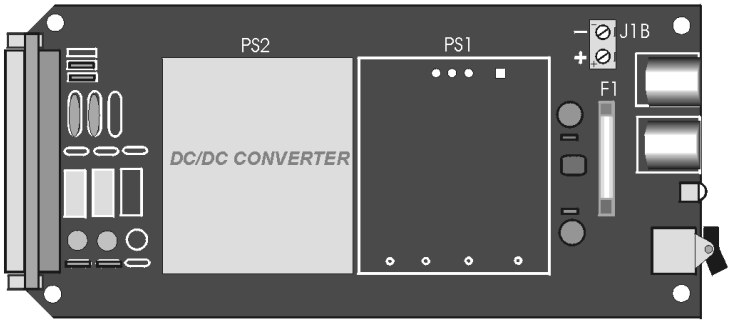
Reference Notes:

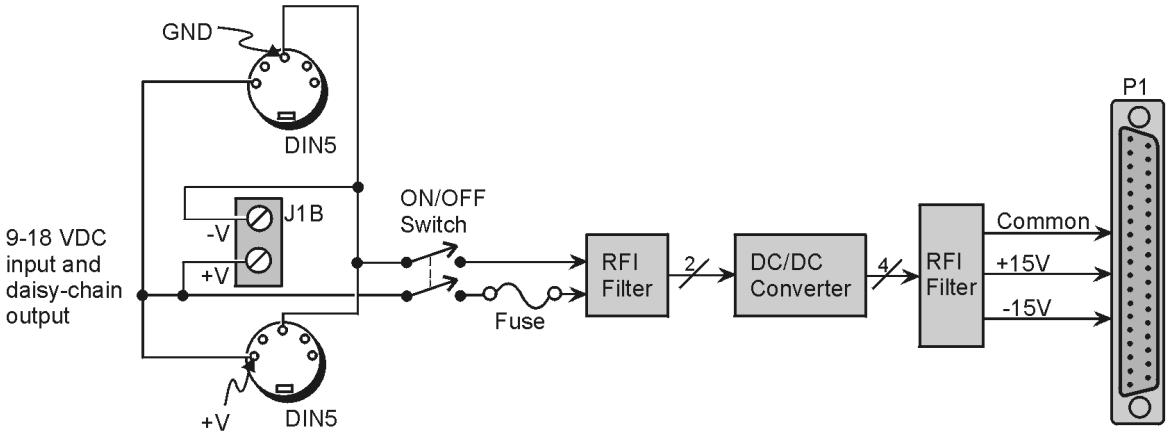
- Refer to the section *Power Requirements*, in the document module *DBK Basics*, in regard to calculating system power requirements.
- The chapter *System Connections and Pinouts* includes pinouts for P1, P2, P3, and P4. Refer to the pinouts that are applicable to your system, as needed.

Overview



DBK32A Power Supply Card

The DBK32A provides added power in configurations where the number of expansion cards exceeds the power available from a LogBook, DaqBook, or DaqBoard. For power, the DBK cards rely on voltages supplied via the P1 connection. The DBK32A supplies ±15 V @ 500 mA via the P1 bus and is compatible with all analog DBK cards.



DBK32A Block Diagram

The DBK32A does not provide +5 V. If +5 V is required by the DBKs in use, you should use the DBK33 Triple-Output Power Supply. Refer to the *DBK33 Document Module* for additional information.

Configuring the Primary Device for use with a DBK32A

Configuration for:

DaqBook/100 Series
DaqBook/200 Series
DaqBoard/100 Series
DaqBoard/200 Series [ISA-type boards]

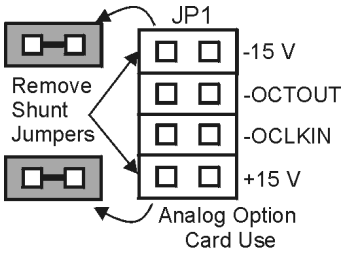
CAUTION

You must configure the DaqBook/100 Series & /200 Series devices or DaqBoard [ISA type] before connecting the DBK32A. Do not connect the P1 cable without first removing the shunt jumpers from JP1 inside the DaqBook/100 Series & /200 Series device or DaqBoard [ISA type]. Failure to remove these jumpers can result in damage to the DBK32A and the DaqBook/100 Series, DaqBook/200 Series or DaqBoard [ISA type].

CAUTION

Do not place jumpers on the -OCTOUT and -OCKLIN pins.
If configured such, damage to the 8254 timer chip will result.

Using a DBK32A requires you to entirely remove the shunt jumpers from header JP1 inside the DaqBook /100 Series & /200 Series or DaqBoard [ISA type], as shown in the figure. DaqBooks/100 Series & /200 Series and DaqBoards [ISA type] are shipped with these shunts positioned to deliver analog power to P1.



Auxiliary Power Configuration

JP1 default position will not work with a DBK32A. Shunt jumpers must be removed before connecting DBK32A. See previous Cautions.

Configuration for:

DaqBook/260
DaqBook/2000 Series
DaqBoard/2000 Series
DBK60
LogBook/300
LogBook/360

No hardware configuration is performed in regard to using the DBK32A with these devices.

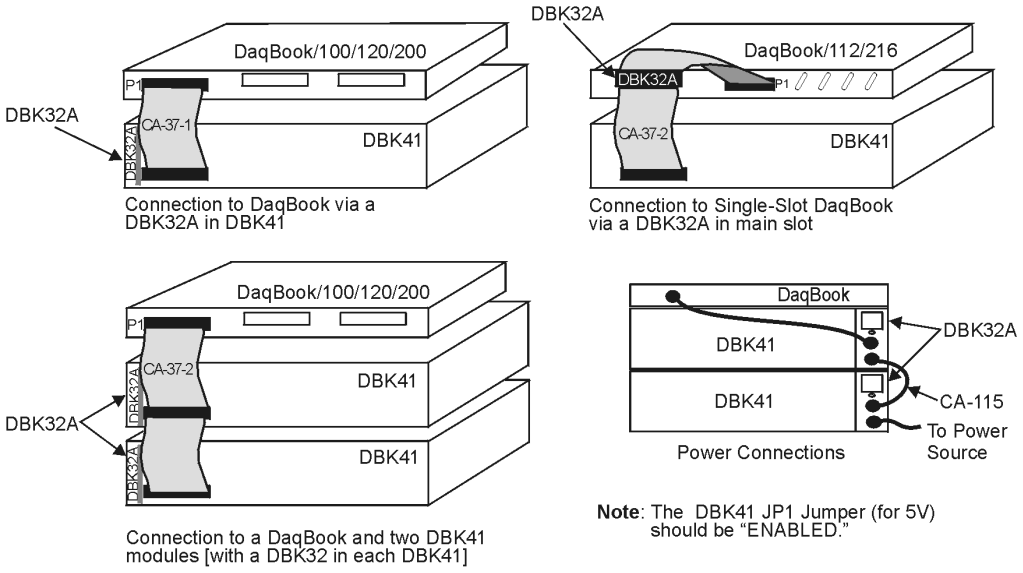
Configuration for:

DBK41

When a DBK32A is installed in a DBK41, the DBK41 should have its JP1 jumper in the "ENABLE +5 VDC" position. Refer to the DBK41 section of the manual for additional information.

Connecting the DBK32A

The DBK32A can be installed into the internal expansion slot of a DaqBook/112, DaqBook/216, DaqBook/2000X, a 3-Slot DBK10, a 3-slot DBK60, or a 10-Slot DBK41. It can also be used in a LogBook/360 and DaqBook/260.



Examples of DBK32A Connections

If you will be using a 3-port DaqBook, i.e., DaqBook/100, /120, /200, /260, or /2000 Series with a DBK41, then the best location for the DBK32A is the right-hand end-slot of the DBK41 when facing the DBK41's rear panel. This will be the left-hand slot if facing the DBK41 from the front-panel.

DBK32A's P1 Connector

DBK32A's DB37 P1 connector interfaces with the analog DBK in one of two ways:

a) Via a P1 interface backplane, such as in the case of installing the DBK32A in a DBK41.

b) Via a CA-37-x cable, which interfaces between the DBK32A's P1 connector and the P1 connector(s) of the analog DBK(s) that it is to supply power to.

DBK32A's DIN5 Connectors

The DBK32A can be powered from a 9 to 18 VDC source such as an AC/DC power adapter, a DBK30A battery module, or a car battery.

The DBK32A has two DIN5 power connectors to allow for the cascading of multiple DBK32As (via a CA-115 power cable). The lower right-hand section of the preceding figure portrays this scenario. Note that a DBK32A can share a power source with an acquisition device. For example, you can connect a CA-115 power cable to the DIN5 Power Out connector of a DaqBook, DaqBoard, or LogBook and then connect the other end of the CA-115 cable to one of the DIN5 connectors on the DBK32A.

DBK32A's J1B Terminal Block

Terminal block J1B has one positive (+) and one negative (-) screw terminal. The terminal block power connection is available as an alternative to a DIN5 connector. As indicated in the block diagram on page 1, all three connectors are in parallel.

DBK32A – Specifications

Name/Function: Auxiliary Power Supply Card

Isolation, Input to Output: 500 VDC

Output Voltages:
+15 VDC (nominal) @ 535 mA
-15 VDC (nominal) @ 535 mA

Line Regulation: 0.5% (maximum)

Load Regulation: 1.0% (maximum)

Total Output Power: 16 VA (full load)

Input Voltage Range: 9 to 18 VDC

Input Current Range:

1.05A @ 18 VDC
10A @ 9 VDC

Size: 209 mm x 19 mm x 82 mm (8-1/4 " x 3/4" × 3-1/4")

Full Load Efficiency: 80% Typical

Input Connections: DIN-5 (×2 for daisy-chaining)

Output Connections: DB37 Male

Parallel Provision: OR-ing diodes in output lines

Controls: ON/OFF rocker arm switch

Indicators: LED driven by positive output

Over-Voltage Protection: Fuse followed by 19V zener clamp

Switching Frequency: 100 kHz min.

Operating Temperature Range: -20 to 70°C

Input Fuse Size: 3 A (Littelfuse)

Note: Specifications are subject to change without notice.