



# DBK80™

## 16-Channel Differential Voltage Input Card with Excitation

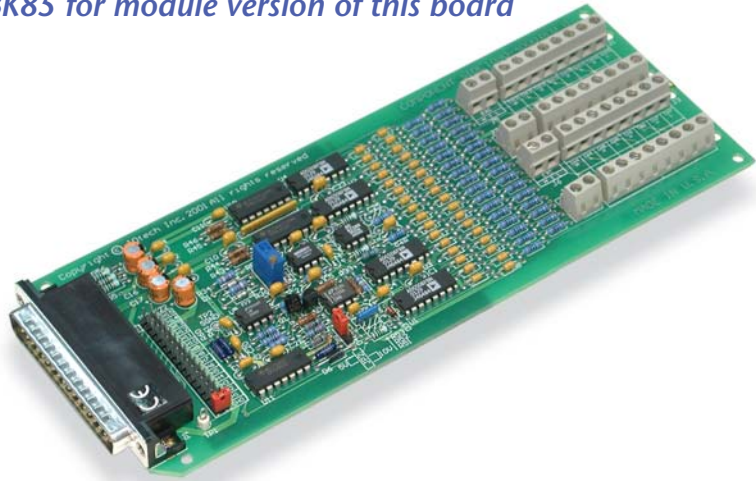


Compatibility: ✓ LogBook ✓ DaqBook ✓ DaqLab ✓ DaqScan ✓ DaqBoard/2000 Series

See DBK85 for module version of this board

### Features

- 16 differential input channels
- Unity gain combines with A/D gains to provide full-scale inputs from  $\pm 156\text{ mV}$  to  $\pm 10\text{V}$
- On-board precision  $+5\text{V}/+10\text{V}$  excitation source for measuring bridges, or other active transducers
- Convenient on-board screw-terminal signal connection
- Compact form factor mounts in any DBK-compatible enclosure



The DBK80™ provides 16 channels of differential voltage input. The DBK80 has a single, unity-gain input stage on all channels. When coupled with the on-board x1 through x64 programmable input gains, the combination provides full-scale input ranges from  $\pm 10\text{V}$  down to  $\pm 156\text{ mV}$ \*

DBK80 provides 16 differential input channels

The DBK80's ultra-low noise, high-speed design allows users to expand their input channels up to 256 channels without sacrificing measurement integrity.

The DBK80 also has a  $+5\text{V}$  or  $+10\text{V}$  precision voltage source on-board (jumper-selectable). This can be used to bias strain gages, thermistors, or other transducers that require biasing.

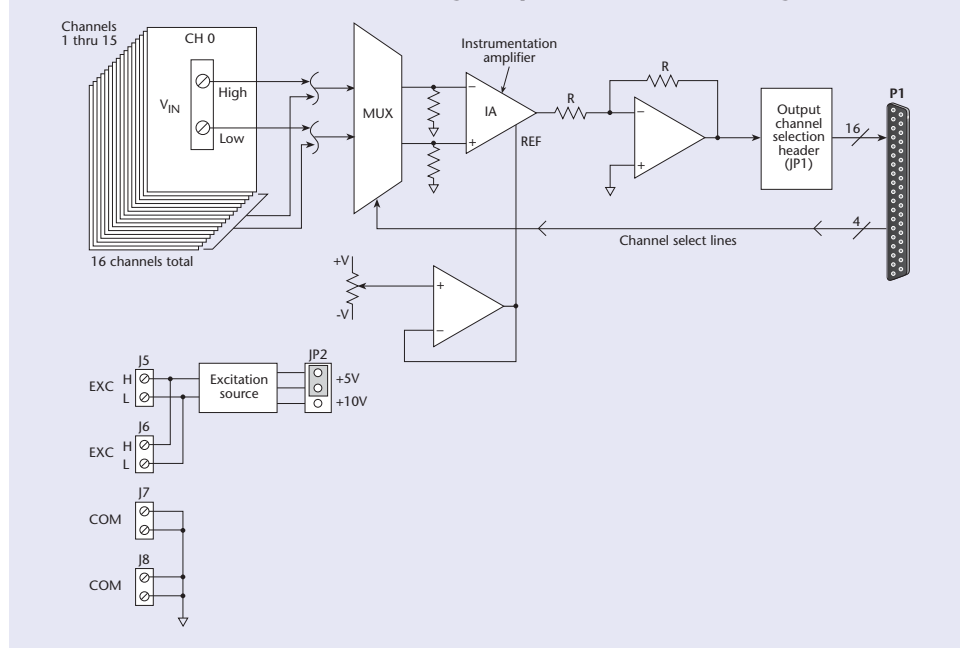
### Specifications

- Operating Temperature:  $-30^\circ\text{C}$  to  $+70^\circ\text{C}$
- Connector: DBK37 male, mates with P1\*\*; screw terminals for signal connection
- Gain Ranges: 1, x1
- Inputs: 16 differential voltage inputs
- Maximum Voltage Range:  $\pm 10\text{V}$
- Input Impedance: 20M Ohm
- Accuracy:  $\pm[0.025\% + 150\ \mu\text{V}]$  (typ),  $\pm[0.1\% + 250\ \mu\text{V}]$  (max)
- Temperature Coefficient: 10 ppm for every degree outside the range of  $0^\circ$  to  $50^\circ\text{C}$
- Noise:  $60\ \mu\text{Vrms}$  (typ)
- Maximum Input Voltage (without damage):  $\pm 35\text{V}$
- 3 dB Bandwidth: 2.6 MHz
- CMRR: 80 dB typ
- Excitation Voltage: 1 channel, jumper-selectable to  $+5\text{V}$  or  $+10\text{V}$
- Excitation Voltage Accuracy:  $\pm 0.5\%$
- Excitation Voltage Current Limit: 20 mA Source, 1 mA Sink
- Power: 25 mA max from  $\pm 15\text{V}$  (with no load on excitation voltage)
- Power Consumption: 755 mW

### Ordering Information

| Description                                | Part No. |
|--|----------|
| 16-channel differential voltage input card | DBK80    |

### DBK80 Differential Voltage Input 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 LogBook360, 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)

For complete information on accessories and cables, visit [www.iotech.com/acc](http://www.iotech.com/acc)

\*  $\pm 5\text{V}$  to  $\pm 0.625$  on older DaqBook/100 and DaqBook/200 series  
 \*\* Attachment to the DaqBoard/2000 series requires a DBK200, DBK202, DBK203A, DBK209, DBK213, or DBK214