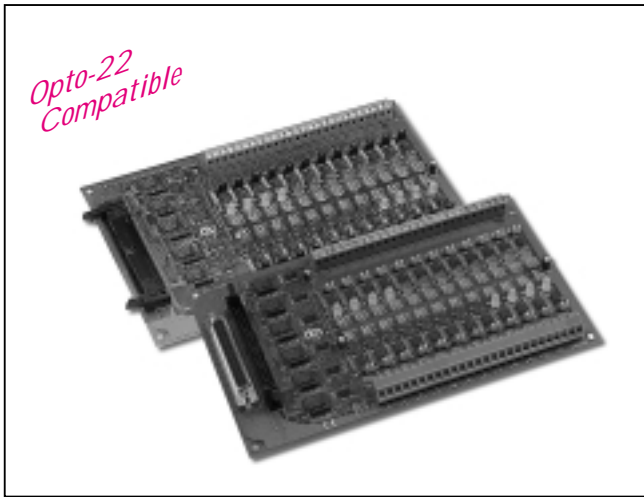# DP-24P / DP-24PD
24-Channel Opto-Isolated Input Board

Opto-22 Compatible

Functional Description

The DB-24P/DB-24PD is a 24-channel isolated digital input daughter board for DIO-24, DIO-48, DIO-144, PCI-D144 OPTO-22 compatible digital input board. The 24-channel inputs of the DB-24PD consist of a bi-directional opto-coupler with a resistor for current sensing . You can use the DB-24PD to sense DC signal from TTL levels up to 24V. You can also use DB-24PD to sense a wide range of AC signals. The DB-24PD registers a constant logic high, if the frequency of the input AC signal is greater or equal to 1 kHz, and if the voltage of the AC signal is at least 4Vrms. If you are using AC input signal,you must short the AC filter Jumper. You can use the board to isolate the computer from large common-mode voltages, ground loops, and voltage spikes that often occur in industrial environments.

Features

- Optically isolated digital input channels
- Connects directly to DIO-24, DIO-48, DIO-144, PCI-D144 or other OPTO-22 compatible digital input card
- AC/DC Signal Input
- AC Signal Input with filter
- Input buffer with voltage comparators

Applications

- Isolated digital input sensing
- Testing Automation

Specifications

- I/O connector Electrical Specifications
- Configuration: 24 optically isolated digital input channels
- Compatibility: TTL compatible
- Digital Input
- Number of channels: 24, each with its own ground reference isolated from other channels
- Maximum input voltage: 24 VDC or 24 VAC
- Digital Logic Level

Level	Minimum	Maximum
Input low voltage (DC or peak AC)	0	$\pm 1V$
Input high voltage DC/1kHz AC	$\pm 2.8VDC$ 4Vrms	$\pm 24VDC$ 24VAC

Input impedance : 1.2k
Source Current
5V inputs: 4mA/channel minimum
24V inputs: 20mA/channel minimum
Response Time: 20μs without filter/2.2ms with filter

- Power Supplies: +5v: 336mA /maximum
- Board Dimensions: 220 mm x 132 mm
- Operating Temperature: 0 -50°C
- Storage Temperature: -20-70°C
- Humidity: 5% to 90 %

Order Description

- DB-24P: 24 channel Isolated Input Board with 50-pin flat cable
- DB-24P/DIN: DB-24P with DIN-Rail mounting kit
- DB-24PD: 24 channel Isolated Input Board with D-Sub 37 connector
- DB-24PD/DIN: DB-24PD with DIN-Rail mounting kit

Without Filter Response Time / With Filter Response Time