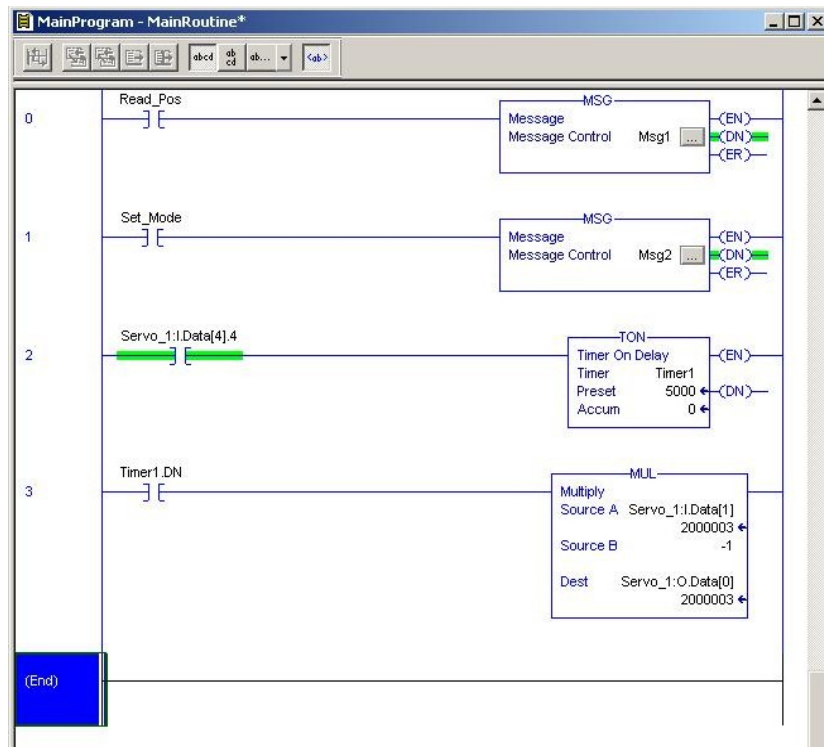


Rockwell EthernetIP example.

This example has been developed using Rockwell RSLogix5000 using a CompactLogix L23 -PLC. The motor used is an Mac400 with an EthernetIP -module mounted.

The main routine is based on 4 rungs, that demonstrates the usage of both explicit read/write and the retrieval and handling of the I/O message data.

The mainroutine ladder program:



Rung nr. 1 will take care of sending an explicit message, that copies the value from the "Mode"-tag into the mode register in the motor as soon as the boolean "Set_Mode" -tag is set. This example is based on the motor being put into "Position" -mode.

To change the mode in the motor, simply change the Mode-tag and set the Set_Mode -flag to send the explicit message, that will change the mode in the motor.

Remember to clear the Set_Mode -flag afterwards to avoid sending the message continuously.

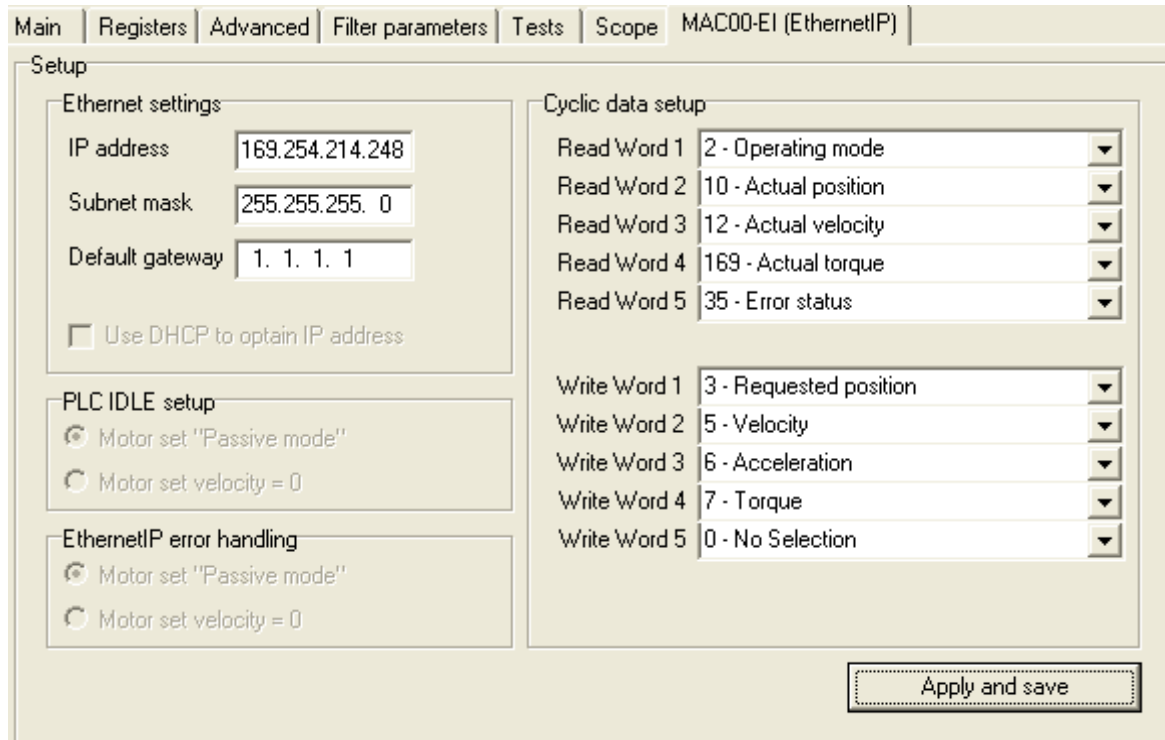
Rung 1 demonstrates the sending of explicit messages to the motor using the Msg block in the PLC.

Rung 0 demonstrates how to use an explicit message to read a value in the motor, in this case the actual position is read when the boolean flag Read_Pos is set. This flag also needs to be set to 0 afterwards.

The I/O message configuration in the motor consists of 5 input words and 5 output words where each word is configured to point at a certain register.

The Servo_1:I_Data[4].4 in rung 3 means the input data word nr. 4, bit 4 which in this configuration points on the "In position" -bit in the Error/Status -register in the motor.

This is register number 35, all setup from the "EthernetIP"-tab from MacTalk.



So when this bit is set, meaning that the motor is at its requested position, it will trigger the timer1 that, after 5seconds takes the input word nr. 1 which points at the actual position, multiplies this by -1 and then saves the result into output word nr. 0 that points at the requested position, now the motor will move to the another position position, causing the "In position" -bit to be 0 and trigger the timer1 again on the rising edge when the motor reaches its position and the whole process start all over again.

Before starting this example place the motor into a position exc. 100000 counts.

Then the motor will move backwards and forwards between 100000 and -100000 counts when the example is started.

Pay special attention to the EthernetIP settings in MacTalk.

The example is based on the following IP-address settings:

MAC400 Motor: 169.254.214.248

Rockwell PLC: 169.254.214.245

To be able to use this example the following equipment is necessary:

MAC400 motor with MAC00-EIx EthernetIP module.

MacTalk V1.49.11 or higher.

Rockwell CompactLogix PLC.

Rockwell RSLogix5000 software.

All necessary cables and power supplies.