

Industrial communication solutions for Windows

XTSXNANO Driver Manual

Telemecanique TSX Nano Modbus Protocol Driver

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XTSXNANO technical specifications

General information

XTSXNANO driver allows you to connect to Telemecanique TSX Nano PLCs configured to use the MODBUS RTU Protocol. This driver does not support the Unitelway protocol option.

Important note:

It is impossible to access any input or output directly by using a Modbus command. In TSX products you can only read and write %Mx internal coils and %MWx internal variables. You can associate I/O's with internal coils or memory words to be then accessed by your application.

For example, to monitor the status of input 0, you can enter an operate block as follows:

`%M0:=%I0.0`

Now you can instruct your application to request %M0 value by using the "Read %M Internal Coils" command.

Command list

Read %M Internal Coils

Description of this command:

Obtains current status (1=ON/0=OFF) in one or more consecutive internal coils of type %M.

Methods used to run this command:

Digital Input

Number of points accepted by this command:

1-256

Meaning of the DriverP0 parameter:

PLC Number (1-255)

Meaning of the DriverP1 parameter:

Indicates the starting %M position (0-255)

Values that are returned:

Value in PointValue (0) = Status of first %M requested (0 or 1)

Value in PointValue (1) = Status of second %M requested (0 or 1) . . .

Value in PointValue (n-1) = Status of last %M requested (0 or 1)

Read %MW Memory Words

Description of this command:

Reads current contents in one or more consecutive registers of type %MW.

Methods used to run this command:

Analog Input

Number of points accepted by this command:

1-256

Meaning of the DriverP0 parameter:

PLC Number (1-255)

Meaning of the DriverP1 parameter:

Indicates the starting %MW register (0-255)

Values that are returned:

Value in PointValue (0) = Value in first %MW requested (0-65535)

Value in PointValue (1) = Value in second %MW requested (0-65535) . . .

Value in PointValue (n-1) = Value in last %MW requested (0-65535)

Write %M Internal Coils

Description of this command:

Writes a new status (1=ON/0=OFF) to one or more consecutive internal coils of type %M.

Methods used to run this command:

Digital Output

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Number of points accepted by this command:

1-256

Meaning of the DriverP0 parameter:

PLC Number (1-255)

Meaning of the DriverP1 parameter:

Indicates the starting %M position (0-255)

Values that are sent:

Value in PointValue (0) = New status for first %M (0 or 1)

Value in PointValue (1) = New status for second %M (0 or 1) . . .

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

Write %MW Memory Words

Description of this command:

Writes one or more consecutive registers of type %MW.

Methods used to run this command:

Analog Output

Number of points accepted by this command:

1-256

Meaning of the DriverP0 parameter:

PLC Number (1-255)

Meaning of the DriverP1 parameter:

Indicates the starting %MW register (0-255)

Values that are sent:

Value in PointValue (0) = New value for first %MW (0-65535)

Value in PointValue (1) = New value for second %MW (0-65535) . . .

Value in PointValue (n-1) = New value for last %MW (0-65535)

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
[1421] PROTOCOL (Format): Negative acknowledge received from device
[2204] CONFIG (NumValues): Too many values (max=256)
[3022] CONFIG (P0): Invalid device address (1-255)
[3506] CONFIG (P1): Invalid address
[8013] CONFIG (Remote): Acknowledge
[8034] CONFIG (Remote): Busy (rejected message)
[8138] CONFIG (Remote): Failure in associated device
[8168] CONFIG (Remote): Illegal data address
[8170] CONFIG (Remote): Illegal data value
[8172] CONFIG (Remote): Illegal function
[8347] CONFIG (Remote): Unknown error

Supported devices

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

TELEMECANIQUE TSX Nano PLCs

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