JVL Motors - ModBus and OCX Connecting via Labview

Feb. 2016 Rune R Rønne

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Agenda

- Labview & ModBus over Ethernet
- Labview & ModBus via Serial link (RTU)
- LabView & MAComm OCX via serial Link

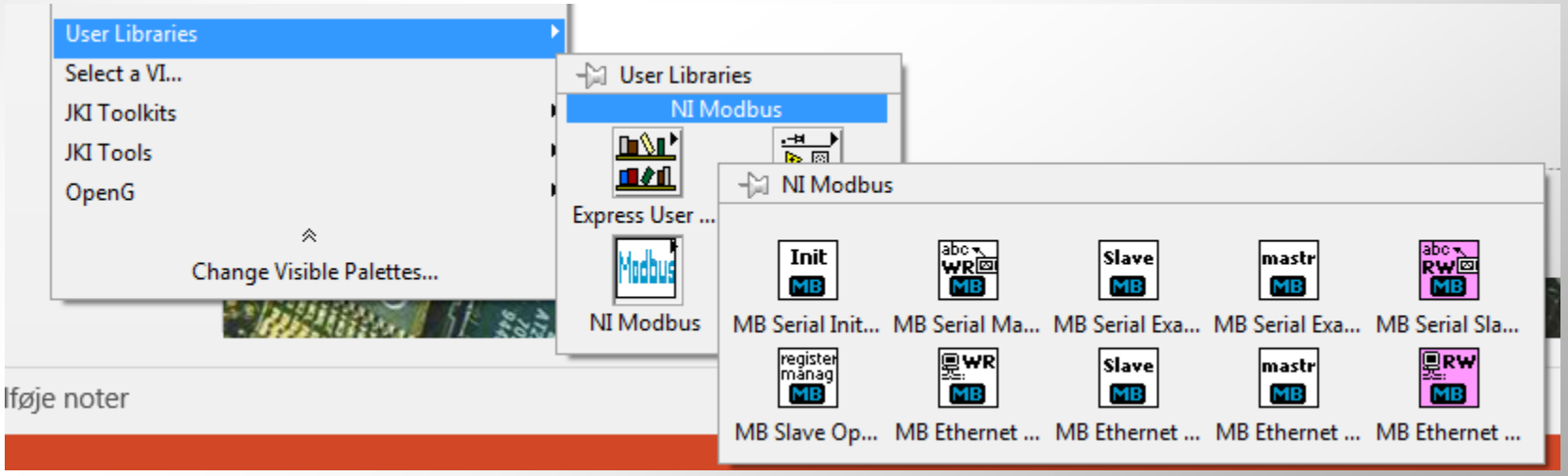
ModBus NIC IP setup

- Correct IP-network setup - Set your instrument network IP range diffrent from your Corporate network. How to link : http://www.ni.com/white-paper/12558/en/
- Best done using different subnet mask and IP range.

NIC 1 – Corporate Network	NIC 2 - Instrument Network
IP Address: 192.168.1.157	IP Address: 10.0.1.235
Subnet Mask:255.255.255.0	Subnet Mask:255.255.0.0
Default GateWay: 192.168.1.254	Default GateWay: 0.0.0.0

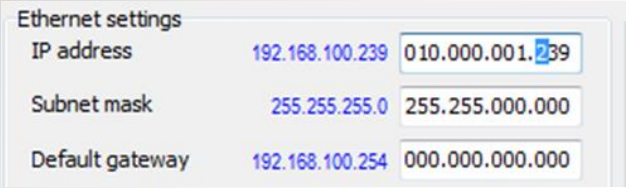
LabView ModBus

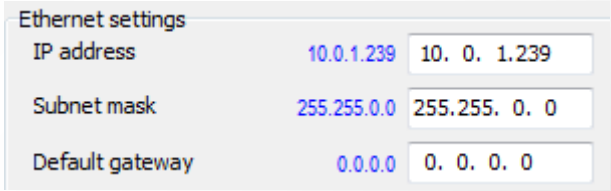
- A free Modbus library can be downloaded from NI website: http://www.ni.com/example/29756/en/
- Once installed you can find ModBus under User Libraries.



Setup IP-address of Motor

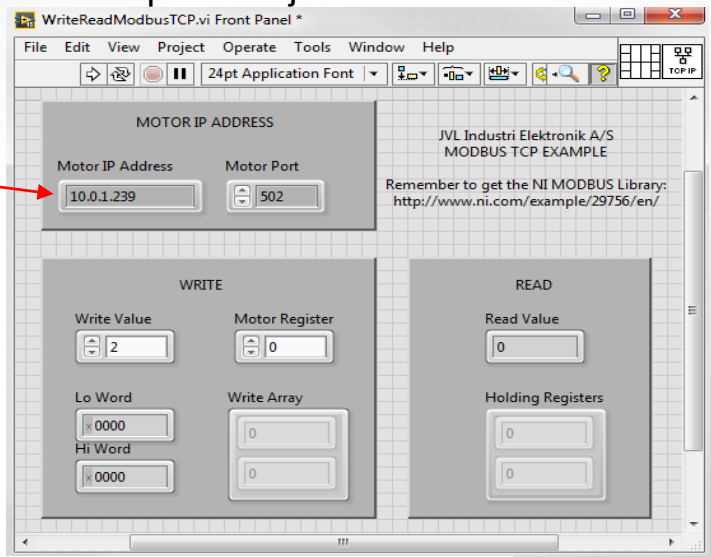
- Using MacTalk connect via serial port and change the IP address of your motor.

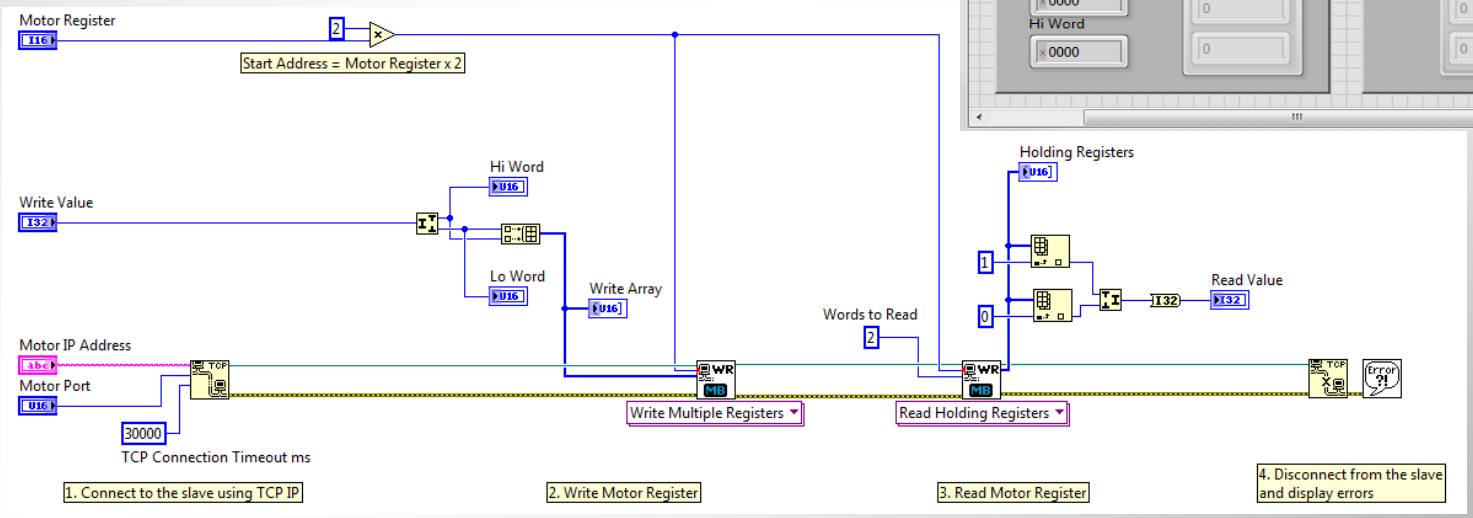




Modbus over ethernet using Labview

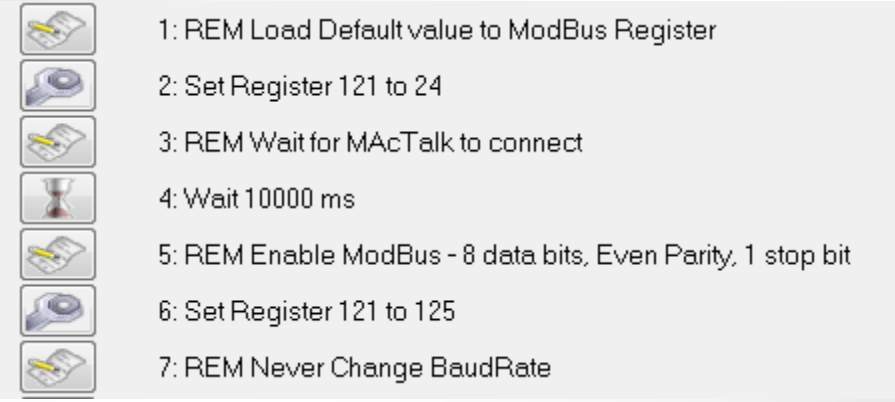
- Download the simple ModBus example from JVL web site: http://www.jvl.dk/1042/industrial-ethernet-plc
- Open the Simple Ethernet Modbus example set the IP of your motor .
- Modbus TCP/IP clients and servers listen and receive Modbus data via port 502.
- All access to Modbus Register addresses are multiplied by a factor of 2.





Modbus RTU using Labview

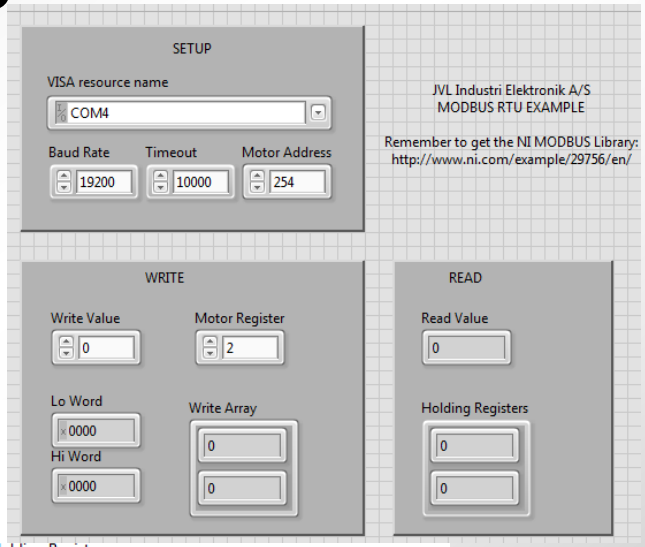
- The following RXP needs to run on the Motor.

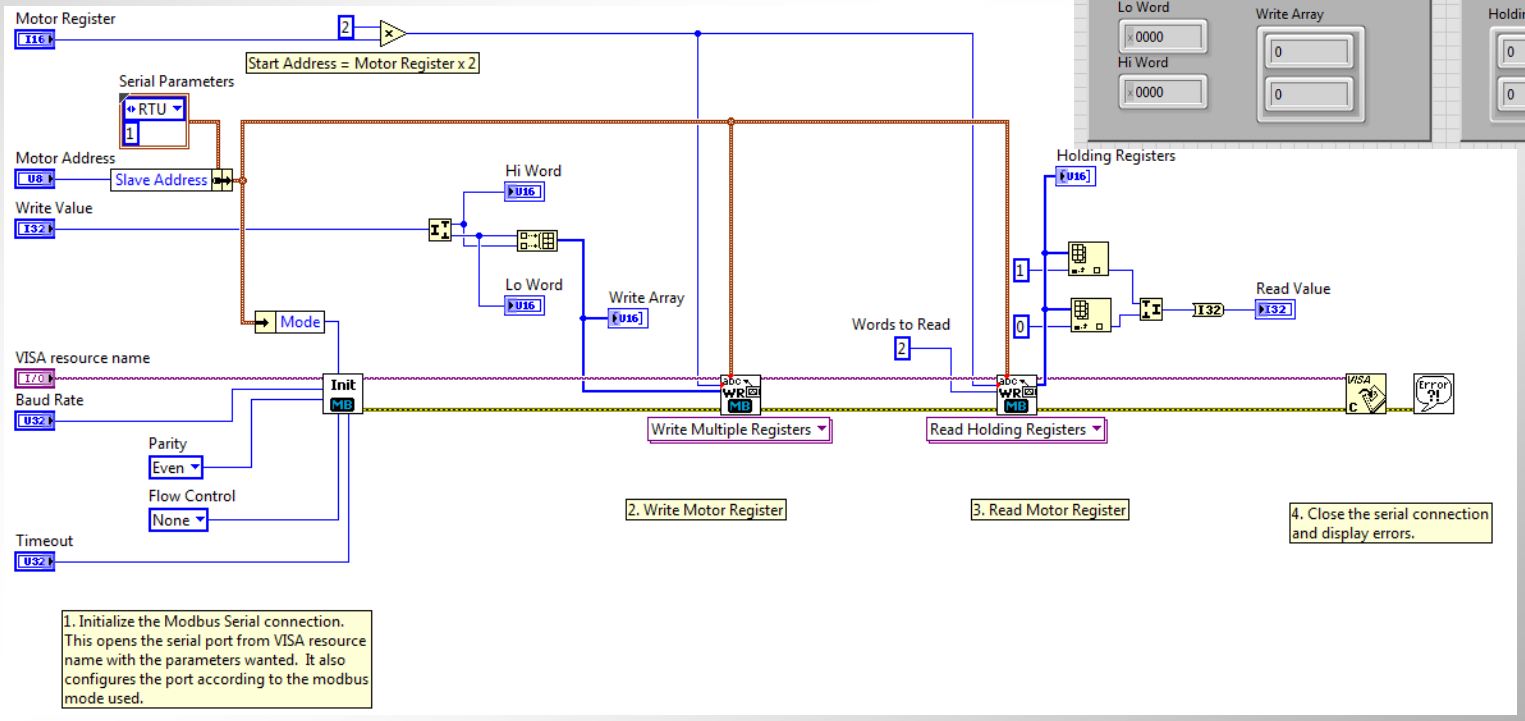


- Note that MacTalk cannot use the Modbus protocol, and so cannot be used to configure the motor, after Modbus has been activated.

Modbus RTU using Labview

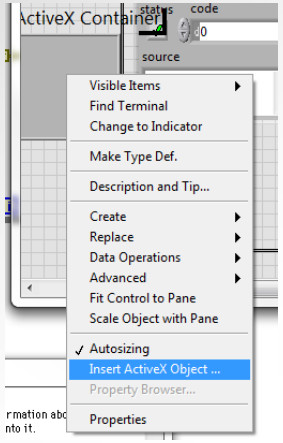
- Open Simple Modbus RTU example
- All access to Modbus Register addresses are multiplied by a factor of 2.

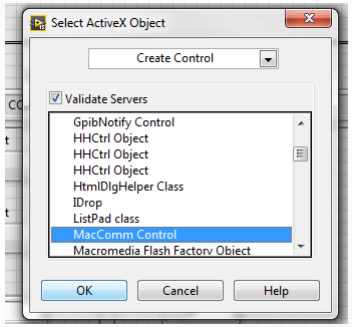


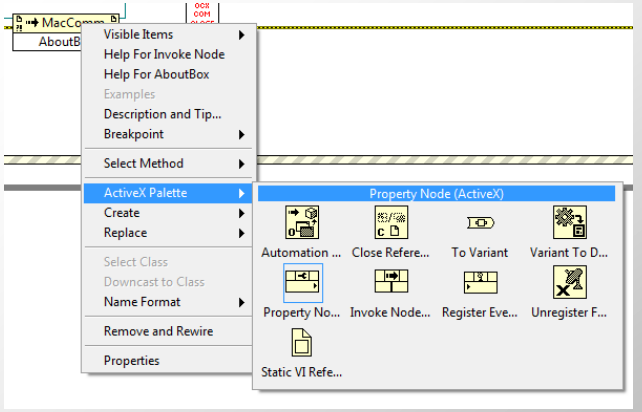


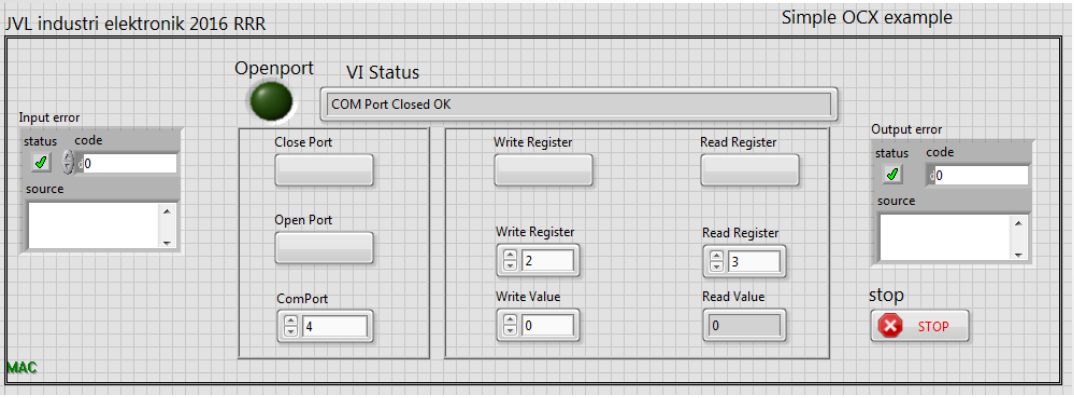
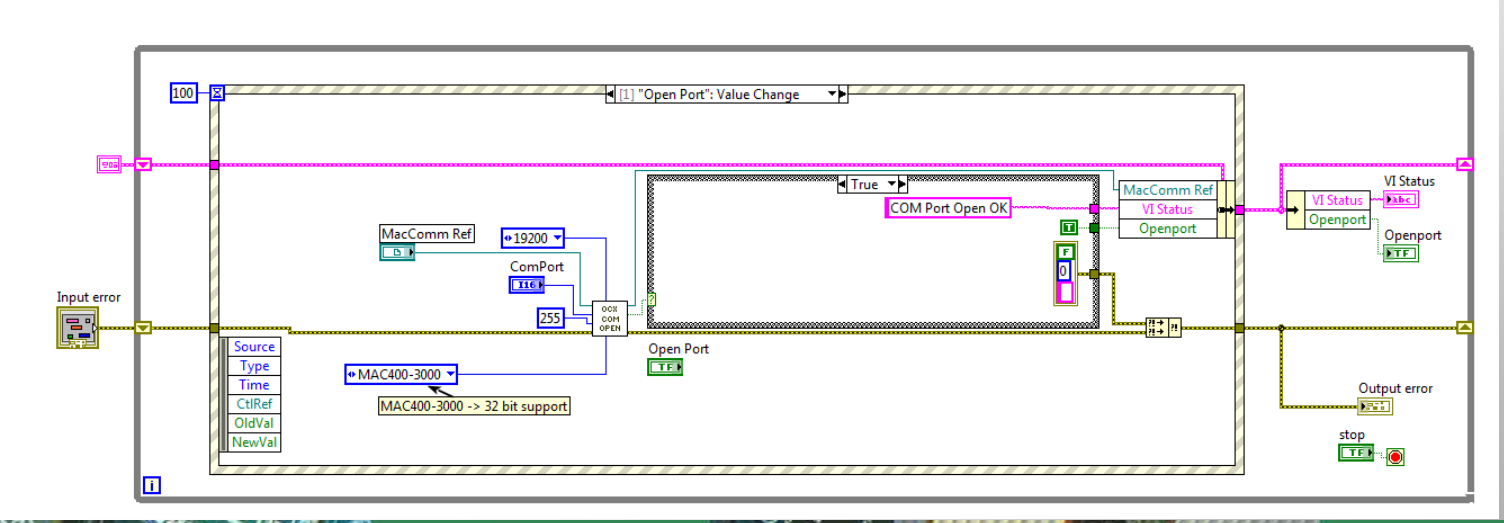
MAComm OCX and Labview

- Install the MAComm OCX V.1.08
- Download the installer from web site : http://www.jvl.dk/430/free-and-trial-programs
- From LabView you should now be able to drop an Active X Container on the front panel and Insert the ”MAComm Control” ActiveX object.. And you are able to initialize the Com port for MAC communication using the ActiveX palet







Simple Labview OCX program

- The Simple OCX example demonstrates how to Open/Close the Com port, change parameters and communicate to Motor registers.