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MANUAL

IDEC Communication Driver [ActiveX]

VERSION 1.6.X

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EVENTS :

Event ReplyIdecBusy (Busy_Flag As String)

Represents the busy status for communications :

- while communication with PLC active : Busy_Flag = "1"
- Communication with PLC inactive : Busy_Flag = "0"

You should check Busy_Flag status before sending IdecRead or IdecWrite commands.
If Busy_Flag = "1", wait a moment before sending next command , then retry.

Event ReplyIdecRead (User_REF As String , Device As String , DataType As String , _ PLC_DATA As String , Error_Desc As String)

Reply on IdecRead command :

- User_REF : User Reference (Returns same Reference used in IdecRead command)
- Device : PLC Device number for communications (0-255 Devices)
- DataType : Data type code (X,I,Y,Q,M,O,R,x,i,y,q,m,o,r,T,t,C,c,D,W,L) – [See Appendix A](#)
- PLC_DATA : Data returned from PLC
- Error_Desc : Error Number – See list for descriptions – [See Appendix A](#)

You can use USER_REF to determine from which IdecRead command the reply comes.
PLC_Data contains the requested data, you should split up the data-string PLC_DATA into pieces and assign them to Public variables. In this way these variables can be used in all the appropriate places.

Event ReplyIdecWrite (User_REF As String , Device As String , DataType As String , Error_Desc As String)

Reply on IdecWrite command :

- User_REF : User Reference (Returns same Reference used in IdecWrite command)
- Device : PLC Device number for communications (0-255 Devices)
- DataType : Data type code (X,I,Y,Q,M,O,R,x,i,y,q,m,o,r,T,t,C,c,D,W,L) – [See Appendix A](#)
- Error_Desc : Error Number – See list for descriptions – [See Appendix A](#)

You can use USER_REF to determine from which IdecWrite command the reply comes.
No PLC_Data is returned ! You should only check Error_Desc to be equal to zero ("0"), else an error has occurred, which can be found in the error-Description list in Appendix A.

METHODS :

IdecWrite (Reference As String , Device As String , Data_Type As String , First_Operand As String , _
PLC_DATA As String , Lenght As String)

- Reference : User Reference (User defined string)
- Device : PLC Device number for communications (0-255 Devices)
- Data_Type : Data type code (X,I,Y,Q,M,O,R,x,i,y,q,m,o,r,T,t,C,c,D,W,L) – [See Appendix A](#)
- First_Operand : First Operand to write to
- PLC_DATA : Data to write to PLC
- Lenght : Length of data to write.

IdecRead (Reference As String , Device As String , Data_Type As String , First_Operand As String , _
Lenght As String)

- Reference : User Reference (User defined string)
- Device : PLC Device number for communications (0-255 Devices)
- Data_Type : Data type code (X,I,Y,Q,M,O,R,x,i,y,q,m,o,r,T,t,C,c,D,W,L) – [See Appendix A](#)
- First_Operand : First Operand to read
- Lenght : Length of data to read.

Register (UserName As String, Code As String)

Registered users have received a UserName and registration code.
This routine should be called always on startup, before opening
the communication port, and before trying to set any settings / properties...
When Registration Code is accepted, the Nag-screen will never appear.

Open_Port (PortOpen As String, Error As String)

You should open the port prior to sending any communication commands !

Set Portopen to "1" on Startup (ex. Form Load), and check return value of Error,
If Error = "0", operation succeeded succesfully, else the port failed to open.
In the latter case you should check other applications using the communications-ports,
and if so terminate them.

When ending your application (ex. Form Unload), Call this method with Portopen = "0"
to close the communication port.

PROPERTIES :

Beepenabled

Enable / disable beeping sound for communication faults.

Caption

Set / Reset the Caption Displayed on top of the control.

CommPort

0 = COM1
1 = COM2
2 = COM3
3 = COM4
4 = COM5
|
|
254 = COM254

When you like to connect via LAN, you need a Serial to Ethernet redirector.
We use normally the Serial to Ethernet connector from Eltima
(www.eltima.com)

Overtime

Normally set to 500 milliseconds, used during communications,
to determine overtime for communication errors.
When you try to connect via the internet or local LAN, you should
adjust this value (normally 1000 or 1500)

Settings

Communication settings usually set to 9600,e,7,1.
Baud Rate / Parity / Data bits / Stop bits.

Visible

Sets control Visible / Invisible during Runtime.

APPENDIX A :

Data Type Codes explained :

- **X / I** : PLC Input
- **Y / Q** : PLC Output
- **M** : PLC Internal Relay
- **O** : PLC Link Relay
- **R** : PLC Shift Register
- **x / i** : PLC Input (used to write/Read 1 Bit)
- **y / q** : PLC Output (used to write/Read 1 Bit)
- **m** : PLC Internal Relay (used to write/Read 1 Bit)
- **o** : PLC Link Relay (used to write/Read 1 Bit)
- **r** : PLC Shift Register (used to write/Read 1 Bit)
- **T** : PLC Timer value (Preset)
- **t** : PLC Timer value (Current)
- **C** : PLC Counter value (Preset)
- **c** : PLC Counter value (Current)
- **D** : PLC Data Register value
- **W** : PLC Calendar / clock
- **L** : PLC Link Register

APPENDIX B :

Communication Error_Codes

- 10 Other communication busy
(command sended , while previous not yet ended. → **Busy_Flag = 1**)
- 11 Device number out of range (Range : 0 – 255)
- 12 Operand number out of range
- 13 Data length range error (max. 100 registers)
- 14 Wrong data type
- 15 Unknown error in IdecWrite
- 16 Unknown error in module send_request
- 17 Data must be 0 or 1 (set / rst commando)
- 18 Unknown reply from IdecWrite
- 19 Unknown reply from IdecRead
- 20 Data range error in IdecWrite
- 21 Timer/Counter preset value change error in IdecWrite
- 22 Calender / Clock data error in IdecWrite
- 23 Data range error in IdecRead
- 24 Timer/Counter preset value change error in IdecRead
- 25 Calender / Clock data error in IdecRead
- 26 BCC error in IdecWrite
- 27 BCC error in IdecRead
- 28 Unknown error in IdecRead
- 29 Overtime error in IdecRead
- 30 Overtime error in IdecWrite