



DBK48™

16-Slot Multifunction Isolated Signal Conditioning



NEW

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

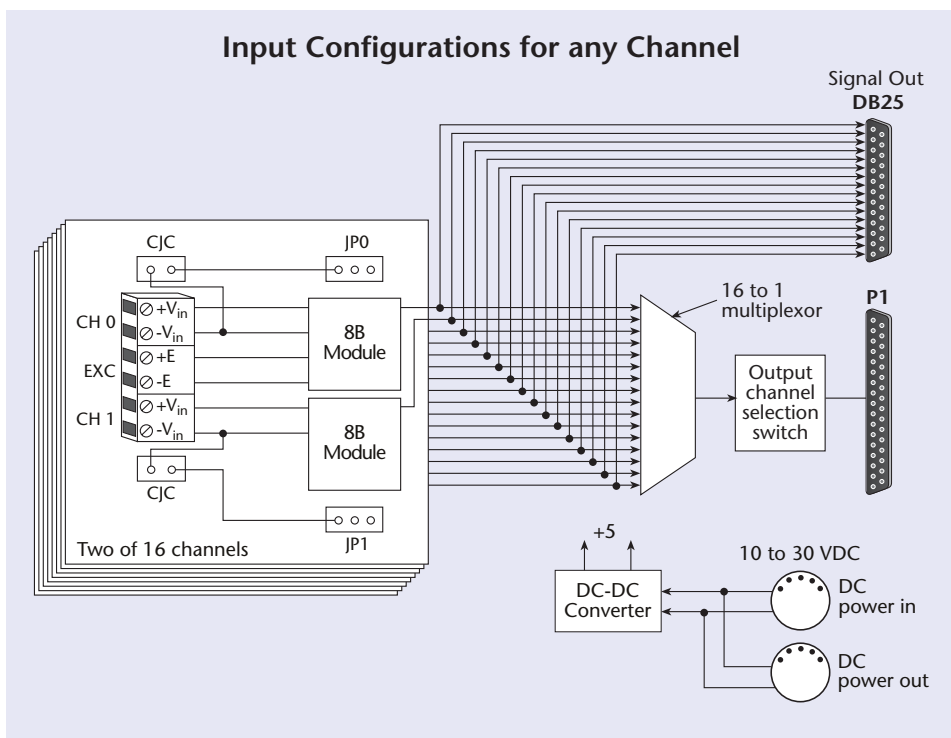
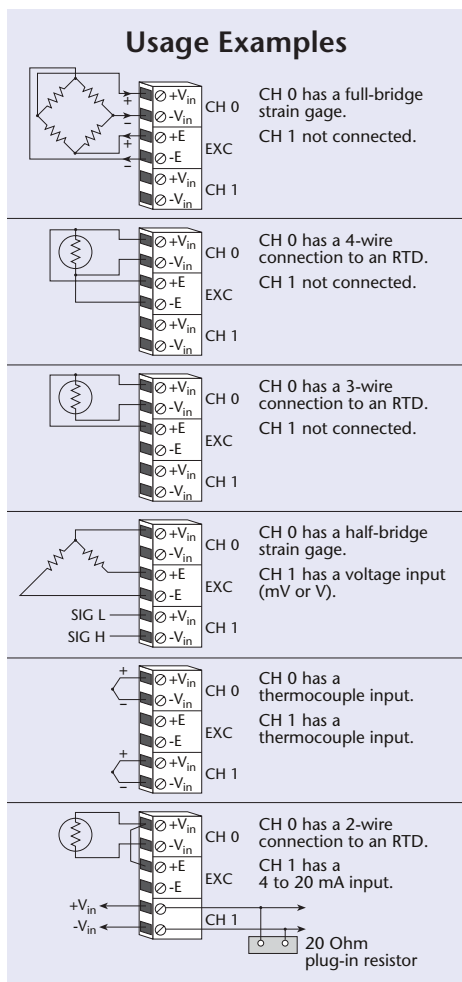
Features

- Accepts up to sixteen 8B* isolated signal conditioning modules
- Features removable screw-terminal connectors
- Offers built in cold junction compensation for thermocouple measurements

The DBK48™ signal conditioning module uses the new, low-cost 8B isolated signal conditioning modules, and provides up to 16 channels of I/O with 250V isolation from channel-to-channel. The DBK48 attaches to any of IOtech's products with a P1 expansion port, including the DaqBook, DaqLab, DaqScan, and DaqBoard/2000 series of PCI boards**. Up to sixteen DBK48 modules can be attached to one P1 port, for a total channel capacity of 256 channels. All DBK48 channels can be scanned at 5 µsec/channel.



The DBK48 accepts up to sixteen 8B signal conditioning modules



All signal connections are accomplished via removable screw-terminal connectors on the DBK48's front panel. Cold-junction compensation is built into the DBK48, allowing any channel to be configured as a thermocouple (TC) input channel. When 2-wire signals are attached to the DBK48, such as voltage, current or TC, all 16 channels can be populated with 8B signal conditioning modules. When 3- or 4-wire

transducers are used, such as strain gages or RTDs, then the maximum number of 3- or 4-wire transducers is eight, plus an additional eight 2-wire transducers (volts, current, or TC). For example, one DBK48 can be configured for 16 volts or TC inputs, or 8 strain inputs plus 8 volts or TC inputs.

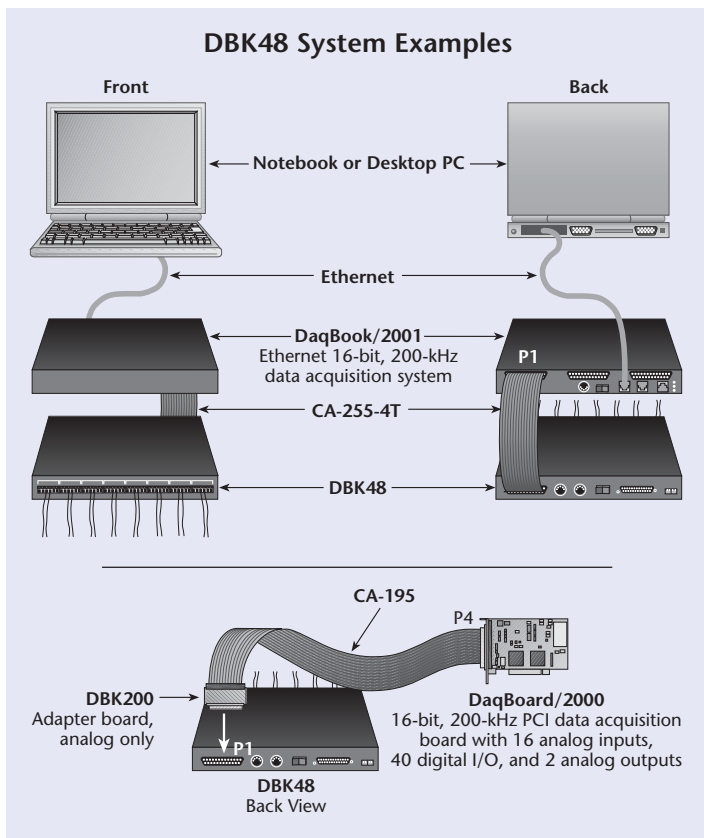
* 8B modules must be purchased separately. All sales are final with no right of return.
** Requires an adapter for DaqBoard/2000 series

7 DBK Signal Conditioning Options



DBK48™

Specifications & Ordering Information



Signal Connections. 8 sets of removable screw-terminal blocks are on the front of the **DBK48**. They provide access to all 16 input channels. 8B modules generate a 0 to 5V or $\pm 5V$ output signal that is multiplexed onto the P1 analog input connector. The output signal of each 8B module is also available on a 25-pin DSUB connector located on the rear panel of the DBK48, which can be measured by any device capable of measuring a $\pm 5V$ signal.

Specifications

Operating Environment:

- Temperature: -30°C to 70°C
- Relative Humidity: 95% RH, non-condensing
- Vibration: MIL STD 810E Category 1 and 10
- System Connector: DB37 male, mates with P1*
- Power Connector: DIN5 x2 for daisy chaining
- Module Capacity: 16 (input only) voltage or thermocouple 8B modules, or 8 strain gage, potentiometer, or RTD 8B modules (any module requiring excitation)
- Power Requirements (8B Modules): 10 to 30 VDC with included AC adapter
- Power Consumption: 750 mW from P1 (typical)
- DC Power Required: 15V @ 833 mA, 20V @ 625 mA, assuming max load, 755 mW required from P1 when used with a DaqBook
- DC Input Fuse: 2A
- Input Connections: Eight sets of removable screw terminals (6 connections each)
- Channel-to-Channel Setting: $\pm 0.05\%$ typical @ 200 kHz; $\pm 0.025\%$ typical @ 100 kHz
- Isolation
- Input Power to System: 250 VDC
- Signal Inputs to System: 250 VDC
- Input Channel-to-Channel: 250 VDC
- Dimensions: 285 mm W x 220 mm D x 45 mm H (11" x 8.5" x 1.75")
- Weight: 1.13 kg (2.5 lbs.) with no modules installed
- Voltage Accuracy: $0.015 + 0.005$ (% reading + % range)
- Voltage Range: $\pm 5V$
- Cold Junction Sensor Accuracy: 2°C (typical)

Powering the DBK48. The **DBK48** is powered from a number of sources: an included AC adapter, an optional **DBK30A™** rechargeable battery/excitation module, or directly from a 10 to 30V VDC source, such as an automobile battery. The **DBK48** has a built-in DC/DC converter capable of providing 10W exclusively for 8B modules.

Ordering Information

Description	Part No.
16-slot multifunction 8B expansion module including AC adapter	DBK48

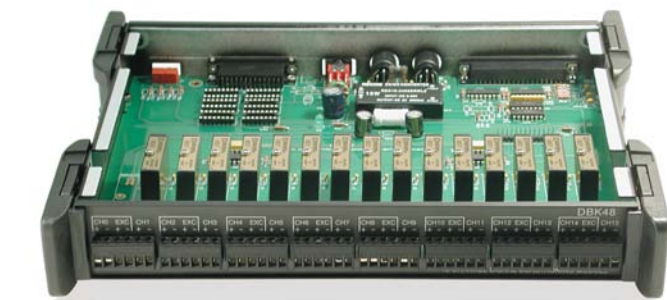
Accessories

Rack mount kit	RackDBK3
8B Modules (see 8B module product page)	

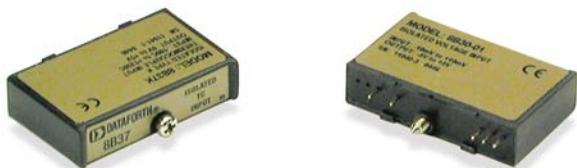
Cables

5-pin DIN to automobile cigarette lighter power cable	CA-116
Shielded T cable for use with DaqBook, DaqLab, DaqScan, and DaqBoard; 2 in.	CA-255-2T
Shielded T cable for use with DaqBook, DaqLab, DaqScan, and DaqBoard; 4 in.	CA-255-4T
Ribbon cable for use with DaqBook, DaqLab, DaqScan, and DaqBoard	CA-37-x

Note: The CA-37-x ribbon cable can also be used in lieu of the CA-255-x molded T cables.



DBK48 with cover open showing 8B signal conditioning modules



8B modules allow a diverse range of signal conditioning requirements



Removable terminal blocks make wiring to your sensor easy

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