TB245 (Rev3) - Adding a DC1 4th axis to an Allin1DC System

Purpose: This document will describe the necessary steps to successfully install a DC1 4th axis drive into an Allin1DC system.

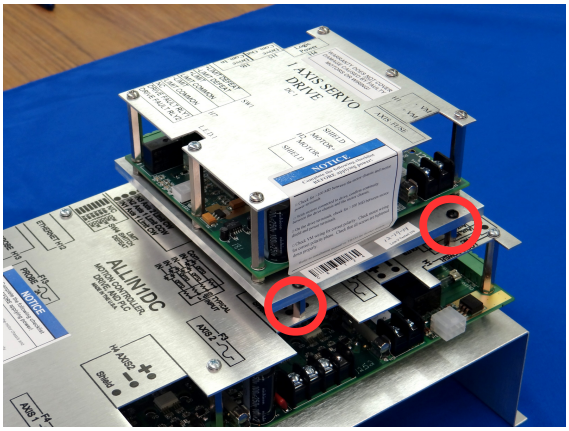
Required Materials:

- DC1
- 7-pin Phoenix connector
- Mounting hardware for DC1 (4x ½" standoffs, 4x 6-32 nylok nuts, 4x 6-32x5/8" screws)
- Drive COM cable
- Logic power cable for DC1
- 4th axis pigtail & Threaded end cap (mounting hardware 4x 6-32x1/2" screws, & 4x 6-32 nylok nuts)
- 2x 8" pieces (one blue, one white w/ blue stripe) of 12 AWG wire for 110VDC power
- 2x 18" pieces of red 18 AWG wire for drive fault wiring

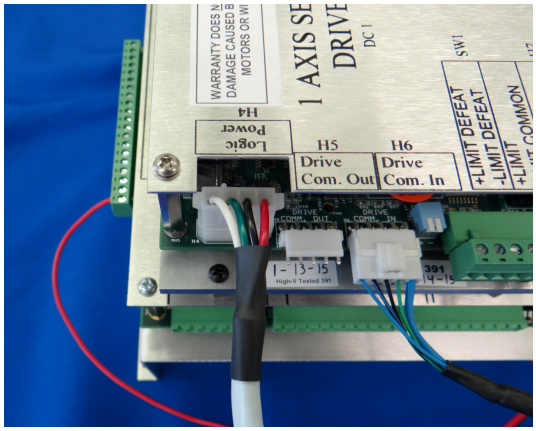
Instructions:

1. Remove cover from Allin1DC and install standoffs with nuts to the cover. Re-install cover and mount DC1 to standoffs using the 6-32 screws.

2. Connect logic power cable to the Power Supply under Allin1DC, then plug the other end into the DC1 **logic power** plug.

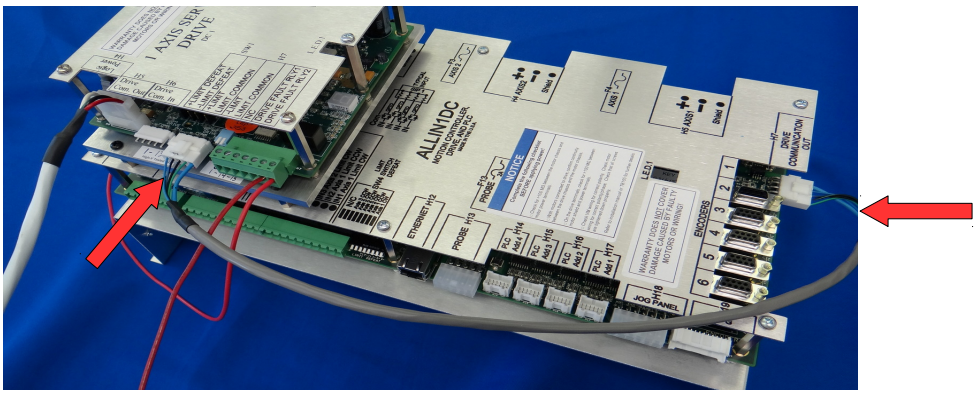


Mounting The DC1



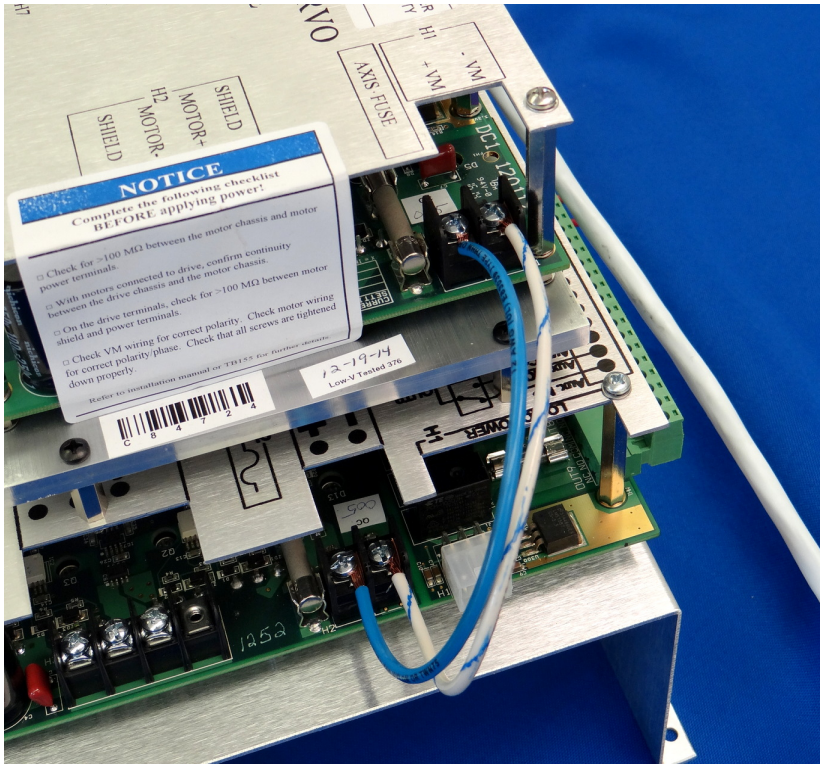
Connecting Logic Power

3. Plug Drive COM cable into Allin1DC on **Drive COM Out** header located to the right of the encoder connections. Plug the other end into the **Drive COM In** header H6 on the DC1.



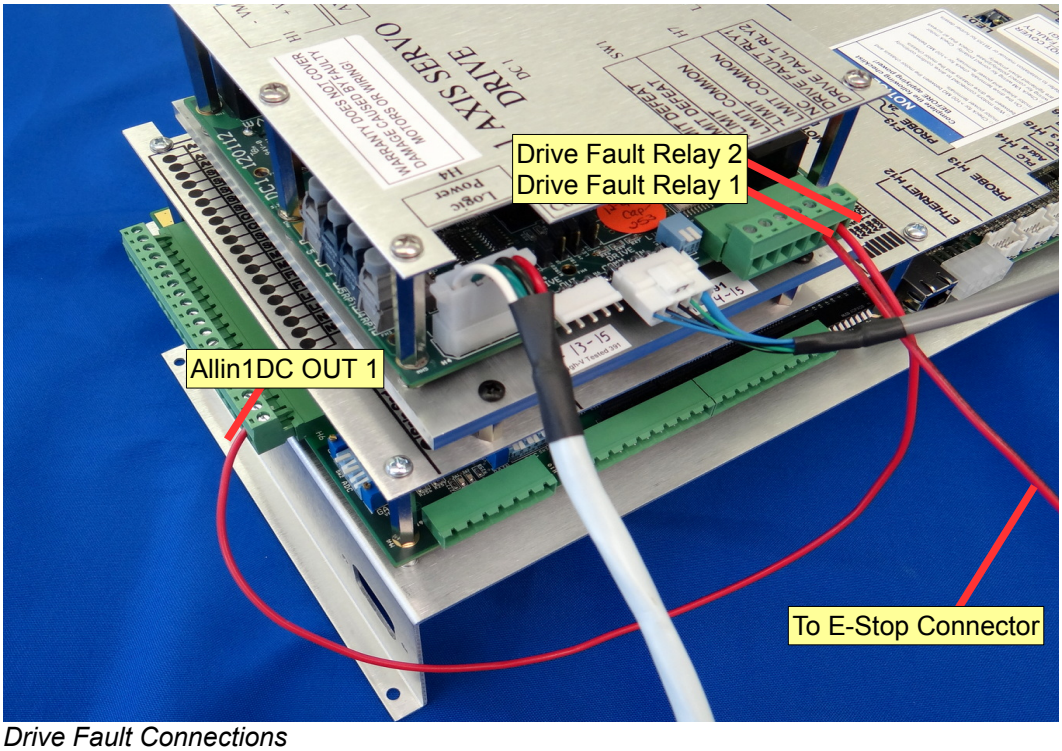
Drive Communication

4. Wire the 8” pieces to the **+Vm** and **-Vm** terminals on the Allin1DC. Then connect them to the **+Vm** and **-Vm** terminals on the DC1. (blue for +Vm, & White with blue stripe for -Vm)



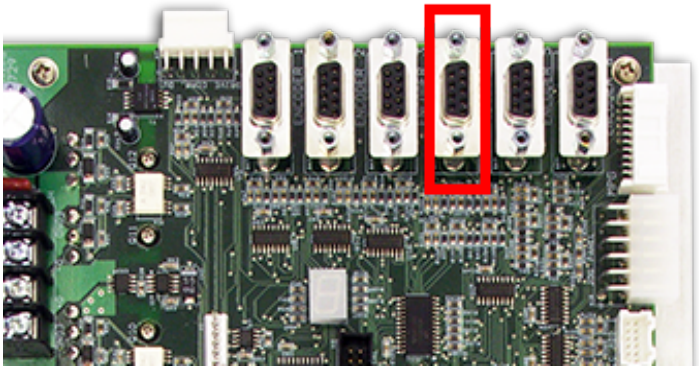
Connect +VM and -VM

5. Take the **Drive fault** wire (509) from the Allin1DC and connect it to **RLY1** on H7 of the DC1. Then run a red wire (510) from **RLY2** on the DC1 to **OUT 1** on the Allin1DC, H6.



Drive Fault Connections

6. Mount the pigtail in the bottom of the cabinet. Connect the encoder to the 4th input on the Allin1DC. Connect the motor power to the DC1.



Encoder Connection Location on the Allin1DC

Encoder 4

7.Connect the following:

- Connect the rotary pigtail **137** black wire (**Pin A**) to **OUT6** on H6 of the Allin1DC.
- Connect **138** white wire (**Pin B**) to **TB1/6B**.
- Connect **927** white wire (**Pin N**) to **INP 7** on H11 of the Allin1DC.
- Connect **926** green wire (**Pin T**) to **INP 8** on H11 of the Allin1DC.
- Connect **928** red wire (**Pin S**) to **12VDC** (or 10-30VDC).
- Connect **929** black wire (**Pin D**) to **TB1/15B**.

8. Connect the rotary table cable to the pigtail and then power up the control.

9. Press **F1-Setup** → **F3-Config** → Password 137 → **F3-Params**. Set the drive mapping parameters:

Parameter	Value
300	2
301	3
302	4
303	1

10. PID settings for all DC rotary tables (including 5C indexer) will be:

Kp	Ki	Kd
0.5	.004	1.0

11. Refer to the rotary table manual for all other settings.
RT 150: www.centroidcnc.com/dealersupport/downloads/manuals/installation/RT150.pdf
RT 200: www.centroidcnc.com/dealersupport/downloads/manuals/installation/RT200.pdf

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