

Industrial communication solutions for Windows

XCAMMESA Driver Manual

Driver for collecting Cewe and ION meters in Cammesa format

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XCAMMESA technical specifications

General information

XCAMMESA driver allows you to collect historic information from CEWE Instruments and Power measurement ION 8300/8400/8500 meters in a format known as CAMMESA, as described at the end of this help. CAMMESA is a company who administers the electrical power market in Argentina.

Command list

Collect Cewe Meter Historic Information

Description of this command:

Reads the available historic information for a given number of channels from the Cewe meter's memory starting at a given date and stores the collected values in an ASCII file with a predefined CAMMESA format in the hard disk.

Methods used to run this command:

Analog Input

1-6 (in fact, number of meter channels being read, plus one for the meter serial number). The maximum number of meter channels that can be read with this command is 5, plus the serial number.

Meaning of the DriverP0 parameter:

Identifies the meter serial number. It is assumed that serial numbers have the Cxxxxxx format, where xxxxxx is the numeric information supplied by this parameter. If 0, means that no serial number is indicated in the sign-on message. It can be additionally entered as a number with the format yyxxxxxx where: yy = ASCII code of the first letter in the serial number. xxxxxx = The remaining six numeric digits.

Meaning of the DriverP1 parameter:

0

Meaning of the DriverP2 parameter:

Indicates how many meter channels must be read from the meter (1-5). If left to 0, a value of 1 will be assumed.

Meaning of the DriverP3 parameter:

Indicates if the date specification must be detailed for each sample (0=NO, 1=YES). If 1 is selected, the file will contain 'full date information'.

Meaning of the DriverP4 parameter:

Indicates how many times the communication must be retried before abandoning it. A communication is retried when any of these two errors appear:

- A checksum error is detected in the incoming message.
- The timeout period elapsed without receiving a reply.

Meaning of the DriverP5 parameter:

Validate replies even with a missing checksum (0=No, 1=Yes).

Meaning of the DriverP6 parameter:

This text parameter is used to define whether you are communicating via RS-232 or via the opto port with the Cewe device.

- Leave empty to communicate via RS-232.
- Type the word 'OPTO' to communicate via the opto port.

Meaning of the DriverP7 parameter:

Indicates the full filename where the meter configuration file is located, i.e. "C:\METERS\MET0001.DAT". This directory entry will be also used by default to store the .PRN log files only if the HMITalk1.DriverP8 is left empty.

Meaning of the DriverP8 parameter:

Indicates a valid file name with full path specification for the .PRN log file (containing historic data). If this property is left empty, the driver will search for a valid filename with a full path specification inside the .DAT configuration file. If that entry is omitted, the log file will be created with the same

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file name and directory entry of the .DAT file but with a .PRN extension. See a description of the .DAT file at the end of this help.

Meaning of the DriverP9 parameter:

This property should only be set when the communication is established through the opto port. Sets an empiric delay expressed in milliseconds between the last transmission made at 300 bauds and the following message with a different baudrate. Change this value only if you continuously get a timeout error after a few messages were sent to the power meter with no problem. Its usual value is 150.

Values that are returned:

Value in PointValue (0) = The meter serial number whose memory was collected as a combined number of the form XYYYYYYY, where: XX = ASCII code of the first letter in the serial number. YYYYYY = The remaining six numeric digits.
Value in PointValue (1) = Factor used for channel 1
Value in PointValue (2) = Factor used for channel 2 (if required and available)
Value in PointValue (3) = Factor used for channel 3 (if required and available)
Value in PointValue (4) = Factor used for channel 4 (if required and available)
Value in PointValue (5) = Factor used for channel 5 (if required and available)

Collect ION 8300/8400/8500 Meter Historic Information

Description of this command:

Reads the available historic information for a given number of channels from the ION meter's memory starting at a given starting register and stores the collected values in an ASCII file with a predefined CAMMESA format in the hard disk.

Methods used to run this command:

Analog Input

Number of points accepted by this command:

1

Meaning of the DriverP0 parameter:

Identifies the meter's device ID (0-9999)

Meaning of the DriverP1 parameter:

1

Meaning of the DriverP2 parameter:

Indicates how many meter channels must be read from the meter (1-16). If left to 0, a value of 1 will be assumed.

Meaning of the DriverP3 parameter:

Indicates if the date specification must be detailed for each sample (0=NO, 1=YES). If 1 is selected, the file will contain 'full date information'.

Meaning of the DriverP4 parameter:

Indicates how many times the communication must be retried before abandoning it. A communication is retried when any of these two errors appear:

- A checksum error is detected in the incoming message.
- The timeout period elapsed without receiving a reply.

Meaning of the DriverP5 parameter:

Indicates the Data Recorder to be read (1-40).

Meaning of the DriverP6 parameter:

Not used.

Meaning of the DriverP7 parameter:

Indicates the full filename where the meter configuration file is located, i.e. "C:\METERS\MET0001.DAT". This directory entry will be also used by default to store the .PRN log files only if the HMITalk1.DriverP8 is left empty.

Meaning of the DriverP8 parameter:

Indicates a valid file name with full path specification for the .PRN log file (containing historic data). If this property is left empty, the driver will search for a valid filename with a full path specification inside the .DAT configuration file. If that entry is omitted, the log file will be created with the same file name and directory entry of the .DAT file but with a .PRN extension. See a description of the .DAT file at the end of this help.

Meaning of the DriverP9 parameter:

This property should only be set when the communication is established through the opto port. Sets an empiric delay expressed in milliseconds between the last transmission made at 300 bauds and the following message with a different baudrate. Change this value only if you continuously get a timeout error after a few messages were sent to the power meter with no problem. Its usual value is 150.

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Values that are returned:

Value in PointValue (0) = Ignored.

Cewe .DAT file format description

This file is used to supply the following information as topics under the `[[HistoricInfo]` section name (see the example at the end of this explanation):

LogFile:

Name of the historic file (also called 'log file'), where the sequence of values for the meter channels will be stored. This field can be any valid filename with a full path specification if required. If this field is omitted or if an asterisk * is used as the filename, the driver will search for a valid filename with a full path specification in the "HMITalk1.DriverP8" property. If this property is not properly set then a log file will be created with the same file name and directory entry of the .DAT file but with a .PRN extension.

Header:

Header to be used when creating the log file. Can be any ASCII string of up to 246 characters. If omitted, the default header "Time" will be used. Multiline headers are allowed by splitting each line with a sequence of ' | ' characters. Besides, if you are having trouble with ' " ' characters, you can use ' { ' or ' } ' instead which will be automatically replaced with ' " '.

TimeCorrection:

Hours to be added or subtracted to the time saved in the historic file.

Synchronize:

Indicates if the meter date must be synchronized with the PC time when the memory collection takes place.

LastDate:

Last date that was read (updated automatically). This date will be used also to let the driver know what is the next date to be read. Uses the format `YYMMDD,hhmm` and should not be manipulated manually (unless you are creating the .DAT file). If this field is omitted, it will be assumed `950101,0000 (01/01/95,00:00)`. This lastdate determines that the next reading will start in this date up to the last available information in the CEWE buffer memory (unless the StopDate topic is set with some date information).

StopDate:

This topic indicates what is the last date that should be read before stop reading. If it doesn't exist or if it is empty, the reading will stop automatically when the last available information in the meter has been retrieved. Uses the format `YYMMDD,hhmm`.

Important note: This topic is valid only for one reading

session. After the reading has been completed, the date will be cleared.

Password:

Indicates the password to be used as a four-digits hexadecimal value. If omitted, the password default used is `0000`.

SamplesInBlock:

Number between 2 and 16 indicating how many groups of samples must be transmitted by the meter on each reply. If the expected reply is too long, the meter might truncate causing a timeout error in the driver. If this is the case, try a lower value for SamplesInBlock. If omitted, 12 is assumed.

Decimals1...5 These values indicate how many decimals should be used when writing each meter channel to the log-file. Can range from 0 to 4 decimals. If omitted, 3 decimals are assumed.

Factor1...5 These values are read from the meter memory and indicate the factors to divide the meter channel values with before they are sent to the log-file. Can range from 0 to 32767.

LastSecondsCounter:

Value automatically maintained where the driver stores a number of seconds that is related to the date of the last record collected.

The format used to give this information is similar to the one used in a typical Windows .INI file:

```
[[HistoricInfo] LogFile=C:\METERS\MET0001.PRN Header="This will be my header"
LastDate=YYMMDD,hhmm SamplesInBlock=12 Decimals1=0 Decimals2=1
```

Example:

```
[[HistoricInfo] LogFile=C:\METERS\MET0001.PRN Header="Time ", "TRNGR51P", "TRNGR51S"
LastDate=950606,2015
```

(The rest of the fields can be omitted).

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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
[1101] DRIVER (Port): Error manipulating baud-rate for opto port communication
[1102] DRIVER (Port): Error reading current baud-rate from port
[1300] PROTOCOL (Timeout): No answer
[1433] PROTOCOL (Format): Validation error in device response
[1434] PROTOCOL (Format): Error in status byte
[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
[3031] CONFIG (P0): Invalid device address (1-9999)
[3042] CONFIG (P0): Invalid serial number
[3508] CONFIG (P1): Invalid command
[8131] CONFIG (Remote): Error restoring setting original baud-rate for Opto port
DataRec invalido
Error de timeout
Error obteniendo factores de escala y unidades
Excepcion ION: Error interno
Excepcion ION: Invalido
Excepcion ION: Metodo invalido
Excepcion ION: No disponible
Excepcion ION: No existe
Excepcion ION: No soportado
Excepcion ION: Overflow
Excepcion ION: Perdida de precision
Excepcion ION: Posible clave invalida
Excepcion ION: Underflow
Fecha o DataRec invalidos
Formato o DataRec invalidos
Internal error:Invalid stage
Password no aceptado por el equipo
Posicion o DataRec invalidos (a)
Posicion o DataRec invalidos (b)

Supported devices

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

CEWE INSTRUMENTS Prometer Meters
POWER MEASUREMENT Ltd ION 8300 Meters
POWER MEASUREMENT Ltd ION 8400 Meters
POWER MEASUREMENT Ltd ION 8500 Meters

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