

Industrial communication solutions for Windows

XIGPL100 Driver Manual

IG Instrumentos DataLogger 1 Channel Pluviometer Driver

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XIGPL100 technical specifications

General information

XIGPL100 driver reads stored memory from IG Instrumentos PLU100 1 Channel Pluviometers. This driver implements a modified version of the Modbus RTU protocol to download the pluviometer memory.

Important note:

When connecting via modem, you should set the RTS signal during the communication. This can be done by setting the RTSEnable argument when calling the read and write methods. A minimum of 5000ms in the CommTimeout property is also recommended.

Command list

Download Pluviometer Memory

Description of this command:

Reads pluviometer memory contents.

Methods used to run this command:

Analog Input

Number of points accepted by this command:

15

Meaning of the DriverP0 parameter:

Pluviometer address (1-255)

Meaning of the DriverP1 parameter:

0

Meaning of the DriverP2 parameter:

0 for direct connection. 1 for RS-485 connection. 2 for radio connection. 3 for modem connection.

Meaning of the DriverP3 parameter:

Number of retries for each request (usually 10) (0-100).

Meaning of the DriverP4 parameter:

Number of records in each request (usually 4) (1-48).

Meaning of the DriverP5 parameter:

Dialing timeout in seconds when using modem connection (P2=3).

Meaning of the DriverP6 parameter:

Dial string when using modem connection (P2=3).

Meaning of the DriverP7 parameter:

Initial pointer address (256-65531). If empty, the initial pointer address is read from a file whose name is formed by combining P9, the device address and the .pos extension. This file is automatically maintained by the driver.

Meaning of the DriverP8 parameter:

Update data logger date (0=No, 1=Yes)

Meaning of the DriverP9 parameter:

Local filename (with path) where memory contents are downloaded. The actual filename is formed by combining P9, the device address and the .txt extension. If starts with '@', p9 is assumed only as the path and memory.tmp and memory.pos are used.

Values that are returned:

Value in PointValue (0) = YEAR IN PLUVIOMETER CLOCK (0-3)
Value in PointValue (1) = MONTH IN PLUVIOMETER CLOCK (1-12)
Value in PointValue (2) = DAY IN PLUVIOMETER CLOCK (1-31)
Value in PointValue (3) = HOUR IN PLUVIOMETER CLOCK (0-23)
Value in PointValue (4) = MINUTES IN PLUVIOMETER CLOCK (0-59)
Value in PointValue (5) = SECONDS IN PLUVIOMETER CLOCK (0-59)
Value in PointValue (6) = NUMBER OF RECORDS READ (1-13055)
Value in PointValue (7) = MEMORYSTART (typically 256)
Value in PointValue (8) = MEMORYEND (typically 65535)
Value in PointValue (9) = NEXT MEMORYPOINTER (256 to 65535)

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Value in PointValue (10) = RECORDLENGTH (5 for this pluviometer)
Value in PointValue (11) = DEVICE ADDRESS
Value in PointValue (12) = TOTAL DOWNLOAD TIME (SEC)
Value in PointValue (13) = ERROR IN HEADER FLAG (0 or 1)
Value in PointValue (14) = DOWNLOAD INTERRUPTED FLAG (0 or 1)
Value in PointValue (15) = DATA LOGGER TYPE

RECORD FORMAT:

- 1) RECORD INDEX (1-13055)
- 2) YEAR (0-3)
- 3) MONTH (1-12)
- 4) DAY (1-31)
- 5) HOURS (0-23)
- 6) MINUTES (0-59)
- 7) LOW BATTERY
- 8) TEST
- 9) RESERVED 1
- 10) RESERVED 2
- 11) PLUVIOMETER COUNTER (0-4095)

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
[1206] DRIVER (System): Error opening file specified in P9
[1300] PROTOCOL (Timeout): No answer
[1307] PROTOCOL (Timeout): No answer when dialing
[1421] PROTOCOL (Format): Negative acknowledge received from device
[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
[2116] CONFIG (NumValues): Invalid number of values (must be 16)
[2123] CONFIG (NumValues): Invalid number of values (must be 37)
[2125] CONFIG (NumValues): Invalid number of values (must be 4)
[3022] CONFIG (P0): Invalid device address (1-255)
[3509] CONFIG (P1): Invalid command (0 only)
[4024] CONFIG (P2): Invalid block size (1-7)
[4048] CONFIG (P2): Invalid connection mode (0 to 3 only)
[4549] CONFIG (P3): Invalid number of retries (0-100)
[5021] CONFIG (P4): Invalid number of records (1-48)
[5504] CONFIG (P5): Invalid dialing timeout (5-180)
[6005] CONFIG (P6): Dial string is empty
[6503] CONFIG (P7): Hang-up string is empty
[7004] CONFIG (P8): RTU modem string is empty
[7005] CONFIG (P8): RTU modem string too long (max=63 chars)
[7503] CONFIG (P9): Local filename undefined
[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:

IG INSTRUMENTOS PLU100 Pluviometers

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