About This Application Note

This provides information for conversion of 1746sc-CTR4 four channel installation with a replacement using the eight channel 1746sc-CTR8. When replacing a CTR4 with a CTR8, no wiring changes are required since the first four channels of the CTR8 are identical to the CTR4.

This Application Note is about replacing a CTR4 with a CTR8 and discusses converting your program from using a CTR4 to using a CTR8.

Replacing the 1746sc-CTR4 with the 1746sc-CTR8

To convert your program from using a 1746sc-CTR4 to the 1746sc-CTR8, there are several items to take into account.

Verify whether the power supply will support the additional load of the CTR8.

You will need to check the supply current output capability of the power supply in the rack and the requirements of all the cards installed in the rack. The CTR8 has a higher current draw than the CTR4.

Rack Power Supply Capacity

	P1	P2	P4	P4
5Vdc capacity	2A	5A	3.6A	10A
24Vdc capacity	0.46A	0.96A	0.87A	2.88A

Module Current Requirements

	CTR4	CTR8
5Vdc Requirement	175mA	225mA
24Vdc Requirement	75mA	125mA

Please note that the power supply loading calculation in RSLogix500 does not take into account data about "other" modules. You will have to manually add the loading of the CTR8 and all your other cards in the rack and compare the total to the capability of the power supply attached to the rack.
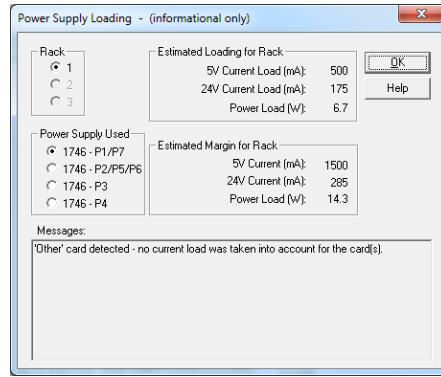
Verify the filter jumper settings.

A 15kHz hardware filter is available by using the onboard jumpers JP2 and JP3. To activate the filter, remove the shunt. JP2 is for Channels 0-3 and JP3 jumper is for Channels 4-7. When replacing a CTR4 with a CTR8, set the Filter jumper JP2 on the CTR8 to match the Filter jumper JP2 that was previously set on the CTR4.

Replace the module in the program.

The CTR4 Module will need to be deleted from the IO Configuration of the PLC, and in that same slot the CTR8 with its module ID Code 10401 will have to be entered. In doing so, the input and output data tables related to the module will be expanded by 16 registers each compared to the register usage required for the CTR4.