Industrial communication solutions for Windows

XIDECONC Driver Manual

Idec Open Net Controller Protocol Driver

Contents

CPKSoft Engineering

Industrial communication drivers.

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XIDECONC technical specifications

General information

XIDECONC driver was designed to support the IDEC OpenNet controllers.
This driver is a modified version of the XIDECM3 driver that has been adapted by Mr. Jaime Valtierra Franchini from Main Ingenieros Ltda., Chile, to support the IDEC OpenNet Controller Communication Protocol.

Command list

Read Inputs Status (X)

Description of this command:
This command is used to read the current status of digital inputs.
Methods used to run 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

Read Outputs Status (Y)

Description of this command:
This command is used to read the current status of digital outputs.
Methods used to run 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

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Read Internal Relays Status (M)

Description of this command:
This command is used to read the current status of internal relays.
Methods used to run 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

Read Link Relays Status (O)

Description of this command:
This command is used to read the current status of internal relays.
Methods used to run 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

Read Shift Registers Status (R)

Description of this command:
This command is used to read the current status of shift registers.
Methods used to run 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).

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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

Read Timer Preset Values (T)

Description of this command:
This command is used to read the current values of timer presets.
Methods used to run 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

Read Timer Current Values (t)

Description of this command:
This command is used to read the current values of timers.
Methods used to run 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

Read Counter Preset Values (C)

Description of this command:
This command is used to read the current values of counter presets.
Methods used to run 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)

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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

Read Counter Current Values (c)

Description of this command:
This command is used to read the current values of counters.
Methods used to run 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

Read Data Register Values (D)

Description of this command:
This command is used to read the current values of data registers.
Methods used to run 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

Read Calendar/Clock (W)

Description of this command:
This command is used to read the calendar/clock information.
Methods used to run this command:
Analog Input

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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

Write Inputs Status (X) bit mode

Description of this command:
This command is used to modify the current status of digital inputs.
Methods used to run 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

Write Outputs Status (Y) bit mode

Description of this command:
This command is used to modify the current status of digital outputs.
Methods used to run 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
...

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Value in PointValue (n-1) = Last value to be sent to the PLC

Write Internal Relays Status (M) bit mode

Description of this command:
This command is used to modify the current status of internal relays.
Methods used to run 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

Write Link Relays Status (O) bit mode

Description of this command:
This command is used to modify the current status of link relays.
Methods used to run 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

Write Shift Registers Status (R)

Description of this command:
This command is used to modify the current status of shift registers.
Methods used to run 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).

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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

Write Timer Preset Values (T)

Description of this command:
This command is used to modify the current values of timer presets.
Methods used to run 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

Write Counter Preset Values (C)

Description of this command:
This command is used to modify the current values of counter presets.
Methods used to run 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

Write Data Register Values (D)

Description of this command:
This command is used to modify the current values of data registers.
Methods used to run this command:
Analog Output
Number of points accepted by this command:
1-100

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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

Write Calendar/Clock (W)

Description of this command:
This command is used to modify the calendar/clock information.
Methods used to run 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

Write Internal Relay Values (M)

Description of this command:
This command is used to modify the current values of internal relays of type M.
Methods used to run 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

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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
[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

Supported devices

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

IDEC OpenNet Controllers.

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