

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

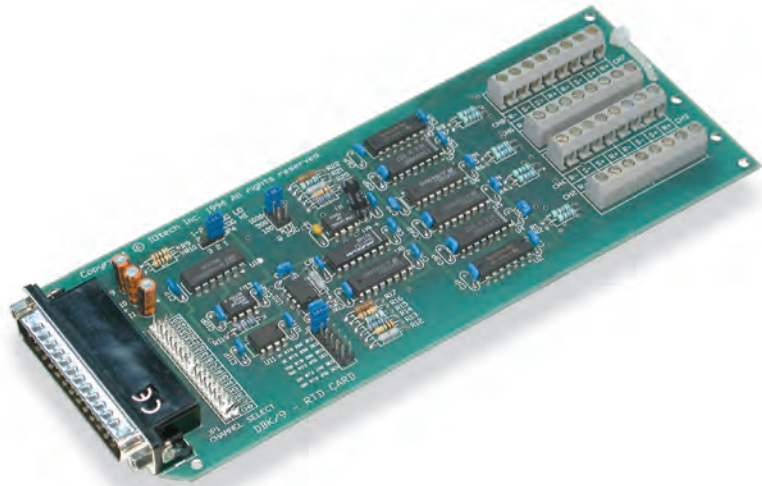
Note: 2-wire RTD connections are not recommended.

Ordering Information

Description
8-channel RTD card

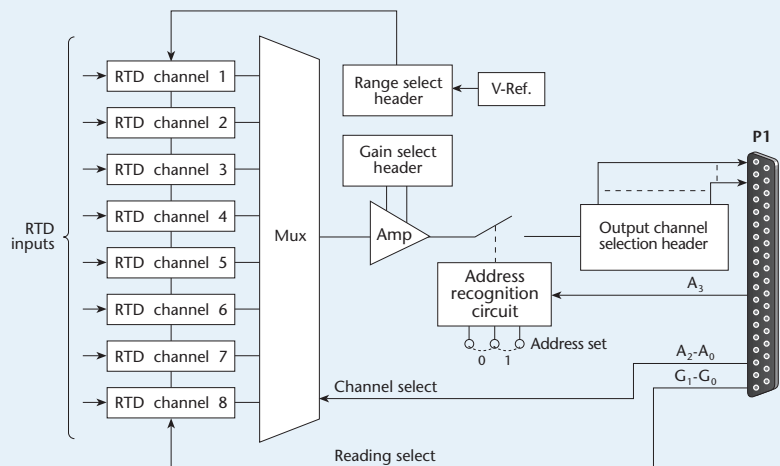
Part No.
DBK9

* 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