

Платы нормализации сигналов серии PLCD-788, PLCD-789D

ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ

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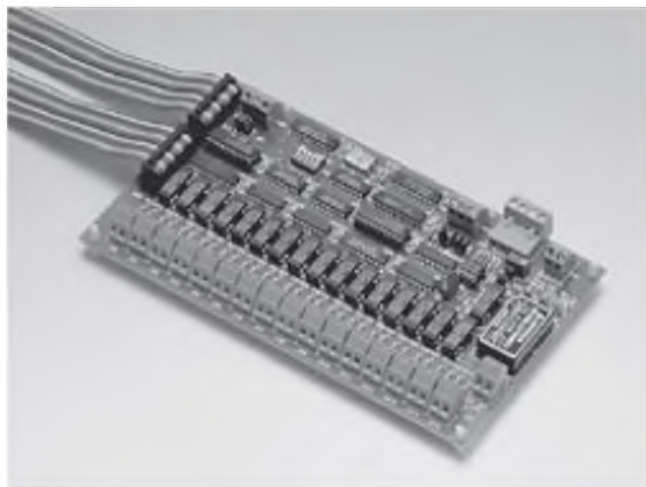
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PCLD-788

16-ch Relay Multiplexer Board



CE

Features

- 16 to 1 channel expansion
- Differential and fully isolated multiplexing
- Break-before-make relay control
- "Channel closed" signal for precise A/D triggering
- Up to 16 PCLD-788s can be cascaded for 256 channels
- Easy wiring for large channel count configuration
- Onboard cold-junction circuitry for thermocouple measurement

Introduction

PCLD-788 multiplexes 16 channels into a single I/O channel of an A/D converter, voltmeter or IEEE-488-based instrument. Up to 16 PCLD-788s can be cascaded for a total of 256 fully-isolated differential channels. The PCLD-788 can be controlled by any PC-LabCard™ product via a 16-bit 20-pin digital output port, found on cards such as the PCL-711B, PCL-812PG or the PCL-818 series.

Channel selection (0-15) and board selection (0-15) are done by programming the high-order four bits and low order four bits of a digital output byte from the main I/O card in use.

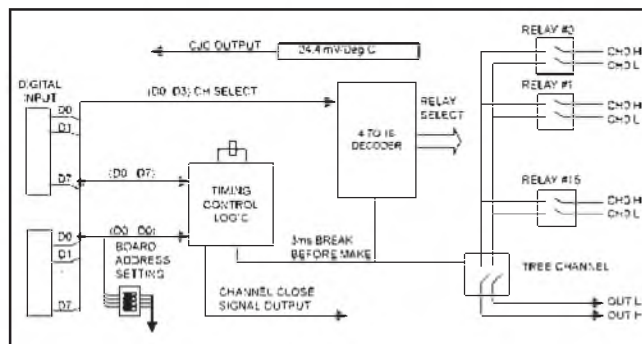
Specifications

I/O

- **Channel Closed Signal** TTL-level pulse
- **Cold-junction Sensor Output** +24.4 mV/°C, 0 V at 0° C
- **Contact Rating** Break-before-make with 3 msec. minimum break time
- **Contact Resistance** 200 Ω max.
- **Input Channels** 16 isolated differential inputs
- **Programming** D/O bit 0, 1, 2 and 3 for channel selection, D/O bit 4, 5, 6 and 7 for board selection. Onboard DIP switches for board-address setting
- **Max. Input Voltage** 100 V_{DC} or 100 V peak AC
- **Max. Switching Current** 0.5 A
- **Max. Switching Power** 10 W
- **Operating Time** 1 msec. max.
- **Relay Life Expectancy** 100 million cycles min. at 10 V_{DC} and 1 mA
- **Release Time** 1 msec. max.

General

- **Certifications** CE
- **Connectors**
 - Controller: 2 x 20-pin flat-cable connectors, second connector in parallel for daisy chaining
 - I/O: Screw terminals
- **Dimensions (L x W)** 205 x 114 mm (8" x 4.5")
- **Mounting** 4 x screw holes for flat surface mounting
- **Power Consumption** +5 V @ 380 mA max.



PCLD-788 Block Diagram

Pin Assignments

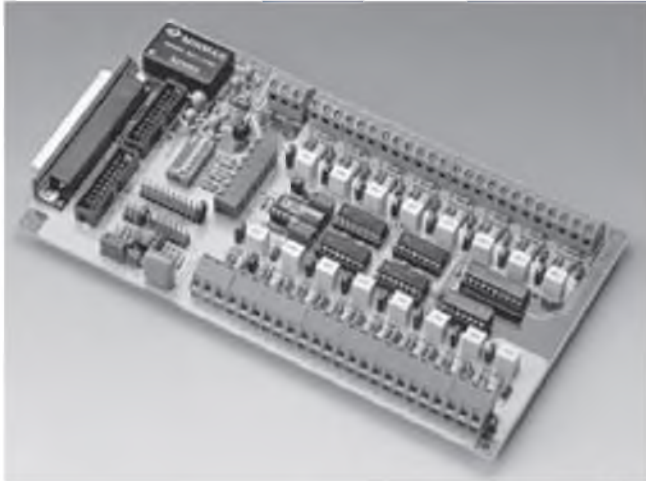
		CN2 & CN3			
C0	1	2	C1		
C2	3	4	C3		
C4	5	6	C5		
C6	7	8	C7		
	9	10			
	11	12			
	13	14			
	15	16			
GND	17	18	GND		
+5V	19	20	+12V		

Ordering Information

- **PCLD-788** 16-ch Relay Multiplexer Board, user's manual and two 1 meter 20-pin flat cables (P/N: PCL-10120-1)

PCLD-789D

Amplifier and Multiplexer Board



CE

Features

- Multiplexes 16 differential inputs to one A/D input
- Expands a PC-LabCard™ product's analog inputs to 128 channels
- High-grade instrumentation amplifier provides switch selectable gains of 1, 2, 10, 50, 100, 200, 1,000
- Onboard cold-junction compensation circuits for direct thermocouple measurement
- Built-in signal conditioning functions include filter, attenuator and current shunt
- Second connectors onboard allow daisy chaining
- Screw-clamp terminal blocks permit easy and reliable connections

Introduction

PCLD-789D is a front-end signal conditioning and channel multiplexing daughterboard for use with PC-LabCard™ product's analog input ports. It multiplexes 16 differential input channels into a single A/D converter input channel. You can cascade up to ten PCLD-789Ds, allowing a single data acquisition card to access 160 analog input channels.

PCLD-789D has DB37 and 20-pin flat cable connectors and lets your PCL-818L or PCL-818HD access up to 128 channels without using an additional digital output cable to select channels.

The PCLD-789D uses a high-grade instrumentation amplifier that provides switch-selectable gains of 1, 2, 10, 50, 100, 200 and 1,000. This amplifier lets you accurately measure low-level signals with your PC-LabCard™ product. The board also contains a cold-junction sensing circuit that allows direct temperature measurement from thermocouple transducers. A wide variety of thermocouples are supported with software compensation and linearization.

Specifications

I/O

- **Cold-Junction Compensation** +24.4 mV/°C, 0 V at 0° C
- **Input Channels** 16 differential
- **Input Conditions**

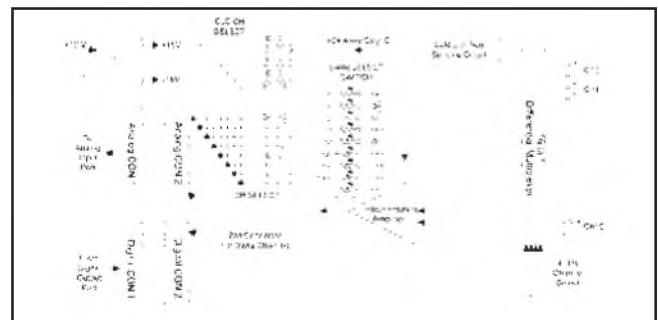
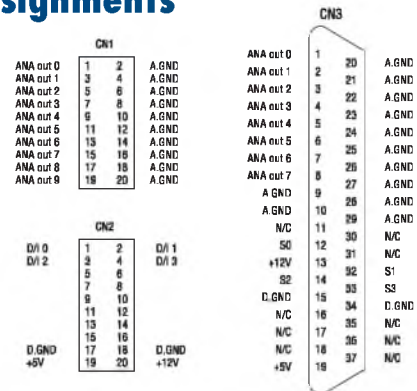
Gains	CMRR	Nonlinearity	Setting Time
1,000	125 dB	0.005% FSR	75 µsec.
100	115 dB	0.005% FSR	15 µsec.
10	105 dB	0.007% FSR	15 µsec.
1	85 dB	0.015% FSR	15 µsec.

- **Input Range** ±10 V maximum, depending on the selected gain
- **Output Range** ±10 V maximum
- **Overvoltage Protection** ±30 V continuous

General

- **Certifications** CE
- **Connectors**
Controller: 1 x DB37 (male) connector
2 x 20-pin flat cable connectors for daisy chaining
Screw terminals
- **I/O:**
- **Dimensions (L x W)** 205 x 114 mm (8.1" x 4.5")
- **Mounting** 4 x screw holes for flat surface mounting
- **Power Consumption** +5 V @ 30 mA max, +12 V @ 80 mA max

Pin Assignments



Block Diagram

Ordering Information

- **PCLD-789D** Amplifier and Multiplexer Board with DB37 connector and 20-pin flat-cable connectors. (Includes DB37 and 20-pin flat cable assemblies)

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