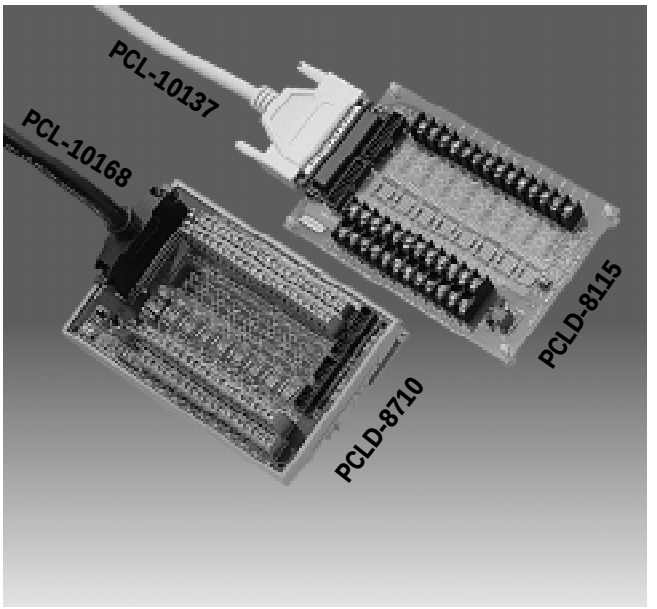
PCLD-8115 / 8710

Screw-terminal Boards



Features

- Low-cost screw-terminal boards
- On-board CJC (Cold Junction Compensation) circuits for direct thermocouple measurement.
- 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.

PCLD-8115 only

- Supports PCL-818 series DAS cards
- Nylon standoffs, screws and washers included for easy mounting
- Dimensions: 169 mm (W) x 112 mm (L) (6.7" x 4.4")

PCLD-8710 only

- Supports PCI-1710/1710HG/1711/1731 DAS cards
- DIN-rail mounting case for easy mounting
- Dimensions: 169 mm (W) x 112 mm (L) x 51 mm (H) (6.7" x 4.4" x 2.0")

Introduction

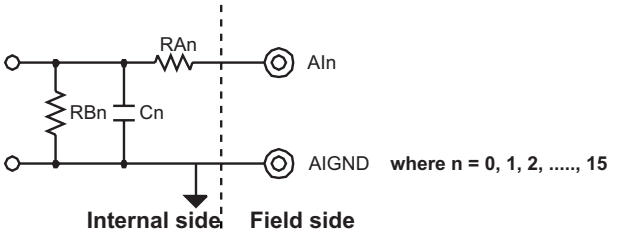
The PCLD-8115 screw-terminal board offers a convenient and reliable signal wiring for multifunction DAS cards with 20-pin flat cable connector or DB-37 connector, such as the PCL-818 series cards. On the other hand, PCLD-8710 is designed to match the DAS cards with 68-pin SCSI-II connector, such as PCI-1710/1710HG/ 1711/1731 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.

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 onto the board circuit pads.

Applications

- Field wiring for analog and digital I/O channels of PC-LabCards
- Signal conditioning circuits can be implemented as illustrated in the following examples:



a) Straight-through connection (factory setting)
RAn = 0 Ω (short)
RBn = none
Cn = none

b) 1.6 kHz (3dB) low pass filter
RAn = 10 k Ω
RBn = none
Cn = 0.01µF

$$f_{3dB} = \frac{RBn}{RAn + RBn}$$

c) 10 : 1 voltage attenuator:
RAn = 9 k Ω
RBn = 1 k Ω
Cn = none

$$\text{Attenuation} = \frac{RBn}{RAn + RBn}$$

(Assume source impedance << 10 k Ω)

d) 4 ~ 20 mA to 1 ~ 5 VDC signal converter:
RAn = 0 Ω (short)
RBn = 250 Ω (0.1% precision resistor)
Cn = none

Ordering Information

- **PCLD-8115**: Industrial Wiring Terminal Board and DB-37 cable assembly
- **PCLD-8710**: Industrial Wiring Terminal Board (cable not included)
- **PCL-10137**: DB-37 cable assembly, 1 m
- **PCL-10168**: 68-pin SCSI-II cable with special shielding for noise reduction, 1 m