

# Programing 580 series without input power

## Using the CCA-01 adapter or CMOD-01

When a VFD is installed into a commercial building project the coordination between the various trades is not always synchronized. A VFD can arrive to the project site and be installed before the electrical contractor has completed connecting main input power to the VFD. When the situation above occurs, the traditional thought is that any programing of the drive whether it be parameter adjustments or firmware upgrades cannot occur until main input voltage is connected to the VFD. This is not case when using the ACH580, ACQ580, or ACS580. ABB has created two solutions to address this issue. This Technical Note 075 will explain how to use the cold configuration adapter (CCA-01), and the use of CMOD-01 extension module.

### Cold configuration adapter (CCA-01)

The CCA-01 as shown to the right in Figure 1 is an adapter that interfaces directly with the VFD's control board allowing programing and firmware upgrades to be done via a computer with Drive Composer. The CCA-01 kit (3AXD50000019865) contains the adapter along with a special USB cable that has two male USB connectors. When using the CCA-01 to program VFDs, both male USB cables will need to be inserted into the computer to ensure that there is sufficient current supply to the adapter and control board.

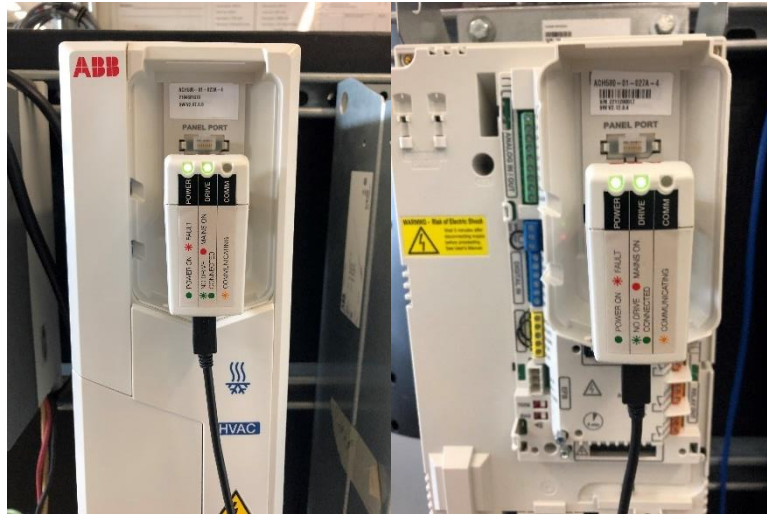


Figure 1

Once the CCA-01 is connected to the computer, the next step will be to remove the control panel from the VFD. Once the control panel is removed, it will expose the port that the CCA-01 will connect to. Figure 2 displays the port where the CCA-01 will be installed. Note, that if the VFD is installed in an enclosure one will have to open the enclosure door and remove the CDPI-01 to gain access to the port. Shown in Figure 3 are examples of how the CCA-01 connects to the VFD.



Figure 2



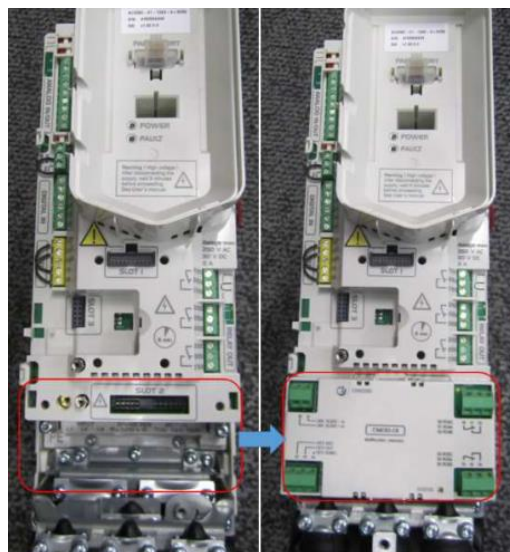
**Figure 3**

After the connection has been made, a user can follow the traditional steps of using Drive Composer to interface and make edits to the drive. If additional information is required when using Drive Composer please reference [3AUA0000094606](https://www.abb.com/global/scg/scg0000094606).

#### **Using external 24V source**

The CMOD-01 is one of the many extension modules that is offered by ABB and provides two additional form-c relays, 1 DO, and terminals to land 24V AC/DC. Using the CMOD-01 can be used as an alternative to programming a VFD if a CCA-01 is not available. Providing 24V AC/DC to the CMOD-01 allows the control board and control panel to be energized. Once energized, parameters can be adjusted via the control panel or via the USB port on the control panel utilizing Drive Composer. Along with editing parameters, the firmware on the drive can be updated. Figure 4 below demonstrate how to properly mount the CMOD-01 on to the VFD.

Note: using the CMOD-01 to provide an external 24V source is best utilized for VFD frames R1-R5. R6-R9 frames come standard with 24V terminals on the control board.



**Figure 4**

## **Additional benefits**

### **CCA-01**

- Safety - using the CCA-01 allows a technician to interface with the drive without the need to power the equipment or enter a live panel. This helps eliminate the need to do work within the arc flash zone.
- Flexibility - the ability to program, or update the firmware on a drive, all while leaving the drive in its original packaging. This can also be done within a warehouse setting before the drive is shipped onsite.
- Time savings - when upgrading the firmware using a CCA-01, the load times are nearly twice as fast compared to using the traditional micro-USB through the drive control panel.
- All the benefits of Drive Composer:
  - Ability to edit and change parameters
  - Update firmware
  - Event logger

### **CMOD-01**

- Safety - using the CMOD-01 allows a technician to interface with the drive without the need to power the equipment or enter a live panel. This helps eliminate the need to do work within the arc flash zone.
- Up time - if the 24V AC/DC is provided from an uninterruptable power supply, in the event of an input power issue, the control board and control panel will stay active. When input power is restored the drive start time is reduced.
- Communications - if the 24V AC/DC is provided from an uninterruptable power supply, in the event of an input power issue, fieldbus or serial communications will remain active.
- Fieldbus card programming – allows for programming of external fieldbus adapter related parameters, as the CMOD-01 powers the fieldbus card. The CCA-01 does not power fieldbus cards.