Training Document for Integrated Automation Solutions Totally Integrated Automation (TIA)

MODULE E07

Diagnosis on the PROFINET with IO Controller CPU 315F-2 PN/DP, Switch SCALANCE X208 and

IO Device ET 200S

This document was prepared by Siemens AG for training purposes for the project 'Siemens Automation Cooperates with Education' (SCE).

Siemens AG does not guarantee the content of this document.

Passing on this document, copying it and using and sharing its content is allowed within public training facilities and continued education facilities. Exceptions require written approval by Siemens AG (Michael Knust michael.knust@siemens.com).

Offenders are held liable. All rights reserved, including translation rights, particularly in the event a patent is granted or a utility model or design is registered.

We thank the Michael Dziallas Engineering corporation, the teachers of vocational schools others for their support during the preparation of this document.

PAGE

1.	Preface	4
2.	Notes on Using the CPU 315F-2 PN/DP	6
3.	Notes on Using the ET 200S with the IM151-3 PN HF	7
4.	Notes on Using the SCALANCE X208	8
5.	Startup of the SCALANCE X208 on the PROFINET (with IO Controller CPU 315F-2 PN/DP/IO Device ET 200S)	10
6.	Diagnostic Functions of the SCALANCE X208	23
6.1	Diagnostic Indications of the SCALANCE X208	23
6.2	Diagnosis of the SCALANCE X208 with STEP 7	24
6.3	Diagnosis of the SCALANCE X208 using Web Based Management (WBM)	29

The following symbols guide you through Module E07:



1. PREFACE

Regarding its content, Module E07 is part of the training unit 'IT Communication with SIMATIC S7'.



Training Objective:

In Module E07, the reader learns how, on the PROFINET, diagnoses can be performed targetoriented. A configuration consisting of the following is used: the CPU 315F-2 PN/DP as IO controller, the ET200S as IO device, and the switch SCALANCE X208 with diagnostic capability. Module E07 shows what to do in principle, providing a brief example.

Preconditions:

To successfully work through Module E07, the following knowledge is assumed:

- Experience in handling Windows
- Fundamentals of PLC programming with STEP 7 (for example, Module A3 'Startup' PLC Programming with STEP 7)
- Fundamentals of network technology (for example, Appendix V Fundamentals of Network Technology)
- Starting up PROFINET (for example, Module E 04 PROFINET with IO Controller CPU 315F-2PN/DP and IO Device ET200S)

Pretace Notes Startop Diagnosis

Hardware and software required

- PC, operating System Windows 2000 Professional staring with SP4/XP Professional starting with SP1/Server 2003 with 600MHz and 512RAM, free disk storage approx. 650 to 900 MB, MS Internet Explorer 6.0 and network card
- 2 Software STEP 7 V 5.4
- **3** PLC SIMATIC S7-300 with CPU 315F-2 PN/DP Sample configuration:
 - Power supply: PS 307 2A
 - CPU: CPU 315F-2 PN/DP
- 4 Distributed IO ET200S for PROFINET with 2 digital inputs and 4 digital outputs Sample configuration:
 - Interface module: IM 151-3 PN HIGH FEATURE
 - Power module: PM-E DC 24V...48V/AC24V...230V
 - Electronic module: 2DI Standard DC 24V
 - Electronic module: 4DO Standard DC 24V/0.5A
- 5 Industrial Ethernet Switch SCALANCE X208
- 6 Ethernet connection between PC, CPU 315F-2 PN/DP, Switch SCALANCE X208 and ET200S with IM 151-3 PN HIGH FEATURE



	Preface	Notes	StartUp	Diagnosis	
_					

2. NOTES ON USING THE CPU 315F-2 PN/DP



The CPU 315F-2 PN/DP is a CPU that is shipped with 2 integrated interfaces. The first interface is a combined MPI/PROFIBUS DP interface that can be used on the

PROFIBUS DP as master or slave for connecting distributed IO/field devices with very fast response timing.

In addition, the CPU can be programmed here by means of a MPI or PROFIBUS DP

- The second interface is an integrated PROFINET interface.
 It allows for using the CPU as PROFINET IO controller for operating distributed IO on the PROFINET. The CPU can be programmed by means of this interface also!
- Also, fail-safe IO devices can be used at both interfaces.

Notes:

- In Module E07, the CPU 315F-2 PN/DP is used on the PROFINET as IO controller.
- To operate this CPU requires a MMC!
- The addresses of the input and output modules can be parameterized at this CPU.

	Preface	Notes	StartUp	Diagnosis
-				

3. NOTES ON USING THE ET200S WITH THE IM 151-3 PN HF

1

The SIMATIC ET200S is a distributed IO device set up in a fine-modular configuration. It can be operated with different interface modules:

IM 151-1 BASIC, IM 151-1 STANDARD and IM 151-1 FO STANDARD for connecting a maximum of 63 IO modules (all types, except for PROFIsafe) to the PROFIBUS DP; as an alternative, bus connection with RS 485 Sub-D connector, or by means of an integrated fiber optic connection.

IM 151-1 HIGH FEATURE for connecting a maximum of 63 IO modules (all types, including clocked mode for PROFIsafe) to the PROFIBUS DP; bus connection with RS485 Sub-D connector

IM 151-3 PN for connecting a maximum of 63 IO modules (all types, including clocked mode for PROFIsafe) to PROFINET IO controllers; bus connection by means of RJ45 connector

IM 151-3 PN HF (HIGH FEATURE) for connecting a maximum of 63 IO modules (all types including clocked mode for PROFIsafe) to PROFINET IO controllers; bus connection by means of 2x RJ45 connector

IM 151-7/F-CPU, IM 151-7/CPU or IM 151-7/CPU FO for connecting a maximum of 63 IO modules (all types; PROFIsafe only with IM151-7/F CPU) to the PROFIBUS DP; as an alternative, bus connection with RS 485 Sub-D connector or by means of integrated fiber optic connection; with integrated CPU 314 of the SIMATIC S7-300 for preprocessing process data.

The following IO modules can be used:

Power modules for individually grouping load and encoder supply voltages, and their monitoring

Digital electronic modules for connecting digital sensors and actuators

Analog electronic modules for connecting analog sensors and actuators

Sensor module for connecting IQ Sense sensors

Technology modules Electronic modules with integrated technological functions; such as counting, positioning, data exchange, etc..

Frequency converter and motor starter modules

For training purposes, we now have an integrated system that can be used for teaching a number of technologies.

Notes:

- In Module E07, the interface module IM151-3 PN HF is used as PROFIBUS DP device.
- Operating the IM151-3 PB HF requires a MMC!

	Preface	Notes	StartUp	Diagnosis	
_					

NOTES ON USING THE SCALANCE X208

i

4.

The SCALANCE X208 is an 8 port Managed Industrial Ethernet switch that can be used universally. The installation of these devices ranges from machine-related applications to networked subsystems. The configuration and remote diagnosis are integrated in SIMATIC STEP 7.

The devices are equipped with PROFINET diagnosis, SNMP access, integrated Web server, and automatic email send function for remote diagnosis and signaling via the network.

Technical data:

- Eight electrical ports for setting up electrical Industrial Ethernet line, star or ring structures
- The eight RJ45 sockets of the **SCALANCE X208** are designed industry-oriented with additional retaining collars
- Load separation through integrated switch functionality
- Redundant voltage supply
- Diagnosis on the device by means of LEDs (power, link status, data traffic)
- Remote diagnosis by means of alarm contact (alarm screen can be set with a button on location), PROFINET, SNMP and Web browser possible
- Automatic detection 10MBit/100MBit by means of auto-negotiation
- Use of uncrossed connection lines through integrated auto-crossover function of the ports
- Fast device replacement if there is a fault by using the optional memory medium C-PLUG (not included in the delivery scope)

Network Topology and Network Configuration:

With the SCALANCE X208, electrical networks can be set up in line, start or ring structures. When configuring networks, the following general requirements have to be noted:

 The length of the TP line between two switches SCALANCE X208: max. 100m with Industrial Ethernet line

max. 10m by means of patch technology with TP cord

IP Address Assignment

In the case of the Industrial Ethernet switch SCALANCE X208, the IP address can be assigned by using the DHCP (Dynamic Host Configuration Protocol). If no corresponding server should be available on the network, the IP address is assigned by means of an included software tool (Primary Setup Tool) or with SIMATIC STEP 7.

Preface	Notes	StartUp	Diagnosis	
 		_		-



Startup and Diagnosis

PROFINET diagnosis alarms of SCALANCE X208 can be indicated with corresponding SIMATIC engineering tools, and processed in the controller.

Moreover, the Industrial Ethernet switch SCALANCE X208 can be integrated into a network management system by means of the standardized protocol SNMP (Simple Network Management Protocol).

If faults occur on the device, error messages (SNMP traps) can be sent to a network system, or as Email to a specified network manager.

The integrated Web server allows for the configuration and diagnosis settings with a standard browser. In addition, statistical information can be read out by means of the Web server.

The following information is indicated locally with LEDs:

- Power
- Port status
- Data traffic
- Signal contact

In addition, the Industrial Ethernet switch SCALANCE X2008 can be monitored by means of the potential-free signal contact.

Notes:

- In Module E07, the switch SCALANCE X208 is used on the PROFINET between a PC with STEP 7 as engineering tool, the CPU 315F-2 PN/DP as IO controller, and the ET200S as IO device.
- Startup and IP address assignment is performed with STEP 7 by means of PROFINET.

	•	-

5. STARTING UP THE SCALANCE X208 ON THE PROFINET

(WITH IOCONTROLLER CPU 315F-2 PN/DP/IO DEVICE ET200S)



Below, a switch SCALANCE X208 is added to the configuration of a PROFINET network including the CPU 315F-2 PN/DP as IO controller, and the ET200S as IO device.

As the initial project, use the STEP 7 project 'ET200S_PN' in Module E04 – 'PROFINET with IO Controller CPU 315F-2PN/DP and IO Device ET200S'.



1. Insert -if available- the C-PLUG. The slot is located on the back of the device. To insert the plug, the screw down cover is removed. The C-PLUG is inserted into the slot provided for it, and the screw down cover has to be closed again correctly.



Notes: The C-PLUG is to be inserted or removed only in the off load state. If the C-PLUG is missing, it is signaled with the switch's diagnostic mechanisms (LEDs, PROFINET, SNMP, Web Based Management).



2. Connect the SCALANCE X208 to 24V direct current (current requirement 350mA). This can also be done redundantly from two voltage sources.

3. By means of the Ethernet, connect the SCALANCE X208 to the PC, the CPU 315F-2 PN/DP and the ET200S.

	Preface	Notes	Startup	Diagnosis	
_					



4. If it is desired, connect the signal contact.

The signal contact is connected using a 2pole insertable terminal block. The signal contact (relay contact) is a potential-free switch that is used for signaling error states through contact separation.





Signal contact SCALANCE X208

The following errors can be signaled with the signal contact:

- The loss of a link at a monitored port.
- The loss of one of the two redundant voltage sources.
- The C-PLUG is also monitored

Connecting and disconnecting a communication station on an unmonitored port does not generate an error message. The signal contact remains activated until the error is remedied, or until the current state is accepted with the button as the new specified condition. When the device is switched off, the signal contact is always activated (opened).



5. The message screen form that has been set can now be displayed and modified with the button. The following is required for this:



After pressing the button for approx. 3 seconds, the currently valid message screen form is displayed. The monitored ports blink with 5 Hz.

After the 3 seconds expired, the new message screen form is displayed. The blinking intervals decrease to 2.5 Hz. After another 3 seconds, the new message screen form is accepted and saved. The monitored ports are indicated with statically lit LEDs, until the button is released. As long as the LEDs are still blinking, the saving process can be canceled by releasing the switch. If an empty message screen form (no ports are monitored) is set or is to be set, LEDs are blinking respectively in turn with their neighbors.

When setting the message screen form, redundant voltage supply monitoring can also be set. Voltage supply monitoring will be activated only if both voltage sources are connected while saving the message screen form. If there should be a C-PLUG in the device at the time the button is pressed, this is saved also and monitored.

By pressing the button for a longer period of time (15 seconds), the device is reset to "factory default". This is indicated by all port LEDs blinking (green). While this happens, the device must not be switched off.

	Preface	Notes	Startup	Diagnosis	
--	---------	-------	---------	-----------	--



6. Open the hardware configuration in your project '**ET200S_PN**' from Module E 04 – 'PROFINET with IO Controller CPU 315F-2PN/DP and IO-Device ET200S'. (\rightarrow SIMATIC Manager \rightarrow File \rightarrow Open \rightarrow ET200S_PN \rightarrow Hardware)

SIMATIC Manager - ET2005_Pl	N		_ 🗆 ×
Datei Bearbeiten Einfügen Zielsys	tem Ansicht Extr	as Fenster Hilfe	
🗅 🥔 🔡 🛲 X 🖻 🛍	👛 🤤 💁 º	ը 🔛 🏥 🏢 🔁 🛛 < Kein Filter >	- V 🐮 📾 🚟
ET2005_PN D:\0_57_Projek	te\ET2005_P		
ET2005_PN SIMATIC 300(1) CPU 315F-2 PN/DP S7-Programm(1) Quellen Bausteine	Fu Hardware	CPU 315F-2 PN/DP	
-)rücken Sie F1, um Hilfe zu erhalten.		TCP/IP -> I	ntel(R) PRO/100 VE Ne

7. Using Drag&Drop, drag the switch 'SCALANCE X208' to the 'PROFINETIO System'. (\rightarrow PROFINET IO \rightarrow General \rightarrow SCALANCE X-200 Switches \rightarrow SCALANCE X208)

🔣 HW Konfig	- [SIMATIC 300(1) (Kor	figuration)	ET2005_	PN]				_ 🗆 ×
DI Station B	earbeiten Einfügen Ziels	ystem Ansicht	Extras	Fenster Hilf	e			_ 8 ×
🗋 🗅 😂 🐂	• 5:16 B C	🏜 🏜 [0 📼 🖁	1 N?				
	1						1	
	PS 307 .	E	thernet(1): I	PROFINET-IO	-System (100)	1.5-	Suchen:	mt mi
2	CPU 31						Profit Standard	•
x2 3 4 5 c ↓ (1)	PW-10					erssen gecken		es T))
Steckplatz	Baugruppe	Bestellnum	E-Adres	A-Adresse	Diagnoseadresse	Kommentar		
<u>0</u>	IN151-JPNHF	6ES7 151-38A			2044*		Weitere FELDGERATE	
1	PM-E DC24/48V/ AC:	6ES7138-4CB		-	2043*		SIMATIC 300	
2		6ES7131-4BBI	0.00.1	00.00				
3	4DU DC24V70,5A ST	6ES7 132-4BD	2	0.00.3			SIMATIC PC Pased Control 200/40	0
4				-	2	<u> </u>	I SIMATIC PC Station	
5				-				
<u>b</u>				-				
1				-	2			
8			4	4	2			
3			1	-	8			
10				-	2			
11			-	-			IGGK5 208-0BA00-2AA3	£_
12			-	-		-	8 Port Switch (8 x B.145)	
13				1		<u> </u>	GSDML-V2.0-Siemens-002A-SCALANCE >	<2001
Drücken Sie Et	um Hilfe zu erhalten						III III	länd

	Preface	Notes	Startup	Diagnosis	
-					
_					



8. A double click on the 'SCALANCE X208' opens its properties. (\rightarrow SCALANCE X208)

HW Konfig	- <mark>[SIMATIC 300(1) (Konfig</mark> earbeiten Einfügen Zielsvsl	juration) ET2005_PN] tem Ansicht Extras Fenster H	ife					×
	• • • • • • • • • • • • • • • • • • •	🕯 🎕 🗈 😫 🕅						annatannia anna
2 1 2	PS 307 (▲	Ethernet(1): PROFINET-I	D-System (100)		9. 1	s s	uchen:	
X2 3 4 5 c	SCALANCE ×208		(1) IM151-3	000000				200 Switches :: X202-2 IRT :: X204 IRT :: X204-2 : X204-2 :: X206-1 :: X206-1 :: X208 :: X208 :: X208 PR0
Steckplatz	Baugruppe	Bestellnummer	E-Adresse	A-Ad	D K 2043		Weitere FELDGER	ÄΤΕ
1	R/45 Port				2041		SIMATIC 300	
2	RJ45 Fort				2040		E 📓 SIMATIC 400	
3	RJ45 Fort				2039	E	🗄 🛄 SIMATIC HMI Station	
4	RJ45 Fort				2038	E	🗄 🎆 SIMATIC PC Based Co	ntrol 300/400
5	RJ45 Port				2037	E	🗄 🖳 SIMATIC PC Station	
6	RI45 Port				2036			
7	RI45 Port				2035			
8	RI45 Fort				2034			
9 9 -						08090	GK5 208-0BA00-2AA3 IEMENS I Port Switch (8 x RJ45) ISDML-V2.0-Siemens-002A-S(
, Einfügen möglich	1							Änd

	Preface	Notes	Startup	Diagnosis	
-					

Automation and Drives - SCE

SIEMENS



9. To each IO device, a device name <<'Gerätename'>> that is unique within the PROFINET IO systems has to be assigned, and an IP address on the 'Ethernet'. (\rightarrow Device name: SCALANCE X208 \rightarrow Ethernet)

genschaften - SCAL	ANCE X208		<u>[</u>]
Allgemein 10-Zyklus	Management]		
Kurzbezeichnung:	SCALANCE X208		
	8 Port Switch (8 x RJ45)		*
Bestell-Nr:	6GK5 208-0BA00-2AA3		
Familie:	SCALANCE X-200 Switch	ies	
Gerätename:	SCALANCE ×208		
Teilnehmer / PN-10	Ausgabestand andern.		
Gerätenummer:	2	PROFINET-IO-System (100)	
IP-Adresse:	192.168.1.12	Ethernet	
✓ IP-Adresse duro	ch 10-Controller zuweisen		
Kommerikai.			
			*
5 			
OK		Abbreche	n Hilfe

10. After you assigned the '**IP Address**', accept it with '**OK**'. (\rightarrow IP address: 192.168.1.12 \rightarrow OK \rightarrow OK)

	8 Port Switch (8 x RJ4	5)		
genschaften - El	thernet Schnittstelle	SCALANCE-X208		
Allgemein Para	ameter			
IP.Adronec	IDDER OF BUILD	Netzübergang –		
Subnetzmaske:	255.255,255.0	C Keinen Route	er verwenden	
	Constant and a second	Router verwe	nden	
		Adresse: 1	92.168.1.1	
C. Franker		1		
Subnetz:	tzt	9 .	Ne	u
Subnetz: nicht verne Ethernet(1)	tzt		Ne	u
Subnetz: nicht verne Ethemet(1)	tzt	2	Eigensc	haften
Subnetz: nicht verne Ethermet(1)	tzt	3 <u>5</u>	Eigense Lös	u., haften
Subnetz: nicht verne Ethemet(1)	tzt	3 <u>.</u>	Eigensc Lös	u haften

	Preface	Notes	Startup	Diagnosis
_				



11. By double clicking on '**SCALANCE X208**', the parameters for the switch can be set that are valid for all ports. (\rightarrow SCALANCE X208 \rightarrow OK)

IW Konfig - [SIMATIC 300(1) (Konfig Station Bearbeiten Einführen Zielsyst	uration) ET2005 tem Ansicht Extras	_PN] Fenster Hilfe			<u>_ </u> _
	ân ân 👔 🖽 🦻	₩			
⊇(0) UR 1 PS 307 . ▲ Ether	net(1): PROFINET-IO-S	System (100)	▲ Suchen:		: <u> </u>
2 CPU 31 X1 MRI/DF X2 PW-10	Eigensch	aften - SCALANCE-X208			
3(2) Si 4			Weit		_
		Parameter 			
		⊢≝ redundante Stromversorgung	nicht überwacht		
		-E C-PLUG Fehler	nicht überwacht Siefluss zuf Alexmeinstellus -		
(2) SCALANCE-X208 eckplatz	Beste				
SCALANCE X208	GGK5				
EM5 Bod					
B/45 Port					
R.145 Port					
RI45 Port					
RI45 Port					
RI45 Port					
R145 Part R145 Part R145 Part R145 Part					
R145 Port R145 Port R145 Port R145 Port			At	brechen	Hilfe
R145 Port R145 Port R145 Port R145 Port			At Internet and In	obrechen	Hilfe ×200- ⊊ I

i

Switch parameters that are valid for all ports:

Redundant power supply

Not monitored - No alarm is generated if one of the two voltage sources fails. **Monitored** - An alarm is generated if one of the two voltage sources fails.

C-PLUG

Not monitored - The C-PLUG is not monitored **Monitored** - If there is an error, an alarm On C-PLUG is generated

Influence when pressing the button is configured

No influence on the alarm setting - The ports to be monitored are set not by pressing the button but by being set in HWConfig

Influence on the alarm setting - The ports to be monitored are already set on the device (for example, by pressing the button, WEB interface, etc.)

		Preface	Notes	Startup	Diagnosis
--	--	---------	-------	---------	-----------



12. By double clicking on '**RJ45 Port**', the parameters for the individual ports can be set. (\rightarrow RJ45 Port \rightarrow OK)

HW Konfig - [SIMATIC 300(1) (Konfigur Station Bearbeiten Einfügen Zielsystem	ation)ET2005_PN] Ansicht Extras Fenster Hilfe		X
	a 🛍 🖪 🗖 😫 👷		
	(1): PROFINET+IO-System (100) Eigenschaften - RJ4S Port - (R-/51)	Suchen:	<u>ntai</u> <u>Ntai</u>
	Allgemein Adressen Parameter	Wert keine keine Überwachung der Übertragungsrate keine Überwachung keine Überwachung Linkdown erzeugt kommenden Alarm	
	Best SGX:		
	<u> </u>	Abbrechen 8 Port Switch (8 x RJ45) GSDML-V2.0-Siemens-0024-SCALANCE_	Hilfe
) Drücken Sie F1, um Hilfe zu erhalten.		p	Änd

1

Parameters for the individual ports:

Alarm generation

None - No alarm is generated

Setpoint by means of configuring - The alarm setting is entered explicitly for each port **Setpoint when entering data traffic** - The link status of the corresponding port is stored when the device transitions to data exchange with the PROFINET IO controller.

Link status

No monitoring - Monitoring deactivated **Link down generates a coming alarm** - An alarm is generated if an existing link is removed.

		Preface	Notes	Startup	Diagnosis
--	--	---------	-------	---------	-----------



13. Now, the IO device has to be assigned a name <<'Gerätename vergeben'>> after it was highlighted. (\rightarrow SCALANCE X208 \rightarrow Target system \rightarrow Ethernet \rightarrow Assign device name)

0 😂 🔓	earbeiten Einfügen 🖩 🙀 🚭 🖻	Zielsystem Ansicht Extras Fenste Laden in Baugruppe Laden in PG	r Hilfe Ctrl+L					<u>_8 ×</u>
Ethernet(1): F	ROFINET-IO-System	Baugruppen-Identifikation laden Baugruppen-Identifikation laden in f				Suchen:		
		Gestörte Baugruppen				Profit: SI	tandard	•
		Baugruppenzustand Betriebszustand Urlöschen Uhrzeit stellen	Ctrl+D (Ctrl+I			 ● 帯 PRC ● 帯 PRC ● 帯 PRC ● 帯 PRC 	DFIBUS-DP DFIBUS-PA DFINET IO General DI SCALANICE X 200 Suitches	
		Beobachten/Steuern					SCALANCE X-200 Switches	
12) SCALA	(1) IM151-3	Gerätenamen auf Memory Card spe	ichern				SCALANCE X204 IR I	
		Ethernet	•	Etherne	et-Teilnehmer	bearbeiten	SCALANCE X204-2 LD	
-		PROFIBUS	•	Geräter	namen überpi	rüfen	SCALANCE X206-1 LD	
•		Servicedaten speichern		Geräter	namen vergel	ben	SCALANCE X208 PRO	
(2)	SCALANCE-X208						I/O Netzübergang	
Steckplatz	🛛 🚺 Baugruppe	Bestellnummer	E-Adresse	A-Ad	D K	🗉 🖻 🛄	Sensors	
0	5CALANCE X2	16 6GK 5,208-0BA00-3AA3			2042		Weitere FELDGERATE	
1	RI45 Part		<i>a</i>		2041	I III SIM	ATIC 300	
2	RI45 Port		1		2040	SIM.	ATIC 400	
3	RI45 Port		8		2039		ATIC HMI Station	
4	RI45 Port	8	12.		2038		ATTC PC Based Control 300/400	
5	RI45 Port			-	2037		ATTURUStation	
6	KI45 Fort				2038			
1	RI45 Fort				2035			
					122201	6GK5 208-0	8600-2663	- E/



Note: A precondition for this is that the PG/PC interface is set to TCP/IP and the PC's network card is configured correctly; for example: IP address 192.168.1.99, subnet 255.255.255.0 and router address 192.168.1.1. (refer to Module E02!)



Note: Make sure that your programming device is connected to the switch SCALANCE X208 by means of the Ethernet!

Preface	Notes	Startup	Diagnosis



14. Now we have to select the switch 'SCALANCE X208' in order to assign the name <<'Name zuweisen'>>. The new device name is then displayed in the area for Existing Devices 'Vorhandene Geräte'. Then, close <<'Schließen'>> the dialog box. (\rightarrow SCALANCE X208 \rightarrow Assign name \rightarrow Close)

n vergeben				
SCALANCE	×208 💌	Gerätetyp: SCALANCE	×	
aerate: -Adresse	Gerätetyp	Gerätename	Name zuweisen	1
106-99-04-DE	SLALANLE X-20 ET 200S	U SWELL SLALANLEX208 IM151-3PNHF	Teilnehmer-Blinktes Dauer (Sekunden): Blinken ein	t 3 Blinken aus
	SCALANCE Seräte: -Adresse 0-06-97-F0-1A 0-06-99-04-DE	SCALANCEX208	SCALANCEX208 Gerätetyp: SCALANCE Seräte: Adresse Gerätetyp Gerätename DOG-97-F0-1A SCALANCE X-200 Swi SCALANCEX208 0-06-99-04-DE ET 200S IM151-3PNHF	SCALANCEX208 Gerätetyp: SCALANCE X- Seräte:



Note: If several IO devices are on the network, the device can be identified with the imprinted MAC address.

	Preface	Notes	Startup	Diagnosis	
_					





15. Now, after again highlighting the switch, it has to be assigned the Ethernet address (\rightarrow SCALANCE X208 \rightarrow Target system \rightarrow Ethernet \rightarrow Edit Ethernet station)

	R & B	Laden in Baugruppe Laden in PG	Ctrl+L			
nernet(1): PF	ROFINET-10-System (Baugruppen-Identifikation laden Baugruppen-Identifikation laden ir	.PG,			Suchen
2010 (2011)		Gestörte Baugruppen				Profit Standard
		Baugruppenzustand Betriebszustand Urlöschen Uhrzeit stellen Beobachten/Steuern	Ctrl+D Ctrl+I			
(2) SCALAN	L ➡(1) M151-3	Firmware aktualisieren				SCALANCE X204 IRT
		Gerätenamen auf Memory Card sp	eichern			
		Ethernet	•	Ethern	et-Teilnehn	mer bearbeiten
		PROFIBUS	,	Geräte	namen übe	erprüfen SCALANCE X206-1 LD
		Servicedaten speichern	-	Gerace	namen ven	SCALANCE X208 PRO
(2)	SCALANCE-X208					🛛 💼 🧰 1/0 🕀 🧰 Netzübergang
eckplatz	Baugruppe	Bestellnummer	E-Adresse	A-Ad	D K.	🗈 🧰 Sensors
	📑 SCALANCE X20	8 6GK5208-08400-3443			2042	Weitere FELDGERATE
	R.145 Part				2041	I SIMATIC 300
	FU45 Fort				20140	SIMATIC 400
	DUED-1				2035	SIMATIC PC Based Control 300/400
	RI45 Port				2000	
5	R.145 Part R.145 Part B.145 Part		1		2032	🔲 🗊 🖳 SIMATIC PC Station
	R.145 Port R.145 Port R.145 Port R.145 Port				2037	■ SIMATIC PC Station
	R/45 Port R/45 Port R/45 Port R/45 Port B/45 Port				2037 2036 2035	BIMATIC PC Station
	R145 Part R145 Part R145 Part R145 Part R145 Part R145 Part				2037 2036 2035 2034	SIMATIC PC Station



Note: A precondition for this is that the PG/PC interface is set to TCP/IP and the PC's network card is configured correctly; for example, IP address 192.168.1.99, subnet 255.255.255.0 and router address 192.168.1.1. (refer to Module E02!)



Note: Make sure that your programming device is connected to the switch SCALANCE X208 by means of the Ethernet!

Preface	Notes	Startup	Diagnosis	



16. Now, search the network for all available devices. (\rightarrow Search)

thernet Teilnehmer			
		Online erreicht	oare Teilnehmer
IAC-Adresse:		Durchsuche	n
^{5.} Konfiguration einstelle	n		
IP-Parameter verwer	iden		
		Netzübergan)
IP-Adresse:		🕫 Keinen R	outer verwenden
Subnetmaske:		C Router ve	awenden
		Adresse:	
Client-ID: IP-Konfiguration zuwe	isen		(veratename
erätename vergeben			
ierätename vergeben – Gerätename:	[Name zuweisen
erätename vergeben – Gerätename: ücksetzen auf Werksei	nstellungen		Name zuweisen
erätename vergeben – Gerätename: ücksetzen auf Werksei	nstellungen		Name zuweisen

17. Then, select your switch 'SCALANCE X208' with a double click. (\rightarrow SCALANCE X208)

the second se		MAC-Adresse	Gerätetyp	Gerätename	Subnetzma.
		08-00-06-99-04-DE	IM151-3	IM151-3PNHF	255.255.25
Anhalten	2	08-00-06-97-F0-1A	INC	SCALANCEX208	255.255.25
		U8-UU-U6-68-A2-F6	\$7-300	PN-IU	255.255.25
Blinken	j				



Note: If several IO devices are on the network, the device can be identified with the imprinted MAC address, or the device name previously assigned.

Preface	Notes	Startup	Diagnosis	

Automation and Drives - SCE



Status: 02/2008

18. Now enter the '**IP** address', assign the 'subnet screen form' and specify the address of a router that is possibly be used. With 'Assign IP configuration', write your settings to the target device and 'Close' the dialog. (\rightarrow IP address: 192.168.1.12 \rightarrow Subnet screen form: 255.255.255.0 \rightarrow Use router \rightarrow 192.168.1.1 \rightarrow Assign IP configuration \rightarrow Close)

and the second sec			
		Online erreich	bare Teilnehmer
AC-Adresse:	08-00-06-97-F0-1A	Durchsuch	en
-Konfiguration einst	ellen		
P-Parameter ver	wenden		
-		Netzübergan	ig:
IP-Adresse:	192.168.1.12	C Keinen F	louter verwenden
Subnetmaske:	255.255.255.0	Router v	erwenden
		Adresse:	192.168.1.1
IP-Konfiguration zu	uweisen		
erätename vergebe	n		
Gerätename:	SCALANCEX208		Name zuweisen
	- 10 - 10		
ücksetzen auf Werl	kseinstellungen		
Gerätename:	SCALANCEX208		Name zuweisen

	Preface	Notes	Startup	Diagnosis	
– T	I A Training Document	Page 21 of	37	Module E0	7

Diagnosis on the PROFINET with CPU 315F-2 PN/DP, Switch SCALANCE X208 and ET 200S



19. Now, by clicking on $\frac{1}{100}$, the configuration table is saved and converted; and after clicking on $\frac{1}{100}$, it is loaded to the PLC. (\rightarrow) (\rightarrow) (\rightarrow)



	Preface	Notes	Startup	Diagnosis	
_					

6. DIAGNOSTIC FUNCTIONS OF THE SCALANCE X208

6.1. DIAGNOSTIC INDICATIONS OF THE SCALANCE X208

٠
1

Fault Indication (red LED)

State	Description
Illuminated red	The SCALANCE X208 detected an error. At the same time, the signal
	contact opens. The following errors are recognized:
	1. Link down event at a monitored port
	2. One of the two redundant voltage supplies failed
	3. C-PLUG
	4. Power-up of the device; the LED is lit for approx. 20s.
Blinks red	An internal error was detected. Inform the maintenance staff and if
	necessary, return the device for repairs.
Not lit	SCALANCE X208 detected no errors.

Power Indication (green LED)

The status of the voltage supply is indicated by means of two green LEDs:

State	Description
Steady green	Voltage supply L1/L2 is connected.
Not lit	Voltage supply L1and/or L2 not connected, or <14V

Port Status Display (green/yellow LEDs)

The interface status is indicated with eight two-color LEDs:

State	Description
Port 1 to 8 LED is	TP link present, no data reception
steady green	
Port 1 to 8 LED is	TP link present, data received at TP port, device powers up, the LED is lit
steady yellow	for approx. 6s
Port 1 to 8 LED	Setting or indication of the message screen form
blinks yellow	
Port 1 to 8 LED	The function "Show Location" was activated by means of the Ethernet.
blinks green	PROFINET IO operation with the PN IO controller started; the attempt to
	modify the message screen form by pressing the button is rejected by all
	port LEDs blinking once. To reset the configuration, the button was pressed
	more than 15s.

LED Indication at Startup

When the device powers up, the following indications are lit in the time sequence listed:

- Power LEDs (green) are lit immediately after switching on the voltage.
- Port LEDs (yellow) are lit for approx. 6s, the red LED is off.

• Port LEDs go off, the red error LED is lit for approx. 20s.

After the Port LEDs go off, the correct link status is indicated after approx. 2s. The device is now ready.

		Preface	Notes	StartUp	Diagnosis
--	--	---------	-------	---------	-----------

6.2. READING OUT THE DIAGNOSIS OF THE SCALANCE X208 WITH STEP 7



In STEP 7 you can diagnose states of the switch SCALANCE X208.

1. To this end, open the hardware configuration of your project in which the SCALANCE X208 was

configured, and select the button 'Offline <-> Online'	8 ~

RIN Station Be	[SIMATIC 300(1) (Kor arbeiten Einfügen Ziel	nfiguration) ET Isystem Ansicht	2005_PN] Extras Fer	nster Hilfe			
		🏜 🏜 🕞 '	📼 🎎	₩?			
	line <-> Online	thernet(1): PB0FIN	ET-IO-Suster	n (100)	▲ Suchen	:	nt Wi
	2PU 31 MPI/DF PN-IO				Erofil:	Standard PROFIBUS-DP	•
	<u>×</u> _					PROFIBUS-PA PROFINET IO SIMATIC 300 SIMATIC 400 SIMATIC HMI St SIMATIC PC Bas SIMATIC PC Sta	ation ed Control tion
				F.			
•	SCALANCEX208						
	SCALANCEX208	B E A	D Kor	imentar	1		
(2) Steckplatz	SCALANCEX208	B E A	D Korr 2042	imentar			
(2) Steckplatz D 7	SCALANCEX208 Baugruppe SCALANCEX208 Baugruppe KIAS	B E A	D Kor 2042 2041	imentar			
(2) Steckplatz (2) (2	SCALANCEX208 ■ Baugruppe ■ SCALANCEX208 ■ R/45 Rov ■ R/45 Rov	B E A 6678.2	D Kon 2042 2041 2040	imentar		3US-DP-Slaves d	<u>}</u> er ₹ <u>≺</u>
▲ (2) Steckplatz 0 7 2 3 3	SCALANCEX208 Baugruppe SCALANCEX208 SCALANCEX208 R4/5 Ror R4/5 Ror R4/5 Ror R4/5 Ror	B E A 667.2	D Kon 2042 2041 2040 2035	imentar		3US-DP-Slaves d C S7, M7 und C7 cler Authout	ן er ₹ַ

Öffnet den Offline-/Online-Partner der aktuellen Station.

 $(\rightarrow \text{Offline} <-> \text{Online}$)

	Preface	Notes	StartUp	Diagnosis	
_					_



2. Then, double click on the switch 'SCALANCE X208'. In the tab 'General', you will be provided with general information such as the version and status of your switch.

A SCALANCE X208 error is indicated here with the symbol \bigotimes . (\rightarrow SCALANCE X208 \rightarrow General)

HW Konfig - [SIMATIC 300(1) (Di	iagnose) ONLINE]		_ 0 ×
🕅 Station Bearbeiten Einfügen Ziel	system Ansicht Extra	Fenster Hilfe	_ 8 ×
	📩 👘 🕅 🖽	22 N2	
			:
	Baugruppenzus	and - SEALANCE X208	_ _ ×
	Pfad: ET200S PN	SIMATIC 300(1)\CPU 315F-2 PN/D Betriebszustand d	er CPU: 🕥 BUN
	Status: 💦 Fehler		
	Allgemein 10-Devi	e Diagnose Zustand Meldemaske	
	Bezeichnung:	SCALANCE X208 Systemkennung:	PROFINET IO
5	Name:	SCALANCEX208	
	Version		
	VEISION.	Bestell-Nr./ Bezeichn. KJCALANCEX200	Ausgabestand
		55K5 208-0BA00-2AA3 Hardware	4 V151
			* 1.0.1
	10-System:	100 Adresse: E 20	342
4 I I	Gerätenummer:	2	
	-		
The scalance of the second sec			
	Status:	Baugruppe projektiert, aber nicht vorhanden	<u>A</u>
Steckplatz Baugruppe	4	Fehler extern	
0 SCALANCEX208	4		
1 R/45 Port	<u>_</u>		
2 K/45 Port	-		1. Sec. 1. Sec
3 K/45 FW	-	1	
4 K/43 FW	-		
	Schließen A	ktualisieren Drucken	Hilfe
Drücken Sie F1, um Hilfe zu erhalten.			

3. In the tab **'IO Device Diagnosis'** you can view the standard diagnosis for your device, together with the channel specific diagnosis $(\rightarrow IO \text{ Device Diagnosis})$

Baugruppenzustand - SCALANCE X208		طلعي
ad: ET2005_PN\SIMATIC 300(1)\CPU 315F-2 PN atus: 😵 Fehler	1/D Betriebszustand der C	PU: 🕕 RUN
Ilgemein 10-Device Diagnose Zustand Meldem	aske	
10-Controller Gerätenummer: 0	Herstellerkennung: Gerätekennung:	SIEMENS AG 16# QAO1
		Hex-Darstellung
IU-Device muß neu parametriert werden		
TU-Device muß neu parametriert werden Kanalspezifische Diagnose: Steckplatz Kanal-Nr. Fehler		
TU-Device muß neu parametriert werden Kanalspezifische Diagnose: Steckplatz Kanal-Nr. Fehler		
TU-Device muß neu parametriert werden Kanalspezifische Diagnose: Steckplatz Kanal-Nr. Fehler Hilfe zur markierten Diagnosezeile:	eigen	

Preface	Notes	StartUp	Diagnosis



4. In the tab '**State**' you can view a representation of the SCALANCE X208 with the following graphically represented diagnosis (\rightarrow State)



1

In this view, the following diagnostic information is displayed:

- At which port is a line active (link up)?

This is shown with a connected line or a missing line. For optic connections, this line is marked yellow/red.

Link up (optic connection -> yellow/)

- What is the transmission speed (baud rate) with which the ports are run? Note the textual indication at the lines (10 MB, 100 MB, 1 GB or 10 GB)

- Is a line in the half duplex or the full duplex mode?



Preface Notes StartUp Diagnosis

1

- Is a C-PLUG inserted and fault-free?

The dashed line next to the signal contact shows a missing C-PLUG. A C-PLUG that is present is shown as a filled-in rectangle.



C-PLUG inserted but faulty

- Is the power supply connected in the redundant mode? This is represented with the second power supply line.

Not redundant. Power connection is shown single

Connected in the redundant mode. Power connection is shown doubled.

- Where was the alarm triggered?

So The symbol indicates at which location the alarm contact was activated by an event: port, C-PLUG, or power supply

Preface	Notes	StartUp	Diagnosis



5. In the tab '**Message Screen Form**' you will see a representation of the SCALANCE X208 with the following graphically represented diagnosis. (\rightarrow Message screen form)



1

In this view, the following diagnostic information is indicated:

- Which ports and connections are monitored?

ד . ד 🐱

The connection is monitored

The connection is not monitored

- Which port properties are monitored?

The following can be monitored, for example:

- Link up, Link down;
- Transmission speed (baud rate)
- Operating mode (half duplex/full duplex)

	Preface	Notes	StartUp	Diagnosis	
_					_

6.3. DIAGNOSING THE SCALANCE X208 USING WEB BASED MANAGEMENT (WBM)



You can start the screens of Web Based Management (WBM) also from STEP 7. The advantage is that the SCALANCE X208 is addressed automatically with the correct IP address.

6. To this end, open the hardware configuration of your project where the SCALANCE X208 was configured, and with a double click select the properties of the 'SCALANCE X208'. (\rightarrow SCALANCE X208)

🔣 HW Konfig - [SIMATIC 300(1) (Kor	nfigura	ation)) E1	2005	_PN]			- O ×
DI Station Bea	rbeiten Einfügen Ziel:	system	Ans	icht	Extras	Fenster Hilfe			_ 8 ×
0 🖨 📽 🖬	\$ 6 68	🚵	ŵ		 ⁹	8 N?			
//is-									
0) UR	307 . 🔺 🛛 El	thernet(1): PR	OFIN	ET-10-9	System (100)	S <u>u</u> chen:	ļ	mtmi
	PU 31		1				Profil:	Standard	•
			(2) 5((1) IM151-3		PROFIBUS-DP PROFIBUS-PA PROFINET IO SIMATIC 300 SIMATIC 400 SIMATIC PC Ba SIMATIC PC St	itation ised Control ation
(2) S	CALANCEX208								
Steckplatz	Baugruppe	B	E	A	D	Kommentar			
0	SCALANCEX208	6GKS	-		2042				
1	RI45 Fort			÷.	2041				
2	RI45 Port		4		2040		1. 12		
3	RI45 Port		4		2039		4		•
4	RI45 Port				2038		PROFIB	US-DP-Slaves of	der E/
5	RI45 Foxt				2037		SIMATIO	CS7, M7 und C	7
6	RI45 Foxt		4		2036		(dezentr	aler Aufbau)	
		1 1			Looor		<u>]</u>		

Drücken Sie F1, um Hilfe zu erhalten.

Preface Notes StartUp Diagnosis



7. In the tab '**Management**' you can open the WBM in your standard browser with the button '**Web** based Management'.

 $(\rightarrow Management \rightarrow Web based Management)$

genschaften - SCALANCE X208		_
Allgemein 10-Zyklus Management		
Web based Management		
		2010
UK	Abbrechen	Hilfe

8. Then the following log-on screen is displayed -for example, in the Microsoft Internet Explorer. Here you have to log on with your user name and your password.

	The factory	v settina	looks	like	this:
--	-------------	-----------	-------	------	-------

User:	Administrator	User				
User name:	admin	user				
Password	admin	user				

 $(\rightarrow admin \rightarrow admin \rightarrow OK)$

Verbindung zu 192	2.168.1.12 herstellen	<u> ?</u> ×
SIEMENS AG Benutzername:	🖸 admin	<u> </u>
Kennwort:	Kennwort speichern OK At	obrechen

Preface	Notes	StartUp	Diagnosis



9. In Web based Management we have -by accessing the HTML pages in the SCALANCE X208- a large number of diagnostic and setting options. As can be seen below, in each figure the operating mode is represented with LEDs.

In addition, the navigation bar provides you with the following 3 links:

- '**Console**' This link opens a console window. In this window you can enter CLI commands. You are connected with the switch by means of a TELNET connection.

- '**Support**' This link initiates an Internet connection that takes you directly to the support pages of SIEMENS AG. The precondition is that the PC supports an Internet connection.

- 'Logout' Closes the browser window.

 $(\rightarrow Console \rightarrow Support \rightarrow Logout)$

Siemens WEB N	lanageme	nt (192.168	8.1.12) - M	crosoft Inl	ernet Explorer	
Datei Bearbeiten	Ansicht	Favoriten	Extras	?		2
🕝 Zurück 👻 🤅) - 💌	2	Suc	ien 🕎 F	avoriten 🚱 🎯 - 😓 🖂 - 🛄 🎎 🔉	
Adresse 🙆 http://	/192.168.1.1	.2/			💌 🛃 Wechseln zu 🛛 Links 🌺	1.
SIEMENS					Automation &	Drives
Console	suppo	ort 👛 L	ogout		SIMATIC	NET
Power E Fault	Port 1 Port 5	Port 2 Port 6 SCA	□ Port 3 □ Port 7	E Port 4 E Port 8 (208	SIMATIC NET Industrial Ethernet S SCALANCE SCALANCI	witch X208 X208
Fertig					la l	11

Preface	Notes	StartUp	Diagnosis	
 aining Decument	Dogo 01 of	£ 07	Madula 507	-



10. In the menu 'System' configuration, system information is provided for your switch and you can make basic settings. For example, you can set the passwords. (\rightarrow System \rightarrow Passwords)

🚰 Siemens WEB Management (1	92.168.1.12) - Microsoft Inte	rnet Explorer		×
Datei Bearbeiten Ansicht Fav	roriten Extras ?			1
🔇 Zurück 🔹 🕥 🖌 🛃 🛃	🚮 🔎 Suchen 👷 Fa	voriten 🧭 🔗+	🎍 🗔 • 🛄 🎎 🦓	
Adresse Adresse http://192.168.1.12/			💽 🂽 Wechseln zu 🛛 Links 🎽 🍕	1 -
SIEMENS			Automation & Dri	ves
Console Support	🖷 Logout		SIMATIC N	ET
Power C Faut Port 1 Power Paut Port 5 Port 5	Port 2 Port 3 Port 4 Port 6 Port 7 Port 8 System Passwords Curre N User Pas Ni Admin Pa	nt Admin Password : lew User Password : ssword Confirmation: ew Admin Password : ssword Confirmation:	SIMATIC NET Industrial Ethernet Swi SCALANCE X SCALANCEX	itch 208 208
e Fertiq		Refresh	Set Values	

	Preface	Notes	StartUp	Diagnosis
-				
٦	T I A Training Document	Page 32 of 37		Module E07



11. In the menu '**X208**' you are provided with information about error status, redundant voltage supply, ring redundancy and C_PLUG. (\rightarrow X208 \rightarrow Fault Mask)

🗿 Siemens WEB Management (192.168.1.12) - Microsoft Internet Explorer
Datei Bearbeiten Ansicht Favoriten Extras ?
🔇 Zurück 🔹 🕥 - 💽 💈 🏠 🔎 Suchen 🔶 Favoriten 🤡 🍰 - 🍃 🖾 - 🛄 🎎 🦓
Adresse 🛃 http://192.168.1.12/ 💽 🎦 Wechseln zu 🛛 Links 🍟 👰
SIEMENS Automation & Driv
Console Support Logout SIMATIC NE
Power Image: Point 1 Image: Point 2 Image: Point 3 Image: Point 3
X208 X208 Fault Mask
System Enable Power Monitoring System Enable Power Monitoring System Redundant power supply Ring Redundant power supply
Enable Link Status Monitoring
Ports: 1 2 3 4 5 6 7 8
Enabled V C C
Rêfresh Set Values

	Preface	Notes	StartUp	Diagnosis	
_					_
Τ Ι	A Training Decument	Dege 22 of	07	Madula E	0-



12. In the menu 'Agent', you can change the IP address, activate the access options to the switch by means of SNMP, DHCP, TELNET and specify the reaction of the device to system events. The SCALANCE X208 can send Emails or activate SNMP traps. $(\rightarrow \text{Agent})$

🗿 Siemens WEB M	lanageme	nt (192.16	3.1.12) - M	icrosoft	Internet Exploi	er					- 0 ×
Datei Bearbeiten	Ansicht	Favoriten	Extras	?							
🔇 Zurück \star 🕘) - 💌	2	Suc	hen 🔬	Favoriten		•	- 6	📑 🛍 🦂	8	
Adresse 🙋 http://	192.168.1.1	2/							🛃 🛃 Wechs	eln zu 🛛 Links 🎽	•
SIEMENS										Automation &	& Drives
Console	supp	ort 👅 L	ogout							SIMATIO	C NET
Power 🖬 🕄 Fault	Port 1 Port 5	Port 2Port 6	⊡ Port 3 ⊡ Port 7	⊡ Port ⊡ Port	4		SII	МАТІС	NET Indust	rial Ethernet SCALANC SCALAN	Switch E X208 CEX208
<u>×208</u>		Age	nt Confi	guratio	ŋ						
E <u>Sγstem</u> X208			1		A	gent En	abled Feat	ures			
Agent <u>Event C</u> E-Mail (<u>onfiq</u> Confia			Г Г	SNMP E-Mail		DHCP Traps		TELNI	ET	
	Config				1	lgent IP	^o Configura	tion			
E International Enternation E					IP Addres	s: [192 k: [256	2.168.1.12	í	_		
					Default Gatewa	y: 192	2.168.1.1	÷			
							4.2				
					Ref	resh	Set	Values			
🛐 Fertig									🔰 🚺 Int	ernet	1

	Preface	Notes	StartUp	Diagnosis	
-					
Т	T LA Training Document	Page 34 of	37	Module E07	



13. In the menu 'Switch', you can enable or disable mirroring a mirror port on the Monitor Ports. In that case, only the monitoring device should be connected to the monitor port. In addition, you will see the current status of the ports in the submenu 'Ports'. (\rightarrow Switch \rightarrow Ports)

Siemens WEB N	1anageme	nt (192.168	3.1.12) - M	icrosoft Inte	ernet Explorer			
Datei Bearbeiten	Ansicht	Favoriten	Extras	?				
🕝 Zurück 🔹 🕘) - 💌	2	Such	nen 🔶 Fa	avoriten 🧭 🔗 -	😓 🖂 • 🗖	1 🛍 🖄	
Adresse 🔕 http://	192.168.1.1	2/					🛃 Wechseln zu 🛛 L	inks » 👘 👻
SIEMENS							Autom	ation & Drives
Console	suppo	ort 👛 L	ogout				SIM	ATIC NET
Power 🗖 🛙 Fault	Port 1Port 5	Port 2 Port 6	I Port 3 I Port 7	Port 4 Port 8		SIMATIC NE	T Industrial Ethe SCAI SCA	rnet Switch LANCE X208 LANCEX208
X208		Swit	ch Ports	Status				
E 💼 Sγstem		10						
🖽 🧰 X208			1 TP 1	00 TX	100M ED	enabled	enabled	110
E Agent			2 TP 1	00 TX	10M HD	enabled	enabled	down
			3 TP 1	00 TX	10M HD	enabled	enabled	down
			4 TP 1	00 TX	10M HD	enabled	enabled	down
Ports			5 TP 1	00 TX	100M FD	enabled	enabled	up
Port Di	ane		6 TP 1	00 TX	100M FD	enabled	enabled	up
	ago		7 TP 1	00 TX	10M HD	enabled	enabled	down
E Statistics			8 TP 1	00 TX	10M HD	enabled	enabled	down
Control Factor					Refr	esh	Internet	× •
E Fertig							🧭 Internet	11.

	Preface	Notes	StartUp	Diagnosis	
					_
TIA Train	ing Dooumont	Dogo 25 of 2	7	Madula E(c





14. In the submenu '**Port Diags**' of the menu '**Switch**', open circuits as well as short circuits can be located. To this end, each individual port can perform an independent error diagnosis at the cable. This test is permissible only if no data connection has been established on the port to be tested. (\rightarrow Switch \rightarrow Port Diags)

🚰 Siemens WEB Managem	ent (192.168.1.12) - Microsoft Internet I	Explorer		
Datei Bearbeiten Ansicht	Favoriten Extras ?			
🔇 Zurück 🔹 🕥 🖌 💌	👔 🚮 🔎 Suchen 👷 Favoriter	• 🙆 🔗 - 🤇	🍃 🖂 • 🗔 🛍	1-33
Adresse 🕘 http://192.168.1	.12/		💌 🔁 V	Vechseln zu 🛛 Links 🎽 📆 👻
SIEMENS				Automation & Drives
🛢 Console 🛛 🛢 Supp	oort 🗧 Logout			SIMATIC NET
Power C Fault C Port 1	Image: Port 2 Image: Port 3 Image: Port 4 Image: Port 6 Image: Port 7 Image: Port 8		SIMATIC NET In	dustrial Ethernet Switch SCALANCE X208 SCALANCEX208
<u>×208</u>	Port Diagnostics done for	Port 2		
🗄 🧰 <u>Sγstem</u>	Port 2 TRun T	est		
🖻 🧰 <u>X208</u>				
E Switch		Pair D	Status	Distance
Ports		1-2 RX	Open	Tested ~0m
E Port Diags ⊡		3-6 TX	Open	Tested ~0m
		4 -5	Not used	(
) 7-8	Notused	27 <mark>7</mark>
		Refres	h	
Fertia				Internet

Preface	Notes	StartUp	Diagnosis
TIA Training Degument	Daga 26 of	97	Modulo EC

 $(\rightarrow$ Statistics)



15. In the menu 'Statistics', statistical information is provided about the type and number of received telegrams, and about transmission errors.

Siemens WEB M	1anagemei	nt (192.1	68.1.12)	- Microsoft Inte	ernet Explorer			
Datei Bearbeiten	Ansicht	Favorite	n Extra	s ?				
🕝 Zurück 🔹 🌔) - 💌	2		Suchen 🔶 Fa	avoriten 🥝 👔	ð• 😓 🗖 •	1 🖉 🔏	
Adresse 🛃 http://	192.168.1.1	2/					🚽 🛃 Wechseln zu	Links »
SIEMENS							Au	tomation & Drives
Console	suppo	ort 🗖	Logou	t			્દ	SIMATIC NET
Power 🗖 🗅 Fault	Port 1 Fort 5	Port : Port (2 II Po 6 II Po	rt3 ⊡ Port4 rt7 ⊡ Port8		SIMATIC	NET Industrial E S S	thernet Switch CALANCE X208 CALANCEX208
<u>×208</u>		Sta	itistics	Throughput	í.			
🗉 🗇 System								
🗉 🧰 X208			1	411 227	1 521 641	2 000	1 0 2 0	}
🗄 🧰 Agent			2	411.221	1.021.041	-	4.000	-
B Switch			3		.e.	2		173
-B Ports			4	218 474 718	205 565 786	3 206 836	3 206 018	2
Dort Die			6	204.422.040	217.285.030	3.194.055	3.195.050	140
	<u>145</u>		7	-	-	-	-	(2)
	220000		8 All	423 307 985	424 372 457	- 6 403 700	- 6 405 906	-
Packet Packet Packet	<u>Size</u> <u>Tγpe</u> Error			420.001.000		0.100.100	0.400.000	
					1 12 0 M	10 G 3 G 3	-	•
					Refresh	Reset Counter	3	
🕘 Seite http://192.	168.1.12/do	c/XUpdate	.html wird	l geöffnet			🚺 🧑 Internet	-

 \triangle

Note: Additional information about the SCALANCE X208 is provided in the Start Up manual "SCALANCE Industrial Ethernet SCALANCE X-100 and SCALANCE X-200 Product Line"

07/2005 A5E00349864 Version 4

	Preface	Notes	StartUp	Diagnosis
_				