

# Industrial communication solutions for Windows

## XMODBTCP Driver Manual

### *Modbus TCP Protocol Driver*

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## XMODBTCP technical specifications

### General information

XMODBTCP driver supports the Modbus TCP protocol according to the Modbus Messaging TCP/IP Implementation Guide from Modbus.org Rev 1.0, 8 May 02

This driver implements Modbus commands 1, 2, 3, 4, 5, 6, 15 and 16. It also implements some special commands that are not part of the original Modbus specification that bring support for special data formats used by certain devices.

This driver expects that you connect to your device through its tcp/ip port. The device should behave as a slave in your network. TCP/IP communication must be set in TCP mode using port 502.

### Command list

#### Read Coil Status

**Description of this command:**

Obtains current status (ON/OFF) in a group of logic coils. This command implements Modbus function 1.

**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:**

1

**Meaning of the DriverP2 parameter:**

Indicates the starting coil address.

**Values that are returned:**

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

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

...

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

#### Read Input Status

**Description of this command:**

Obtains current status (ON/OFF) in a group of discrete inputs. This command implements Modbus function 2.

**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:**

2

**Meaning of the DriverP2 parameter:**

Indicates the starting input address.

**Values that are returned:**

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

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

...

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

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## Read Holding Registers as Unsigned 16-bit Integers

### Description of this command:

Obtains the current values in one or more holding registers as unsigned 16-bit integers from 0 to 65535. This command implements Modbus function 3.

### 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:

3

### Meaning of the DriverP2 parameter:

Indicates the starting register address.

### Values that are returned:

Value in PointValue (0) = First register value (0-65535)

Value in PointValue (1) = Second register value (0-65535)

...

Value in PointValue (n-1) = Last register value (0-65535)

## Read Holding Registers as Signed 16-bit Integers

### Description of this command:

Obtains the current values in one or more holding registers as signed 16-bit integers from -32768 to 32767. This command implements Modbus function 3.

### 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:

74

### Meaning of the DriverP2 parameter:

Indicates the starting register address.

### Values that are returned:

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

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

...

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

## Read Holding Registers as Unsigned 32-bit Integers

### Description of this command:

Obtains the current values in one or more holding registers as unsigned 32-bit integer numbers. This command uses Modbus function 3.

### Methods used to run this command:

Analog Input

### Number of points accepted by this command:

1-62

### Meaning of the DriverP0 parameter:

Station number (0-255).

### Meaning of the DriverP1 parameter:

76

### Meaning of the DriverP2 parameter:

Indicates the starting register address.

### Values that are returned:

Value in PointValue (0) = First register value

Value in PointValue (1) = Second register value

...

Value in PointValue (n-1) = Last register value

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## Read Holding Registers as Signed 32-bit Integers

### Description of this command:

Obtains the current values in one or more holding registers as signed 32-bit integer numbers. This command uses Modbus function 3.

### Methods used to run this command:

Analog Input

### Number of points accepted by this command:

1-62

### Meaning of the DriverP0 parameter:

Station number (0-255).

### Meaning of the DriverP1 parameter:

75

### Meaning of the DriverP2 parameter:

Indicates the starting register address.

### Values that are returned:

Value in PointValue (0) = First register value

Value in PointValue (1) = Second register value

...

Value in PointValue (n-1) = Last register value

## Read Holding Registers as Unsigned 32-bit Integers (words reversed)

### Description of this command:

Obtains current values in one or more holding registers as unsigned 32-bit integer numbers with words in reverse order. This command uses Modbus function 3.

### Methods used to run this command:

Analog Input

### Number of points accepted by this command:

1-62

### Meaning of the DriverP0 parameter:

Station number (0-255).

### Meaning of the DriverP1 parameter:

86

### Meaning of the DriverP2 parameter:

Indicates the starting register address.

### Values that are returned:

Value in PointValue (0) = First register value

Value in PointValue (1) = Second register value

...

Value in PointValue (n-1) = Last register value

## Read Holding Registers as Signed 32-bit Integers (words reversed)

### Description of this command:

Obtains current values in one or more holding registers as signed 32-bit integer numbers with words in reverse order. This command uses Modbus function 3.

### Methods used to run this command:

Analog Input

### Number of points accepted by this command:

1-62

### Meaning of the DriverP0 parameter:

Station number (0-255).

### Meaning of the DriverP1 parameter:

85

### Meaning of the DriverP2 parameter:

Indicates the starting register address.

### Values that are returned:

Value in PointValue (0) = First register value

Value in PointValue (1) = Second register value

...

Value in PointValue (n-1) = Last register value

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## Read Holding Registers as IEEE Floats

### Description of this command:

Obtains the current values in one or more holding registers as 32-bit IEEE floating-point values. This command uses Modbus function 3.

### Methods used to run this command:

Analog Input

### Number of points accepted by this command:

1-62

### Meaning of the DriverP0 parameter:

Station number (0-255).

### Meaning of the DriverP1 parameter:

66

### Meaning of the DriverP2 parameter:

Indicates the starting register address.

### Values that are returned:

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

## Read Holding Registers as IEEE Floats (bytes reversed)

### Description of this command:

Obtains the current values in one or more holding registers as 32-bit IEEE floating-point values assuming that bytes are received in reverse order. This command uses Modbus function 3.

### Methods used to run this command:

Analog Input

### Number of points accepted by this command:

1-62

### Meaning of the DriverP0 parameter:

Station number (0-255).

### Meaning of the DriverP1 parameter:

68

### Meaning of the DriverP2 parameter:

Indicates the starting register address.

### Values that are returned:

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

## Read Holding Registers as IEEE Floats (words reversed)

### Description of this command:

Obtains current values in one or more holding registers as 32-bit IEEE floating point values assuming that the words order is received in reversed order. This command uses Modbus function 3.

### Methods used to run this command:

Analog Input

### Number of points accepted by this command:

1-62

### Meaning of the DriverP0 parameter:

Station number (0-255).

### Meaning of the DriverP1 parameter:

80

### Meaning of the DriverP2 parameter:

Indicates the starting memory address.

### Values that are returned:

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

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**Important note:**

This command was added to support the floating-point format used by the TSX-3722 PLC from Telemecanique.

## Read Holding Registers as IEEE Doubles

**Description of this command:**

Obtains the current values in one or more input registers as 64-bit IEEE double values. This command uses Modbus function 3.

**Methods used to run this command:**

Analog Input

**Number of points accepted by this command:**

1-31

**Meaning of the DriverP0 parameter:**

Station number (0-255).

**Meaning of the DriverP1 parameter:**

266

**Meaning of the DriverP2 parameter:**

Indicates the starting register address.

**Values that are returned:**

Value in PointValue (0) = First register value

Value in PointValue (1) = Second register value

...

Value in PointValue (n-1) = Last register value

**Important note:**

This command was added to support the double format used by Janitza UMG-503 meters.

## Read Holding Registers as IEEE Doubles (bytes reversed)

**Description of this command:**

Obtains the current values in one or more input registers as 64-bit IEEE double values assuming that bytes are received in reverse order. This command uses Modbus function 3.

**Methods used to run this command:**

Analog Input

**Number of points accepted by this command:**

1-31

**Meaning of the DriverP0 parameter:**

Station number (0-255).

**Meaning of the DriverP1 parameter:**

268

**Meaning of the DriverP2 parameter:**

Indicates the starting register address.

**Values that are returned:**

Value in PointValue (0) = First register value

Value in PointValue (1) = Second register value

...

Value in PointValue (n-1) = Last register value

**Important note:**

This command was added to support the double format used by Janitza UMG-503 meters.

## Read Input Registers as Unsigned 16-bit Integers

**Description of this command:**

Obtains the current values in one or more input registers as unsigned 16-bit integers from 0 to 65535. This command implements Modbus function 4.

**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:**

4

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**Meaning of the DriverP2 parameter:**

Indicates the starting register address.

**Values that are returned:**

Value in PointValue (0) = First register value (0-65535)

Value in PointValue (1) = Second register value (0-65535)

...

Value in PointValue (n-1) = Last register value (0-65535)

## Read Input Registers as Signed 16-bit Integers

**Description of this command:**

Obtains the current values in one or more input registers as signed 16-bit integers from -32768 to 32767. This command implements Modbus function 4.

**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:**

179

**Meaning of the DriverP2 parameter:**

Indicates the starting register address.

**Values that are returned:**

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

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

...

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

## Read Input Registers as Unsigned 32-bit Integers

**Description of this command:**

Obtains the current values in one or more input registers as unsigned 32-bit integer numbers. This command uses Modbus function 4.

**Methods used to run this command:**

Analog Input

**Number of points accepted by this command:**

1-62

**Meaning of the DriverP0 parameter:**

Station number (0-255).

**Meaning of the DriverP1 parameter:**

176

**Meaning of the DriverP2 parameter:**

Indicates the starting register address.

**Values that are returned:**

Value in PointValue (0) = First register value

Value in PointValue (1) = Second register value

...

Value in PointValue (n-1) = Last register value

## Read Input Registers as Signed 32-bit Integers

**Description of this command:**

Obtains the current values in one or more input registers as signed 32-bit integer numbers. This command uses Modbus function 4.

**Methods used to run this command:**

Analog Input

**Number of points accepted by this command:**

1-62

**Meaning of the DriverP0 parameter:**

Station number (0-255).

**Meaning of the DriverP1 parameter:**

175

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**Meaning of the DriverP2 parameter:**

Indicates the starting register address.

**Values that are returned:**

Value in PointValue (0) = First register value

Value in PointValue (1) = Second register value

...

Value in PointValue (n-1) = Last register value

## Read Input Registers as Unsigned 32-bit Integers (words reversed)

**Description of this command:**

Obtains current values in one or more input registers as unsigned 32-bit integer numbers with words in reverse order. This command uses Modbus function 4.

**Methods used to run this command:**

Analog Input

**Number of points accepted by this command:**

1-62

**Meaning of the DriverP0 parameter:**

Station number (0-255).

**Meaning of the DriverP1 parameter:**

186

**Meaning of the DriverP2 parameter:**

Indicates the starting register address.

**Values that are returned:**

Value in PointValue (0) = First register value

Value in PointValue (1) = Second register value

...

Value in PointValue (n-1) = Last register value

## Read Input Registers as Signed 32-bit Integers (words reversed)

**Description of this command:**

Obtains current values in one or more input registers as signed 32-bit integer numbers with words in reverse order. This command uses Modbus function 4.

**Methods used to run this command:**

Analog Input

**Number of points accepted by this command:**

1-62

**Meaning of the DriverP0 parameter:**

Station number (0-255).

**Meaning of the DriverP1 parameter:**

185

**Meaning of the DriverP2 parameter:**

Indicates the starting register address.

**Values that are returned:**

Value in PointValue (0) = First register value

Value in PointValue (1) = Second register value

...

Value in PointValue (n-1) = Last register value

## Read Input Registers as IEEE Floats

**Description of this command:**

Obtains the current values in one or more input registers as 32-bit IEEE floating-point values. This command uses Modbus function 4.

**Methods used to run this command:**

Analog Input

**Number of points accepted by this command:**

1-62

**Meaning of the DriverP0 parameter:**

Station number (0-255).

**Meaning of the DriverP1 parameter:**

166

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## Meaning of the DriverP2 parameter:

Indicates the starting register address.

## Values that are returned:

Value in PointValue (0) = First register value

Value in PointValue (1) = Second register value

...

Value in PointValue (n-1) = Last register value

## Read Input Registers as IEEE Floats (bytes reversed)

### Description of this command:

Obtains the current values in one or more input registers as 32-bit IEEE floating-point values assuming that bytes are received in reverse order. This command uses Modbus function 4.

### Methods used to run this command:

Analog Input

### Number of points accepted by this command:

1-62

### Meaning of the DriverP0 parameter:

Station number (0-255).

### Meaning of the DriverP1 parameter:

168

### Meaning of the DriverP2 parameter:

Indicates the starting register address.

### Values that are returned:

Value in PointValue (0) = First register value

Value in PointValue (1) = Second register value

...

Value in PointValue (n-1) = Last register value

## Read Input Registers as IEEE Floats (words reversed)

### Description of this command:

Obtains current values in one or more input registers as 32-bit IEEE floating point values assuming that the words order is received in reversed order. This command uses Modbus function 4.

### Methods used to run this command:

Analog Input

### Number of points accepted by this command:

1-62

### Meaning of the DriverP0 parameter:

Station number (0-255).

### Meaning of the DriverP1 parameter:

180

### Meaning of the DriverP2 parameter:

Indicates the starting memory address.

### Values that are returned:

Value in PointValue (0) = First register value

Value in PointValue (1) = Second register value

...

Value in PointValue (n-1) = Last register value

## Force Single Coil

### Description of this command:

Forces a single logic coil to a state ON or OFF. This command implements Modbus function 5.

### 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:

5

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**Meaning of the DriverP2 parameter:**

Indicates the coil address.

**Values that are sent:**

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

## Force Multiple Coils

**Description of this command:**

Forces a series of consecutive logic coils to selected ON or OFF states. This command implements Modbus function 15.

**Methods used to run this command:**

Digital Output

**Number of points accepted by this command:**

1-1000 (It is convenient for the groups to be a multiple of 8 elements)

**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:**

15

**Meaning of the DriverP2 parameter:**

Indicates the starting coil address.

**Values that are sent:**

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

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

...

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

## Preset Single Register as Unsigned 16-bit Integer

**Description of this command:**

Places a specified value into a holding register as an unsigned 16-bit integer value from 0 to 65535. This command implements Modbus function 6.

**Methods used to run this command:**

Analog 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:**

6

**Meaning of the DriverP2 parameter:**

Indicates the register address.

**Values that are sent:**

Value in PointValue (0) = New register value (0-65535)

## Preset Multiple Registers as Unsigned 16-bit Integers

**Description of this command:**

Places specified values into a series of consecutive holding registers, as unsigned 16-bit integer values from 0 to 65535. This command implements Modbus function 16.

**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:**

16

**Meaning of the DriverP2 parameter:**

Indicates the starting register address.

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**Values that are sent:**

Value in PointValue (0) = New value for first register (0-65535)  
Value in PointValue (1) = New value for second register (0-65535)  
...  
Value in PointValue (n-1) = New value for last register (0-65535)

## Preset Multiple Registers as Unsigned 32-bit Integers

**Description of this command:**

Places specified values into a series of consecutive holding registers, as unsigned 32-bit integer values. This command uses Modbus function 16.

**Methods used to run this command:**

Analog Output

**Number of points accepted by this command:**

1-62

**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:**

78

**Meaning of the DriverP2 parameter:**

Indicates the starting register address.

**Values that are sent:**

Value in PointValue (0) = New value for first register  
Value in PointValue (1) = New value for second register  
...  
Value in PointValue (n-1) = New value for last register

## Preset Multiple Registers as Signed 32-bit Integers

**Description of this command:**

Places specified values into a series of consecutive holding registers, as signed 32-bit integer values. This command uses Modbus function 16.

**Methods used to run this command:**

Analog Output

**Number of points accepted by this command:**

1-62

**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:**

77

**Meaning of the DriverP2 parameter:**

Indicates the starting register address.

**Values that are sent:**

Value in PointValue (0) = New value for first register  
Value in PointValue (1) = New value for second register  
...  
Value in PointValue (n-1) = New value for last register

## Preset Multiple Registers as Unsigned 32-bit Integers (words reversed)

**Description of this command:**

Places specified values into a series of consecutive holding registers, as unsigned 32-bit integer values with words in reverse order. This command uses Modbus function 16.

**Methods used to run this command:**

Analog Output

**Number of points accepted by this command:**

1-62

**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.

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**Meaning of the DriverP1 parameter:**

88

**Meaning of the DriverP2 parameter:**

Indicates the starting register address.

**Values that are sent:**

Value in PointValue (0) = New value for first register

Value in PointValue (1) = New value for second register

...

Value in PointValue (n-1) = New value for last register

## Preset Multiple Registers as Signed 32-bit Integers (words reversed)

**Description of this command:**

Places specified values into a series of consecutive holding registers, as signed 32-bit integer values with words in reverse order. This command uses Modbus function 16.

**Methods used to run this command:**

Analog Output

**Number of points accepted by this command:**

1-62

**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:**

87

**Meaning of the DriverP2 parameter:**

Indicates the starting register address.

**Values that are sent:**

Value in PointValue (0) = New value for first register

Value in PointValue (1) = New value for second register

...

Value in PointValue (n-1) = New value for last register

## Preset Multiple Registers as IEEE Floats

**Description of this command:**

Places specified values into a series of consecutive holding registers as 32-bit IEEE floating point values. This command uses Modbus function 16.

**Methods used to run this command:**

Analog Output

**Number of points accepted by this command:**

1-62

**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:**

70

**Meaning of the DriverP2 parameter:**

Indicates the starting register address.

**Values that are sent:**

Value in PointValue (0) = New value for first register

Value in PointValue (1) = New value for second register

...

Value in PointValue (n-1) = New value for last register

## Preset Multiple Registers as IEEE Floats (bytes reversed)

**Description of this command:**

Places specified values into a series of consecutive holding registers as 32-bit IEEE floating point values where the bytes order is reversed. This command uses Modbus function 16.

**Methods used to run this command:**

Analog Output

**Number of points accepted by this command:**

1-62

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**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:**

72

**Meaning of the DriverP2 parameter:**

Indicates the starting register address.

**Values that are sent:**

Value in PointValue (0) = New value for first register  
Value in PointValue (1) = New value for second register  
...  
Value in PointValue (n-1) = New value for last register

## Preset Multiple Registers as IEEE Floats (words reversed)

**Description of this command:**

Places specified values into a series of consecutive holding registers as 32-bit IEEE floating point values where the required words order must be reversed. This command uses Modbus function 16.

**Methods used to run this command:**

Analog Output

**Number of points accepted by this command:**

1-62

**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:**

81

**Meaning of the DriverP2 parameter:**

Indicates the starting register address.

**Values that are sent:**

Value in PointValue (0) = New value for first register  
Value in PointValue (1) = New value for second register  
...  
Value in PointValue (n-1) = New value for last register

**Important note:**

This command was added to support the format used by the TSX-3722 PLC from Telemecanique.

## 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  
[1433] PROTOCOL (Format): Validation error in device response  
[1435] PROTOCOL (Format): Invalid transaction identifier received  
[2147] CONFIG (NumValues): Only one value can be read or written  
[2185] CONFIG (NumValues): Too many values (max=125)  
[2208] CONFIG (NumValues): Too many values (max=31)  
[2229] CONFIG (NumValues): Too many values (max=62)  
[3014] CONFIG (P0): Invalid device address (0-255)  
[3022] CONFIG (P0): Invalid device address (1-255)  
[3508] CONFIG (P1): Invalid command  
[4001] CONFIG (P2): 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

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[8347] CONFIG (Remote): Unknown error

## Supported devices

---

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

ABB Totalflow  $\mu$ FLO 6213  
ABB Totalflow XRC 6490 RTU  
ABB Totalflow XRC 6790 RTU  
ABB Totalflow XRC 6890 RTU  
ABB Totalflow 8000/8100 Btu/CV Transmitter  
ABB Totalflow XFC 6410 EFM  
ABB Totalflow XFC 6413 EFM  
ABB Totalflow XFC 6713 EFM  
ABB S4C+ Robot Controller Controller  
ACKSYS Communications & Systems COMETH Network Gateway  
ACKSYS Communications & Systems WL-ABOARD/N Network Gateway  
ACKSYS Communications & Systems WL-ABOARD/S Network Gateway  
ACKSYS Communications & Systems WL-COMETH Network Gateway  
ACROMAG 901MB-0900 Discrete Input Module  
ACROMAG 902MB-0900 Discrete Output Module  
ACROMAG 903MB-0900 Discrete I/O Modules  
ACROMAG 904MB Discrete Input Module  
ACROMAG 905MB Discrete Output Module  
ACROMAG 906MB Discrete I/O Module  
ACROMAG 913MB Analog Input Module  
ACROMAG 914MB Analog Input Module  
ACROMAG 917MB Analog Output Module  
ACROMAG 918MB Analog Output Module  
ACROMAG 924MB Analog Input Module  
ACROMAG 932MB Analog Input Module  
ACROMAG 934MB Analog Input Module  
ACROMAG 942MB Frequency/Pulse Counter Module  
ACROMAG BusWorks 900EN Ethernet I/O Modules  
ACTL eWON2001 Network Gateway  
ADFWEB.COM SRL Datalogger Modbus RTU  
ADVANTAGE ENGINEERING Sentra 300 Controller  
ADVANTECH ADAM-5510EKW/TP Controller  
ALERTON FLG-Modbus BACtalk Gateway  
AMASS Data Technologies Inc Analog to Digital Conversion Module  
AMASS Data Technologies Inc Embedded Control Digital I/O Module  
AMASS Data Technologies Inc PSE/RTU Shaft Encoder Sensor  
ANTX Inc Elite Gas Controller  
APEX Automation Technologies GmbH PDnetIP-Controller  
AQUASENSORS LLC  
AQUASENSORS LLC DataStick System Sensor  
ARCOM HtMux Network Gateway  
ARCOM HtNode Network Gateway  
AREVA T&D BITRONICS M871  
AUMA Riestler GmbH & Co KG AUMATIC AC/DC Drive Control  
BACHMANN ELECTRONIC M1 (M200 series) Controller  
BARIX AG Barix IO12 I/O Module  
BARIX AG Barix R6 I/O Interface  
BARIX AG Barix X8 I/O Interface  
BARNETT ENGINEERING Ltd ProTalk SPX Monitoring Hardware  
BECKHOFF Modbus Bus Terminal Controller BC7300 Controller  
BELUK Capacitor-Protecting Relay KSR Sensor  
BELUK EMM Power Analyzer Monitoring Hardware  
BELUK Power Factor Control Relay BLR-CM  
BENTEK SYSTEMS SMX-900 Modem  
BIHL WIEDEMANN AS-i/Modbus Gateway  
COMET SYSTEM SRO Ethernet Sensor

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CONTROL MYCROSYSTEMS SCADAPack Controller  
CONTROL TECHNIQUES Commander SE AC Vector Drive Control  
CONTROL TECHNIQUES Commander SK AC/DC Drive Control  
CONTROL TECHNIQUES Commander SX AC/DC Drive Control  
CONTROL TECHNIQUES Epsilon Digital Servo AC/DC Drive Control  
CONTROL TECHNIQUES MDS Modular Servo AC/DC Drive Control  
Control Techniques Inc EN Servo Drive AC/DC Drive Control  
CONTROL TECHNIQUES Unidrive SP AC/DC Drive Control  
CONTROL TECHNIQUES. Mentor II DC AC/DC Drive Control  
CONTROL TECHNIQUES. Quantum III DC AC/DC Drive Control  
DAE Instrument SIO270 I/O Module  
DANIEL Measurement and Control Model 3804 Liquid Ultrasonic Flow Meter Sensor  
DATAFORTH Corporation isoLynx SLX200 Data Acquisition System  
DATANAB LLC BarioNet Controller  
DATAQ Instruments Inc DI-900MB Modules  
DELTA COMPUTER SYSTEMS RMC70 Series One- and Two-Axis Motion Controllers  
DGH CORPORATION D1000M single-channel data acquisition modules  
DGH CORPORATION D5000M Four Analog Input Modules  
DGH CORPORATION DIN-100 Series I/O  
ENDRESS HAUSER Flowtec AG Promag 53 Electromagnetic Flowmeter  
ENDRESS HAUSER Flowtec AG Promass 83 Coriolis Flowmeter  
EPRODUCTION SOLUTIONS Axxess 2.4 GHz Gateway Sensor Receiver  
EQUUSTEK SOLUTIONS DL2000-CMX Network Gateway  
EQUUSTEK SOLUTIONS DL3500 Network Gateway  
EQUUSTEK SOLUTIONS DL4000-DMX DF1 Network Gateway  
EQUUSTEK SOLUTIONS DL4000-MMX Network Gateway  
EQUUSTEK SOLUTIONS DL4500-MEDH+ Network Gateway  
EQUUSTEK SOLUTIONS DL4500-MEDH-485 Network Gateway  
EUROTHERM 2500 Intelligent Data Acquisition and Precision Multi-Loop PID Control  
EXEMYS LLC MODBUS Serial Server Network Gateway  
FLOWERVE CORPORATION Valtek Logix 2000 Digital Positioner Controller  
FLUENTA FGM  
FRABA POSITAL Absolute Rotary Encoder Series OCD-EM  
GALIL Motion Control IOC-7007 I/O Controller  
GSE Scale Systems Indicator 460 Series  
GSE Scale Systems Indicator 560 Series  
GSE Scale Systems Indicator 660 Series  
HACH COMPANY MOD I/O Modbus Interface  
HACH COMPANY sc1000 Multi-parameter Universal Controller  
HONEYWELL INTERNATIONAL Herculine Smart Actuators  
ICP DAS USA M-7000 Series Controllers  
INDUSTRIAL SCIENTIFIC CORPORATION 4800 Controller  
INSTROMET  
PRECISION DIGITAL CORPORATION Model PD865 Snooper RTU  
PRECISION DIGITAL CORPORATION PD500 Series Controller  
PROSOFT TECHNOLOGY MV156-MCM I/O Interface  
PROSOFT TECHNOLOGY MVI56-MCMR Network Gateway  
PROSOFT TECHNOLOGY MVI56-MNET Network Gateway  
ROXAR RFM  
SCHNEIDER ELECTRIC Advantys OTB Network Interface Module OTB 1E0 DM9LP  
SCHNEIDER ELECTRIC Advantys STB Network Interface Module  
SCHNEIDER ELECTRIC Altistart 48 Soft Starters Controller  
SCHNEIDER ELECTRIC Altivar Speed Drives ATV 58  
SCHNEIDER ELECTRIC Altivar Speed Drives ATV31  
SCHNEIDER ELECTRIC Altivar Speed Drives ATV38  
SCHNEIDER ELECTRIC Altivar Speed Drives ATV68  
SCHNEIDER ELECTRIC Altivar Speed Drives ATV71H  
SCHNEIDER ELECTRIC ASi Communications Gateways  
SCHNEIDER ELECTRIC Atrium PL7 Processors  
SCHNEIDER ELECTRIC Atrium Unity Processors TSX PCI 57  
SCHNEIDER ELECTRIC Carriere Digital 600 Retrofit Trip Relay  
SCHNEIDER ELECTRIC ConneXium Communications Gateways

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SCHNEIDER ELECTRIC DeviceNet Modbus Communication Gateways  
SCHNEIDER ELECTRIC Easergy Substation Control Unit Controller  
SCHNEIDER ELECTRIC Fipio Modbus Communications Gateways  
SCHNEIDER ELECTRIC Inductel Inductive Identification System XGK-S1.0421  
SCHNEIDER ELECTRIC Inductel Inductive Identification System XGKS1715503  
SCHNEIDER ELECTRIC LT6 Motor Control  
SCHNEIDER ELECTRIC MASTERPACT Circuit Breaker  
SCHNEIDER ELECTRIC Micro Communications Modules TSX ETZ 410  
SCHNEIDER ELECTRIC Micro Communications Modules TSX ETZ 510  
SCHNEIDER ELECTRIC Micro PL7 Processors  
SCHNEIDER ELECTRIC Momentum M1 PLC Processor Controller  
SCHNEIDER ELECTRIC Momentum M1E PLC Processor Controller  
SCHNEIDER ELECTRIC PM500 Power Meter  
SCHNEIDER ELECTRIC PM800 Power Meter  
SCHNEIDER ELECTRIC PM9 Power Meter  
SCHNEIDER ELECTRIC Power Logic Circuit Monitor CM3000  
SCHNEIDER ELECTRIC Power Logic Circuit Monitor CM4000  
SCHNEIDER ELECTRIC Premium Communications Modules TSX ETY 410  
SCHNEIDER ELECTRIC Premium Communications Modules TSX ETY 510  
SCHNEIDER ELECTRIC Premium family CPU module P571634  
SCHNEIDER ELECTRIC Premium family CPU module P573634  
SCHNEIDER ELECTRIC Premium family CPU module P574634  
SCHNEIDER ELECTRIC Premium family CPU module P575634  
SCHNEIDER ELECTRIC Premium PL7 TSX 57  
SCHNEIDER ELECTRIC Premium Unity Processors TSX P57  
SCHNEIDER ELECTRIC Preventa safety controllers Controller  
SCHNEIDER ELECTRIC Profibus DP Modbus Communications Gateways  
SCHNEIDER ELECTRIC Quantum Communications Modules 140 NOE 771 0  
SCHNEIDER ELECTRIC Quantum Communications Modules 140 NOE 771 1X  
SCHNEIDER ELECTRIC Quantum Concept Processors  
SCHNEIDER ELECTRIC Quantum family CPU module CPU65160  
SCHNEIDER ELECTRIC Quantum Unity Processors  
SCHNEIDER ELECTRIC SEPAM 20 Protection Relays  
SCHNEIDER ELECTRIC SEPAM 2000 Protection Relays  
SCHNEIDER ELECTRIC SEPAM 40 Protection Relays  
SCHNEIDER ELECTRIC SEPAM 80 Protection Relays  
SCHNEIDER ELECTRIC Tesys U Motor Control and Protection Units Controller  
Schneider Electric TSX 37 Controllers  
SCHNEIDER ELECTRIC Twido Programmable Controllers  
SCHNEIDER ELECTRIC Varlogic Power Factor Controller  
SCHNEIDER ELECTRIC Vigilohm Insulation Monitor  
SCHNEIDER ELECTRIC Vision System  
SCHNEIDER ELECTRIC Zelio Smart Relays  
SEALEVEL SYSTEMS Seal/O-410 I/O Module  
SEALEVEL SYSTEMS Seal/O-420 I/O Module  
SEALEVEL SYSTEMS Seal/O-430 I/O Module  
SEALEVEL SYSTEMS Seal/O-440 I/O Module  
SEALEVEL SYSTEMS Seal/O-450 I/O Module  
SEALEVEL SYSTEMS Seal/O-462 I/O Module  
SEALEVEL SYSTEMS Seal/O-463 I/O Module  
SEEKIRK A1700 Annunciator  
STANLEY ASSEMBLY TECHNOLOGIES QPM Sigma Controller Q3000  
WEED INSTRUMENT (EoTec) Modbus Remote I/O Electrical Interface  
ETC.

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