



DBK42™

16-Slot Multi-Purpose Isolated Signal Conditioning



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

Features

- Accepts any combination of up to sixteen 5B isolated input signal conditioning modules
- Optional screw-terminal connection block includes cold-junction sensors for thermocouple applications
- Features rugged all-metal construction for portable applications
- Includes a built-in power supply, operable from 10 to 24 VDC

The DBK42™ sixteen-slot 5B signal conditioning module allows IOtech's data acquisition systems to accommodate any combination of up to sixteen 5B input signal conditioning modules*. Each user-installable signal conditioning module offers 500V isolation from the system and from other channels. It is available with a wide variety of modules that accommodate an array of signals—from low-level thermocouple signals to strain gage signals.

A single cable connects the DBK42's output to the P1 analog input connector. One system can support up to 16 DBK42 units, providing a total of 256 isolated analog input channels. The A/D scans the DBK42's channels at the same 5 or 10 µs/channel rate that they scan all DBK series analog expansion and signal conditioning cards.

Powering the DBK42. The DBK42 can obtain its input power from a number of sources: an included AC adapter, an optional DBK30A™ rechargeable battery/excitation module, or directly from a 12 VDC source, such as an automobile battery. The DBK42 has a built-in DC/DC converter capable of powering a full complement of 5B modules even when the unit is fully outfitted with strain gage modules with bridge excitation on every channel.

See DBK207 for rack-mount applications

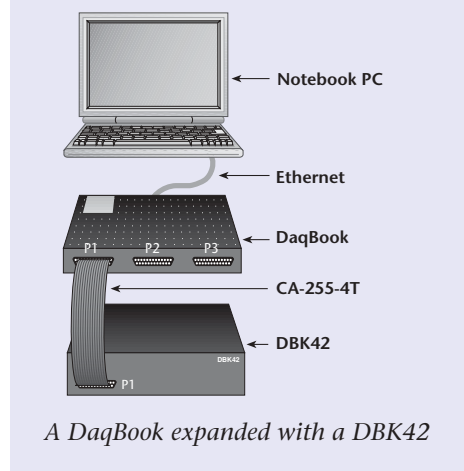


The DBK42 accommodates up to sixteen 5B signal conditioning modules

Configurability. The DBK42 offers exceptionally wide ranging configurability. For instance, it permits you to individually select the type of signal attached to every channel. Also, there is no limit to the type and combination of signals that can be attached to the DBK42.

Signal Connections. The optional CN-71 and CN-72 signal connection blocks provide a convenient way of connecting analog signals to the DBK42. The CN-71 connection block is for non-thermocouple applications, while the CN-72, which features cold-junction sensors, is for thermocouple applications. Each block contains four terminals per channel, providing access to both the 5B modules' input and excitation output features. Each block features a clear plastic shield over its screw terminals that protects you from high voltage on the input terminals.

DBK42 Expansion Example



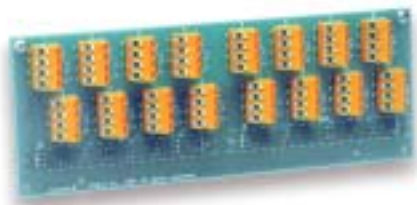
DBK42 with installed 5B modules

* 5B modules must be purchased separately; see Selection Guide on p. 184



DBK42™

Specifications & Ordering Information



The CN-71 sixteen-channel screw-terminal signal connection block



The CN-72 sixteen-channel screw terminal connection box with cold junction sensors



5B modules (see p. 184 for the complete 5B Module Selection Guide)

Specifications

Connector: DB37 male, mates with P1*
Module Capacity: 16 (input only) 5B modules
Power Requirements: 10 to 24 VDC or 120 VAC with included adapter

With 16 T/C type modules:

12 VDC @ 0.50A
 15 VDC @ 0.40A
 18 VDC @ 0.35A

With 16 strain gage type modules:

12 VDC @ 1.9A
 15 VDC @ 1.5A
 18 VDC @ 1.3A

DC Input Fuse: 3A

Power Indicator: LED powered by internal 5 VDC

Power Connection: DIN5 x2 for daisy chaining

AC Power Packs: 120 VAC to 15 VDC @ 0.9A

120 VAC to 24 VDC @ 2.0A (optional)

Input Connections: DIN96 rectangular standard screw-terminal connection block (optional); choices include:

CN-71, without cold-junction compensation
 CN-72, with cold-junction compensation

DC/DC Converter: 10 to 24 VDC to 5 VDC (isolated) Isolation

Input Power to System: 500 VDC

Signal Inputs to System: 1500 VDC

Input Channel-to-Channel: 500 VDC

Dimensions: 285 mm W x 221 mm D x 91 mm H (11" x 8.5" x 3.5")

285 mm W x 285 mm D x 91 mm H (11" x 11" x 3.5") with optional signal connection block

495 mm W x 254 mm D x 91 mm H (19" x 9.75" x 3.5") with optional rack mount kit installed

Weight: 1.8 kg (4 lbs) with no modules installed

Power Consumption: 35 mW

Note: Only modules with $\pm 5V$ or 0-5V output should be used.

Ordering Information

Description	Part No.
16-channel 5B expansion module including AC adapter	DBK42

Accessories

16-channel screw terminal connection block	CN-71
16-channel screw terminal connection block with cold-junction sensors	CN-72
Rack mount kit	RackDBK-1

Cables

5-pin DIN to automobile cigarette lighter power cable	CA-116
Shielded P1 T cable for use with all DaqBooks, LogBooks, and DaqLabs	CA-255-4T
Ribbon cable for use with DaqScan	CA-37-x

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

For complete information on accessories and cables, visit www.iotech.com/acc

Related Products

LogBook	p. 75
DaqBook	p. 89
DaqLab	p. 103
DaqScan	p. 108
DBK44	p. 152
DBK50	p. 156
DBK51	p. 156
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* Attachment to the DaqBoard/2000 requires a DBK200, DBK201, DBK202, or DBK203 adapter