XALGODUE Driver Manual

Algodue UPM Series Universal Power Meters Driver

CPKSoft Engineering

Process Monitoring and Industrial Automation Software

Index

1. Introduction

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This driver is included with all unlimited licenses of TAS-HMITalk. It is not sold separately. It requires the TAS-HMITalk ActiveX to work, therefore it cannot be used as a stand-alone driver.

If you use this driver in your applications, you need to include the xalgodue.tlk in the set of files that you distribute. This file must be located in the same folder where the hmitalk.ocx file is registered in order to be found by the activex when the applications are executed.

The source-code for the xalgodue.tlk driver is available in plain-C language for additional USD 299 if you own a license of TAS-HMITalk 8.04 or higher.

Refer to the following link to visit the xalgodue driver page at CPKSoft Engineering website: http://www.cpksoft.com/tabid/55/ProductID/11/PageIndex/1/Default.aspx.

Visit this link if you want to see a complete list of drivers that are currently available for TAS-HMITak: http://www.cpksoft.com/Drivers/tabid/55/Default.aspx.

Also, refer to this link if you are interested in purchasing a license of the most recent version of TAS-HMITalk: http://www.cpksoft.com/Products/tabid/54/Default.aspx.

We welcome your comments about this document. You can reach us by e-mail at contact @ cpksoft.com.

2. Driver details

2.1. Driver overview

XALGODUE driver allows you to connect with UPM320 Universal Power Meter from Algodue Elettronica. Communication with the UPM320 takes place by means of an asynchronous serial transmission, half duplex RS-485. The RS485 standard enables a multi-drop connection, which is the connection of several instruments to a host with only one cable. Use isolated converters to connect the instruments to the PC.

2.2. Supported devices

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

ALGODUE UPM300 Universal Power Meter
ALGODUE UPM320 Universal Power Meter

3. Command list

3.1. Read Measured Values

Description of this command:

This command reads all the available measured values.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-32

Meaning of the DriverP0 parameter:

Instrument Identification (0-255)

Meaning of the DriverP1 parameter:

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Values that are returned:

Value in PointValue (0) = THREE-PHASE SYSTEM VOLTAGE (rms)
Value in PointValue (1) = PHASE L1 VOLTAGE (rms)
Value in PointValue (2) = PHASE L2 VOLTAGE (rms)
Value in PointValue (3) = PHASE L3 VOLTAGE (rms)
Value in PointValue (4) = LINE L1-L2 VOLTAGE (rms)
Value in PointValue (5) = LINE L2-L3 VOLTAGE (rms)
Value in PointValue (6) = LINE L3-L1 VOLTAGE (rms)
Value in PointValue (7) = THREE-PHASE SYSTEM CURRENT (rms)
Value in PointValue (8) = LINE L1 CURRENT (rms)
Value in PointValue (9) = LINE L2 CURRENT (rms)
Value in PointValue (10) = LINE L3 CURRENT (rms)
Value in PointValue (11) = THREE-PHASE SYSTEM POWER FACTOR
Value in PointValue (12) = PHASE L1 POWER FACTOR
Value in PointValue (13) = PHASE L2 POWER FACTOR
Value in PointValue (14) = PHASE L3 POWER FACTOR
Value in PointValue (15) = THREE-PHASE SYSTEM APPARENT POWER
Value in PointValue (16) = PHASE L1 APPARENT POWER
Value in PointValue (17) = PHASE L2 APPARENT POWER
Value in PointValue (18) = PHASE L3 APPARENT POWER
Value in PointValue (19) = THREE-PHASE SYSTEM ACTIVE POWER
Value in PointValue (20) = PHASE L1 ACTIVE POWER
Value in PointValue (21) = PHASE L2 ACTIVE POWER
Value in PointValue (22) = PHASE L3 ACTIVE POWER
Value in PointValue (23) = THREE-PHASE SYSTEM REACTIVE POWER
Value in PointValue (24) = PHASE L1 REACTIVE POWER

Value in PointValue (25) = PHASE L2 REACTIVE POWER
Value in PointValue (26) = PHASE L3 REACTIVE POWER
Value in PointValue (27) = 3-PHASE SYSTEM ACTIVE ENERGY
Value in PointValue (28) = 3-PHASE SYSTEM REACTIVE ENERGY
Value in PointValue (39) = FREQUENCY
Value in PointValue (30) = AVERAGE POWER
Value in PointValue (31) = AVERAGE CURRENT

3.2. Read Maximum Values

Description of this command:

This command reads all the maximum values.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-5

Meaning of the DriverP0 parameter:

Instrument Identification (0-255)

Meaning of the DriverP1 parameter:

97

Values that are returned:

Value in PointValue (0) = MAXIMUM I1
Value in PointValue (1) = MAXIMUM I2
Value in PointValue (2) = MAXIMUM I3
Value in PointValue (3) = MAXIMUM Pav
Value in PointValue (4) = MAXIMUM Iav

4. Appendices

4.1. Error messages

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

This list does not include some error messages that can be returned by the activex component while attempting to establish a connection.

[1005] DRIVER (Internal): Invalid driver stage
[1300] PROTOCOL (Timeout): No answer
[1433] PROTOCOL (Format): Validation error in device response
[2001] CONFIG (DataType): Analog outputs are not supported by this driver
[2002] CONFIG (DataType): Digital inputs are not supported by this driver
[2003] CONFIG (DataType): Digital outputs are not supported by this driver
[2258] CONFIG (NumValues): Too many values requested (max=32)
[2262] CONFIG (NumValues): Too many values requested (max=5)
[3014] CONFIG (P0): Invalid device address (0-255)
[3508] CONFIG (P1): Invalid command

4.2. Keywords list

The following list shows a set of words directly related to this driver.

"ALGODUE, Meter, Meters, Power, Series, Universal, UPM, UPM300, UPM320".