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CB37 V1.2 Datasheet

October 5th, 2006, Revision 1.01

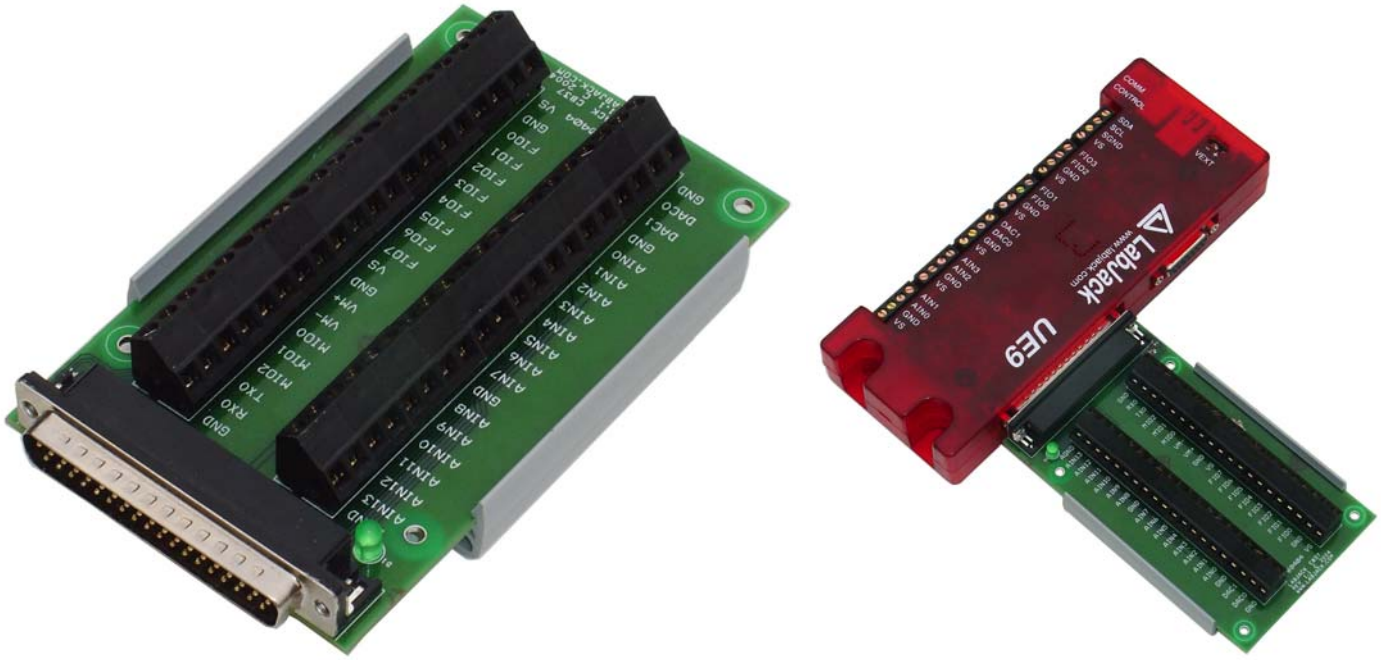
The CB37 terminal board connects to the LabJack UE9's DB37 connector and provides convenient screw terminal access. The CB37 is designed to connect directly to the LabJack, but can also connect via a 37-line 1:1 male-female cable (not included). **The CB37 V1.2 is not compatible with LJTick signal conditioning modules (CB37 V2.1 required for LJTick compatibility).**

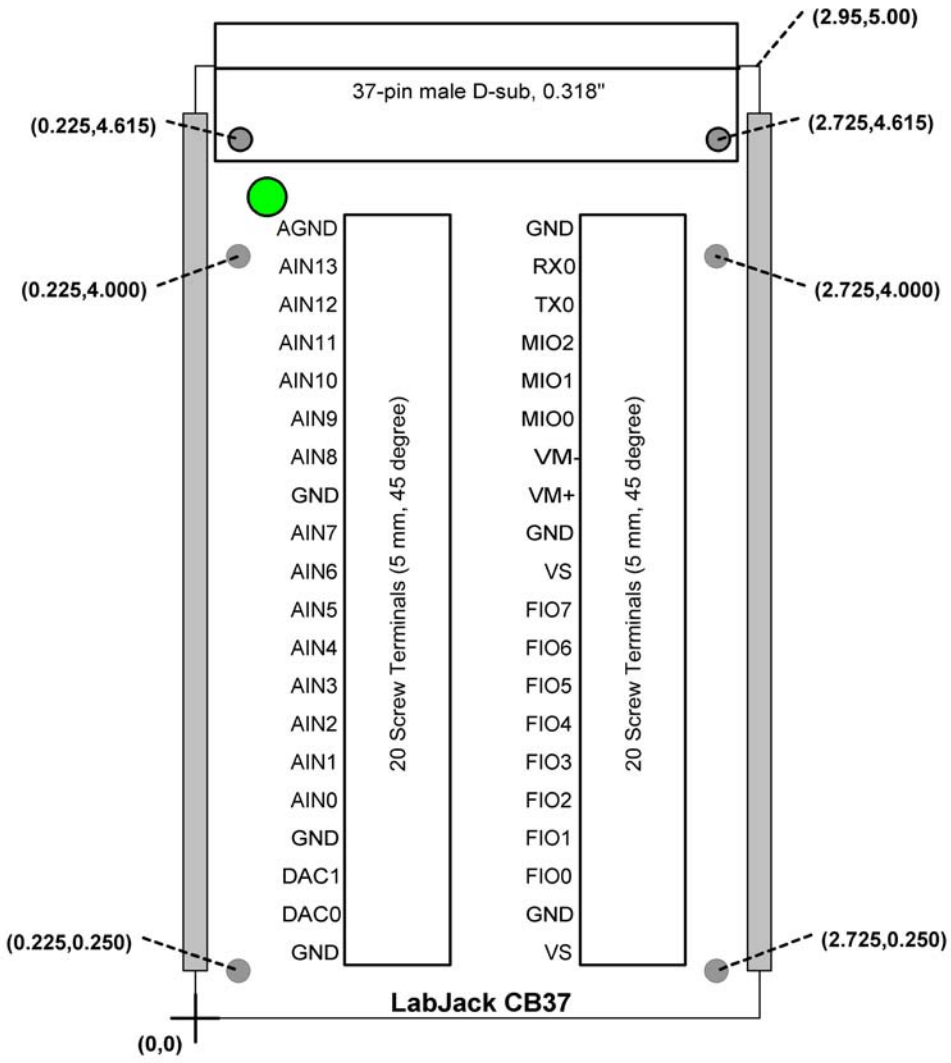
The green LED on the CB37 is directly powered by the 5-volt supply (Vs) from the LabJack, so it should be lit whenever the CB37 is connected to a powered LabJack.

The CB37 PCB is mounted to a piece of Snaptrack. The Snaptrack is DIN rail mountable using Tyco part # TKAD (not included).

When using the analog connections on the CB37, the effect of ground currents should be considered, particularly when a cable is used and substantial current is sourced/sunk through the CB37 terminals. For instance, a test was done with a 6 foot cable between the CB37 and a LabJack UE9, and a 100 ohm load placed from Vs to GND on the CB37 (~50 mA load). A measurement of CB37 GND compared to UE9 GND showed 5.9 mV. If a signal was connected to AIN0 on the CB37 and referred to GND on the CB37, the UE9 reading would be offset by 5.9 mV. The same test with the CB37 direct connected to the UE9 (no cable) resulted in an offset of only 0.2 mV. In both cases (cable or no cable), the voltage measured between CB37 AGND and UE9 GND was 0.0 mV.

When any sizeable cable lengths are involved, a good practice is to separate current carrying ground from ADC reference ground. An easy way to do this on the CB37 is to use GND as the current source/sink, and use AGND as the reference ground. This works well for passive sensors (no power supply), such as a thermocouple, where the only ground current is the return of the input bias current of the analog input. Another option is to use a separate ground wire for loads requiring substantial current.





Declaration of Conformity

Manufacturers Name: LabJack Corporation
Manufacturers Address: 13701 W Jewell Ave, STE 284, Lakewood, CO 80228, USA

Declares that the product

Product Name: CB37 Terminal Board
Model Number: CB37

conforms to the following Product Specifications:

EMC Directive: 89/336/EEC

EN 55011 Class A
EN 61326-1: General Requirements