

SERVICE BULLETIN	
Note No.	SVC-FSB-0065
Release Date	1/8/2020
Contact	ngceoservice@ngc.com

# Installation of Current Monitor Isolation Board (2U and 4U eDrives)

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## Summary

This technical note describes the process for installing a current monitor isolation board into an eDrive.

## Scope

This technical note applies to both the 2U and 4U eDrives.

## Materials Needed (88-045-10, Isolated Current Monitor Kit which includes the following...)

- 81-223-20 Current Monitor Isolation Circuit Card Assembly (CCA) (Supplied by NG CEO)
- Wire Ties (Supplied by NG CEO)
- Current Monitor Label with Scale Factor Value (Supplied by NG CEO)

## Tools and Equipment Needed

- Phillips® Screwdriver
- Wire Cutters

## Safety Warnings



**CAUTION.** Electrical shock hazard. Before servicing the eDrive, make sure that the AC power cord and external power supplies are disconnected. Injury to personnel may result, including death. Damage to equipment may result as well.



**ESD:** HANDLE APPROPRIATELY.

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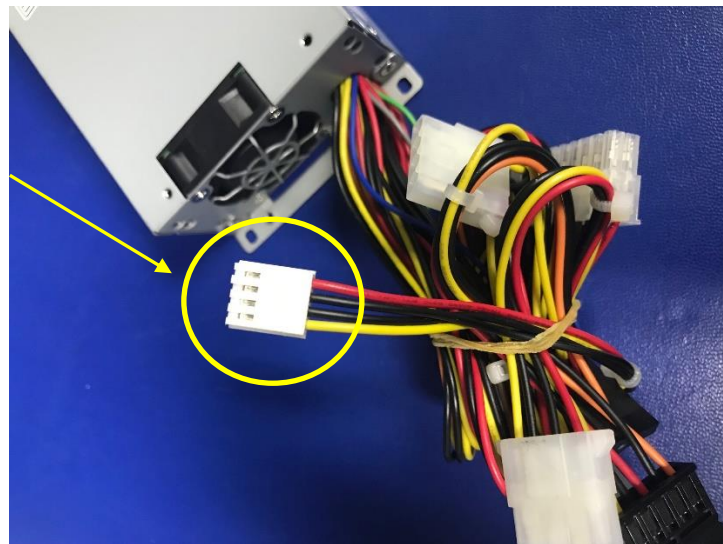
### Procedure

1. Turn off and unplug the eDrive.
2. Remove the top cover from the eDrive by removing the 22 Phillips®-head attachment screws.
3. Locate the Enhance SFX Power Supply within the eDrive and then locate the bundle of output connectors coming from the power supply (See Figure 1). Once located, use wire cutters to carefully cut and remove wire-ties from the bundle to locate the 4-pin flat connector (as illustrated in Figure 2). This connector may be white or black in color. The wires associated with this connector are yellow, black, black, and red.



**Figure 1. SFX Power Supply**

4-Pin Flat Power Connector  
(From SFX Power Supply)



**Figure 2. 4-Pin Flat Connector from SFX Power Supply**

Once the 4-pin connector is located, re-bundle the other connectors from the SFX power supply and secure the bundle with a tie-wrap.

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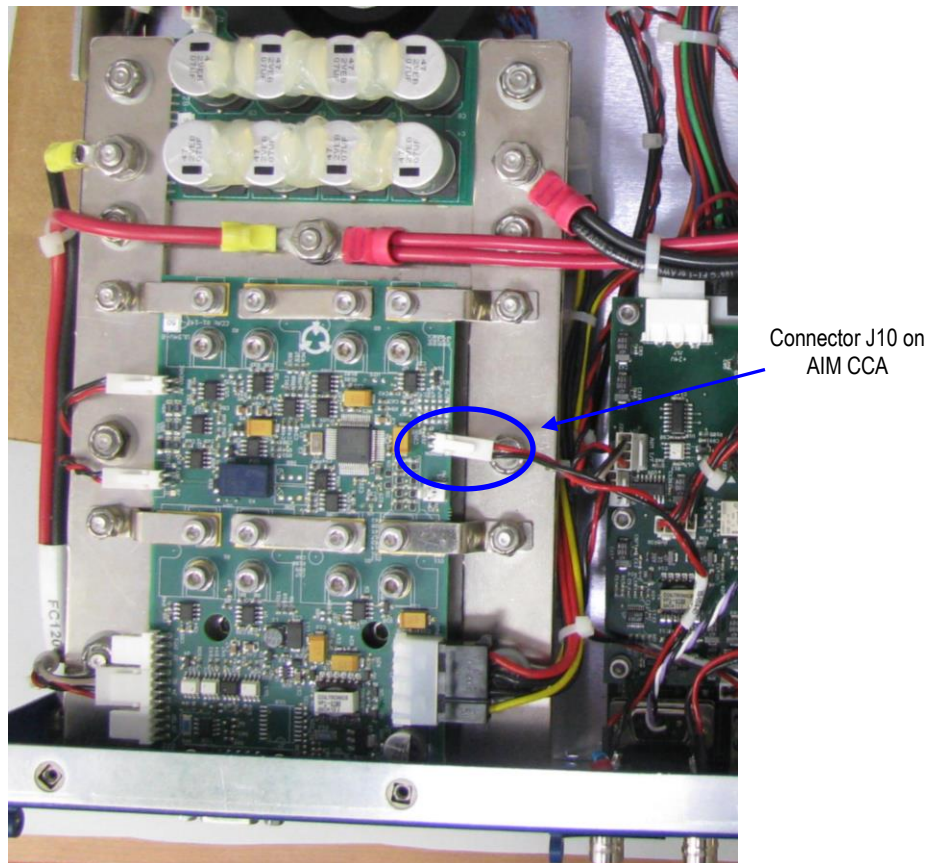


4. Attach the 4-pin connector from the SFX power supply to the 4-pin connector located on the new Current Monitor Isolation CCA (P/N: 81-223-20) (Reference **Figure 3**).



**Figure 3:** 81-223-20 Isolated Current Monitor CCA

5. Locate the current monitor connector located at J10 on the AIM circuit card assembly (see **Figure 4**).



**Figure 4:** Current Monitor Connector at J10 of AIM Circuit Card Assembly

6. Disconnect the current monitor two-pin connector from **J10** on the AIM CCA and plug it onto the two-pin connector located on the new Current Monitor Isolation CCA (P/N: 81-223-20). Attach the two-pin connector on the red/black twisted pair wiring leading from the 81-223-20 CCA to **J10** of the AIM CCA (reference **Figure 5a**).

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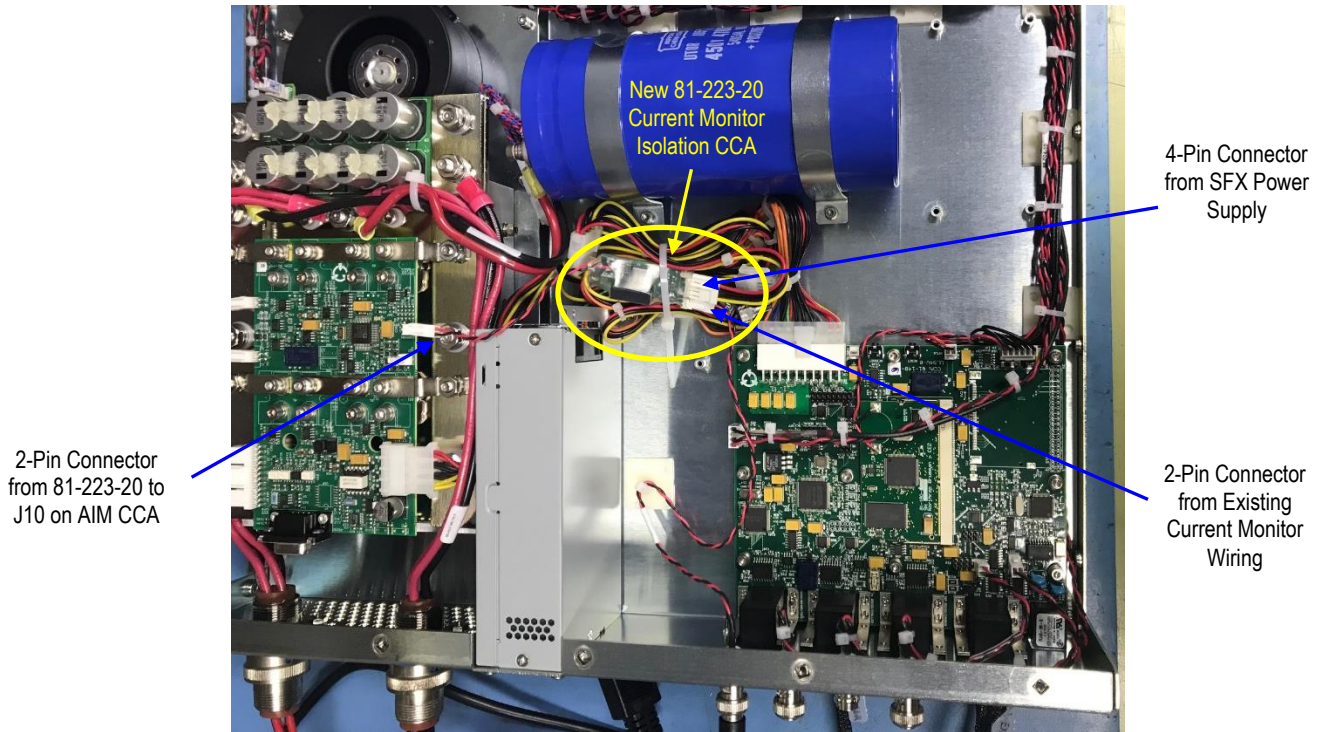


Figure 5a: Electrical Connections To/From 81-223-20 CCA (2U eDrive)

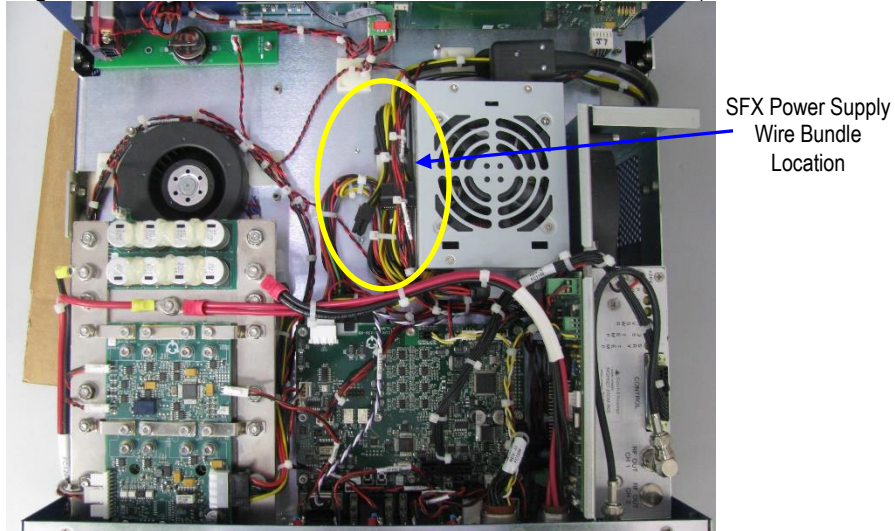


Figure 5b: SFX Power Supply Wire-Bundle Location (4U eDrive)

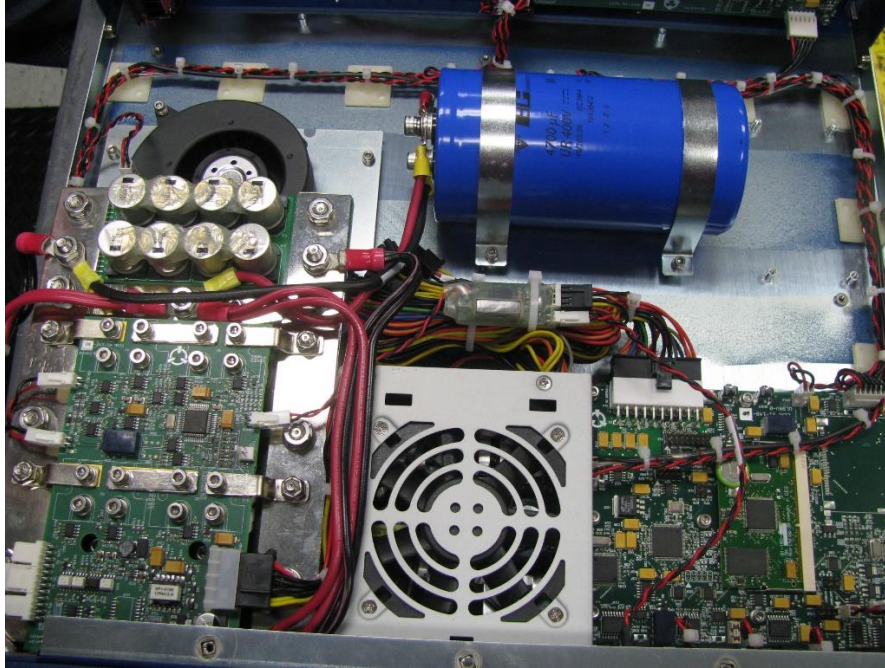
7. Once all three electrical connections are made to/from the 81-223-20 CCA, secure the CCA to the SFX wire-harness bundle using a supplied tie-wrap (see **Figure 6**).



**NOTE:** Care should be taken to not overtighten the wire-tie support securing the 81-223-20 CCA to the SFX power supply wire bundle. Overtightening could result in damaging the CCA.

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**Figure 6:** 81-223-20 as Secured to SFX Power Supply Wire-Harness Bundle (2U eDrive)

8. Re-install the eDrive cover.
9. Attach the white CURRENT MONITOR, SCALE FACTOR label (supplied by NG CEO) to the back of the eDrive overlaying the current monitor BNC (reference **Figure 7**). This label will identify that the isolated current monitor board is installed and will identify the new scale factor for the current monitor. **Table 1**, below, provides a summary of how the scale factor changes with the installation of the new 82-223-20 assembly.

**Table 1:** Current Monitor Scaling Factors

eDrive Type / Configuration	Original Scale Factor (A/V)	Scale Factor with 81-223-20 Retrofit CCA (A/V)
100A	10	30
300A	20	60

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Figure 7: Location of CURRENT MONITOR, SCALE FACTOR Label