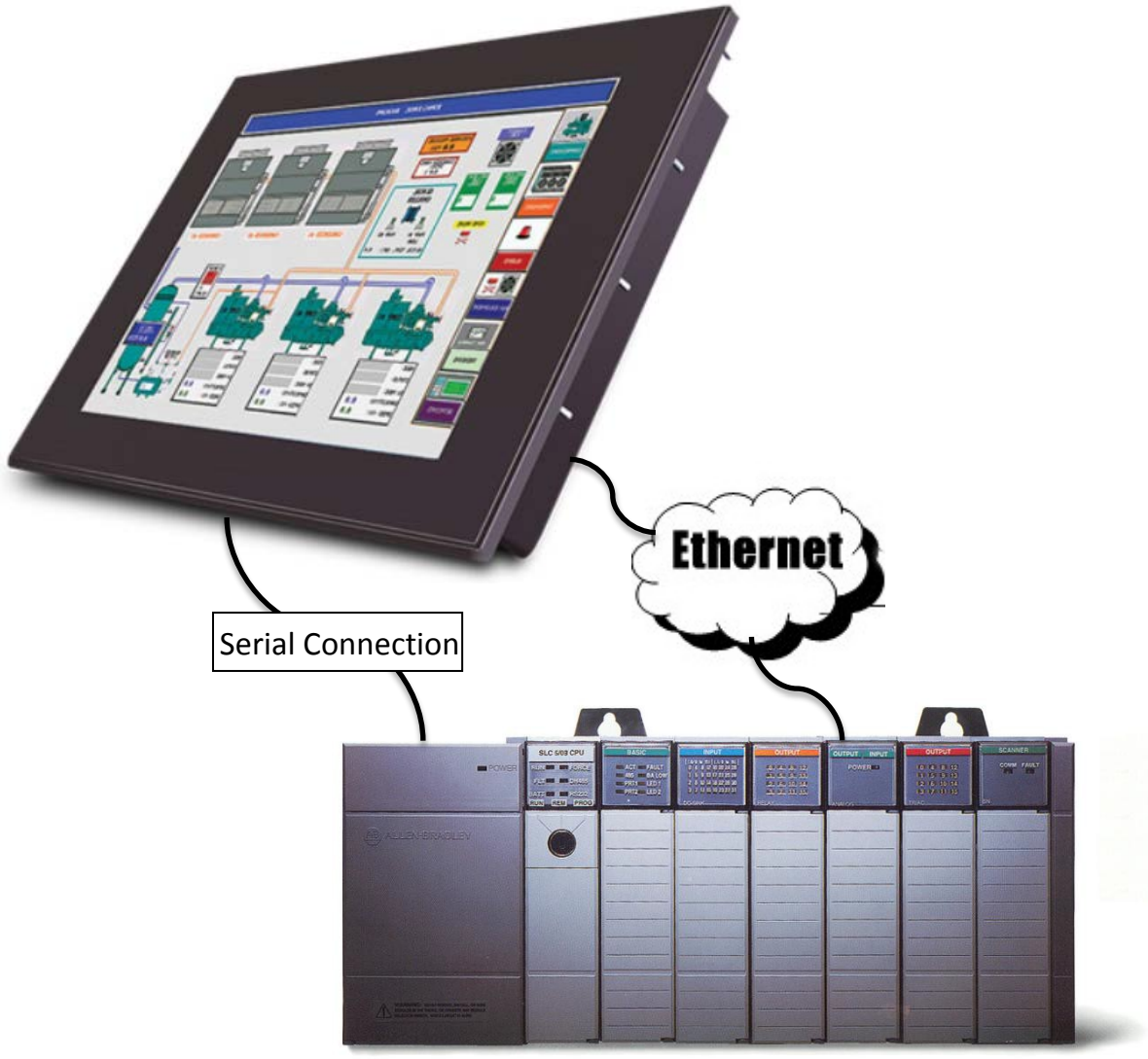
Application Guide

Connecting EZ5-HMIs to Allen Bradley Controllers Application Guide

This document will serve as a guide explaining how to connect our EZ5 HMIs to an Allen Bradley Controller. We communicate with most of the Allen Bradley drivers available. Please follow the steps outlined in this document to configure the EZ-HMI to communicate with an Allen Bradley Controller.



Phone: 1-563-359-7501 • www.ezautomation.net
4140 Utica Ridge Rd, Bettendorf, IA 52722

Application Guide

WARNING!

Programmable control devices such as EZ5 Series Touch Panel are not fail-safe devices and as such must not be used for stand-alone protection in any application. Unless proper safeguards are used, unwanted start-ups could result in equipment damage or personal injury. The operator must be made aware of this hazard and appropriate precautions must be taken. In addition, consideration must be given to the use of an emergency stop function that is in dependent of the programmable controller. The diagrams and examples in this user manual are included for illustrative purposes only. The manufacturer cannot assume responsibility or liability for actual use based on the diagrams and examples.

CAUTION

Do not press the EZ5 Series Touch Panel touch screen with any sharp objects. This practice may damage the unit beyond repair.

Trademarks

This publication may contain references to products produced and/or offered by other companies. The product and company names may be trademarked and are the sole property of their respective owners. EZ Automation disclaims any proprietary interest in the marks and names of others.

Designed and Built by AVG
4140 Utica Ridge Rd. • Bettendorf, IA 52722-1327

Marketed by EZAutomation
4140 Utica Ridge Road • Bettendorf, IA 52722-1327

Author
Thomas Bernauer

Application Guide

Table of Contents

This page left intentionally blank

Phone: 1-563-359-7501 • www.ezautomation.net
4140 Utica Ridge Rd, Bettendorf, IA 52722

Allen Bradley Drivers

Our units communicate with most of the Allen Bradley drivers available. The list below shows the drivers we support and PLC controllers. There are 7 different protocols we offer as tools to communicate to MicroLogix, PLC_3&5, SLCs, ControlLogix and CompactLogix. However, not all of them utilize the same drivers.

Allen Bradley(AB):

A-B DF1 Half and Full Duplex (PLC-5, SLC500, MicroLogix 1000, 1200 and 1500) DH485/AIC/AIC+ for MicroLogix 1000, 1200, 1500, SLC 500, 5/01, 5/02, 5/03)

A-B Ethernet I/P (ControlLogix & CompactLogix)

A-B DF1 over EtherNet/IP (for MicroLogix & SLC 500 PLCs) A-B Data

Driver Types

AB DF1

This driver is an asynchronous byte-oriented protocol that uses RS232. This is the most common protocol used by many engineers. This protocol uses a link layer serial frame.

Full Duplex-This protocol is used for point to point link. For two way communications between two different units or peers

Half Duplex-This protocol is a multi-drop communications with one master and multiple slaves. It has slower data transmission but can speak to many devices using the same port.

AB DH485

DH-485 is a proprietary communications protocol allows multiple PLC to communicate over a network. This RS-485 uses a token passing medium access control. This DH-485 allows connection for up to 32 devices. Communications with other nodes within the network is achievable.

AB EtherNet/IP

This protocol is a standard industrial network and preferred network of Rockwell automation. This protocol uses the same standard as Ethernet and TCP/IP. This enables real time control for discrete, automatic processes, safety, drives, and high demanding applications.

EZ5 Driver Compatibility

This section will break down the types of drivers supported by the different EZ-HMIs. Some Touch Panels may support most of the Allen-Bradley drivers; however, the Remote I/O and DH+ are not supported in the EZ5 Programming Software.

Available Drivers:

MicroLogix DF1(Full Duplex) PLC 3&5 DF1

SLC 500's DF1 (Full Duplex)

SLC 500/MicroLogix DF1(Half Duplex)

SLC 500/MicroLogix DH-485/AIC

EtherNet/IP supports only the inputs and outputs

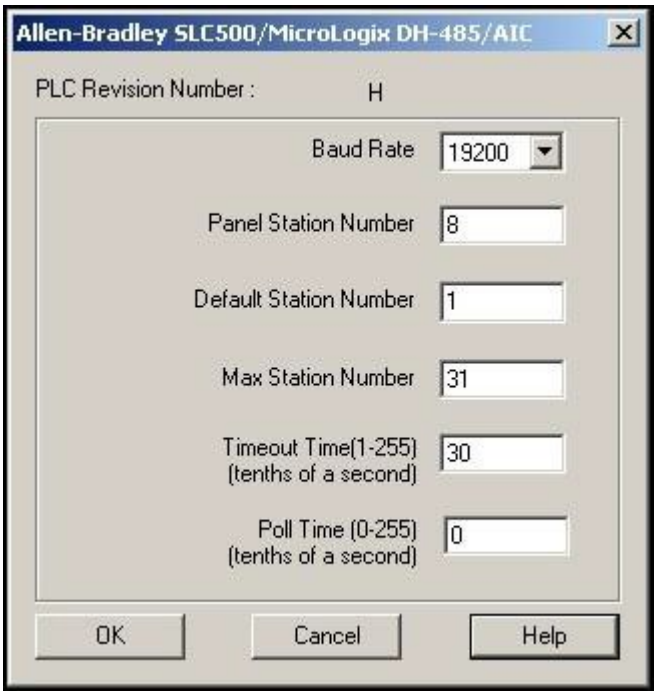
Phone: 1-563-359-7501 • www.ezautomation.net
4140 Utica Ridge Rd, Bettendorf, IA 52722

Communications and Wiring Pinouts

Below will be examples of the communication parameters setup. You will find these settings in the Project Information window when you first open up the programming Software. In the PLC section to the right of the PLC model and protocol selection area you will find a View/Edit PLC Com Setup… button. This is where the communication parameters will be at. You will need to match these parameters up with that of the PLC.

DH-485

The following describes the attributes that define the MicroLogix/SLC500 DH-485/AIC setup. This is found in under the menu item Setup > Select PLC. Click on the appropriate PLC type and protocol and then click on the View/Edit Attributes button.



PLC Editor Revision: This lists the latest PLC code revision. It is useful in determining if you have the latest PLC code software.

Baud Rate: Click on the arrow to the right of the baud rate field to select the attribute that corresponds to the baud rate of the DH-485 network. The default is 19200.

Panel Station Number: Enter the address for the Panel on the DH-485 network. The node address (0–31) must be unique on the network. The default is 8.

Default PLC Station Number: Enter the default PLC address (0-31 decimal). The address must be unique on the DH485 network. This address will be used when a node address has not been entered in the panel internal register map. The default for the node address is one.

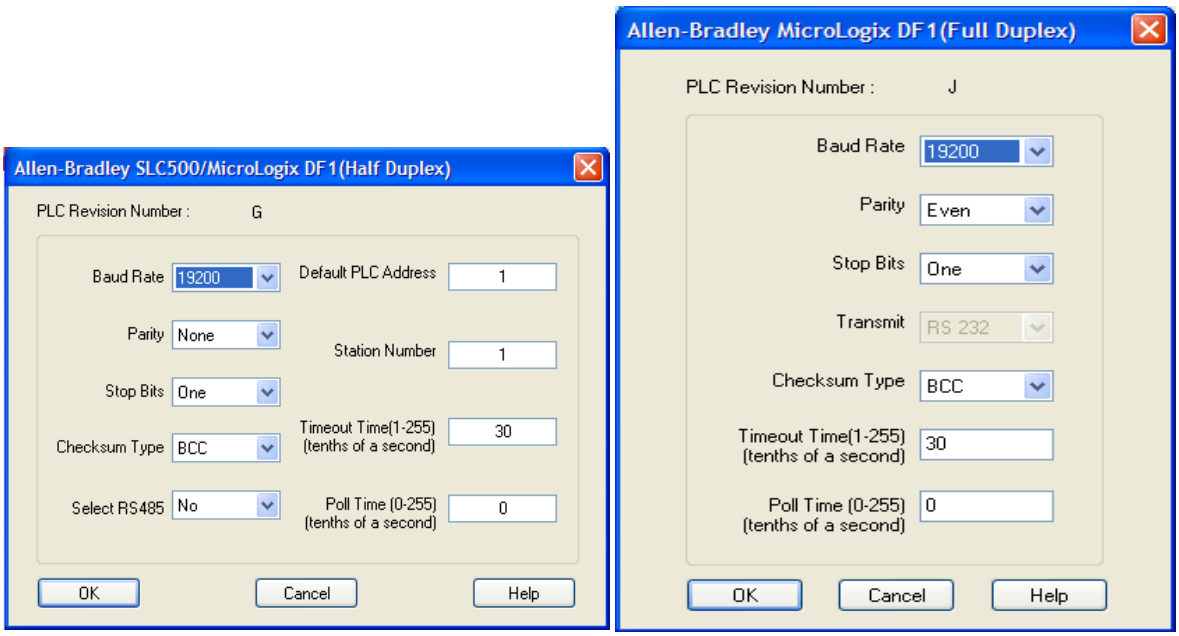
Max Station Number: Enter the maximum node address for the DH-485 network. This address should be equal to or greater than the PLC or panel with the highest node address on the network. The default is address 31.

Timeout Time (1-255 tenths of a second): Enter a time-out time between 1 and 255 tenths of a second. This is the time the panel will wait to get a response from a PLC before it reports a time- out error. The default is 30 tenths of a second (3 seconds).

Poll Time (0-255 tenths of a second): This is the time between poll of the PLC by the panel in tenths of a second. For constant polling set this to zero. The default for poll time is 0 for constant polling.

DF-1 Full and Half duplex:

The following describes the attributes that define the Allen-Bradley SLC, MicroLogix PLC with DF1 Full/Half Duplex Protocol setup. This is found in under the menu item Setup > Select PLC. Click on the appropriate PLC type and protocol and then click on the View/Edit PLC COM Setup button.



PLC Editor Revision: This states the current revision of the PLC.

Baud Rate: Click on the arrow to the right of the dialog box and select the entry that corresponds to the baud rate of the DF1 port.

Parity: Click on the arrow to the right of the dialog box and select the stop bit number for the DF1 port. Default value is even.

Stop Bits: Click on the arrow to the right of the dialog box and select the entry that corresponds to the stop bits of the DF1 port. The default is one.

Checksum Type: Click on the arrow to the right of the dialog box and select the entry that corresponds to the checksum of the DF1 port. The default checksum is BCC.

Select RS485: If the PLC is operating with RS-485 select Yes. If Yes is chosen, control RTS is forced to Yes, controlling the RS-485 driver. This will also force the panel to disable the receiver while the panel is driving the RS-422/485 driver.

> **Note**: The PLC port will not work correctly at baud rates less than 9600 when RS-485 is selected.

Default PLC Address: The default PLC station address is used when a PLC address is not specified in a map entry. The default entry is 2.

Station Number: The station address is the address of the DH-485/RS232 DF1 module. The station address defaults to 2.

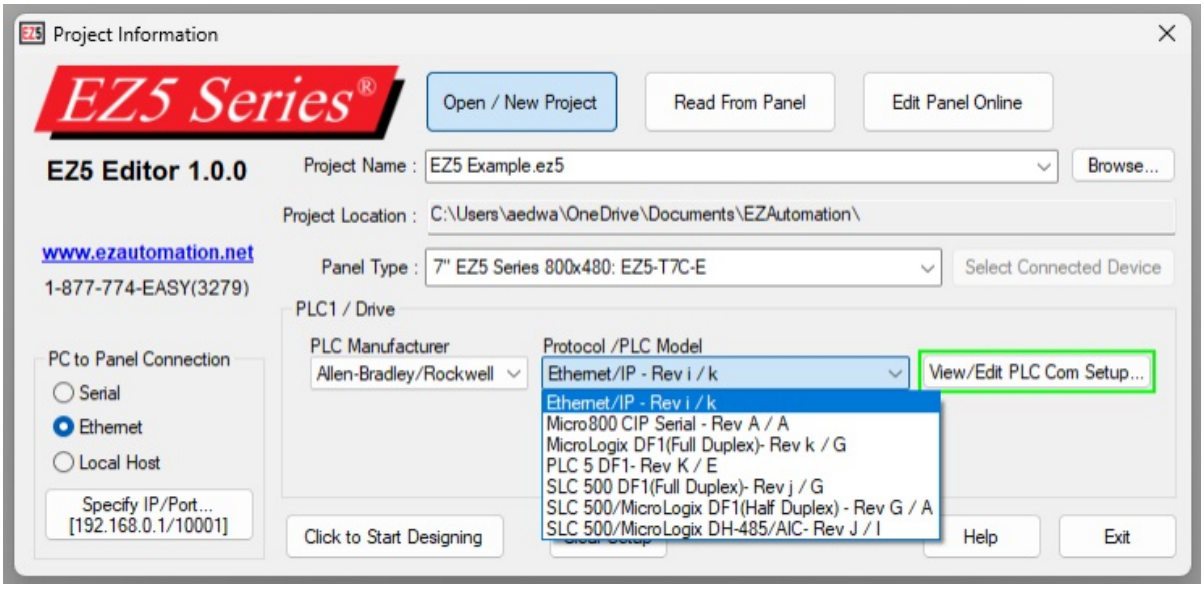
Timeout Time: Enter the time in tenths of a second the panel should wait for communications with the PLC before displaying an error. The default for this is 30 tenths of a second (3 seconds).

Poll Time: Enter the time in tenths of a second the panel should wait between executing one complete sequence of reads for the current screen. The default value is zero for constant polling.

Ethernet I/P

EZ Automation Touch Panels support communication to ControlLogix, SLC 500 series and PLC5 over Ethernet using Ethernet IP protocol. User would need to define IP address and PLC type for each of the PLC connected to Panel.

To select EtherNet I/P please select an HMI that support this protocol. Then on the drop down window on PLC manufacturer please select “Ethernet Drivers”. In the next field under “PLC Model and Protocol” please select “Ethernet I/P” as shown below.

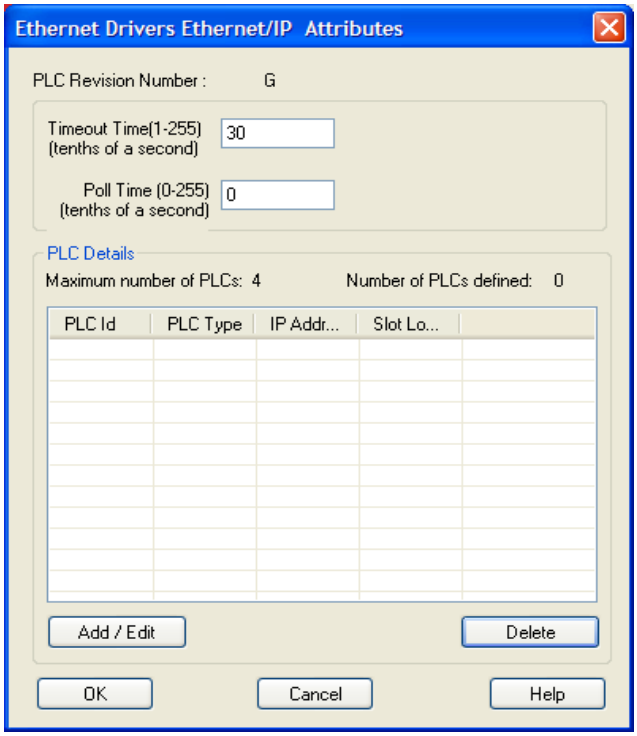


After selecting the Model and Protocol, on the right is the “View/Edit PLC Com Setup…” button.

After selecting the view/edit PLC Com Setup button, this window shown below will appear.

This is where you will add your PLC(s) IP. You can add up to 4 PLCs at a time with our dedicated OS.

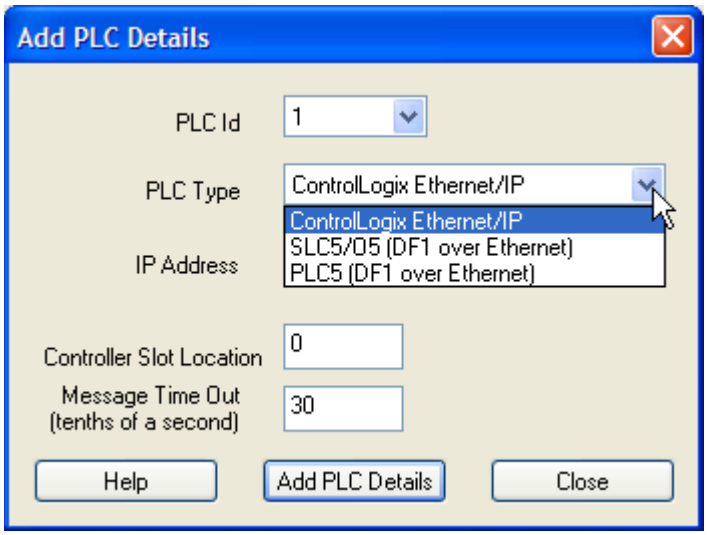
The EZ5 Programming Software will assign you a PLC ID for each PLC added.



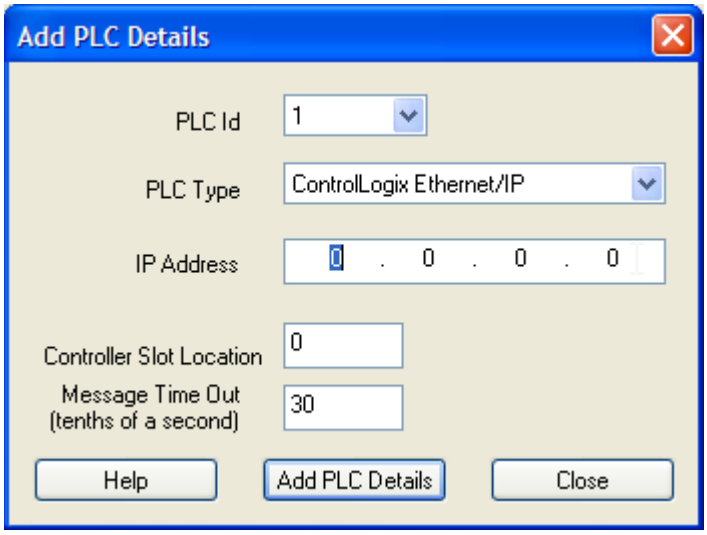
Timeout Time: Enter the time in tenths of seconds that the panel should wait for communications with the gateway to fail before displaying an error. Default is 30 tenths of a second (3 seconds).

Poll Time: Enter the time the panel should wait between executing one complete sequence of reads for the current screen. This time is defaulted to 0 for constant polling.

Please double click on the grid or press Add/Edit to enter your PLC information.



There are 3 PLCs that the panel can communicate with as shown from the dialog box above.



Note: Entering the slot number of the PLC's CPU is only applicable for the ControlLogix PLCs.

After entering all the necessary details, click on “Add PLC Details” to add the PLC. Finally, click “OK” and you are all set to communicate with added PLC/PLCs from EZ Touch Panel over Ethernet IP.

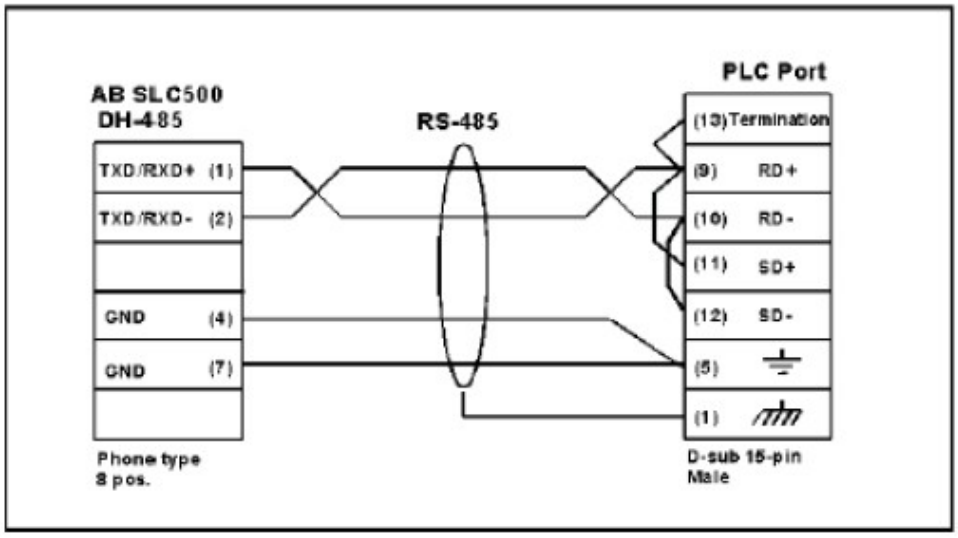
NOTE: The SLC5/05 (DF1 over Ethernet) also works with compatible MicroLogix PLCs.

PLC Communication Wiring Diagrams

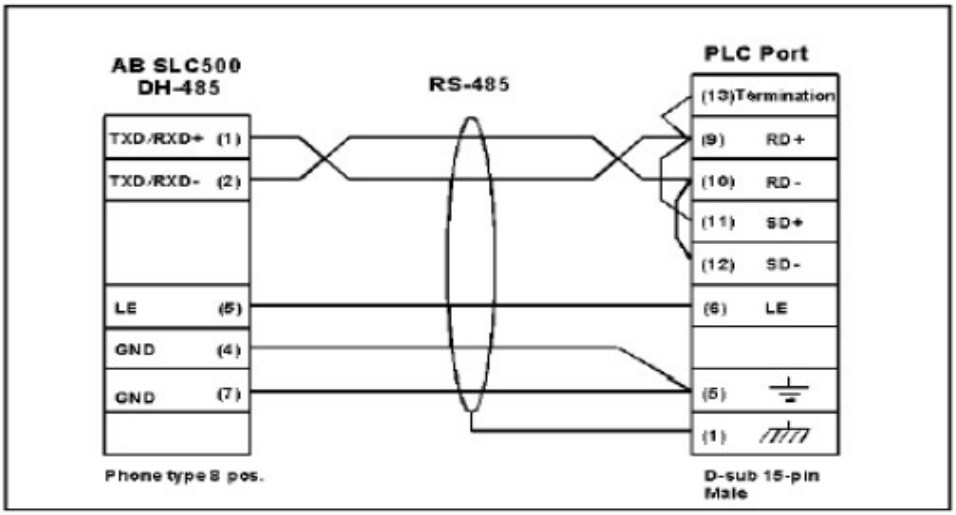
This section will include wiring diagrams for communications from our 15 pin port (COM 2) to the Allen Bradley PLC.

Allen-Bradley SLC500, 5/01, /02, /03 DH-485/AIC, RS-485A
(P/N EZ-DH485)

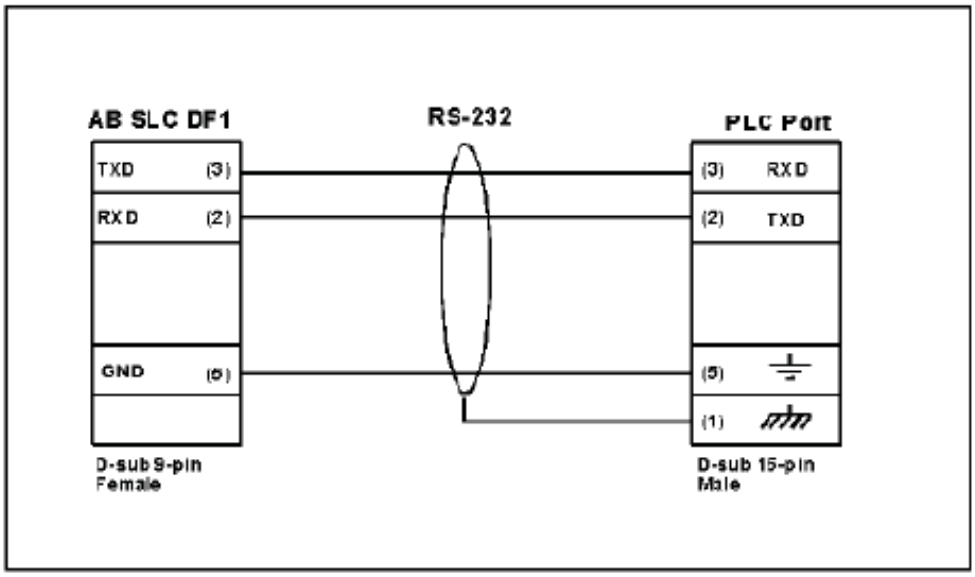
Allen-Bradley SLC500 DH-485/AIC (Point-to-Point)



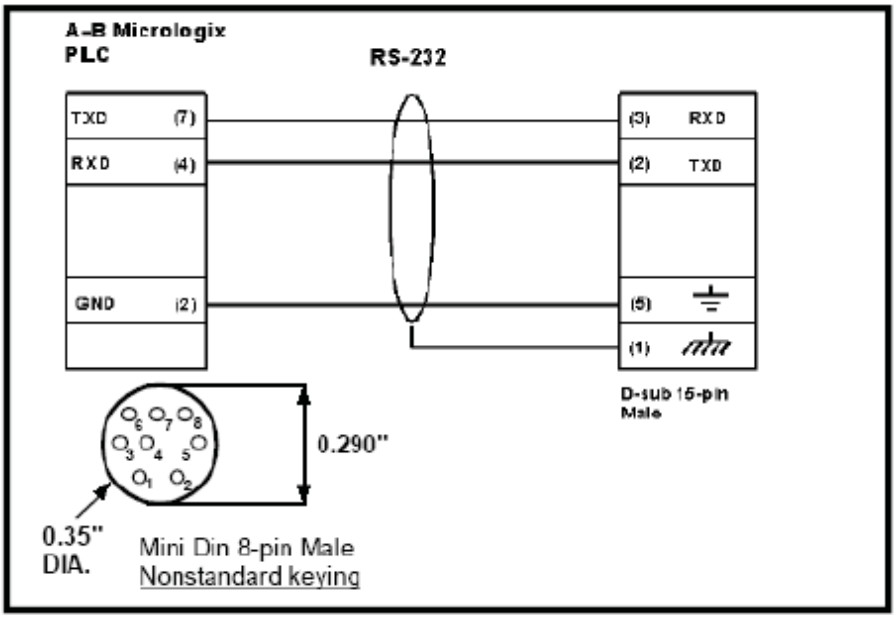
Allen-Bradley SLC500 DH-485/AIC (Multi-drop)



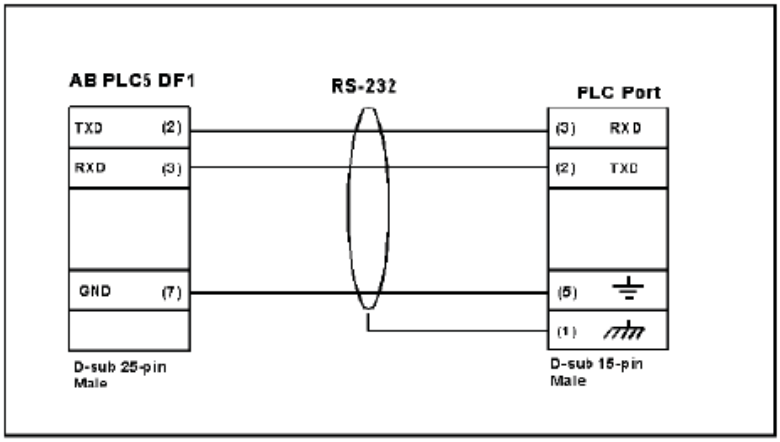
Allen-Bradley SLC DF1, RS-232C (P/N EZ-SLC-232-CBL)



Allen-Bradley MicroLogix 1000/1200/1500 RS-232C (P/N EZ-MLOGIX-CBL)



Allen-Bradley PLC5 DF1 RS-232C (P/N EZPLC5-232-CBL)

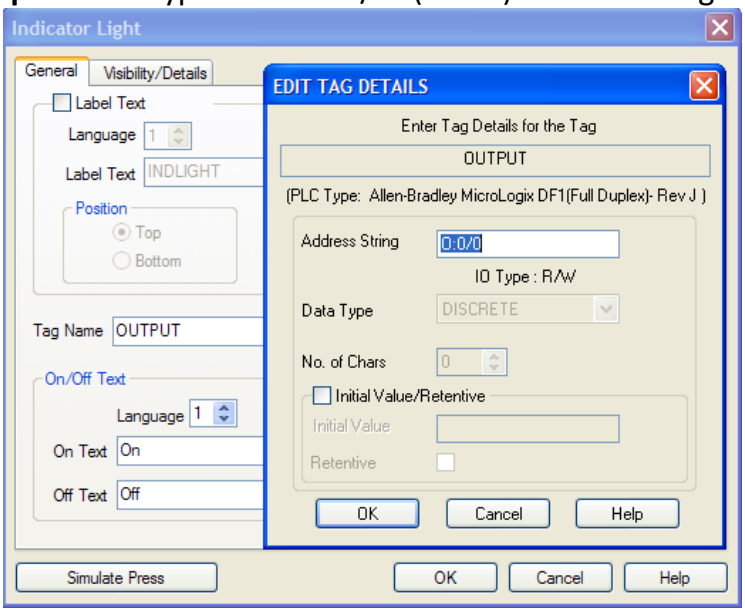


Tag Addressing for SLC and MicroLogix (PLC_5)

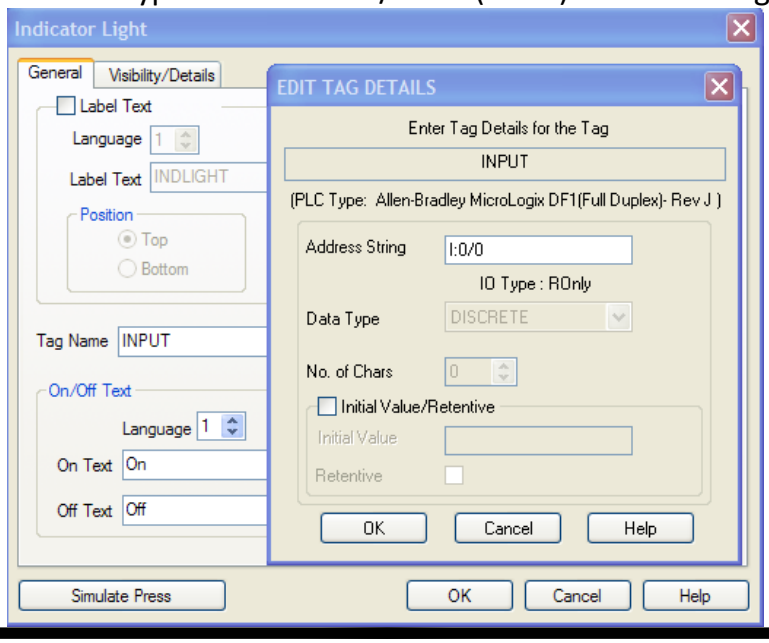
PLC Element strings

The element strings identify where tags are mapped to in the PLC. The following provides the Map String, Memory Type, Address Range, Flag, IO Type, Value Type and Examples for mapping tags with the Allen-Bradley SLC's, MicroLogix, and PLC_5 DF1 (Full Duplex) Protocol:

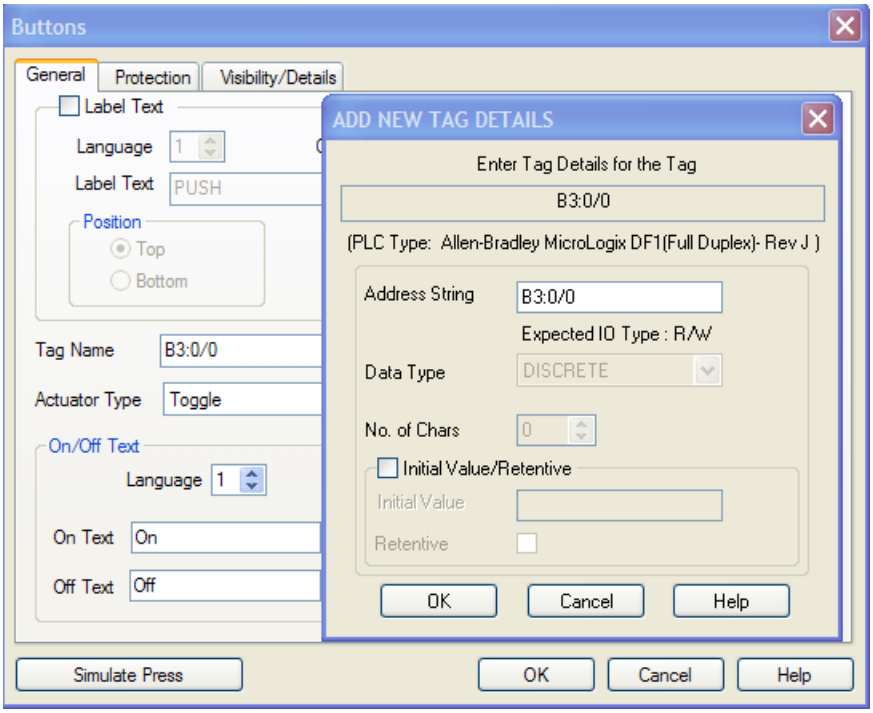
O-Output: Data type discrete R/W (Word): Address range 0-255



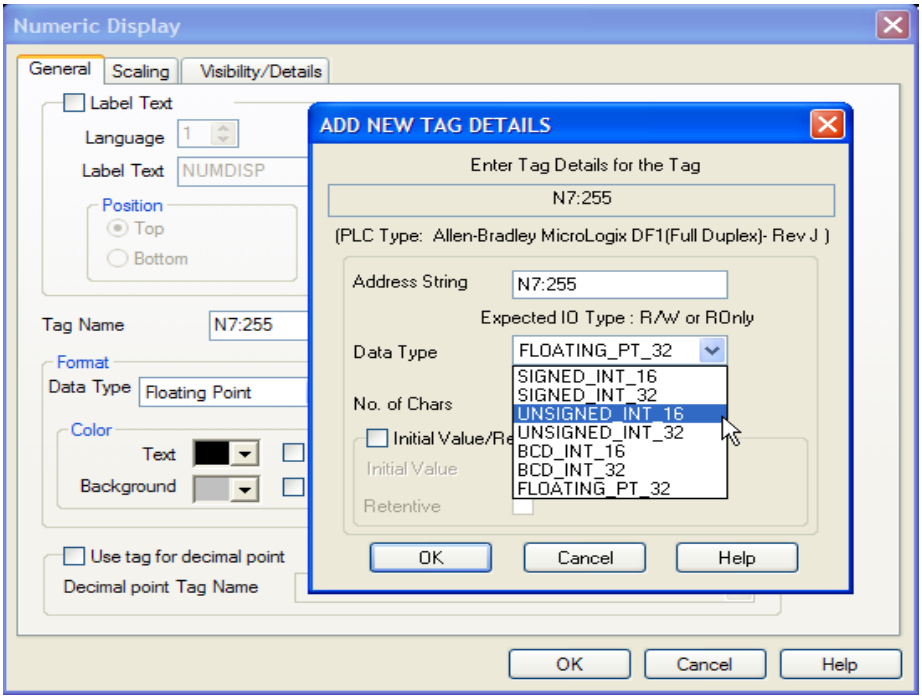
I-Input: Data type discrete read/write (word): Address range 0-255



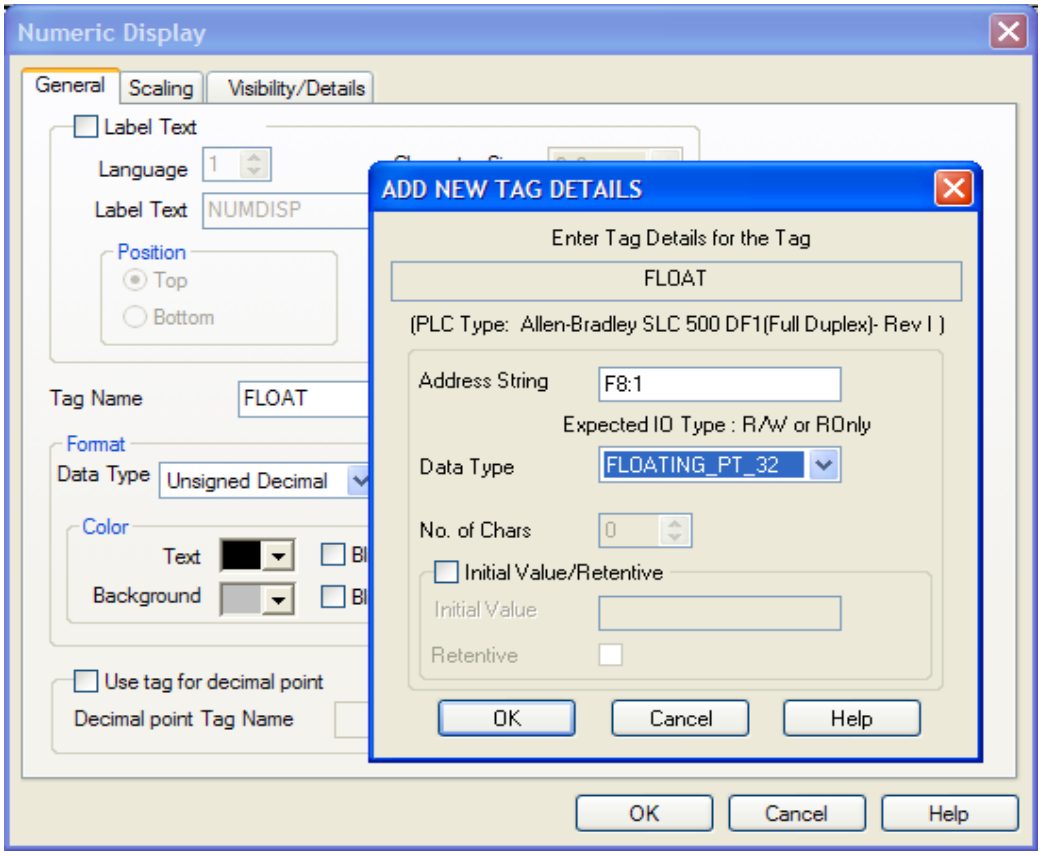
B-Binary: Data type R/W (word) Address range: 0-255



N-Integer: Data type R/W or R/O (word). Address Range 0-255



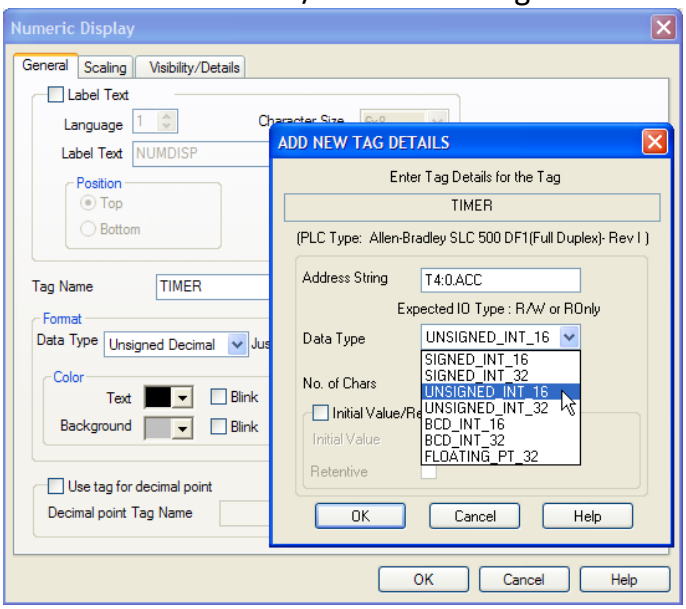
F-Float: Data type R/W or R/O (word). Address Range 0-255



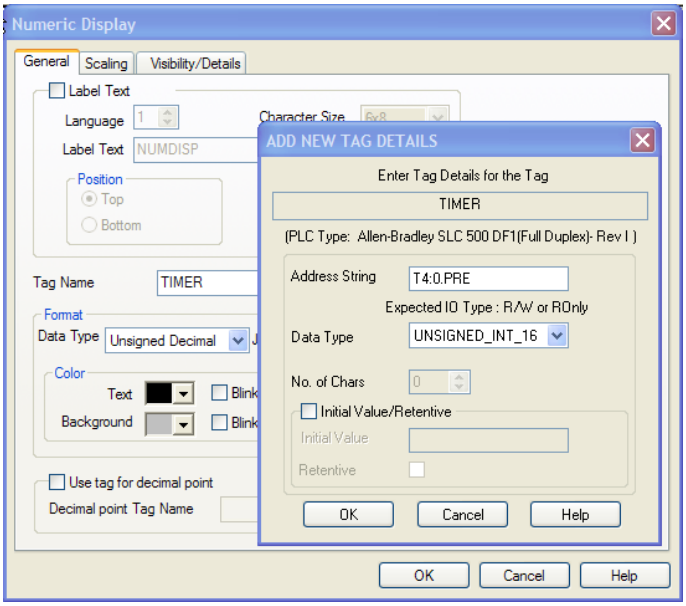
Timers Addressing

Timers can be addressed in a few ways depending on what you are trying to accomplish. Here are some of the ways to address them using the different flags associated with the timer instruction. The Timer instruction requires a flag address to be programmed in EZ programming software.

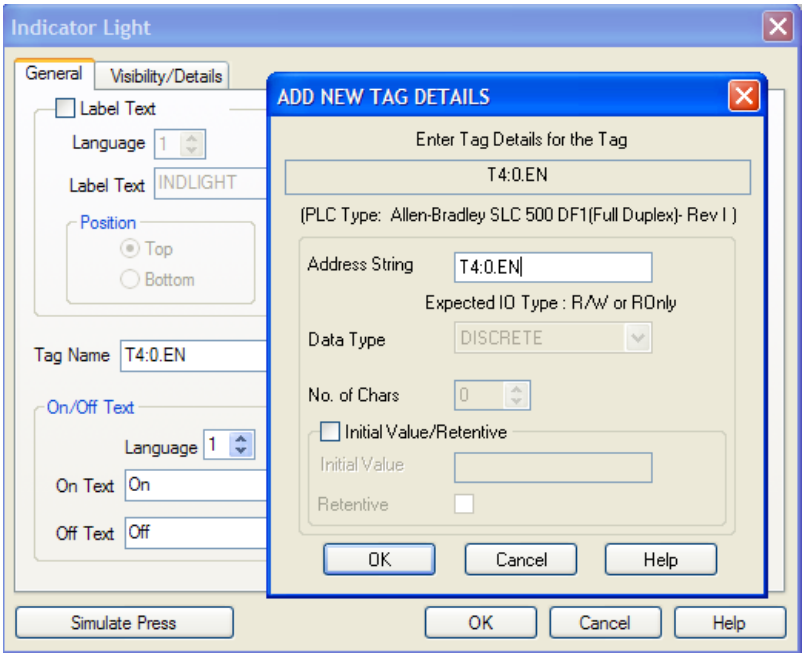
The Accumulator: T4:0.ACC R/O Address range 0-255



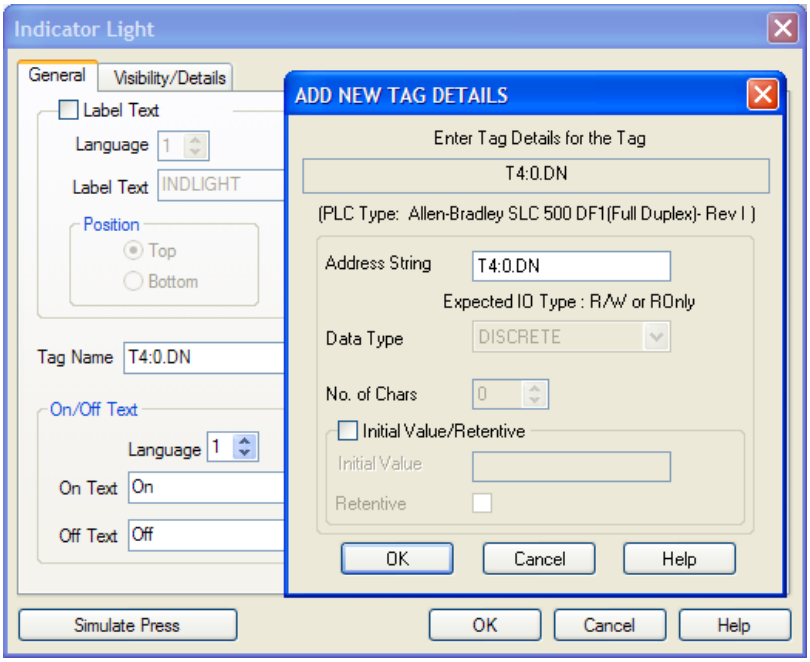
The Preset: T4:0.PRE R/W or R/O Address range 0-255



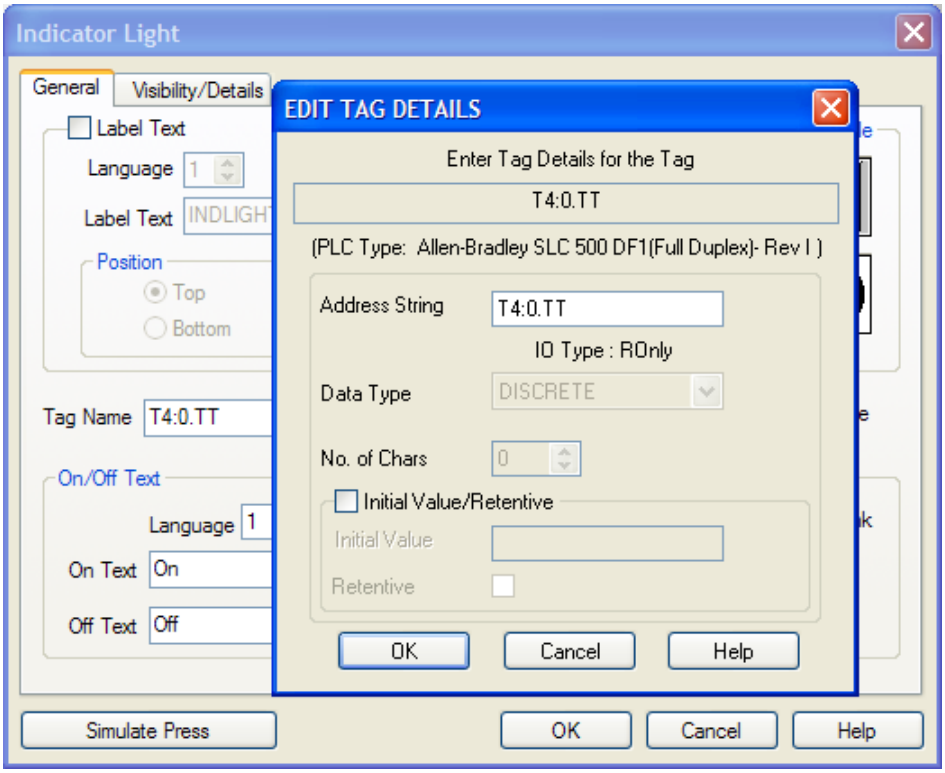
The Enable bit: T4:0.EN Discrete Read only



The Done Bit: T4:0.DN Discrete Read only



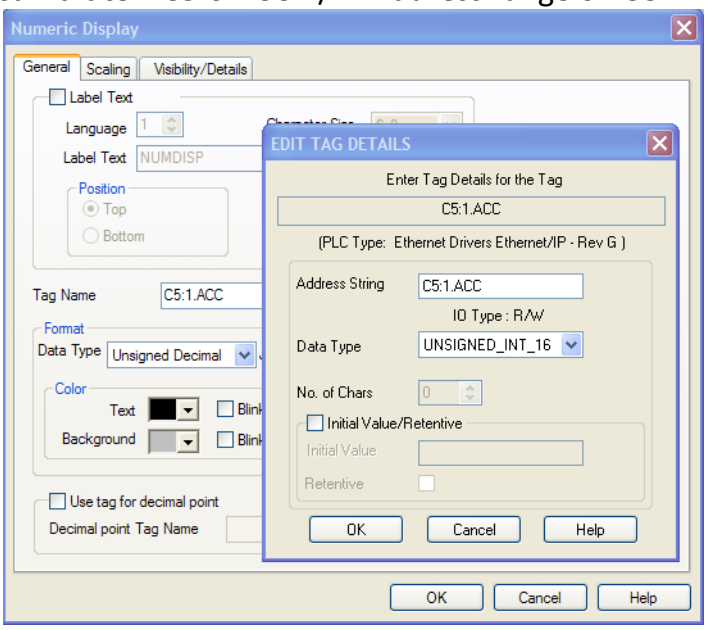
The Timer Timming Bit: T4:0.TT Discrete Read only



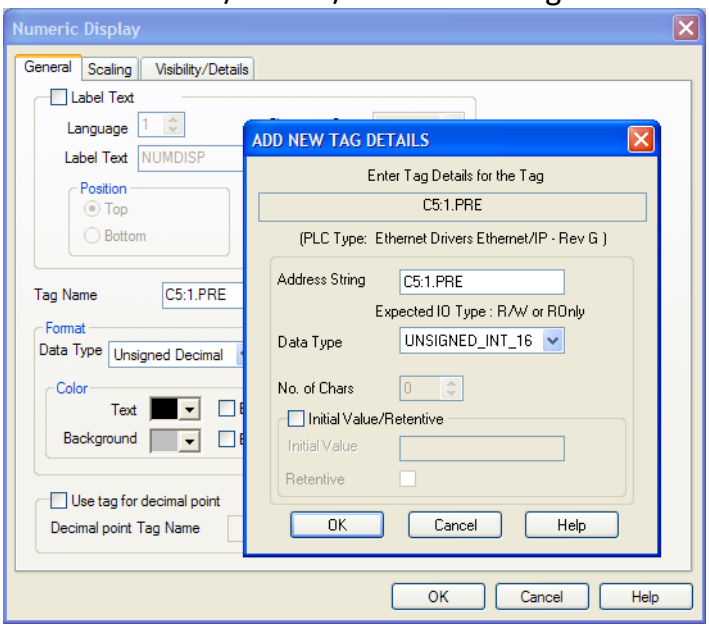
Counter Addressing

Counters can be addressed in a few ways depending on what you are trying to accomplish. Here are some of the ways to address them using the different flags associated with the counter instruction. The Counter instruction requires a flag address to be programmed in EZ programming software.

The Accumulator: C5:0.ACC R/W Address range 0-255

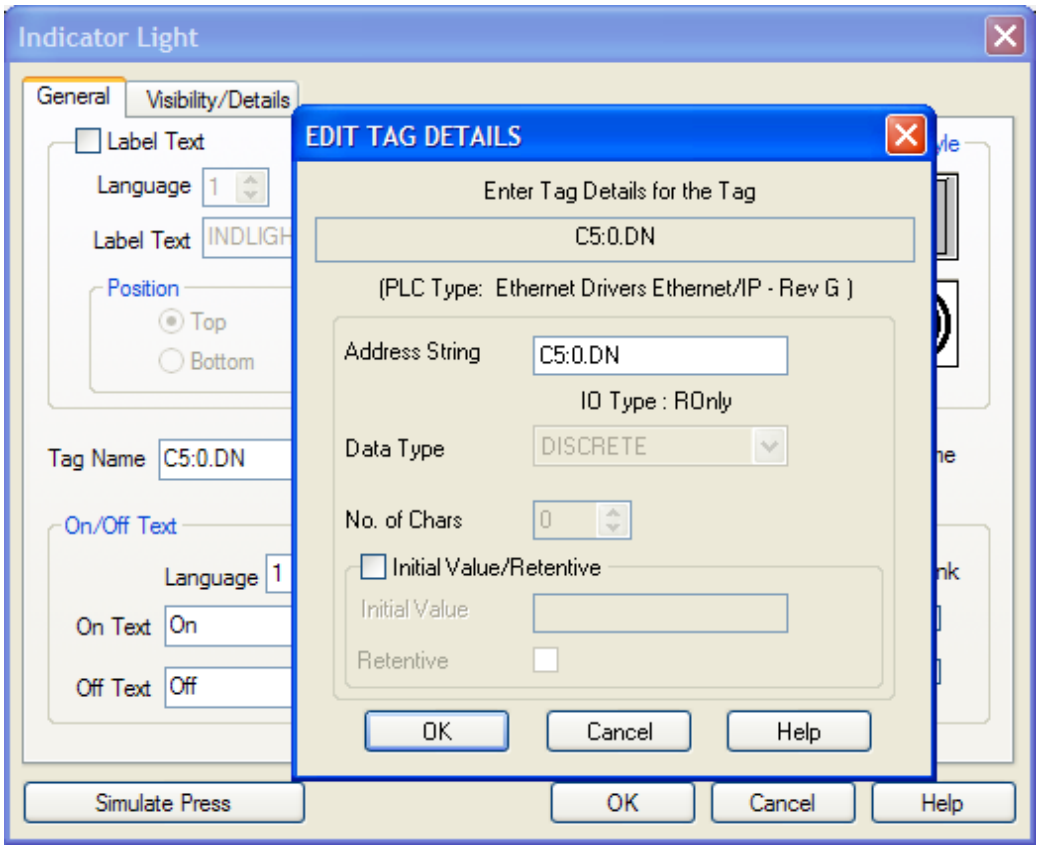


The Preset: T4:0.PRE R/W or R/O Address range 0-255



Phone: 1-563-359-7501 • www.ezautomation.net
4140 Utica Ridge Rd, Bettendorf, IA 52722

The Done Bit: C5:0.DN Discrete Read only. The .CU, .CD, .OV and .UN members are also supported.



Complete Address Table

Memory Type	Access Type	Data Type	File Range	Address Range	Flag	Bit	Example
Output (O)	READ_WRITE	Word	None	0-17777 for PLC5 0-255 Micro, SLC			O:017
Input (I)	READ_ONLY	Word	None	0-17777 for PLC5 0-255 Micro, SLC			I:010
Status (S)	READ_ONLY	Word	None	0-9999 for PLC5 0-255 Micro, SLC			S:127
Binary (B)	READ_WRITE	Word	B3,B9-B255	0-999 for PLC5 0-255 Micro, SLC			B3:10/2
Integer (N)	READ_WRITE	Word	N7,N9-N255	0-999 for PLC5 0-255 Micro, SLC			N7:100
Float (F)	READ_WRITE	Word	F8-F255	0-999 0-255 Micro, SLC			F9:3
Timer (T)	READ_ONLY READ_ONLY READ_ONLY READ_WRITE READ_WRITE	Discrete Discrete Discrete Word Word	T4,T9-T255	0-999 for PLC5 0-255 Micro, SLC	.EN .TT .DN .ACC .PRE	15 14 13	T4:0.EN T4:0.TT T255:32.DN T4:0.ACC T4:0.PRE
Counter (C)	READ_ONLY READ_ONLY READ_ONLY READ_ONLY READ_ONLY READ_WRITE READ_WRITE	Discrete Discrete Discrete Discrete Discrete Word Word	C5, C9-C255	0-999 for PLC5 0-255 Micro, SLC	.CU .CD .DN .OV .UN .ACC .PRE	15 14 13 12 11	C5:0.CU C5:1.CD C10:254.DN C255:1.OV C5:0.UN C5:7.ACC C5:123.PRE
Control (R)	READ_ONLY READ_ONLY READ_ONLY READ_ONLY READ_ONLY READ_ONLY READ_ONLY READ_ONLY READ_WRITE READ_WRITE	Discrete Discrete Discrete Discrete Discrete Discrete Discrete Discrete Word Word	R6, R9-R255	0-999 for PLC5 0-255 Micro, SLC	.EN .EU .DN .EM .ER .UL .IN .FD .LEN .POS	15 14 13 12 11 10 9 8	R6:1.EN R6:2.EU R255:254.DN R6:1.EM R10:1.ER R11:121.UL R6:1.IN R6:1.FD R44:5.LEN R77:1.POS
String (ST)	READ_WRITE	Word	ST3-ST999	0-779 for PLC5, SLC, Micro			ST3:775

Phone: 1-563-359-7501 • www.ezautomation.net
4140 Utica Ridge Rd, Bettendorf, IA 52722

Address Syntax for ControlLogix Ethernet/IP

Unlike PLC5 or SLC, the ControlLogix family of PLCs uses tags for its variables. To access a ControlLogix variable, enter the ControlLogix Tag Name as the Address in the Panel Tag Details dialog box.

Touch panel Software allows you to enter tag names that are of 40 character length, same as the number of characters you would be allowed to enter for ControlLogix Tag name.

A Logix5000 controller lets you divide your application into multiple programs, each with its own data. Thus, when you create a tag, you define it as either a controller tag (global data) or a program tag for a specific program (local data).

The general addressing format to be followed when you enter Tag Information from ControlLogix in our Touch Panel Software:

1. Controller tags: “PLCID>"Tag Name" is the addressing format to be followed when you enter Tag Information from ControlLogix in our Touch Panel Software. (PLCID is the corresponding Index for each PLC connected to the Panel)

   Example: To access a controller tag "Parts_Count" in the ControlLogix PLC, you would enter the tag address as:

   1>Parts_Count

2. Program tags: "PLCID">Program:"Program Name"."Tag Name": PLCID corresponds to the Index in the PLC configuration table from PLC attributes. (Program name is the name of the specific program that contains the local tag.)

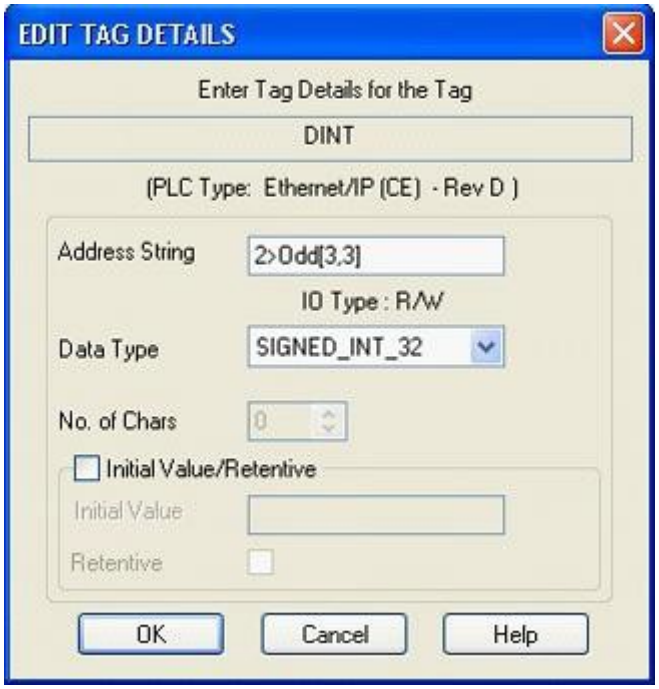
   Example: To access a program tag "Part Number" in a ControlLogix PLC program called "Extruder," you would enter the tag address as:

   1>Program: Extruder.PartNumber

Touch Panel Software currently supports the following data types of ControlLogix Tags: BOOL, DINT, INT, REAL, STRING, INT (ARRAYS), DINT (ARRAYS), BOOL (ARRAYS), REAL (ARRAYS) and Structures.

Support for Arrays:

Touch panel Software allows you to enter tags either with one, two or three dimensional arrays and they support address range which goes from 0 to 65535 Example of how a Tag name defined with array is addressed in our software can be seen below:



ControlLogix Controller Tag:
Syntax: "PLCID">"Tag Name"[index]...
Example: 2>Odd[3][3]

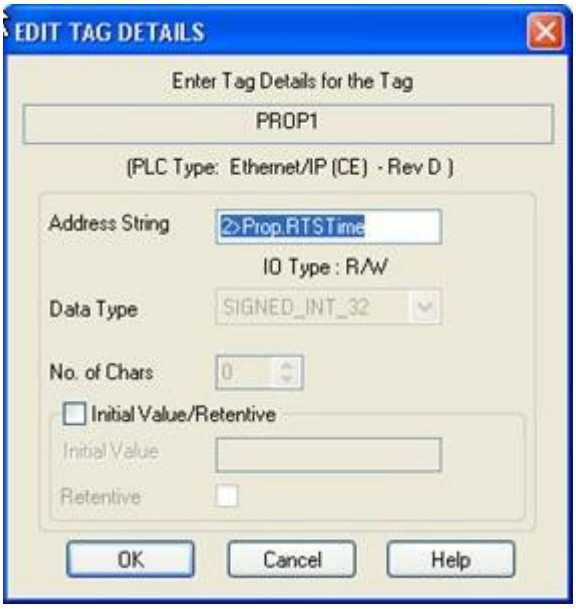
ControlLogix Program Tag:
Syntax: "PLCID">Program:"Program Name"."Tag Name"[index]...
Example: 2>Program:Extruder.Odd[3][3]

Rules to follow while addressing the Tags that are of Array type:

1. There should be a bracket at the beginning as well as at the end of an address location. E.g. **array[10], array[10, 10], array[10,10,10]**
2. There shouldn't be any space between the name of an array and its address location. The correct way of addressing would be: **tag1[10], tag2[32]** etc. If you enter the tag address as **tag1 [10] or tag2 [3,3],** it would be an invalid tag.
3. There should be a comma (",") between the row and column while addressing a two dimensional array and comma between row, column and no of characters in terms of a 3 dimensional array. The correct way of addressing would be : **tag2[3,3],tag3[10,10,10]** etc. If you enter the tag address as **tag2[3 3] or tag3[10 10 10]**, it would be an invalid tag.
4. There shouldn't be any space between the row and column while addressing a two dimensional array and similarly there shouldn't be any space between row, column and no of characters in terms of a 3 dimensional array. The correct way of addressing would be : **tag2[3,3], tag3[5,5,5]** etc If you enter the tag address as **tag2[3, 3] or tag3[10, 10,10**], it would be an invalid tag.

Support for Structures

Touch panel software would now allow you to define tags with structures. When you define tags of Structures, make sure that the Tag address you enter in the panel software follows the format below:



ControlLogix Controller tag:
Syntax: PLC ID>Structure Name. Member Name
Example: 2>PROP.RTSTimer

ControlLogix Program tag:
Syntax: 2>Prop. RTS Time is an example of the addressing format to be followed when you use
tags defined with structures in our Panel software.
Example: 2>Program:Extruder.Prop.RTSTimer

Support for Timer and Counter Status Bits and Flags

ControlLogix Controller tag:
Syntax: “PLCID” > "Timer/Counter Name”.Flag
Example: 1> Timer1.EN

ControlLogix Program Tag:
Syntax: “PLCID”> Program:”Timer/Counter Name”.Flag
Example: 1>Program:Extruder.Counter2.ACC

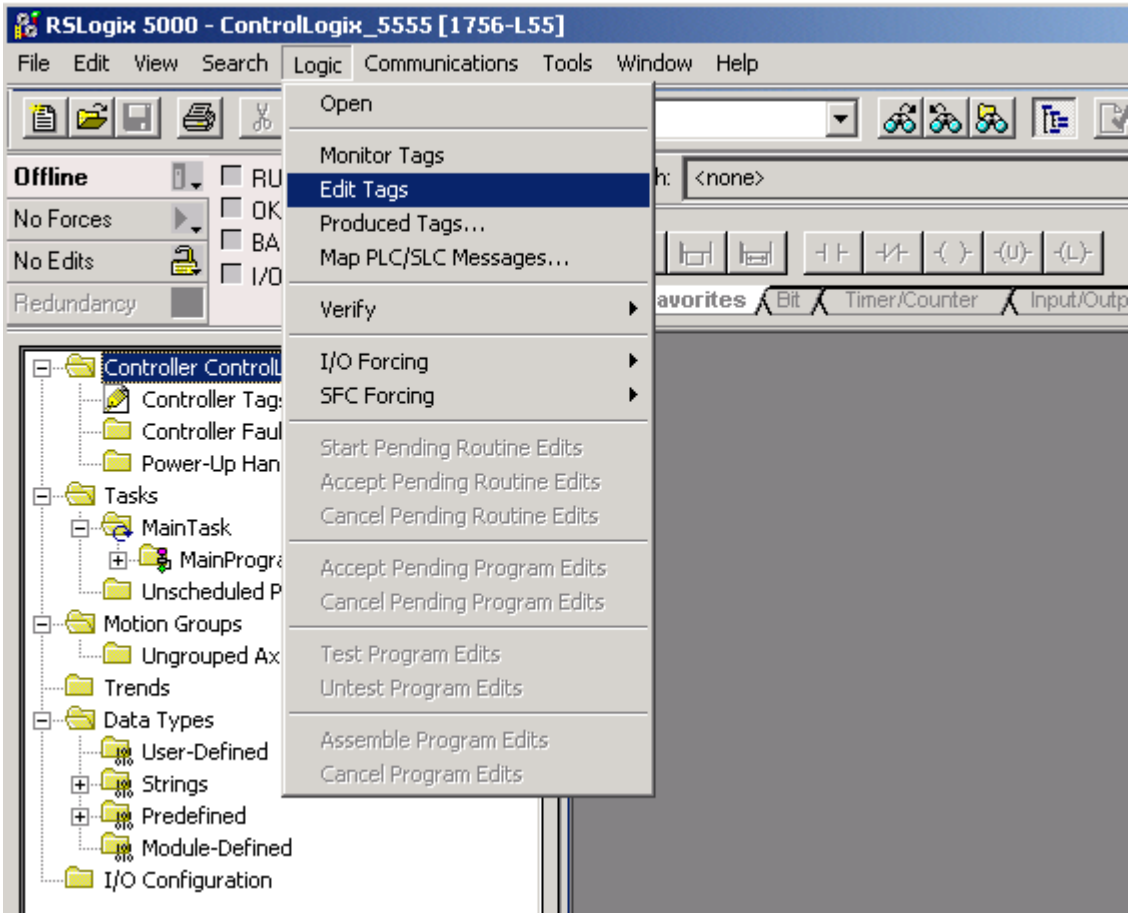
Memory Type	Access Type	Data Type	Flag	Example
Timer (T)	READ_ONLY	Discrete	.EN	1>Timer1.EN
	READ_ONLY	Discrete	.TT	1>Timer1.TT
	READ_ONLY	Discrete	.DN	1>Timer1.DN
	READ_ONLY	Word	.ACC	1>Timer1.ACC
	READ_WRITE	Word	.PRE	1>Timer1.PRE
Counter (C)	READ_ONLY	Discrete	.CU	1>Counter2.DU
	READ_ONLY	Discrete	.CD	1>Counter2.CD
	READ_ONLY	Discrete	.DN	1>Counter2.DN
	READ_ONLY	Discrete	.OV	1>Counter2.OV
	READ_ONLY	Discrete	.UN	1>Counter2.UN
	READ_ONLY	Word	.ACC	1>Counter2.ACC
	READ_WRITE	Word	.PRE	1>Counter2.PRE

Steps to configure ControlLogix Tags for use with EZ5

In this section will show how to configure tags to work with our HMIs. Step by step process will walk you through the RSLogix 5000 software. You will be creating a new tag using the Allen Bradley RSLogix 5000. You will map the tag save and then download to the PLC.

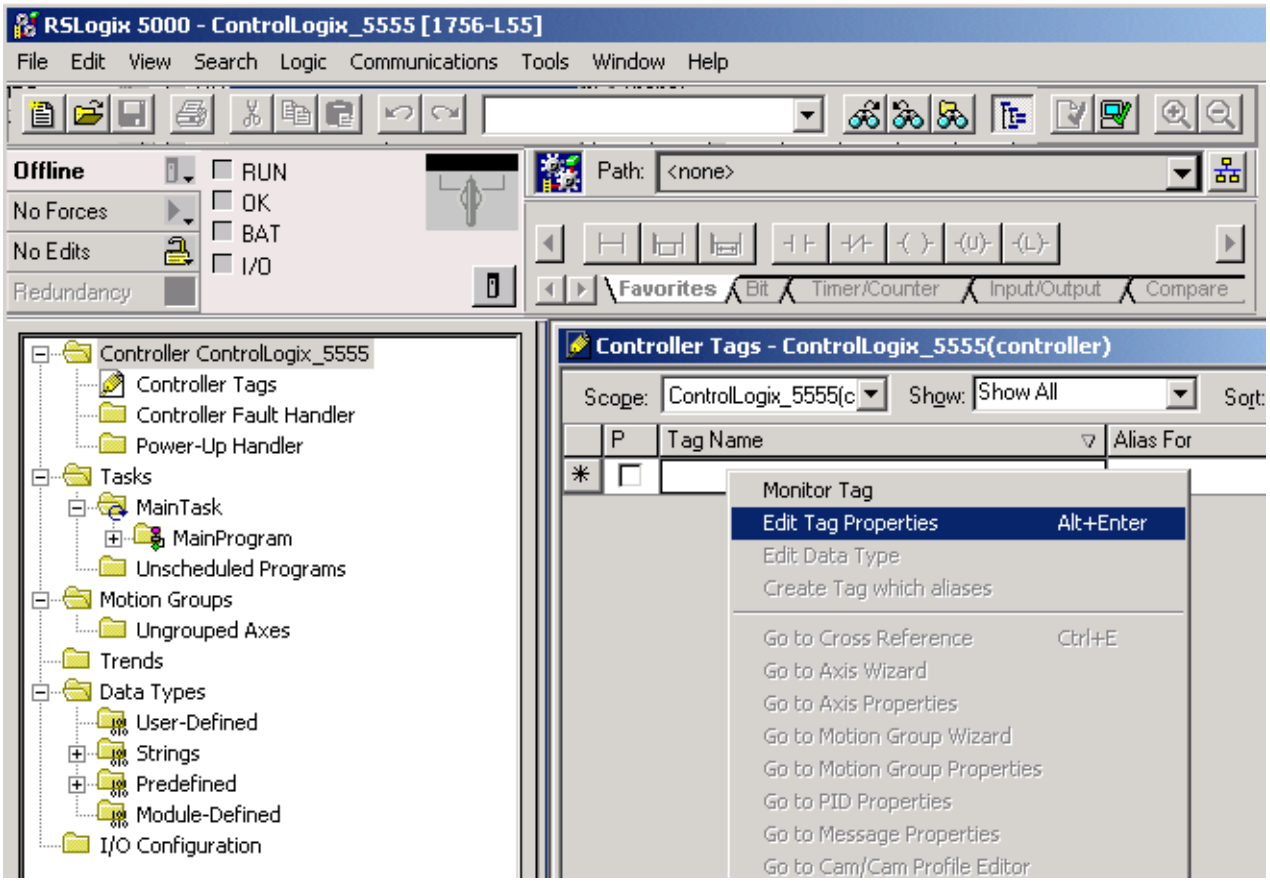
> **Note**: RSLogix must be Offline to create tags or to map them as PLC/SLC Messages.

Let's create a new tag in RSLogix 5000. While RSLogix 5000 is offline, go to LOGIC > EDIT TAGS.



1. Once the EDIT TAG window is open, right-click on an empty cell and chooses EDIT TAG PROPERTIES.

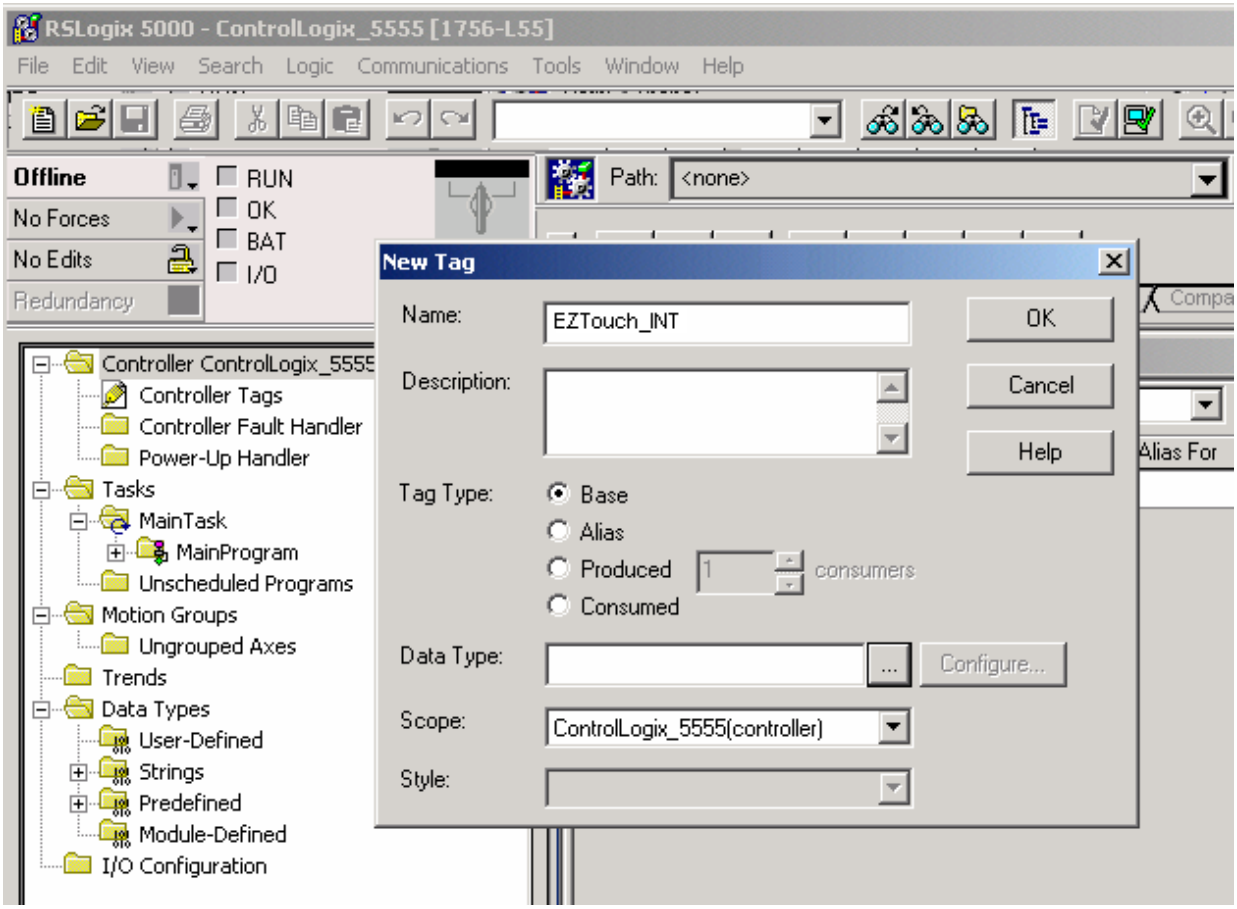
2. After choosing EDIT TAG PROPERTIES the window in figure below will be shown.



3. Give your new tag a name, for this example we have used “EZTouch_INT”. Enter a description if needed (this is optional and not required).

4. Choose a TAG TYPE. For our purpose we will use a BASE type tag.

5. Click on the “…” box next to the DATA TYPE field to bring up the menu in Figure 4.

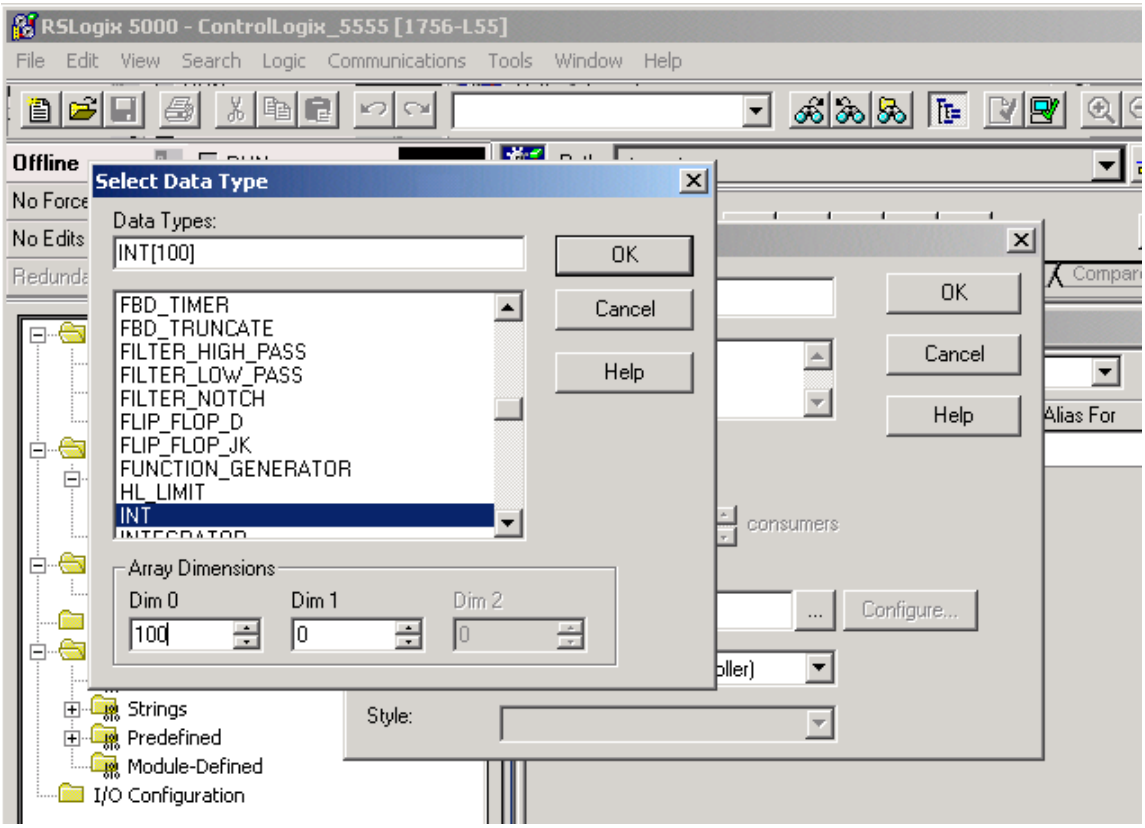


7. Scroll down through the list until you come to “INT” or type “INT” into the DATA TYPE field. The data types supported by EZTouch for use with ControlLogix are, INT, REAL (floating pt.).

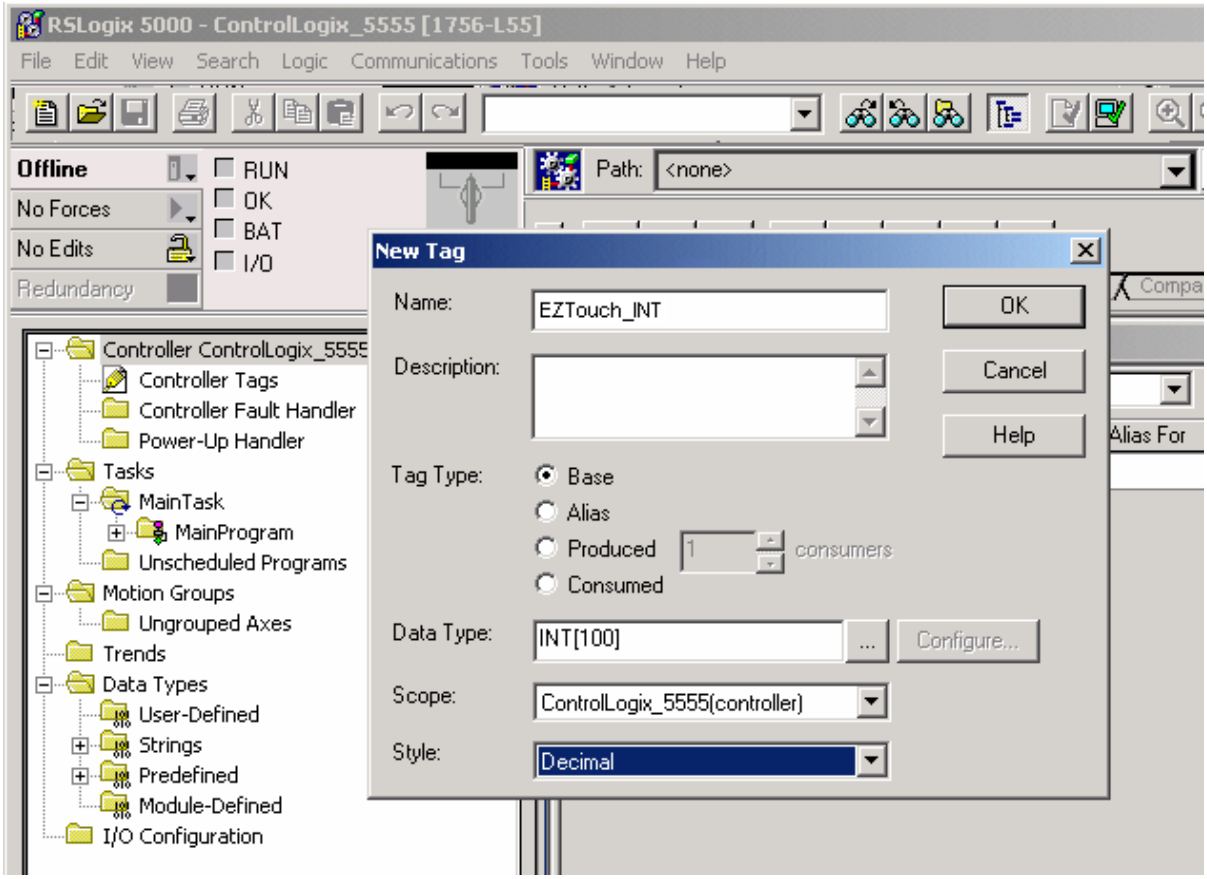
   Note: The BOOL data type is not recommended for use as it may cause unpredictable results.

8. After selecting a DATA TYPE of INT, we will need to move down and define the ARRAY DIMENSIONS. The array dimensions define the number of elements in your tag, ex: 100 means that you have created 100 data elements using the INT format. You need only to fill in a value for DIM 0.

9. Once the Data Type and Array Dimensions have been established, click OK.



Now your NEW TAG window should look as in the example below.

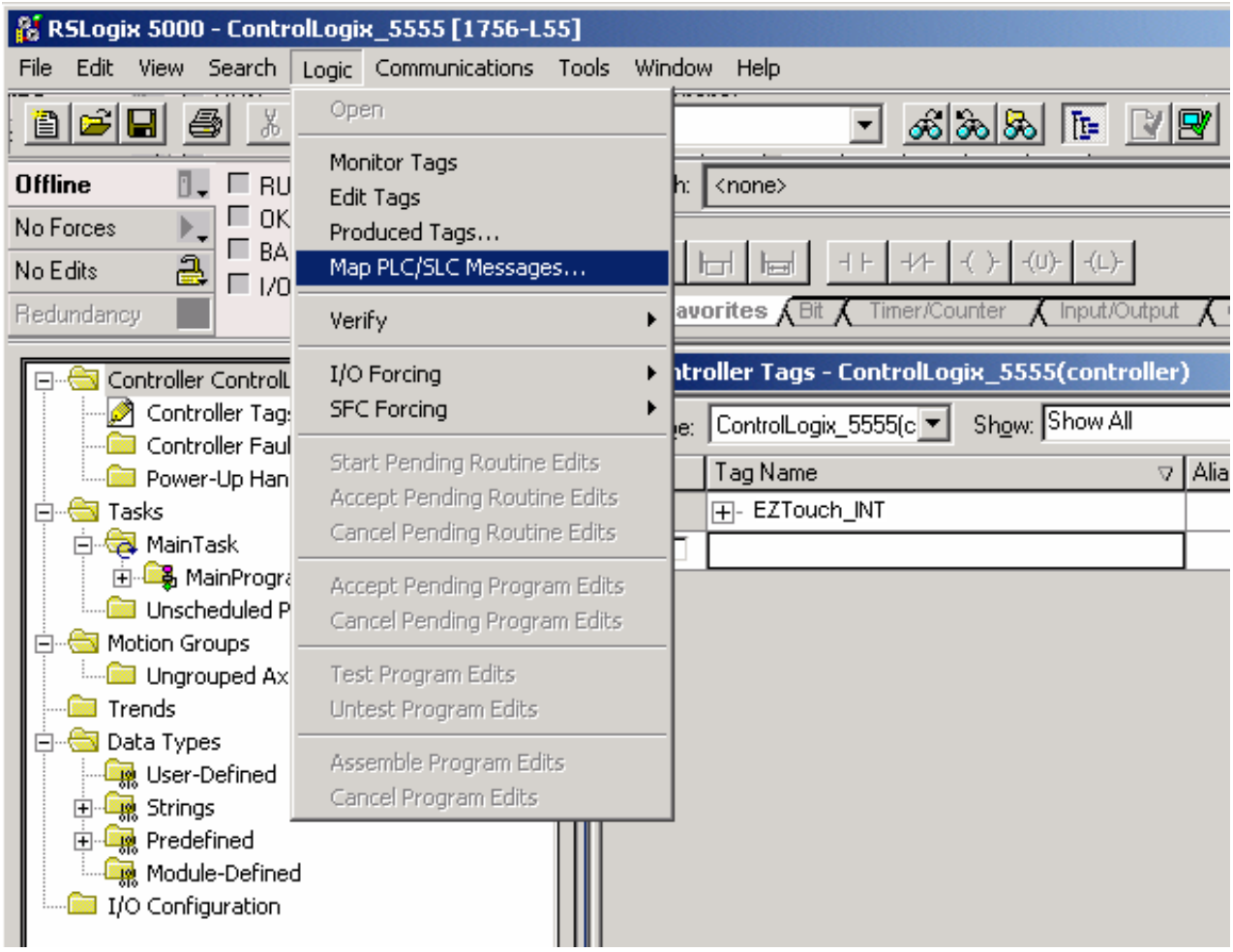


To complete the creation of your new tag, select a SCOPE & STYLE. In our example, we have defined the tag as a CONTROLLER tag. Our STYLE type is Decimal.

Click OK to finalize the tag creation.

Map tag as a PLC/SLC Message

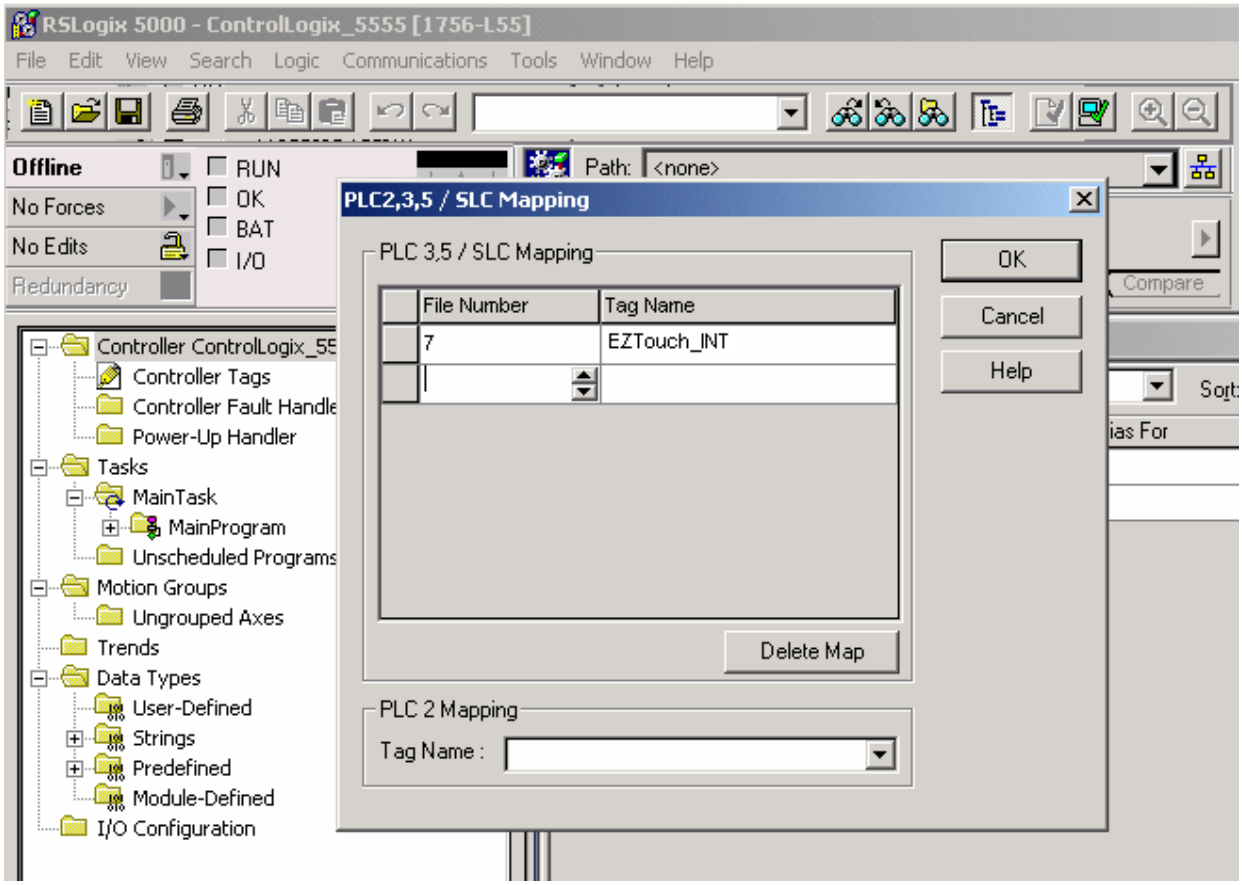
1. Select LOGIC > MAP PLC/SLC MESSAGES… The window as shown below will appear.



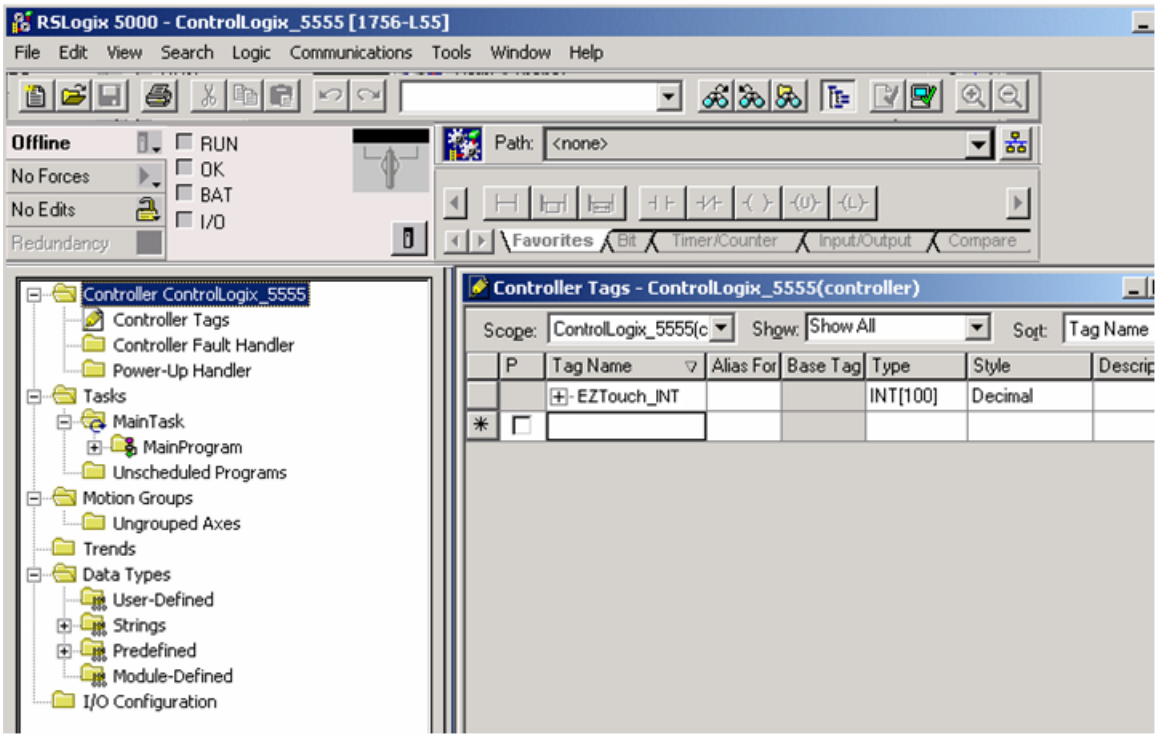
2. Define a FILE NUMBER to be associated with our newly created tag. In our example, we have used a File Number of 7.

3. Next, select the TAG NAME that you would like to associate with the File Number 7. Here we have selected “EZTouch_INT”

4. Please complete the Mapping by clicking “OK.”



After you click OK from the PLC/SLC Mapping window, your RSLogix 5000 screen should look similar to the example below:



5. Save the project and download it to the PLC for the changes to take effect. (Repeat the Tag Creation process and PLC/SLC Mapping process as needed.)

After completing the previous steps, your EZTouch will be able to access tags N7:0 – N7:99.

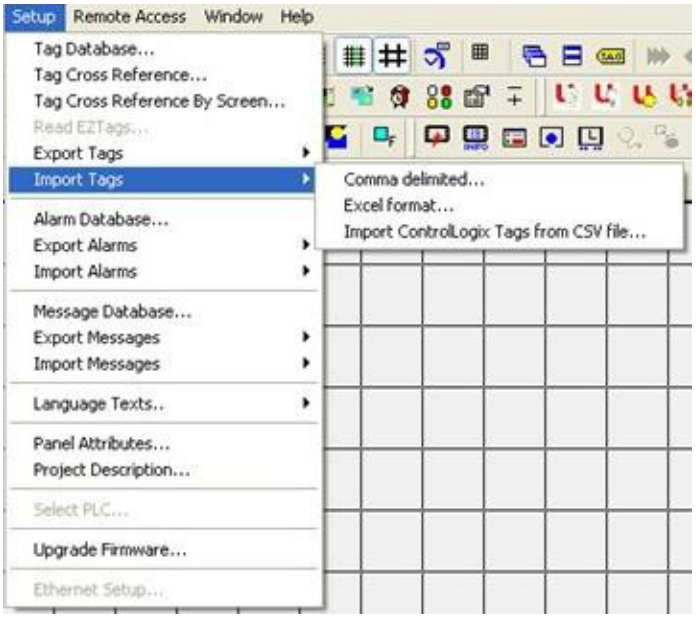
Importing ControlLogix Tags

In order to eliminate the need for having to enter the Tag Information from ControlLogix manually, our touch panel software provides you this feature "Importing ControlLogix Tags" through which you could Import the ControlLogix Tags into your Touch Panel Project.

All you need to do is to Export the ControlLogix Tags from RS-Logix Software into a CSV file and then Import the ControlLogix tags into your project in the Touch Panel Software.

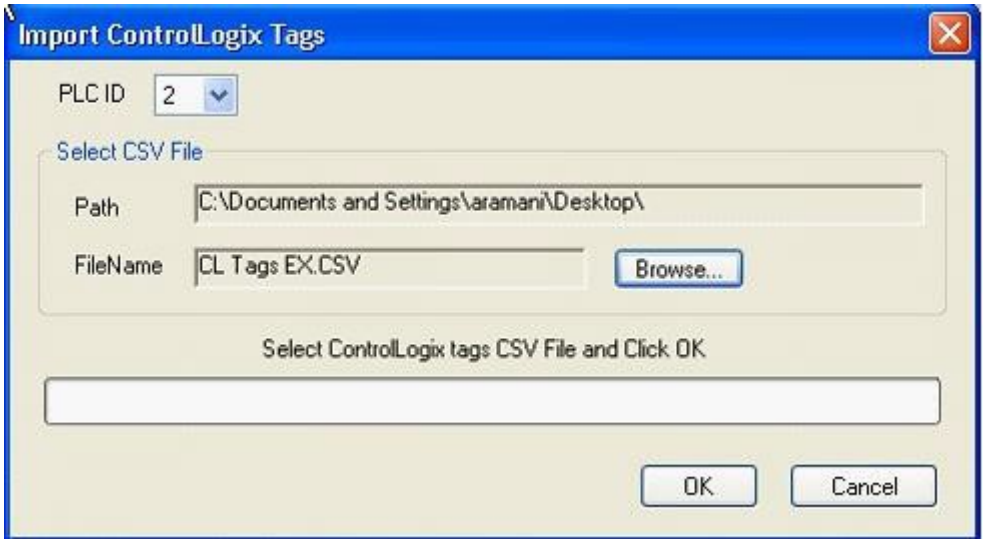
To import ControlLogix Tags from CSV file, perform the steps below:

1. Click on Import Tags -> "Import ControlLogix Tags from CSV file" as shown below

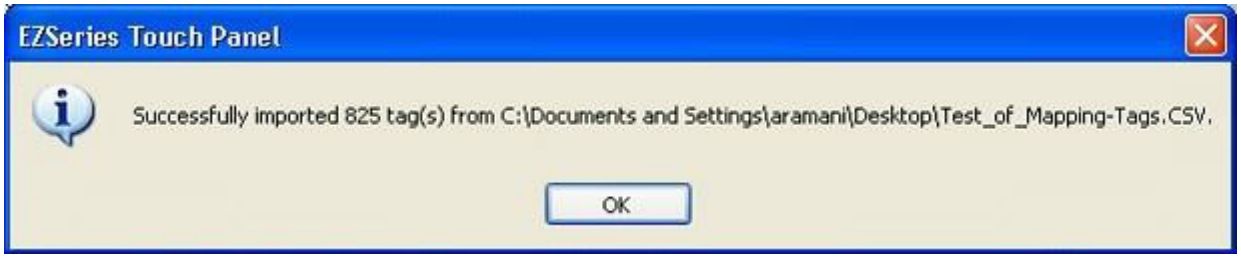


2. You will now see the "Import ControlLogix Tags" Dialog Box

3. Please Select the ControlLogix PLC ID from the drop down box.



4. Click "OK" and you would see the following Dialog Box notifying you of the number of ControlLogix Tags that has been successfully imported. If there are issues in importing the Tags, the tag database log view window will appear to inform you of the errors.



5. Once the tags are imported, you can click on Setup > Tag Database to view the imported Tags.

DRIVER ERROR CODES

DF-1 Driver Errors

The values listed here may be placed in the PLC Error internal register, if the error is detected by the EZSeries Touch Panel.

0x0001 Incompatible Revision:

This error will be displayed when the driver and exec have incompatible revision.

0x0002 PLC error incorrect map size:

This error occurs when an incompatible map is loaded into the unit. The driver will not attempt to communicate with the PLC when this occurs.

0x0004 Limit of elements per screen exceeded:

This occurs when there are too many register on the display that can be monitored.

0x0008 PLC MSG time-out CMD=X:

This error occurs when the unit does not receive a reply to its command. The unit will retry a command and wait for the specific time-out period before reporting this command. The command ID causing this error is reported. CMD 0xAA=READ CMD 0XA2=WRITE.

0x0010 Invalid PLC attributes - using defaults:

This will occur if the PLC driver receives an invalid set of attributes. The default attributes will be used when this occurs.

0x0020 PLC bad checksum CMD=X:

This occurs when a reply with an invalid checksum is received by the unit. The command ID of the command that incurred the error is reported as part of the message. CMD 0XAA=Read CMD 0XA2=Write.

0x0040 PLC Error STS=XX EXTSTS=XX CMD=ZZ

This is reported when a controller responds to a command with an error. The error code is shown and can be looked up in the Allen-Bradley documentation. The command ID of the command causing the error is reported. CMD 0XAA=Read, CMD 0XA2=Write.

0x0080 PLC Nack Error

This error is reported when a controller responds to a command with a negative acknowledgment.

0x0100 PLC element read-only

This is reported when an attempt is made to write to an element with a read-only map entry. Read-only map entries are: input file, output file, and all discrete entries. The driver can only read discrete entries; it cannot write to a single bit within a word.

0x0200 PLC TX buffer full:
The error is reported if the transmit buffer becomes full in the PLC driver.

0x0400 PLC error no reply:
This occurs when the DF1 modules indicate the PLC has no reply to the last message. It is usually displayed when the unit re-establishes communications after a PLC message time-out error. This can also occur when the panel message time-out is too short. If the PLC message time-out does not give the PLC enough time to respond to the message this error will be displayed.

0x0800 Error code xx:
This is reported when the PLC driver encounters an unknown error. This should never occur.

NOTES:

Time-out Errors:
The time-out time specifies the amount of time the panel will wait for a reply to a message before triggering an error. Each message sent to the PLC must be acknowledged by the PLC. The acknowledgment must be received within a certain amount of time. If an acknowledgment is not received, the driver will retry the message. After the message has been sent twice with no response, the driver will report a time-out. If the panel is constantly displaying time-out errors or communication errors, the time-out time or poll time may have to be increased. Only the Panel is allowed to communicate with the SLC500-20, 20- or 40 series PLCs. These PLCs can only handle one or two messages at a time, and if more than one Panel is trying to communicate, errors will occur. A panel and a program loader can be connected to this series of PLCs without errors occurring. The amount of information being requested from the Panel and the amount of activity on the DH485 network can affect the response time of a message.

Discrete:
All map entries that specify a bit are read-only. The driver cannot perform bit writes. The error "PLC Element Read-Only" is returned when an attempt is made to write to a discrete element.

DH-485/RS-232 Interface Module Setup:
The DF1 port on the interface module should be set to match the PLC port on the panel. The DF1 port must be set to eight bits per character. The rest of the settings must match the settings on the panel. The panel will not be able to communicate to the module if the settings on this port do not match the settings on the PLC port of the panel. The DF1 module must be configured for half- duplex by selecting the DF1 protocol option from the top level setup menu on the interface module.

Do you still need help?

Technical Support

Most of the frequently encountered problems regarding the communications of the AB PLCs are answered in the sections above. However, if you still need answers to your questions, please call our technical support at 1-877-774-EASY.