

### Features

- Provides eight RTD channels
- Supports 3- and 4-wire RTDs
- Supports three ranges of RTD resistance
- Features resolution over the full-range of -200 to 850 °C span

The DBK9 is an 8-channel RTD (resistance temperature device) measurement card for IOtech's data acquisition systems. IOtech's DBK9 supports up to eight channels of 3- or 4-wire RTDs with resistances of 100, 500, or 1000 Ohm. RTD-type selection is made via a jumper on the card that configures all 8 channels.

**Self-Heating Error.** The DBK9 limits power input to the RTD to 100 microwatts, minimizing self-heating error in the device. Self-heating error is typically less than 0.1 °C of error at the maximum resistance range, which occurs at the top of the temperature range.

**Excitation Sources.** The DBK9 provides bias for the RTD with three constant voltage sources derived from the A/D's internal power supply.

### Specifications

**Connector:** DB37 male, mates with P1\*; screw terminals provided for signal connections

**Configurations:** 3- or 4-wire

**Alpha:** 0.00385

**Inputs:** 8 channels

**Temperature Ranges:**

100, 500, or 1000 Ohm: -200 to +850 °C

**RTD Excitation Voltage:**

100 Ohm 635 mV

500 Ohm 455 mV

1000 Ohm 235 mV

**Accuracy:**

100, 500, or 1000 Ohm: ±1.5 °C

**Resolution:**

100, 500, or 1000 Ohm: 0.3 °C

**Range and RTD Type Adjustments:**

Jumpers on circuit board

**Power Consumption:** 560 mW

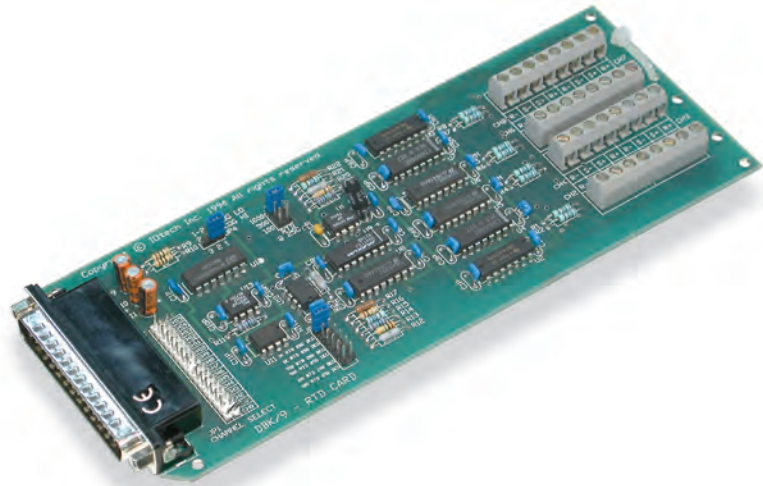
**Note:** 2-wire RTD connections are not recommended.

### Ordering Information

**Description**  
8-channel RTD card

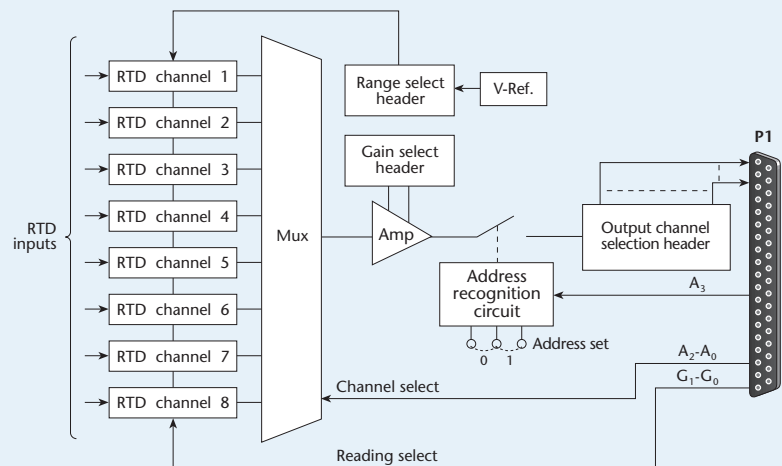
**Part No.**  
DBK9

\* Attachment to the DaqBoard/2000 Series requires a DBK200, DBK202, DBK203A, DBK209, DBK213, or DBK214



The 8-channel DBK9 RTD card accommodates 3- and 4-wire RTDs

### DBK9 RTD Measurement Card Block Diagram



### Cables

For use with DBK10, use CA-37-x ribbon cable, or contact factory of additional cabling options

For use with DBK60 or LogBook/360, no cable is required (except from DBK60 or LogBook/360 to the A/D mainframe)

For use with no enclosure, use CA-37-x where x is the number of DBK devices attached

For use with DaqLab Series (internal slots), use CA-255-2T with one board, or CA-37-2 for use with two DBK cards (or contact factory for additional cabling options)

### Product Compatibility

- ✓ LogBook
- ✓ DaqBook
- ✓ DaqLab
- ✓ DaqScan
- ✓ DaqBoard/2000 Series