EMERSON.
Industrial Automation

This Application Note applies to the UniSP Drive Series

Saving and Restoring Unidrive SP Drive Parameters

This application note will describe how to save and then restore parameters to a Unidrive SP using the SMARTCARD. Before performing any of the SMARTCARD operations below make sure the drive is not enabled and there is no voltage applied to control terminal 31.

Saving Unidrive SP drive parameters to the SMARTCARD:

The following steps are needed to program a new SMARTCARD or anytime the user wishes to save a new backup project to the SMARTCARD residing in the working drive. In order to gain access to the drive SMARTCARD the drive keypad will need to be removed as shown below. The drive keypad can be installed or removed while powered down or when the drive is on.

Warning: Be aware of possible live terminals when installing the keypad with power on.
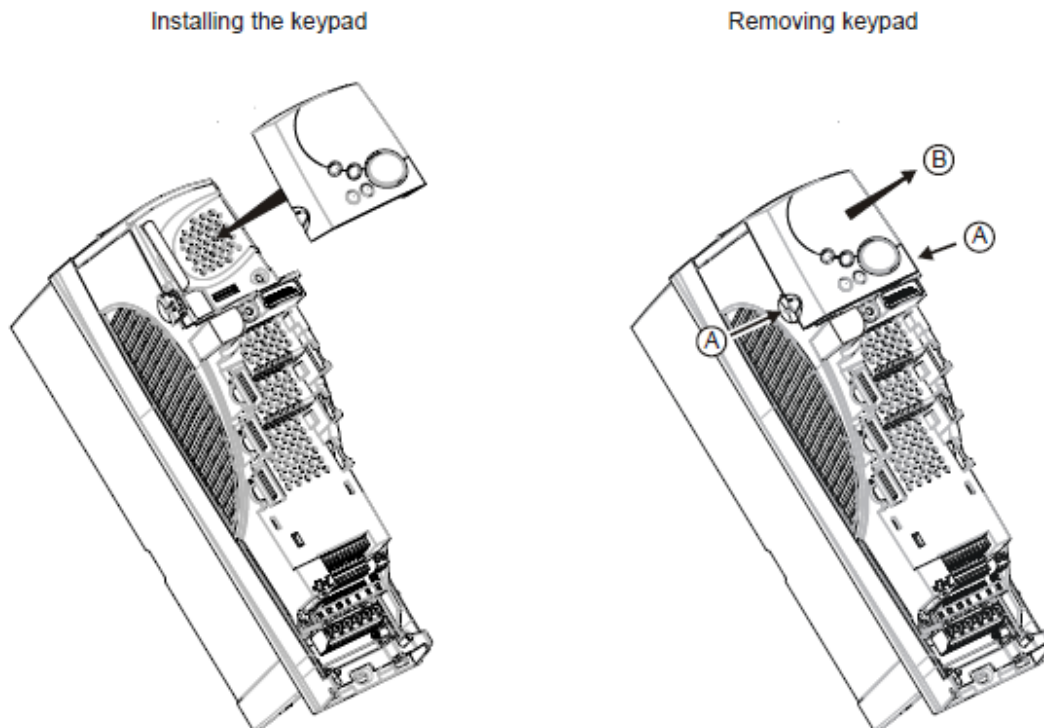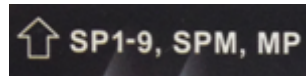

Fig.1

To install, align the keypad and press gently in the direction shown until it clicks into position. To remove, while pressing the tabs on either side of the keypad inwards (A), and gently lift the keypad in the direction indicated as (B).
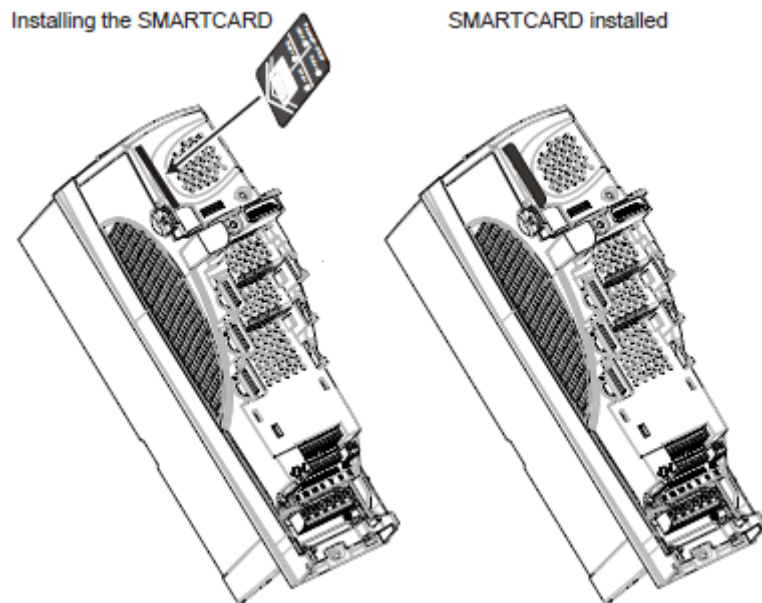
Once the keypad has been removed the SMARTCARD can be installed into the drive as shown below. The SMARTCARD can also be installed with drive power on, but make sure the drive is disabled and there is no voltage applied to control terminal 31.

Unidrive SP drive sizes 1 to 9:

The SMARTCARD is located at the top of the module under the drive keypad display (if installed) on the left-hand side. Ensure the SMARTCARD is inserted with the SP1-9 arrow pointing towards the top of the drive.

⇧ SP1-9, SPM, MP

The drive only communicates with the SMARTCARD when commanded to read or write, meaning the card may be "hot swapped", however, do not remove the SMARTCARD until the Read or Write operation has completed.

Installing the SMARTCARD   SMARTCARD installed

Once the SMARTCARD has been installed into the drive as shown above the drive keypad will need to be replaced and drive powered on in order to program the SMARTCARD. Using the drive keypad scroll up or down to drive parameter 0.30. Press the keypad 'M' so that 'nonE' is flashing and then using the joypad up arrow change to 'Prog' and press the Red Reset button.

Programs all drive parameters to the SMARTCARD

NOTE
Overwrites any data already in data block 1

Pr 0.30 = Prog +

A small flashing period will flash next to left hand side of '0.30' during the programming of the SMARTCARD. Parameter 0.30 will change back to 'nonE' once the programming is complete. The SMARTCARD now has a backup set of drive parameters that can be used to restore parameters in this drive or any replacement drive of the same size and voltage ratings.

Restoring Unidrive SP drive parameters from a SMARTCARD:

The following steps are needed to program a new out of the box Unidrive SP drive or replacement Unidrive SP drive that has an incorrect set of parameters.

Remove the drive keypad and install the SMARTCARD that has the backup drive parameters stored on it as shown in fig. 1 and apply power to the drive. Make sure the drive is not enabled and there is no voltage applied to control terminal 31. Using the drive keypad scroll up or down to drive parameter 0.30. Press the keypad 'M' so that 'nonE' is flashing and then using the joypad up arrow change to 'rEAd' and press the Red Reset button.

Drive reads all parameters from the SMARTCARD
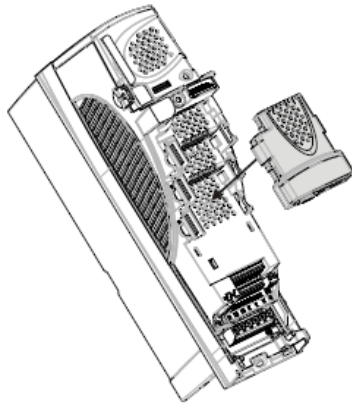

Pr 0.30 = rEAd +

A small flashing period will flash next to left hand side of '0.30' during the programming of the UniSP drive. Parameter 0.30 will change back to 'nonE' once the programming is complete. Cycle power to the drive and the newly programmed UniSP drive is now ready for use.
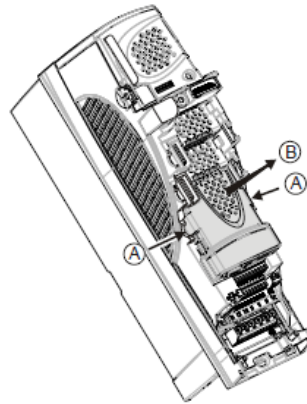
Removing and replacing SM-Ethernet or SM-Uni-Encoder modules:

The following steps should be used to remove and replace respective Solutions Modules. Remove power to the Unidrive SP drive. SM Solutions Modules are not "hot swappable". Remove any cables or connectors attached to the respective Solutions Module. Solutions Modules in Slot 1 must be removed first prior to accessing and/or removing Solutions Modules in Slot 2 and finally in Slot 3 or when changing out a Unidrive SP drive. Once the Solutions Modules have been replaced re-connect any cables and connectors that were disconnected to allow removal.
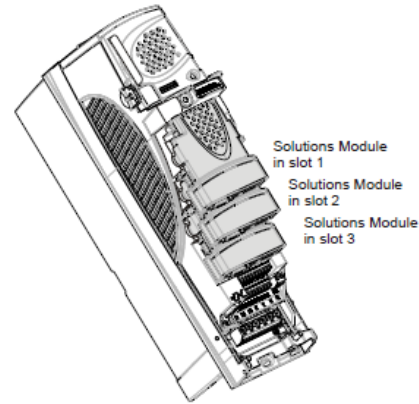
Installing the Solutions Module	Removing the Solutions Module	Three Solutions Modules installed

Solutions Module in slot 1
Solutions Module in slot 2
Solutions Module in slot 3

To install the Solutions module, press down in the direction shown above on the left until it clicks into place.

To remove the Solutions module, press inward at the points (A) shown in the center and pull in direction (B) shown.

Before removing any Solutions Modules note the order which they are installed so that when replacing the modules all are installed in the exact position they were removed.

For a working Unidrive SP drive, there are no extra steps required to program a new or replacement SM-Ethernet or SM-Uni-Encoder as these solutions module parameters are stored in the Unidrive SP drive. If replacing the Unidrive SP drive follow the steps earlier in the document for restoring Unidrive SP drive parameters using the SMARTCARD.

Removing and replacing SM-Apps-Plus modules:

For the purposes of the Application Note it will be assumed that pre-programmed SM-Apps-Plus modules are available for replacement purposes. Remove power to the Unidrive SP drive. Remove the SM-Apps-Plus module according to the instructions above and replace it with a pre-programmed module in the exact same slot that it was removed from. Once the module has been replaced and any cabling restored the Unidrive SP is now ready for use.

Resources
Unidrive SP User Guide Model sizes 0 to 6
Unidrive SP Free Standing User Guide Model sizes 6 to 9
For more resources visit: www.controltechniques.com
For further questions please call or e-mail technical support at:
    Tel: 952-995-8000
    E-mail: techsupport.cta@emerson.com