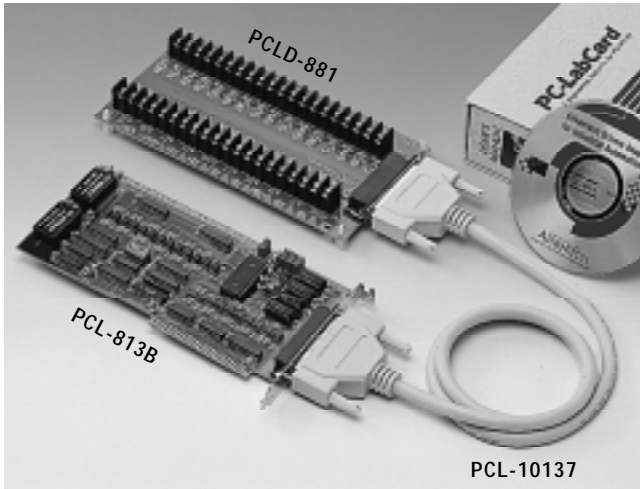


# PCL-813B

## 32-channel S.E. Isolated A/D Card



### Features

- 32 single-ended analog input channels
- Over 500 V<sub>DC</sub> isolation
- 12-bit successive approximation A/D converter
- Analog input ranges (V):  
±5, ±2.5, ±1.25, ±0.625  
0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25
- Program-controlled A/D trigger and data transfer

### Introduction

The PCL-813B is a 12-bit 32-channel A/D card which offers high-voltage isolation on each analog input. The PCL-813B is an extremely cost effective solution for applications in industrial measurement and monitoring.

The card offers 32 A/D channels with software programmable gain on each channel and two DC-to-DC converters on a 4-layer PCB with an integral ground plane. Optically-isolated inputs provide over 500 V<sub>DC</sub> of isolation between the analog inputs and the PC, protecting the PC and peripherals from damage due to high voltages on the input lines. The PCL-813B is ideal for situations where the budget-conscious user requires flexibility, stability and a high level of isolation protection.

The PCL-813B comes with the PCLD-881 wiring terminal board and a DB-37 cable assembly.

### Applications

- Multiple-channel DC voltage measurement
- Transducer/sensor interfacing
- Process monitoring
- Signal isolation

### Specifications

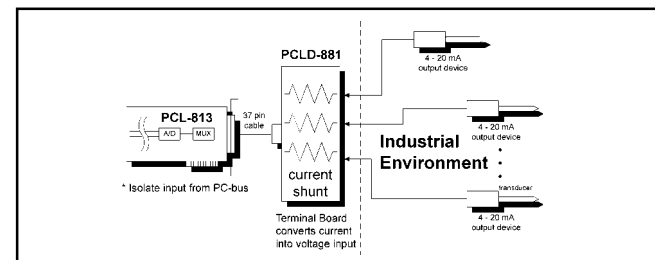
#### Input

- **Channels:** 32 single-ended with isolation
- **Resolution:** 12 bits, SAR
- **Input ranges:**  
Bipolar: ±5 V, ±2.5 V, ±1.25 V, ±0.625 V  
(software programmable)  
Unipolar: 0 ~ 10 V, 0 ~ 5 V, 0 ~ 2.5 V, 0 ~ 1.25 V  
(jumper selectable)
- **Overvoltage:** Continuous ±30 V (max.)
- **Converter:** AD574 (or equivalent) w/ 25 µsec. conversion time
- **Data transfer rate:** 25 kHz maximum, software control only

- **Offset error:** 0 ~ 5 V: ±1 LSB  
+5 V, 0 ~ 10 V: ±2 LSB
- **Accuracy:** 0.01% of reading ±1 LSB
- **Isolation voltage:** > 500 V<sub>DC</sub> from analog input to PC
- **Trigger mode:** Software trigger
- **Input impedance:** > 10 MW
- **Temperature coefficient:** ±25 PPM/°C

#### General

- **Power consumption:** +5 V @ 660 mA max.  
+12 V @ 140 mA max.
- **Operating temperature:** 0 ~ 50° C (32 ~ 122° F)
- **Storage temperature:** -20 ~ 65° C (-4 ~ 149° F)
- **Operating humidity:** 5 ~ 95% RH non-condensing (refer to IEC 68-2-3)
- **I/O connector:** DB-37 female connector for input port
- **Dimensions:** 100 mm (L) x 219 mm (H) (3.9" x 8.6")



Typical application for the PCL-813B:  
Industrial 4 ~ 20 mA output device monitoring

### Ordering Information

- PCL-813B: 32-channel isolated A/D card, PCLD-881B wiring terminal board, DB-37 cable assembly, manual and utility disk.
- PCLS-OCX: ActiveX Control for data acquisition and control