Training Document for Integrated Automation Solutions

Totally Integrated Automation (TIA)

MODULE E06

PROFINET/PROFIBUS DP with CPU 315F-2 PN/DP/IE/PB Link and

DP Slave ET200S

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The following symbols guide you through this module:



1. INTRODUCTION

Regarding its content, Module E06 is part of the training unit 'IT Communication with SIMATIC S7'.



Training Objective:

In Module E06, the reader learns how PROFIBUS DP components can be incorporated at PROFINET. In the process, he also learns how the CPU 315F-2 PN/DP with the IE/PB link as gateway and the ET200S as DP slave is started up. The E06 Module demonstrates what to do in principle, providing a brief example.

Preconditions:

To successfully work through this module, 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 Basics of Network Technology)

Preface	Notes	StartUp

Hardware and Software required

- 1 PC, operating system Windows 2000 Professional starting 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 STEP7 V 5.4
- **3** PLC SIMATIC S7-300 with CPU 315F-2 PN/DP Sample configuration:
 - Power pack: PS 307 2A
 - CPU: CPU 315F-2 PN/DP
- 4 PN/DP Link
- **5** Distributed IO ET200S for PROFINET with 2 digital inputs and 4 digital outputs Sample configuration:
 - Interface module: IM 151-1 HF
 - Power module: PM-E DC 24V...48V/AC24V...230V
 - Electronic module: 2DI Standard DC 24V
 - Electronic module: 4DO Standard DC 24V/0.5A
- 6 Ethernet connection between PC, CPU 315F-2 PN/DP and IE/PB Link
- 7 PROFIBUS connection between IE/PB Link and ET200S



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



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

Moreover, the CPU can be programmed here by means of MPI or PROFIBUS DP

- The second interface is an integrated PROFINET interface.
 It allows for using the CPU as PROFINET IO controller to operate distributed IO on PROFINET. The CPU can also be programmed by using this interface!
- In addition, both interfaces can be used for fail-safe IO devices.

Notes:

- In Module E06, the CPU 315F-2 PN/DP is used at the PROFINET as IO controller.
- A MMC is needed to operate this CPU!
- The addresses of the input and output modules can be parameterized at this CPU.

3. NOTES ON USING THE PN/DP LINK

As an independent component, the IE/PB Link is the seamless transition between Industrial Ethernet and PROFIBUS.

PROFInet makes communication relationships of the PROFIBUS devices among each other as well as to Ethernet devices possible. In this case, the IE/PB Link supports the connection of simple DP slaves as well as the connection of PROFIBUS devices with loadable functionality in the form of a program; for example, the ET 200S with CPU.

In addition, the IE/PB Link offers the following functions:

- S7 routing:

Allows for network-overreaching PG/OP communication. That means, all S7 stations can be programmed remotely at the Industrial Ethernet or at the PROFIBUS from the PG. Visual display data of S7 stations on the PROFIBUS can be accessed by the Industrial Ethernet from operator interface stations. <<? sentence not clear in original>>

- Data record routing (PROFIBUS DP):

This makes it possible, for example, to parameterize and diagnose -with SIMATIC PDM (on the PC)a PROFIBUS field device at the Industrial Ethernet by means of the IE/PB Link.

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NOTES ON USING THE ET200S WITH IM 151-1 HF 4.

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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 E06, the interface module IM151-1 HF(HIGH FEATURE) is used as PROFIBUS DP slave.
- The PROFIBUS address is set binary-encoded at 8 switches at the interface module IM151-1 HF. The lowest switch has to be set to OFF. A number is assigned to each of the other switches. These numbers add up to the PROFIBUS station address. A modified setting of the PROFIBUS address will be used only after voltage recovery. Consequently, the interface module IM151-1HF has to be switched off and then switched on again.

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5. STARTING UP THE PROFINET/PROFIBUS DP WITH IE/PB Link



Below, the following is described: the startup of a PROFINET network with the CPU 315F-2 PN/DP as IO controller, the IE/PB Link as the gateway PROFINET/PROFIBUS DP, and the ET200S as PROFIBUS DP slave.

For testing the configuration, a program is written where a display lamp P1 is activated when two buttons S0 and S1 are operated at the same time.

Assignment list:

10.0	S0	Button selection 1
I0.1	S1	Button selection 2
O0.0	P1	Display lamp



1. The central tool in STEP7 is the 'SIMATIC Manager'. It is called here with a double click. (\rightarrow SIMATIC Manager)



2. STEP 7 programs are managed in projects. We are now setting up such a project (\rightarrow File \rightarrow New)

SIMATIC Manager		
atei Zielsystem Ansicht Extras Fenster Hilfe		
Neu	Ctrl+N	
Assistent 'Neues Projekt'		
Öffnen	Ctrl+O	
S7-Memory Card	•	
Memory Card-Datei	•	
Löschen		
Reorganisieren		
Verwalten		
Archivieren		
Dearchivieren		
Seite einrichten		
1 PROFIsafe02 (Projekt) F:\0_57_Projekte\PROFIs_2		
2 Profi Umrichter (Projekt) F:\0_57_Projekte\Profi_Um		
3 Erreichbare Teilnehmer PROFIBUS		
Beenden	Alt+F4	
stellt ein neues. Projekt oder eine neue Bibliothek.		

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3. Now, we assign the 'Name' 'ET200S_IE_PB_LINK' to the project (\rightarrow ET200S_IE_PB_LINK \rightarrow OK)

Neues Projekt		×			
Anwenderprojekte Bibliotheken Multiprojekte					
Name	Ablagepfad				
ET200S_IEPBL	INK F:\0_S7_Projekte\ET2	2005_1			
ET200S_PN	F:\0_S7_Projekte\ET2	2005_P			
Stempel01	F:\0_S7_Projekte\Ste	mpel0			
🔲 In aktuelles Multip	rojekt einfügen				
Name:		Тур:			
ET200S_IE_PB_LINI	K	Projekt 💌			
		F-Bibliothek			
Ablageort (Pfad) :					
F:\0_S7_Projekte		Durchsuchen			
		·			
ПК	Abb	rechen Hilfe			

 Next, highlight your project and insert a 'PROFIBUS Subnet' (→ ET200S_IE_PB_LINK → Insert → Subnet → PROFIBUS).

Datei Bearbeiten	Einfügen Zielsystem Ansicht	Extras Fenster Hilfe	-
2 87 -	Station	• Enter I mail (Voin Filter)	· 🦅 🔡 🎯 🦻
ET2005_IE_PB	Programm	2 PROFIBUS	
	57-Software 57-Baustein M7-Software	3 Industrial Ethernet 4 PTP	
	Symboltabelle Textbitäcthek Externe Quele	*	
	Parameter Externe Parameter/Objekte.,		

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5. Highlight your project again and insert an 'Industrial Ethernet Subnet' (\rightarrow

ET200S_IE_PB_LINK \rightarrow Insert \rightarrow Subnet \rightarrow Industrial Ethernet).



6. Next we insert a 'SIMATIC 300 Station'. To do this, the project has to be highlighted (\rightarrow ET200S_IE_PB_LINK \rightarrow Insert \rightarrow Station \rightarrow SIMATIC 300 Station)



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7. Open the configuration tool for the **'Hardware'** with a double click. (\rightarrow Hardware)

SIMATIC Manager - [ET2005_1	IE_PB_LINK F:\0_57_Projekte\ET2005_1]	- 🗆 🗙
🞒 Datei Bearbeiten Einfügen Zie	elsystem Ansicht Extras Fenster Hilfe	- 8 ×
	🖆 🗣 🎭 🦮 🏥 🗈 🛛 Kein Filter> 💽 🏹 🞇 🍘	
E DET200S_IE_PB_LINK		
Drücken Sie F1, um Hilfe zu erhalten.	TCP/IP -> Realtek RTL8139/810x F	11.

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- 8. Open the hardware catalog by clicking on the symbol (), ()
 - In this catalog, all racks, modules and interface modules for configuring your HW setup are provided, arranged in he following directories:
 - PROFIBUS-DP, PROFIBUS PA, PROFINET IO, SIMATIC300, SIMATIC400, SIMATIC PC Based Control, and SIMATIC PC Station.

Insert the **'Mounting Channel'** with a double click (\rightarrow SIMATIC 300 \rightarrow RACK 300 \rightarrow Mounting Channel).



Then, a configuration table is displayed automatically for setting up Rack 0.

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9. From the HW catalog you can now select all modules that are inserted in your actual rack and insert them in the configuration table. To this end, click on the name of the respective module, hold the mouse key and drag it into a line in the configuration table.

We start with the power supply unit 'PS 307 2A'. (\rightarrow SIMATIC 300 \rightarrow PS-300 \rightarrow PS 307 2A)

HW Konfig - [SIMATIC 300(1) (Ko	nfiguration) ET2005_IE_P8	LINK]							
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	317 🗖							Sychen	c	ntni
2								Profil	Standard	*
4 5 6 7 				···			<u>ب</u>		PROFIBUS-DP PROFIBUS-PA PROFINET 10 SIMATIC 300 CP CPU-300 PC-300 PC-300 M7-EXTENSION M7-EXTENSION PS-300 P	-
Steckplatz	Baugruppe	Bestellnummer	Fi.	M	E	A 1			PS 307 24	_
1	PS 307 2A	6ES7 307-18A00-0AA0					-		BACK-300	
2	nt.							L.E	🗌 🖾 Profilschiene	-1
4		3					1	4	A	<u> </u>
5 6 7								6ES7 3 Laststro AC:24V	07-18A00-0AA0 mversorgung 120/230/ DC/2A	(<u>*</u> {
rücken Sie Et. um	hilfe zu erhalten.							0	1	And



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Note: If your hardware differs from the hardware shown here, simply select the corresponding modules in the catalog and insert them in your rack.

The order numbers of the individual modules that are also inscribed on the components are displayed in the footer of the catalog.

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10. Now we drag the '**CPU 315F-2 PN/DP**' to the second slot. The order number and the version of the CPU are indicated on the front of the CPU. (\rightarrow SIMATIC 300 \rightarrow CPU-300 \rightarrow CPU 315F-2 PN/DP \rightarrow 6ES7 315-2FH10-0AB0 \rightarrow V2.3)

×			_LINK] er Hilfe	S_IE_PB is Fenst	- <mark>ET20</mark> nt Extr	ion) - Ansict	igurat stem	00 <mark>(1) (Konf</mark> ügen Zielsy	1ATIC 30 en Einfü	g <mark>- [SIM</mark> Bearbeite	IW Konfig Station I	
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mt mi	Sychen:								7.	PS 307	⊒(U) UH 1 0	
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2 2 IFM 2C 3 3 3C 2 DP 3C 2 DP 3C 2 DP 4 4 4 IFM 4C 2 DP 4C 2 PP 5 5 5 2 PN/DP 55 2 PN/DP 55 2 PN/DP 55 2 PN/DP 7 315.2FH10.0AB0 V2 3 ✓ 0.1ms/kAW; 77Kommunkation PROFINET ID;	CPU-300 CPU 312 CPU 312 CPU 312 IFM CPU 312 IFM CPU 312 C CPU 313 CPU 313C CPU 314C CPU 314 CPU 314 CPU 314 CPU 314 CPU 314 CPU 315 CPU S CPU 315 CPU S CPU 315 CPU S CPU		Kommentar	A	M 1	Fi	B 6ES7	ppe	Baugrupp 2'5 307 2A)) UR	4 5 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	
+ 4 4 4 5 5 5 5 5 5 5 7 V	CPU 314 CPU 314 CPU 314 CPU 314 CPU 314 CPU 315 CPU 315		Kommentar	A	M	Fi	8 6ES7	ppe X	Baugrupp 'S 307 2A)) UR	teckplatz	

11. When entering the CPU, the window below is displayed. In it, you have to assign an 'IP Address' to the CPU 315F-2 PN/DP, specify the 'Subnet screen form' and select the 'Ethernet' already provided. As an option, you can also select a 'Router Address' for network-overreaching communication. Confirm your input with 'OK' (→ IP Address: 192.168.1.10 → Subnet screen form: 255.255.255.0 → Ethernet(1) → Use router → Address: 192.168.1.1 → OK)

	Bei Anwahl eines Subnetzes werden die nächsten freien Adressen vorgeschlagen
PAdresse [192.168.1.10] iubnetzmaske: [255.255.255.0	Netzübergang C Keinen Router verwenden Router verwenden
jubnetz:	Adresse: 192.168.1.1
nicht vernetzt Ethernet(1)	Neu
	Eigenschaften
	Löschen

PROFINET/PROFIBUS DP with CPU 315F-2 PN/DP/ IE/PB Link and DP Slave ET



Notes about networking at the Ethernet (additional information is provided in Appendix V of the training document):

MAC Address:

The MAC address consists of a permanent and a variable part. The permanent part ("Basis MAC Address") indicates the manufacturer (Siemens, 3COM, ...). The variable part of the MAC address distinguishes among the different Ethernet stations, and should be assigned globally unique. Each module is imprinted with a MAC address specified by the factory.

Value Range for the IP Address:

The IP address consists of 4 decimal numbers ranging from 0 to 255, separated by a period. For example: 141.80.0.16

Value range for the subnet screen form:

This screen form is used to indicate whether a station or its IP address is part of the local subnet, or accessible only by using a router.

The subnet screen form consists of 4 decimal numbers ranging from 0 to 255, separated by a period; for example, 255.255.0.0

In their binary representation, the 4 decimal numbers have to contain from the left a series of contiguous values "1" and from the right a series of contiguous values "0".

The values "1" determine the area of the IP address for the network number. The values "0" specify the area of the IP address for the station address.

Example:

 Correct values:
 255.255.0.0 decimal = 1111 1111.1111 1111.0000 0000.0000 0000 binary

 255.255.128.0 decimal = 1111 1111.1111 1111.0000 0000.0000 0000 binary

 255.254.0.0 decimal = 1111 1111.1111 1110.0000 0000.0000 binary

 Incorrect value:
 255.255.1.0 decimal = 1111 1111.1111 1111.0000 0001.0000 binary

Value range for the gateway address (Router):

The address consists of 4 decimal numbers ranging from 0 to 255, separated by a period; for example, 141.80.0.1.

Relationship of IP addresses, router address, and subnet screen form:

The IP address and the gate way address are to differ only at positions where a "0" occurs in the subnet screen form.

Example:

You entered the following: for the subnet screen form 255.255.255.0; for the IP address 141.30.0.5 and as router address 141.30.128.1.

The IP address and the gateway address must differ only regarding the 4th decimal number.

However, in the example, already the 3rd position differs.

In the example, you have to make the following change:

- the subnet screen form to: 255.255.0.0 or
- the IP address to: 141.30.128.5 or
- the gateway address to: 141.30.0.1

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12. After you have accepted the network settings, a bar is displayed to the right of the CPU315F-2 PN/DP -the 'PROFINET IO System'- where you can arrange PROFINET IO devices. This is done by clicking on the desired module (here 'IE/PB Link PN IO'.) in the hardware catalog in the path 'PROFINET IO' and dragging it to the 'PROFINET IO System'. The order number and the version are provided on the front of the IE/PB Link PN IO (\rightarrow PROFINET IO \rightarrow I/O \rightarrow Gateway \rightarrow IE/PB Link PN IO \rightarrow 6GK1 411-5AB00 \rightarrow V1.0).

William R.	Frankling and stylesting	juration) - E12005_IE_PB_I	INK]								-	
station be	aarbeiten Einfügen Zielsyst	tem Ansicht Extras Fenster	Hife								1	0 >
12 2-1		🛍 🏜 🗈 🗖 📽 🕅	?									
- and the												
1 I I I I I I I I I I I I I I I I I I I	DS: 207-24	Ethernet(1) PROFINET-IO2	Indem	100			_	Suchen:	-		20	10
2	CPU 315-21	enand() morner to	yatom	(100)				Brofit	Standard			
5	<u> </u>							(日本) (日本)	1/0 Netzüb	argang		
 (0)	UR						<u>×</u>		Weitere SIMATIC 3 SIMATIC 4 SIMATIC P	PB Link PN 6GK1 411 FELDGEF 00 00 C Based Co	HO -5A800 RÄTE ontrol 300	0/400
(0) iteckplatz	UR Baugruppe	Bestelhummer	[Fi	[M	E	A	<u>×</u>		Weitere SIMATIC 3 SIMATIC 4 SIMATIC PI SIMATIC PI	PB Link PN 6GK1 411 FELDGEF 10 00 C Based Co C Station	HO -5A800 RÄTE ontrol 300	3/408
(0) iteckplatz	UR Baugruppe PS 307 2A	Bestellnummer 6ES7 307-18A00-04A0	Fi	M	E	A	<u>×</u>		Weitere SIMATIC 3 SIMATIC 4 SIMATIC PI	PB Link PN 6GK1 411 FELDGEF 00 00 C Based Co C Station	N 10 SAB00 RÄTE ontrol 300	3/408
(0) iteckplatz	UR Baugruppe PS 307 2A CPU 315-2 PN/DP	Bestelnummer 6E57 307-18A00-0AA0 6E57 315-2EG10-0AB0	Fi	M	E	A	× ×		Weitere SIMATIC 3 SIMATIC 4 SIMATIC PI SIMATIC PI	PB Link PN 6GK1 411 FELDGEF 10 2 Based Co 2 Station	110 -5A800 RATE ontrol 300	0/400
(0) iteckplatz 2 V7	UR Baugruppe PS 307 2A CPU 315-2 PN/DP MP//DP	Bestelhummer 6ES7 307-18A00-0AA0 6ES7 315-2E610-0AB0	Fi	M	E	A	×		Weitere SIMATIC 3 SIMATIC 4 SIMATIC P SIMATIC P	PB Link PN 6GK1 411 FELDGEF 10 10 C Based Co C Station	110 -54800 34TE ontrol 300	1/400
(0) Heckplatz	UR Baugruppe PS 307 2A CPU 315-2 PN/DP MFI/DP FW//D	Bestelmummer 6ES7 307-18A00-0AA0 6ES7 315-2E610-0AB0	Fi	M 2 2 ²	E 2047 2046	A	K		Weitere SIMATIC 3 SIMATIC 4 SIMATIC P SIMATIC P	PB Link PN 6GK1 411 FELDGEF 10 10 C Based Co C Station	110 -54800 34TE ontrol 300	3/400
(0) teckplatz 2 1/7 1/2 1	UR Baugruppe PS 307 2A CPU 315-2 PN/DP MPI/DP PN/D	Bestellnummer 6ES7 307-18A00-0AA0 6ES7 315-2EG10-0AB0	Fi	M 2 2	E 2047 2046	A	K	€ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Weitere SIMATIC 3 SIMATIC 4 SIMATIC P SIMATIC P	PB Link PN 6GK1 411 FELDGEF 10 00 C Based Co C Station	110 -54800 34TE ontrol 300	1/400
(0) teckplatz 2 V7 422 1	UR Baugruppe PS 307 2A CPU 315-2 PN/DP MPL/DP FN-/D	Bestelhummer 6ES7 307-18A00-04A0 6ES7 315-2EG10-0AB0	Fi	2 2	E 2047 2046	A		€	Weitere SIMATIC 3 SIMATIC 4 SIMATIC PI SIMATIC PI	PB Link PN 6GK1 411 FELDGEF 10 10 C Based Co C Station	110 -54800 34TE ontrol 300	2/400

13. When entering the IE/PB Link PN IO, the following window is displayed where you have to assign a 'PROFIBUS Address' to the IE/PB Link PN IO, and select the 'PROFIBUS' network provided. Then confirm your input with '**OK**' (\rightarrow PROFIBUS \rightarrow Address: 2 \rightarrow OK)

dresse: öchste / bertragu	Adresse: 126 angsgeschwindigkeit: 1.5 Mbit/	Bei Anwahl eines Subnetzes wird die nächste freie Adresse vorgeschlagen 's
Subnetz: nich	t vernetzt	1.5 Mbb/a
rnonbe	55107	Eigenschaften.
		Löschen

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14. Now, using the right mouse key, click on the 'IE/PB Link PN IO' and open its 'Object attributes'. (\rightarrow IE/PB Link PN IO \rightarrow Object attributes)

🖳 HW Konfig - [SIMATIC 300(1) (Konfiguration) ET	2005_IE_PB_LINK] Extras Fenster Hilfe		
	i 🗖 🔡 🕺		
1 PS 307 24 CPU 315F-2 PN/DP	thernet(1): PROFINET-IO-System (100)	Suchen: Erofil: Stan	dard
X/ MIP/DP X2 PN-10 3 4	E PB Kopieren Einfägen	Ctrl+C Ctrl+V	BUS-DP BUS-PA NET IO
	Objekt tauschen PROFINET IO-System IP-Adressen bea PROFINET IO Sync-Domain verwalten PROFINET.IO Topologie	beiten 9	neral Izübergang IE/PB Link PN IO
	Baugruppe spezifizieren,		V1.0
	Löschen	Del	IWLAN/PB Link PN 10
(125) IE-PB-Link	Verschieben Größe ändern Minimale Größe Optimale Größe	e	eitere FELDGERÄTE IC 300 IC 400 IC PC Based Control 300/400 IC PC Station
Steckplatz Baug Bestellnummer Diagno 0 II.F.FB.Link 6GK1.411-54800 2043** 1 II.FR0FIBUL 6GK1.411-54800 2044**	Gehe zu Objekteigenschaften	► Alt+Return	
	Produktsupport-Informationen FAQs Handbuch-Suche	Ctrl+F2 Ctrl+F7 Ctrl+F6	00 10FINET ID-Proxy inkl ndet Industrial Ethernet mit uting: Datensatz-Gateway
/ Zeigt Eigenschaften des markierten Objekts zum Bearbeiten ar		p	and

15. To each IO device, a 'device name' that is unique within the PROFINET IO system and an IP address has to be assigned on the 'Ethernet'. (\rightarrow Device name: IE/PB Link \rightarrow Ethernet)

igenschaften - IE/PB L	ink	×
Allgemein Optionen (Gerätenummern Diagnose	
Kurzbezeichnung:	IE/PB Link	
	IE/PB Link, PROFINET IO-Proxy inkl. Reatime, verbindet Industrial Ethernet mit PROFIBUS, Routing, Datensatz-Gateway, Firmware V1.0	지
Bestell-Nr. / Firmware:	6GK1 411-5A800 / V1.0	
Gerätename:	IE-PB-Link	
Teinehmer / PROFIN	ET ID-System	
Gerätenummer:	1 PROFINE T-IO-System (100) Ethernet 192.168.1.11	
Kommentar:		1
	2	-
ок	Abbrechen Hilfe	

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16. After the 'IP Address' is assigned, it has to be accepted with 'OK'.

 $(\rightarrow$ IP Address: 192.168.1.11 \rightarrow OK \rightarrow OK)

P/Adresse: 19211681111 Subnetzmaske: [255.256.295.0	Netzübergang C. Keinen Bouter ver R. Rooter verwender Adresse: 152.16	venden 8.1.1
- nicht vernetzt		Neu.
Elsemol()	i.	Eigenschaften
		Löschen

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17. After you have accepted the network settings, a bar appears to the right of the IE/PB Link PN IO the 'PROFIBUS DP Master System'- where you can arrange PROFIBUS slaves. This is done by clicking on the desired module (here 'ET200S' with the 'IM151-1 HF) in the hardware catalog in the path 'PROFIBUS DP' and dragging it to the 'PROFINET DP Master System'. The order number is provided on the front of the IM151-1 HF. (\rightarrow PROFIBUS DP \rightarrow ET200S \rightarrow IM151-1 HF).

Bit Station Bearbeten Einfügen Zielsystem Ansicht Extras Penster Hilfe Image: Station Bearbeten Einfügen Zielsystem Ansicht Extras Penster Hilfe Image: Station Bearbeten Einfügen Zielsystem Ansicht Extras Penster Hilfe Image: Station Bearbeten Einfügen Zielsystem Ansicht Extras Penster Hilfe Image: Station Bearbeten Einfügen Zielsystem Ansicht Extras Penster Hilfe Image: Station Bearbeten Einfügen Zielsystem Ansicht Extras Penster Hilfe Image: Station Bearbeten Einfügen Zielsystem Ansicht Extras Penster Hilfe Image: Station Bearbeten Einfügen Zielsystem (100) Image: Station Bearbeten Einfügen Zielsystem Park Extras Penster Hilfe Image: Station Bearbeten Einfügen Zielsystem Park Extras Penster Hilfe Image: Station Bearbeten Einfügen Zielsystem (11) IE-P8-Link Image: Station Bearbeten Extra Bearbeten Einfügen Zielsystem (280) Image: Station Bearbeten Einfügen Zielsystem Einfügen Zielsystem (280) Image: Station Bearbeten Einfügen Zielsystem Zielsystem (280) Image: Station Bearbeten Einfügen Zielsystem Zielsystem Zielsystem (280) Image: Station Bearbeten Einfügen Ziel	HW Konfig - [SIMATIC 300(1) (Konfiguration) ET2005_IE_PB_LINK]	
Image:	🕅 Station Bearbeiten Einfügen Zielsystem Ansicht Extras Fenster Hilfe	X
Image: Standard S		
Image: Sector provide and the sector provided a		
2 CPU 315F-2 PN/DP MR/DP 3 3 PROFIBUS[1]: DP-Mastersystem [230] 4 CR-Objekt 5 CR-Objekt 6 CR-Objekt 0 DP/AS-1 0 D	Ethemet(1): PBDEINET.JD.Sustem (100)	Suchen:
ARP/OP 3 4 5 6 0	2 CPU 315F-2 PN/DP	Profil: Standard
	X7 MP/DP 3 PN-0 4 5 6	
Elektronikmodule, Sendefähigkeit für	Image: Steckplatz Baug Bestellnummer Diagnoseadresse 0 IE-FB-Link 85K1 411-54800 2043** 1 IFFOFIBUL 65K1 411-54800 2044**	
The Section of the Se		Elektronikmodule, Sendefähigkeit für direkten Datenaustausch, unterstützt

18. When entering the slave, the following window is displayed. Here, you have to assign a PROFIBUS address to the slave. It has to be identical with the address that you set on the 8 switches at the interface module IM151-1 HF. (\rightarrow 3 \rightarrow OK)

Adresse:	- 3		
Übertragu	ngsgeschwindigkeit 1.5	i Mbit/s	
Subnetz:	vemetzt	「五川山ル	Neu
	Test ()	112111202	Eigenschaften
			Löschen

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19. From the hardware catalog, you now can select all additional modules that are present in your actual ET200S and insert them in the configuration table. To this end, click on the name of the respective module, hold the mouse key und drag it to a line in the configuration table. Let's start with the power module 'PM-E DC24V...4 key8V/AC24...230V' by dragging it to Slot 1. (→ PROFIBUS DP → ET200S → IM151-1 HF → PM → PM-E DC24V...48V/AC24...230V)



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20. Next, we drag the digital input module '2DI DC24V ST' to the second slot. The order number and the version are provided in the module. (\rightarrow PROFIBUS DP \rightarrow ET200S \rightarrow IM151-1 HF \rightarrow DI \rightarrow 2DI DC24V ST)



21. Now, we drag the digital output module '4 DO DC24V/0.5A ST' to the 3rd slot. The order number and the version are provided on the module. (\rightarrow PROFIBUS DP \rightarrow ET200S \rightarrow IM151-1 HF \rightarrow DO \rightarrow 4 DO DC24V/0.5A ST)



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22. Now we can change the addresses of the inputs and outputs in the ET200S. This is done by double clicking on the corresponding input/output modules in the ET200S and setting them in the tab '**Addresses**'. These addresses should be noted down in each case. Addresses are assigned automatically in the sequence in which the modules were entered. (\rightarrow 4DO DC24V/0.5A ST \rightarrow Addresses \rightarrow OK)



23. By clicking on (\bigcirc) the cofiguration table will now be saved and converted ($\rightarrow)$



PROFINET/PROFIBUS DP with CPU 315F-2 PN/DP/ IE/PB Link and DP Slave ET



24. Next, we assign an IP address to the IO device after it was highlighted. (\rightarrow IE/PB Link \rightarrow Target system \rightarrow Ethernet \rightarrow Edit Ethernet station)

UN Station Bearbeiten Ein	rügen Zielsystem i I 🕞 Laden in B	Ansicht Extras Fenste augruppe	er Hilfe Ctrl+L			
	Laden in P	G			1	
1 UR PS 307 2A	Baugruppe Baugruppe	n-Identifikation laden n-Identifikation laden in	PG	IET-IO-System (100)	Sucher	n Mini
2 CPU 315F-2	PN/D Gestörte E	augruppen			Profil:	Standard 💌
X1 MITVDP X2 I PN-10 3 4 5 6	Baugruppe Betriebszu Urlöschen Uhrzeit ste Beobachte	nzustand stand Men n/Steuern	Ctrl+D Ctrl+I			D D
1). 	Firmware a	ktualisieren		1		2D0 DC24V/0, 2D0 DC24V/24
	Gerätenan	ien auf Memory Card spe	sichern	1		2D0 DC24V/2A
•	Ethernet		Þ	Ethernet-Teilnehmer bea	rbeiten	200 DC24V/24
· · · · · · · · · · · · · · · · · · ·	PROFIBUS		*	Gerätenamen überprüfer	1	
(1) IE-PB-Link	Servicedat	en spelchern		Gerätenamen vergeben.		
Steckplatz Baug.	Bestellnummer # 6GK1 411-54E00 1/ 6GK1 411-54E00	Diagnoseadresse 2043* 2044*				4 F-D0 DC24V/ 4 F-D0 DC24V/ 4 F-D0 DC24V/ 4 F-D0 DC24V/ 4 D0 DC24V/0.5
					6ES7 1 Digitala 4xDC2- untersti	32-4BD00-QAA0 ausgabemodul DO 4V/0.5A, Standard, ützt Taktsynchronität; ↓



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, subnetwork 255.255.255.0 and router address 192.168.1.1. (Refer to Module E02!)



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Note: make sure your programming device is connected to the IE/PB link by means of the Ethernet!

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25. In the dialog box below, we will now look for all stations that are accessible online by means of the Ethernet. (\rightarrow Search)

tautende Station wähle	n	
		Online erreichbare Baugruppen
AC-Adresse:		Durchsuchen
Konfiguration einstellen		
P-Parameter verwend	en	
		Netzübergang
IP-Adresse:	1	Keinen Router verwenden
Subnetmaske:	[C Router verwenden
	T Zurücksetzen	Adresse
identiliziert über	C MAC Adjesse	C treatenane
IP-Konligutation zuviets	en	
erätename vergeben		
erätename vergeben		
elätename vergeben Serätename		Name zoweisen
erätename vergeben Serätename		Name zuweben

26. Shortly after 'Start'(ing) the search, all stations available in the network are displayed with their MAC addresses. If IP addresses have been assigned, they are displayed also. Here, select the 'IE/PB Link' (→ Start → IE/PB Link → OK)

Starten	IP-Adresse	MAC-Adresse	Gerätetyp	Gerätename
Anhalten]	08-00-06-94-C1-C4	IE/PB Link	IE-PB-Link
	14 ()			
Blinken				

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OK

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27. In the following window, you can now assign the 'IP Address' to your device, and specify the 'Subnet screen form'. As an option, a 'Router Address' can be selected for network overreaching communication. After you assigned the IP configuration <<'IP-Konfiguration zuweisen'>>, confirm the indication with 'OK', and close <<'Schließen'>> the dialog. (→ IP Address: 192.168.1.11 → subnet form screen: 255.255.255.0 → Use router → Address: 192.168.1.1 → Assign IP configuration' → OK → Close).

a tautende Station a	vählen		
		Online erreich	bare Baugruppen
AC-Adresse:	08-00-06-94-C1-C4	Durchsuch	en
Konfiguration einst	ellen		
IP-Parameter ver	wenden		
		Netzübergar	lg
P-Adresse:	192.168.1.11	C Keinen F	louter verwenden
Subnetmaske:	255.255.255.0	Router v	erwenden
	T Zurücksetzen	Adresse:	192.168.1.1
IP-Konfiguration z	weisen		
srätename vergebe	n		
			Name requires
äerätename	IE-PB-Link		Indite zumeisen
ierätename chließen	(IE-PB-Link		Hilfe
ierätename chließen	IE-PB-Link		Hilte
ierätename chließen net-Teilnehmer	E-PB-Link bearbeiten (4502:703)	×	

Hilfe

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28. Now, the IO device has to be assigned the device name <<'Gerätename vergeben'>> after it was highlighted. (\rightarrow IE/PB Link \rightarrow Target system \rightarrow Ethernet \rightarrow Assign device name)

Laden in Baugruppe Ctri+L 1 PS 307 2A 2 Baugruppen-Identifikation laden in PG 3 Gestörte Baugruppen 4 Urlöschern 5 Bebreitszustand Ctri+L Urlöschern 4 Urlöschern 5 Bebreitszustand Ctri+I Urlöschern 6 Bebreitszustand Ctri+I Ethernet Teilnehmer bearbeiten 200 DC244//04. 200 DC244//04. 200 DC244//04. 200 DC244//04. 200 DC244//04. 200 DC244//04. 200 DC244//04. 200 DC244//04.	Laden in Baugruppe Ctri+L Laden in PG Baugruppen-Identifikation laden Baugruppen-Identifikation laden in PG Baugruppen-Identifikation laden Baugruppen-Identifikation laden Baugruppen-Identifikation laden Baugruppen-Identifikation laden Baugruppen-Identifikation laden Cru 315F-2 PN/ Gestörte Baugruppen X7 MP/DP 3a Baugruppenzustand Ctri+D Betriebszustand Ctri+D Betriebszustand Urlöschen Ctri+I 0Urlöschen Bebrachter/Steuern Firmware aktualisieren Geratenamen auf Memory Card speichern Ethernet Ethernet-Teilnehmer bearbeiten Gerätenamen auf Memory Card speichern Gerätenamen überprüfen Steckplatz Baug. Bestellnummer Diagnoseadresse 0 ISPREIBUS 2043**	_61					Fenster Hilfe	nsicht Extras	Zielsystem A	ügen	Einfi	arbeiten	in Bea	Statio
Image: Opure Baugruppen-Identifikation laden Image: Description of the second se	1 PS 307 2A Baugruppen-tidentifikation laden in PG 2 ICPU 315F-2 PN/D Gestörte Baugruppen X7 MPV/DP Baugruppenzustand Ctrl+D 3 Christian in PG Baugruppenzustand Ctrl+D 3 Urlöschen Ctrl+D Bebrachten/Steuern. 5 Urlöschen Gerätenamen auf Memory Card speichern Ethernet-Teilnehmer bearbeiten 6 Beugruppenzustand Ctrl+D Ethernet-Teilnehmer bearbeiten 6 Beobachten/Steuern. Gerätenamen auf Memory Card speichern Ethernet-Teilnehmer bearbeiten 11 IE-PB-Link Servicedaten speichern Gerätenamen überprüfen Gerätenamen vergeben 5 (1) IE-PB-Link Servicedaten speichern Gerätenamen vergeben Gerätenamen vergeben 5 (1) IE-PB-Link Servicedaten speichern Gerätenamen vergeben Gerätenamen vergeben 5 (1) IE-PB-Link Servicedaten speichern Gerätenamen vergeben Gerätenamen vergeben			1				ugruppe i	Laden in Ba Laden in PG	9	9		<u>-</u>	B
2 CPU 315F-2 PN/D Gestörte Baugruppen X/Y MP/DP X2 PN-IO 3 Ctri+D 4 Urlischen 5 Uhrzeit stellen 8 Beobachten/Steuern Firmware aktualisieren Ethernet - Teilnehmer bearbeiten Gerätenamen auf Memory Card speichern Gerätenamen überprüfen PROFIBUS Servicedaten speichern Steckplatz Baug. Bestellnummer Diagnoseadresse 0 EFPS Link Diagnoseadresse	2 CPU 315F-2 PN/D Gestörte Baugruppen X// MPI/DP Baugruppenzustand Ctrl+D 3 Ctrl+D Ctrl+D 3 Urlöschen Ctrl+I 5 Uhrzeit stellen Beobachten/Steuern. 6 Beobachten/Steuern. Ethernet Firmware aktualisieren Gerätenamen auf Memory Card speichern Gerätenamen überprüfen Gerätenamen auf Memory Card speichern Gerätenamen überprüfen Gerätenamen vergeben 11) IE-PB-Link Servicedaten speichern Gerätenamen vergeben 2 2 Baug	⊇≥ 		S <u>u</u> chen:	ystem (100)	JET-10	aden aden in PG	1-Identifikation 1-Identifikation	Baugrupper Baugrupper		Δ	5 307 2	JR I 🛛 P) (I) L 1
At MPHDP Baugruppenzustand Ctrl+D 3 Betriebszustand Ctrl+D 4 Ur/ischen Ctrl+I 5 Uhrzeit stellen Beobachten/Steuern 6 Beobachten/Steuern 200 DC24V/05 Firmware aktualisieren Gerätenamen auf Memory Card speichern Ethernet-Teilnehmer bearbeiten Ethernet PROFIBUS Gerätenamen überprüfen Gerätenamen vergeben 11 IE-PB-Link. Servicedaten speichern Gerätenamen vergeben 280 N00 C24.//24 200 DC24V/05 Firmware aktualisieren Gerätenamen vergeben 4 F-00 DC24//24	At	2	Standard	<u>P</u> rofil:				ngruppen	Gestörte Ba	PN/D	5F-2 F	PU 31		2
Firmware aktualisieren 200 DC24//24 Gerätenamen auf Memory Card speichern 200 DC24//24 Ethernet Ethernet-Teilnehmer bearbeiten PROFIBUS Gerätenamen überprüfen Servicedaten speichern Gerätenamen vergeben Value Baug Bestellnummer Diagnoseadiesse Value 2433°*	Firmware aktualisieren Gerätenamen auf Memory Card speichern 2 Gerätenamen auf Memory Card speichern Ethernet-Teilnehmer bearbeiten 2 Image: PROFIBUS Gerätenamen überprüfen Gerätenamen überprüfen Servicedaten speichern Gerätenamen vergeben Gerätenamen vergeben Itekplatz Baug Bestellnummer Diagnoseadresse 7 <i>IL FPB Link</i> 56/K1 411 54/B00 2043**	DO AC24230 DO DC24V/0,5 DO DC24V/0,5 DO DC24V/0,5 DO DC24V/0,5	- 0 D0 0 2D 0 2D 0 2D 0 2D		-	trl+D ^{trl+I} 80)		n zustand tand ien i/Steuern	Baugrupper Betriebszus Urlöschen, Uhrzeit stell Beobachten			W-10	F	X2 3 4 5 6
Gerätenamen auf Memory Card speichern 200 DC24V/24 Ethernet Ethernet-Teilnehmer bearbeiten 200 DC24V/24 Image: Display the speichern Ethernet-Teilnehmer bearbeiten 200 DC24V/24 Image: Display the speichern Gerätenamen überprüfen 200 DC24V/24 Image: Display the speichern Gerätenamen überprüfen 200 DC24V/24 Image: Display the speichern Gerätenamen vergeben 100 DC24V/24 Image: Display the speichern Ge	Gerätenamen auf Memory Card speichern Ethernet PROFIBUS Servicedaten speichern teckplatz Baug Bestellnummer Diagnoseadresse Charles Servicedaten speichern	DO DC24V70; DO DC24V72A	2D					ktualisieren	Firmware al					
Ethernet Ethernet-Teilnehmer bearbeiten 2200 DC24V/2A PROFIBUS Gerätenamen überprüfen 280 N0 DC24 Servicedaten speichern Gerätenamen vergeben 280 N0 DC24 Image: Bestellnummer Diagnoseadresse 4 F-00 DC24V/4 Image: Bestellnummer Diagnoseadresse 4 F-00 DC24V/4 Image: Bestellnummer Diagnoseadresse 4 F-00 DC24V/4	Ethernet Ethernet-Teilnehmer bearbeiten 2 PROFIBUS Gerätenamen überprüfen 2 Servicedaten speichern Gerätenamen vergeben 2 Iteckplatz Baug Bestellnummer Diagnoseadresse Iter FB Link <i>SerXi</i> 411/54800 2/0/3*	.D0 DC24V/2A 200 DC24V/2A	2D				Card speichern	en auf Memory (Gerätename					
PROFIBUS Gerätenamen überprüfen 2/10 N0 DC24 Image: Servicedaten speichern Gerätenamen vergeben 2/10 N0 DC24 Gerätenamen vergeben 2/10 N0 DC24 2/10 N0 DC24 Gerätenamen vergeben 2/10 N0 DC24 2/10 N0 DC24 Gerätenamen vergeben 2/10 N0 DC24 2/10 N0 DC24 Gerätenamen vergeben 4 F-00 DC24/ 4 F-00 DC24/ Gerätenamen vergeben 4 F-00 DC24/ 4 F-00 DC24/ Gerätenamen vergeben 2/10 N0 DC24 4 F-00 DC24/	PROFIBUS Gerätenamen überprüfen 2 (1) IE-PB-Link Servicedaten speichern Gerätenamen vergeben 2 eckplatz II Baug Bestellnummer Diagnoseadresse 4 // // F/B-Link Gerätenamen vergeben 4	DO DC24V/2A	2D	h	net-Teilnehmer bearbeite	Ethe			Ethernet					
(1) IE-PB-Link Servicedaten speichern 2R0 N0/NC DC eckplatz II Baug Bestellnummer Diagnoseadlesse III III FF8 Link Servicedaten speichern 4 F-00 DC24V/ 4 F-00 DC24V/ 4 F-00 DC24V/	It It Gerätenamen vergeben 2 eckplatz Baug Bestellnummer Diagnoseadresse 4 // // // // // // // // // // // // // //	RO NO DC24 RO NO DC24	2R		enamen überprüfen	• Ger			PROFIBUS					
eckplatz	ieckplatz	RO NO/NO DO	2R		enamen vergeben	Ger		en speichern	Servicedate		nk	IE-PB-Li	(1)	
1 📑 /E-F8-Link 65K1 411-54800 2043*	1 📑 IE-FB-Link 65K1 411-54500 2043"	F-D0 DC24V/	4 F				sse	Diagnoseadre	ellnummer	Be	aug	В	ilatz	eckp
4F-D0 DC24V/		F-DO DC24V/	- 🚺 4 F					2043*	1 411-54800	k 6G/	Blink	<u>⊨</u> /E+	-	7



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, subnetwork 255.255.255.0 and router address 192.168.1.1. (Refer to Module E02!)



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Note: Make sure that your programming device is connected to the IE/PB link by means of the Ethernet!

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29. Now we have to select the 'IE/PB Link' in order to assign the name <<'Name zuweisen'>>. (\rightarrow IE/PB Link \rightarrow Assign name)

P-Adresse	MAC-Adresse	Gerätetyp	Geratename	Name zuweisen
32,106,1,11	06000634010	4 ICARD LINK	JIE-PB-LINK	Teinehmer-Blinktest Dauer (Sekunden): 3
nu Geräte	gleichen Typs anze	igen ⊏nur0	äeräte ohne Namen anze	igen



- **Note:** If several IO devices are on the network, the device can be identified by using the imprinted MAC address.
- 30. The new device name is displayed in the area 'Available devices' 'Vorhandene Geräte'. 'Close' the dialog. (→ Close)

rätenamen	vergeben			
erätename:	E-P8-Link	•	Gerätetyp: IE/P8 Link	
othandene G	erate.			
IP-Adresse	MAC-Adresse	Gerätetyp	Geratename	Name zuweisen
192,168,1,11	08-00-05-94-C1-C	4 IE/PB Link	IE-PB-Link	
				Teinehmer-Blinktest
				Dauer (Sekunden): 3 💌
				-
				Distances Distances
				Dinken en Dinken aus
01000	1120 12			
nul Gerate	gleichen Typs anze	igen I nurt	ierate ohne Namen anzeij	gen
Aktualisis	ven Fv	oortieren	1	
		Concentration of the second se		
	4			





31. The configuration table can now be loaded to the PLC by clicking on '. The operating mode switch on the CPU should be on STOP! (\rightarrow



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

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SIEMENS

32. The CPU 315F-2 PN/DP is confirmed as the target module for the loading process. (\rightarrow OK)

augruppe	Träger	Steckplatz
PU 315F-2 PN/DP	0	2
ulles markieren		

eilnehmeradress	e auswählen			2
Jber welche Teilne	ihmeradresse ist das F	PG mit der Baugruppe CF	PU 315F-2 PN/DI	P verbunden?
Baugruppenträger:	0 🛫			
Steckplatz:	2 =			
Zielstation:	€ Lokal			
	C Über Netzüber	gang zu erreichen		
Anschluß an Ziels	tation eingeben:			
IP-Adresse	MAC-Adresse	Baugruppentyp	Stationsname	CPU-Name
Treichbare Teilneh	mer:			
•	- 1 - 1			Þ
		BUZERIEG		

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34. We now select the CPU's MAC address on the Ethernet. If you are connected to only one CPU, accept with '**OK**'. (\rightarrow OK)

Über welche Teinel	hmeradresse ist das PG n	nit der Baugruppe CF	PU 315-2 PN/DP	verbunden?
Baugruppenträger.	0 -			
Steckplatz:	23			
Zielstation:	C (block	a ana annaimheann		
Anschluß an Ziels	tation eingeben:	The entropy of		
IP-Adresse	MAC-Adresse	Baugruppentyp	Stationsname	CPU-Name
192.168.1.10 ∢	08-00-06-68-9A-1C	CPU 315-2PN	SIMATIC 3	CPU 315
Irreichbare Teilneh 192:168:190	mer: 08-00-06-68-9A-1C	CPU 315-2PN	SIMATIC 30	CPU 315.
•				1
	Ak	tualisieren		
				1136-

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

35. Next, the IO controller has to be assigned the correct IP address if it is not yet set correctly. Confirm this in the following dialog box with 'Yes'. (\rightarrow Yes)

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36. After the hardware configuration is loaded, we can start with generating the program. In the 'SIMATIC Manager', open the block 'OB1' with a double click. (\rightarrow OB1)

SIMATIC Manager - [ET2005_IE_PB	_LINK F:\0_57_Proje	kte\ET2005_I]		
🛃 Datei Bearbeiten Einfügen Zielsyste	em Ansicht Extras Fe	nster Hilfe		_ 8 ×
		Kein Filter >	· 7/ 4	2 🛞 🦉
ET200S_IE_PB_LINK SIMATIC 300(1) CPU 315F-2 PN/DP S7-Programm(1) Quellen Bausteine	Objektname Systemdaten OB1	Symbolischer Name	Erstellsprache	Größei
Drücken Sie F1, um Hilfe zu erhalten.		TCP/IP -> Rea	tek RTL8139/810x F	38 Byl //

37. Select the programming language FBD 'Erstellsprache FUP' and accept with 'OK' (\rightarrow FBD \rightarrow OK)

Eigenschaften - Organis	ationsbaustein		×
Allgemein - Teil 1 Allgem	ein - Teil 2 Aufrufe Attribute		
Name:	081		
Symbolischer Name:			
Symbolkommentar:			_
Erstellsprache:	FUP		
Projektpfad:			
Speicherort des Projekts	F:\0_S7_Projekte\ET200S_1		
Erstellt am:	Code 23.11.2005 11:00:17	Schnittstelle	
Zuletzt geändert am:	07.02.2001 15:03:43	15.02.1996 16:51:12	
Kommentar:	"Main Program Sweep (Cycle)"		×
OK		Abbrechen	liife

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38. With 'Program LAD, STL, FBD S7 blocks' 'KOP, AWL, FUP- S7 Bausteine programmieren', you now have an editor that allows you to create your STEP7 program correspondingly. To this end, the organization block OB1 has already been opened with the first network. You have to highlight the first network to establish your initial operations. Now you can write your first STEP7 program. In STEP 7, individual programs are usually divided into networks. Clicking on the network symbol

opens a new network.

The STEP7 program that is to be tested can now be loaded to the PLC.

In our case, it is only OB1. Save the OB 🛄, and click on Load 🕍. The CPU's key switch 鎆 s

should be in the Stop position! ($ ightarrow$,I	٥
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KOP/AWL/FUP - [OB1 E	2005_IE_P8_LINK\SIMATIC 300(1)\CPU 315-2 PN Zielsystem Test Ansicht Extras Fenster Hilfe	/DP]	
	66 90 66 7 8	FR # BDICE	
Schnittstelle G G TEMP	Inhalt von: 'Ungebung\Schnittstelle' Name INHP	Htt Neues Netzwerk	
OB1 : "Hain Program Kommentar:	Sweep (Cycle)*	Carley Carles Construction Constr	
E0.0 - 8 E0.1 -	A0.0		ाव र र
X	2 Ido (2 Discussioning) & Descand	Programmelem	Aufrufstruk
Drücken Sie F1, um Hilfe zu erhalt	n.	fine Abs < 5.2 Nw 1	Einfig And

39. Switching the operating mode switch to RUN starts the program, and after clicking on the symbol for monitoring, the program can be observed in 'OB1'.

200S

Note: Make sure that the CPU is connected with the IE/PB link by means of the Ethernet, and the IE/PB link with the ET200S by means of the PROFIBUS!

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Status: 02/2008		PROFINET/PROFIBUS DP w	vith CPU 315F-2 PN/DP/ IE/PB	Link and DP Slave ET