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## XYUYAO Driver Manual

### *Yuyao Changjiang Temperature Meters Protocol Driver*

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## XYUYAO technical specifications

### General information

XYUYAO driver allows you to connect to Yuyao Changjiang Temperature Meters of the XMTG Series such as the XMTG-918.

This driver expects that you connect to your device through its serial port. The device should behave as a slave in your RS-232/485 network. This driver supports serial-over-ethernet so you can alternatively use some kind of transparent ethernet/serial converter to reach your device using your LAN.

Suggested COM settings: 9600, N, 8, 2

**Important note:** Some firmwares of Yuyao meter may return invalid CRC values that are wrongly calculated based on previous measured values instead of on current measurement values. Because of this, this driver offers a parameter to ignore the CRC in the meter reply telegram, to avoid the driver to report CRC calculation error messages.

### Command list

#### Read PV and SV

**Description of this command:**

Obtains current value for meter process variable, setpoint and alarm status.

**Methods used to run this command:**

Analog Input

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

1-4

**Meaning of the DriverP0 parameter:**

Station number (0-15).

**Meaning of the DriverP1 parameter:**

0

**Meaning of the DriverP2 parameter:**

Ignore CRC flag (0=No, 1=Yes)

**Values that are returned:**

Value in PointValue (0) = PV (process variable value)

Value in PointValue (1) = SV (setpoint value)

Value in PointValue (2) = Alarm 1 Status

Value in PointValue (3) = Alarm 2 Status

#### Read AL-1 Upper Limit Alarm

**Description of this command:**

Obtains current value for meter AL-1 Upper Limit Alarm.

**Methods used to run this command:**

Analog Input

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

1

**Meaning of the DriverP0 parameter:**

Station number (0-15).

**Meaning of the DriverP1 parameter:**

1

**Meaning of the DriverP2 parameter:**

Ignore CRC flag (0=No, 1=Yes)

**Values that are returned:**

Value in PointValue (0) = AL-1 Upper Limit Alarm value

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## Read AL-2 Lower Limit Alarm

**Description of this command:**

Obtains current value for meter AL-2 Lower Limit Alarm.

**Methods used to run this command:**

Analog Input

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

1

**Meaning of the DriverP0 parameter:**

Station number (0-15).

**Meaning of the DriverP1 parameter:**

2

**Meaning of the DriverP2 parameter:**

Ignore CRC flag (0=No, 1=Yes)

**Values that are returned:**

Value in PointValue (0) = AL-2 Lower Limit Alarm value

## Read Pb Sensor Correct

**Description of this command:**

Obtains current value for meter Pb Sensor Correct.

**Methods used to run this command:**

Analog Input

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

1

**Meaning of the DriverP0 parameter:**

Station number (0-15).

**Meaning of the DriverP1 parameter:**

3

**Meaning of the DriverP2 parameter:**

Ignore CRC flag (0=No, 1=Yes)

**Values that are returned:**

Value in PointValue (0) = Pb Sensor Correct value

## Read P Speed Parameter

**Description of this command:**

Obtains current value for meter P Speed Parameter.

**Methods used to run this command:**

Analog Input

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

1

**Meaning of the DriverP0 parameter:**

Station number (0-15).

**Meaning of the DriverP1 parameter:**

4

**Meaning of the DriverP2 parameter:**

Ignore CRC flag (0=No, 1=Yes)

**Values that are returned:**

Value in PointValue (0) = P Speed Parameter value

## Read d Lang Parameter

**Description of this command:**

Obtains current value for meter d Lang Parameter.

**Methods used to run this command:**

Analog Input

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

1

**Meaning of the DriverP0 parameter:**

Station number (0-15).

**Meaning of the DriverP1 parameter:**

6

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## Meaning of the DriverP2 parameter:

Ignore CRC flag (0=No, 1=Yes)

## Values that are returned:

Value in PointValue (0) = d Lang Parameter value

## Read t Control Period

### Description of this command:

Obtains current value for meter t Control Period.

### Methods used to run this command:

Analog Input

### Number of points accepted by this command:

1

### Meaning of the DriverP0 parameter:

Station number (0-15).

### Meaning of the DriverP1 parameter:

7

### Meaning of the DriverP2 parameter:

Ignore CRC flag (0=No, 1=Yes)

### Values that are returned:

Value in PointValue (0) = t Control Period value

## Read Filt Digital

### Description of this command:

Obtains current value for meter Filt Digital.

### Methods used to run this command:

Analog Input

### Number of points accepted by this command:

1

### Meaning of the DriverP0 parameter:

Station number (0-15).

### Meaning of the DriverP1 parameter:

8

### Meaning of the DriverP2 parameter:

Ignore CRC flag (0=No, 1=Yes)

### Values that are returned:

Value in PointValue (0) = Filt Digital value

## Read Hy Drop in Level

### Description of this command:

Obtains current value for meter Hy Drop in Level.

### Methods used to run this command:

Analog Input

### Number of points accepted by this command:

1

### Meaning of the DriverP0 parameter:

Station number (0-15).

### Meaning of the DriverP1 parameter:

9

### Meaning of the DriverP2 parameter:

Ignore CRC flag (0=No, 1=Yes)

### Values that are returned:

Value in PointValue (0) = Hy Drop in Level value

## Read dP Location

### Description of this command:

Obtains current value for meter dP Location.

### Methods used to run this command:

Analog Input

### Number of points accepted by this command:

1

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**Meaning of the DriverP0 parameter:**

Station number (0-15).

**Meaning of the DriverP1 parameter:**

10

**Meaning of the DriverP2 parameter:**

Ignore CRC flag (0=No, 1=Yes)

**Values that are returned:**

Value in PointValue (0) = dP Location value

## Read outHOutput Upper

**Description of this command:**

Obtains current value for meter outHOutput Upper.

**Methods used to run this command:**

Analog Input

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

1

**Meaning of the DriverP0 parameter:**

Station number (0-15).

**Meaning of the DriverP1 parameter:**

11

**Meaning of the DriverP2 parameter:**

Ignore CRC flag (0=No, 1=Yes)

**Values that are returned:**

Value in PointValue (0) = outHOutput Upper value

## Read outL Output Lower

**Description of this command:**

Obtains current value for meter outL Output Lower.

**Methods used to run this command:**

Analog Input

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

1

**Meaning of the DriverP0 parameter:**

Station number (0-15).

**Meaning of the DriverP1 parameter:**

12

**Meaning of the DriverP2 parameter:**

Ignore CRC flag (0=No, 1=Yes)

**Values that are returned:**

Value in PointValue (0) = outL Output Lower value

## Read At Control Method

**Description of this command:**

Obtains current value for meter At Control Method.

**Methods used to run this command:**

Analog Input

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

1

**Meaning of the DriverP0 parameter:**

Station number (0-15).

**Meaning of the DriverP1 parameter:**

13

**Meaning of the DriverP2 parameter:**

Ignore CRC flag (0=No, 1=Yes)

**Values that are returned:**

Value in PointValue (0) = At Control Method value

## Read Lock Parameter Edit Layer

**Description of this command:**

Obtains current value for meter Lock Parameter Edit Layer.

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## Methods used to run this command:

Analog Input

## Number of points accepted by this command:

1

## Meaning of the DriverP0 parameter:

Station number (0-15).

## Meaning of the DriverP1 parameter:

14

## Meaning of the DriverP2 parameter:

Ignore CRC flag (0=No, 1=Yes)

## Values that are returned:

Value in PointValue (0) = Lock Parameter Edit Layer value

## Read Sn Input specification

### Description of this command:

Obtains current value for meter Sn Input specification.

### Methods used to run this command:

Analog Input

### Number of points accepted by this command:

1

### Meaning of the DriverP0 parameter:

Station number (0-15).

### Meaning of the DriverP1 parameter:

15

### Meaning of the DriverP2 parameter:

Ignore CRC flag (0=No, 1=Yes)

### Values that are returned:

Value in PointValue (0) = Sn Input specification value

## Read oP-A Output Method

### Description of this command:

Obtains current value for meter oP-A Output Method.

### Methods used to run this command:

Analog Input

### Number of points accepted by this command:

1

### Meaning of the DriverP0 parameter:

Station number (0-15).

### Meaning of the DriverP1 parameter:

16

### Meaning of the DriverP2 parameter:

Ignore CRC flag (0=No, 1=Yes)

### Values that are returned:

Value in PointValue (0) = oP-A Output Method value

## Read AL-P Alarm Output Define

### Description of this command:

Obtains current value for meter AL-P Alarm Output Define.

### Methods used to run this command:

Analog Input

### Number of points accepted by this command:

1

### Meaning of the DriverP0 parameter:

Station number (0-15).

### Meaning of the DriverP1 parameter:

18

### Meaning of the DriverP2 parameter:

Ignore CRC flag (0=No, 1=Yes)

### Values that are returned:

Value in PointValue (0) = AL-P Alarm Output Define value

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## Read Cool Function Switch

**Description of this command:**

Obtains current value for meter Cool Function Switch.

**Methods used to run this command:**

Analog Input

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

1

**Meaning of the DriverP0 parameter:**

Station number (0-15).

**Meaning of the DriverP1 parameter:**

19

**Meaning of the DriverP2 parameter:**

Ignore CRC flag (0=No, 1=Yes)

**Values that are returned:**

Value in PointValue (0) = Cool Function Switch value

## Read P-SH Upper Display

**Description of this command:**

Obtains current value for meter P-SH Upper Display.

**Methods used to run this command:**

Analog Input

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

1

**Meaning of the DriverP0 parameter:**

Station number (0-15).

**Meaning of the DriverP1 parameter:**

20

**Meaning of the DriverP2 parameter:**

Ignore CRC flag (0=No, 1=Yes)

**Values that are returned:**

Value in PointValue (0) = P-SH Upper Display value

## Read P-SL Lower Display

**Description of this command:**

Obtains current value for meter P-SL Lower Display.

**Methods used to run this command:**

Analog Input

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

1

**Meaning of the DriverP0 parameter:**

Station number (0-15).

**Meaning of the DriverP1 parameter:**

21

**Meaning of the DriverP2 parameter:**

Ignore CRC flag (0=No, 1=Yes)

**Values that are returned:**

Value in PointValue (0) = P-SL Lower Display value

## Read Meter Address

**Description of this command:**

Obtains current value for meter Address.

**Methods used to run this command:**

Analog Input

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

1

**Meaning of the DriverP0 parameter:**

Station number (0-15).

**Meaning of the DriverP1 parameter:**

22

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## Meaning of the DriverP2 parameter:

Ignore CRC flag (0=No, 1=Yes)

## Values that are returned:

Value in PointValue (0) = Address value

## Write SV

### Description of this command:

Sets new value for SV.

### Methods used to run this command:

Analog Output

### Number of points accepted by this command:

1

### Meaning of the DriverP0 parameter:

Station number (0-15).

### Meaning of the DriverP1 parameter:

0

### Meaning of the DriverP2 parameter:

Ignore CRC flag (0=No, 1=Yes)

### Values that are sent:

Value in PointValue (0) = New SV value

## Write Meter Address

### Description of this command:

Sets new meter Address.

### Methods used to run this command:

Analog Output

### Number of points accepted by this command:

1

### Meaning of the DriverP0 parameter:

Station number (0-15).

### Meaning of the DriverP1 parameter:

22

### Meaning of the DriverP2 parameter:

Ignore CRC flag (0=No, 1=Yes)

### Values that are sent:

Value in PointValue (0) = Address value

## 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  
[2002] CONFIG (DataType): Digital inputs are not supported by this driver  
[2003] CONFIG (DataType): Digital outputs are not supported by this driver  
[3053] CONFIG (P0): Invalid device address (0-15)  
[8046] CONFIG (Remote): Checksum error

## Supported devices

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

XMTG Series  
XMTG-918

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