

How to...

echochange

Setting up data exchange between a Siemens S7-300 and an Allen-Bradley ControlLogix, using Siemens PUT and GET functions



Version: E-032014-01

© Copyright 2014 Softing Industrial Automation GmbH

Disclaimer of liability

The information contained in these instructions corresponds to the technical status at the time of printing of it and is passed on with the best of our knowledge. The information in these instructions is in no event a basis for warranty claims or contractual agreements concerning the described products, and may especially not be deemed as warranty concerning the quality and durability pursuant to Sec. 443 German Civil Code. We reserve the right to make any alterations or improvements to these instructions without prior notice. The actual design of products may deviate from the information contained in the instructions if technical alterations and product improvements so require.

It may not, in part or in its entirety, be reproduced, copied, or transferred into electronic media.

Softing Industrial Automation GmbH

Richard-Reitzner-Allee 6 85540 Haar / Germany Tel: + 49 89 4 56 56-0 Fax: + 49 89 4 56 56-488 Internet: http://industrial.softing.com Email: info.automation@softing.com Support: support.automation@softing.com

The latest version of this manual is available in the Softing download area at: http://industrial.softing.com.



Table of Contents

Chapter 1	Introduction	5
Chapter 2	RSLogix 5000- create tags to send and receive data	6
Chapter 3	NetCon echo – echochange network settings	8
Chapter 4	STEP 7 setup	9
Chapter 5	NetCon - establish the connections	19



This page is intentionally left blank.



1 Introduction

This document provides step by step instructions on how to establish data exchange between a Siemens S7-300 PLC and an Allen-Bradley ControlLogix PLC, using a Softing echochange protocol converter.

General description of the presented example:

- Both PLCs and the echochange are in the same network
- The S7-300 controls the flow of communications, using PUT and GET functions
- The PUT function is used to write data from a S7-300 data block (Data_to_CLX, 1 byte) onto a ControlLogix tag (Data_from_S7)
- The GET function is used to read data from a ControlLogix tag (Data_to_S7, integer array of 50 elements) and store it onto an S7-300 data block (Data_from_CLX)

Software used:

- Siemens SIMATIC Step 7 V5.4 SP5
- Allen-Bradley RSLogix 5000 V20.01.00 (CPR 9 SR 5)
- Allen-Bradley RSLinx Classic Lite V2.59.02 (CPR 9 SR 5)
- Softing NetCon echo V4.33

Conventions

The following conventions are used throughout Softing customer documentation:

Keys, buttons, menu items, commands and other elements involving user interaction are set in bold font and menu sequences are separated by an arrow	Open Start → Control Panel → Programs
Buttons from the user interface are enclosed in brackets and set to bold typeface	Press [Start] to start the application
Coding samples, file extracts and screen output is set in Courier font type	MaxDlsapAddressSupported=23
Filenames and directories are written in italic	Device description files are located in C \StarterKit\delivery\software\Device Description files



Note

This symbol is used to call attention to notable information that should be followed during installation, use, or servicing of this device.



2 RSLogix 5000- create tags to send and receive data

- 1. Create a tag to receive data from the S7-300 PLC. In this example we will create a SINT tag (short integer, 1 byte).
 - a. In the **Controller Organizer** section, right-click on **Controller Tags** and then click on **New Tag...**.



b. Enter a tag name, select data type **SINT** and click **Create**.

Name:	Data_from_S7		Create
Description:		*	Cancel
		-	Help
Туре:	Base Conn	ection	
Alias For:		*	
Data Type:	SINT		
Scope:	D CL1_Demo_Slot2	•	
External Access:	Read/Write	•	
Style:	Decimal	•	
Constant			



2. Use the previous method to create a tag for the S7-300 to read. We will create an INT (integer) array with 50 elements.

New Tag	ter fag (int fage	Section.	X	Constant	Style		
inch hug	and there is shown				Decimal		
Name:	Data_to_S7		Create 🗸		Decimal		
					Binary		
Description:		~	Cancel		Binary		
					Decimal		
			Help		Decimal		
		-			Decimal		
			Select Data Type		-	D	X
Туре:	Base	ction	Data Types:				
Alias For:		-/	INT[50]				ОК
Data Type:	SINT		FILTER_NOTCH	SELECTO	в	•	Cancel
Scope:	DCL1_Demo_Slot2	•	FLIP_FLOP_D FLIP_FLOP_JK	_0222010			Help
External Access:	Read/Write	•	FUNCTION_GENE	RATOR		=	
Style:	Decimal	•	IMC				
Constant)-	
	oficiation		Array Dimensions	-			
	inguised		Dim 2	Dim 1	Dim	10	
	AB:1756_AI6_FI	-	0 🗘	0	50	÷	
	AB:1756_Al6_FI		Show Data Tun	ae by Grour			
	AB:1756_AU6		Only Dala Typ	es by Group	10		

3. This is how the new tags should look in the **Controller Tags** table:

cope: 10 CL1_Demo_Slot2 - Show: All Tags								7	
Name	2 a:	Alias For	Base Tag	Data Type	Description	External Access	Constant	Style	
Alo		Local:3:1.Ch0Data	Local:3:I.Ch0Data	REAL		Read/Write		Float	
AJ1		Local:3:I.Ch1Data	Local:3:I.Ch1Data	REAL		Read/Write		Float	
A00		Local:4:0.Ch0D	Local:4:0.Ch0D	REAL		Read/Write		Float	
A01		Local:4:0.Ch1D	Local:4:0.Ch1D	REAL		Read/Write		Float	
				COUNTER[10]		Read/Write			
				SINT		Read/Write		Hex	
⊞-Data_to_S7				INT[50]		Read/Write		Decim	al
DIN		Local:0:Local:0	Local:0:LData 0	BOOL		BeadWrite		Decim	al

4. Download the project to the ControlLogix device.



3 NetCon echo – echochange network settings

- 1. Configure the network settings of the echochange port to be used. We will use port 1 (Eth 1).
 - a. Click on Station \rightarrow Own Station 1.



b. As a minimum, the IP address and subnet mask are required. DNS and Router addresses may be necessary in some cases.

	w.	011
Station Name	echochange SNA	ОК
MAC (Ethernet) Addr	ess 00 A2 DA 23 06 7E	Cancel
CP/IP Station Paran	neter	Help
Use DHCP		
IP Address 192.	168.10.5	
Subnet Mask 255.	255.255.0	
Domain Name sna.	softing.local	
Maximum three Don	nain Server Addresses	
ONS Addresses	192.168.10.4	
192.168.10.3		
Maximum three Rou	ter Addresses	
auton Addresses	192 168 10 1	



4 STEP 7 setup

- 1. Open or create your project.
- 2. Enable the clock memory byte, as we will need a cyclic trigger.
 - a. Open the hardware configuration.



b. Right-click on the CPU and select Object Properties....

💐 HW Config - [SIMATIC 300(1) (Configuration) Echochange	_FW_Demo]	
Dig Station Edit Insert PLC View Options Window Help		
😑 (0) UR		
1	<u>^</u>	
2 S CPU 315-2 PN/DP	Copy	Ctrl+C
X7 MPI/DP X2 Phi/O	Paste	Ctrl+V
X2P1 Port 1	Replace Object	
3	Add Master System	
4	Disconnect Master System	
5	Insert PROFINET IO System	
	Disconnect PROFINET IO System	
8	PROFINET IO Domain Management	
9	PROFINET IO Topology	
	Isochronous Mode	
	Specify Module	
	Delete	Del
	Go To	•
	Filter Assigned Modules	
	Monitor/Modify	
	Edit Symbols	
<u>×</u>	Object Properties	Alt+Return
lon us	Open Object With	CONTAILTO
	Assign Asset ID	
5100 Module U Fl M I U Lommen -	Product Support Information	Ctrl+F2
2 M CPU 315-2 PN/DP 6ES7V2.6 2	FAQs	Ctrl+F7
X1 MFI/DP 2 2047	Find Manual	Ctrl+F6
X2 FNH0 2046	SIMATIC POM	
X21 Fort 1 2045 -	Summer Parts	
3	Start Device Tool	



c. Select the **Cycle/Clock Memory** tab to make sure **Clock memory** is checked, and choose an unused memory byte. We use MB255 in this example.

Diagnostics/Clock	Protecti	on	Communication	Web
General Startup			Synchronous Cycle	e Interrupts
ycle/Clock Memory Re	etentive Memory	Interrupts	Time-of-Day Interrupts	Cyclic Interrupt
Cycle				
Update 081 process	image cyclically			
			_	
Scan cycle monitoring tir	ne (ms):	150	_	
Mjnimum scan cycle time	: [ms]:	0		
Scan cycle load from co	mmunication (%):	20		
Size of the process-imag	e i <u>n</u> put area:	128		
Size of the process-imag	e output area:	128		
0885 - call up at I/O ac	cess error:	No OB85 c	all up	•
Clock Memory				
			1	
Clock memory				
✓ <u>Clock memory</u> Memory <u>Byte</u> :		255		
Clock memory Memory Byte:		255	J	
Clock memory Memory Byte:		255)	

- 3. Create a new connection.
 - a. Open NetPro by clicking on **Options** \rightarrow **Configure Network**.





b. Right-click on the CPU block and choose Insert New Connection.



c. Select Unspecified station, and S7 connection type.

Insert New (Connection
Connection	Partner he current project Echochange_FW_Demo
- 🔊 In (All multicast stations unknown project
Eroject.	
<u>Station:</u> <u>M</u> odule:	(Unspecified)
Connection	
Iype: ☑ <u>D</u> isplay (S7 connection
(OK	Cancel Help



In the next window enter the partner's IP address (echochange) and take note of the connection identifier (W#16#1 in this case). Next, click on [Address Details...].

Land Courses	tion Field Patiet	Direct Deservation	
Local Connec	tion End Point	Block Parameters	
Fixed Com	guied dynamic connection	Local D (Hex): W#16#1	
M One-way		<u>ار لار الم</u>	D
 Establish a 	an active connection	Defends 1	
Send oper	ating mode messages	Default	m
Connection P	ath		
CONTROCTOR	Local	Partner	
End Point:	SIMATIC 300(1)/ CPU 315-2 PN/DP	Unspecified	
End Point: Interface:	SIMATIC 300(1)/ CPU 315-2 PN/DP CPU 315-2 PN/DP, PN-10(R0/S2)	Unspecified Unspecified	
End Point: Interface: Subnet:	SIMATIC 300(1)/ CPU 315-2 PN/DP CPU 315-2 PN/DP, PN-I0(R0/S2) local PLC Network (Industrial Etherne	Unspecified Unspecified Unspecified [Unspecified [Industrial Ethernet]	2
End Point: Interface: Subnet: Address:	SIMATIC 300(1)/ CPU 315-2 PN/DP CPU 315-2 PN/DP, PN-I0(R0/S2) local PLC Network (Industrial Etherne 192.168.10.10	Unspecified Unspecified Unspecified [Industrial Ethernet] [192.168.10.5	2
End Point: Interface: Subnet: Address:	SIMATIC 300(1)/ CPU 315-2 PN/DP CPU 315-2 PN/DP, PN-IO(R0/S2) local PLC Network [Industrial Etherne 192.168.10.10	Unspecified Unspecified et] [Industrial Ethernet] [192.168.10.5	2

e. For simplicity, match the Local **Rack/Slot** and **Connection Resource** values on the Partner side. In our case, this resulted in TSAPs 10.02 for both Local and Partner.

	Local	Partner
ind Point	SIMATIC 300(1)/ CPU 315-2 PN/DP	Unspecified
lack/Slot:	0 2	0 2
Connection Resou hex):		10 💌
SAP:	10.02	10.02

f. Click **[OK]** in this window and in the previous one.



- 4. Create a data block for the data to be sent to the ControlLogix PLC (1 byte).
 - a. Go back to the project window and add a new data block.



b. Enter the Name and type and the Symbolic Name.

Properties - Data Bloc	k			
General - Part 1 General <u>N</u> ame and type: <u>S</u> ymbolic Name:	Part 2 Calls Attr DB2 Data_to_CLX	ibutes Shared DB	_	Y
Symbol <u>C</u> omment: Created in <u>L</u> anguage: Project path: Storage location of project:	DB C:\Program Files\Sie	emens\Step7\s	:7proj\Echochan	
Date created: Last modified: C <u>o</u> mment:	Code 10/08/2013 11:44:1 10/08/2013 11:44:1	2 AM 2 AM	Interface 10/08/2013 11:44:	12 AM
ŌK			Cancel	Help



c. Double-click the new block and select Byte for the data type.

Echochange	_FW_Demo\SI	MATIC 300(1)\CPU 3	15-2 PN/DP\\DB2	2]
Window Help			11	
8 🛍 🖂 S	≗60^ !≪ ≫			
Address	Name	Туре	Initial value	Comment
0.0		STRUCT		1
+0.0	DB_VAR	BYTE	8#16#0	<u></u>
=2.0		END_STRUCT		
	Echochange, Window Help and C S Address 0.0 +0.0 =2.0	Echochange_FW_Demo\SI Window Help Mindow Help Mindow Signature Madacess Name 0.0 +0.0 DB_VAR =2.0	Echochange_FW_Demo\SIMATIC 300(1)\CPU 3 Window Help Image: Strain St	Echochange_FW_Demo\SIMATIC 300(1)\CPU 315-2 PN/DP\\DB2 Window Heb

- d. Close the data block configuration window and save the block.
- 5. Create a data block for the data to be read from the ControlLogix PLC, following the same method described previously. This will be an integer array of 50 elements.

General - Part 1 General	al - Part 2 Calls /	Attributes				
Name and type:	(DB1	Shared DB	-	v	1	
Symbolic Name:	Data from CLX					
Symbol Comment:					-	
Created in Language:	DB	-				
Project path:					-	
Storage location	C:\Program Files\	Siemens\Sten7\	s7proi\Echoch	an	-	
or project	Code		Interface			
Date created:	10/08/2013 11:41	1:17 AM				
Last modified:	10/08/2013 11:41	1:17 AM	10/08/2013 1	11:41:17 AM		
Common.				-		
				~		
OF			Cano			
	"Data from CLV"	Febrelesen	FW DomolSI	THE 200/ MCDIL	245 2 01001 10	041
AD/STL/FBD - [DB1	"Data_from_CLX" ebun_View_Ontions	Echochange_ Window Help	FW_Demo\SIM	ATIC 300(1)\CPU	315-2 PN/DP\\	81]
AD/STL/FBD - [DB1 File Edit Insert PLC D	"Data_from_CLX" ebug View Options 酒 聞い ロローの	Echochange_ Window Help	FW_Demo\SIM	ATIC 300(1)\CPU	315-2 PN/DP\\	81]
AD/STL/FBD - [DB1 File Edit Insert PLC D	"Data_from_CLX" ebug View Options	Echochange Window Help	FW_Demo\SIM. & !< >! [_	ATIC 300(1)\CPU	315-2 PN/DP\V	B1]
AD/STL/FBD - [DB1 File Edit Insert PLC D	"Data_from_CLX" ebug View Options	Echochange Window Help Mindow Help Mindow Help Ball Constant Manuella State Constant Constant Manuella State Constant Manuella State State Constant Manuella States States Stat	FW_Demo\SIM. & !< >! [_ *	ATIC 300(1)\CPU	315-2 PN/DP\W	B1]
AD/STL/FBD - [DB1 File Edit Insert PLC D	"Data_from_CLX" ebug View Options Image: State Stat	Echochange Window Help Mu Part 6 Reddress Name 0.0 +0.0 DB	FW_Demo\SIM 6* !« »! [] •	ATIC 300(1)\CPU	315-2 PN/DP\V	B1]
LAD/STL/FBD - [DB1 File Edit Insert PLC D I 😂 🔓 🖬 📾 🐰	"Data_from_CLX" ebug View Options	Echochange Window Help Mindow	FW_Demo\SIM & !< >! _ •	ATIC 300(1))CPU	315-2 PN/DP\V	Com

Close the data block configuration window and save the block.



- 6. Add a GET function on your program to read data from the ControlLogix PLC.
 - a. Find the appropriate GET function under the Standard Library.



b. Drag FB14 to the program and assign an unused DB number (DB3 in our example).





Note that in our example we use STL language, but the same programming can be done in any language.



c. Press Enter, then click [Yes] in the following dialog box:



d. Enter the required parameters for the GET function.



- REQ: control parameter request, activates the data exchange on a rising edge. We use the clock byte we created in chapter 4 step 2 c. We use M255 in our example, and bit 2's frequency is 2.5 Hz.
- ID: this is the connection identifier from chapter 4 step 3 d (W#16#1).
- NDR: new data received status bit. Pick an unused memory location to store this status. We selected M200.0.
- ERROR: error status bit. Pick an unused memory location to store this status. We selected M200.1.
- STATUS: status word. Pick an unused memory location to store this status. We selected MW201.
- ADDR_1: pointer to the area on the partner CPU that is to be read. This address will be mapped in the echochange.
 P#DB200.DBX0.0 INT 50: pointer to data block 200, byte offset 0, bit offset 0, of data type INT, 50 elements.
- RD_1: pointer to the area on the local CPU in which the read data is entered.
 P#DB1.DBX0.0 INT 50: pointer to data block 1 (Data_from_CLX), byte offset 0, bit offset 0, of data type INT, 50 elements.



- 7. Insert a new network on your program and add a PUT function to write data to the ControlLogix PLC.
 - a. Find the appropriate PUT function under the Standard Library.



b. Drag FB15 to the program, and assign an unused DB number (DB4 in our example).

FB15 PUT CPU_300 FB20 GETIO TO FUNCT FB21 SETIO IO PUNCT	STATUS:=MW201 ADDR_1:=P#DB200.DBX 0.0 INT 50 RD_1 :=P#DB1.DBX 0.0 INT 50
FB22 GETIO_PART TO FL FB23 SETIO_PART TO FL FB33 SETIO_PART TO FL FB63 TSEND COMM FB64 TRCV COMM FB65 TCON COMM	Network 2: Title: Comment:
FB67 TUSEND COMM FB67 TUSEND COMM FB68 TURCV COMM FB210 S5FW_TCP COMM FB220 S5FW_IOT COMM	CALL FB 15 , DB4

c. Press Enter, then click [Yes] in the following dialog box:

<mark>sk 2</mark> : Title:	LAD/STL/FBD (30:150)
nt:	The instance data block DB 4 does not exist. Do you want to generate it?
CALL FB 15 , DB4	
	Yes No Details Help



8. Enter the required parameters for the PUT function.

```
Network 2 : Title:
Comment:
      CALL
           "PUT" , DB4
                                          FB15
                                                              -- Write Data to a Re
       REQ
            :=M255.2
             :=W#16#1
       ID
       DONE
            :=M200.2
       ERROR :=M200.3
       STATUS: =MW203
       ADDR 1:=P#DB100.DBX 0.0 BYTE 1
       SD 1 :=P#DB2.DBX0.0 BYTE 1
```

- REQ: control parameter request, activates the data exchange on a rising edge.
 We use the clock byte we created in chapter 4 step 2.c. We use M255 in our example, and bit 2's frequency is 2.5 Hz.
- \circ ID: this is the connection identifier from chapter 4 step 3.d (W#16#1).
- DONE: done status bit. Pick an unused memory location to store this status. We selected M200.2.
- ERROR: error status bit. Pick an unused memory location to store this status. We selected M200.3.
- STATUS: status word. Pick an unused memory location to store this status. We selected MW203.
- ADDR_1: pointer to the area on the partner CPU to which the data will be written. This address will be mapped in the echochange.
 P#DB100.DBX0.0 BYTE 1: pointer to data block 100, byte offset 0, bit offset 0, of data type BYTE, 1 element.
- SD_1: pointer to the area on the local CPU which contains the data to be sent.
 P#DB2.DBX0.0 BYTE 1: pointer to data block 2 (Data_to_CLX), byte offset 0, bit offset 0, of data type BYTE, 1 element.
- 9. Download the project to the S7-300 device.





5 NetCon - establish the connections

1. Create a new connection.



2. Enter a connection name and select **Siemens S7** under the **Application Protocol Passive** section and **Rockwell CompactLogix/ControlLogix** under the **Application Protocol Active** section.

Connection Name S7_CLX		ОК
Transport Protocol Passive	Transport Protocol Active	Cancel
 О ТСР/ІР ○ H1 	● TCP/IP ◎ H1	Help
Application Protocol Passive Siemens S5 AP Siemens S7 Modbus TCP	Application Protocol Active Siemens S5 AP Siemens S7 Modbus TCP	G
(Rockwell CompactLogix / ControlLogix Rockwell SIc / Plc5 Mitsubishi Melsec-Q	

3. Since we are only using port 1 (Eth 1), we will leave the Number of Adapter at 1.



4. Enter the IP of the ControlLogix PLC on the **Destination IP Address**, under the **Active side** section.

Connection Name S7_C Passive side	CLX Connection	on is active S7 <-> ControlLogi Active side	x Forward clock over TCP/IP	ОК
Number of the Adapter	1 VIII Slave	Number of the Adapter 1	▼ ✓ Slave	Cancel
Destination IP Address	0.0.0.0	Destination IP Address 19	2.168.10.8	Help
Destination Port	102	Destination Port 44	818	
Туре	Protocol	Туре	Protocol	
Client (Active)	TCP (with Ack)	Olient (Active)	TCP (with Ack)	
③ Server (Passive)	O UDP (without Ack)	Server (Passive)	O UDP (without Ack)	
Special Settings		Special Settings		
PLC Header	Life Data Acks 📝 Rfc1006	PLC Header 🗸 Life	e Data Acks 📃 Rfc1006	B
Special Settings	REC1006 TSAPs	Special Settings	REC1006 TSAPs	

5. Click on **RFC1006 TSAPs** and enter the TSAPs chosen in Step 7. See chapter 4 section 3 e.

O UDP (without Ack)	Server (Passive)	UDP (without Ack)		6 8
	Special Settings	-	OSI TSAP Settings	LR 23
ata Acks 📝 Rfc1006	PLC Header	e Data Acks 📃 Rfc1006		ОК
RFC1006 TSAPs	Special Settings	RFC1006 TSAPs	Rfc1006 TSAP Settings	Cancel
	211 Data		HEX ASCII	Help
			Own TSAP 10 02	
		111	Dest TSAP 10 02	Service

6. After clicking **[OK]** on the **Echochange Connection Network** window, click **[OK]** on the next window:



7. Enter the ControlLogix CPU slot. In our case we use slot 2.

🕼 ControlLogi	(Protocol	? ×
		ОК
Connection Name	S7_CLX	Cancel
CPU Slot No	2 Ţ	Help

8. The **PIc Conversion Table** will come up. Here you will link the S7-300 data areas with the ControlLogix tags.



 First map the S7 data area to be written to the ControlLogix tag. We used P#DB100.DBX0.0 BYTE 1 for the ADDR_1 parameter in our PUT instruction, so in the echochange we specify **DB100** with **0** offset as follows:

		Plc Prot	tocol	Element		Block	Address	Length	Тур	Add ->	ОК
	Source	57	•	DB	•	100	0				Canal
	Destination	Cix	•	-					i 8 🔻	Update ->	Cancer
	Dest >Symbol								-> Browse	<- Delete	Help
le.	Area	Dh St	art Lon	Tune		Dh Start	Lan Tuna Sun	nhol	5		Clear

10. Click on [\rightarrow Browse] to select the respective ControlLogix tag.

		Plc Pro	tocol	Element		Block	Address	Length	Тур
5	Source	S7	•	DB	•	100	0		
[Destination	Clx	•		*				i 8 👻
ſ	Dest >Symbol								-> Browse

11. Select the connection you created and click **[OK]**.



12. Select the tag and click [OK].

Collect Browsing			? x
Element	Access	Parameters ^	ОК
Cxn:Float:3ad464e2			Cancel
Cxn:Float:3fab961d Cxn:StandardInput:cc69634c			Help
Data_from_S7	Read/Write	Typ INT8, No C	
Data_to_S7	Read/Write	Typ INT16, No	
DI0	Read/Write	Typ Bool, No (
DI1	Read/Write	Typ Bool, No (
DI10	Read/Write	Tvp Bool. No (*	Þ

13. Enter the data length and type (1, byte) and click on **[Add →]** to add the mapping to the conversion table.

		Plc P	rotoco	1	E	lemen	t		Blog	:k	4	Addres	s Length	Тур	Add ->	OK	
	Source	rce S7 • DB		•	8	100 0			0								
	Destination	lestination Clx	ination Clx •		Clx -									1	18 -	Update ->	Cancel
	Dest >Symbol	Data	_from	_S7[C]									-> Browse	<- Delete	Help	
lc	Area	Db	Start	Len	Туре	-	Plc	Area	Db	Start	Len	Type	Symbol			Clear tab	



14. Now map the S7 data area used to read from the ControlLogix tag. We used P#DB200.DBX0.0 BYTE 1 for the ADDR_1 parameter in our GET instruction, so in the echochange we specify **DB200** with **0** offset as follows:

		Plc	Protoco	ol	E	lemer	nt		Blog	:k	3	Addres	s Length	Тур		Adda	OK
	Source	S7		•		DB	•		20	D		0					
	Destination	Clx	é.	-			Ŧ			-			1	i 8	-	Update ->	Cancel
	Dest >Symbol	Dat	ta_fron	n_S7[C	:]						ŝ			-> Br	owse	<- Delete	Help
Plc	Area	Db	Start	Len	Туре	-	Plc	Area	Db	Start	Len	Туре	Symbol				Clear table
57	DB	100	0	1	i 8	->	Clx		0	0	1	i 8	Data from S7[C]				

15. Click on [\rightarrow **Browse**] to look for the respective ControlLogix tag.

		Plc	Protoco	I.	E	leme	nt		Blog	:k		Address	s Length	Тур
	Source	urce S7			I	DB			200			0		i 8 •
	Destination Dest >Symbol	Cb	× •				Ŧ						1	
		Data_from_S7[C]								-> Browse				
Plc	Area	Db	Start	Len	Туре	-	Plc	Area	Db	Start	Len	Туре	Symbol	
57	DB	100	0	1	i 8	->	Clx		0	0	1	i 8	Data from S7[C]	

16. Select the connection you created and click [OK].

elect a conn	ection	ОК
onnection	n na Connection params	Cancel
7_CLX	CLX. TCP/IP: Client 1	Help
	- •	Add->

17. Select the tag and click [OK].

Access	Parameters ^	ОК
		Cancel
Read/Write	Typ INT8, No (Help
Read/Write	Typ INT16, No	
Read/Write	Typ Bool, No (
Read/Write	Typ Bool, No (
Read/Write	Typ Bool, No (
Read/Write	Tvp Bool. No (*	
	Access Read/Write Read/Write Read/Write Read/Write Read/Write Read/Write	Access Parameters Read/Write Typ INT8, No (Read/Write Typ INT16, No Read/Write Typ Bool, No (Read/Write Typ Bool, No (Read/Write Typ Bool, No (Read/Write Typ Bool, No (Read/Write Typ Bool, No (



18. Enter the data length and type (50, Integer) and click on **[Add →]** to add the mapping to the conversion table.

		Plc	Pic Protocol			Pic Protocol		Pic Protocol		Elemen		lement		Block			Addres	s Length	Тур	Add -> .	OK
	Source	\$7		•	1	DB	•		20	0		0				Caesal					
	Destination	Cb	c	•	6	-							50	i 16 🔹	Update ->	Cancer					
	Dest >Symbol	Da	ta_to_S	7[1,0.5	50]									-> Browse	<- Delete	Help					
Plc	Area	Db	Start	Len	Туре	-	Plc	Area	Db	Start	Len	Туре	Symbol			Clear table					
S 7	DB	100	0	1	i 8	->	Clx		0	0	1	i 8	Data from S7[C]								

19. The conversion table should look like this:

		Plc Protocol			Pic Protocol			E	lemer	nt		Blog	ck		Addres	s Length	Тур		Add	OK			
	Source	S7	S7	S7	S7	S7	S7	S7		•		DB	•	l.	200	0		0					Canco
	Destination	Destination Clx									•	Update ->	Cancer										
	Dest >Symbol	Dat	ta_to_s	7[I,0.5	50]									-> Bro	wse	<- Delete	Help						
Pic	Area	Db	Start	Len	Туре	-	Plc	Area	Db	Start	Len	Туре	Symbol				Clear tab						
7	DB	100	0	1	i 8	->	Clx		0	0	1	i 8	Data_from_S7[C]										
7	DB	200	0	50	i16	->	Clx		0	0	50	i 16	Data to S7[L0.50]										

20. Click **[OK]** to confirm. Setup is now complete.



Softing Industrial Automation GmbH

Richard-Reitzner-Allee 6 85540 Haar / Germany Tel: + 49 89 4 56 56-0 Fax: + 49 89 4 56 56-488 Internet: http://industrial.softing.com Email: info.automation@softing.com Support: support.automation@softing.com