# AV6A EtherNet/IP
## Installation Instructions

Nidec | AVTRON™ ENCODERS

## Install AV6A EDS File

1. Make sure you are running Logix version 20 or later.
2. Download the EDS file for the AV6A Encoder
3. http://www.nidec-avtron.com/encoders/family/light-mill-duty/av6a
4. Click on "Documents" and then click on "AV6A HS6A 12 X 13 EDS file" or "AV6A HS6A 14 X16 EDS file"
5. The EDS file is a zip file and will need to be "extracted"
   → see lower left hand corner.
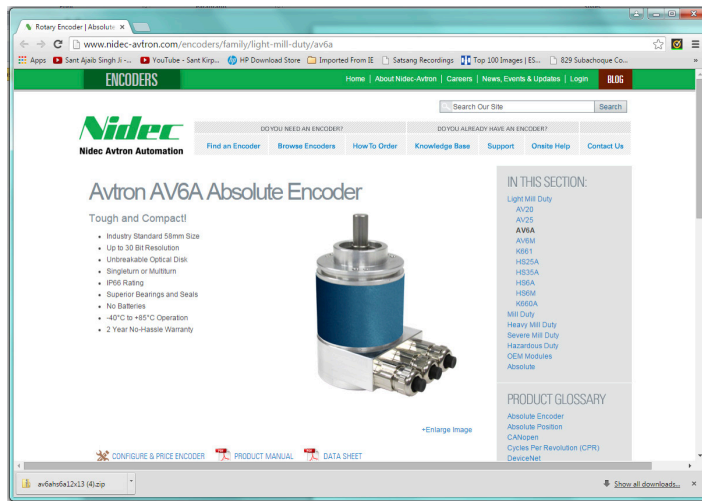


6. Make note which directory the zip file is "extracted".
7. In RSLogix or RSStudio, Register the EDS file.
8. In Logix or Studio - On the top menu select -> Tools -> EDS Hardware Installation Tool.
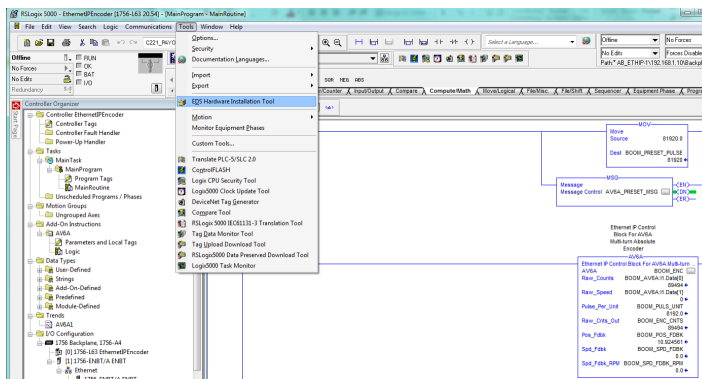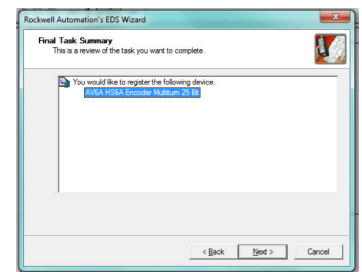


9. Click "Next" to begin EDS Register wizard. (below on left)
10. Click "Register an EDS File" (below on right)
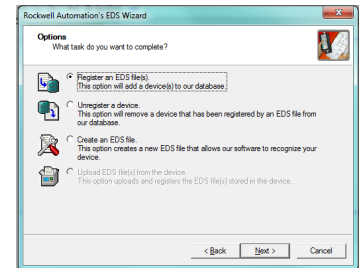


11. Click "Browse" and find the EDS file that was extracted Then Click "Next".(below on left)
12. Highlight the EDS and click "Next" (below on right)
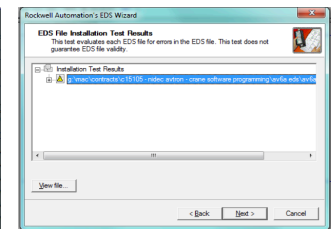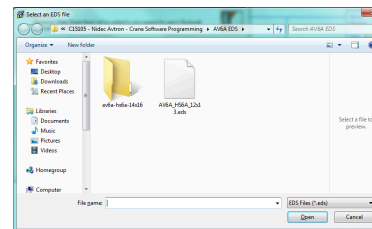


13. Highlight the Encoder and click "Next". (below on left)
14. Highlight the Encoder again and click "Next". (below on right)
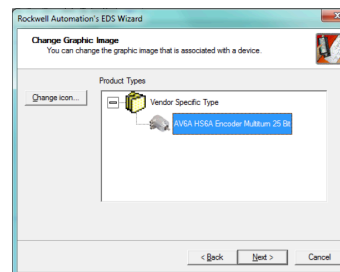


15. Click "Finish". The EDS is now ready to be inserted into the project.

## Insert Encoder Into Project

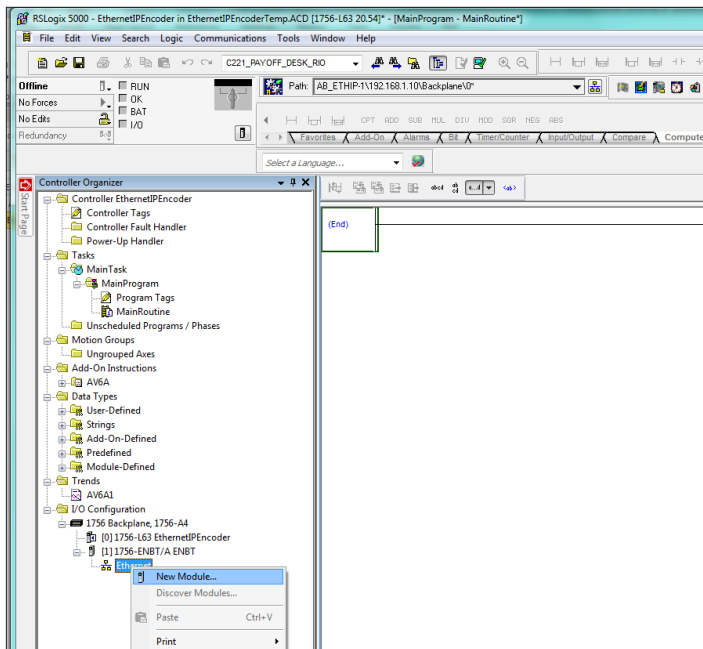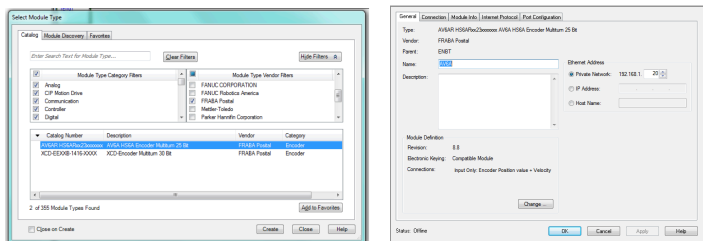**1.** Go to the I/O Configuration and insert a "New" encoder under the "Ethernet" network.



**2.** Unclick on the "Module Type Vendor Filters" checkbox and Highlight the "FRABA" checkbox.Highlight the encoder and click "Create". (below on left)

**3.** In the "General" tab, give the encoder a name and an IP address and then click "Change". (below on right)



**4.** Select revision 8.8 – "Disable Keying" – "Encoder Position Value + Velocity" – DINT – Tag Suffix of 1. Then click "OK". (below on left)

**5.** Go To The "Connection" tab and setup the encoder for the RPI update rate and the "Input Type" should be "Unicast". Then click "OK". (below on right)
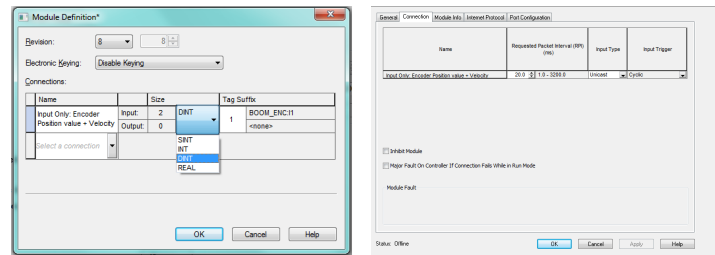


**6.** You should now see an Avtron encoder in the I/O tree**.**
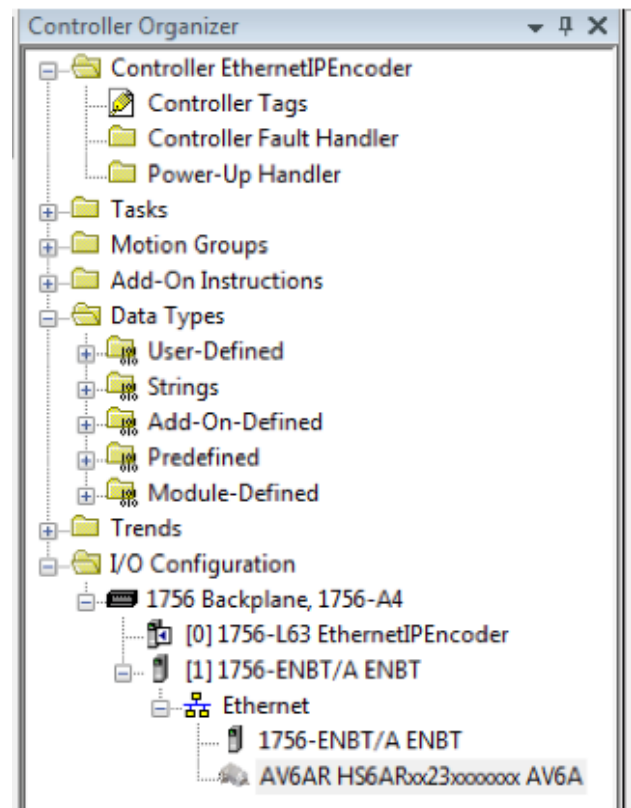


**7.** In the controller tags, you should also see your data inputs:

## Insert AOI Into Project

**1.** In the Controller Organizer, right click on Add-on Instruction Folder, click on "Import Add-onInstruction"..



**2.** Find the AV6A.L5X add-on instruction highlight it and click "Import".

**3.** To calibrate or "Preset" the encoder requires a CIP "Message". Configure the "MSG" like the following example Initialize a DINT variable to the "Preset" counts. Then click on the MSG configuration button "…"



**4.** In the "Configuration" tab, set up the following:



**5.** Click on the "Communication" tab and click "Browse" to find the encoder in the I/O tree. (example in light blue outline)

**6.** The following is an example of the encoder instruction AV6A: (example in medium blue outline)



The Add On Instruction will need the encoder input data words [0] and [1] and Connection Fault bits from the Encoder I/O inputs. It will also need the pulses per engineering unit, Maximum position for range checking, motor speed feedback and speed check threshold for direction checking. The instruction will feed back the encoder position with offset in engineering units, speed in units / min, communication status, out of range status, and direction fault status.