XIDECONC Driver Manual

Idec Open Net Controller Protocol Driver

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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 xideconc.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.

Refer to the following link to visit the xideconc driver page at CPKSoft Engineering website: http://www.cpksoft.com/tabid/55/ProductID/50/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

XIDECONC driver was designed to support the IDEC OpenNet controllers.

This driver is a modified version of the XIDECM3 driver originally developed by Carlos Perez Kuper that has been adapted by Mr. Jaime Valtierra Franchini from Main Ingenieros Ltda., Chile, to support the IDEC OpenNet Controller Communication Protocol.

2.2. Supported devices

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

IDEC OpenNet Controllers.

3. Command list

3.1. Read Inputs Status (X)

Description of this command:

This command is used to read the current status of digital inputs.

Type of data handled by this command:

Digital Input

Number of points accepted by this command:

1-480

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

1

Meaning of the DriverP2 parameter:

Indicates the first input to be read (0-597).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are returned:

Value in PointValue (0) = First value read
Value in PointValue (1) = Second value read
Value in PointValue (2) = Third value read
...
Value in PointValue (n-1) = Last value read

3.2. Read Outputs Status (Y)

Description of this command:

This command is used to read the current status of digital outputs.

Type of data handled by this command:

Digital Input

Number of points accepted by this command:

1-480

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

2

Meaning of the DriverP2 parameter:

Indicates the first output to be read (0-597).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are returned:

Value in PointValue (0) = First value read
Value in PointValue (1) = Second value read
Value in PointValue (2) = Third value read
...
Value in PointValue (n-1) = Last value read

3.3. Read Internal Relays Status (M)

Description of this command:

This command is used to read the current status of internal relays.

Type of data handled by this command:

Digital Input

Number of points accepted by this command:

1-1000

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

3

Meaning of the DriverP2 parameter:

Indicates the first internal relay to be read (0-2557 or 8000-8237).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are returned:

Value in PointValue (0) = First value read
Value in PointValue (1) = Second value read
Value in PointValue (2) = Third value read
...
Value in PointValue (n-1) = Last value read

3.4. Read Link Relays Status (O)

Description of this command:

This command is used to read the current status of internal relays.

Type of data handled by this command:

Digital Input

Number of points accepted by this command:

1-1000

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

4

Meaning of the DriverP2 parameter:

Indicates the first internal relay to be read (0-8477).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are returned:

Value in PointValue (0) = First value read
Value in PointValue (1) = Second value read
Value in PointValue (2) = Third value read
...
Value in PointValue (n-1) = Last value read

3.5. Read Shift Registers Status (R)

Description of this command:

This command is used to read the current status of shift registers.

Type of data handled by this command:

Digital Input

Number of points accepted by this command:

1-256

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

5

Meaning of the DriverP2 parameter:

Indicates the first shift register to be read (0-255).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are returned:

Value in PointValue (0) = First value read
Value in PointValue (1) = Second value read
Value in PointValue (2) = Third value read
...
Value in PointValue (n-1) = Last value read

3.6. Read Timer Preset Values (T)

Description of this command:

This command is used to read the current values of timer presets.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-100

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

10

Meaning of the DriverP2 parameter:

Indicates the first timer preset value to be read (0-255).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are returned:

Value in PointValue (0) = First value read
Value in PointValue (1) = Second value read
Value in PointValue (2) = Third value read
...
Value in PointValue (n-1) = Last value read

3.7. Read Timer Current Values (t)

Description of this command:

This command is used to read the current values of timers.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-100

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

11

Meaning of the DriverP2 parameter:

Indicates the first timer preset value to be read (0-255).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are returned:

Value in PointValue (0) = First value read
Value in PointValue (1) = Second value read
Value in PointValue (2) = Third value read
...
Value in PointValue (n-1) = Last value read

3.8. Read Counter Preset Values (C)

Description of this command:

This command is used to read the current values of counter presets.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-100

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

12

Meaning of the DriverP2 parameter:

Indicates the first counter preset value to be read (0-255).

Values that are returned:

Value in PointValue (0) = First value read
Value in PointValue (1) = Second value read
Value in PointValue (2) = Third value read

...
Value in PointValue (n-1) = Last value read

3.9. Read Counter Current Values (c)

Description of this command:

This command is used to read the current values of counters.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-100

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

13

Meaning of the DriverP2 parameter:

Indicates the first counter current value to be read (0-255).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are returned:

Value in PointValue (0) = First value read
Value in PointValue (1) = Second value read
Value in PointValue (2) = Third value read
...
Value in PointValue (n-1) = Last value read

3.10. Read Data Register Values (D)

Description of this command:

This command is used to read the current values of data registers.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-100

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

14

Meaning of the DriverP2 parameter:

Indicates the first data register to be read (0-8999).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are returned:

Value in PointValue (0) = First value read
Value in PointValue (1) = Second value read
Value in PointValue (2) = Third value read
...
Value in PointValue (n-1) = Last value read

3.11. Read Calendar/Clock (W)

Description of this command:

This command is used to read the calendar/clock information.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-7

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

15

Meaning of the DriverP2 parameter:

Indicates the first data register to be read (0-6).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are returned:

Value in PointValue (0) = Year
Value in PointValue (1) = Month
Value in PointValue (2) = Day
Value in PointValue (3) = Day of Week
Value in PointValue (4) = Hour
Value in PointValue (5) = Minute
Value in PointValue (6) = Second

3.12. Write Inputs Status (X) bit mode

Description of this command:

This command is used to modify the current status of digital inputs.

Type of data handled by this command:

Digital Output

Number of points accepted by this command:

1

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

1

Meaning of the DriverP2 parameter:

Indicates the first input to be modified (0-255).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are sent:

Value in PointValue (0) = First value to be sent to the PLC
Value in PointValue (1) = Second value to be sent to the PLC
Value in PointValue (2) = Third value to be sent to the PLC
...
Value in PointValue (n-1) = Last value to be sent to the PLC

3.13. Write Outputs Status (Y) bit mode

Description of this command:

This command is used to modify the current status of digital outputs.

Type of data handled by this command:

Digital Output

Number of points accepted by this command:

1

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

2

Meaning of the DriverP2 parameter:

Indicates the first output to be modified (0-255).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are sent:

Value in PointValue (0) = First value to be sent to the PLC
Value in PointValue (1) = Second value to be sent to the PLC
Value in PointValue (2) = Third value to be sent to the PLC
...
Value in PointValue (n-1) = Last value to be sent to the PLC

3.14. Write Internal Relays Status (M) bit mode

Description of this command:

This command is used to modify the current status of internal relays.

Type of data handled by this command:

Digital Output

Number of points accepted by this command:

1

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

3

Meaning of the DriverP2 parameter:

Indicates the first internal relay to be modified (0-2257 or 8000-8237).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are sent:

Value in PointValue (0) = First value to be sent to the PLC
Value in PointValue (1) = Second value to be sent to the PLC
Value in PointValue (2) = Third value to be sent to the PLC
...
Value in PointValue (n-1) = Last value to be sent to the PLC

3.15. Write Link Relays Status (O) bit mode

Description of this command:

This command is used to modify the current status of link relays.

Type of data handled by this command:

Digital Output

Number of points accepted by this command:

1

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

3

Meaning of the DriverP2 parameter:

Indicates the first internal relay to be modified (0-8477).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are sent:

Value in PointValue (0) = First value to be sent to the PLC
Value in PointValue (1) = Second value to be sent to the PLC
Value in PointValue (2) = Third value to be sent to the PLC
...
Value in PointValue (n-1) = Last value to be sent to the PLC

3.16. Write Shift Registers Status (R)

Description of this command:

This command is used to modify the current status of shift registers.

Type of data handled by this command:

Digital Output

Number of points accepted by this command:

1

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

82

Meaning of the DriverP2 parameter:

Indicates the first shift register to be modified (0-255).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are sent:

Value in PointValue (0) = First value to be sent to the PLC
Value in PointValue (1) = Second value to be sent to the PLC
Value in PointValue (2) = Third value to be sent to the PLC
...
Value in PointValue (n-1) = Last value to be sent to the PLC

3.17. Write Timer Preset Values (T)

Description of this command:

This command is used to modify the current values of timer presets.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-100

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

10

Meaning of the DriverP2 parameter:

Indicates the first timer preset value to be modified (0-255).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are sent:

Value in PointValue (0) = First value to be sent to the PLC
Value in PointValue (1) = Second value to be sent to the PLC
Value in PointValue (2) = Third value to be sent to the PLC
...
Value in PointValue (n-1) = Last value to be sent to the PLC

3.18. Write Counter Preset Values (C)

Description of this command:

This command is used to modify the current values of counter presets.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-100

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

12

Meaning of the DriverP2 parameter:

Indicates the first counter preset value to be modified (0-255).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are sent:

Value in PointValue (0) = First value to be sent to the PLC
Value in PointValue (1) = Second value to be sent to the PLC
Value in PointValue (2) = Third value to be sent to the PLC
...
Value in PointValue (n-1) = Last value to be sent to the PLC

3.19. Write Data Register Values (D)

Description of this command:

This command is used to modify the current values of data registers.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-100

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

14

Meaning of the DriverP2 parameter:

Indicates the first data register to be modified (0-8999).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are sent:

Value in PointValue (0) = First value to be sent to the PLC
Value in PointValue (1) = Second value to be sent to the PLC
Value in PointValue (2) = Third value to be sent to the PLC
...
Value in PointValue (n-1) = Last value to be sent to the PLC

3.20. Write Calendar/Clock (W)

Description of this command:

This command is used to modify the calendar/clock information.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

7

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

15

Meaning of the DriverP2 parameter:

0

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are sent:

Value in PointValue (0) = Year
Value in PointValue (1) = Month
Value in PointValue (2) = Day
Value in PointValue (3) = Day of Week
Value in PointValue (4) = Hour
Value in PointValue (5) = Minute
Value in PointValue (6) = Second

3.21. Write Internal Relay Values (M)

Description of this command:

This command is used to modify the current values of internal relays of type M.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-100

Meaning of the DriverP0 parameter:

Device Number (0-31) (0=1:1)

Meaning of the DriverP1 parameter:

16

Meaning of the DriverP2 parameter:

Indicates the first data register to be modified (0-2557 or 8000-8237).

Meaning of the DriverP3 parameter:

Indicates if a line feed (0x0A) must be added to the telegrams (0=No, 1=Yes).

Values that are sent:

Value in PointValue (0) = First value to be sent to the PLC
Value in PointValue (1) = Second value to be sent to the PLC
Value in PointValue (2) = Third value to be sent to the PLC
...
Value in PointValue (n-1) = Last value to be sent to the PLC

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
[1421] PROTOCOL (Format): Negative acknowledge received from device
[1433] PROTOCOL (Format): Validation error in device response
[2175] CONFIG (NumValues): Too many values (max=1)
[2177] CONFIG (NumValues): Too many values (max=100)
[2178] CONFIG (NumValues): Too many values (max=1000)
[2204] CONFIG (NumValues): Too many values (max=256)
[2221] CONFIG (NumValues): Too many values (max=480)
[2232] CONFIG (NumValues): Too many values (max=7)
[3015] CONFIG (P0): Invalid device address (0-31)
[3508] CONFIG (P1): Invalid command
[4118] CONFIG (P2): Invalid value (0 to 255)
[4119] CONFIG (P2): Invalid value (0 to 597)
[4120] CONFIG (P2): Invalid value (0 to 8477)
[4121] CONFIG (P2): Invalid value (0-2557 8000-8237)
[4128] CONFIG (P2): Parameter out of octal range
[4129] CONFIG (P2): Value out of range (0 to 255)
[4566] CONFIG (P3): Invalid setting (0-1)
[8037] CONFIG (Remote): Calendar or clock data error
[8091] CONFIG (Remote): Data range error

4.2. Keywords list

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

"Controller, Controllers., IDEC, Net, Open, OpenNet".