

Industrial communication solutions for Windows

XTWIDOS Driver Manual

Schneider Electric Telemecanique Twido PLC Serial Driver

Contents

XTWIDOS technical specifications.....	2
General information.....	2
Command list	2
Read multiple %M status.....	2
Write single %M status.....	3
Write multiple %M status.....	3
Read multiple %MW as unsigned words.....	3
Write multiple %MW as unsigned words.....	4
Read multiple %MW as signed integers	4
Write multiple %MW as signed integers.....	5
Error messages	5
Supported devices.....	5

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XTWIDOS technical specifications

General information

XTWIDOS driver allows you to connect to Schneider Electric TWIDO PLCs using the Modbus RTU protocol through the TWIDO serial port.

This driver supports RS485 networking to connect multiple slave devices to a single computer.

This driver supports to communicate to the PLC serial port in an ethernet-to-serial configuration and can connect to a serial server such as Moxa or Exemys directly, without needing to install a COM port redirector or creating a virtual COM port.

The Twido port must be configured for Modbus. If using Port 1 of the Twido, the DPT signal must be tied to signal ground.

In order to be able to communicate with your PLC through its serial port, you must be sure to go to the Preferences section in the PLC configuration and select the COM option.

All registers must exist and be created in the PLC memory before any attempt to read or write them. If you get a [8168] CONFIG (Remote): Illegal data address error message, it will be indicating that you are trying to read or write a register that still needs to be created. Some registers might not be accessed directly, meaning that you should create M or MW registers that keep updated a copy of the same information, and then read those M or MW registers.

REGISTER TYPES SUPPORTED:

- %M
- %MW

SERIAL COMMUNICATION SETTINGS:

- Serial port I/F: RS232, RS485
- Data Bits: 7 or 8 (Must match the pc's port setting)
- Stop Bits: 1 or 2 (Must match the pc's port setting)
- Baud Rate: 9600,19200,38400,57600,115200 (Must match the pc's port setting)
- Parity: Even, Odd, None (Must match the pc's port setting)
- PLC station No.: 0-255 (Working as a slave device)
- PLC time out: 1500 to 5000 ms (adjust if longer timeout is required)

Command list

Read multiple %M status

Description of this command:

Obtains the current status (ON=1/OFF=0) in a group of consecutive %M. Use DriverNumPoints to specify the number of consecutive %M to be read. Use DriverP0 to specify the PLC station number in the RS485 network. You can only read %M registers with this command. Your PLC should first copy any other registers to %M registers in order to make them available to be read with command.

Methods used to run this command:

Digital Input

Number of points accepted by this command:

1-1000

Meaning of the DriverP0 parameter:

Station number (0-255)

Meaning of the DriverP1 parameter:

Must be set to 1

Meaning of the DriverP2 parameter:

Indicates the first %M address to be read (%M0=0)

Values that are returned:

Value in PointValue (0) = First %M status (0=OFF, 1=ON)

Value in PointValue (1) = Second %M status (0=OFF, 1=ON)

- ...

Value in PointValue (n-1) = Last %M status (0=OFF, 1=ON)

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Write single %M status

Description of this command:

Writes a single %M. Use DriverP0 to specify the PLC station number in the RS485 network. You can only write a single %M register with this command. Your PLC should copy the %M register status to any other register that you actually need to write.

Methods used to run this command:

Digital Output

Number of points accepted by this command:

1

Meaning of the DriverP0 parameter:

Station Number (0-255). If the station number is 0, the command is sent as a broadcast message and no response is expected.

Meaning of the DriverP1 parameter:

Must be set to 5

Meaning of the DriverP2 parameter:

Indicates the %M address to be written (%M0=0).

Values that are sent:

Value in PointValue (0) = New %M status (0=OFF, 1=ON)

Write multiple %M status

Description of this command:

Writes a series of consecutive %M. Use DriverNumPoints to specify the number of %M to be written. Use DriverP0 to specify the PLC station number in the RS485 network. You can only write %M registers with this command. Your PLC should copy the %M registers status to any other registers that you actually need to write.

Methods used to run this command:

Digital Output

Number of points accepted by this command:

1-1000 (It is convenient that this number is a multiple of 8)

Meaning of the DriverP0 parameter:

Station Number (0-255). If the station number is 0, the command is sent as a broadcast message and no response is expected.

Meaning of the DriverP1 parameter:

Must be set to 15

Meaning of the DriverP2 parameter:

Indicates the first %M address to be written (%M0=0).

Values that are sent:

Value in PointValue (0) = New status for first %M (0=OFF, 1=ON)

Value in PointValue (1) = New status for second %M (0=OFF, 1=ON)

- ...

Value in PointValue (n-1) = New status for last %M (0=OFF, 1=ON)

Read multiple %MW as unsigned words

Description of this command:

Obtains the current values in a group of consecutive registers of type %MW, returning the values as unsigned words ranging from 0 to 65535. Use DriverNumPoints to specify the number of %MW registers to be read. Use DriverP0 to specify the PLC station number in the RS485 network. You can only read %MW registers with this command. Your PLC should first copy any other registers to %MW registers in order to make them available to be read with command.

Methods used to run this command:

Analog Input

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Station number (0-255)

Meaning of the DriverP1 parameter:

Must be set to 3

Meaning of the DriverP2 parameter:

Indicates the first %MW register address to be read (%MW0=40001)

- Use 40001 for %MW0

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- Use 40002 for %MW1
- ...
- Use 40256 for %MW255

Values that are returned:

- Value in PointValue (0) = First %MW register value (0 to 65535)
- Value in PointValue (1) = Second %MW register value (0 to 65535)
- ...
- Value in PointValue (n-1) = Last %MW register value (0 to 65535)

Write multiple %MW as unsigned words

Description of this command:

Writes values to a group of consecutive registers of type %MW, treating the values as unsigned words ranging from 0 to 65535. Use DriverNumPoints to specify the number of %MW registers to be written. Use DriverP0 to specify the PLC station number in the RS485 network. You can only write %MW registers with this command. Your PLC should copy the %MW registers values to any other registers that you actually need to write.

Methods used to run this command:

Analog Output

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Station number (0-255) If the station number is 0, the command is sent as a broadcast message and no response is expected.

Meaning of the DriverP1 parameter:

Must be set to 16

Meaning of the DriverP2 parameter:

- Indicates the first %MW register address to be written (%MW0=40001)
- Use 40001 for %MW0
- Use 40002 for %MW1
- ...
- Use 40256 for %MW255

Values that are returned:

- Value in PointValue (0) = First %MW register value (0 to 65535)
- Value in PointValue (1) = Second %MW register value (0 to 65535)
- ...
- Value in PointValue (n-1) = Last %MW register value (0 to 65535)

Read multiple %MW as signed integers

Description of this command:

Obtains the current values in a group of consecutive registers of type %MW, returning the values as unsigned words ranging from -32768 to 32767. Use DriverNumPoints to specify the number of %MW registers to be read. Use DriverP0 to specify the PLC station number in the RS485 network. You can only read %MW registers with this command. Your PLC should first copy any other registers to %MW registers in order to make them available to be read with command.

Methods used to run this command:

Analog Input

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Station number (0-255)

Meaning of the DriverP1 parameter:

Must be set to 74

Meaning of the DriverP2 parameter:

- Indicates the first %MW register address to be read (%MW0=40001)
- Use 40001 for %MW0
- Use 40002 for %MW1
- ...
- Use 40256 for %MW255

Values that are returned:

- Value in PointValue (0) = First %MW register value (-32768 to 32767)
- Value in PointValue (1) = Second %MW register value (-32768 to 32767)

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- ...
Value in PointValue (n-1) = Last %MW register value (-32768 to 32767)

Write multiple %MW as signed integers

Description of this command:

Writes values to a group of consecutive registers of type %MW, treating the values as unsigned words ranging from -32768 to 32767. Use DriverNumPoints to specify the number of %MW registers to be written. Use DriverP0 to specify the PLC station number in the RS485 network. You can only write %MW registers with this command. Your PLC should copy the %MW registers values to any other registers that you actually need to write.

Methods used to run this command:

Analog Output

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Station number (0-255) If the station number is 0, the command is sent as a broadcast message and no response is expected.

Meaning of the DriverP1 parameter:

Must be set to 78

Meaning of the DriverP2 parameter:

Indicates the first %MW register address to be written (%MW0=40001)

- Use 40001 for %MW0

- Use 40002 for %MW1

- ...

- Use 40256 for %MW255

Values that are returned:

Value in PointValue (0) = First %MW register value (-32768 to 32767)

Value in PointValue (1) = Second %MW register value (-32768 to 32767)

- ...

Value in PointValue (n-1) = Last %MW register value (-32768 to 32767)

Error messages

The following list shows the possible error messages that can be returned by the driver during a failed communication in the 'Status' property.

[1005] DRIVER (Internal): Invalid driver stage

[1300] PROTOCOL (Timeout): No answer

Supported devices

This driver can communicate with these devices, but is not necessarily limited to this list:

SCHNEIDER ELECTRIC TELEMECANIQUE TWIDO PLC

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