ACDC Rev-C Modifications

Tobias Abelmann and Marek Michulka

January 2022

1 Introduction

In the process of testing the ACDC Rev-C data acquisition system, Marek Michulka, Evan Angelico, Paul Rubinov, Joe Pastika, Henry Frisch, and I discovered a number of necessary modifications. This paper serves to document these modifications, so that any unmodified Rev-C cards can be made to work properly.

2 Modifications

1. Replace R1 and R4 with resistors of at least $19.1k\Omega$ (we used $20k\Omega$ and $24k\Omega$ resistors). When making this change, please note that R4 is mislabeled. According to the labels on the board, the resistor labeled C5 — which should be initially populated with a $\sim 16k\Omega$ resistor — should be replaced. In the event that this is done wrong, C5, which is labeled R4, should be populated with a $0.1\mu F$ capacitor.
2. Replace R29 and R30 with $20m\Omega$ resistors (we used these).
3. Bypass C18 and C20 (remove them and place 0Ω resistors).
4. Add $\sim 50\Omega$ pull-down resistors from C104 and C105 to ground as shown here.
5. Remove R36 and add $\sim 50\Omega$ pull-down resistors from each pad of R36 to ground as shown here.