



How Eason PLC Drivers Work

When you add a PLC driver to your WinBuild 2000 project, you gain access to certain memory registers in your PLC (or similar) device. The software driver gives you the ability to easily read or write to these memory registers. The driver takes care of the details of the transmission protocol- all you need to know is the memory register inside the PLC.

Whenever your WinBuild 2000 application requires data from the PLC, it will automatically retrieve the current value.

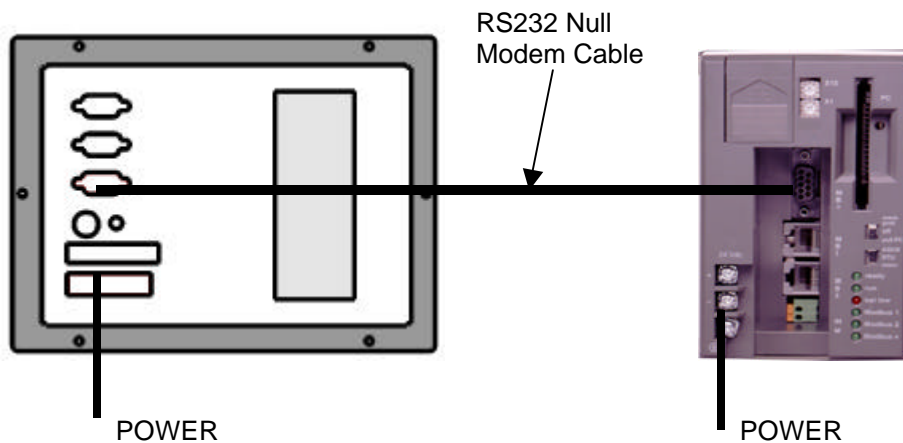
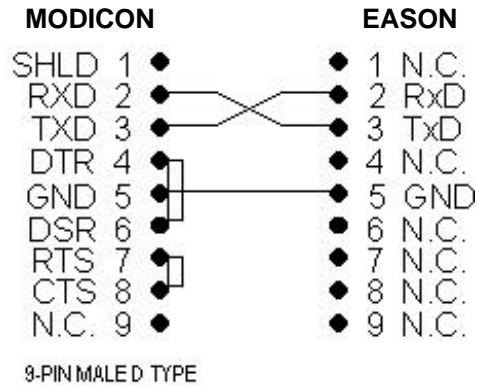
If your Eason program changes a value, the driver will automatically write that value back down to the PLC.

The Modicon Modbus protocol actually covers not only Modicon PLC products, but other devices which use the Modbus protocol. (Emerson, AC Tech, etc.) Any of these devices can be connected to your Eason 2000 Family interface with the Modbus driver. This document will try to outline some typical setups, but see your device's documentation for specifics.

Connections

Communications to Modbus devices via RS232 only require a simple connection via Null Modem cable. See the 2000 Family hardware manuals for RS422 & RS485 wiring diagrams.

RS232 Null Modem Cable for Modbus Communication



Driver Setup

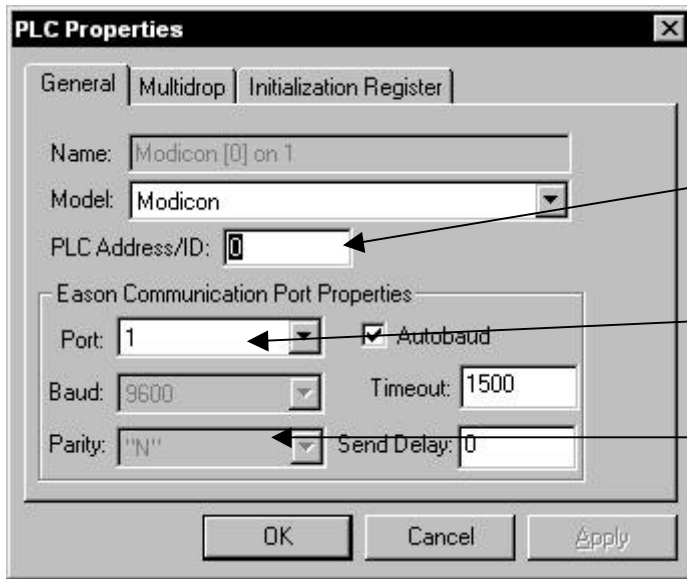
To add the Modicon Modbus driver to your project, in WinBuild 2000 click "SETUP | PROJECT" and click on the "Drivers" tab.

Click "ADD"

Click on the "Modicon Modbus" driver, and click "OK"

The driver will now show up in your project drivers list.

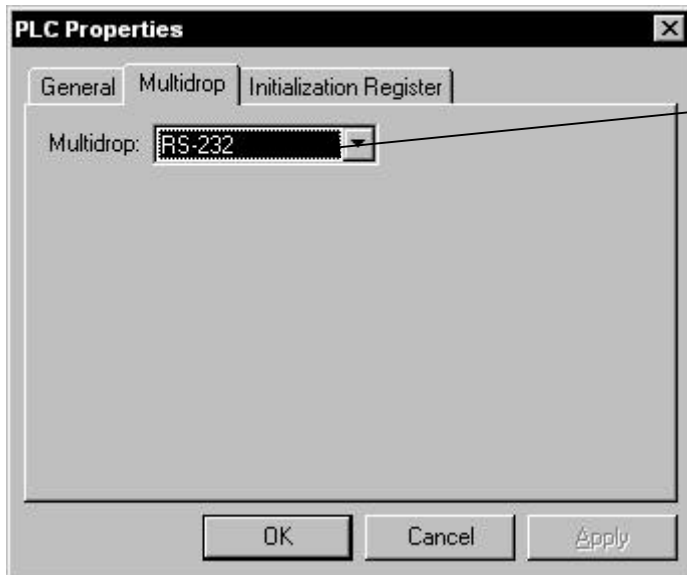
Highlight the Modicon Modbus driver in the list, and click on the "Properties" button. This will allow you to set the specifics of your Modbus connection. If you have a multi-drop setup with more than one instance of a Modbus device on the port, you can continue to add more Modicon Modbus drivers, and configure them to be on the same port. (Be sure to use unique IDs for each.)



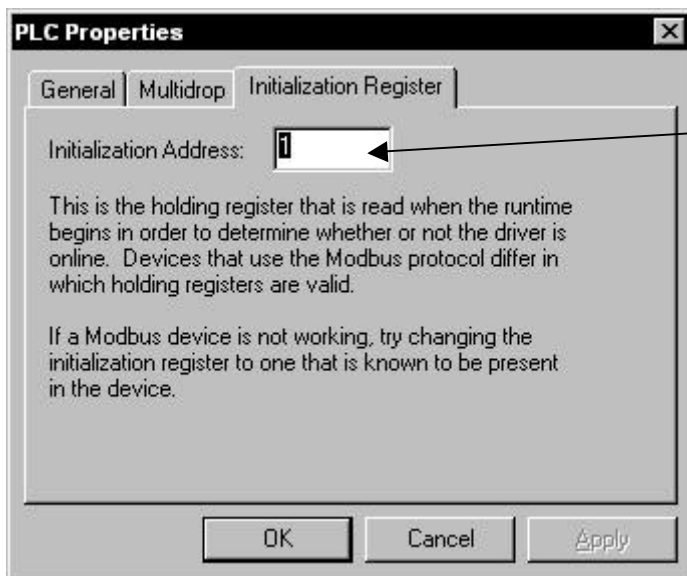
Selects ID of device you are talking to. Default is 0, but if you are multi-dropping, other addresses might be used.

Select which Eason communication port you are using.

Select Baud rate- or use the Autobaud function to connect up automatically.



Select multidrop method- RS232, RS422, RS485



This default is 1- some devices such as AC Tech require this to be '55'.

Registers

The Modicon Modbus driver allows you to access the following registers in your device:

ADDRESS	TYPE	NOTE
00001 to 09999	Bit	Outputs (read/write)
10001 to 19999	Bit	Inputs (read only)
30001 to 39999	Word	Input Registers (read only)
40001 to 49999	Word	Holding Registers (read/write)
40001L to 49999L	Double Word	Holding Registers, uses two consecutive addresses
40001F to 49999F	Real	Holding Registers, uses two consecutive addresses
40001D to 49999D	Double Real	Holding Registers, uses four consecutive addresses

To define a register you want to use in your project, just click “SETUP | TAGS” and click “New Tag”. Now fill in all the information to access your PLC tag:

	Tag Name	Source	Address	Type	Default
1	LENGTH	Modicon [0] on 1	40001	Word	0

This example will now create a variable or TAG in your WinBuild 2000 project that will access the WORD address 40001 in the Modicon device.

Making It All Work

Once you have added the driver, and created a TAG in your project, there is no more programming or setup required on your part.

If you want to display a PLC tag on the screen, just use a data display box, and associate it with the tag you created. The Eason will take care of reading from the PLC and displaying a current value.



If you change that value, the Eason will then write that new value back down to the PLC.

If your Eason BASIC code or Pseudocodes happen to require the PLC value in a calculation or evaluation, the driver will automatically read the value from the PLC, or write back if the value has changed.

Other Devices

For tips on setting up connections to Watlow Temperature controllers, see Technical Note # 87