Bringing Together Leading Brands in Industrial Automation

RSView32: Communicating to PowerFlex Drives on Ethernet, ControlNet, & DeviceNet using DDE w/ CIP Messages

February 26th, 2003

Background

RSView32 is a Windows based program that can be used to capture data, monitor, and control plant-wide systems. DDE (Dynamic Data Exchange) can be used to directly monitor or modify data from PowerFlex VFDs on Ethernet, ControlNet, or DeviceNet. This means an intermediate PLC is not needed to collect the data before sending it to an RSView32 application.

Application Note Objectives

This application note will show an example of creating a project in RSView32, creating tags to collect data from a PowerFlex VFD on Ethernet, ControlNet or DeviceNet, and using tags to display or modify VFD data in RSView32. This note applies to the PowerFlex 70, PowerFlex 700, and PowerFlex 700 with vector control using the 20-COMM-E (Ethernet), 20-COMM-C (ControlNet), or 20-COMM-D (DeviceNet) communication adapters.

Conventions Used in This Application Note

🗎 FYI: Provides additional information that is useful, but is not necessary to complete the application.

△ ATTENTION: Identifies information about practices or circumstances that can lead to personal injury or death, property damage or economic loss. Attention statements help you identify a hazard, avoid a hazard, and recognize the consequences.

Software Used

This note uses RSView32 Works v6.30.16 and RSLinx v2.40.01 (Build 16).

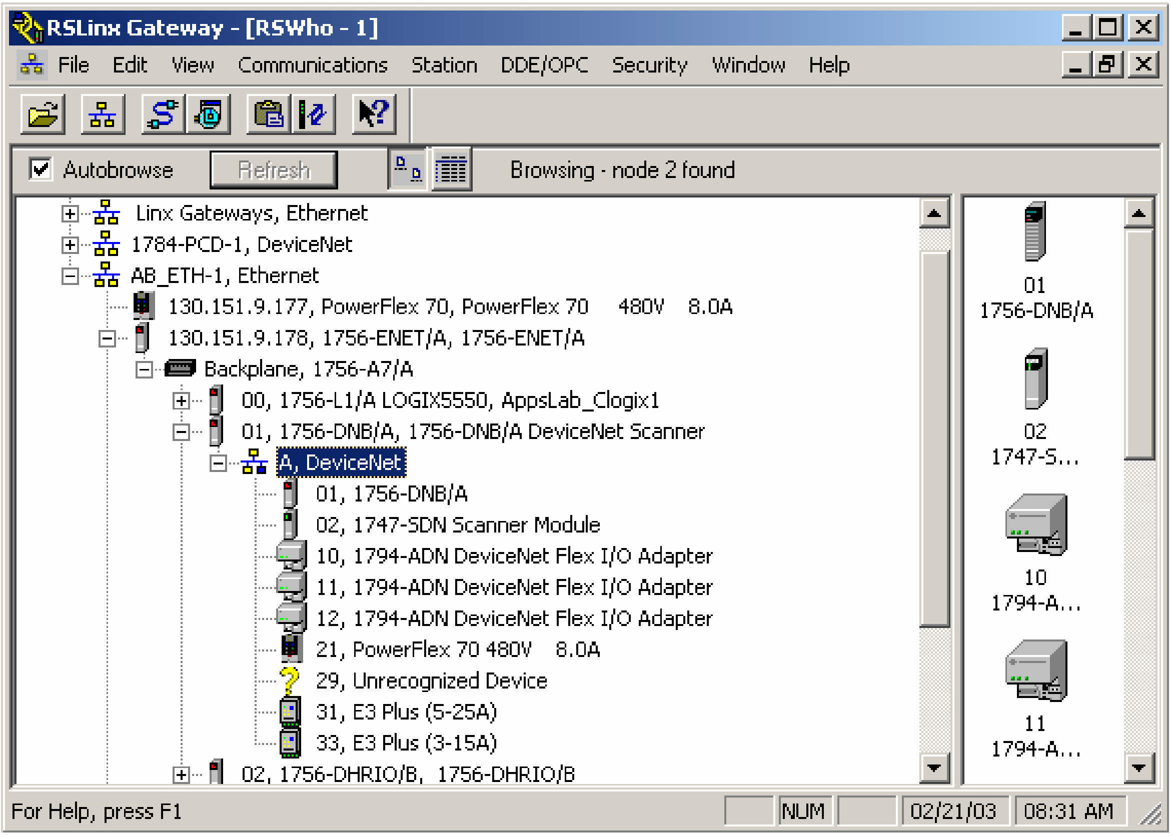
Table of Contents

1. Network Configuration

Open RSLinx. The **Workstation** is the computer on which the RSView32 application will be created. Your drive could be on an Ethernet, ControlNet, or DeviceNet network.

We could talk to the drive directly through a driver configured on RSLinx, or we could use ControlLogix gateway to jump to a drive on another network. For example, we could browse down to the PowerFlex 70 on DeviceNet by going through the ControlLogix backplane.

In the examples shown in this document, we will be talking to the PowerFlex 70 on Ethernet.



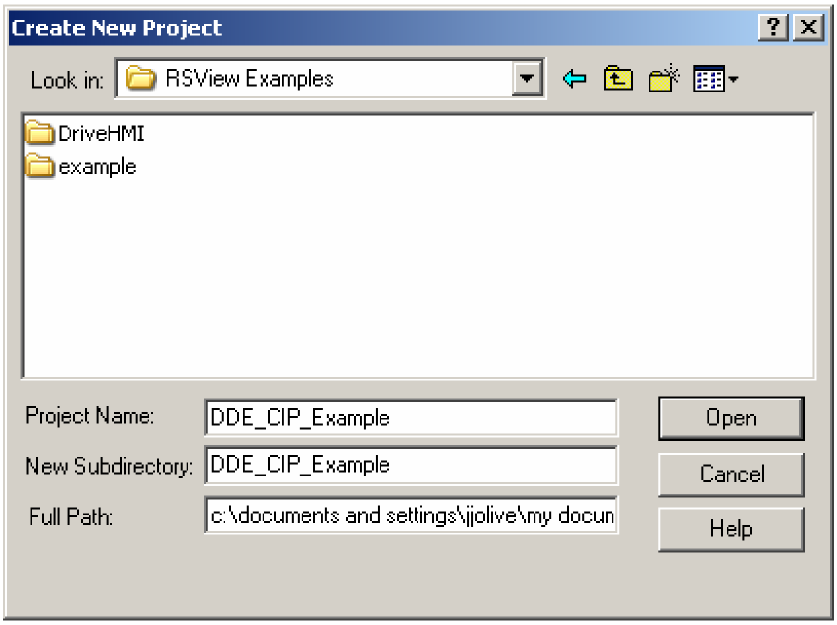
☑ Autobrowse   Browsing - node 2 found

```
Linx Gateways, Ethernet
1784-PCD-1, DeviceNet
AB_ETH-1, Ethernet
    130.151.9.177, PowerFlex 70, PowerFlex 70    480V    8.0A
    130.151.9.178, 1756-ENET/A, 1756-ENET/A
        Backplane, 1756-A7/A
            00, 1756-L1/A LOGIX5550, AppsLab_Clogix1
            01, 1756-DNB/A, 1756-DNB/A DeviceNet Scanner
                A, DeviceNet
                    01, 1756-DNB/A
                    02, 1747-SDN Scanner Module
                    10, 1794-ADN DeviceNet Flex I/O Adapter
                    11, 1794-ADN DeviceNet Flex I/O Adapter
                    12, 1794-ADN DeviceNet Flex I/O Adapter
                    21, PowerFlex 70 480V    8.0A
                    29, Unrecognized Device
                    31, E3 Plus (5-25A)
                    33, E3 Plus (3-15A)
            02, 1756-DHRIO/B,  1756-DHRIO/B
```

For Help, press F1

2. Create an RSView32 Project.

Open RSView32 Works and click on “File/New”. Create a name for the project. Then click on the Open button.

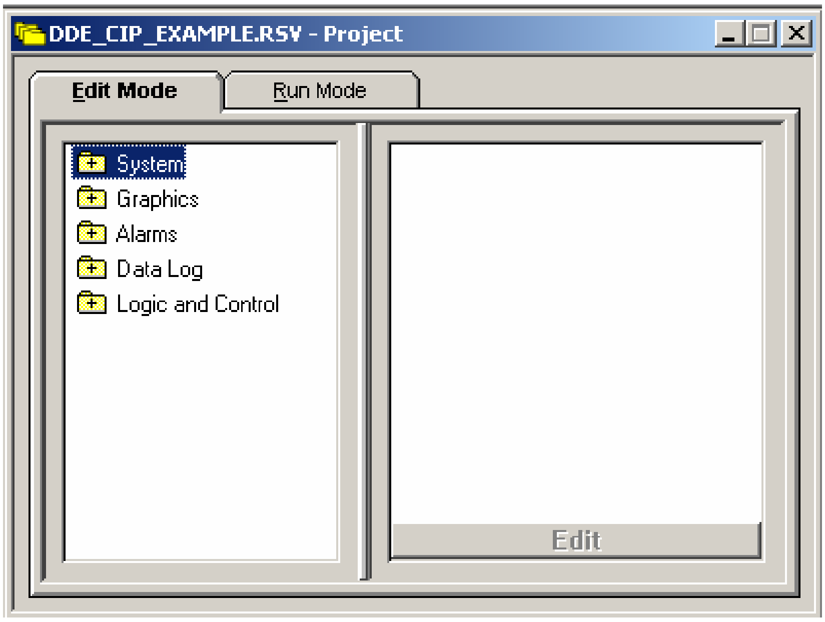


Project Name: DDE_CIP_Example

New Subdirectory: DDE_CIP_Example

Full Path: c:\documents and settings\jjolive\my docun

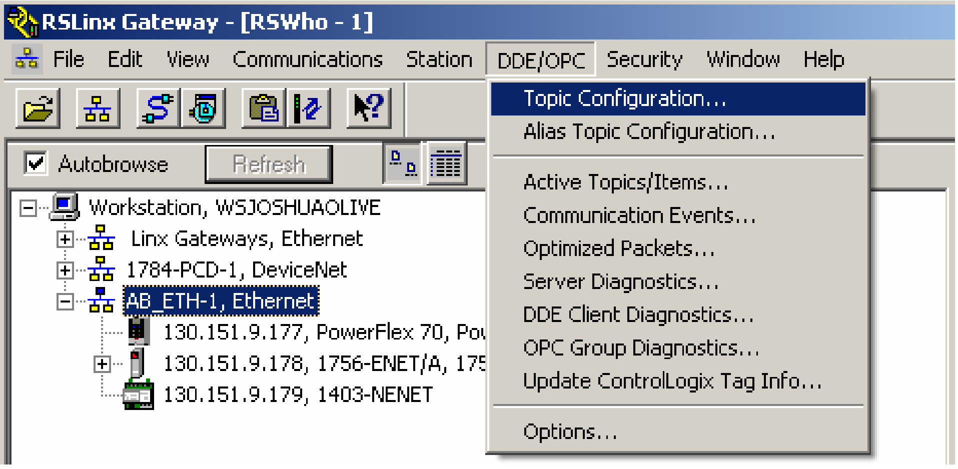
Now you should have a window that looks similar to this:



3. Create a DDE Topic Using RSLinx

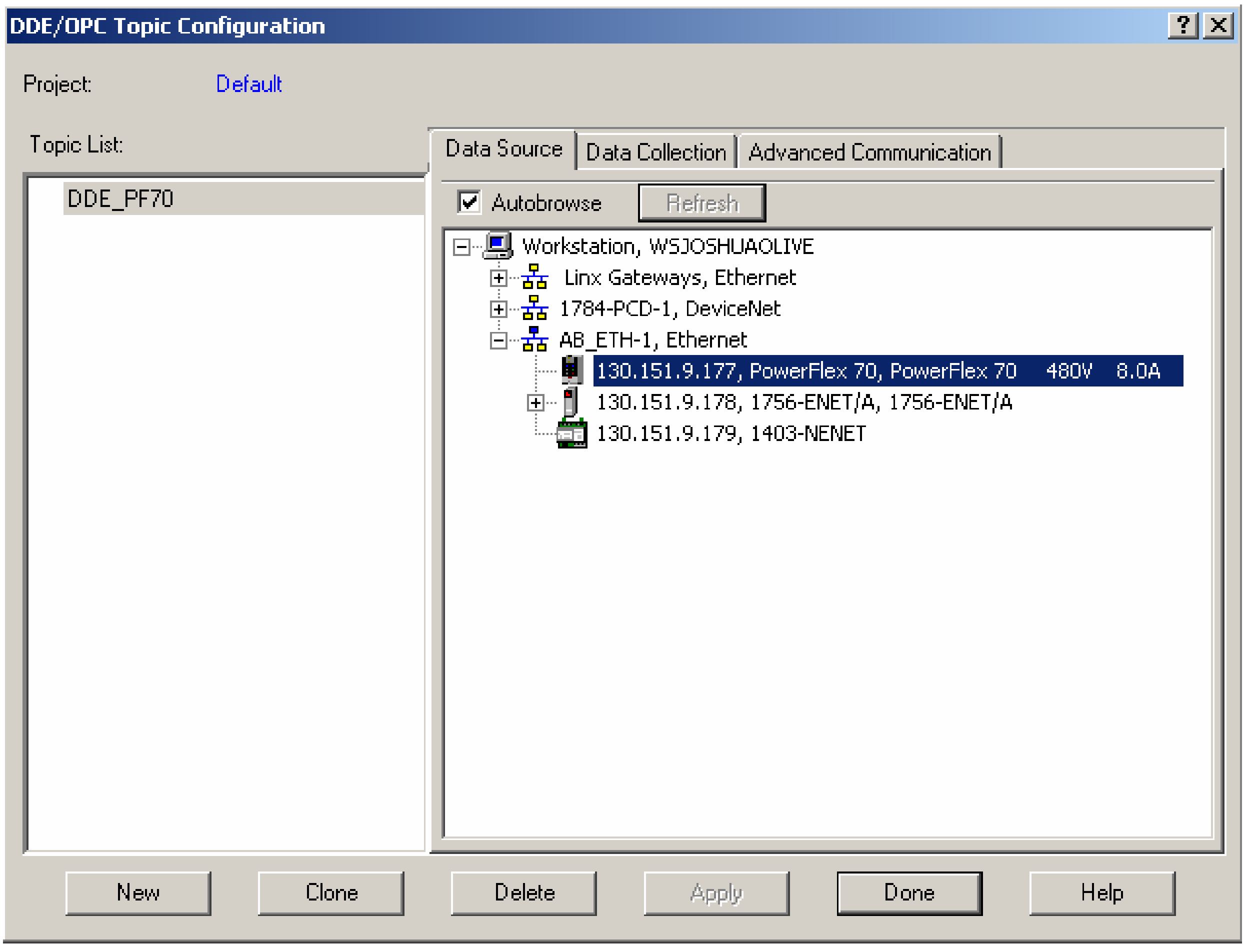
For this step, go back to RSLinx. Browse through your network until you see the drive you would like to create a topic for.

Click on “DDE/OPC”, then “Topic Configuration” as shown below.

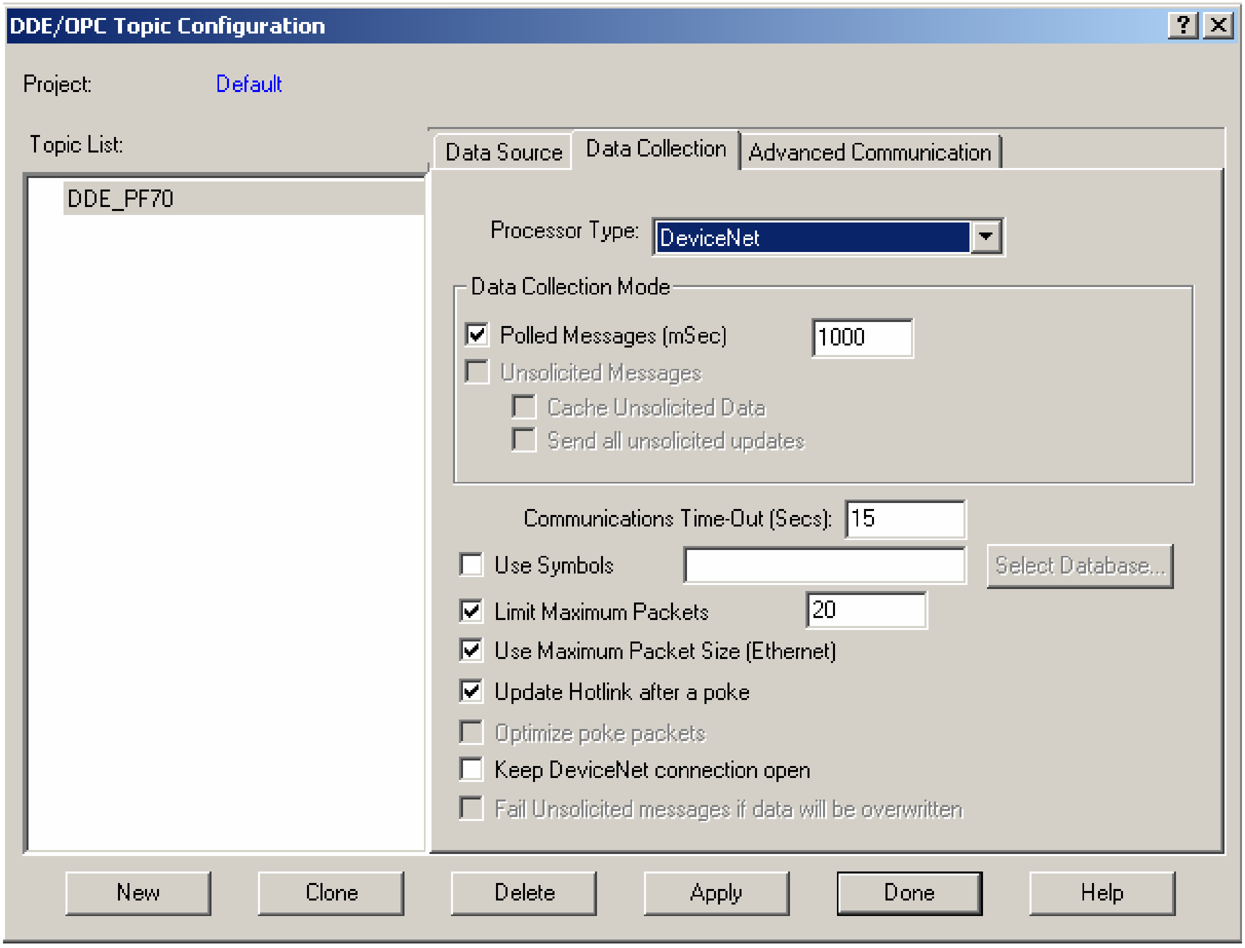

RSLinx Gateway - [RSWho - 1]
File Edit View Communications Station DDE/OPC Security Window Help
Topic Configuration...
Alias Topic Configuration...
Active Topics/Items...
Communication Events...
Optimized Packets...
Server Diagnostics...
DDE Client Diagnostics...
OPC Group Diagnostics...
Update ControlLogix Tag Info...
Options...
Autobrowse
Refresh
Workstation, WSJOSHUAOLIVE
Linx Gateways, Ethernet
1784-PCD-1, DeviceNet
AB_ETH-1, Ethernet
130.151.9.177, PowerFlex 70, Pov
130.151.9.178, 1756-ENET/A, 175
130.151.9.179, 1403-NENET

Now a dialog box like the one below shows up. Click New. RSLinx creates a new topic. Type in a name for your topic. In this example we named the new topic “DDE_PF70”.

On the “Data Source” tab browse the network and highlight the drive you would like to communicate with. This sets up the communication path for the DDE topic.



Click on the “Data Collection” tab and select “DeviceNet” for “Processor Type”. This sets up the data collection for a CIP type message.



DDE/OPC Topic Configuration

Project: Default

Topic List: DDE_PF70

Processor Type: DeviceNet

Data Collection Mode

☑ Polled Messages (mSec) 1000

□ Unsolicited Messages

□ Cache Unsolicited Data

□ Send all unsolicited updates

Communications Time-Out (Secs): 15

□ Use Symbols

☑ Limit Maximum Packets 20

☑ Use Maximum Packet Size (Ethernet)

☑ Update Hotlink after a poke

□ Optimize poke packets

□ Keep DeviceNet connection open

□ Fail Unsolicited messages if data will be overwritten

Click on the “Apply button” to apply the changes to your new topic.

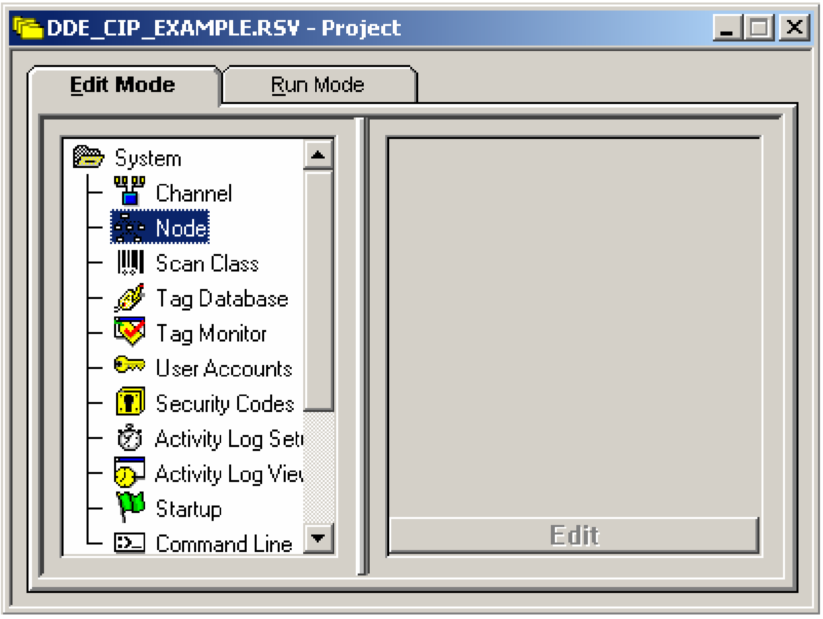
After applying the changes, you can click on the “Advanced Communication” tab to verify that the communication path is correct. Note that when we highlighted the PowerFlex 70 on Ethernet, RSLinx automatically created the correct path because the PowerFlex 70 was highlighted. Here is an explanation of the address “AB ETH-1\0.(130.151.9.177)” that appears for our example:

“AB ETH-1”	→	Indicates we are using the Ethernet driver in RSLinx.
“0”	→	Indicates we are going out the Ethernet card on the Workstation.
“(130.151.9.177)”	→	Indicates the Ethernet IP address of the PowerFlex 70 on Ethernet.

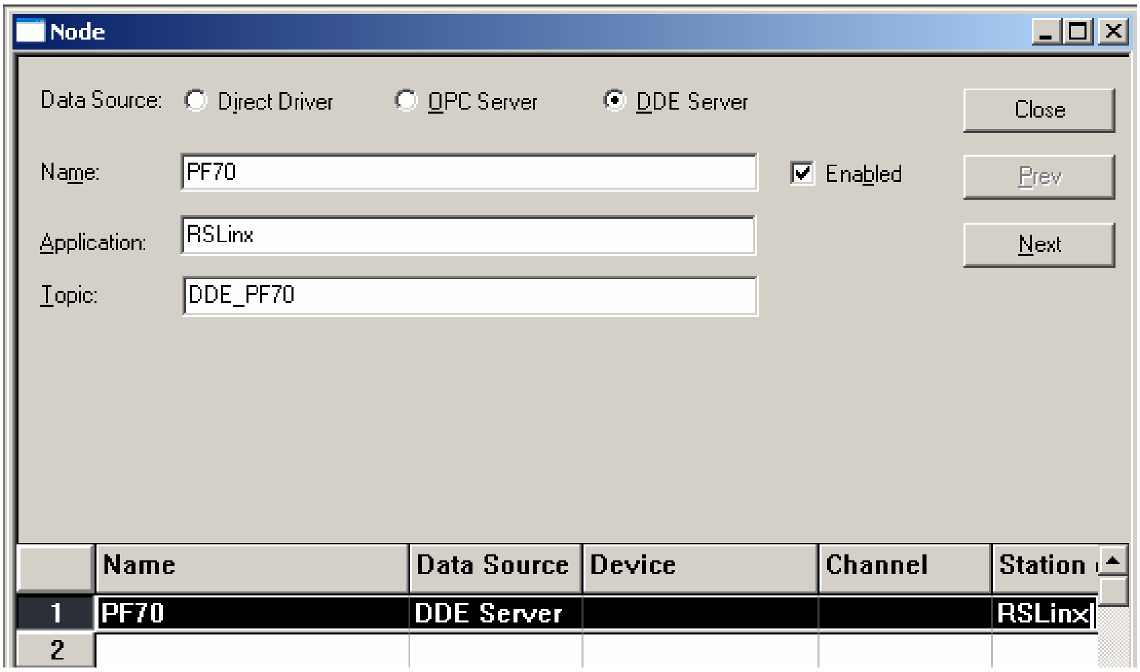
Click on the “Done” button once you have verified the settings. When RSLinx asks you to update the topic click “Yes”.

4. Create a DDE Node in RSView32

Go back into RSView32. Expand the System folder and double click on Node.



A Node dialog box appears. Select DDE Server for the Data Source. Then give the new node a name. In this example, we named it “PF70”. For “Application” type “RSLinx” since that will be the source of our data. For “Topic” type in the name of the topic that you created in RSLinx. In this example the topic name is “DDE_PF70”. Now you are done creating the node, so click on the “Accept” button to accept the node. Then close the Node dialog box.



Data Source: ○ Direct Driver ○ OPC Server ● DDE Server

Name: PF70 ☑ Enabled

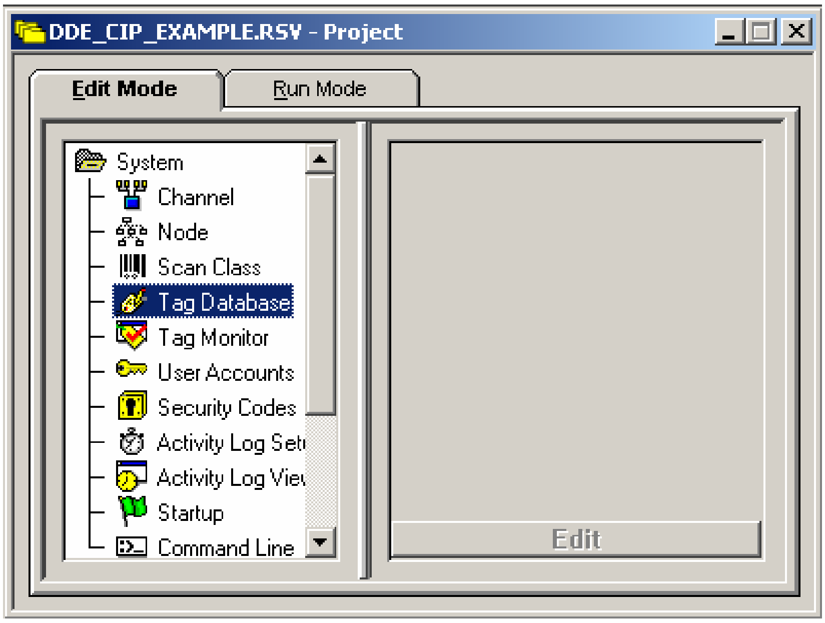
Application: RSLinx

Topic: DDE_PF70

	Name	Data Source	Device	Channel	Station
1	PF70	DDE Server			RSLinx
2					

5. Create a Tag in RSView

Expand the System folder and double click on the Tag Database.



Click “Edit”, “New Folder” in RSView32 to create a folder for your drive’s tags.

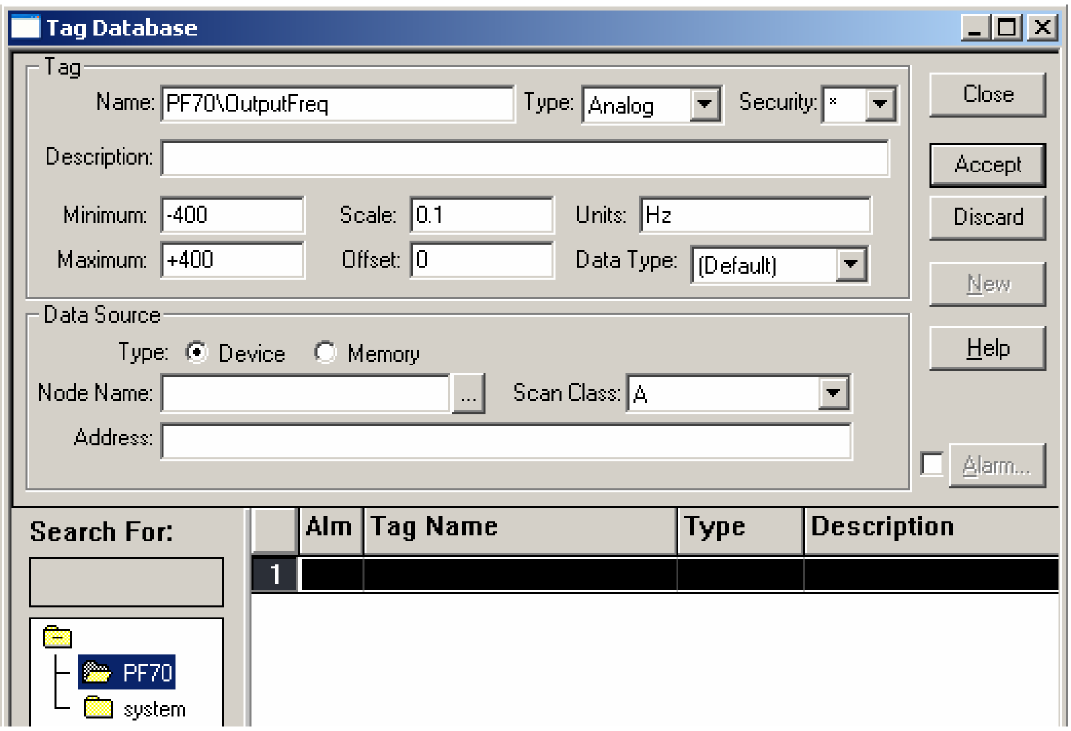
Now you can type in a tag name for the data you will be transferring to/from the drive. In this example, the tag name is “OutputFreq”.

For the tag type, select “Analog”.

“Data Type” will depend on the data you are transferring to/from the drive. In this example, the Output Frequency parameter in the PowerFlex 70 is an integer.

The minimum, maximum, scale, and offset for the tag can also be changed. In this example, we will change the scale to 0.1 because the Output Frequency of the PowerFlex 70 is displayed with one decimal point. The maximum will be 400 because the maximum frequency the PowerFlex 70 could ever output is 400.0 Hz. The minimum will be -400. We also documented that the units are Hz.

Check “Device” for the data source type.



Tag Database

Tag

Name: PF70\OutputFreq Type: Analog Security: *

Description:

Minimum: -400 Scale: 0.1 Units: Hz

Maximum: +400 Offset: 0 Data Type: (Default)

Data Source

Type: ● Device ○ Memory

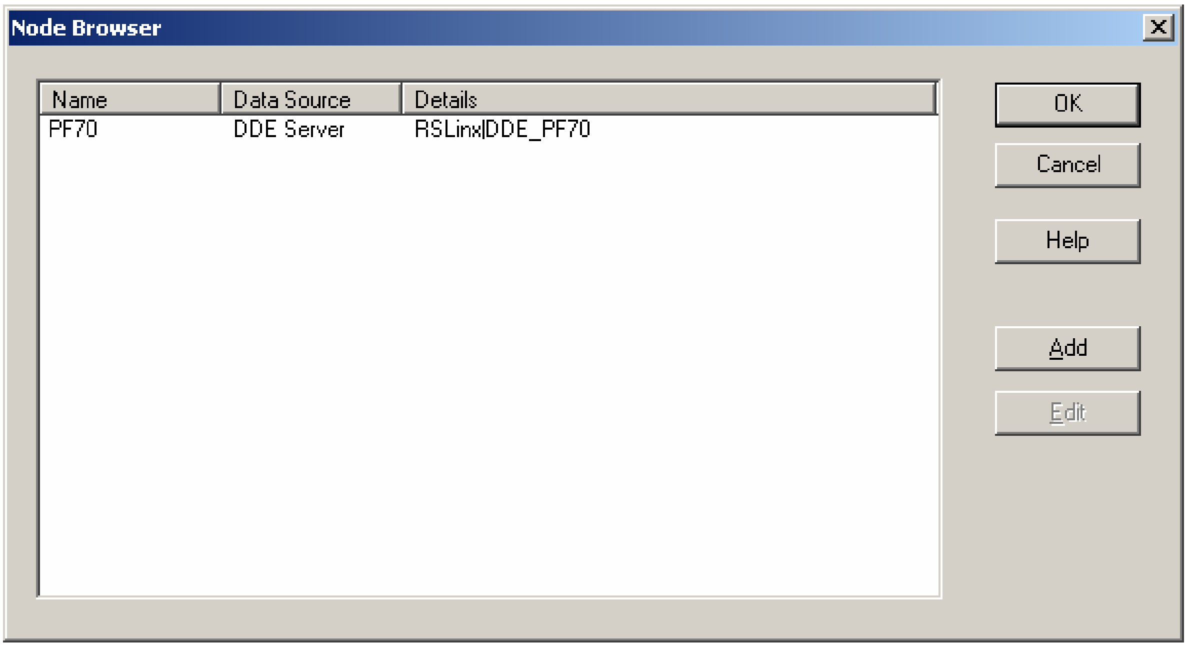
Node Name: Scan Class: A

Address:

Search For:

	Alm	Tag Name	Type	Description
1				

Now click on the ... button next to Node Name. The following screen appears.



Node Browser

Name	Data Source	Details
PF70	DDE Server	RSLinx|DDE_PF70

Select the Node that you just created and click “OK”.

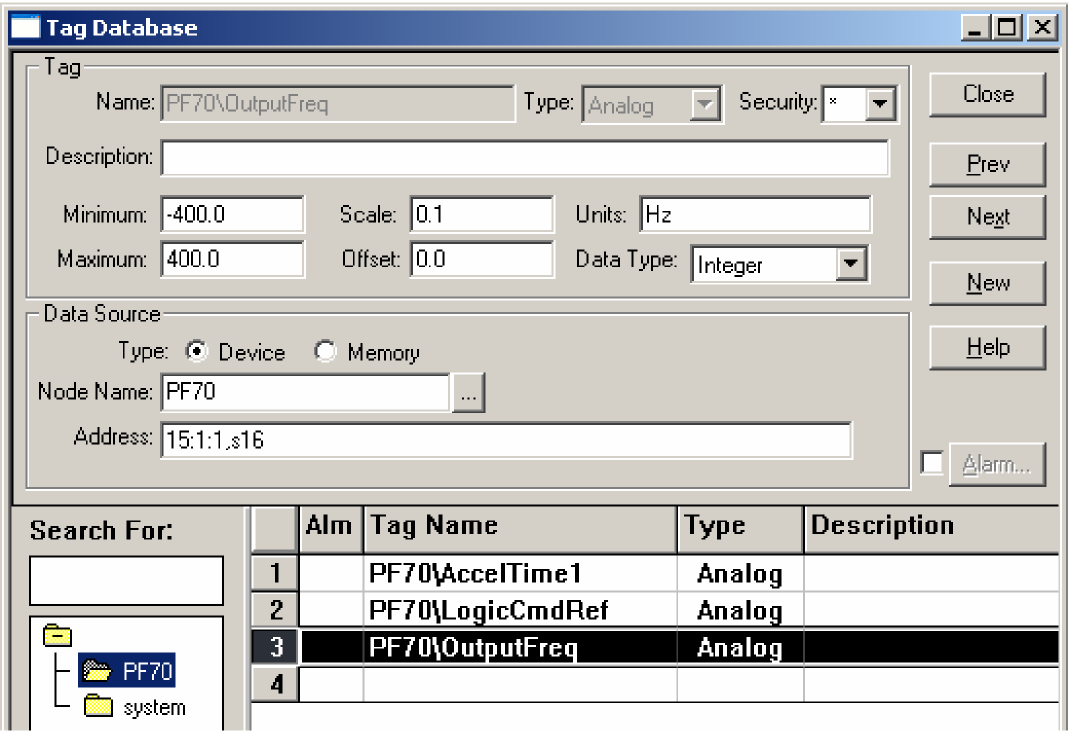
Now we must enter the Address of the data we are transferring to/from the drive. For Ethernet, ControlNet and DeviceNet the address follows the format of a CIP type message:

“Class Code”:”Instance”:”Attribute”,”Data Type Code”

The “Class Code”, “Instance”, and “Attribute” are specific to the communication adapter used and can be found one of the appendices of the communication adapter’s user manual. Please note that in the manual the class code is shown in hex, but in the tag address in RSView32 it must be decimal.

In this example, our communication adapter is a 20-COMM-E. The address breaks down as follows:

Field	**Value**	**Description**
Class Code	15	15 is parameter object which means we are doing something with a parameter
Instance	1	The parameter number in the drive that we want data for. Parameter 1 is Output Frequency in the PowerFlex 70.
Attribute	1	Parameter value.
Data Type	s16	A signed 16 bit integer.


Tag Database

Tag

Name: PF70\OutputFreq Type: Analog Security: *

Description:

Minimum: -400.0 Scale: 0.1 Units: Hz

Maximum: 400.0 Offset: 0.0 Data Type: Integer

Data Source

Type: ● Device ○ Memory

Node Name: PF70

Address: 15:1:1,s16

	Alm	Tag Name	Type	Description
1		PF70\AccelTime1	Analog	
2		PF70\LogicCmdRef	Analog	
3		PF70\OutputFreq	Analog	
4				

This is a list of codes for the data types for RSLinx.

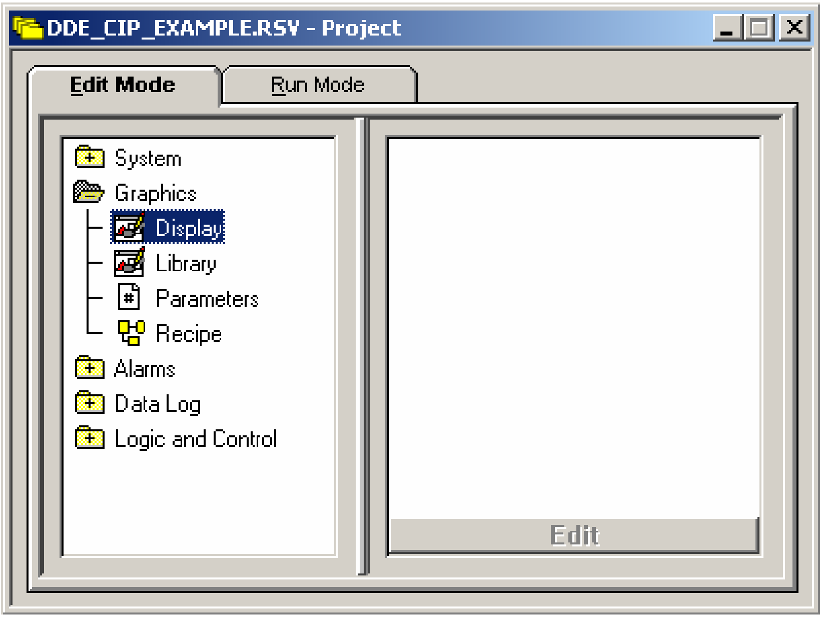
Data Type	Description
u0	Boolean
u8	Byte
u16	Usigned Word
u32	Unsigned Long
u64	Unsigned Double
s0	Boolean
s8	Char
s16	Word
s32	Dword
s64	Double
str1	Short String (1 byte length and string)
str2	String (2 byte length and string)
arr0	Boolean Array
arr8	Byte Array
arr16	Word Array
arr32	Dword Array
arr64	Double Array
f32	32-bit Floating Point
f64	64-bit Floating Point
arrf32	32-bit Floating Point Array
arrf64	64-bit Floating Point Array
nf	Do not format String

For more details on the data types and DDE structure see “DDE (dynamic data exchange), communicating to DeviceNet devices” in the RSLinx Online Help Index .

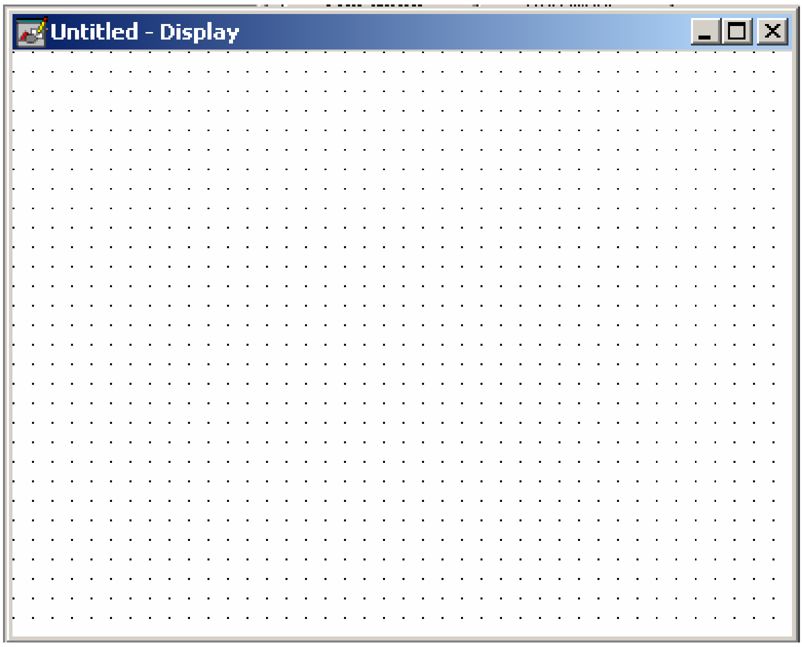
When finished creating your tags, click “Close” to close the tag database.

6. Create a Display Screen in RSView32

Expand the Graphics folder and double click on Display.



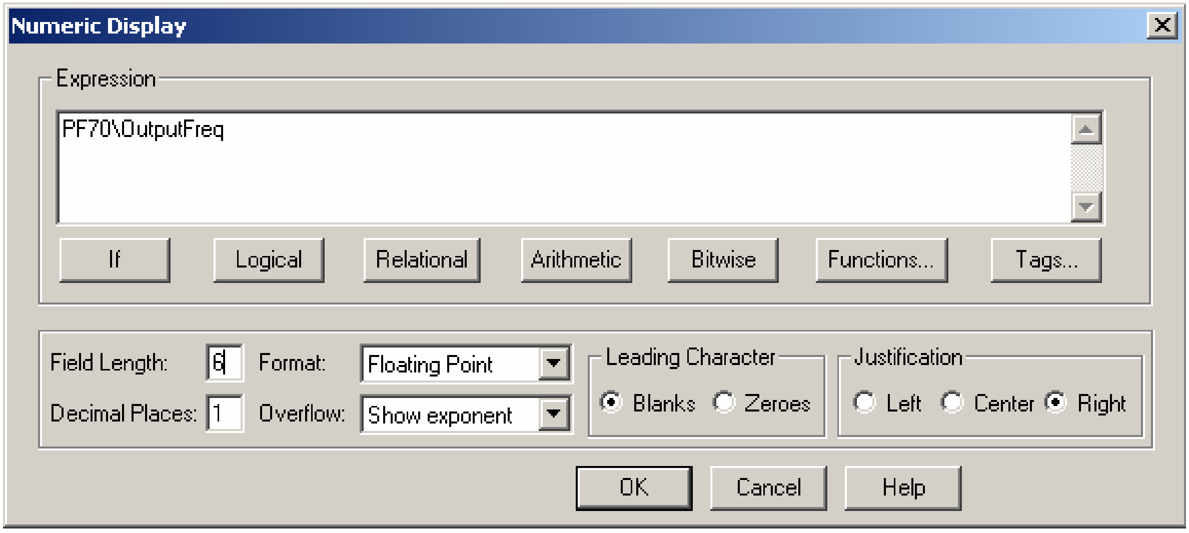
A new Display will be created.



At this point, you can insert a new object that will be used to change or display a drive parameter. In the example, we will create a numeric display to show the Output Freq for the PowerFlex 70.

Click on the # button once to create a numeric display. Select a spot on the display screen to create the numeric display, then click the left mouse button and drag to create a numeric display of a desired size. Once you lift your finger off of the left mouse button the following dialog box appears.

Now type in the tag name (including the folder name) or click on “Tags…” to select the tag. Select the correct format for the parameter you are monitoring, and setup the number of decimal places, if there are any. Choose floating point for the format in order to show any decimal places. We will display one decimal place for the output frequency:


Numeric Display

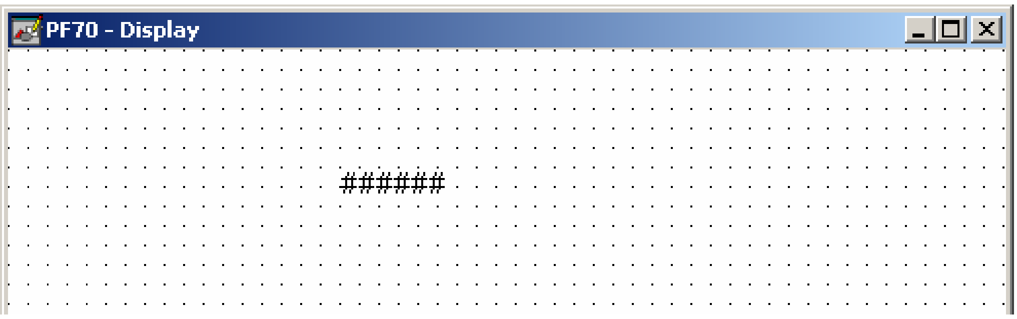
Expression

PF70\OutputFreq

Field Length: 6
Format: Floating Point
Decimal Places: 1
Overflow: Show exponent
Leading Character: ● Blanks ○ Zeroes
Justification: ○ Left ○ Center ● Right

Notice that in the Numeric Display dialog box you can add logical and arithmetic instructions to manipulate the tag data before it is displayed.

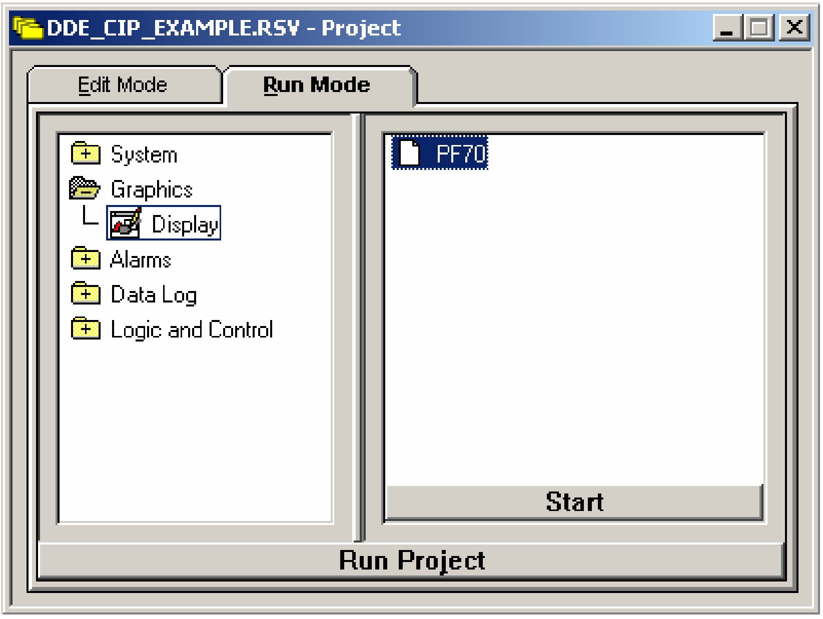
Be sure to save the new display screen.


PF70 - Display

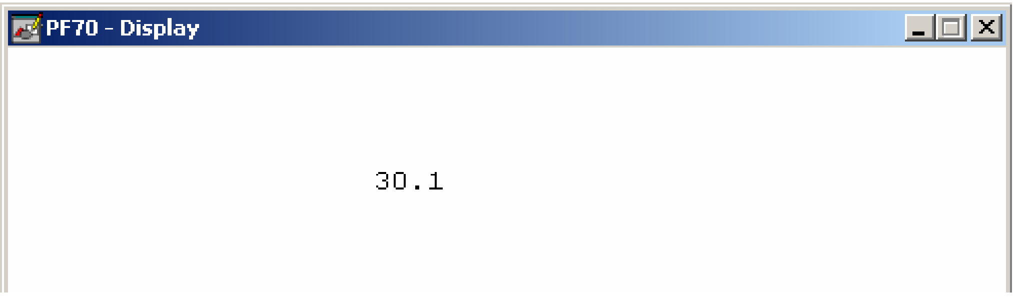
######

7. Testing the Display in Run Mode

Select the Run Mode tab, and click "Run Project". Expand the Graphics folder, and double click on the name of the display screen that you created.



Now the display that you created shows up in run mode. To display a value for the output frequency, start the drive. Now a value appears.



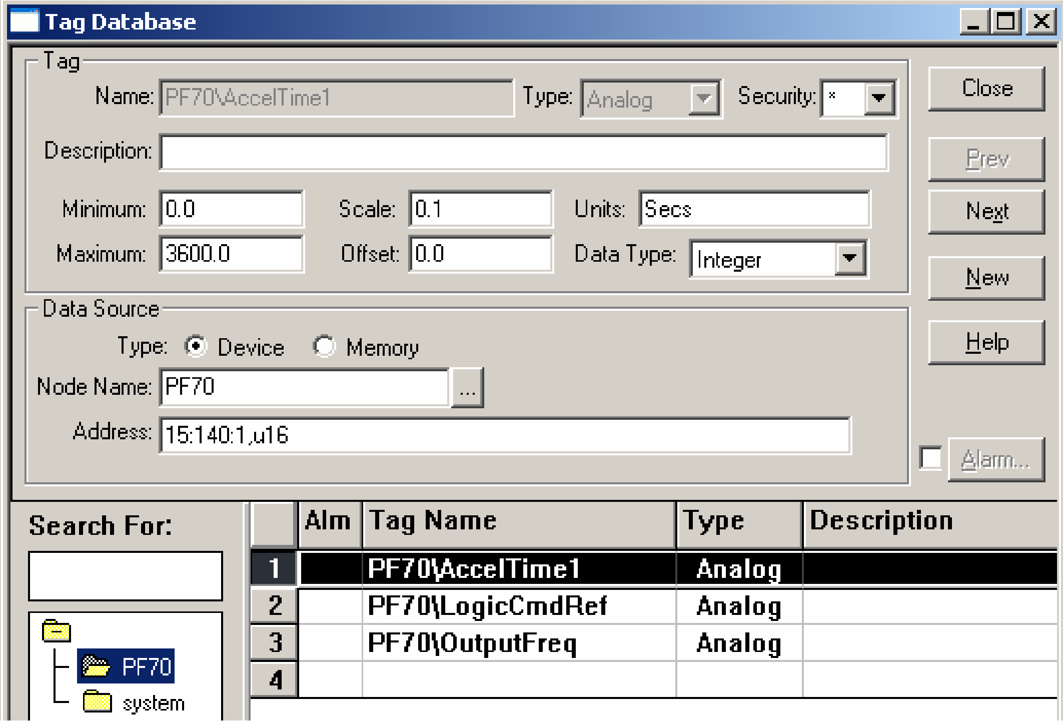
30.1

8. Creating a Numeric Input to Change a Drive Parameter

△ ATTENTION: Using explicit messaging to make frequent changes to a parameter will eventually result in the failure of the device's EEPROM (if so equipped). If an application requires frequent changes of only a few parameters, the parameters should be written using the adapter's Datalink function (if available) since this does not cause EEPROM writes to occur.

Now that you know how to create a tag and display a parameter value, let's go through an example of changing a parameter.

Create a new tag. This time select a parameter that is writable, such as Accel Time 1. Again AccelTime1 has a scale of 0.1 because the PowerFlex 70 displays Accel Time 1 with one decimal point.



Tag

Name: PF70\AccelTime1 Type: Analog Security: *

Description:

Minimum: 0.0 Scale: 0.1 Units: Secs

Maximum: 3600.0 Offset: 0.0 Data Type: Integer

Data Source

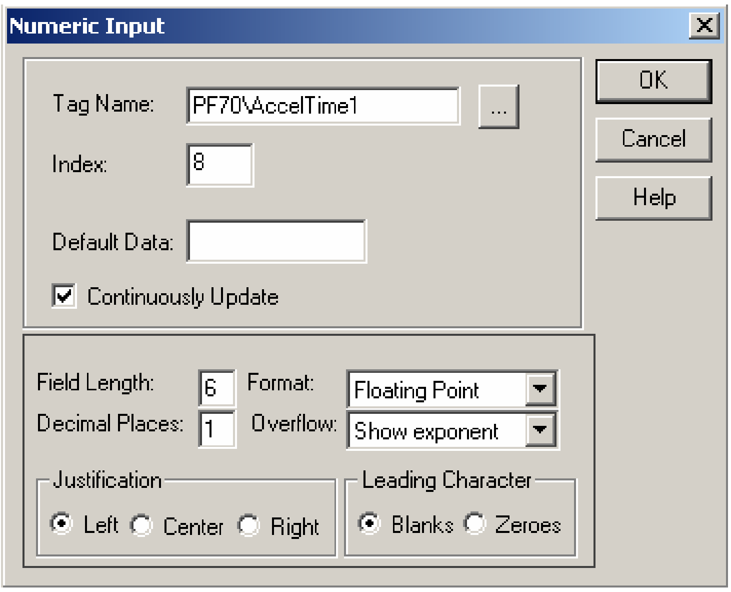
Type: ● Device ○ Memory

Node Name: PF70

Address: 15:140:1,u16

	Alm	Tag Name	Type	Description
1		PF70\AccelTime1	Analog	
2		PF70\LogicCmdRef	Analog	
3		PF70\OutputFreq	Analog	
4				

Now open up the display that you've previously created. Click on the ⌗ button to add a numeric entry input. Select a spot on the display to create the numeric input, click the left mouse button, and drag to make a numeric input of the desired size.



Numeric Input

Tag Name: PF70\AccelTime1

Index: 8

Default Data:

☑ Continuously Update

Field Length: 6

Format: Floating Point

Decimal Places: 1

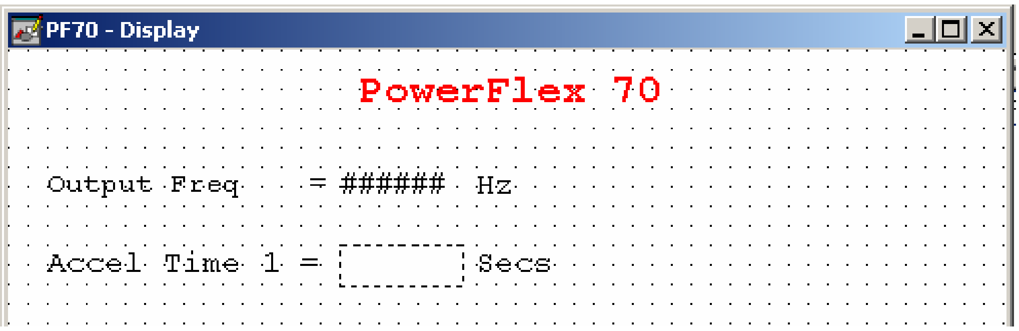
Overflow: Show exponent

Justification: ● Left ○ Center ○ Right

Leading Character: ● Blanks ○ Zeroes

Select the tag name for the parameter that you wish to change. In this example, we chose to display 2 decimal places. Click “OK” to close the Numeric Display dialog box.

Save the display. Notice that in the example we added some more text to make the display screen look a little nicer.



PF70 - Display

PowerFlex 70

Output Freq = ###### Hz

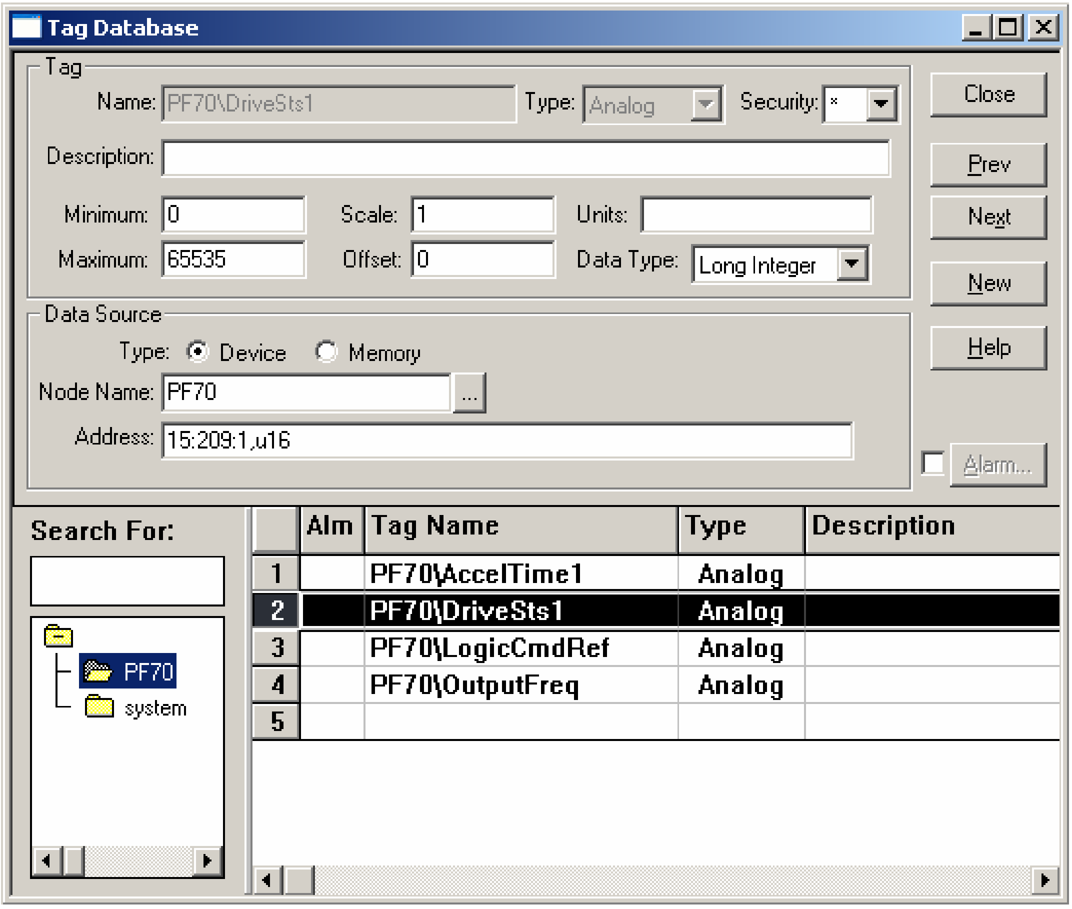
Accel Time 1 = Secs

Once again, we can go to run mode to test the numeric input.

To change the input highlight it and type in the new value that you want to be written to the drive parameter.

9. Creating a Drive Status Indicator

An indicator can be created in RSView32 to show drive status bits, such as whether the drive is running or not. In this example, we will create an indicator to show if the PowerFlex 70 is running. A tag has been created for parameter 209 [Drive Status 1].



Tag Database

Tag

Name: PF70\DriveSts1 Type: Analog Security: *

Description:

Minimum: 0 Scale: 1 Units:

Maximum: 65535 Offset: 0 Data Type: Long Integer

Data Source

Type: ● Device ○ Memory

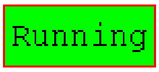
Node Name: PF70

Address: 15:209:1,u16

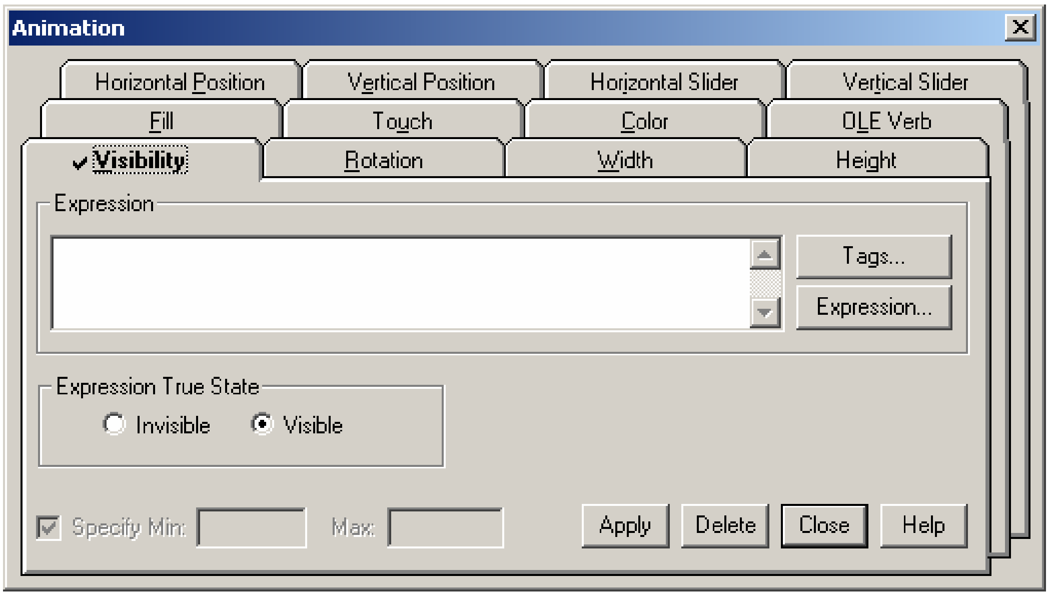
Search For:

	Alm	Tag Name	Type	Description
1		PF70\AccelTime1	Analog	
2		PF70\DriveSts1	Analog	
3		PF70\LogicCmdRef	Analog	
4		PF70\OutputFreq	Analog	
5				

Now click □ to draw a rectangle in your display screen. Click "Attributes", "Fill Color" from the RSView32 display menu to change the color of your indicator. Then click A to create some text on your indicator. At this point, your indicator might look something like this:



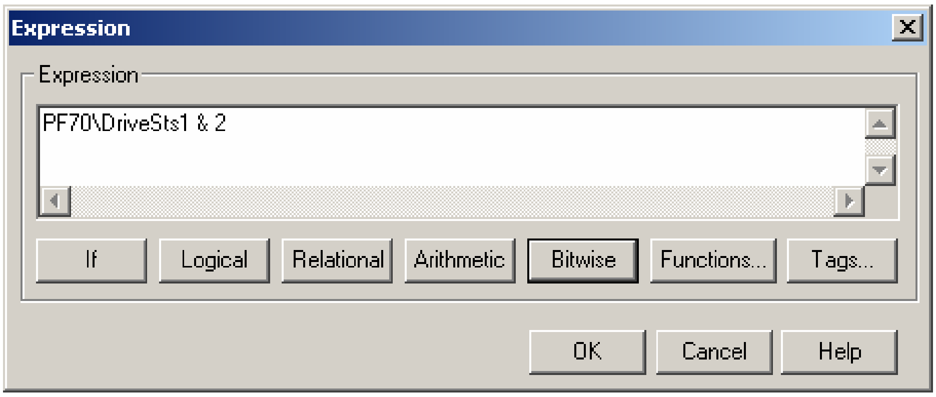
Select both the indicator and the text, then click "Arrange", "Group". Next click "Animation", "Visibility". A dialog box like the following appears. We will set this up to make the indicator visible when the drive is running, and invisible when the drive is not running. Check "Visible".



Expression True State: ○ Invisible ● Visible

☑ Specify Min: Max:

Now click on the "Expression" button. This brings up another dialog box. Type in the name of the status tag you wish to use or choose the tag using the "Tags…" button. Then click "Bitwise" and select the "&" operator. Finally, type in the decimal value for the status parameter that indicates the desired state. In this example, bit 1 (a decimal value of 2) indicates that the drive is running. The final expression for our example is shown below. Now our indicator will be visible when bit 1 of parameter 209 is on, and invisible when bit 1 is off. Click "OK" to close the "Expression" window and click "Apply", then "Close" to close the "Animation" dialog box.



Expression: PF70\DriveSts1 & 2

Now you can go into run mode to test the new indicator.

10. Controlling the drive using the Register Object

🗎 FYI: Writing to the Register Object does not write to the EEPROM. Instead, it writes to volatile memory. Therefore, the Datalinks in the Register Object can be used for writing parameters that are changed frequently.

Several of the communication adapters support the Register Object (Class Code 7). The Register Object can be used to write to the logic command, reference, Datalinks and to read the drive status, feedback, and Datalinks using CIP messages.

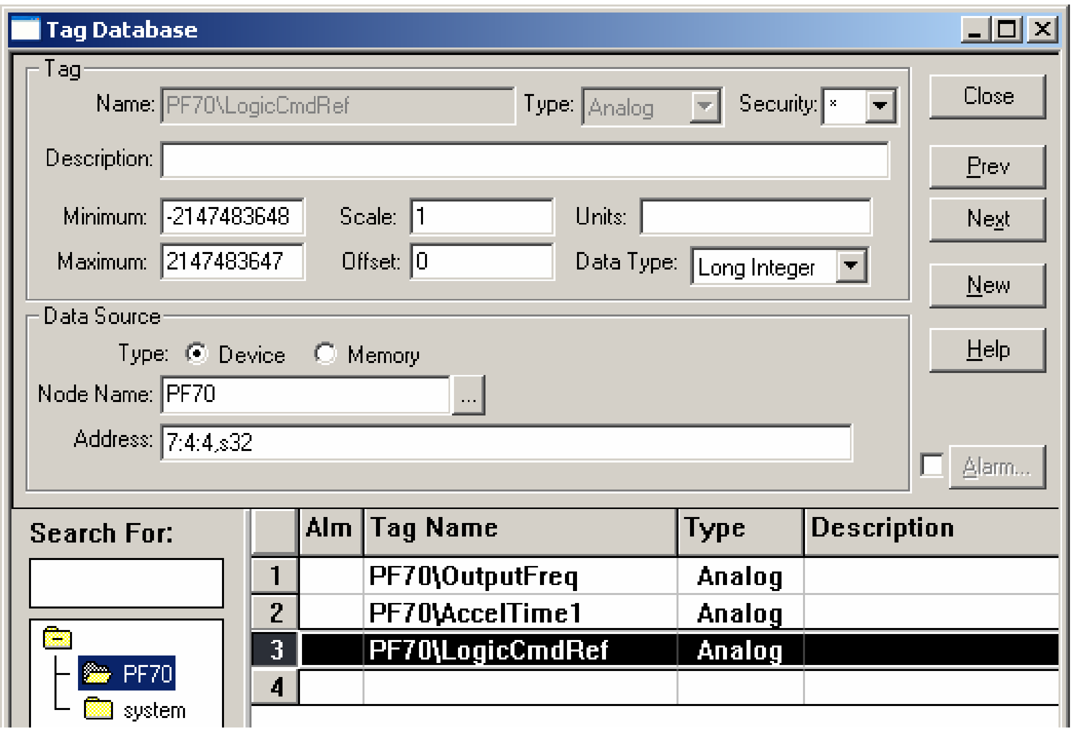
When controlling the drive from RSView32 using CIP messaging there is no continuous communication connection to the drive. To prevent a communication loss fault on the drive, the communication adapter's [Comm Fault Action] and [Idle Flt Action] parameters can be set to "Hold Last".

△ ATTENTION: Risk of injury or equipment damage exists. [Comm Flt Action] lets you determine the action of the adapter and connected drive if communications are disrupted. By default, this parameter faults the drive. You can set this parameter so that the drive continues to run. Precautions should be taken to ensure that the setting of this parameter does not create a hazard of injury or equipment damage.

△ ATTENTION: Risk of injury or equipment damage exists. [Idle Flt Action] lets you determine the action of the adapter and connected drive if the scanner is idle. By default, this parameter faults the drive. You can set this parameter so that the drive continues to run. Precautions should be taken to ensure that the setting of this parameter does not create a hazard of injury or equipment damage.

When using the 20-COMM-E or 20-COMM-C the control timeout must be set before the drive will allow control with the Register Object. This control timeout can be set by writing a value in seconds to Class 7, Instance 0, and Attribute 100.

In this example, we will write to the logic command of the PowerFlex 70 on Ethernet. We will create buttons in RSView32 to start, stop, and change the speed. Note that the logic command and reference in the 20-COMM-E register object are packed into the same 32 bit integer, where the logic command is the lower 16 bits and the reference is the upper 16 bits. To make the example easier, we will use the MOP (motor operated pot) function instead of writing the upper 16 bits of the register object to change the speed ref.



Tag Database

Tag

Name: PF70\LogicCmdRef Type: Analog Security: *

Description:

Minimum: -2147483648 Scale: 1 Units:

Maximum: 2147483647 Offset: 0 Data Type: Long Integer

Data Source

Type: ● Device ○ Memory

Node Name: PF70

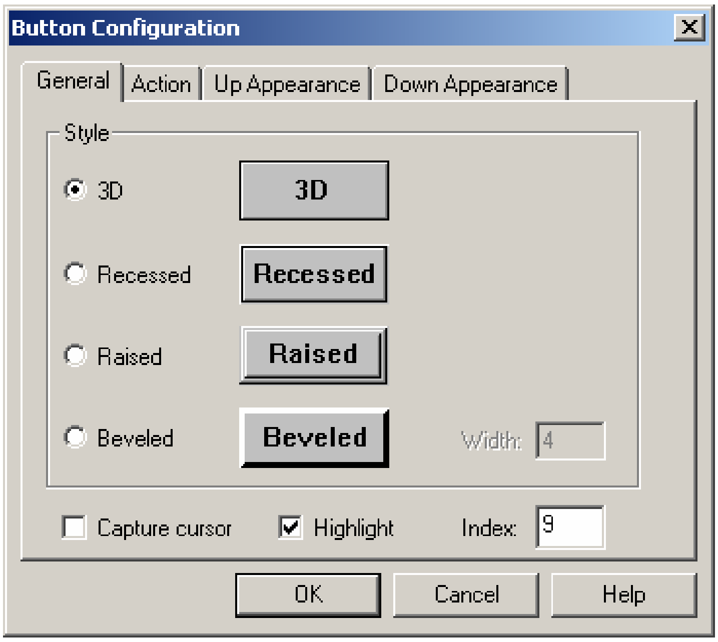
Address: 7:4:4,s32

□ Alarm...

	Alm	Tag Name	Type	Description
1		PF70\OutputFreq	Analog	
2		PF70\AccelTime1	Analog	
3		PF70\LogicCmdRef	Analog	
4				

Creating start and stop buttons:

Now we will create a start button. Go back to the display screen and click on to create a button. Then click and drag on the display screen to create a button of the desired size. The following dialog box appears:



Button Configuration

Style

● 3D

○ Recessed

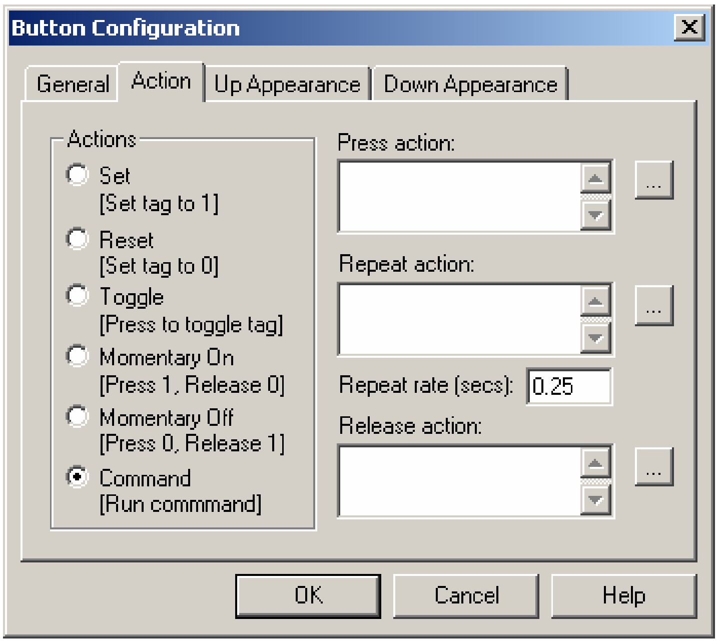
○ Raised

○ Beveled

Width: 4

□ Capture cursor ☑ Highlight Index: 9

Select the tab labeled “Action”. Verify that “Command (Run command)” is selected. Then click on the ... button next to the “Press action:” window.



Button Configuration

General | Action | Up Appearance | Down Appearance

Actions

○ Set [Set tag to 1]
○ Reset [Set tag to 0]
○ Toggle [Press to toggle tag]
○ Momentary On [Press 1, Release 0]
○ Momentary Off [Press 0, Release 1]
● Command [Run command]

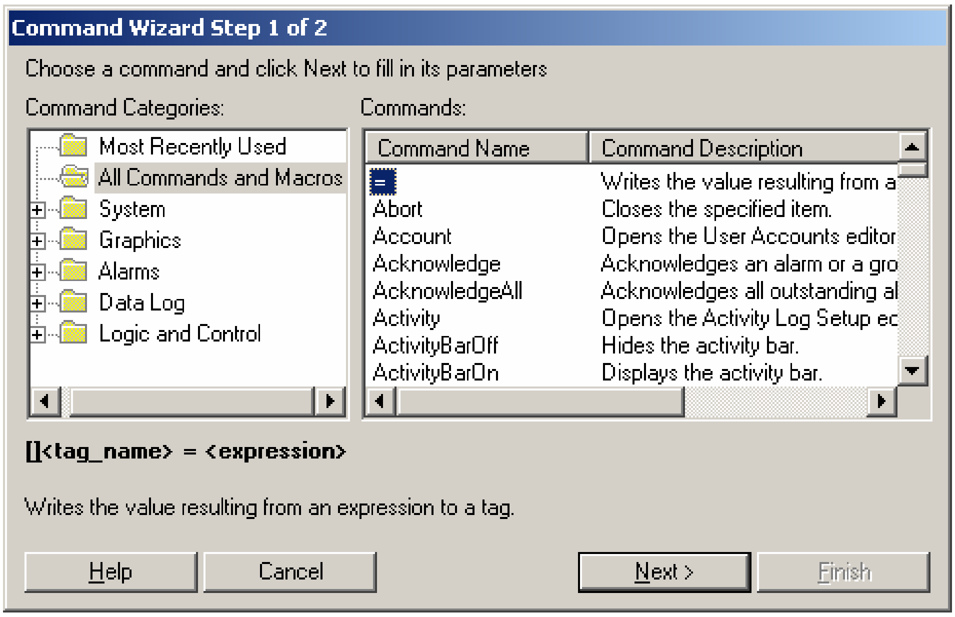
Press action: ...

Repeat action: ...

Repeat rate (secs): 0.25

Release action: ...

Now another dialog box appears:



Command Wizard Step 1 of 2

Choose a command and click Next to fill in its parameters

Command Categories:

- Most Recently Used
- All Commands and Macros
- System
- Graphics
- Alarms
- Data Log
- Logic and Control

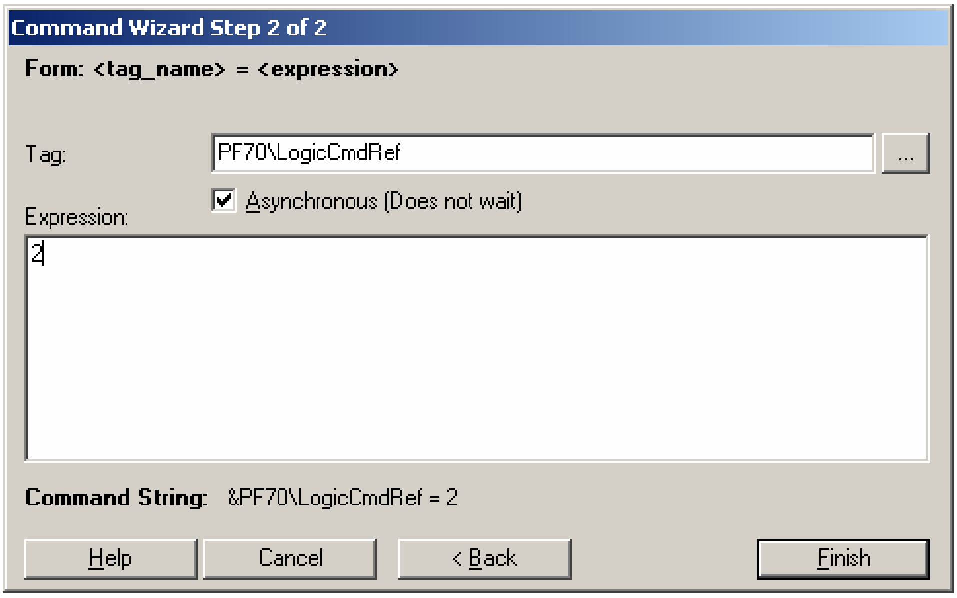
Commands:

Command Name	Command Description
=	Writes the value resulting from a
Abort	Closes the specified item.
Account	Opens the User Accounts editor
Acknowledge	Acknowledges an alarm or a gro
AcknowledgeAll	Acknowledges all outstanding al
Activity	Opens the Activity Log Setup ec
ActivityBarOff	Hides the activity bar.
ActivityBarOn	Displays the activity bar.

[]<tag_name> = <expression>

Writes the value resulting from an expression to a tag.

Select the “=” sign and click “Next”. Select or type in the name of the tag you created for the logic command and reference register object. Then, for the expression type in the decimal value that you want written to the logic command when the button is pressed. In this example, the start bit in the PowerFlex 70 is bit 1, so this is a decimal value of 2. Then click “Finish”.



Command Wizard Step 2 of 2

Form: <tag_name> = <expression>

Tag: PF70\LogicCmdRef

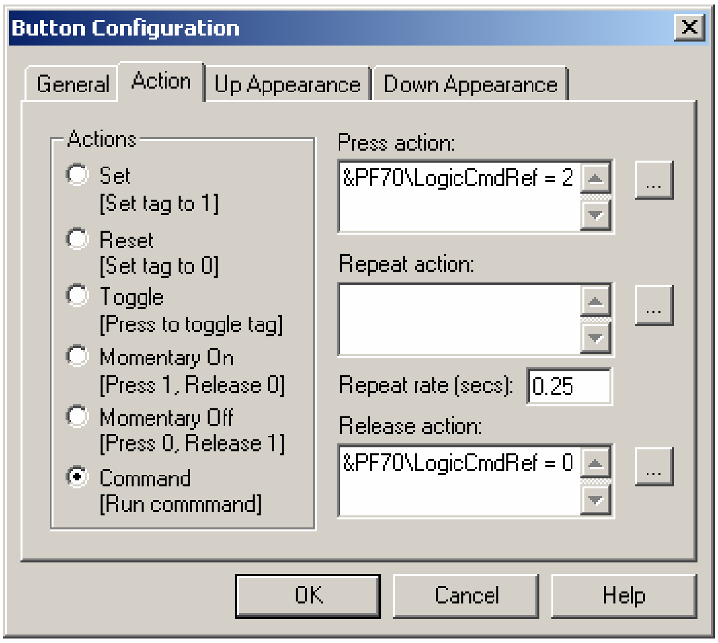
☑ Asynchronous (Does not wait)

Expression:

```
2
```

Command String: &PF70\LogicCmdRef = 2

The start button is a momentary type of control, so for the "Release action" we must set the logic command back to 0. This will make the start button act like a momentary push button, so that the start command is issued when the button is pressed. "Repeat Action" is only used



Button Configuration

Actions

○ Set [Set tag to 1]

○ Reset [Set tag to 0]

○ Toggle [Press to toggle tag]

○ Momentary On [Press 1, Release 0]

○ Momentary Off [Press 0, Release 1]

● Command [Run commmand]

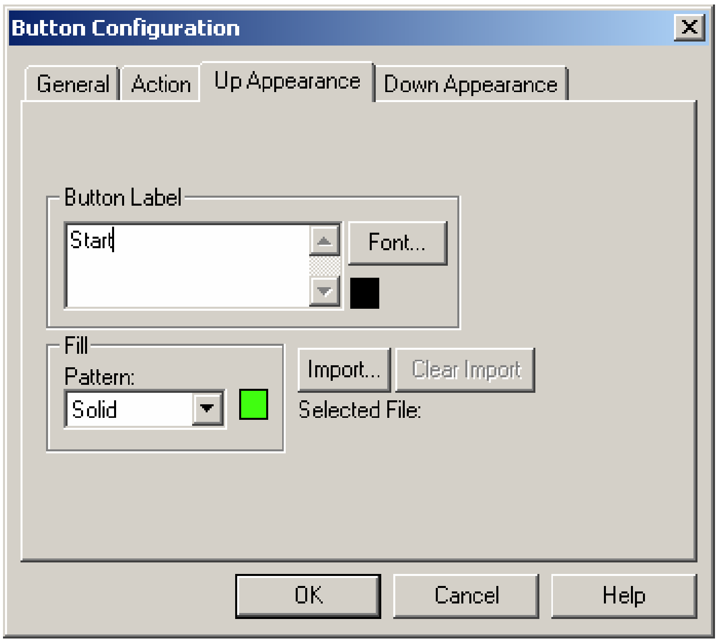
Press action: &PF70\LogicCmdRef = 2

Repeat action:

Repeat rate (secs): 0.25

Release action: &PF70\LogicCmdRef = 0

Click on the "Up Appearance". Here you can type in a label for the button and select a color.



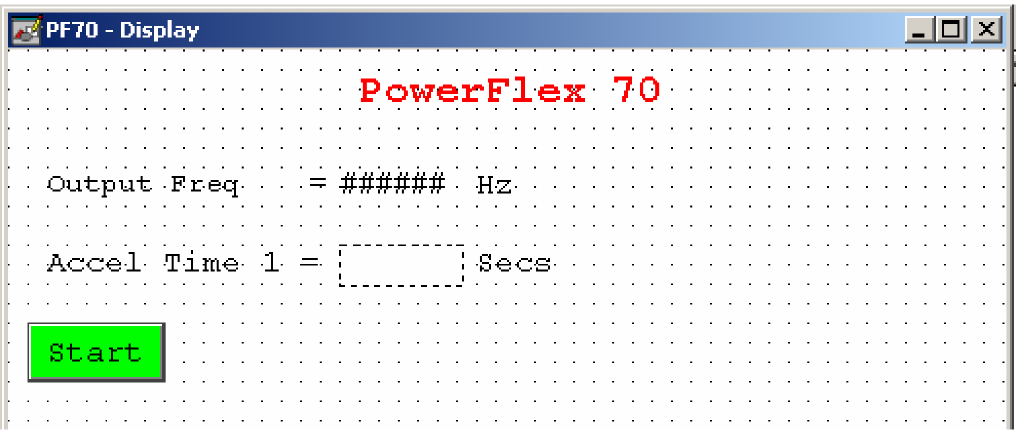
Button Configuration

Button Label: Start

Fill

Pattern: Solid 🟩

Selected File:



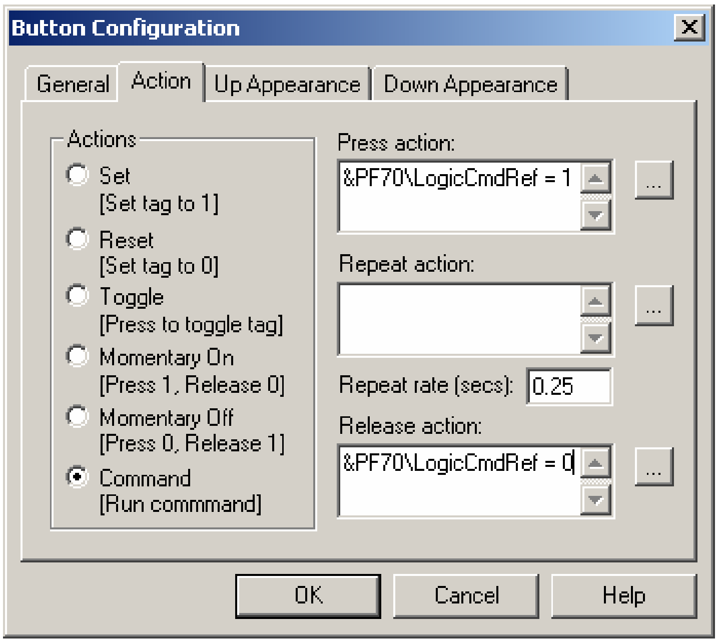
PF70 - Display

PowerFlex 70

Output Freq = ###### Hz

Accel Time 1 = Secs

Now you can create another button to stop the drive. For sending a stop command to the PowerFlex 70, we must set bit 0, which is a decimal value of 1. Then, for the release action, we will set the logic command back to 0:



Actions

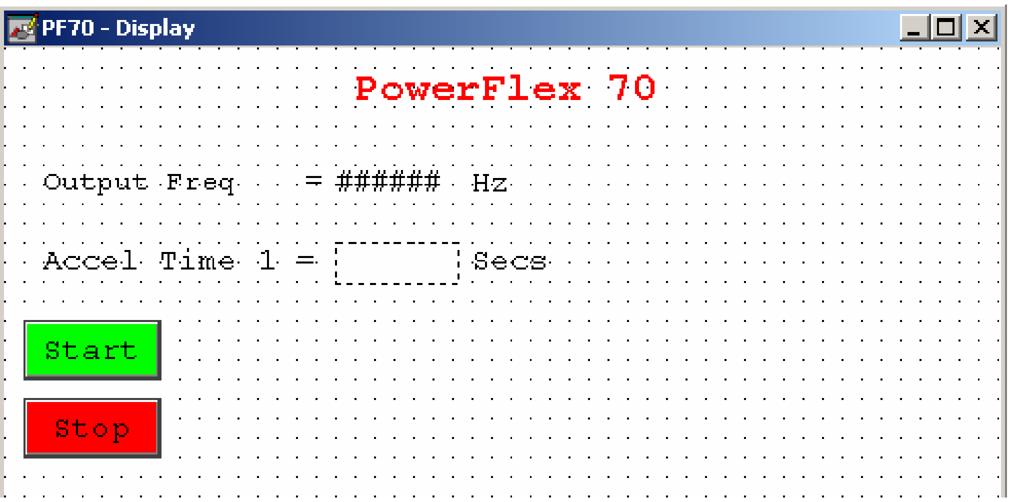
- ○ Set [Set tag to 1]
- ○ Reset [Set tag to 0]
- ○ Toggle [Press to toggle tag]
- ○ Momentary On [Press 1, Release 0]
- ○ Momentary Off [Press 0, Release 1]
- ● Command [Run commmand]

Press action: &PF70\LogicCmdRef = 1

Repeat action:

Repeat rate (secs): 0.25

Release action: &PF70\LogicCmdRef = 0



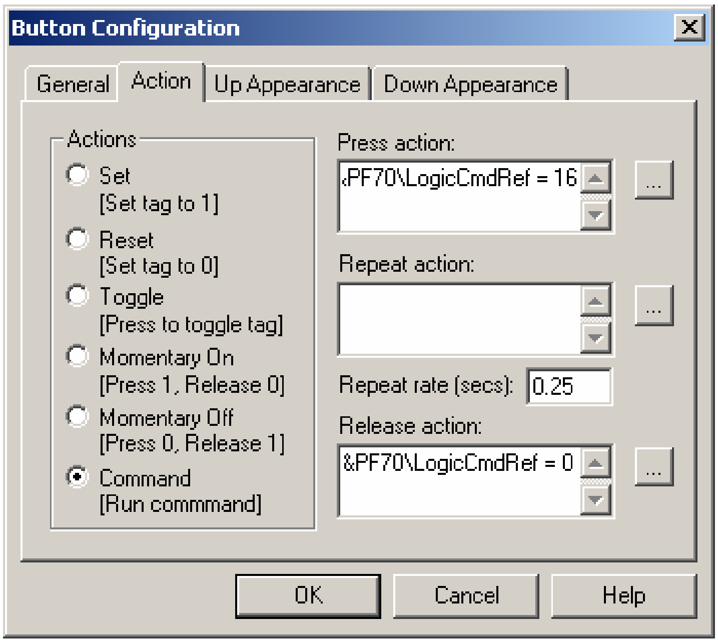
PowerFlex 70

Output Freq = ###### Hz

Accel Time 1 = Secs

Creating forward and reverse buttons:

We will create another button for the forward command. To send a forward command to the PowerFlex 70, we must set bit 4 (a decimal value of 16). Again, for the release action we set the logic command to 0.



● Command [Run command]

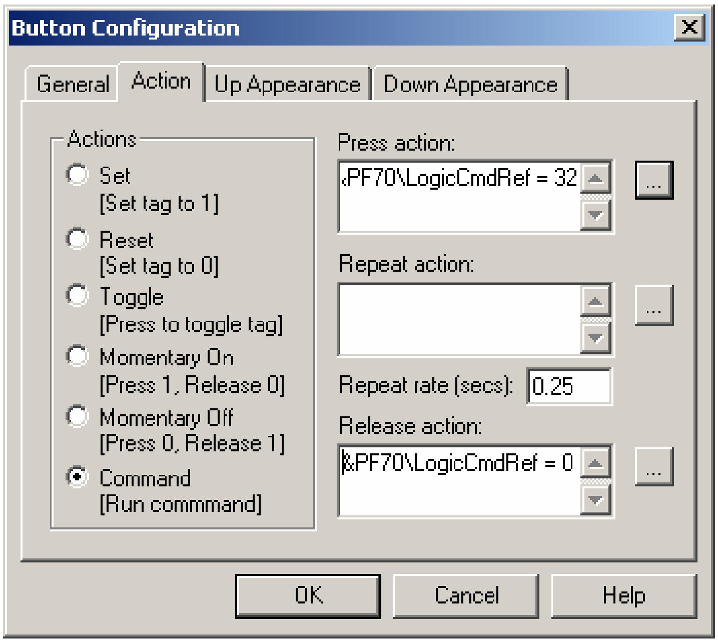
Press action: PF70\LogicCmdRef = 16

Repeat action:

Repeat rate (secs): 0.25

Release action: &PF70\LogicCmdRef = 0

We will create a separate button for the reverse command. To send a reverse command to the PowerFlex 70, we must set bit 5 (a decimal value of 32). Again, for the release action we set the logic command to 0.



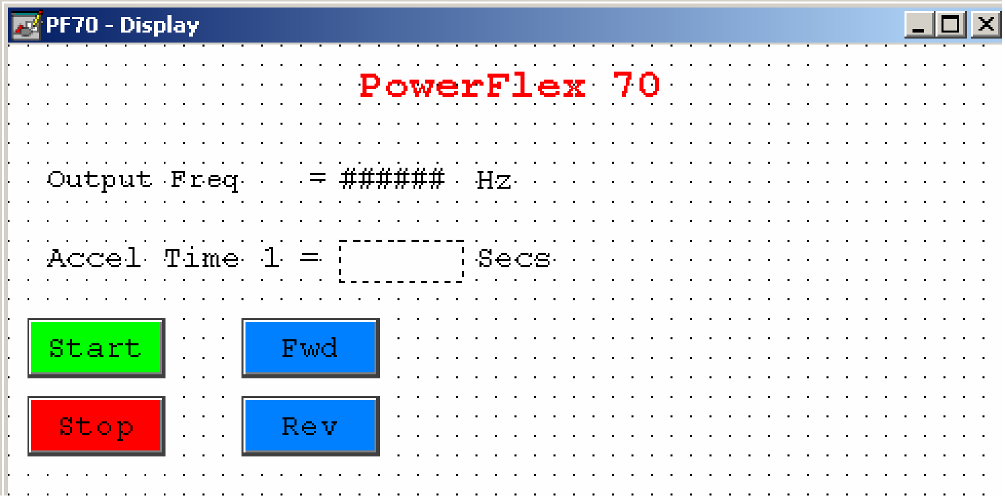
● Command [Run command]

Press action: PF70\LogicCmdRef = 32

Repeat action:

Repeat rate (secs): 0.25

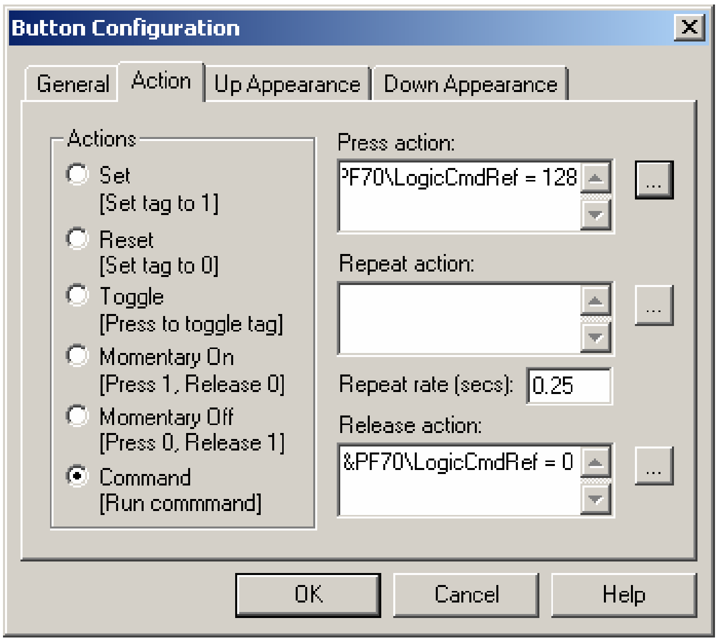
Release action: &PF70\LogicCmdRef = 0



Creating MOP (motor operated pot) buttons to control the speed:

In the PowerFlex 70, we must set the parameter [Speed Ref A Sel] to “MOP Level” to control the drive with MOP increment and decrement buttons. To change how fast the speed reference changes when pressing the MOP buttons, adjust the parameter [MOP Rate].

Create a button for MOP increment to increase the drive’s speed. To increment the MOP value we must set bit 7 (a decimal value of 128). Again, for the release action we set the logic command to 0.



Actions
○ Set [Set tag to 1]
○ Reset [Set tag to 0]
○ Toggle [Press to toggle tag]
○ Momentary On [Press 1, Release 0]
○ Momentary Off [Press 0, Release 1]
● Command [Run command]

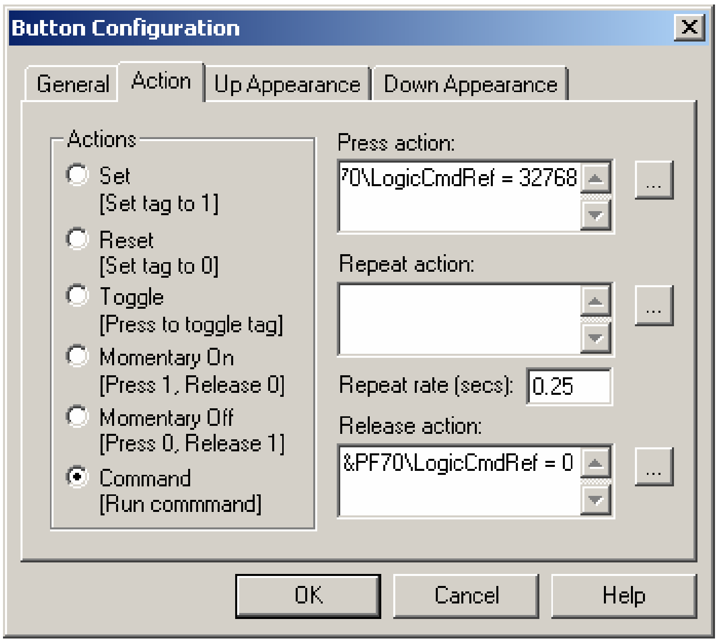
Press action: PF70\LogicCmdRef = 128

Repeat action:

Repeat rate (secs): 0.25

Release action: &PF70\LogicCmdRef = 0

Create a button for MOP decrement to decrease the drive’s speed. To decrement the MOP value we must set bit 15 (a decimal value of 32768). Again, for the release action we set the logic command to 0.



Actions

○ Set
[Set tag to 1]

○ Reset
[Set tag to 0]

○ Toggle
[Press to toggle tag]

○ Momentary On
[Press 1, Release 0]

○ Momentary Off
[Press 0, Release 1]

● Command
[Run command]

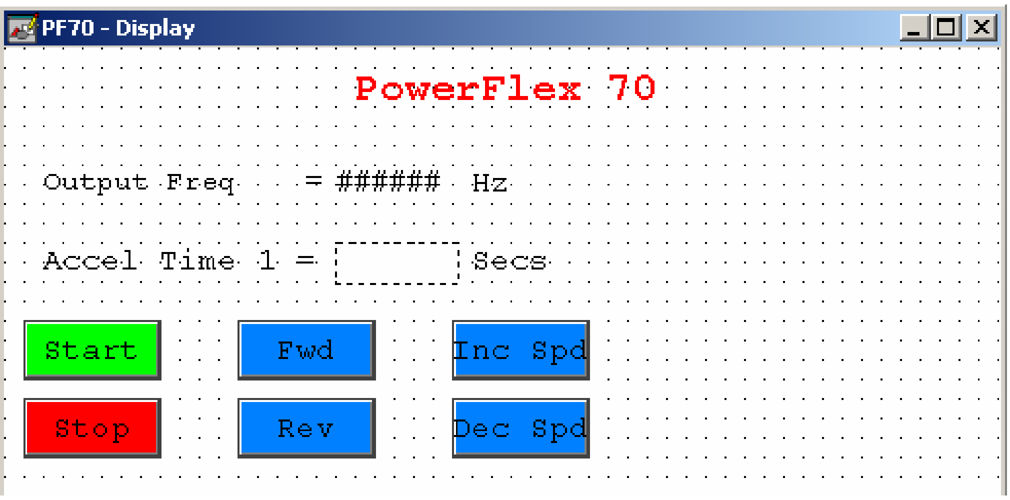
Press action: 70\LogicCmdRef = 32768

Repeat action:

Repeat rate (secs): 0.25

Release action: &PF70\LogicCmdRef = 0

Now our example looks like this. Again, to test the display, we can go into run mode and click the control buttons.


PF70 - Display
PowerFlex 70
Output Freq = ###### Hz
Accel Time 1 = Secs
Start
Fwd
Inc Spd
Stop
Rev
Dec Spd