![ACCES I/O PRODUCTS, INC. logo]

IIB-24
24-Channel Optically Isolated Input Board

FEATURES
- 24 optically isolated inputs
- Non-polarized inputs accept 31VDC or 24VAC
- Input isolation rated at 500V channel to channel and channel to ground
- Jumper-selectable filters per channel for AC inputs and to eliminate undesired response to electrically noisy DC signals
- Pairs with compatible 24-channel digital input boards
- On-board screw terminals
- Industry standard 50 pin keyed IDC connector
- Power for circuit isolation accepted from either pin-49 from host digital input connector or alternatively from power screw terminals
- LED indicates presence of +5VDC power for board operation
- PC/104 module size and mounting compatibility

FACTORY OPTIONS
- Higher input voltage levels

ACCESSORIES
- MP104-DIN   Din-Rail mounting
- CAB50F-6   Ribbon Cable Assembly

FUNCTIONAL DESCRIPTION
The IIB-24 optically isolated input board is designed to add capability to interface powered signals originating from equipment with different power sources to eliminate troublesome ground loops and circulating currents. While ACCES offers up to 120 buffered digital I/O lines on a single PCI board in 5 groups of 24 for monitoring dry contacts and TTL interfacing, there is often a need to also interface powered status signals. Simply add in an IIB-24 to any 24 bit group and you've expanded your signal interface capability without needing to program a new device or find another open PCI slot or USB port.
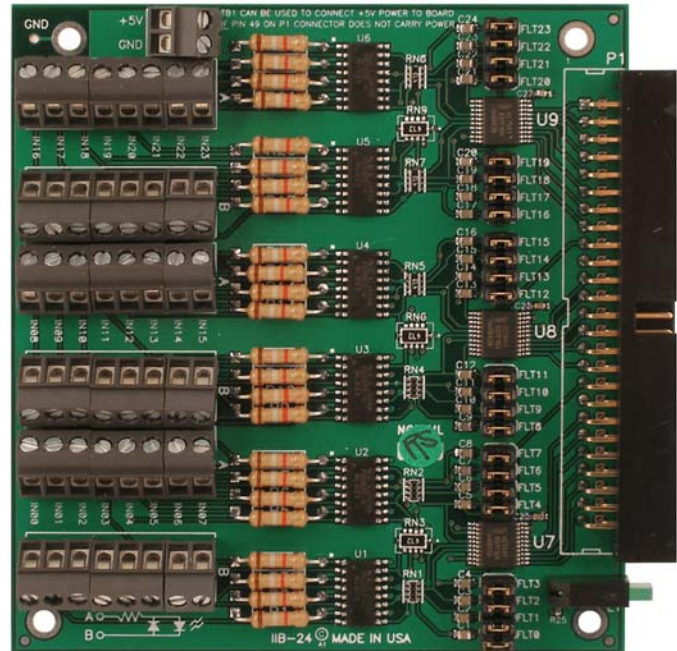
Less than half the cost of a solid state module mounting rack with discrete input modules, and about a quarter size of the footprint, this add-on module will be hard to compete with for applications requiring some level of optical isolation or higher than TTL level signals.
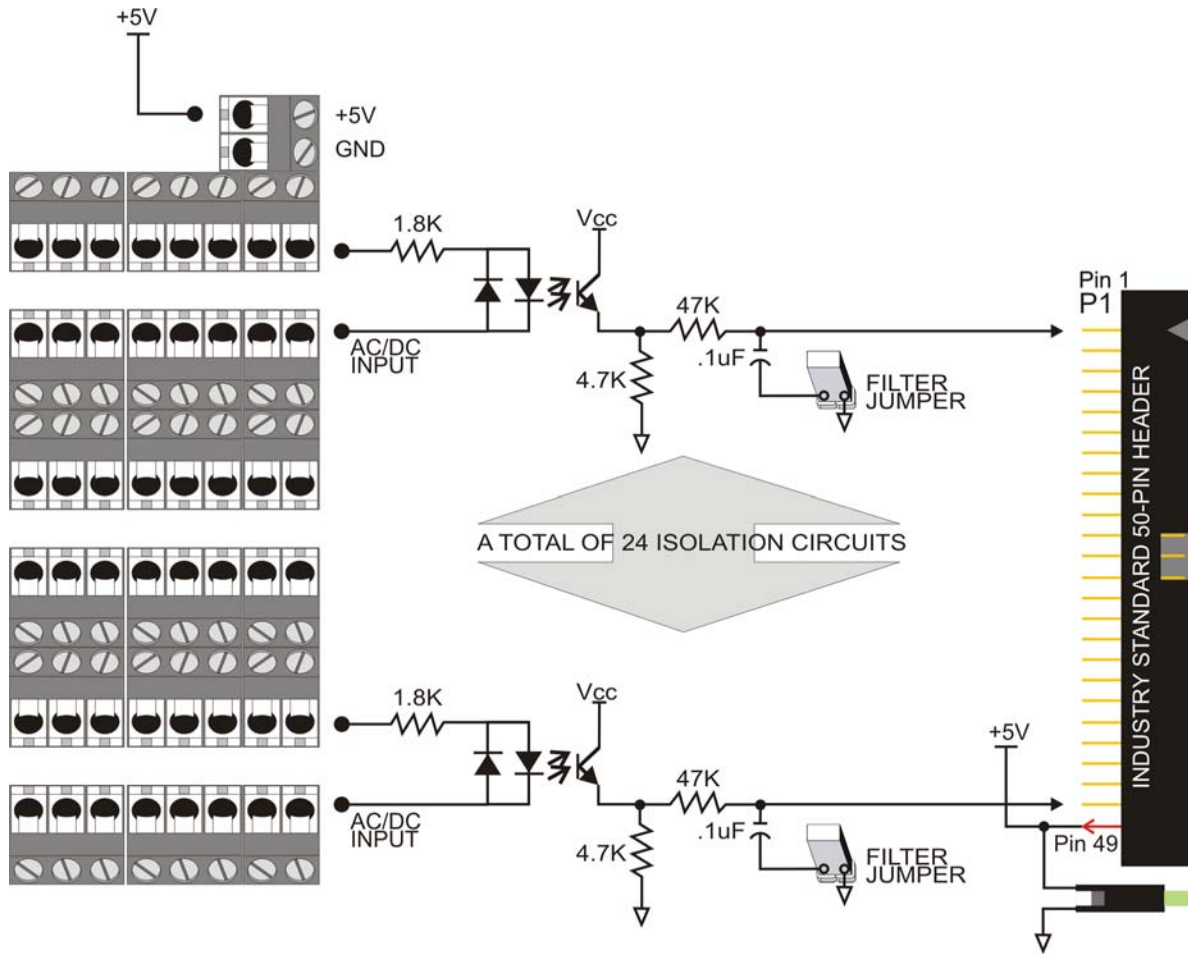
The isolated, non-polarized inputs may be driven by either DC sources of 3-31 V (or higher by special order) or AC sources at frequencies of 40Hz to 10kHz. Optically isolating the digital inputs from each other, and from the computer, assures smooth, error-free data transmission in noisy, real-world environments. The input channels are accessed via screw terminals. The TTL input signals are connected to the DIO product via a 50-pin IDC type right angle header.

The IIB-24 is designed to be used in rugged industrial environments but is small enough to fit nicely onto any desk or testing station. The board is PC/104 sized (3.550 by 3.775 inches). Easily mount the board on a DIN-rail using our MP104-DIN adaptor.

OEM USB/104 FORM FACTOR
The OEM "board-only" version is perfect for a variety of embedded applications. What makes this approach unique is that its PCB size and mounting holes match the PC/104 form factor. This allows our rugged digital board to be added to any PCI-104 or PC/104 stack.

BLOCK DIAGRAM

SPECIFICATIONS

Inputs
Channels: 24
Type: Non-polarized
Voltage: 3 to 31 DC or AC RMS (40 Hz-10 kHz) CMOS compatible
Isolation: 500V* channel-to-ground and channel-to-channel
Resistance: 1.8K ohms in series with opto-coupler
Filter Response: Rise Time = 4.7 mS / Fall Time = 4.7 mS
Non-Filter Response: Rise Time = 10 uS / Fall Time = 30 uS

Environmental
Operating Temp: 0˚ to 70˚ C
Storage Temp: -40˚ to +85˚ C
Humidity: Maximum 90% RH, without condensation
Board Dimension: 3.550 x 3.775 inches
Box Dimension: 4.00 x 4.00 x 1.4 inches
Power: 5V@ 35mA, typical

Ordering Guide
IIB-24   Isolated Input Module