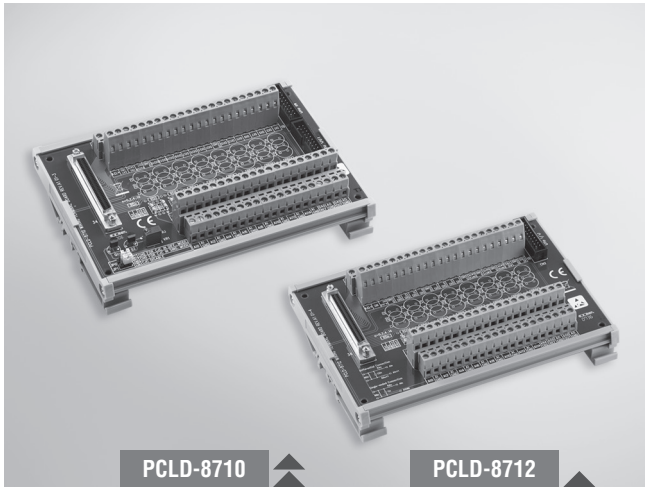


# PCLD-8710 PCLD-8712

DIN-rail Wiring Terminal Board with CJC Circuit

DIN-rail Wiring Terminal for PCI-1712/L



## Features

- Low-cost screw-terminal with 68-pin SCSI-II connector
- Onboard CJC (Cold Junction Compensation) circuits for direct thermocouple measurement (PCLD-8710)
- Reserved space for signal-conditioning circuits such as low-pass filter, voltage attenuator and current shunt
- Industrial-grade screw-clamp terminal blocks for heavy-duty and reliable connections
- DIN-rail mounting case for easy mounting
- Supports PCI-1710U/UL, PCI-1710HGU, PCI-1711U/UL, PCI-1716/L (PCLD-8710) and PCI-1712/1712L (PCLD-8712)

## Introduction

The PCLD-8710 is designed to match multifunction cards with 68-pin SCSI-II connectors, such as the PCI-1710U/UL, PCI-1710HGU, PCI-1711U/UL, PCI-1716/L cards. This screw-terminal board also includes cold junction sensing circuitry that allows direct measurements from thermocouple transducers. Together with software compensation and linearization, every thermocouple type can be accommodated. The PCLD-8712 Screw-terminal Board provides convenient and reliable signal wiring for the PCI-1712/L of which has a 68-pin SCSI-II connector.

Due to its special PCB layout you can install passive components to construct your own signal-conditioning circuits. The user can easily construct a low-pass filter, attenuator or current shunt converter by adding resistors and capacitors on board's circuit pads.

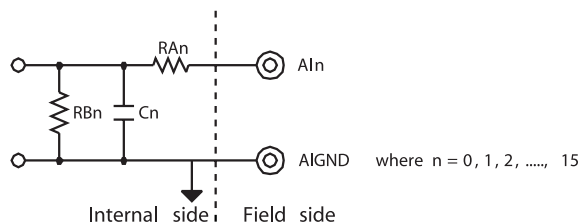
## Applications

Field wiring for analog and digital I/O channels of PC-LabCard™ products.

Signal conditioning circuits can be implemented as illustrated in the following examples:

### a) Straight-through connection (factory setting)

$R_{An} = 0 \Omega$  (short)  
 $R_{Bn} = \text{none}$   
 $C_n = \text{none}$



### b) 1.6 kHz (3 dB) low pass filter

$R_{An} = 10 \text{ K}\Omega$   
 $R_{Bn} = \text{none}$   
 $C_n = 0.01 \mu\text{F}$

$$f_{3dB} = \frac{1}{2\pi R_{An} C_n}$$

### c) 10 : 1 voltage attenuator:

$R_{An} = 9 \text{ K}\Omega$   
 $R_{Bn} = 1 \text{ K}\Omega$   
 $C_n = \text{none}$   
 $\text{Attenuation} = \frac{R_{Bn}}{R_{An} + R_{Bn}}$   
 (Assume source impedance  $\ll 10 \text{ K}\Omega$ )

### d) 4 ~ 20 mA to 1 ~ 5 V<sub>DC</sub> signal converter:

$R_{An} = 0 \Omega$  (short)  
 $R_{Bn} = 250 \Omega$  (0.1% precision resistor)  
 $C_n = \text{none}$

## Ordering Information

- |                |   |
|----------------|---|
| ▪ PCLD-8710    | DIN-rail Wiring Terminal Board with CJC Circuit |
| ▪ PCLD-8712    | DIN-rail Wiring Terminal for PCI-1712/L         |
| ▪ PCL-10120-1E | 20-pin Flat Cable, 1 m                          |
| ▪ PCL-10120-2E | 20-pin Flat Cable, 2 m                          |
| ▪ PCL-10168-1E | 68-pin SCSI Shielded Cable, 1 m                 |
| ▪ PCL-10168-2E | 68-pin SCSI Shielded Cable, 2 m                 |