

16-Channel Differential Voltage Input Card with Excitation

Features

- 16 differential input channels
- Unity gain combines with A/D gains to provide full-scale inputs from ± 156 mV to ± 10 V
- On-board precision +5V/+10V 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 ± 10 V down to ± 156 mV.

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 +5V or +10V precision voltage source on-board (jumper-selectable). This can be used to bias strain gages, thermistors, or other transducers that require biasing.

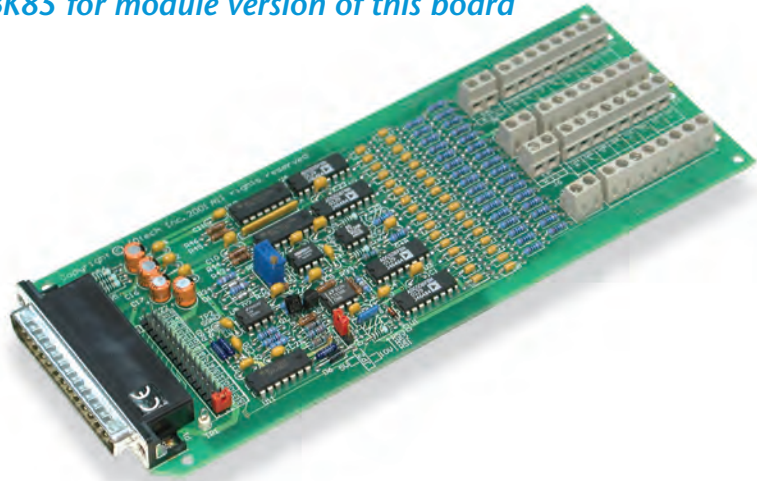
Specifications

- Operating Temperature:** -30 to +70 °C
Connector: DBK37 male, mates with P1*; screw terminals for signal connection
Gain Ranges: 1, x1
Inputs: 16 differential voltage inputs
Maximum Voltage Range: ± 10 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 to 50 °C
Noise: 60 μVrms (typ)
Maximum Input Voltage (without damage): ± 35 V
3 dB Bandwidth: 2.6 MHz
CMRR: 80 dB typ
Excitation Voltage: 1 channel, jumper-selectable to +5V or +10V
Excitation Voltage Accuracy: $\pm 0.5\%$
Excitation Voltage Current Limit: 20 mA Source, 1 mA Sink
Power: 25 mA max from ± 15 V (with no load on excitation voltage)
Power Consumption: 755 mW

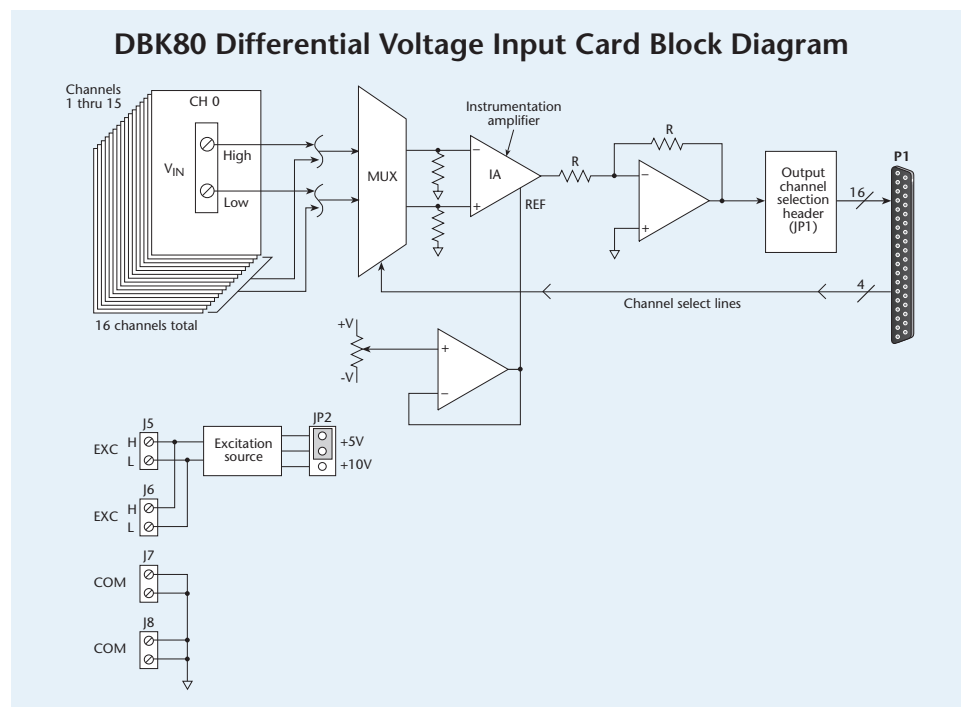
Ordering Information

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

See DBK85 for module version of this board



DBK80 provides 16 differential input channels



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

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