CLICK DRIVER

CHAPTER
4

In This Chapter...

CLICK Using Driver Worksheet

The CLICK PLC has two communications ports (RS-232 or RS-485) available that may be used to communicate to a PC running Point of View software.

In this example, we are going to read the clock seconds from the CLICK PLC using port 2 (RS-232).

NOTE: *You must have a CLICK with a Real Time Clock / Calendar to start this exercise.*

1.) Open the Point of View software.

2.) Click on the Application Menu button and select New.

3.) Enter 'CLICK Example' as the project name. Select the product type that is currently licensed on the USB key for the PC you are using, then hit OK. (Ignore if in Demo Mode)
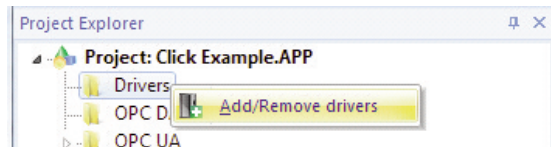
> Product type*:
>
> Windows Professional (5000 tags)
> Windows Standard (1000 tags)
> Windows Lite (500 tags)

4.) The Project Wizard will open > Hit OK.
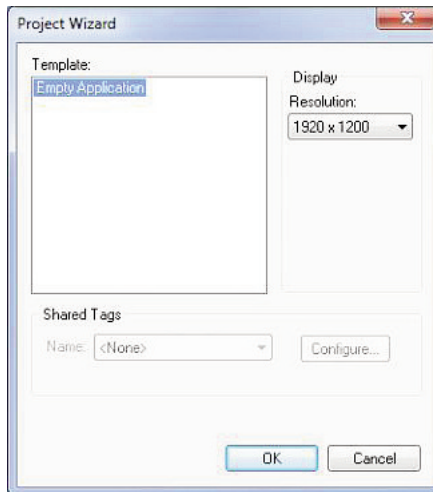
Next, we will set up the driver communications to the CLICK:

5.) Select the Comm tab at the bottom of the Project Explorer pane.

6.) Right click on Drivers and select Add/Remove drivers.

7.) Scroll down in the list of available drivers and select the MODBU 'Modbus Protocol RTU/ASCII'.

8.) Click on the Select button, this will move the driver down to the selected drivers list.

9.) Now select OK and a new MODBU driver sheet will be created.

10.) Under the Drivers folder > right click on MODBU folder > select Settings.

11.) Verify these settings match your CLICK settings and that the correct communications port is selected.
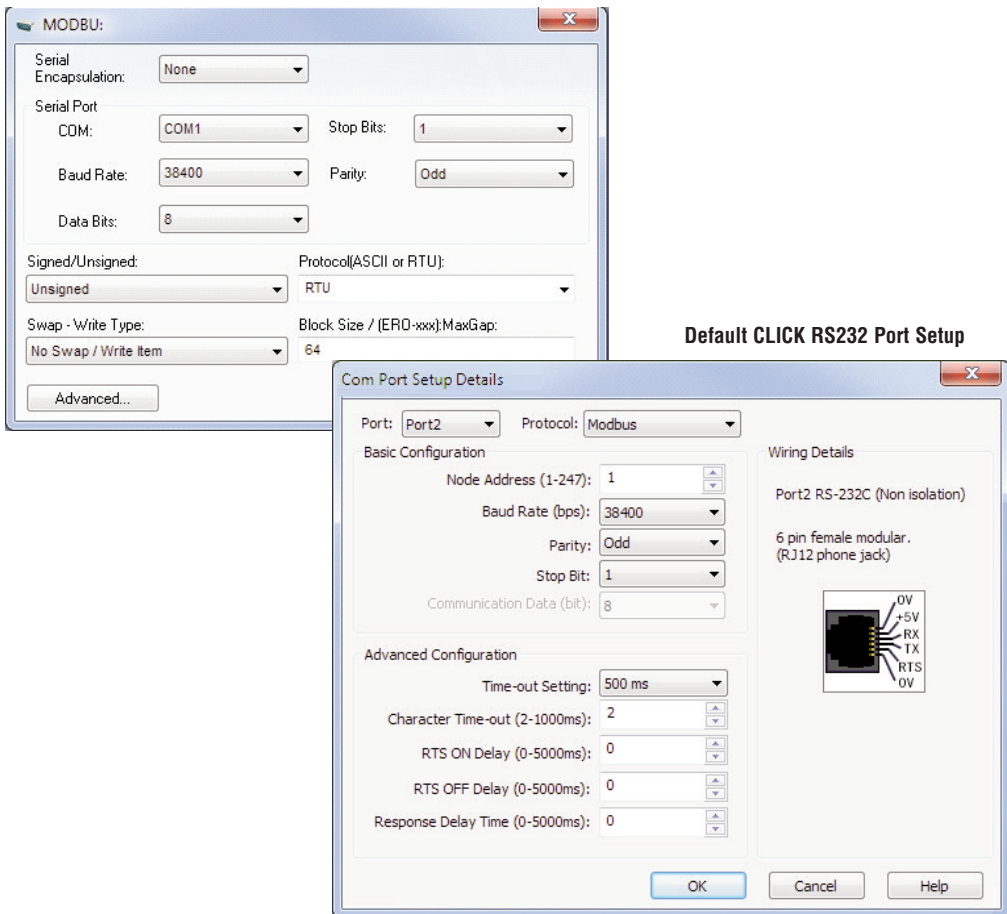
Default CLICK RS232 Port Setup

Setup of tag in driver worksheet to read from the CLICK:

12.) Click on the Comm tab at the bottom of the Project Explorer pane.

13.) Open the Driver folder > select MODBU > double left click on Main Driver Sheet.
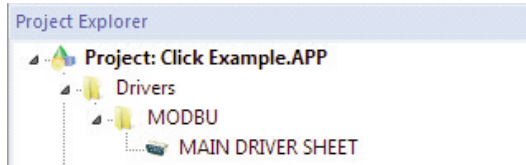
NOTE: *You can refer to the MODBU driver help file by selecting Help from the ribbon bar, then selecting 'Communications Drivers'.*

14.) Under Tag Name, type in 'CSeconds' and hit Enter.

15.) On the pop up window select Yes, leave settings at default and hit OK.

16.) For the Station entry, type in the node address. For our example enter '1'.

17.) Under I/O Address, enter '4X:61466'

	Tag Name	Station	I/O Address
	🔍 Filter text	🔍 Filter text	🔍 Filter text
1	CSeconds	1	4X:61466

NOTE: *You can find a list of assigned Modbus address in the CLICK by using the Address picker and selecting 'Display Modbus Addresses.'*

18.) Close the worksheet, select 'Yes' to save changes.

Next, we will create a text object to read the clock seconds:

19.) Click on the Graphics tab at the bottom of the Project Explorer pane.

20.) Now right click on Screens and select Insert > then select OK.
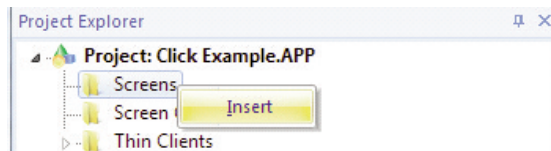
21.) On the ribbon bar under the Graphics tab select Active Objects > then Text. This will give you a cross-hair, left click and place anywhere on the screen work area.

22.) Now type in 'CSeconds: ##' > Hit Enter.

23.) Double left click on the above entry to open the properties.

24.) Click on 'Text data link'.

25.) In the Tag/Expression field, enter the tag we created back in step 14 'CSeconds'.

**NOTE:** *You can enter a tag manually by double left clicking in the tag field, or by clicking on the Browse button.*

26.) Close the Object Properties window.

27.) Right click on the current screen tab and select Close.
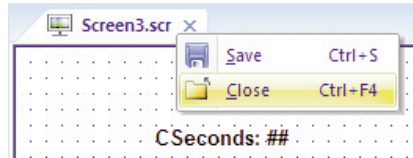
28.) On the pop up, select Yes to save changes.

29.) Change the file name to 'CLICK Main Menu', then select Save.

30.) Under the screen folder > right click on our newly created screen > select 'Set as Startup'
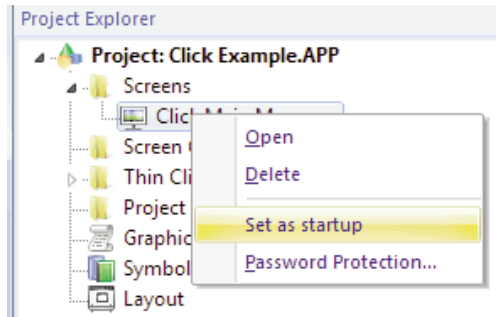
We will now run the project to verify communications between the PC and the CLICK:

NOTE: *Ensure your PC is connected to the CLICK PLC port 2 prior to placing in Run.*

31.) On the ribbon bar > under the 'Home' tab and Local Management > select the Run button.

32.) You should now see the seconds updating on your screen.
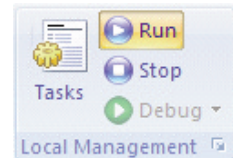
NOTE: *If any part of the project doesn't work as expected (or to exit the runtime application), switch back to the development application (ALT+TAB) and then click Stop on the Home tab of the ribbon. Then if needed, begin troubleshooting.*

CLICK Modbus Addressing in Point of View

CLICK Data Types and Modbus Addresses

Data Types	CLICK Address	Modbus Address	POV Address	Data Format	Read/Write
X	X1	100001	1X:1	BOOL	Read
Y	Y1	8193	0X:8193	BOOL	Read/Write
C	C1	16385	0X:16385	BOOL	Read/Write
T	T1	145057	1X:45057	BOOL	Read
CT	CT1	149153	1X:49153	BOOL	Read
SC	SC1	161441	1X:61441	BOOL	Read
DS	DS1	400001	4X:1	INTEGER	Read/Write
DD	DD1	416385	DW:16385	INT (double word)	Read/Write
DH	DH1	424577	4X:24577	HEX	Read/Write
DF	DF1	428673	FP:28673	REAL	Read/Write
XD	XD0	357345	3X:57345	HEX	Read
YD	YD0	457857	4X:57857	HEX	Read/Write
TD	TD1	345057	3X:45057	INTEGER	Read/Write
CTD	CTD1	349153	DW3:49153	INT (double word)	Read/Write
SD	SD1	361441	3X:61441	INTEGER	Varies
TXT	TXT1	436865	STS:36865:5*	STRING	Read/Write

* [String prefix : Modbus address : length]

Modbus I/O Address Prefix Syntax Table for Point of View

Register Type	Description	Read/Write
0X:	Coil Status (Function code 1, 5, 15)	Read/Write
1X:	Input Status (Function code 2)	Read
3X:	Input Register (Function code 4)	Read
4X:	Holding Register (Function code 3, 6, 16)	Read/Write
STA:	Exception Status (Function code 7)	Read
FP:	Floating Point	Read/Write
FPS:	Floating Point (byte swap)	Read/Write
FP3:	Floating Point Read Only	Read
FP3S:	Floating Point Read (byte swap)	Read
DW:	Double Word	Read/Write
DWS:	Double Word (byte swap)	Read/Write
DW3:	Double Word Read Only	Read
DW3S:	Double Word Read (byte swap)	Read
BCD:	BCD (Function code 3, 6, 16)	Read/Write
BCD3:	BCD Read Only (Function code 4)	Read
BCDDW:	BCD Double Word	Read/Write
BCDDWS:	BCD Double Word (byte swap)	Read/Write
BCDDW3:	BCD Double Word Read Only	Read
BCDDW3S:	BCD Double Word Read (byte swap)	Read
ID:	Report Slave ID (Function code 17)	Read
ST:	String	Read/Write
STS:	String (byte swap)	Read/Write