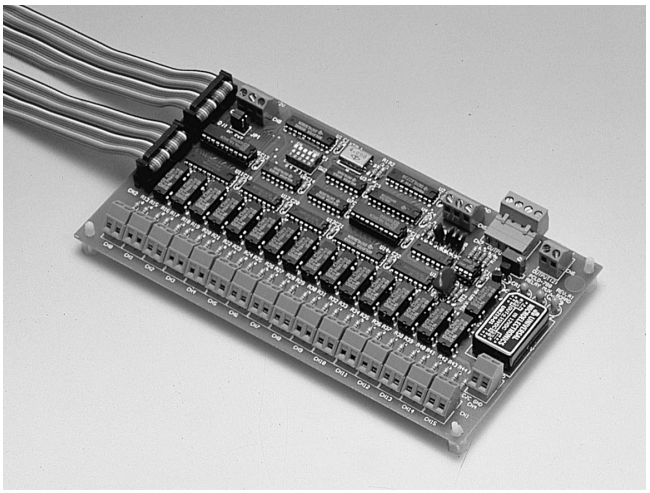
# PCLD-788

## 16-channel Relay Multiplexer Board



## 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

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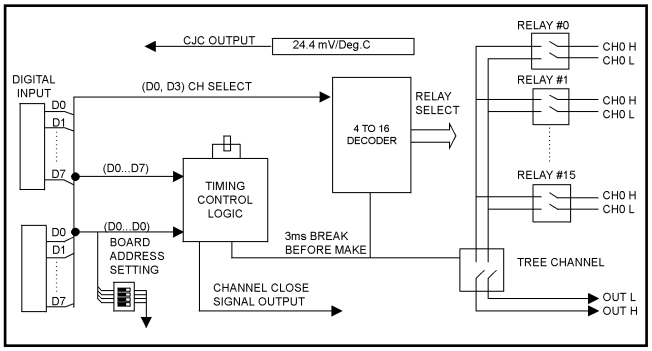
## Introduction

The 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 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

- **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. On-board DIP switches for board-address setting
- **Contact Rating** Break-before-make with 3 msec. minimum break time
- **Max. Input Voltage** 100 $V_{DC}$ or 100 V peak AC
- **Max. Switching Current** 0.5 A
- **Max. Switching Power** 10 Ω
- **Relay Life Expectancy** 100 million cycles min. at 10 $V_{DC}$ and 1 mA
- **Operating Time** 1 msec. max.
- **Release Time** 1 msec. max.
- **Contact Resistance** 200 Ω max.
- **Channel Closed Signal** TTL-level pulse
- **Cold-junction Sensor Output** +24.4 mV/° C, 0 V at 0° C
- **Power Consumption** +5 V @ 380 mA max.
- **Connectors for Digital Ports** Two 20-pin flat-cable connectors, second connector in parallel for daisy chaining
- **Dimensions** 205 mm (L) x 114 mm (W) (8" x 4.5")




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

## Applications

- Channel multiplexing for analog input channels of PCL-711B, PCL-812PG or PCL-818 series cards