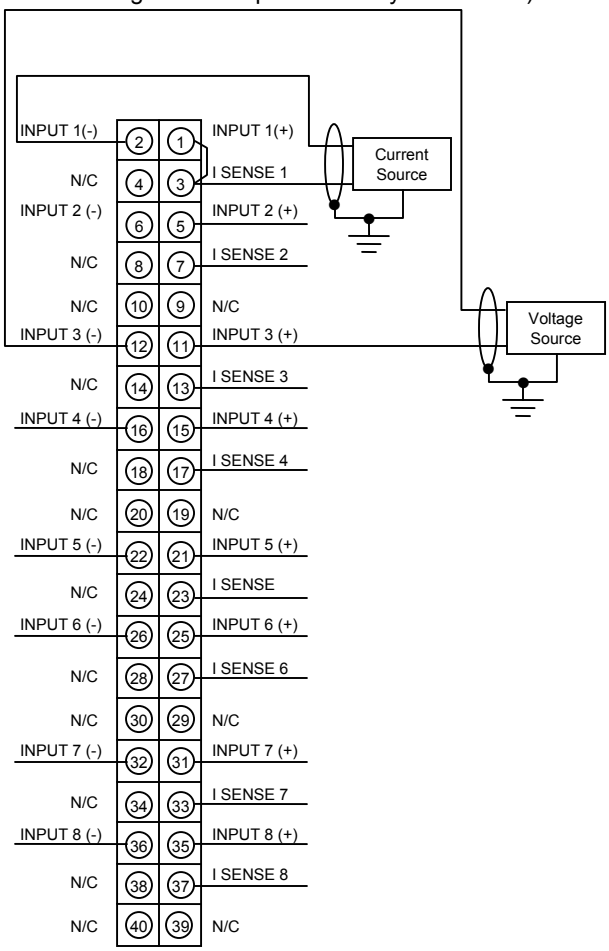
Data Bulletin

MODICON® QUANTUM™ 140ACI03000 ANALOG INPUT MODULE

Wiring examples
(refer to user guide for important safety information):



Removable terminal strip is ordered separately.

140XTS00200	Standard, Screw Type, 40 points
140XTS00100	IP 20 Finger Safe, 40 points

Optional rack accessories are ordered separately.

140XCP50000	Dummy module without terminal block
140XCP51000	Dummy module with cover

General Description

The Quantum 140ACI03000 Analog Input Module provides (8) differential analog input channels. Each channel is individually configurable for a 1 ... 5 VDC or 4 … 20 mA signal.

This module has broken wire detection in current mode and under voltage in voltage mode.

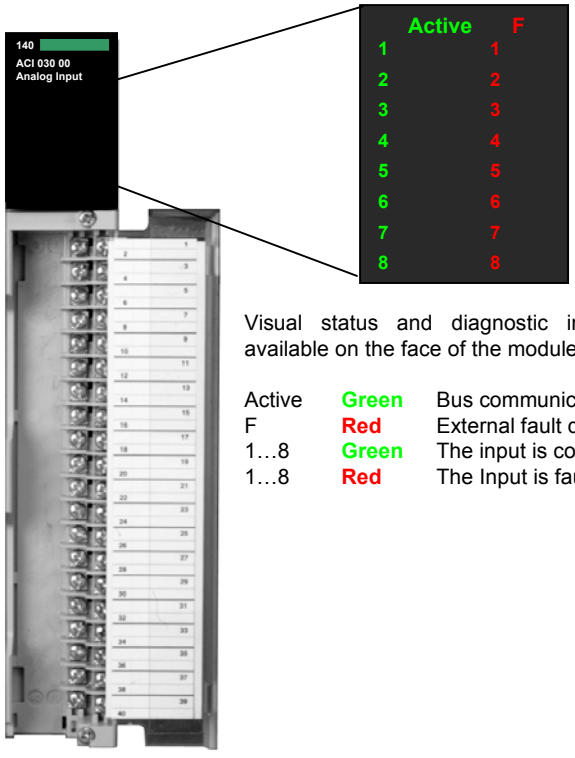
A Quantum removable terminal strip allows for easy maintenance.

Quantum backplanes (ordered separately) come in 2,3,4,6,10, and 16 slot versions. Any Quantum module can be used in any slot. A Quantum power supply is required in each rack. The power supply provides logic power to all modules on the bus.

All Quantum I/O modules are optically isolated from the bus, ensuring safe and trouble-free operation. This isolation also allows modules to be hot swapped.

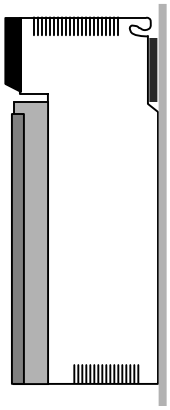
Optionally, you can insert mechanical keys between the I/O module and the terminal strip to ensure that the field wiring and the module type are properly matched. Key codes are unique for each module type. Key kits are shipped with each I/O module.

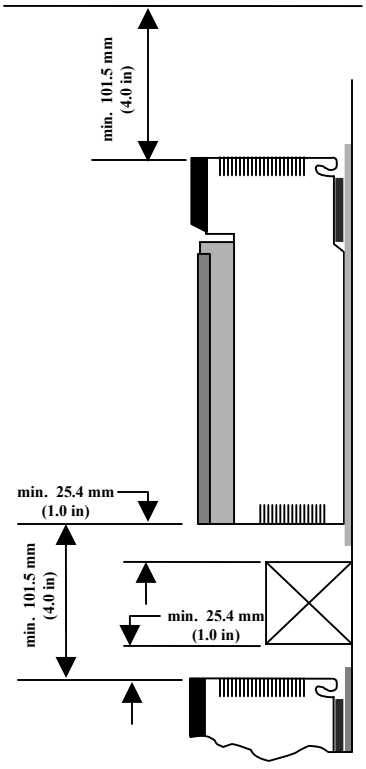
As an option, modules can be ordered with a conformal coating applied to protect the internal circuitry from corrosive gases such as Chlorine, Nitric Oxide, Hydrogen Sulfide and Sulfur Dioxide.



Visual status and diagnostic information is available on the face of the module as LED's.

Active	Green	Bus communication is active
F	Red	External fault detected
1…8	Green	The input is configured
1…8	Red	The Input is faulted





Specifications		
Module Type	8 analog inputs, differential	
Bus Current Required	240 mA	
Signal Type	1…5VDC, 4…20mA	
Update Time (in ms)	5 ms for all channels	
Input Surge Tolerance	+/-30VDC, +/-25mA	
Input to Input Isolation	30 VDC maximum	
Input to Bus Isolation	1000 VDC, 3000 Vpp, for 1 minute	
Linearity	+/- 0.04%	
Internal Fuses	2A slow-blow (not user replaceable)	
External Fuses - Supply	500mA fast-blow recommended	
Common Mode Rejection	> -72 dB @ 60 Hz	
Filtering	Single pole low pass with -3 dB cutoff @ 15 Hz, +/- 20%	
Input Type	Differential	
Signal Type	1 to 5 VDC	4 to 20 mA
Input impedance	> 20 MΩ	250 Ω +/– 0.03%
Absolute Maximum Input	50 VDC	25 mA
Error at 25 degrees C	0.05% typical, 0.1% max	
Resolution	12 bits	
Accuracy Drift with Temperature	0.0025% / degree C typical, 0.005% / degree C max	
Power Dissipation	2 W	
Storage Temperature	-25 to +80 degrees C	
Operating Temperature	0 to 60 degrees C	
Relative Humidity	5 … 95% Non-condensing	
Weight	2.0 lb (1 kg) Maximum	
EMC Immunity	IEC1131 - Surge on aux power supply 500 V	
EMC Emissions	EN50081-2 (limitation A)	
Agency Approvals	UL, CUL, CSA, CE, FM Class 1 Div 2	
Software Support	Concept™, ProWORX®, Unity™	
IO Map	9 Input words	

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For detailed technical documentation visit:
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