

How to use the sample program for the WT series

Contents

How to use the sample program for WT5000/WT1800(E)/WT1600/WT3000(E)/WT500/WT300 (E)	2
How to use the sample program supporting /DS option for WT5000	6

How to use the sample program for WT5000/WT1800(E)/WT1600/WT3000(E)/WT500/WT300 (E)

Microsoft Visual Basic 6.0, Microsoft Visual C++ 6.0,
VisualStudio2005/2008/2010/2013/2015/2017
(Microsoft Visual Basic.Net, Microsoft Visual C++, Microsoft Visual
C#)

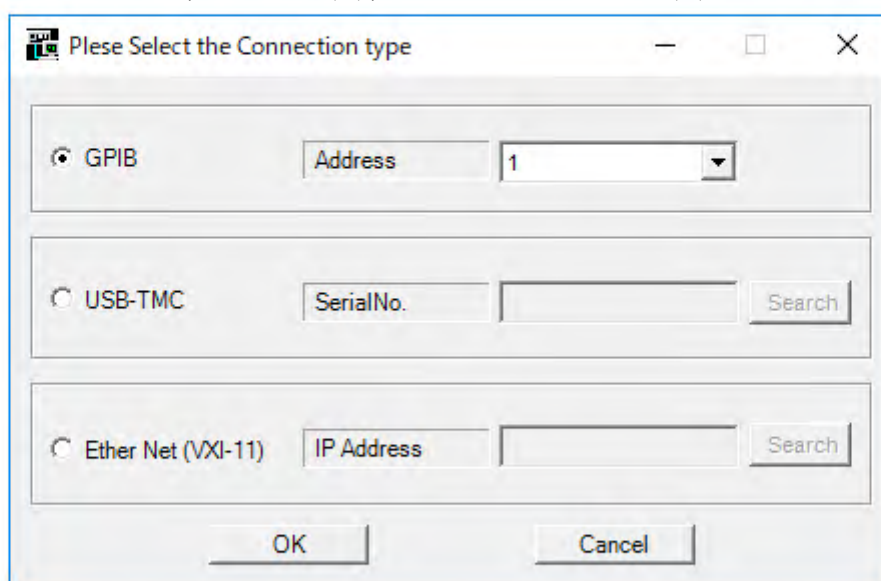
* WT1600 does not support Visual Basic.Net, Visual C#, or Visual Studio 2017.

* WT5000 supports only Visual Studio 2010/2013/2015/2017.

Operating procedure

1. Install any one of the following programs on the PC:
 - Microsoft Visual C++ 6.0 (hereinafter VC)
 - Microsoft Visual Basic 6.0 (hereinafter VB)
 - Microsoft VisualStudio (hereinafter VS)
2. Download a sample program from our web site and decompress/unzip it.
When VS is used, the sample program version should match with the VS version.
3. Double-click the dsw, vbp or sln file for VC, VB or VS respectively to start the software.
4. The program starts with a ! for VC or a right-pointed triangle for VB/VS, displaying the window shown in Figure 1.

<Figure 1: Example of a window displayed on
WT5000, WT1800(E), WT500 and WT300(E) series >



* The sample programs for WT5000, WT1800(E), WT500 and WT300 (E) series have the functions below.

When the connection information file is available at the start of the program, it reads the connection information from the file and displays the communication setting screen with each item set.

If the file is not available, the items will not be set.

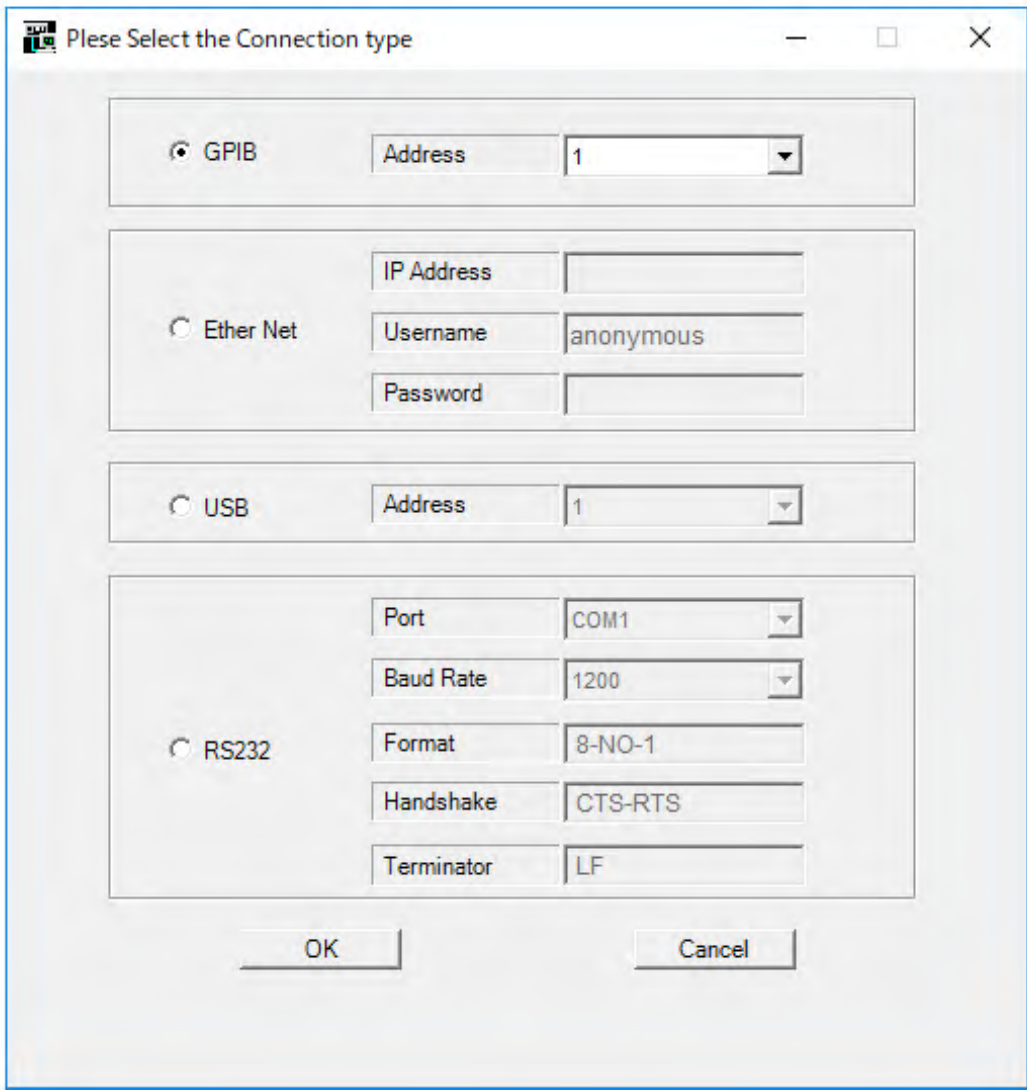
The connection information file is created/updated when the connection is successfully established with the instrument after the press of OK button.

In addition, the Search button to the right of the USBTMC and EtherNet (VXI11) checks if any instrument is connected physically to the PC and determines if the instrument is supported by

the sample program in use. The result is displayed in the setting input field.

When there are multiple instruments found, the setting input field turns into a combo box, allowing you to select the result from a list.

< Figure 2: Example of a window displayed on WT3000(E)>



* This program uses the TMCTL proprietary communication library provided by Yokogawa Test & Measurement Corporation. Download “TMCTL” from the following website and read the “tmctl readme” file.

<https://tmi.yokogawa.com/library/documents-downloads/software/tmctl/>

Select the type of connection and enter the settings for the connection interface and communication conditions. Then, click OK to go to Sample Program menu

- WT1600 does not support USB communication.
- WT5000, WT1800(E) and WT500 do not support RS232 communication.

GPIB connection . . .

Input the GP-IB address of the WT unit to be connected (1 to 30).

* National Instruments GP-IB card is required.

Network connection . . .

Input the IP address, username and password of the WT unit to be connected.

In the initial state, the username is “anonymous” and the password is not set.

* Please set only the IP address for the WT5000/WT1800(E)/WT500/WT300(E).

RS232 connection . . .

Input the Port, Baud Rate, Format, Handshake and Terminator of the WT unit to be connected.

USB connection . . .

Input the USB ID number of the WT unit to be connected (1 to 127).

* For WT5000, WT1800(E), WT500 and WT300(E), please fill in the serial number.

* This program uses the USB driver (YTUSB, YKMUSB) provided by Yokogawa Test & Measurement Corporation, which can be downloaded from:

<https://tmi.yokogawa.com/library/search/#/q=USB&s=r&t=6>

Note) This sample is free software. No guarantee or support is offered.

Sample Program menu (WT3000(E))

The screenshot shows the WT3000 software interface with several key sections annotated:

- Range Settings:** Includes 'Element' (1-4), 'Voltage Range' (100V), and 'Current Range' (5A). Annotations: 'Select the element for range setting.', 'Set the voltage range and press SET. Also, for current, set the direct input range or external input range and press SET.'
- Update Rate:** A dropdown menu set to 'New' with a 'SET' button. Annotation: 'Set the data update rate and press SET.'
- Test Command Send:** A text input field and a 'SEND' button. Annotation: 'A command line to directly enter parameters, such as scaling, that are not available on this configuration screen. Click SEND after entering a command to send the data.'
- Error Information:** A 'SET' button. Annotation: 'Setting errors and other information.'
- Header/Off and Verbose/Off:** Two buttons. Annotations: 'Turn headers ON and OFF.', 'Turn ON and OFF abbreviation of sent commands.'
- Number of Items:** A dropdown set to '10'. Annotations: 'Select the number of data to acquire. Up to 10 items can be measured using this sample software.', 'You can switch the format of the measured data to acquire (ASCII/BINARY).'
- Function, Element, Order, Data:** Two tables for configuring data acquisition. Annotations: 'Set the functions, elements, and orders for loading measured data.'
- Send Data (Single) / Send Data (Update Rate) / Send Data (Event):** Three buttons. Annotations: 'Get the measured data once.', 'Get data continuously at the specified time interval.', 'Get measured data continuously at each data update rate.'
- Data Save:** A button with 'File Name' and 'Header/Off' fields. Annotations: 'Load the set items.', 'Save data using the input file name.'
- Send Items:** A button. Annotation: 'Send the items displayed on the screen to the WT.'
- Send Command Monitor:** A text area showing sent commands. Annotations: 'Clear the contents of the command line.', 'Monitor for sent commands. For example, when setting the actual voltage and current, the actual sent commands are displayed here, allowing you to confirm and refer back to them.'
- Receive Monitor:** A text area showing received data. Annotations: 'Clear the contents of the command line.', 'Monitor for received commands. The data and other items that the WT returns in response to inquiry commands are displayed.'
- RESET WT3000 / CLOSE:** Two buttons at the bottom right. Annotations: 'Reset the settings on the WT5000.', 'Close the program screen (this screen).'

Note) This sample program is subject to change without notice.

How to use the sample program supporting /DS option for WT5000

VisualStudio2013(Microsoft Visual C++)

Operating procedure

See “How to use the sample program for WT5000/WT1800(E)/WT1600/WT3000(E)/WT500/WT300(E)”.

Note) Using a connection other than USB3.0 or Ethernet (1000BASE-T) lowers the performance of waveform streaming data.

Sample Program menu

Turn headers ON and OFF.

Set the data update rate and press SET.

Turn ON and OFF abbreviation of sent commands.

A command line to directly enter parameters, such as scaling, that are not available on this configuration screen. Click SEND after entering a command to send the data.

Setting errors and other information.

Select the element for range setting.

Clear the contents of the command line.

Monitor for sent commands. For example, when setting the voltage and current, the actual sent commands are displayed here, allowing you to confirm and refer back to them.

Send the items displayed on the screen to the WT.

Load the set items.

Clear the contents of the command line.

Monitor for received commands. The data and other items that the WT returns in response to inquiry commands are displayed.

Close the program screen (this screen).

Reset the settings on the WT5000.

Convert saved binary file (Single) to csv file.

Turn ON and OFF CSV file integrated conversion of saved binary file (Update Rate).

Convert saved binary file (Update Rate) to csv file.

Get the voltage range and press SET. Also, for current, set the direct input range or external input range and press SET.

Select the number of data to acquire. Up to 10 items can be measured using this sample software.

You can switch the format of the measured data to acquire (ASCII/BINARY).

Set the functions, elements, and orders for loading measured data.

Get the measured data once.

Get measured data continuously at each data update rate.

Get data continuously at the specified time interval.

Set sample rate.

Turn output waveforms ON and OFF.

Get the waveform streaming data once. Set the sample rate, output waveform and Constraints before acquisition.

Get waveform streaming data continuously at each data update rate. Set the sample rate, output waveform and Constraints before acquisition.

Turn ON and OFF synchronization between measured data and waveform streaming data.

Save data using the input file name.

Inside the blue frame are the setting items for DS option.

Note) This sample program is subject to change without notice.