

DB-889D

16-channel analog multiplexer board



Functional Description

The DB-889D is an expansion multiplexer / amplifier board for use with A-82X and PCI-1800 series. Each DB-889D multiplexes 16 differential analog input channels into one analog input of the DAS board. It provides software programmable gains of 0.5, 1, 5, 10, 50, 100, 500 and 1000. Thermocouple measurements are handled easily with 889D. The board includes cold-junction sensing and compensation circuitry that provides a scaling of 24.4mV/°C. Biasing resistors are included for open thermocouple detection. The 889D can be cascaded to a total of 128-channel of voltage measurements or 112-channel of thermocouple measurements.

Applications

- Energy Management
- Signal Conditioning
- Analog Multiplexer

Specifications

- Accepts thermocouple type: J, K, T, E, S, R, B
- Cold-junction compensation:
+24.4 mV/°C(1°C/bit), 0.0V at 0.0°C

Gain	Common Mode Rejection	Nonlinearity % of FSR	Setting Time
0.5	99dB	±0.0004	23 μ s
1	99dB	±0.0004	23 μ s
5	114dB	±0.0004	28 μ s
10	114dB	±0.0004	28 μ s
50	123dB	±0.0004	140 μ s
100	123dB	±0.0004	140 μ s
500	123dB	±0.0008	1300 μ s
1000	123dB	±0.0008	1300 μ s

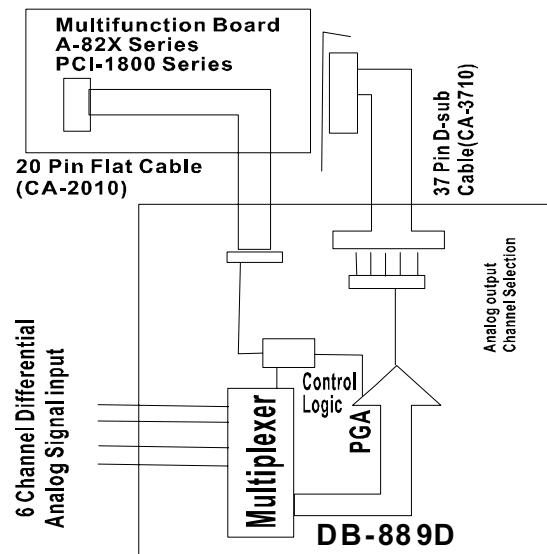
- Over voltage protection: ± 30V Continuous
- Common mode voltage: ± 10V max
- Analog output voltage: ± 10V

Features

- Connects directly to A-82X, PCI-1800 series DAS board
- Cold-junction compensation for thermocouples, thermocouple open detection
- Input filtering
- Software-programmable instrumentation amplifier gain of 0.5, 1, 5, 10, 50, 100, 500 and 1000
- Daisy chain to eight DB-889D

General Specifications

- Power requirements: +5V@120 mA
- Operating temperature: 0 ~ 60°C
- Operating humidity: 0 ~ 90% non-condensing
- Storage temperature: -20 ~ 80°C
- Dimensions: 114 mm x 204 mm



Ordering Information

Standard

DB-889D: 16-channel multiplexer & signal conditioning board with CA-3710 & CA-2010 cable

Optional

CA-2010: 20-pin flat cable, 1m

CA-3720: 37-pin D-sub cable, 2m