

# PISO-730/730A

32-channel isolated DI/O & 32-channel TTL DI/O board



PISO-730



PISO-730A

## Functional Description

The PISO-730/730A provides 32-channel isolated digital I/O and 32-channel TTL-level digital I/O. Each of the 16 isolated digital output channel equipped a Darlington transistor (PISO-730) or PNP transistor (PISO-730A). The board can interface to field digital logic signals to eliminate ground-loop problems and isolate the host PC from damaging voltages.

## Applications

- Factory Automation
- Product Test
- Laboratory Automation

## Specifications

### 16 Optical-Isolated Inputs

- Type: isolated current input
- Input voltage: 5V to 24VDC
- Input impedance: 1.2KΩ, 0.5W
- Response time: 4KHz max

### 16 TTL-level Inputs

- Input high voltage: 2.0V min
- Input low voltage: 0.8V max
- Response time: 30KHz typical

### 16 Isolated Digital Outputs

- Output voltage:
  - open-collector 5~30VDC (PISO-730)
  - open-collector 10~30VDC (PISO-730A)
- Sink current: 100 mA/channel, 200 mA max
- Source current: 100 mA/channel
- Response time: 30KHz max

### 16 TTL-level Outputs

- High: Source 0.4 mA at 2.4V min
- Low: Sink 8 mA at 0.5V max

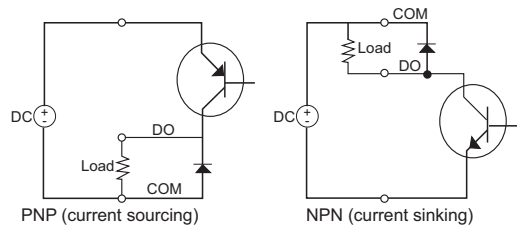
## Features

- 16-channel isolated digital input and 16-channel isolated open-collector output
- 16-channel TTL input and 16-channel TTL output
- Built-in DC/DC converter built-in
- 2500VDC isolated voltage (PISO-730)
- 3750VDC isolated voltage (PISO-730A)
- Sink current output (PISO-730)
- Source current output (PISO-730A)

## General Specifications

- I/O connector: one 37-pin D-sub female  
two 20-pin ribbon male
- Power requirements: +5V @ 640 mA
- Operating temperature: 0 ~ 60°C
- Operating humidity: 0 ~ 90% non-condensing
- Storage temperature: -20 ~ 70°C
- Dimensions: 180 mm x 105 mm

## Sinking and Sourcing circuit



## Pin Assignment

| CON1    |    |    |         | CON2  |    |    |       | CON3 |  |    |       |  |  |
|---------|----|----|---------|-------|----|----|-------|------|--|----|-------|--|--|
| IDO15   | 37 | 19 | EO.COM2 | +12V  | 20 | 19 | +5V   |      |  | 19 | +5V   |  |  |
| IDO13   | 36 | 18 | IDO14   | D.GND | 18 | 17 | D.GND |      |  | 17 | D.GND |  |  |
| IDO11   | 35 | 17 | IDO12   | DI 15 | 16 | 15 | DI 14 |      |  | 15 | DI 14 |  |  |
| IDO9    | 34 | 16 | IDO10   | DI 13 | 14 | 13 | DI 12 |      |  | 13 | DI 12 |  |  |
| IDO7    | 33 | 15 | IDO8    | DI 11 | 12 | 11 | DI 10 |      |  | 11 | DI 10 |  |  |
| IDO5    | 32 | 14 | IDO6    | DI 9  | 10 | 9  | DI 8  |      |  | 9  | DI 8  |  |  |
| IDO3    | 31 | 13 | IDO4    | DI 7  | 8  | 7  | DI 6  |      |  | 7  | DI 6  |  |  |
| IDO1    | 30 | 12 | IDO2    | DI 5  | 6  | 5  | DI 4  |      |  | 5  | DI 4  |  |  |
| EO.GND  | 29 | 11 | IDO0    | DI 3  | 4  | 3  | DI 2  |      |  | 3  | DI 2  |  |  |
| EI.COM2 | 28 | 10 | EO.COM1 | DI 1  | 2  | 1  | DI 0  |      |  | 1  | DI 0  |  |  |
| IDI15   | 27 | 9  | EI.COM1 |       |    |    |       |      |  |    |       |  |  |
| IDI13   | 26 | 8  | IDI14   | +12V  | 20 | 19 | +5V   |      |  | 19 | +5V   |  |  |
| IDI11   | 25 | 7  | IDI12   | D.GND | 18 | 17 | D.GND |      |  | 17 | D.GND |  |  |
| IDI9    | 24 | 6  | IDI10   | DO 15 | 16 | 15 | DO 14 |      |  | 15 | DO 14 |  |  |
| IDI7    | 23 | 5  | IDI8    | DO 13 | 14 | 13 | DO 12 |      |  | 13 | DO 12 |  |  |
| IDI5    | 22 | 4  | IDI6    | DO 11 | 12 | 11 | DO 10 |      |  | 11 | DO 10 |  |  |
| IDI3    | 21 | 3  | IDI4    | DO 9  | 10 | 9  | DO 8  |      |  | 9  | DO 8  |  |  |
| IDI1    | 20 | 2  | IDI2    | DO 7  | 8  | 7  | DO 6  |      |  | 7  | DO 6  |  |  |
|         |    | 1  | IDI0    | DO 5  | 6  | 5  | DO 4  |      |  | 5  | DO 4  |  |  |
|         |    |    |         | DO 3  | 4  | 3  | DO 2  |      |  | 3  | DO 2  |  |  |
|         |    |    |         | DO 1  | 2  | 1  | DO 0  |      |  | 1  | DO 0  |  |  |

## Ordering Information

### Standard

- PISO-730:** 32-channel isolated digital I/O & 32-channel TTL digital I/O board. (current sinking)
- PISO-730A:** 32-channel isolated digital I/O & 32-channel TTL digital I/O board. (current sourcing)

### Optional

- DN-37:** Two 37-pin connector DIN-rail mounting terminal board
- DB-37:** 37-pin D-sub directly connector terminal board
- DN-20:** Two 20-pin header DIN-rail terminal board
- DB-16P:** 16-channel isolated DI/O board
- DB-16R:** 16-channel relay board
- ADP-20/PCI:** 20-pin extender