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

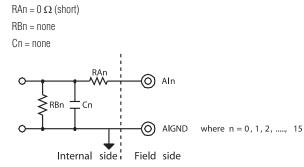
The PCLD-8710 is designed to match multifunction cards with 68-pin SCSI-II connectors, such as the PCI-1710U/UL, PCI-1710HGU, PCI-1711U/UL, PCI-1716/L cards. This screwterminal board also includes cold junction sensing circuitry that allows direct measurements from thermocouple transducers. Together 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)



b) 1.6 kHz (3 dB) low pass filter

$$\label{eq:RAn} \begin{split} &\mathsf{RAn} = 10 \;\mathsf{K}\Omega \\ &\mathsf{RBn} = \mathsf{none} \\ &\mathsf{Cn} = 0.01 \;\mu\mathsf{F} \end{split}$$

 $f_{3dB} = \frac{1}{2\pi RAn.Cn}$

c) 10 : 1 voltage attenuator:

 $\begin{array}{l} \text{RAn}=9\ \text{K}\Omega\\ \text{RBn}=1\ \text{K}\Omega\\ \text{Cn}=\text{none}\\ \text{Attenuation}=\frac{\text{RBn}}{\text{RAn}+\text{RBn}}\\ \text{(Assume source impedance << 10\ \text{K}\Omega)} \end{array}$

d) 4 ~ 20 mA to 1 ~ 5 V_{nc} signal converter:

 $\label{eq:RAn} \begin{array}{l} \mathsf{RAn} = 0 \; \Omega \; (\text{short}) \\ \mathsf{RBn} = 250 \; \Omega \; (0.1\% \; \text{precision resistor}) \\ \mathsf{Cn} = \mathsf{none} \end{array}$

Ordering Information

- PCLD-8710
 - PCLD-8712
- PCL-10120-1E
- 20-pin Flat Cable, 1 m 20-pin Flat Cable, 2 m
- PCL-10120-2EPCL-10168-1E
- 68-pin SCSI Shielded Cable, 1 m
- PCL-10168-2E
- 68-pin SCSI Shielded Cable, 2 m

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