

Application Note

Using the Yaskawa V1000 AC Drive and SI-N3/V DeviceNet Option Kit with AB CompactLogix Programmable Controller

Applicable Product:

SI-N3/V DeviceNet Option Kit

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Introduction

The following document describes the configuration of Allen Bradley CompactLogix PLCs for communicating with the SI-N3/V DeviceNet option kits for the Yaskawa 1000-series AC drives. In this example, the information describes the use of the programming tools to configure and control the AC drive for operation, and defines the requirements for access to additional parameters in the drive. In general it defines the I/O configuration requirements and PLC ladder used.

IMPORTANT! - DOCUMENT APPLICABILITY

This application example uses the Yaskawa V1000 drive. Illustrations may not depict your specific Yaskawa drive. Other Yaskawa drives may be used. Since each system application is typically different, the following may be accomplished in different ways using different Yaskawa AC drives. The basic principles shown herein can be built upon for specific system application requirements.

Intended Audience

This document assumes that the reader is familiar with Yaskawa AC drives, DeviceNet and DeviceNet technical terminology and operation, and with PLC programming.

References

TOEPC71060614 TOEPC71060622 TOBPC73060028A SIEPC73060028A V1000 Quick Start Guide V1000 Technical Manual SI-N3/V Installation Manual SI-N3/V Technical Manual



DeviceNet Option Switch Settings

The SI-N3/V DeviceNet Option does not contain any of the onboard switches that are found on earlier DeviceNet option kits, rather the switch settings are stored as parameters in the drive itself.

Drive Parameter Settings

In order to control the drive from the DeviceNet network drive parameters b1-01 and b1-02 need to be set to a value of '3 – Option Card'. Set the drive to the desired MAC or Node address convenient for your network by adjusting parameter F6-50 (In this example application the node address will be 3). To enable automatic network baud rate determination (auto-baud) set drive parameter F6-51 to a value of '4-Autobaud'.

Table 1, Drive Parameter Settings			
Parameter No/Name	Setting	Description	
B1-01 Frequency Reference Selection	3	Option PCB	
B1-02 Run Command Selection	3	Option PCB	
F6-50 MAC Address	3	Node Address	
F6-51 Baud Rate	4	Auto Baud Rate Detection	
F6-52 Polled Consuming Connection Path	21	DN Extended Speed Control	
F6-53 Polled Producing Connection Path	71	DN Extended Speed Status	

Table 1, Drive Parameter Settings

System

The following example describes the process of configuring a simple system with RS Logix 5000 used to program a CompactLogix PLC and to control the Yaskawa AC drives. See Figure 1 for a diagram of the example system. The system consists of the following:

- Yaskawa V1000 AC Drive
- SI-N3/V DeviceNet Option Kit
- 24VDC/2.5A Power Supply
- AB 1770-KFD DeviceNet RS-232 Interface
- CompactLogix L32E PLC with a 1769-SDN DeviceNet Scanner Module Installed
- DeviceNet Connectors and Cables
- PC Running Windows XP
- RSLinx Classic, RSNetworx for DeviceNet, RSLogix 5000



Figure 1, System Diagram

Drive Configuration

Install the SI-N3/V DeviceNet option on the V1000 drive as indicated in the option technical manual. Apply power to the network components.



PLC Polled Message Example

Configuring RSLinx for the Network



Start RS Linx Classic and begin by selecting and starting the DeviceNet Driver.

Select the appropriate DeviceNet driver from the list (in this example 1770-KFD).



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🗞 RSLinx Classic Lite	
File View Communications Station DDE/OPC Security Window Help	
Image: Second state of the second s	
For Help, prace E1	- PM
For Help, press F1 10(16/07 03:17	PM //

Choose the correct serial communications port as well as the baud rate that your DeviceNet network will be running. Make your Node address either 0 or 1. Click ok. In the message box that pops up leave the name of the RSLinx driver at the default "1770-KFD-1" and click OK.

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RSNetworx Configuration



Start RSNetWorx for DeviceNet and click on "Network" -> "Online" and select the communications path from the list (in this example, 1770-KFD-1) then click OK. If all the devices are at the correct baud rate then they will be displayed in the Graph window.

Double click on the scanner icon and then click on the "Scanlist" tab. Make sure that the box labeled "Automap on Add" is unchecked. Highlight node 3 and click the button to move the node into the scanlist.

1769-SDN Scanner Module	<u>? ×</u>
General Module Scanlist Input Out	put ADR Summary
Available Devices:	Scanlist:
Automap on Add Upload from Scanner Download to Scanner Edit I/O Parameters	Node Active Electronic Key: Oevice Type Vendor Product Code Major Revision Minor or higher
OK Cancel	Apply Help

1769-SDN Scanner M	odule	<u>?</u> ×
General Module Scan	list Input Output ADR Su	mmary
Node ▲ Typ ⊞ 🔲 02, CIM Polle	e Size Map ed 4 1:0.Data[0].0	AutoMap
Advanced Mapping : 02, CIMRP7U	-23P7 ? X	Unmap
Map Message Offset M 1 Polled 0:0 D	femory Offset Bit Lengt Discrete 0:0 16	Advanced
2 <not mapped=""> 3 <not mapped=""> 4 <not mapped=""></not></not></not>		Options
•		-
Map From: Map	ap To:	
Message: Polled 💌	Memory: Discrete	7U-23P7
Byte: 0 🔺 (DWord: 0	
Bit: 0 💌	Bit: 0	
Apply Mapping Bit	Length: 16	
Delete Mapping	Close Help	Help

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> Click on the **Output** tab. On the output dialogue box click on the **Advanced** button to format the I/O into two sixteen bit words. Select **Polled** from the dropdown list in the **Map From:⇒Message:** section and **Discrete** in the **Map To:⇒Memory:** section. The value in the **Bit Length** box should be equal to sixteen (16).

> Map the first sixteen bit I/O word by highlighting selection 1 in the MAP column of the text window. Set Map From: ⇒Byte: to 0. Set Map To:⇒DWord: to 0.

Map the second sixteen bit I/O word by highlighting 2 from the Map column of the text box. Set Map From:⇒Message: to Polled, Map To:⇒Memory: to Discrete, Map From:⇒Byte: to 2, and Map To:⇒DWord: to 1 as shown.

When Finished click on **Apply Mapping.** Click Close.

170	59-5DN	Scanner N	1odule				? ×
Gen	eral M	odule Sca	nlist Input	Output A	DR ∣Sun	nmary	
N	lode	∆ Ty	pe Size	Мар		AutoMan	
Ac	lvance	d Mapping	: 03, YASK	AWA-COSM	OS-DEVIC	ENE ?	<u>× </u>
	Мар	Message	Offse	et Memory	Offset	Bit Lengtł	
	1	Polled Polled	0:0 2:0	Discrete Discrete	0:0 1:0	16 16	
	3	<not mapp<="" td=""><td>ed></td><td>2.00000</td><td></td><td></td><td></td></not>	ed>	2.00000			
		(not mapp					
	— Map F	From:		Map To:			
	Mes	sage: Po	olled 💌	Memory:	Discrete	•	
	Byte	: 2	÷	DWord:	1	-	
	Bit	0		Bit		- -	
			<u> </u>			<u> </u>	
		Apply Map	bing	Bit Length:	16	-	
		Delete Map	oina	Close		Help	
	_		y	0.000			F
_							

1769-SDN Scanner Module	? ×
General Module Scanlist Input Output ADR S	ummary
Node △ Type Size Map ⊡ □ 03, YAS Polled 4 Yes	AutoMap
	Unmap
	Advanced
1 •	Options
Memory: Discrete Start DWord: 0	-
Bits 31 - 0	
1:0.Data[0] 03, YASKA 1:0.Data[1] 03, YASKA	WA-CUSM
1:0.Data[2] 1:0.Data[3]	
1:0.Data[4]	
1:0.Data[6]	
1:0.Data[7] 1:0.Data[8]	
OK Cancel Apply	Help

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When you have applied the mapping, the output should look like this.

Map the input exactly the same as the output, by selecting the "Input" tab -> "Advanced" and completing the steps outlined in the Output configuration section.

Click OK when finished and select "Download configuration to scanner..." in the window that pops up. Download the changes to the scanner, save the network configuration, and close RSNetWorx.

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The assembly mapping will be as follows in Table 2, Tag Mapping for the Example Drive.

Set the value of the Drive Command Tag labeled "Local1:O.Data[0]".

To access the frequency command to the drive, modify the value for the *Frequency Reference Command Tag*, labeled "Local1:O.Data[1]" corresponding to the example in this application note

The associated response or monitor data from the drive is:

- Local1:I.Data[0] = Drive Status,
- Local1:I.Data[1] = Actual Speed.

Controller Tag Name (Example)	Assembly Data	Description
Local1:I:Data[0]	Assembly 71 (Bytes 1 & 2)	Drive Status Word: Bit 0: Faulted Bit 1: Warning Bit 2: Running Forward Bit 3: Running Reverse Bit 4: Drive Ready Bit 5: Controlling from Network Bit 6: Frequency Reference from Network Bit 7: At Speed Commanded Bit 8-15: Not Used
Local1:I:Data[1]	Assembly 71 (Bytes 3 & 4)	Actual Speed Example (3000 = 30.00 Hz),
Local1:O:Data[0]	Assembly 21 (Bytes 1 & 2)	Drive Command Word: Bit 0: Run Forward Command Bit 1: Run Reverse Command Bit 2: Fault Reset Bit 3: Not Used Bit 4: Not Used Bit 5: Network Control Bit 6: Network Frequency Reference Bit 7: Not Used Bit 8-15: Not Used
Local1:O:Data[1]	Assembly 21 (Bytes 3 & 4)	Commanded Speed Example (3000 = 30.00 Hz),

Table 2, Tag Mapping for the Example Drive

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Configuring RSLinx for the Scanner Module

Open RSLinx Classic and select the RS-232 DF1 devices driver then click on 'Add New'. Leave the network name at the default value of "AB_DF1-1" In the "Configure RS-232 DF1 Devices" window select "Auto Configure" then OK.

Close RSLinx.

onfigure Drivers	? ×
Available Driver Types:	Close
RS-232 DF1 devices Add New	Help
Configure RS-232 DF1 Devices Device Name: AB_DF1-1 Comm Port: COM1 Device: Logix 5550 / CompactLogix Baud Rate: 13200 Station Number: 00 (Decimal) Parity: None Error Checking: BCC Stop Bits: 1 Protocot Full Duplex	Configure Startup Start Stop Delete
Auto-Configure Auto Configuration Successfull Use Modem Dialer Configure Dialer	
OK Cancel Delete Help	

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RS Logix 5000 I/O Configuration

New Controlle	r de la companya de l	X
Vendor:	Allen-Bradley	
Туре:	1769-L32E CompactLogix5332E Control	OK
Revision:	13 💌	Cancel
	Redundancy Enabled	Help
Name:	Example_System	
Description:	Example System 1	
Chassis Type:	<none></none>	
Slot:		
Create In:	C:\RSLogix 5000\Projects	Browse

To control the drive from the DeviceNet network configure the I/O in RS Logix 5000.

Start RS Logix 5000 and begin a new project by selecting 'File' and ->'New'.

In the Type field select the correct PLC/Controller and system descriptions for the system being created.

Click OK to create the project database for the system.

Add the DeviceNet Scanner to the I/O configuration: Refer to the I/O Configuration folder in the project tree and highlight the CompactBus port used in the project. Right click and select 'New Module...'



YASKAWA The Drive for Quality™ SUBJECT: Application Note PRODUCT: SI-N3/V De TITLE: USING THE YASKAWA V1000 AC DRIVE AND	viceNet Option Kit DOC #: AN.V1000.01 SI-N3/V DEVICENET OPTION KIT
WITH AB COMPACTLOGIX PROGRAMMAB Select Module Module Description Vendor • Analog • Communications • 1769-SDN/B 1769 Scanner DeviceNet • Allen-Bradley • Digital • Other • Specialty • Expectations • Find Add Favorite By Category By Vendor Favorites • Expectation Vendor • Expectation • Expectation	 Select the correct DeviceNet scanner from the communications module list. The DeviceNet scanner module model number is listed on the module itself. Click OK.

In the New Module Dialog that pops up enter a name for the DeviceNet scanner (in this example it is 'DNet').

Click OK.

New Module		×
Type:	1769-SDN/B 1769 Scanner DeviceNet	
Vendor:	Allen-Bradley	
Name:	DNet Slot: 1	
Description:	Input Size: 90 (32-bit)	
	Uutput Size: 90 式 (32-bit)	
Revision:	2 1 Electronic Keying: Compatible Keying	
🔽 Open Mod	tule Properties OK Cancel Help	

Module Properties: Local:1 (1769-SDN/B 2.1)	×
General Connection RSNetWorx	
DeviceNet File (.dnt): gram Files\Rockwell Software\RSNetWorxii\Networks\Network Found in: C:\Program Files\Rockwell Software\RSNetWorxii\N	c.dnt Browse
Launch RSNetWorx for DeviceNet	
View and edit the DeviceNet network	
Status: Offline OK Cancel Apply	Help

In the next dialog click on the RSNetWorx tab set the path to the saved DeviceNet file from RSNetWorx.

Click OK.



Set the project path with RSWho by clicking on the clicking on the clicking on the click ison. In the Who Active box highlight AB_DF1-1,DF1 and click 'Set Project Path'

Under the Task folder select 'MainTask' then 'MainRoutine'. Add a latch to the Main Routine by dragging the (1) icon over to the first rung in the program.

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Offline No Forces BAT No Edits I/O Image: Strings Image: Strings Image: Strings Image: Strings	RSLogix 5000 - Test [1756-L1]* - [MainPro File Edit View Search Logic Communicat	gram - MainRoutine*] ions Tools Window Help	
Controller Test Controller Test Controller Fault Handler Power-Up Handler MainProgram Program Tags MainRoutine Motion Groups Unscheduled Programs Motion Groups Trends Data Types Mean Strings Module-Defined Book Strings Controller Test MainProgram Cantroller Test MainProgram Cantroller Test MainProgram Cantroller Test MainProgram Cantroller Test MainProgram Cantroller Test MainProgram Cantroller Test MainProgram Cantroller Test MainProgram Cantroller Test MainProgram MainProgram Motion Groups Motion Groups Muser-Defined Book Strings Cantroller Test Module-Defined Data Types	Image: Second state		
Il 11756-DNB DeviceNet	Controller Test Controller Tags Controller Fault Handler Newer-Up Handler MainProgram MainProgram MainProgram MainRoutine Unscheduled Programs Unscheduled Programs Ungrouped Axes Trends Strings Strings Muser-Defined Strings Module-Defined Defined	(End)	* *



Name the Latch by selecting it and clicking on the icon to open a dropdown menu. In the dropdown menu expand the dropdown list under Local1:O.CommandRegister then select Local1:O.CommandRegister.Run to initialize the scanner.

Add another rung to the Main routine and on the new rung add a normally open bit by dragging the <code>++</code> icon over to the rung. Name the bit by right clicking on the '?' and selecting 'New Tag...'.

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New Tag		×
Name:	start	OK
Description:	<u> </u>	Cancel
	×	Help
Tag Type:	Base Alias Produced Consumers Consumed	
Data Type:	BOOL C	ionfigure
Scope:	Test(controller)	
Style:	Decimal	

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In the New Tag dialog enter the name of the tag as "start". Leave the data type at the default of "BOOL".

Click OK

Add a COP function by dragging the ^{COP} icon under the 'File/Misc.' tab. The COP instruction will send the frequency reference to the drive. Length = 1



New Tag		×	
Name:	Frequency_	Ref OK	
Description:		Select Data Type	×
		Data Types:	
		DINT	OK
	•	CAM CAM_PROFILE	Cancel
Tag Type:	Base	CONTROL COORDINATE_SYSTEM	Help
	 Alias Produced 		
	C Consume	DINT DISCRETE 2STATE	
Data Type:	AB:1756_DN		
Scope:	Test(controll)	Array Dimensions	
Style:			*

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Name the source by selecting a new tag and naming it "Frequency_Ref", its data type should be DINT.

By highlighting the 'Program Tags' in the project tree it is possible to view the newly added Yaskawa AC drives and tags. Frequency reference value can be set here. Set Frequency_Ref value to 6000 or 60.00Hz

K RSLogix 5000 - Example_System2 [1769-L32E]* - [File Edit View Search Logic Communications Tool	rogram Tags - MainProgram] Window Help	_ D × _ & ×
		
Rem Run 📴 Run Mode	Path: AB_DF1-1	1 🖴
No Edits	Image:) Ipare
Controller Example_System2	Scope: 🕞 MainProgram 👻 Show Show All	
Controller Tags	Name 🛆 Value 🔶 Force Mask 🗲 Si	tyle 🛛 🖌 Data Type 🔺
- Controller Fault Handler	+-Frequency Ref 6000 D	ecimal DINT
Power-Up Handler	start 0	ecimal BOOL
E Call Tasks		
Program Tags		
MainRoutine		
Unscheduled Programs		
😑 🗁 Motion Groups		
Ungrouped Axes		
Trends		
E-G Data Types		
User-Derined		
E - S I/O Configuration		
🗄 📶 Backplane, CompactLogix System		
1769-L32E Example_System2		
1769-L32E Ethernet Port LocalENB		
Ethernet		T
🕞 🌐 CompactBus Local	Monitor Tags / Edit Tags /	
		a //.



Name the destination by clicking on the "?" and clicking on the icon to open the drop menu. From the Local1:O.Data dropdown list select Local1:O.Data[1] to send the frequency reference to the drive via the assemblies.

Configure the run/stop command by first dragging the icon over to the rung and placing it across the COP command. Add a () latch to the branch and name it: Local:1:O.Data[0]

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🔐 RSLogix 5000 - Test [1756-L1]* - [MainPr	ogram - Ma	inRoutine*]		
File Edit View Search Logic Communical	tions Tools	Window Help		
		<u> & & & &</u>	<u> 89 </u>	
Offline 🛛 🗸 🗖 RUN	🗕 🎆 Р	ath: AB_DF1-1		
No Forces D CK.				
No Edito		┥┣━╢╘╛║╕┟╡┲╞╎┲╱╢╼╝	-(U)- ONS OSR	
<u>L</u>		Favorites ABit & Timer/Counter A	Input/Output 🖌 Compare	
	開開國			
E- Controller Test				
Controller Fault Handler			Local 1:0 CommandRegister R	
Controller Fault Handler	10			
	II.			
A MainTask		e start	COP	
🖻 🕞 MainProgram	1		Copy File	
Program Tags		e	Source Frequency_Ref	
MainRoutine		e	Dest Local:1:0.Data[1]	
- 🗀 Unscheduled Programs			Length 1	
😑 😋 Motion Groups		²		
- 🗀 Ungrouped Axes		e	Locat1:0.Data[0]	ㅋ
- 🗀 Trends	l r			
😑 🔄 Data Types		Tag Name	Data Type Descripti	ION
User-Defined		Local 1:0.CommandRegister	AB:1755	
🖭 🛄 Strings	(End)	= Lucal 1.0.Data	DINT[125]	
🕀 🚟 Predefined	(Lana)	Local To Data[0]	DINT	
Module-Defined			DINT	
		0 9 10 11 12 13 14 15	DINT	
II [1] 1/30-DINB Deviceivec	CININ	24 25 26 27 28 29 30 31	DINT	
		Local T: O Data 5	DINT	
Ready		Local:1:0 Deta[6]	DINT	
			Controller Scoped Tags	
			Program Scoped Tags	



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start

When $\exists \vdash$ is toggled the drive will run forward at the frequency stored in the "Frequency_Ref" tag. To change the frequency value click on 'Program Tags' and enter the new value in the "Frequency_Ref" data section.

Additional AC drives in a system can be added and accessed similarly.



PLC Explicit Message Example

The following is a sample of a PLC ladder that can be used to implement Explicit Message parameter access to the drive. Six connections can be activated for accessing parameter data in the Yaskawa AC drives. They are accessed based on the CIP path associated with the parameter. Refer to the SI-N3/V Technical Manual for more information.

In this example, the PLC will access the Acceleration time in the AC/DC drive object (Class 42 (0x002A), Instance 1, Attribute 18 (0x0012). The value in Acceleration time sets the time to accelerate the motor from 0 to maximum frequency. In order to set the acceleration time, use a "Message" function in the PLC. See the figure below for an example of the ladder logic used.



The Message instruction is activated by a contact called "explicit_msg", which will command the drive in the example system to set its accleration to a specified value. The 'Message' function is configured based upon two dialog interfaces.

Add a new rung and to it add a normally open bit named "explicit_msg" its data type should be BOOL.

₭ RSLogix 5000 - Example_Syst File Edit View Search Logic	em2[1769-L32E]* - [MainProgram - MainRoutine*] Communications Tools Window Help	
Continue Con	Patr AB_DF1:1 B Image: Head of the state o	
Controller Example Sys Controller Tags Controller Tags Controller Tags Controller Tags Controller Tags Controller Tags MainTags	Image: Source Frequency.Ref Dest Local:10.Deta[0].0 2 0 (End)	
Ready	Rung 2 of 3 APP MER	11.



From the element group "Input/Output" select MSG and drag it over to the new rung.

Right click on 'Controller Tags' and select 'New Tag'. In the new tag window make the name AccelTime and make the data type DINT.

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Click OK



Select Data Type Data Type: MESSAGE OK LEAD_LAG_SEC_ORDER LIGHT_CURTAIN MAXIMUM_CAPTURE MESSAGE MOVING_CAPTURE MOTION_INSTRUCTION MOVING_STD_DEV MOVING_STD_DEV MOUTPLEXER OILTPUE CAM Array Dimensions Dim 2 Dim 1 Dim 0		
Data Types: OK MESSAGE OK LEAD_LAG_SEC_ORDER Cancel LIGHT_CURTAIN Help MAXIMUM_CAPTURE Help MINIMUM_CAPTURE Help MOTION_INSTRUCTION MOVING_STD_DEV MOVING_STD_DEV V MULTIPLEXER Immodel Dim 2 Dim 1 Dim 0 0 Immodel Immodel	Select Data Type	×
MESSAGE OK LEAD_LAG_SEC_ORDER LIGHT_CURTAIN MAXIMUM_CAPTURE MESSAGE MINIMUM_CAPTURE MOTION_INSTRUCTION MOVING_STD_DEV MOVING_STD_DEV MULTIPLEXER OLITOUT_CAN Array Dimensions Dim 2 Dim 1 Dim 0	Data Types:	
LEAD_LAG_SEC_ORDER LIGHT_CURTAIN MAXIMUM_CAPTURE MINIMUM_CAPTURE MOTION_GROUP MOTION_INSTRUCTION MOVING_STD_DEV MULTIPLEXER OULTIPLEXER Dim 2 Dim 1 Dim 0	MESSAGE	OK
Array Dimensions Dim 2 Dim 1 Dim 0	LEAD_LAG_SEC_ORDER LIGHT_CURTAIN MAXIMUM_CAPTURE MINIMUM_CAPTURE MOTION_GROUP MOTION_INSTRUCTION MOVING_AVERAGE MOVING_STD_DEV MULTIPLEXER OULTPLEXER	Cancel Help
Dim 2 Dim 1 Dim 0	Array Dimensions	
	Dim 2 Dim 1 Dim 0	
	비료 비료	-

Right click on 'Controller Tags' again and select 'New Tag'. In the new tag window make the name exp_message1 and make the data type MESSAGE.



Next to 'Message Control' click on the blue "?" to open a drop down menu and select exp_message1.

Under I/O configuration double click on 1756-DNB Scanner. Make sure that the scanner has a name for this example "DNet".

Click on box next to exp_message1 to configure the Set command. Set the Message Configuration.

Service Type: Service Code of 10 Hex SET_ ATTRIBUTE _SINGLE

Class: 2A Hex is the AC/DC drive object.

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Instance: 1 is the Instance.

Attribute: 12 Hex is the Acceleration Time of the drive.

Source Element: AccelTime is the data that will be sent to the drive.

Source Length: 2 (Bytes)

Message Configuration - exp_message2	×
Configuration [*] Communication Tag	
Message Type: CIP Generic	•
Service Set Attribute Single	Source Element: AccelTime
Service 10 (Hex) Class: 2a (Hex)	Source Length: 2 (Bytes)
Instance: 1 Attribute: 12 (Hex)	New Tag
O Enable O Enable Waiting O Start	🔾 Done 🛛 Done Length: 0
Error Code: Extended Error Code:	🔲 Timed Out 🗢
Error Part:	
OK	Cancel Apply Help

Message Configuration - exp_message
Configuration Communication* Tag
Path: DNet, 2, 3 Browse Browse
Communication Method © CIP © DH+ Channel: Image: Destination Link: 0 CIP With Source ID Source ID Source Link:
Connected 🗹 Cache Connections 🔹
Enable Enable Waiting Start Done Done Length: 0
⊙ Error Code: Extended Error Code: ☐ Timed Out € Error Path: Error Text:
OK Cancel Apply Help

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To set the acceleration time to 1 second, click on Controller Tags and enter 10 in the AccelTime "Value" column. Click on the Communication tab to add the path to the drive.

DNet is the name of 1756-DNB Scanner.

2 is a fixed number representing the DeviceNet scanner port.

3 is the MAC address of the AC drive.

Click Apply and OK

RSLogix 5000 - Example_System	m2 [1769-L32E]* - [Conti Communications Tools W	roller Tags - Ex	ample_System2(controller)]		
			- &&&	<u>.</u>	.a	
Offline		Path: AB_DF1	-1			
No Edits			msg gsv ssu er)Input/Output	J IOT	mpute/Math	
Controller Example_Sys	Scope: Scope: Scope:	em 💌 🛛 Sh <u>o</u> w	Show All			
Controller Tags	Name ∆ Val	ue 🗲	Force Mask 🛛 🗧 🗲	Style	Data Type	Description 🔺
Controller Fault Har		{}	{}		AB:1769_SDN_4	
Power-Up Handler		{}	{}		AB:1769_SDN_3	
	+-AccelTime 🔻	10		Decimal	DINT	
	+-explicit_messa	{}	{}		MESSAGE	
🔗 Program Ta						
🔂 MainRoutine						
Unscheduled Progra						
🖻 🔄 Motion Groups						
Ungrouped Axes						
Parts Trends						
Ucer-Defined						
Predefined						
🗄 🚂 Module-Defined						
🗄 🔄 I/O Configuration						
🖻 🏢 Backplane, Compac						
1769-132F Evar						-
	▲ Monitor Tags / Ed	dit Tags /		(<u> </u>		
Enter a tag value						1.



Download the program to the PLC and go online. When the start bit is toggled the drive will run at the specified frequency, and when the explicit_msg bit is toggled it will change the drive acceleration to that specified by the AccelTime controller tag.

The information and example shown here indicate how Yaskawa AC drives can be controlled by utilizing the SI-N3/V DeviceNet option interface. The descriptions indicate how to configure, control and monitor the drives through a CompactLogix PLC, and how to access other associated drive parameters through explicit messaging.

For questions or comments regarding this example, feel free to contact Yaskawa Electric America, Inc.

For support please call: 1-800-YASKAWA.

The Drive for Quality™