

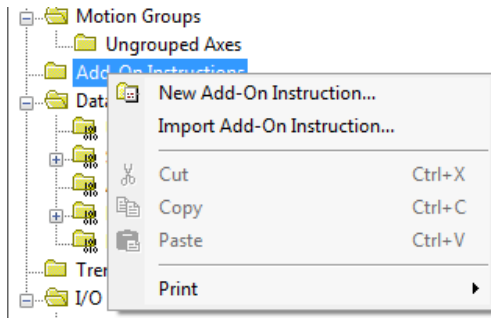
FAQ: How To Use an Add On Instruction

AMCI has created Add On Instructions (AOIs) for use with most of their integrated motion control products. These Add On Instructions simplify sending commands to the motion controller by automatically setting the command bits and creating named fields where the target position, programmed speed, acceleration, and deceleration parameters can be entered.

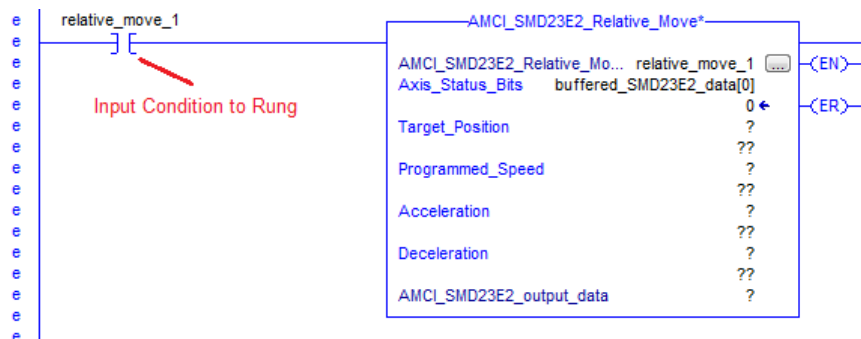


- There are unique Add On Instructions for each of AMCI's integrated motion control products.
- The Add On Instructions will only work if the integrated motion control product has been added to the I/O using an EDS file.

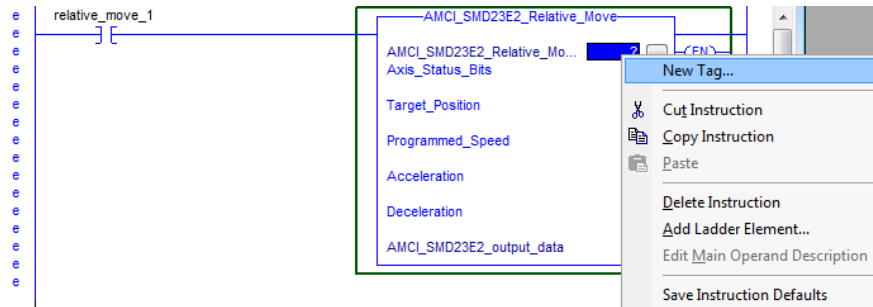
1. The exported Add On Instructions are located in a folder in the sample program zip file. Extract the folder containing the Add On Instructions to your PC.
2. Open Studio 5000, right click on Add On Instructions in the project tree and select Import-Add-On-Instructions.



3. Browse to the folder containing the Add On Instructions, select the desired Add On Instruction, and click on Import. (This process will have to be repeated for each of the Add On Instructions that you want to use in your project.)
4. An intermediate message may appear during the import process. If it does, click on OK to close the message and to continue the import operation.
5. Create a rung in which to insert the Add On Instruction and then drag and drop the Add On Instruction from the project tree into the rung. Please note that this rung must also include some kind of input condition(s).

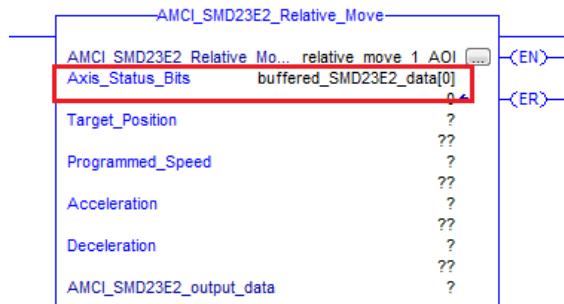


- Just like a Timer or a Counter in your logic, each Add On Instruction must have its own unique name. Create this name by right clicking on the top field of the new AOI and select New Tag...



- Type the name in the Name field and click on Create.
- The next field in the AOI is the Axis_Status_Bits and this must reference the first input word from the motion controller, specifically Status_Word_0.

While it is possible to use the data directly from the motion controller, AMCI recommends buffering the input data at the top of your ladder logic program and then use this buffered data in your Add On Instructions.

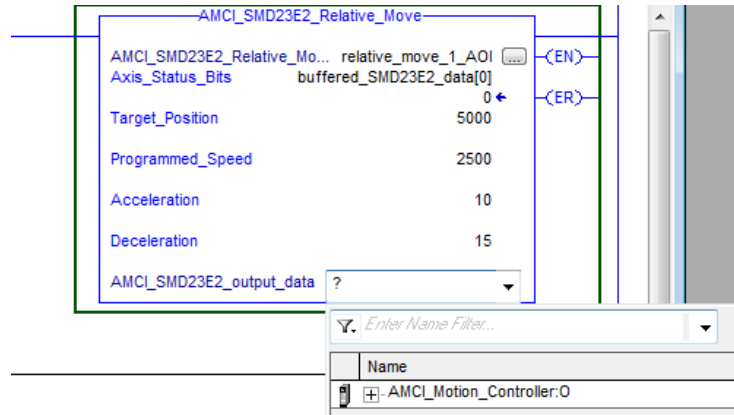


- The Target_Position, Programmed_Speed, Acceleration, and Deceleration fields can be entered either as discrete values or as tags. The following list shows the required data formats if you decide to enter them as tags.

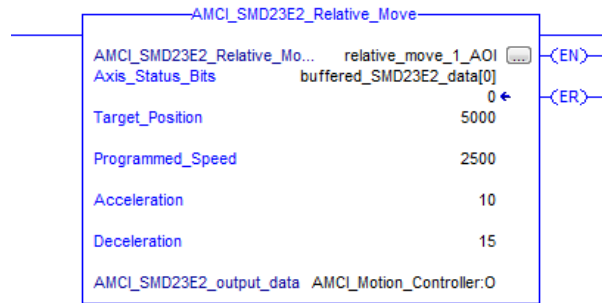
Target_Position	DINT
Programmed_Speed	DINT
Acceleration	INT
Deceleration	INT

10. The final field is the output registers of integrated motion controller.

Click on the down arrow in the field and brows to output address of the AMCI Motion Controller.



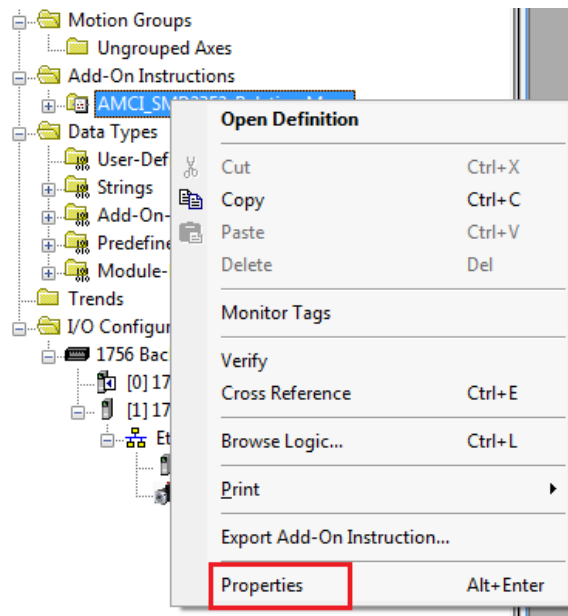
11. The following image shows a completed AMCI Add On Instruction where the Target Position, Programmed Speed, Acceleration, and Deceleration are entered as discrete values.



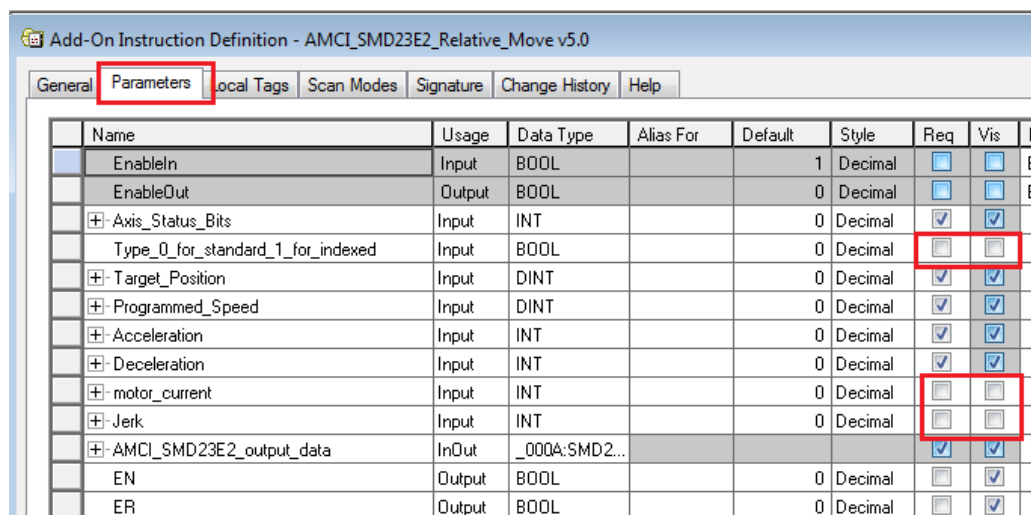
Additional Add On Instruction Functionality

Some of the Add On Instructions have the less commonly used functions, such as Indexed Moves, Motor Current, or Acceleration Jerk, hidden. The Add On Instructions are not locked or protected and, if desired, these functions can be made visible and enabled.

1. Right click on the Add On Instruction in the project tree and select Properties.



2. Click on the Parameters tab. The following window will open.



3. Place check marks in the REQ (Required) and VIS (Visible) fields to enable the required function.
4. Click on Apply to accept the changes.

File: FAQ_using_add_on_instructions.doc Date: 6/14/2019