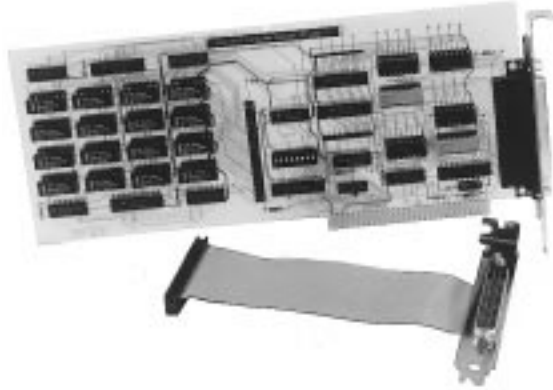


Model DIO32B

32 Channel Isolated Digital I/O



FEATURES

- **16-Channel Optically Isolated Input**
- **Non-Destructive Read Back of Outputs**
- **High Reliability 10VA DIP Reed Relays**
- **Power and Ground Provided on Connector**
- **Socketed DIP Resistor Allows User Specified Input Range**



DESCRIPTION

The Model DIO32B offer 32 channels of isolated digital I/O for XT and AT compatible systems. The card is structured as 4 ports of 8 channels each. Ports A and B each offer 8 bits of optically isolated inputs. Each input is isolated from ground, all other channels and from the host PC ground. Isolation is effective up to 400VDC or peak AC. Ports A and B are input ports only. Each input channel has two leads, hi and low, with current limiting resistors to limit the input current to the opto-isolator. After the current limiting resistor, the signal is applied to a bridge rectifier to convert AC signals to DC status. The signal is then applied to the opto-isolator for reading by the computer.

Ports C and D each offer 8 bits of reed relay output for controlling the on/off status of external devices such as servos, lights, buzzers, or other low current level applications. These ports have non-destructive read-back capability, i.e. after writing a value to the port, its status can be read back into the computer to determine if it has responded properly. The relays are normally open, “NO”, Form A, and close when energized by the computer writing a “1” to the appropriate port bit.

SPECIFICATIONS

Channels

16 Input
16 Output

Input Range

6-12 VAC/VDC

Input Isolation

Optical, 400V

Input Frequency Response

DC to 5000Hz

Throughput

660Hz

Maximum Input Volts

12V AC/DC

I/O Address Requirement

4 I/O Bytes

Interrupts Supported

2-7

Power Required

+5VDC @ 0.6A

Temperature

Operating: 0 to 50°C
Storage: -20 to 70°C

Relative Humidity

10-90%, non-condensing

MTBF

150,000 Hrs



SPECIFICATIONS

OUTPUT RELAYS SPECS

Operations

200M

Power Capacity

10VA, Resistive Load

Connectors

On-board: DB-37 female
2nd Bracket: DB-37 male

Software

The software that is provided with this card supports several different models. Those models include the DIO32B, DIO16, 16ISO, 16REL, 16REL-L and the 32REL-B. The examples are written around the DIO32B, but the the DIO16, 16ISO, and 16REL are just subsets of the DIO32B. For example, the 16ISO will function with code written for the input section of the DIO32B. Additional code is provide for the 16REL-L, DIO16 and 32REL-B in separate directories.

Operating Systems Supported

DOS 3.x or greater

Languages Supported

Microsoft C V7.0 or greater
Microsoft Quick BASIC V4.5
x86 Assembler

Example Programs

Demo programs are provided in both interpretive and compiled BASIC. There are also demo routines in C. Both the compiled and linked versions are included. An assembly language driver is also included with source code.

ORDERING GUIDE

Model DIO32B

32 Channel Board, cable/connector
assembly for output connector

ACCESSORIES

Model UTB-K

Termination board/Metal enclosure

Model 2M37DSM

37 pin header that converts D-sub
mini connectors to field wiring



PINOUT CONNECTIONS

DB-37 Male Connector & Pin-Outs		
Port Bit	Relay K#	Pin Number
Port C Bit 0	K16	P2 - 2, 20
1	K15	3, 21
2	K14	4, 22
3	K13	5, 23
4	K12	6, 24
5	K11	7, 25
6	K10	8, 26
7	K9	9, 27
Port D Bit 0	K8	P2 - 10, 28
1	K7	11, 29
2	K6	12, 30
3	K5	13, 31
4	K4	14, 32
5	K3	15, 33
6	K2	16, 34
7	K1	17, 35
Ground		P2 - 18, 36, 37
+5 Volts		P2 - 19
+12 Volts		P2 - 1

Model C1900

18" (457mm) cable, male to female

Model C1800

18" (457mm) cable, female to female

6260 Sequence Drive
San Diego, CA 92121
800 523-2320
fax 858 677-0895
www.icsadvent.com