BRAIN BOARDS
CLASSIC PAMUX
B4 INSTALLATION NOTES

Introduction

The Pamux® B4 is an addressable digital brain board that can control up to 32 input or output points in distributed I/O applications. The B4 is designed for use with the G4PB32H mounting rack for single-point digital I/O, or the PB32HQ mounting rack for quad pak digital I/O (four points of I/O per module).

The B4 features a 70-pin header connector to attach to a digital I/O mounting rack. Up to 16 B4 brain boards may be linked on a single Pamux bus to control up to 512 points of digital I/O. Each B4 requires 5 VDC ± 0.1 V @ 0.5 A (plus an additional 0.5 A if a terminator board is installed).

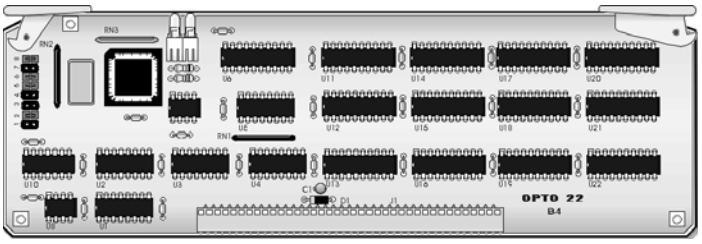

Figure 1: B4 Brain Board

This document describes how to install the B4 digital I/O brain board on a compatible mounting rack. It discusses all B4 configuration issues, including how to set jumpers for the address, watchdog, and reset line. It also explains how to install a terminator board when a B4 station is at one end of a Pamux system. Finally, it describes the LED indicators on the B4 and provides information on Opto 22 product support.

For complete information on the Pamux system, call Opto 22 at 800/321-6786 and request the *Pamux User's Guide* (form 726).

Installing the B4 on a Mounting Rack

The B4 brain board measures 9.25 by 2.9 inches. It includes a 70-pin box connector along its bottom edge to attach to a digital I/O mounting rack. Two levers are located on opposite corners of the board. These levers operate with the card guides on the mounting rack to hold the brain board in place or to help release it from the rack.

Figure 2 is a detailed illustration of the B4 along with its dimensions.

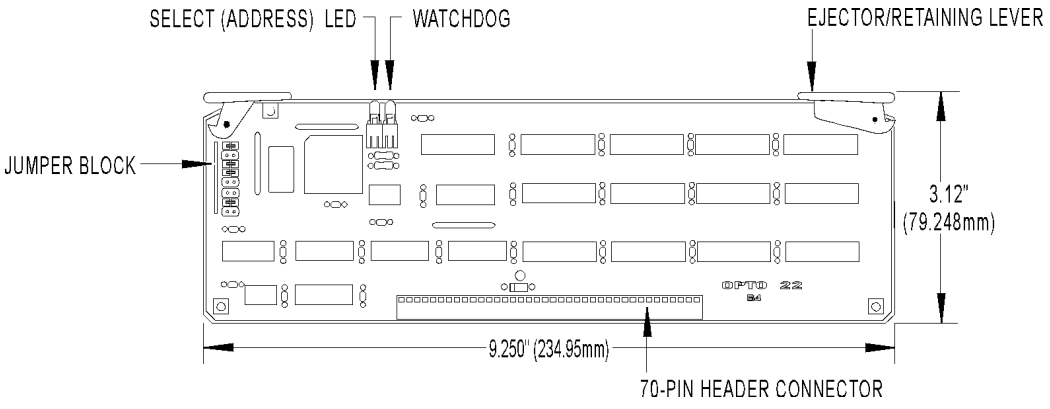

Figure 2: Dimensions of the B4 Brain Board

The B4 can be installed on either of two I/O mounting racks:

- G4PB32H — *32 channels of single-point G4 I/O*
- PB32HQ — *8 channels of quad pak I/O (four points per module)*

The G4PB32H mounting rack uses single-point digital modules. It offers a dense footprint and point-by-point I/O configuration.

The PB32HQ also offers a dense footprint but uses Opto 22 quad pak modules. Each quad pak contains four discrete points of I/O in one package. The PB32HQ is thus configured in four-point increments.

Figure 3 shows how the B4 brain board is installed on either mounting rack.

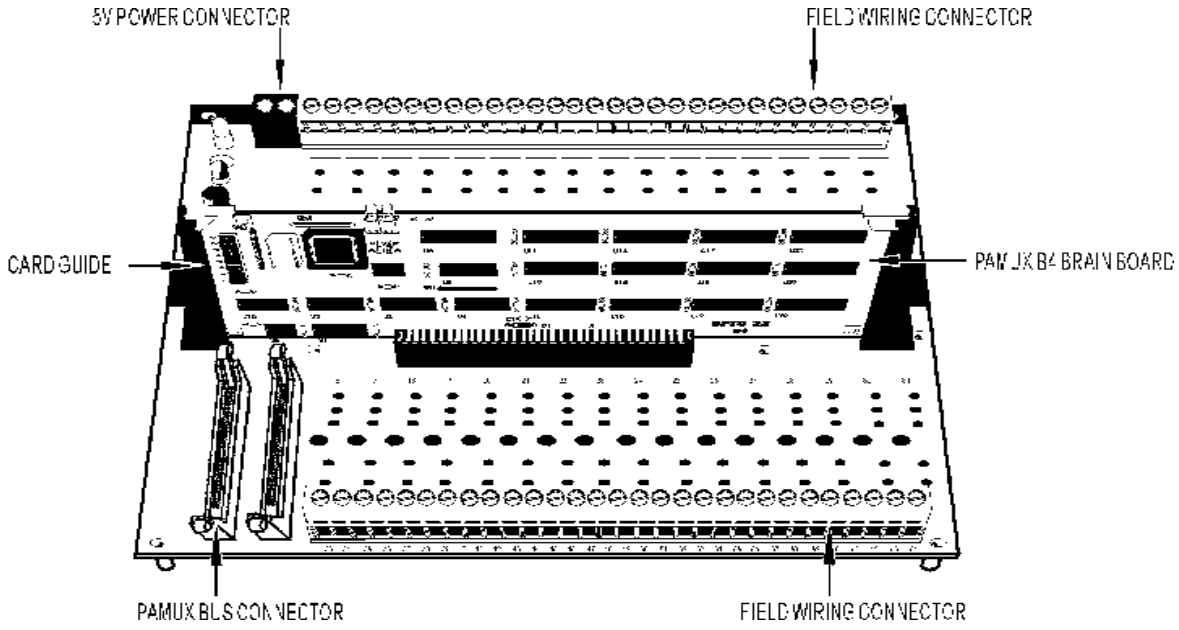

Figure 3: Installation of the B4 on a Mounting Rack

Figures 4 and 5 show the mounting dimensions of these racks.

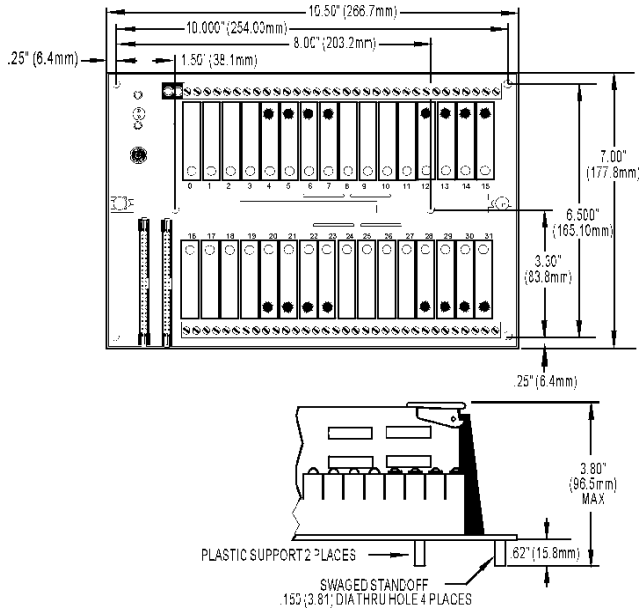

Figure 4: Mounting Dimensions of the G4PB32H

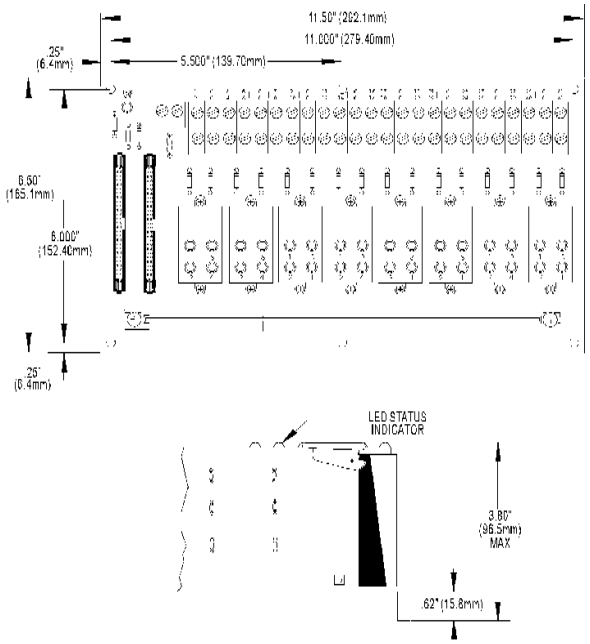

Figure 5: Mounting Dimensions of the PB32HQ

Figure 6 shows the vertical dimensions of the B4 mounted on either rack.

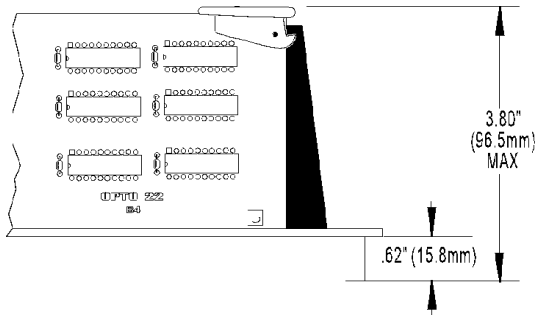

Figure 6: Vertical Dimensions of the B4 Mounted on a Rack

Setting the Jumpers

The B4 includes eight jumpers. Jumpers 1 through 4 set the address, jumpers 5 and 6 set the watchdog functionality, and jumpers 7 and 8 determine the behavior of the reset line.

Jumpers 1–4 (Address)

These jumpers configure the base address of the B4. Since the brain board controls 32 points of I/O, while the Pamux data bus is only eight bits wide, the B4 must be accessed as four consecutive banks of eight I/O channels each. Each bank has its own address.

The four banks on the B4 have contiguous addresses. The bank 0 address is the base address of the B4; the bank 1 address is the base address plus one; the bank 2 address is the base address plus two; and the bank 3 address is the base address plus three. Hence, only the base address needs to be configured. Refer to Table 1 to determine how to set this base address.