

SD4840E2 - Ladder Diagram

Motion_Axis_AOIs_SD4840E2_RSLogix_V31:MainTask:MainProgram

Total number of rungs in routine: 12

...\\Sample Programs\\Motion_Axis_AOIs_SD4840E2_RSLogix_V31.ACD

At the top of your program, BEFORE ALL OF THE ADD ON INSTRUCTIONS, use a CPS instruction to copy the input data from the AMCI motion device to a tag array that was created using the AMCI_Motion_Axis_Input_Data User Defined Data Type.

The input data in this tag array is made up of named tags and will also be used as the buffered data in your program. It is this buffered data that must be used in place of the input data directly from the AMCI motion device.

Absolute or Relative Moves
Run_AMCI_SD4840E2.0

Absolute and Relative Moves

AMCI_MAM

AMCI_MAM	AMCI_MAM_SD4840E2	...
Axis_Input_Data	AMCI_SD4840E2_input_data	(EN)
Axis_Output_Data	AMCI_SD4840E2_output_data	(DN)
Move_type_0_Absolute_1_Relative	1	(ER)
Position_or_Distance	4096	(IP)
Programmed_Speed	2048	(PC)
Acceleration	10	
Deceleration	10	

CW or CCW Jogs
Run_AMCI_SD4840E2.1

AMCI Motion Axis Jog

AMCI_MAJ

AMCI_MAJ	AMCI_MAJ_SD4840E2	...
Axis_Input_Data	AMCI_SD4840E2_input_data	(EN)
Axis_Output_Data	AMCI_SD4840E2_output_data	(DN)
Direction_0_CW_1_CCW	1	(ER)
Programmed_Speed	2000	(IP)
Acceleration	10	(PC)
Deceleration	10	

CW or CCW Home
Run_AMCI_SD4840E2.2

AMCI Motion Axis Home

AMCI_MAH

AMCI_MAH	AMCI_MAH_SD4840E2	...
Axis_Input_Data	AMCI_SD4840E2_input_data	(EN)
Axis_Output_Data	AMCI_SD4840E2_output_data	(DN)
Direction_0_CW_1_CCW	0	(ER)
Programmed_Speed	4096	(IP)
Acceleration	20	(PC)
Deceleration	40	

Stop Motion
Run_AMCI_SD4840E2.3

AMCI Motion Axis Stop

AMCI_MAS

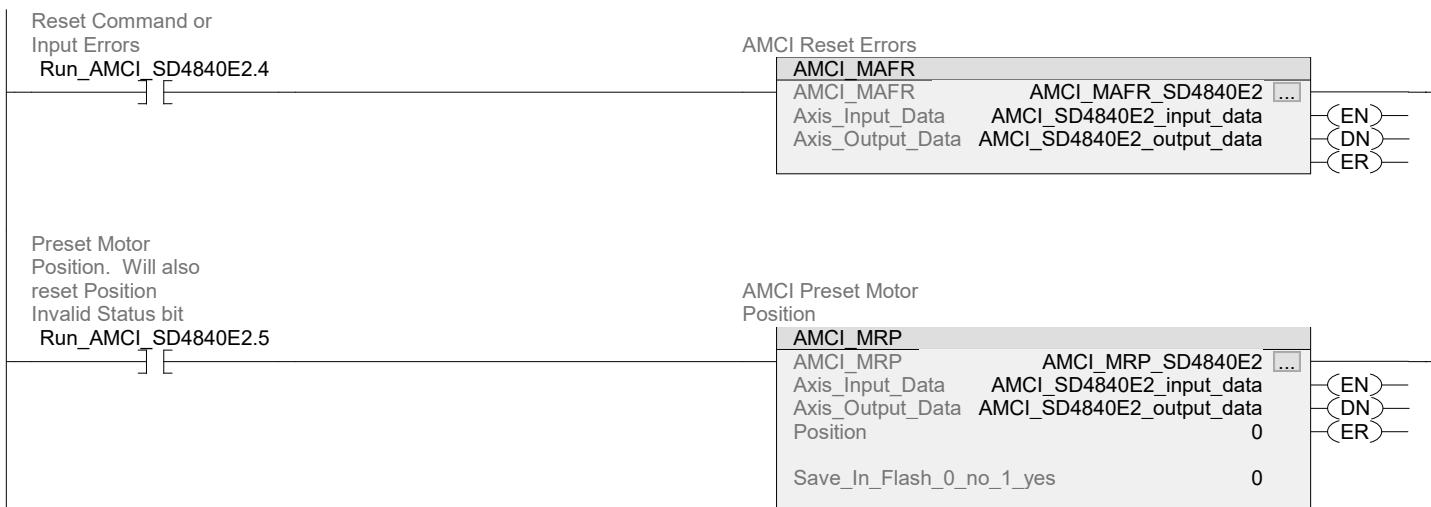
AMCI_MAS	AMCI_MAS_SD4840E2	...
Axis_Input_Data	AMCI_SD4840E2_input_data	(EN)
Axis_Output_Data	AMCI_SD4840E2_output_data	(DN)

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The AMCI SD4840E2 has Main and Auxiliary terminals on its power connector. The Main supplies power to both the motor and to the electronics while the optional Auxiliary supplies power only to the electronics, including the network connection and the encoder.

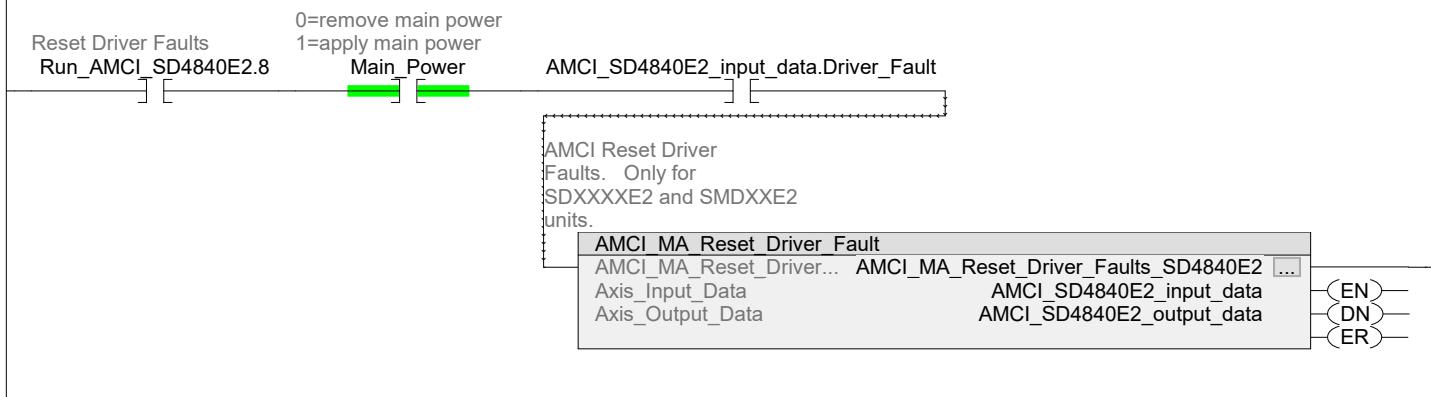
It is a common practice to connect power to both the Main and Auxiliary Power pins and to remove the Main Power as part of a safety system. The Auxiliary Power maintains the network connection while the Main Power is removed.

Removing the Main Power will cause the following to occur WHEN THE MAIN POWER IS RESTORED.

- The Driver Enabled Status Bit will be reset
- The Driver Fault Status bit will be set
- The Position Invalid Status bit will be set

The following rung shows the action that you should take after the Main Power has been restored.

comment_coil.0



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...\\Sample_Programs\\Motion_Axis_AOIs_SD4840E2_RSLogix_V31.ACD

9 Linear Axis Follower
Run_AMCI_SD4840E2.6

Linear Axis Follower
for SD and SMD
devices. Will not
work with SV
integrated servo
devices.

AMCI_MA_SD_SMD_Linear_Follower

AMCI_MA_SD_SMD_Linear_Fo...	AMCI_MA_Linear_Follower_SD4840E2	[...]
Axis_Input_Data	AMCI_SD4840E2_input_data	(EN) —
Axis_Output_Data	AMCI_SD4840E2_output_data	(ER) —
Follower_Position	Sample_Motion_Axis.CommandPosition	(DN) —
	0.0	
Follower_Velocity	Sample_Motion_Axis.CommandVelocity	(IP) —
	0.0	
Acceleration	500	
Deceleration	500	
Proportional_Coefficient	1	
Network_delay	0	

10 Circular Axis
Follower
Run_AMCI_SD4840E2.7

Circular Axis
Follower for SD and
SMD devices. Will
not work with SV
integrated servo
devices.

AMCI_MA_SD_SMD_Circular_Follower

AMCI_MA_SD_SMD_Circular_...	AMCI_MA_Circular_Follower_SD4840E2	[...]
Axis_Input_Data	AMCI_SD4840E2_input_data	(EN) —
Axis_Output_Data	AMCI_SD4840E2_output_data	(DN) —
Follower_Position	Sample_Motion_Axis.CommandPosition	(ER) —
	0.0	
Follower_Velocity	Sample_Motion_Axis.CommandVelocity	(IP) —
	0.0	
Acceleration	500	
Deceleration	500	
Proportional_Coefficient	1	
Conversion_Constant	2048	
Position_Unwind	16384	

At the bottom of your program, after all of the Add On Instructions, use a CPS instruction to copy the data from the AOIs to the output registers of the AMCI motion device.

The source tag array that was created using the AMCI_Motion_Axis_Output_Data User Defined Data Type.

CPS
Source
Dest
Length

AMCI_SD4840E2_output_data
AMCI_SD4840E2:0.COMMAND_WORD_0
10

11

(End)