DBK208™
16-Channel Isolated Digital I/O Signal Conditioning

Compatibility: ✔ LogBook ✔ DaqBook ✔ DaqLab ✔ DaqScan ✔ DaqBoard/2000 Series
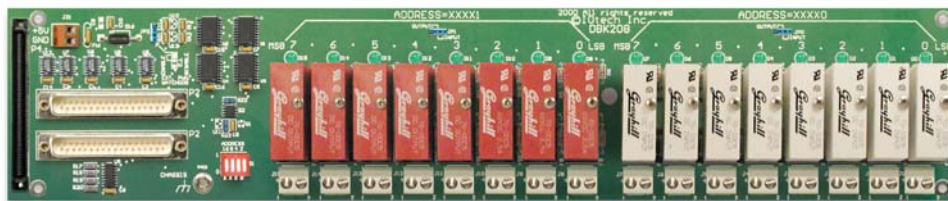
Features

- Accepts up to 16 Opto 22®-compatible isolated solid-state-relay (SSR) digital I/O modules*
- 500 VDC channel-to-channel and channel-to-system isolation
- Modules available for sensing AC and DC signals and switching AC and DC loads
- Modules are jumper configured as either inputs or outputs in groups of eight
- Per channel screw terminals (12-26 AWG) for easy signal connection plus LEDs to indicate module status
- On-board logic permits the disabling of outputs upon external power loss
- On-board logic disables outputs upon detection of a CPU reset
- Up to 16 DBK208™ boards can be daisy chained supporting expansion up to 256 isolated digital I/O lines
- Easily configured, without programming, with DaqView™ software
- Optionally rack and DIN-rail mountable
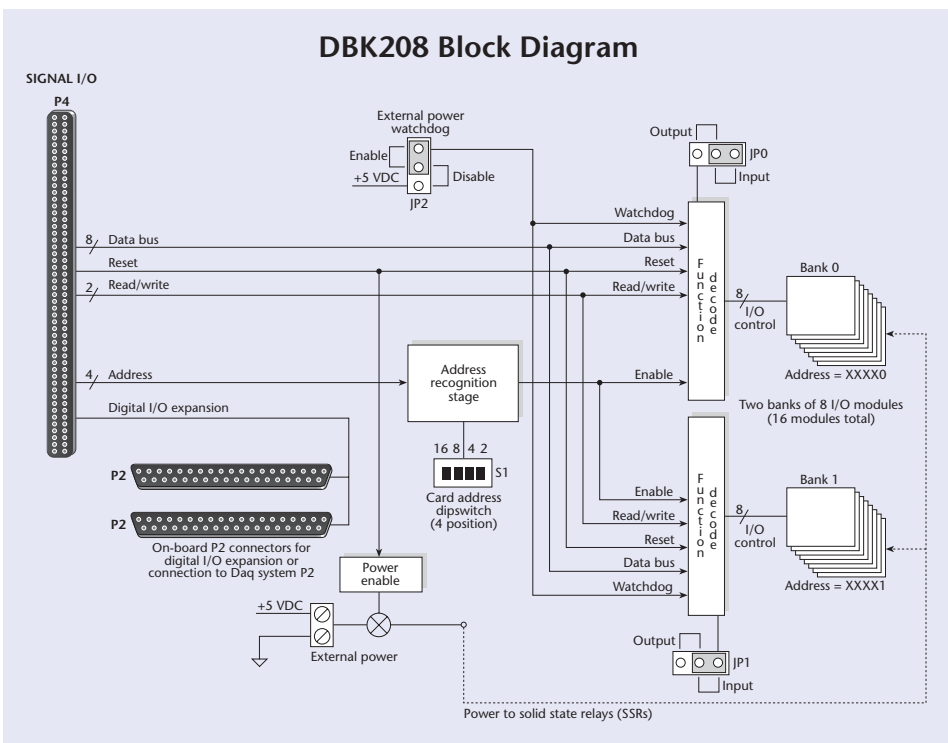- Requires +5 VDC power supply

The DBK208™ signal conditioning and expansion board can be configured with up to 16 isolated Opto-22® compatible solid-state relay (SSR) digital I/O modules. Two 8-channel banks can be jumper-selected as either inputs or outputs. Each channel features screw terminals for the convenient connection of field signals as well as LEDs to indicate channel status.

Each user-configurable signal conditioning module offers 500V isolation from the system and from other channels. A wide variety of solid-state-relay (SSR) I/O modules are available to sense AC and DC signals and to switch AC and DC loads.

An on-board jumper (JP2) allows users to determine the status of the digital outputs in the event of the loss/recovery of external power. When enabled, the loss of external power disables module outputs until the application program writes new values to the data bus. When disabled, the loss of power has no effect on the state or continued control of the outputs. Additionally, on-board logic disables module outputs upon detection of a CPU reset.
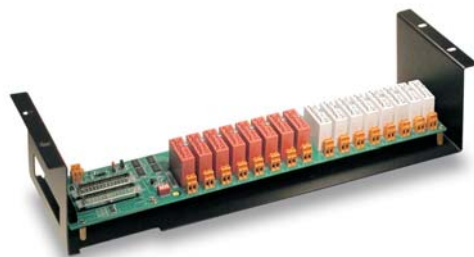

The DBK208 accepts up to 16 isolated solid-state-relay (SSR) digital I/O modules

DBK208 Block Diagram

For DaqBoard/2000 series only a single CA-195 cable is required to terminate to the DBK208. For applications with digital I/O only channel expansion requirements, up to 16 DBK208 boards can be daisy chained (via multiple CA-37-x cables) providing expansion up to 256 digital I/O channels. For applications with both analog and digital I/O channel expansion requirements, the DBK201, DBK206, and the DBK209 expansion boards are available. All DBK signal conditioning and expansion boards are scanned at 5 µs/channel.

The DBK208 ships with panel-mount hardware, however it can also be either DIN-rail or rack-mounted with optional mounting

kits. The DBK209 and DBK206 adapter boards are used to convert the 100-pin (P4) connector from the DaqBoard/2000 series boards to three expansion ports (P1, P2, and P3). These (DB37) connectors interface to a broad range of analog and digital DBK

Rack3 rack-mount kit for the DBK208

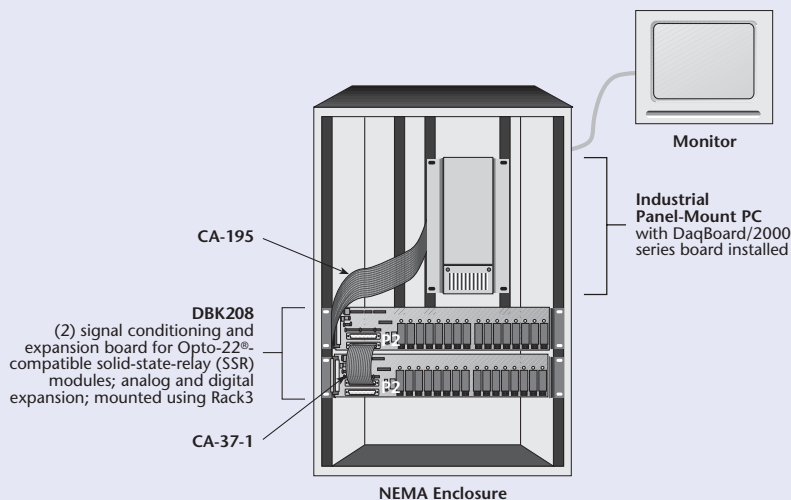* OPTO 22® modules must be purchased separately. All sales are final with no right of return.
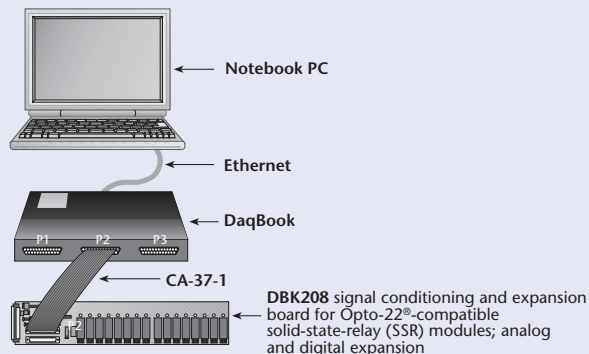
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DBK
Signal Conditioning Options

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DBK208™
Specifications & Ordering Information

DBK208 Expansion Examples

Monitor

Industrial
Panel-Mount PC
with DaqBoard/2000
series board installed

CA-195

DBK208
(2) signal conditioning and
expansion board for Opto-22®-
compatible solid-state-relay (SSR)
modules; analog and digital
expansion; mounted using Rack3

CA-37-1

NEMA Enclosure

*Two DBK208 isolated digital signal conditioning and
expansion boards (16 max) using Rack3 mounting option*

Notebook PC

Ethernet

DaqBook

P1 P2 P3

CA-37-1

DBK208 signal conditioning and expansion
board for Opto-22®-compatible
solid-state-relay (SSR) modules; analog
and digital expansion

*The DaqBook/2001 with one DBK208 isolated digital
signal conditioning and expansion board (16 max)*

signal conditioning boards and modules. The DBK209 is typically used for applications where both isolated analog input (DBK207 and/or DBK207/CJC) and isolated digital I/O (DBK208 and/or DBK210) channel expansion is required. The DBK206 supports the same channel expansion as the DBK209 plus removable screw-teminals providing access to all DaqBoard/2000 series I/O. Both the DBK206 and the DBK209 are panel mountable and rack and DIN-rail mountable with optional kits.

Specifications

Module Capacity: 16, Opto-22® solid-state-relays
Cable (optional): CA-37-x or CA-195
DC Input Fuse: 0.5A, reset type
Power Requirement: 5 VDC, regulated; 0.25A min
Operating Environment
  Temperature: 0˚C to 70˚C
  Relative Humidity: 95% RH, non-condensing
Connectors
  P4: 100-pin connector provides for connection to DaqBoard/2000 series P4 connector via a CA-195 cable
  P2: Two P2 (DB37) connectors provide connection to a Daq system and digital expansion via a single CA-37-x cable or multiple CA-37-1 cables
  Screw Terminals: 16 sets of 2-connector blocks for I/O signals
Isolation
  Channel-to-System: 500V
  Channel-to-Channel: 500V

Ordering Information

Description	Part No.
Termination and expansion board with fixed screw terminals (12 to 26 AWG wire), sockets for up to sixteen Opto-22®-compatible isolated solid-state-relay (SSR) digital I/O modules, and status LEDs per channel; provides direct connection for digital DBK signal conditioning and expansion options	DBK208
Termination and expansion board with removable screw terminals for access to all DaqBoard/2000 series I/O with direct connection for DBK signal conditioning and expansion options	DBK206
Expansion board for direct connection to DBK signal conditioning and expansion options	DBK209

Accessories

Rack-mount kit for DBK206, DBK207, DBK207/CJC, DBK208, DBK209, and DBK210 signal termination and expansion boards	Rack3
DIN-rail adapter kit for DBK206, DBK207, DBK207/CJC, DBK208, and DBK210 signal termination and expansion boards	DIN1
DIN-rail adapter kit for DBK209 signal termination and expansion board	DIN2
Optional hardcopy manual set (3); includes programmer's manual, DaqBoard/2000 & DaqBoard/2000c series user's manual, and DBK option cards & modules user's manual	1033-0900

Cables

Expansion-card cable for connecting DBK series expansion options; specify number of option cards (x) to be connected	CA-37-x
100-conductor expansion cable, mates with the DaqBoard/2000 series boards and the DBK200, DBK201, DBK202, DBK203, DBK206, DBK207, DBK207/CJC, DBK208, DBK209, and DBK210;	
3 ft expansion cable	CA-195
6 ft expansion cable	CA-195-6
Same as CA-195 with CE compliance; 3 ft.	CA-209

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

Related Products

LogBook
DaqBook
DaqLab
DaqScan
DBK206
DBK207
DBK207/CJC
DBK209
Isolated Digital I/O Modules
DaqBoard/2000 Series