This document will assist you with setting up the VFD and Control Logix/Compact Logix PLC communications.

* Add the VFD IP address to RS Linx. The VFD will need to have power applied.
* Inside Studio 5000 Be **OFFLINE**
  + Controller Organizer
    - I/O Configuration
      * Ethernet right click choose New Module
        + On the Catalog tab in the search box enter “PowerFlex 40”
        + Choose PowerFlex 40-E you may have to expand the column.
        + Create button
        + Give it a name
        + Set the IP Address to what is on the VFD
        + Now open Controller Tags and you should see the VFD tags.
  + Now create ladder in the PLC to control the VFD.
  + Keep a few things in mind. The tags will have the name you created and the “I” for input on the tag is an Input on the PLC and an output of the VFD.
  + To control the frequency go to VFD O. freq command. This value is multiplied by .1. For example, if the number on the PLC is 450 then the VFD will have frequency of 45.0 hz.
* On the VFD you must wire it up. Keep in mind at the time of this writting all of our VFD’s are 120 VAC input and 208/240 VAC output to the motor.
* Connect terminals 1 and 11 together. This allows the VFD to run. This is the hard wiring of an E-stop circuit.
* Program the VFD to look at the Comm port for the start, stop and frequency reference.
  + <http://literature.rockwellautomation.com/idc/groups/literature/documents/qs/22b-qs001_-en-p.pdf>
  + Key pages are
    - 8 wiring diagram
    - 12 & 13 program navigation
    - 14 & 15 for basic program parameters. Start, Stop and Freq ref.
    - 20 Fault codes

Have fun with this. I always get excited when I get multiple machines to connect and talk with each other.