



**Communication Settings for  
IDEC MicroSmart (CPU: FC4A-C24R2)**

**and**

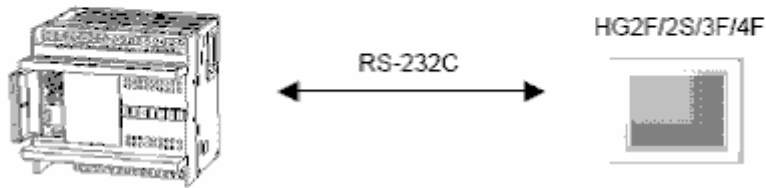
**IDEC Touchscreens  
(5.7" HG2F, 10.4" HG3F, 12.1" HG4F)**

**Introduction**

This information will help you configure IDEC touchscreens (5.7” HG2F, 10.4” HG3F, or 12.1” HG4F) and the IDEC MicroSmart protocol. For other supported IDEC PLCs and communication settings/range of addresses, please refer to WindO/I-NV2 manual. Select “Host Interface,” then select “Connection to a PLC”.

<http://www.IDEC.com/Products/ENG/PDF/manuals/WindOI/V282/English/mainmenue.pdf>

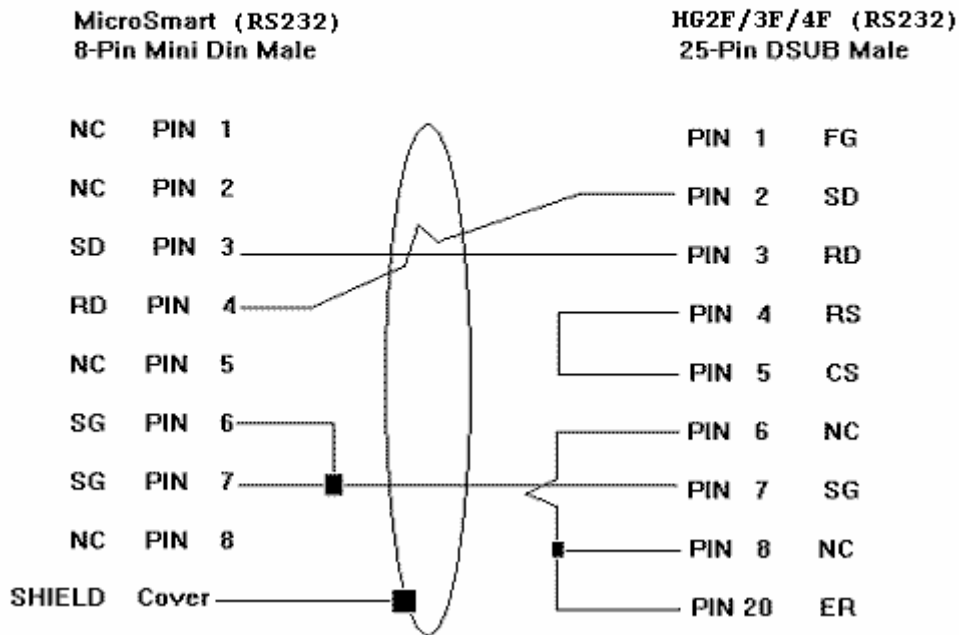
**MicroSmart**



**NOTE:** The cable wiring diagram below is specifically for connecting to MicroSmart, RS232 communication. For MicroSmart RS485 communication or other IDEC PLCs, please refer to the manual.

**MicroSmart Built-in or Optional RS232C port**

**Cable Part Number : FC4A-KC2CA**



## Communication Settings

MICRO<sup>3</sup>, MICRO<sup>3</sup>C, OpenNet Controller and MICROSmart

Item	Setting
Baud Rate (bps)	9600
Data Bits (bits)	7
Parity	Even
Stop Bits	1
Device Number	0(DEC)

## Addressing

OpenNet Controller/MICROSmart

### Bit Device

Device Name	HG Device Symbol	PLC Device Symbol	Address range	Read /Write	Address Gradual
Internal Relay(Bit)	M	M	0 - 2557	R/W	(*1)
Input(Bit)	I	I	0 - 597	R	(*1)
Output(Bit)	Q	Q	0 - 597	R/W	(*1)
Timer(Contact)	T	T	0 - 255	R	Dec
Counter(Contact)	C	C	0 - 255	R	Dec
Spec.Int.Relay(Bit)	SM	M	8000 - 8237	R/W	(*1)
Shift Register(Bit)	R	R	0 - 255	R	Dec

### Word Device

Device Name	HG Device Symbol	PLC Device Symbol	Address range	Read /Write	Address Gradual
Data Register	D	D	0 - 7999	R/W	Dec
Input(Word)	WI	I	0 - 580	R	Dec(*2)
Output(Word)	WQ	Q	0 - 580	R/W	Dec(*2)
Internal Relay(Word)	WM	M	0 - 2540	R/W	Dec(*2)
Timer(Current)	TN	T	0 - 255	R	Dec
Counter(Current)	CN	C	0 - 255	R	Dec
Timer(Preset)	TP	T	0 - 255	R/W	Dec
Counter(Preset)	CP	C	0 - 255	R/W	Dec
Link Register	L	L	100 - 1317	R/W	(*1)
Shift Register(Word)	WR	R	0 - 240	R	Dec(*3)
Error Register	E	-	0 - 5	R/W	Dec
Spec.Int.Relay(Word)	WSM	M	8000 - 8220	R/W	Dec(*2)
Spec.Data Register	SD	D	8000 - 8999	R	Dec

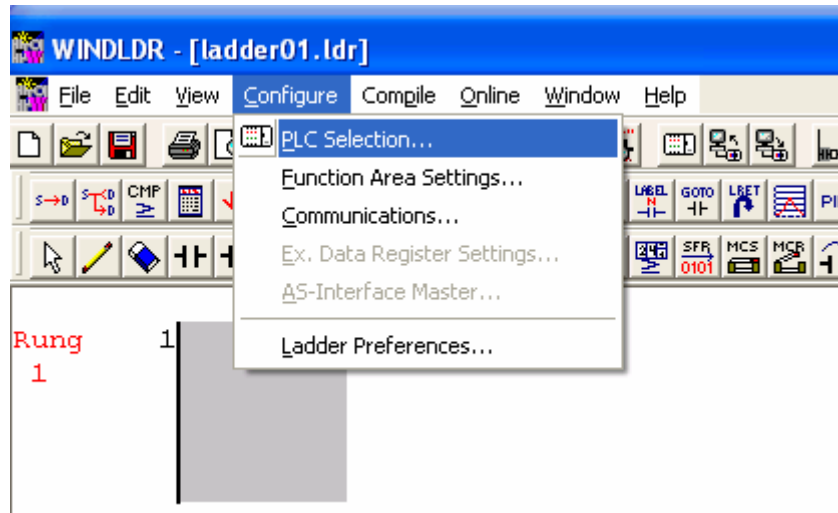
\*1 Set position 1 for this device in octal.

\*2 Set this device using a multiplier of 20.

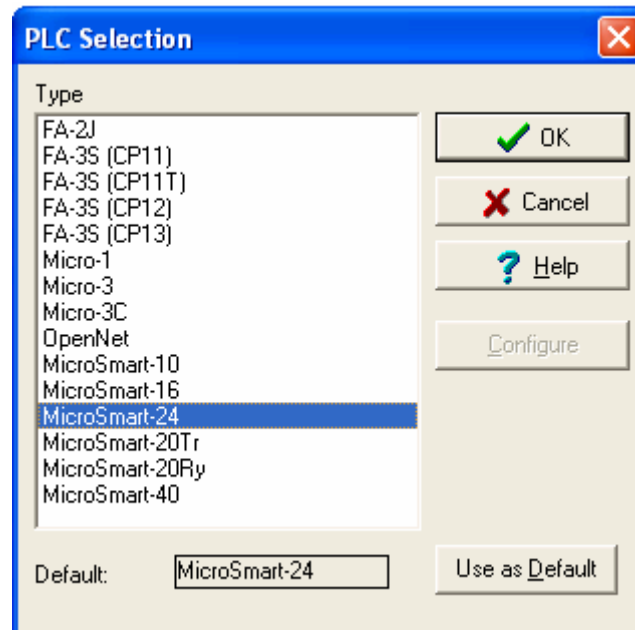
\*3 Set this device using a multiplier of 16.

## Step1: WINDLDR Software

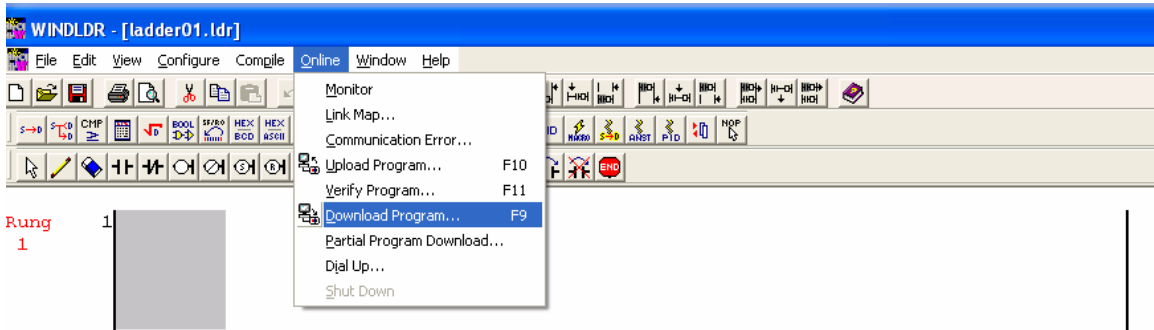
- 1) Select the PLC by choosing Configure and then PLC Selection.



- 2) In this example, MicroSmart 24 I/O is selected. Click the OK button to accept the choice.

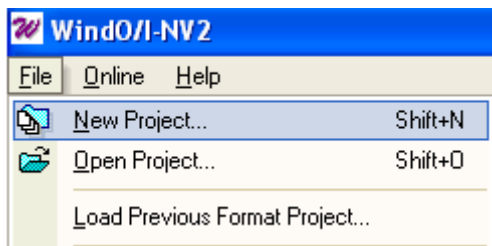


- 3) To make this test simple, you will be downloading a blank program. Select Online and then Download.

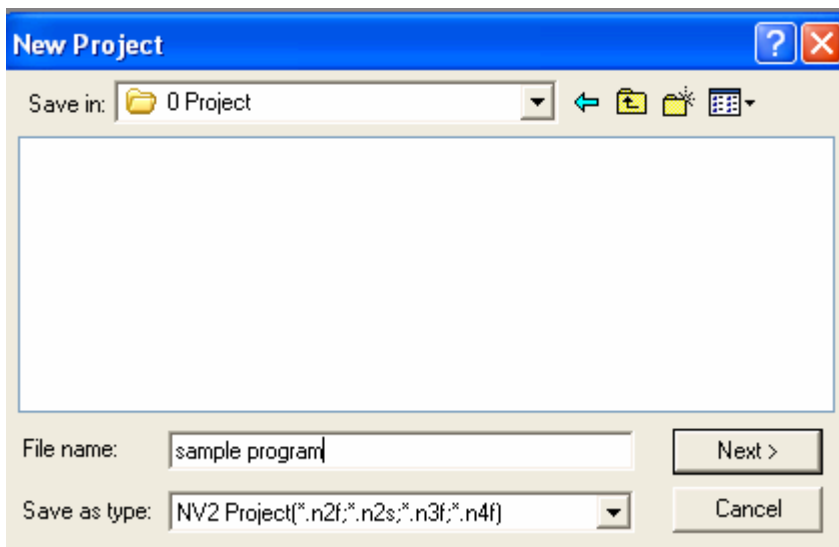


## Step 2: WINDO/I-NV2 Software

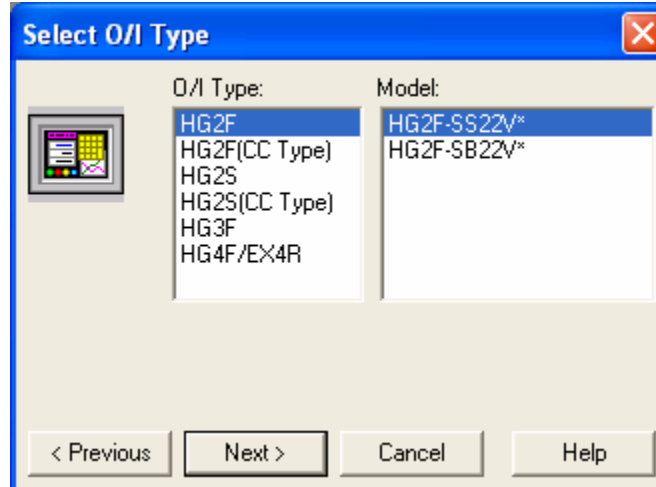
- 1) First, you must create a project name. Go to File and select New Project.



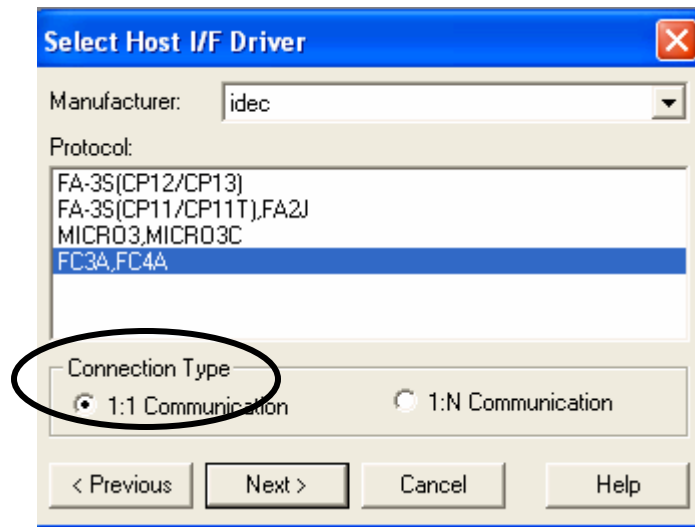
- 2) In the File Name, enter the project name and click on the Next button to continue.



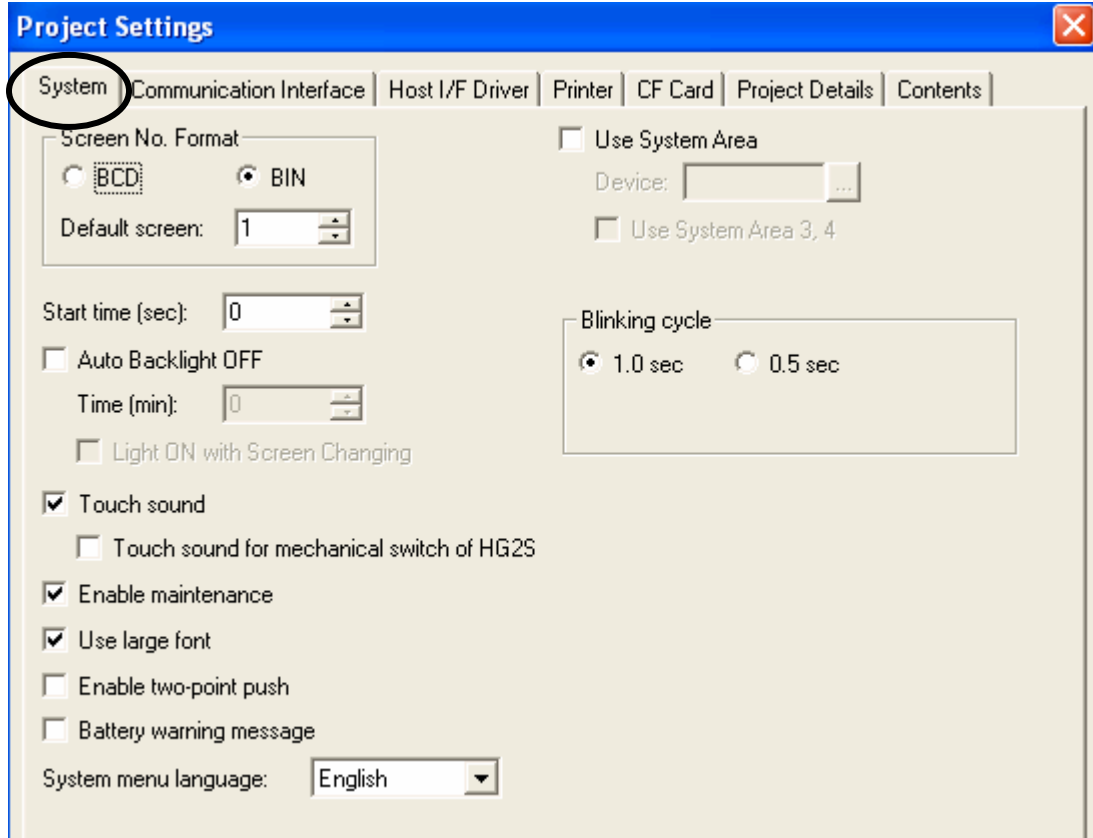
3) Select the O/I and Model Type then click on the Next button to continue.



4) The Manufacturer is IDEC using Protocol FC3A, FC4A. Connection Type is 1:1 Communication. Click the Next button to continue.

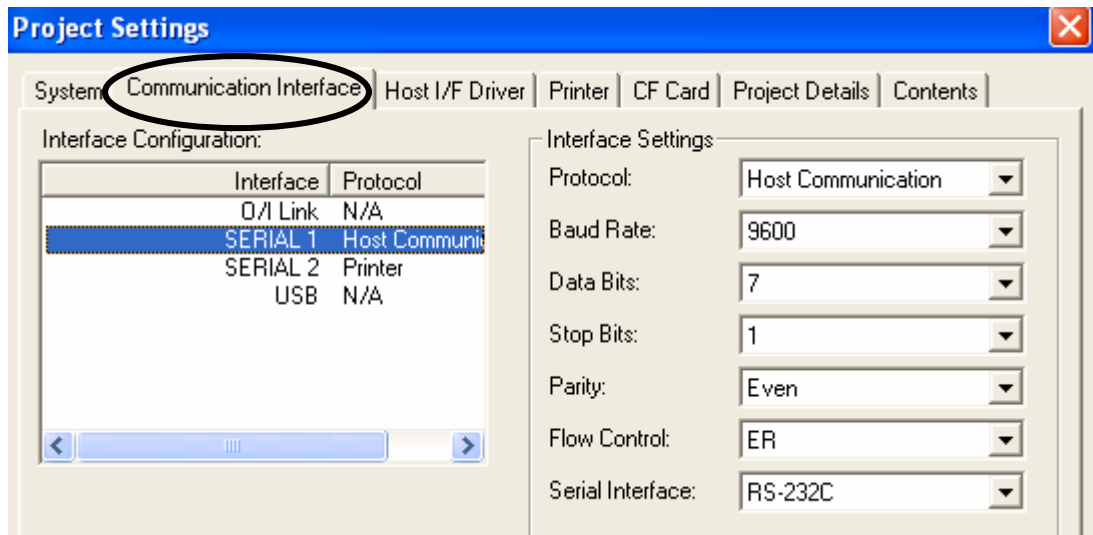


5) In System, all settings are as is. For further details, click on the Help button.



6) Communication Interface

- a) Interface Configuration: Select SERIAL 1, Host Communication.
- b) Interface Settings: The communication settings should be the same as in the PLC. Since the PLC is IDEC MicroSmart, then the settings are 9600, 7, Even, 1, ER for flow control and communicating via RS232.
- c) Even, 1, ER for flow control and communicating via RS232.



7) Host I/F Driver:

- a) The Device No. is 0 (Refer to Communication Settings table).
- b) Option to check the box for enabling Pass Through (PLC program can pass-thru the touchscreen without switching cables from the PC).
- c) Click the OK button to close the Project Settings:

The screenshot shows the 'Project Settings' dialog box with the 'Host I/F Driver' tab selected. The 'Host I/F Driver' tab is circled in black. The 'O/I Type' is 'HG2F-SS22V', 'Manufacturer' is 'idec', and 'Protocol' is 'FC3A,FC4A - 1:1 communication'. Under the 'PLC (Host)' section, 'Transmission Wait (x 10 msec):' is 0, 'Time Out (x100 msec.):' is 20, 'Retry Cycles:' is 5, and 'Device No.:' is 0. An arrow points to the 'Device No.' field. Another arrow points to the 'Enable Pass Through' checkbox, which is currently unchecked.

Field	Value
O/I Type	HG2F-SS22V
Manufacturer	idec
Protocol	FC3A,FC4A - 1:1 communication
PLC (Host) Section	
Transmission Wait (x 10 msec):	0
Time Out (x100 msec.):	20
Retry Cycles:	5
Device No.:	0
Enable Pass Through	<input type="checkbox"/>

**8) Screen Properties**

- a) The Screen type is Base Screen.
- b) The Base Screen number is 1
- c) Title is optional ( This is to label your screens)
- d) Click the OK button to close the Screen Properties.

**Screen Properties**

General | Options

Screen Type: Base Screen

No.: 1

Title: screen 1

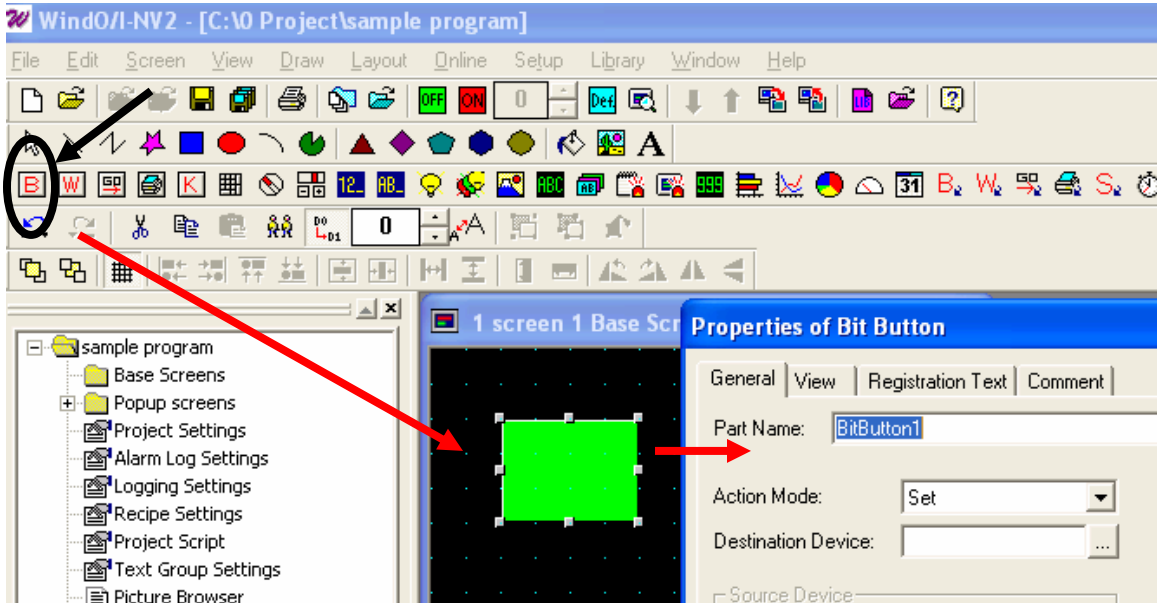
Size  
Width: 320 Height: 240

Screen List:

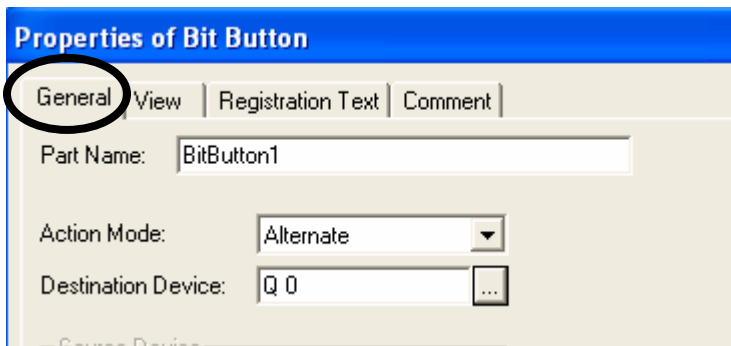
No.	Title	Screen ...
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OK Cancel Help

- 9) Select the Bit Button, drop it on the base screen and then double click to configure the Properties of Bit Button.

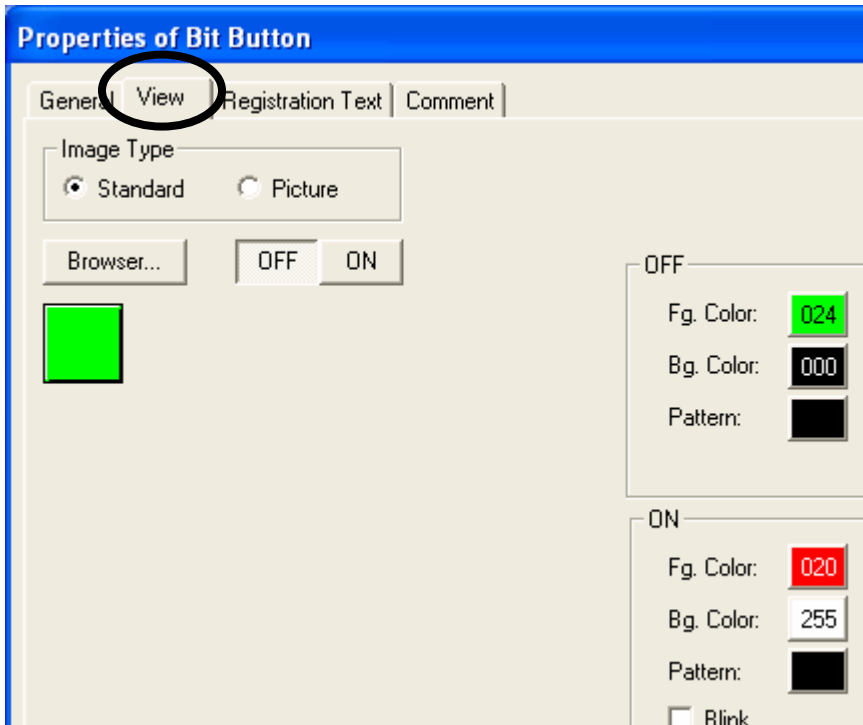


- a) Properties of Bit Button: General
- b) The Action Mode is Alternate
- c) The Destination Device is Q 0 (when button is pressed, it will write to Output Q0).



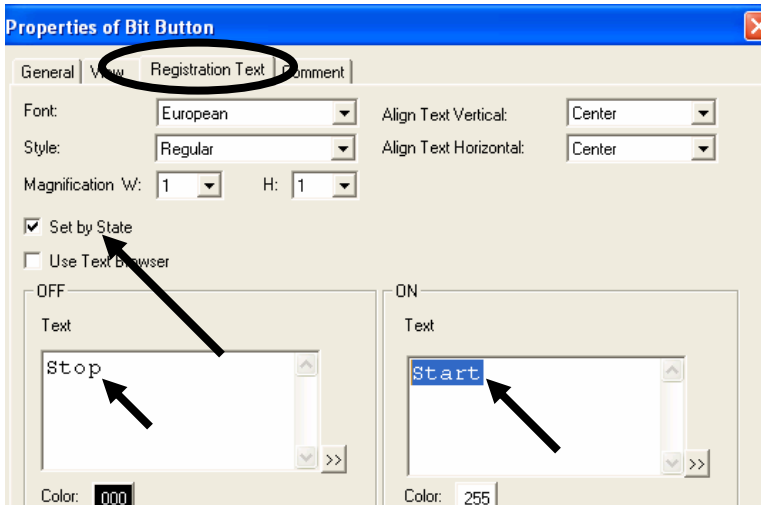
## 10) Properties of Bit Button: View

- a) The Image Type is either Standard (built-in library of images) or Picture (Symbol Factory or other types of images).
- b) Optional: Click the Browser button to choose other images.  
Colors are also changeable.

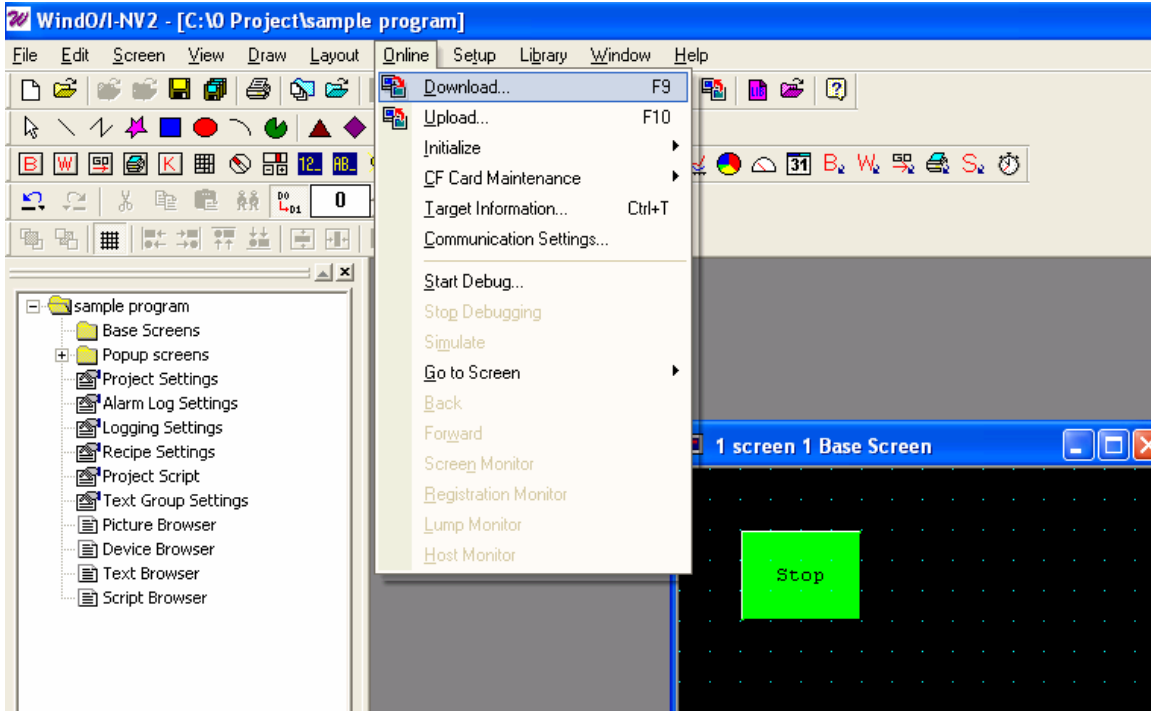


## 11) Properties of Bit Button: Registration Text

- a) Optional: Check the box for Set by State (This will allow you to display text messages for On/Off state).
- b) Click the OK button to close the Properties of Bit Button.



12) Download the project by selecting Online and then Download.



13) Once both programs are downloaded to the PLC and HG2F/3F/4F, test the communication by connecting both devices together using cable part number FC4A-KC2CA. Press the bit button created on the screen. If Output Q0 is triggered in the MicroSmart PLC, then the communication is successful.