

## MMC Quick Start Guide Using the 3ABS Option

The 3ABS option permits an MMC controller to access absolute SSI encoders such as Posital by Fraba.

### Wiring Considerations

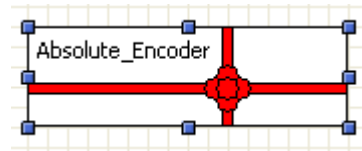
Absolute encoders are separate feedback sensors not associated with an axis but generally available. They are numbered 1, 2, 3 and wired as follows

DSub Pin	Description
11	Encoder 1 Clk+
24	Encoder 1 Clk-
10	Encoder 1 Data+
23	Encoder 1 Data-
22	Encoder 1 Preset
9	Encoder 1 Input
25	Encoder 1 GND
12	(unused 5V)
7	Encoder 2 Clk+
20	Encoder 2 Clk-
6	Encoder 2 Data+
19	Encoder 2 Data-
18	Encoder 2 Preset
5	Encoder 2 Input
21	Encoder 2 GND
8	(unused 5V)
3	Encoder 3 Clk+
16	Encoder 3 Clk-
2	Encoder 3 Data+
15	Encoder 3 Data-
14	Encoder 3 Preset
1	Encoder 3 Input
17	Encoder 3 GND
4	(unused 5V)
13	Aux Input

Power to the encoders needs to be provided from the 24 volt supply that is running the controller.

### Copy in the Package

Start Snap2Motion. In the Software Components folder open the "ABS Option" project. Click on the "Console" tab and single click on the package named "Absolute\_Encoder"



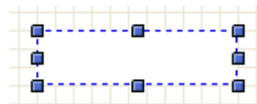
From the main menu select Edit | Copy. Open up your current project, select the "Console" tab, and from the main menu select Edit | Paste to put the package into your project.

### Reading an Encoder Position

Add a text box to your project by clicking on the text tool



and dragging a rectangle on your form:



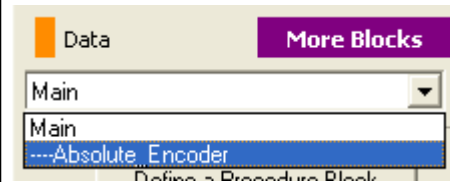
With the new text box still selected click on the "Blocks" tab



and choose the "Events" category. Drag a "Show" box out onto the workspace.



Choose the "More Blocks" category and select from the drop-down list "Absolute Encoder".



Drag this block onto the show block



and change the parameter to "1". Click the "Run" button and you should see the encoder position change in the text box.

The default user units are rotations. Change the counts per user unit with the Set Counts Per User Unit block.

### Presetting an Encoder

The absolute encoders can be preset (or zeroed) by a hardware signal from the controller. Add a button to your project by clicking the button tool



and dragging a rectangle on your form.

Type the word "Preset" into the button legend editor



Click on the Blocks tab, click on Events, and drag the Click event onto the workspace. Click on "More Blocks", select the Absolute\_Encoder package and drag the Preset block below click:



Click the "Play" button to start the application. Turn the encoder so a value is seen in the display. Click the "Preset" button. Presetting takes one second of time. After 1 second the display should zero reflecting that the preset event occurred



There is an initialization block in the list of "More Blocks" for the absolute encoder. However that block is already attached to an Autostart block for the package and is already handled

