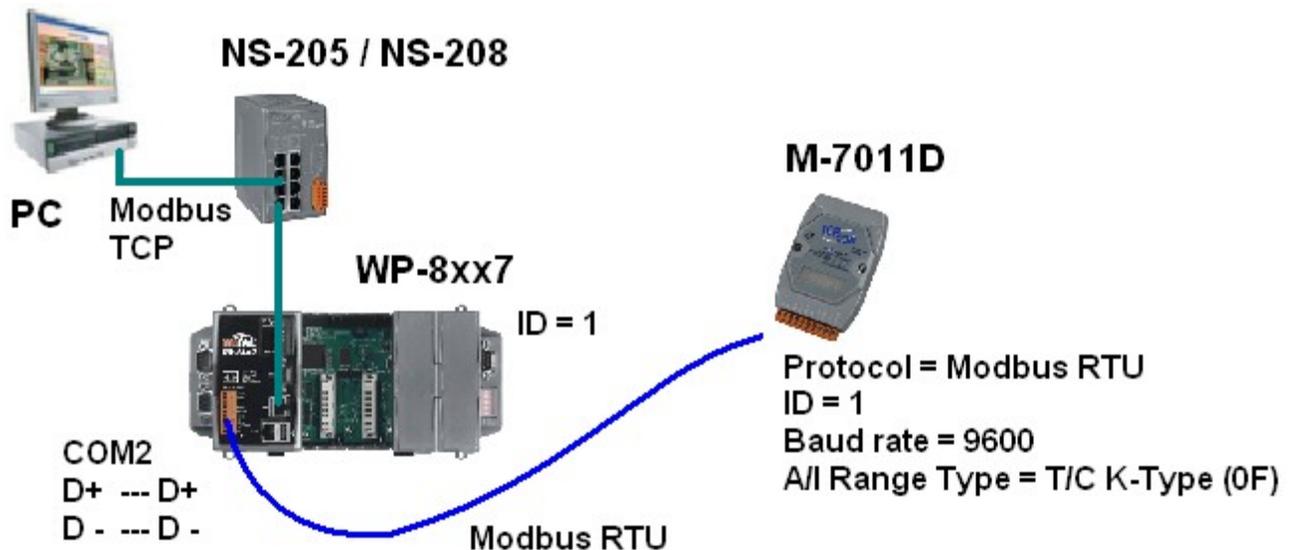# A M.S. VC++ 6.0 Demo Program To Connect One WP-8xx7 by Modbus TCP Protocol

By chun@icpdas.com

This example shows a M.S. VC++ 6.0 program "PC_wpdmo78.exe" running on PC to connect one WP-8xx7 by Modbus TCP protocol. The connected WP-8xx7 runs one ISaGRAF program "wpdmo78" . The WP-8xx7 setups its COM2: RS-485 as a Modbus RTU Master port to conect one M-7011D as the following figure.

Reference:

1. Please visit the following web site to get the "PC_wpdmo78.exe" and "wpdmo78.pia"
 www.icpdas.com > FAQ > Software > ISaGRAF > 118
2. Refer to Chapter 21 of the "ISaGRAF User 's manual" to get more description about linking the WP-8xx7 to M-7000 I/O modules.
3.Refer to Chapter 5 of the "ISaGRAF User 's manual" to get more description about Modbus protocol.

How to test ?

Step 1: (Refer to Chapter 21 of the "ISaGRAF User 's manual")

PC runs the "DCON utility" to config the M-7011D . Set it as "Modbus RTU" protocol and ID (Address) as 1 and Baudrate as 9600 and set its Analog input type as "T/C K-Type" (Thermo-couple K-type). If you are using a different sensor (not T/C K-type), then set it as your type and modify the code in the "wpdmo78.pia" to fit the correct type.

Step 2:

Then connect the PC and WP-8xx7 and M-7011D as the above figure.

Step 3:

Download the "wpdmo78.pia" to the WP-8xx7 controller.
If you sre not familiar with ISaGRAF, please refer to the Chapter 9.5 of the "ISaGRAF User 's Manual" to restore the "wpdmo78.pia" to your PC / ISaGRAF. Then refer to the Chapter 2.1.5 to download this "wpdmo78.pia" to your WP-8xx7 (Please download it by Ethernet).

Note: The IP of PC and IP of WP-8xx7 must be in the same IP domain to communicate each other well. For ex., PC (IP = 192.168.1.3 , mask = 255.255.255.0) can communicate with the WP-8xx7 (IP = 192.168.1.181 , mask = 255.255.255.0) well . However PC (IP = 192.168.**100**.3 , mask = 255.255.255.0) CAN NOT communicate with WP-8xx7 (IP = 192.168.**1**.181 , mask = 55.255.255.0).

Step 4:

Open a command prompt window on PC. Then run "PC_wpdmo78.exe" to communicate with the WP-8xx7. You will see the below figure if it is connected well.

For ex., if the IP of the WP-8xx7 controller is 192.168.1.181, then enter the following command.
PC_wpdmo78 192.168.1.181
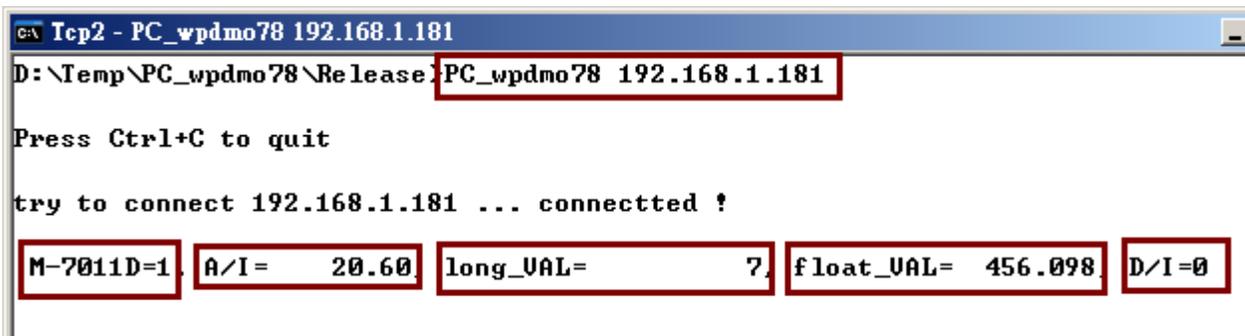
You may see the ISaGRAF debugger windows and found the long_VAL is increasing 1 per second. And if modify the float_VAL to a different value, the assocate value in the PC is changed.