

Instruction manual LOCON 100 / 200 and ROTARNOCK 80 / 100 with Fieldbus connection



Deutschmann Automation GmbH & Co. KG www.deutschmann.com | wiki.deutschmann.de

Manual Art.-No. V3526E

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1 Introduction

1.1 On this manual

This manual documents installation, functions and operation of the Deutschmann unit specified on the cover sheet and in the header.

1.1.1 Symbols



Particularly **important text sections** can be seen from the adjacent pictogram.

You should **<u>always</u>** follow this information since, otherwise, this could result in malfunctions or operating errors.

1.1.2 Concepts

The expressions 'LOCON' and 'TERM' are frequently used throughout this manual with no further model specifications. In such cases, the information applies to the entire model series.

1.1.3 Suggestions

We are always pleased to receive suggestions and wishes etc. and endeavour to allow for these. It is also helpful if you bring our attention to any errors.

1.2 Product program of Deutschmann Automation

A detailed and topical outline of our product range can be found on our homepage at http://www.deutschmann.de

2 Introduction

DEUTSCHMANN cam controls with PROFIBUS-interface can easily be operated at a PLC. For this it is necessary that the protocol S7 (status on delivery) is set at the cam control. All parameters from a cam control can be processed by the S7-protocol.

The S7-protocol allows the processing of the most important parameters in the cam control (see chapter 5 "Table-types of the parameter-data-table" on page 11).

This table form makes a parameterization easier.

This instruction manual describes the S7-protocol, see comment in chapter 8.1 "Protocol: S7" on page 17.

Besides, the devices ROTARNOCK 100, LOCON 100 and LOCON 200 support the "Com. Profile" protocol. For it the device is addressed in the PROFIBUS in accordance with the Deutschmann communication profile (see instruction manual "Communication Profile").



3 Program

At a PLC with PROFIBUS the transfer of the parameter data to the cam control is taken over by a PLC program (handling component).

The cam control transfers the process data back in every PROFIBUS cycle. The length of the process data is dependent on the cam control and the selected module of the GSD-file (see chapter "Explanation:" on page 15).



4 Synchronization (starting phase)

After switching on the cam control, the PLC and the cam control synchronize themselves. Afterwards the parameter data are copied to the cam control cyclically.

After switching on, the cam control sends a 0xC000 (bit 15 and 14 set in the 1. word) until it gets this word back from the PLC as an echo. After that the cam control sends a 0x0000 (bit 15 and 14 deleted in the 1. word) and ends the synchronization with it.

From that point on the handling component copies always 3 subsequent words from the parameter data table, from the address word via the bus to the cam control (see chapter 4.2 "Data structure of a request (from PLC to cam control)" on page 9).



Values in hex x = not used

4.1 Data exchange

Now the PLC sends 0x8000 (bit 15 write-req set) with start address of the first word from the table and the first three words from the parameter table.

A parameter table always starts with the address 0. All data have always to be copied in intervals of 6 byte to the cam control. As a confirmation the PLC waits for the first word of the request (0x8000 hex).

The second data record, that is sent from the PLC to the cam control is 0x8006 hex in the first word and the next three words from the parameter table.

Consequently the start address always has to be a multiple of 6. Reaching the end of the table the copy process starts again from the address 0.

As a confirmation the PLC waits for the first word of the request (0x8006 hex).

Besides the PLC always gets the process data back (see chapter 4.3 "Process data in Multiturn-format" on page 10).



x = Not used

Y = Number of bytes of the offset table

Z = Start address of the parameter data, e. g. from type 2

4.2 Data structure of a request (from PLC to cam control)

1. word			2. word	3. word	4. word	5. word
Bit 15	Bit 14	13 0	15 0	15 0	15 0	only for logic function
Command	Command	Address pointer	Data	Data	Data	
0	0	not used				
0	1	not used	6 byte data f	rom address i	oointer	16 bit logic
1	0	write-request			Jointon	
1	1	sync (starting phase)				

Note: With regard to the logic function, the following must be observed when using the 16 inputs:

* ROTARNOCK 4-PROFIBUS: The 1st input is in the 10 byte in the 5th word in the PROFIBUS.

* ROTARNOCK 100-PROFIBUS: The 1st input is in the 9 byte in the 5th word in the PROFIBUS.

4.3 Process data in Multiturn-format

From the 5. word on the process data are permanently provided.

Word Byte No.	1. word Byte 0, 1	2. word Byte 2, 3	3. word Byte 4, 5	4. word Byte 6, 7	5. word Byte 8, 9	6. word Byte 10, 11	7. word Byte 12 , 13	
Bit	15 0	15 0	15 0	15 0	31 16	150	15 0]
	Copy of the 1. word from the PLC as confirma- tion of receipt	_	_	_	Position		Speed	

Data structure of a response from the cam control to the PLC:

 Byte 14	Byte 15	Byte 16	Byte 17	Byte 18	Byte 19	
 70	70	70	15 8	70	70	
 ActProgr	Error No.	Output 1 to 7	Output 9 to 16	Output 17 to 24	Output 25 to 32	
		1 to 7	9 to 16	17 to 24	25 to 32	

Assignment of the outputs to bits

Example:

MSB	 LSB
Bit 7	Bit 0
Output 8	 Output 1

The status information on the outputs start from byte 16 on. Here that amount of outputs is transfered that is supported by the cam control.

5 Table-types of the parameter-data-table

Description	Fixed value	Table-type	Length
OFFSET_TYPE	0x0001	Offset always starts at table-address 0	WORD
IDLE_TYPE	0x0004	Idle time table	WORD
CONTROL_TYPE	0x0005	Config-parameter table	WORD
CAM_MT_TYPE	0x0007	Cams for Multiturn devices	WORD
DIRECTIONCAM_TYPE_NEW	0x000F	Direction cams	WORD
AT_CAM_ST_TYPE	0x000B	Angle-time cams	WORD
LOGIC_TYPE	0x000C	Logic function	WORD

6 Offset-table

In the offset-table three words are reserved in each case for the description of a parameter table. The first three words urgently have to be located at the beginning of this parameter table, they, themselves declare the offset-table.

The first word contains the key sign for this offset-table (0x0001), the second word contains the number of required bytes of the table and the third word contains the start address of the table. The start address of the offset-table always equals zero.

The entries in the offset-table enable already existing tables to be extended or new ones to be added. The parameter table always starts with the offset declaration (example).

Description	Value in the PLC	Function	Length
Offset_Type	1		WORD
Offset_Length	To be calculated		WORD
Offset_Address	0		WORD

Thereupon the declaration of each table follows by means of the offset-table.

6.1 Offset-table for idle time

Description	Value in the PLC	Length
Idle_Type	4	WORD
Idle_Length	Number of required idle times by 6	WORD
Idle_Address	Address of the first idle time entry	WORD

6.2 Idle time: IDLE

Structure	Value	Function	Length
ProgNo			BYTE
Output		0_n und OFF = 0 => this idle time will be deleted	BYTE
IdleT_On			WORD
IdleT_Off			WORD

Any further required idle time will be lined up gaplessly.

In order to automatically program the cam control, the programmer of the PLC only has to change the corresponding values in the structure-table.

6.3 Offset table for control table

Description	Value in the PLC	Length
Control_Type	5	WORD
Control_Length	here fixed on 6	WORD
Control_Address	Address of the first control entry (New_Prog)	WORD

6.4 Devices control-table: CONTROL_TYPE

In this table those bytes and flags are set by the PLC programmer, that carry out a specific configuration in the cam control. The table consist of six bytes:

Description	Value	Function	Length
New_Prog	015	Select new program	BYTE
ConfigFlags: Teach _In_Zero	Bit 0	Teach-In Zero Point (high active)	BOOL
Invert_Encoder	Bit 1	Invert-Encoder-Countdir (0=not inverted, 1=inverted)	BOOL
Error_Quit	Bit 2	Error-Quit	BOOL
Res_03 Res_07	Bit 3 - 7	Res_03_Res_07	BOOL
Res_0			BYTE
Res_1			BYTE
Res_2			BYTE
Res_3			BYTĒ

6.5 Offset table for (Multiturn) cams

Description	Value in the PLC	Length
CAM_MT_Type	7	WORD
CAM_MT_Length	Amount of required cams by 12	WORD
CAM_MT_Address	Address of the first MT-entry	WORD

6.6 Cams (for Multiturn): CAM_MT

Structure	Value	Function	Length
ProgNo			WORD
Output		0 = deletes the cam in the device	WORD
On			DWORD
Off			DWORD

6.7 Offset table for direction cams

Description	Value in the PLC	Length
Direction_Cam_NewType	F	WORD
Direction_Cam_Length	6 byte	WORD
Direction_Cam_Address	Address of the first direction-cam-entry	WORD

6.8 Direction cams: DIRECTION_CAM_NEW

The length of the direction cams-table is determined by the last output, which is used for the function of the direction cams. In the example below output 3 is the last output used for a direction evaluation. The table's length always has to be a multiple of 6 bytes. Therefore 3 "dummy"bytes have been added.

Structure	
Suuciure	

Structure	value	Length
Direction_Cam_New_Table.Direction_Cam_New[1].Output 0 Byte	0	Byte
Direction_Cam_New_Table.Direction_Cam_New[2].Output 1 Byte	1	Byte
Direction_Cam_New_Table.Direction_Cam_New[3].Output 2 Byte	2	Byte
Direction_Cam_New_Table.Direction_Cam_New[4].Reserved 0 Byte	0	Byte
Direction_Cam_New_Table.Direction_Cam_New[5].Reserved 0 Byte	0	Byte
Direction_Cam_New_Table.Direction_Cam_New[6].Reserved 0 Byte	0	Byte

The following values are possible:

- Update always (both directions) = default 0 =
- Update positive 1 =
- 2 = Update negative

6.9 Offset table for angle-time cams

Description	Value in the PLC	Length
AT_CAM_ST_Type	0x0B	WORD
AT_CAM_ST_Length	Amount of required cams by 6	WORD
AT_CAM_ST_Address	Address of the first angle-cam-entry	WORD

6.10 Angle-time cams: AT_CAM_ST

Structure	Value	Function	Length
ProgNo			BYTE
Output			BYTE
On			WORD
Duration	0x0001 - 0x7EF4	ms	WORD

6.11 LOGIC-function: LOGIC

Structure	Value	Function	Length
ProgNo	from 0 to MAX_PROG		BYTE
DestNo	from 1 to 16	0 deletes complete logic function	BYTE
DestType	0 = hardware output		BYTE
	1 = flag		
	2 = hardware output inverted		
	3 = flag inverted		
OpNo1	1 - 32		BYTE
ОрТуре1	0 = internal cam control output		BYTE
	1 = input: hard-/software		
	2 = flag		
	3 = SR (shift register)		
	4 = PB (only LOCON 200)	input	
LogicFct1-2	0 = none		BYTE
	1 = or		
	2 = and		
	3 = or not		
	4 = and not		
OpNo2	1 - 32		BYTE
OpType2	see OpType1		BYTE
LogicFct2-3	see LogicFct1-2		BYTE
OpNo3	1 - 32		BYTE
ОрТуре3	see OpType1		BYTE
LogicFct3-4	see LogicFct1-2		BYTE
OpNo4	1 - 32		BYTE
ОрТуре4	see OpType1		BYTE
OutputDelay	ms	at present max. 255	WORD
OutputTrigger	0 = leading edge		BYTE
	1 = trailing edge		
Module number	0 basis		BYTE
(only LOCON 200)	x I/O-module number		

6.12 GSD-modules for PROFIBUS cam control

GSD-file	Module	Cam control
R80	"S7DB(universal)"	ROTARNOCK 80
R100	"S7DB(universal)"	ROTARNOCK 100
R100	"S7DB(uni.)+logic16"	ROTARNOCK 100 with logic
L100	"S7DB(universal)"	LOCON 100
L100	"S7DB(uni.)+logic8"	LOCON 100 with 8 logic inputs
L100	"S7DB(uni.)+logic16"	LOCON 100 with 16 logic inputs
L200	"L200-Basis(S7-mode)"	LOCON 200 (incl. logic)
L200 IO8	"L200-IO8"	LOCON 200-IO8-expansion

6.13 Example: Parameter-table

Address in dez	Description	Length	Value in dez
0	Offset_Type	WORD	1
2	Offset_Length	WORD	12
4	Offset_Address	WORD	0
6	Cam_MT_Type	WORD	3
8	Cam_MT_Length	WORD	6
10	Cam_MT_Address	WORD	12
12	Cam_MT_Cam (1).ProgNo	WORD	0
14	Cam_MT_Cam (1).Output	WORD	4
16	Cam_MT_Cam (1).On	DWORD	20
18	Cam_MT_Cam (1).Off	DWORD	40

In this example the output 4, Cam_MT_Cam(1).Output is set in the program 0, Cam_MT_Cam(1).ProgNr., between position 20, Cam_MT_Cam(1).On and 40, Cam_MT_Cam(1).Off. The value Cam_MT_Length is the amount of bytes and is calculated as follows: Amount of cams multiplied by six.

Offset_Length is the amount of bytes of the offset parameters, always starting at zero and ending at the address 10 in this example.

Explanation:

Туре	Length
BOOL	1 bit
BYTE	8 bits
WORD	2 bytes
DWORD	4 bytes

7 Data component-generator

The generator generates a desired parameter-table (empty) automatically in the AWL-format. With it the user is relieved of the calculation of the length-values and start addresses. The program can be loaded from our homepage at http://www.deutschmann.de.

🖪 S7DBGenerator			<u> </u>
Datei Hilfe B-Datenbaustein B-Nocken Winkel-Winkel-Nocken Winkel-Zeit-Nocken Richtungsnocken Totzeiten Logik	Data-Block-DB Name Version Geben Sie hier die 1 Namen und die Ver darf zwischen 1 und noch Leerzeichen e	01 OhneName 1.0 Nummer des Datenbausteins sowie sion an. Die Nummer des Datenbau d 65535 sein, der Name darf weder enthalten.	den Isteins Ieer sein
Datenbaustein			V 1.53

By a simple click on the flags you can select the language. Please execute the single points now one after the other (for further information please take a look at the help program).

In order to generate the data component, click on "File" -> "Generate data component" (see picture below); define the file name and save.

🚮 S7DBGenerator		
Datei Hilfe		
DB erzeugen Beenden Winkel-Winkel-Nocken Winkel-Zeit-Nocken Richtungsnocken Dictuingsnocken Dictuingsnocken Dictuingsnocken Dictuingsnocken	Data-Block-DB Name Version Geben Sie hier die I Namen und die Ver darf zwischen 1 und noch Leerzeichen e	01 OhneName 1.0 Nummer des Datenbausteins sowie den rsion an. Die Nummer des Datenbausteins d 65535 sein, der Name darf weder leer sein enthalten.
Datenbaustein		V 1.53

8 Example: Connecting LOCON 200 via PROFIBUS to a PLC

This example is based on our sample project "Nsw_v2_d.zip" with the project planning software "Step 7 V5.3 + SP2". The following chapters explain the handling with the project. The optional chapters basically apply for hardware differences or they show where which changes have to be made.

8.1 Protocol: S7

As described in this manual in chapter 2 in the protocol S7 has to be set.



Attention: After a cold start all values in the cam control are deleted.

The PLC is master, therefore the programming can only be carried out through the PLC.

8.2 Configuring the PROFIBUS-ID

PROFIBUS Slave ID: 126 Dez default

In chapter 9 this manual shows the different possibilities how to set the PROFIBUS-slave-address.

In this example the PROFIBUS-ID is 9.

8.3 Adding or deleting IO8-expansions (optional)

With a double click on *Hardware* you get to the overview. LOCON 200 + 2 IO8-expansions are default.



👪 HW Konfig -	[SIMATIC 300 (1) (Konfi	guration) NSW_¥2_D]					×
I Station Be	arbeiten Einfügen Zielsys	tem Ansicht E⊻tras Eenster Hilfe					_ 문 ×
0 2 8		🛍 🋍 🗈 🖼 🕺					
	CPU 315-2 DP DP	y	PRC	DFIBUS: DP-Ma	uccili dR	×	Suchers Ander Alexandree Standard Control Ander Alexandree Standard Contro
• [(e) [← ●	LOCON-200-PB					Ľ	
Steckplatz	DP-Kennung	Bestellnummer / Bezeichnung	E-Adresse	A-Adresse	Kommentar	1	
0	183	222 L200-Basis (SZ-Mode)	0.7	0.7	Tronundrical		
1	209	-> L200-Basis (SP-Mode)	811	-			
2	208	-> L200-Basis (S7-Mode)	1213				
3	144	-> L200-Basis (S7-Mode)	14				
4	144	-> L200-Basis (S7-Mode)	15				
5	145	-> L200-Basis (S7-Mode)	1617				
6	161	> L200-Baxis (S7-Mode)		89			
7	8DX	L200-108	20	20			
8	8DX	L200-108	21	21			
9							
10							
11			_				
12			_				
13							
14			-	-			
10			_	-			
17			-	-			
17			_	-			PROFIBUS-DP-Slaves der SIMATIC
19							S7, M7 und C7 (dezentraler Aufbau)
20			-				
1.0	1	1	1	1	1		
Drücken Sie F1, u	um Hilfe zu erhalten.						

8.3.1 Adding further IO8-expansions (optional)

After installing the gsd-file "L200.gsd" you can find it (like all Deutschmann cam controls) under: PROFIBUS-DP -> Further fielddevices -> PLC

Mark the existing Slave. An "L200-IO8"-expansion can now be added by using Drag + Drop.



Afterwards the IO-address can be defined.

8.3.2 Deleting IO8-modules

In order to delete the IO8-expansions select the last line, then press the right mouse button and choose "Delete".

Station Bearbeiten Einrügen Zelsystem Arsicht Extras Fenster Hilfe Image: Station Bearbeiten Einrügen Zelsystem Arsicht Extras Fenster Hilfe Image: Station Bearbeiten Einrügen Zelsystem Arsicht Extras Fenster Hilfe Image: Station Bearbeiten Einrügen Zelsystem Arsicht Extras Fenster Hilfe Image: Station Bearbeiten Einrügen Zelsystem Arsicht Extras Fenster Hilfe Image: Station Bearbeiten Einrügen Zelsystem Arsicht Extras Fenster Hilfe Image: Station Bearbeiten Einrügen Zelsystem Arsicht Extras Fenster Hilfe Image: Station Bearbeiten Einrügen Zelsystem Arsicht Extras Fenster Hilfe Image: Station Bearbeiten Einrügen Zelsystem Arsicht Extras Fenster Hilfe Image: Station Bearbeiten Einrügen Zelsystem Arsicht Extras Fenster Hilfe Image: Station Bearbeiten Einrügen Zelsystem Arsicht Extras Fenster Hilfe Image: Station Bearbeiten Extras Fenster Hilfe Image: Station Bearbeite	
□ □ ■	_ 8
CDUB PROFIBUS: DP Mastersystem (1) Supher: Suph	
Image: Supervision of the s	
2 3 CPU 315-2 DP PROFIBUS: DP Mattersystem (1) End R 3 DP Kopiern CH+C End Q End Q 4	mt m
X2 DP France Point Point Point Standard 3 4 5 5 CH + V Bit of the	
3	
5 Objekt tauschen	
Objekt tauschen	
6 El 2005	
7 Mastersystem einhugen 🖶 👜 ET 2000	
mastersystem trenden	
PROFINEL TO System en agen Bi- Funktionsbaugrupper	า
PROFILE Desystem centeri	
Baugruppe spezifizieren	
Löchen Del Error	
(9) LOCON-200-PB	
Gehe zu	
Steckplatz U DP-Kennung Bestellnummer / Bezeichnung Zugeordnete Baugruppen Fitern Be- SIMADYN	
0 193 ???!200Basis (S7Mode) Beshachter/Stevern	
7 218/ → 12008 and (5/4008/)	
2 200 - 2200 Symbole bearbeiten	
A 144	
5 145 -> 1200 Ravin (S240x/H) Produktsupport-Informationen_Ctrl+F2	
6 161 → L200Basis (S7Mode) FAOs Ct1+F7 Weiter FEIDGER8	F
7 8DX L200-108 Handbuch-Suche Ctrl+F6	
18 8DX L200108 21 21 Gateway	
9	
10 e	P8
	Imodul
L200-Bai	sis(S7-Mode)
13	sis(Kommprof-Mode)
	Paue)
16 HIU048 (m)	raiaj
18	£
19	
20	

After confirming the security query the last line will be deleted.

8.4 Importing, defining and describing data component with values

8.4.1 Importing and translating data components (optional)

Under *sources -> right mouse button -> external sources* a data component, generated by the DBGenerator can be imported.



The new source (here "L200") has to be translated now. For it click with the right mouse button on the new source -> *translate*. (Depending on the defined DB number in the software "DBGenerator" it will appear in the category "components".)

8.4.2 Defining data component (optional)

In the network 1 of the OB1 in line "DB_NUM_NSW:=W#16#1" (default = 1) the cam control data component is defined.

8.4.3 Defining values - setting cams

The data component (here DB1) defined in chapter 8.4.2 can be called by a double-click left. Under *View* change to *Data view*.



Attention:

The entry of all values is made in hexadecimal form!

🔣 KOP/AWL/FUP - [DB1 "DB_NSW	W" N5W_V2_D\SIMATIC 300 (1)\CPU 315-2 DP\\DB1]			_ 8 ×
🕞 Datei Bearbeiten Einfügen Zielsy	ystem Iest Ansicht E⊻tras Eenster Hilfe			_ 8 ×
	8.0 OFFSET TABLE, CAM ST Table, CAM ST Length	WORD	V#16#30 V#10	s#30
	10.0 OFFSET TABLE, CAM ST Table, CAM ST Address	WORD	W#16#12 W#10	5#12
	12.0 OFFSET TABLE, Control Table, Control Type	WORD	WE16E5 VE10	5#5
	14.0 OFFSET TABLE. Control Table. Control Length	WORD	W#16#6 W#16	5#6
	16.0 OFFSET_TABLE.Control_Table.Control_Address	WORD	U#16#42 U#10	5#42
	18.0 CAM_ST_Table.CAM_ST[1].ProgNo	BYTE	B#16#0 B#10	5#0
	19.0 CAM_ST_Table.CAM_ST(1).Output	BYTE	B#16#0 B#1	6#1
	20.0 CAM_ST_Table.CAM_ST[1].On	WORD	V#16#0 V#1e	5#0
	22.0 CAM_ST_Table.CAM_ST[1].Off	WORD	W#16#0 W#10	6#32
	24.0 CAM_ST_Table.CAM_ST[2].ProgNo	BYTE	B#16#0 B#10	5#0
	25.0 CAM_ST_Table.CAM_ST[2].Output	BYTE	B#16#0 B#16	5#2
	26.0 CAM_ST_Table.CAM_ST[2].On	WORD	U\$16\$0 U\$16	5#32
	28.0 CAM_ST_Table.CAM_ST[2].Off	WORD	V#16#0 V#16	5#64
	30.0 CAM_ST_Table.CAM_ST[3].ProgNo	BYTE	B#16#0 B#10	5#0
	31.0 CAM_ST_Table.CAM_ST[3].Output	BYTE	B#16#0 B#10	5#3
	32.0 CAM_ST_Table.CAM_ST[3].On	WORD	V#16#0 V#10	5#64
	34.0 CAM_ST_Table.CAM_ST[3].Off	WORD	V#16#0 V#1e	5#96
	36.0 CAM_ST_Table.CAM_ST[4].ProgNo	BYTE	B#16#0 B#16	5#0
	37.0 CAM_ST_Table.CAM_ST[4].Output	BYTE	B#16#0 B#10	ō#4
	38.0 CAM_ST_Table.CAM_ST[4].On	WORD	V#16#0 V#10	5#96
	40.0 CAM_ST_Table.CAM_ST[4].0ff	WORD	V#16#0 V#1e	5#C8
	42.0 CAM_ST_Table.CAM_ST[5].ProgNo	BYTE	B#16#0 B#16	5#0
	43.0 CAM_ST_Table.CAM_ST[5].Output	BYTE	B#16#0 B#16	5#5
	44.0 CAM_ST_Table.CAM_ST[5].On	WORD	V#16#0 V#10	5#C8
	46.0 CAM_ST_Table.CAM_ST(5).Off	WORD	U#16#0 U#16	5#FA
	48.0 CAM_ST_Table.CAM_ST(6).ProgNo	BYTE	B#16#0 B#16	5#0 +
Programm BE Aufrufstr		1	I I	•
×				
	: Info \bigwedge 3: Querverweise λ 4: Operandeninfo λ 5: Steuer	n λ 6: Diagnose λ 7:	Vergleich /	
Drücken Sie F1, um Hilfe zu erhalten.		9	offline Abs < 5	.2 Einfg

8.5 Defining or deleting symbols (optional)

If an IO8-expansion was added or deleted (chapter 8.4.1), then the symbolism is changed to *Symbols*.

Date Berhelen (nfoge Zelsysten Ajeckt Egins Eender Hife Control Control Contr	SIMATIC Manager - NSW_V2_D	_ # ×
Ducken Sie Fi, un Hilfe au erheten. () Constant () State () () () () () () () () () () () () ()	Datei Bearbeiten Einfügen Zielsystem Ansicht E≾tras Eenster Hilfe	
Deciden Sie Pi, un Hilfe zu erhalten.	🗋 😂 認示 🕹 暗色 🍙 🔍 🐂 🏝 🏣 🏛 💽 < Kein Filter > 💽 🍸	
VSW 42.0 - Cl/Programmel/Stepp/S7/Proj/NSW_22.0 Image: Strate in the strate i		
Drucken Drucken Drucken Drucken Drucken Bausteine	NSW_V2_D C:\Programme\Siemens\Step7\S7Proj\NSW_V2_D	
Drücken Sie F1, um Hife zu erhalten. PC Adapter(MPI)	INSW_V2D Insw.v2D Insw.v2D Insw.v2D Insw.v2D	
	Drücken Sie F1, um Hiffe zu erhalten.	PC Adapter(MPI)

The following view comes up:

Status	10 1 1 1		0.1.1		
	BLKMOV	SEC 20	SEC 20	Conv Variablee	
	Cuole Execution	08 1	08 1	CODY YORKANGS	
	DB NSW	08 1	08 1		
	DPRD DAT	SEC 14	SEC 14	Read Consistent Data of a Standard DP Slave	
	DPWR DAT	SEC 15	SEC 15	Write Consistent Data to a Standard DP Slave	
	EB Koppl SPS NSW	FB 3	EB 3		
	FC Prozessdaten N	FC 3	FC 3	Beispiel zum auslesen der Prozessdaten	
	NO_FLT1	OB 82	OB 82	I/O Point Fault 1	
	Instanz_zu_FB3	DB 3	FB 3		
0	Loss of Rack Fault	OB 86	OB 86		
1	M10.0	M 10.0	BOOL	Reset "Error Kommunikation NS/V"	
2	MOD_ERR	OB 122	OB 122	Module Access Error	
3	MV12	MWV 12	WORD	Fehlernummer Kommunikation NSW	
4	NSVV_Error	EB 15	BYTE	aktuelle Fehlernummer NSW / Hardwaresteckplatz 4	
5	NSVV_Logik_E_1_16	AVV 8	WORD	Logik_Eingänge 1-16 zum NSW wenn Unterstützt / Hardwaresteckplatz 6	
6	NSVV_Logik_E_17_24	AB 20	BYTE	Logik_Eingänge 17-24 zum NSW wenn Unterstützt / Hardwaresteckplatz 7	
7	NSVV_Logik_E_25_32	AB 21	BYTE	Logik_Eingänge 25-32 zum NSW wenn Unterstützt / Hardwaresteckplatz 8	
8	NSVV_Out_1_16	EW 16	WORD	Ausgänge 1-16 vom NSW an die S7 / Hardwaresteckplatz 5	
9	NSWV_Out_17_24	EB 20	BYTE	Ausgänge 17-24 vom NSW wenn Unterstützt / Hardwaresteckplatz 7	
:0	NSVV_Out_25_32	EB 21	BYTE	Ausgänge 25-32 vom NSW wenn Unterstützt / Hardwaresteckplatz 8	
1	NSVV_Position	ED 8	DWORD	aktuelle Position NSW / Hardwaresteckplatz 1	
2	NSVV_ProgNr	EB 14	BYTE	aktuelle Programmnummer NSW / Hardwaresteckplatz 3	
3	NSVV_Speed	EW 12	WORD	aktuelle Geschwindigkeit NSW / Hardwaresteckplatz 2	
4	PROG_ERR	OB 121	OB 121	Programming Error	
5	Prozessdaten	VAL 1	050 0		
70	IEST_DB	SFC 24	SFC 24	lest Data Block	

8.5.1 Adding a new symbol (optional)

For it the cursor is brought into the last line and a new symbolic name has to be defined.

57-Pr	rogrami	m(1) (Symbole) N	5W_V2_D\S	IMATIC 300	(1)\CPU 315-2 DP	
	Status	Symbol /	Adresse	Datentyp	Kommentar	
		BLKMOV	SFC 20	SFC 20	Copy Variables	
2		Cycle Execution	OB 1	08 1		
3		DB_NSW	DB 1	DB 1		
1		DPRD_DAT	SFC 14	SFC 14	Read Consistent Data of a Standard DP Slave	
5		DP/VR_DAT	SFC 15	SFC 15	Write Consistent Data to a Standard DP Slave	
5		FB_Koppl_SPS_NSW	FB 3	FB 3		
· · · · ·		FC_Prozessdaten_N	FC 3	FC 3	Beispiel zum auslesen der Prozessdaten	
		I/O_FLT1	OB 82	08 82	I/O Point Fault 1	
)		Instanz_zu_FB3	DB 3	FB 3		
0		Loss of Rack Fault	OB 86	OB 86		
1		M10.0	M 10.0	BOOL	Reset "Error Kommunikation NSW"	
2		MOD_ERR	OB 122	08 122	Module Access Error	
3		MW12	MVV 12	WORD	Fehlernummer Kommunikation NSW	
4		NSVV_Error	EB 15	BYTE	aktuelle Fehlernummer NSW / Hardwaresteckplatz 4	
5		NSVV_Logik_E_1_16	AVV 8	WORD	Logik_Eingänge 1-16 zum NSW wenn Unterstützt / Hardwaresteckplatz 6	
16		NSW_Logik_E_17_24	AB 20	BYTE	Logik_Eingänge 17-24 zum NSW wenn Unterstützt / Hardwaresteckplatz 7	
7		NSVV_Logik_E_25_32	AB 21	BYTE	Logik_Eingänge 25-32 zun NSW wenn Unterstützt / Hardwaresteckplatz 8	
18		NSW_Out_1_16	EW 16	WORD	Ausgänge 1-16 vom NSW an die S7 / Hardwaresteckplatz 5	
19		NSW/_Out_17_24	EB 20	BYTE	Ausgänge 17-24 vom NSW wenn Unterstützt / Hardwaresteckplatz 7	
20		NSW_Out_25_32	EB 21	BYTE	Ausgänge 25-32 vom NSW wenn Unterstützt / Hardwaresteckplatz 8	
21		NSVV_Position	ED 8	DWORD	aktuelle Position NSW / Hardwaresteckplatz 1	
22		NSW_ProgNr	EB 14	BYTE	aktuelle Programmnummer NSW / Hardwaresteckplatz 3	
23		NSW_Speed	EW 12	WORD	aktuelle Geschwindigkeit NSW / Hardwaresteckplatz 2	
24		PROG_ERR	OB 121	OB 121	Programming Error	
25		Prozessdaten	VAT 1			
26		TEST_DB	SFC 24	SFC 24	Test Data Block	
27		NSVV_Out_33_40	EB 22	BYTE	Ausgänge 33-40 vom NSW wenn Unterstützt / Hardwaresteckplatz 8	
28						

8.5.2 Deleting a symbol (optional)

In order to delete a symbol mark the line with a left click on the line number and press *ENTF* on the keypad. After confirming the line is deleted.

8.6 Process data

In order to have the process data displayed they have to be opened.

SIMATIC Manager - NSW_¥2_D							_ 8 ×
Datei Bearbeiten Einfügen Zielsysten	n <u>A</u> nsicht E⊻tras E	enster <u>H</u> ife					
			Kein Filter >	- <u>7</u> 28 8			
NSW_V2_D C:\Programme	\Siemens\Step7\S	Proj\N5₩_¥2_D					
E ∰ ris-220 E ∰ ris-220 E ∰ CFU 30510 E ∰ CFU 352.02P E ∯ CFU 352.02P E ∲ CFU 352.02P	G DB12 DB10 SFC20	FB3 FB3 Government	9000 973 85503	g Den g SECT4	6 083 6 083 6 5FC15		
Drücken Sie E1, um Hife zu erhalten.					PC Adapter(MPI)	 [

The following view comes up:

📽 Var - [Prozessdaten NSW_V2_D\SIMATIC 300	(1)\CPU 315-2 DP\57-Programm(1)]		_ 8 ×
🌃 Iabelle Bearbeiten Einfügen Zielsystem Variable	Ansicht Extras Eenster Hife		X
+ D 2 3 4 6 1 6	≗a ≗ № @# @# ## ##		
Coperand Symbol	Symbolkommentar	Anzei Statuswert	Steuerwert
1 //Prozessdaten			
ED 8 "NSW_Position"	aktuelle Position NSW / Hardwaresteckplatz 1	DEZ	
BW 12 "NSW_Speed"	aktuelle Geschwindigkeit NSW / Hardwaresteckplatz 2	DEZ	
EB 14 "NSVY_ProgNr"	aktuelle Programmnummer NSVV / Hardwaresteckplatz 3	HEX	
EB 15 "NSVY_Error"	aktuelle Fehlernummer NSW / Hardwaresteckplatz 4	DEZ	
EW 16 "NSW_Out_1_16"	Ausgänge 1-16 vom NSW an die S7 / Hardwaresteckplatz 5	BIN	
7 AVV 8 "NSVY_Logik_E_1_16"	Logik_Eingänge 1-16 zum NSW wenn Unterstützt / Hardwaresteckplatz 6	BIN	2#0000_0100_0000_0000
//Optionale Aus- bzw. Eingänge			
EB 20 "NSVV_Out_17_24"	Ausgänge 17-24 vom NSW wenn Unterstützt / Hardwaresteckplatz 7	BIN	
10 AB 20 "NSVV_Logik_E_17_24"	Logik_Eingänge 17-24 zum NSW wenn Unterstützt / Hardwaresteckplatz 7	BIN	2#0000_0100
11 //Optionale Aus- bzw. Eingänge			
12 EB 21 "NSVV_Out_25_32"	Ausgänge 25-32 vom NSW wenn Unterstützt / Hardwaresteckplatz 8	BIN	
13 AB 21 "NSVV_Logik_E_25_32"	Logik_Eingänge 25-32 zum NSW wenn Unterstützt / Hardwaresteckplatz 8	BIN	2#0000_0100
14			
15			
16			
17 //FB3			
18 M 10.0 "M10.0"	Reset "Error Kommunikation NSW"	BOOL	false
19 M/V 12 "M/V12"	Fehlernummer Kommunikation NSW	DEZ	
20 DB3.DBVV 30 "Instanz_zu_FB3".answer_Count	wird hochgezählt, solange keine Antwort vom NS/V da ist	HEX	
21 DB3.DBW 10 "Instanz_zu_FB3".Zaehler	Datenwortzähler	HEX	
22			
23			
24			
5			
26			
ür Hilfe drücken Sie F1.		C Offine	Abs < 5.2

8.6.1 Extending the process data of an IO8-module (optional)

In order to make a new symbol visible (according to chapter 8.5.1), it has to be called here. For it it is sufficient to to enter the symbolic name into a free line in the column "Symbol". After pressing *ENTER* the line is brought up to date.

5	¥ar -	Prozessda	ten NSW_V2_D\SIMATIC 300	(1)\CPU 315-2 DP\S7-Programm(1)]			_ 8 ×
2	Iape	elle <u>B</u> earbeit	en Einfügen Zielsystem ⊻ariable	Ansicht E⊻tras Eenster Hilfe			_ <u>8</u> ×
-9	1			<u>°a 2 № </u>			
	1	Operand	Symbol	Symbolkommentar	Anzei	Statuswert	Steuerwert
1	11	Prozessdater	n				
2	E	ED 8	"NSVV_Position"	aktuelle Position NSW / Hardwaresteckplatz 1	DEZ		
3	E	W 12	"NSW_Speed"	aktuelle Geschwindigkeit NSW / Hardwaresteckplatz 2	DEZ		
4	E	EB 14	"NSVV_ProgNr"	aktuelle Programmnummer NSW / Hardwaresteckplatz 3	HEX		
5	E	EB 15	"NSVV_Error"	aktuelle Fehlernummer NSW / Hardwaresteckplatz 4	DEZ		
6	E	EW 16	"NSVV_Out_1_16"	Ausgänge 1-16 vom NSW an die S7 / Hardwaresteckplatz 5	BIN		
7	A	AVV 8	"NSVV_Logik_E_1_16"	Logik_Eingänge 1-16 zum NSW wenn Unterstützt / Hardwaresteckplatz 6	BIN		2#0000_0100_0000_0000
8	11	Optionale Au:	s- bzw. Eingänge				
9	E	EB 20	"NSW_Out_17_24"	Ausgänge 17-24 vom NSW wenn Unterstützt / Hardwaresteckplatz 7	BIN		
10	A	AB 20	"NSVV_Logik_E_17_24"	Logik_Eingänge 17-24 zum NSW wenn Unterstützt / Hardwaresteckplatz 7	BIN		2#0000_0100
11	11	Optionale Au:	s- bzw. Eingänge				
12	E	EB 21	"NSVV_Out_25_32"	Ausgänge 25-32 vom NS// wenn Unterstützt / Hardwaresteckplatz 8	BIN		
13	A	AB 21	"NSVV_Logik_E_25_32"	Logik_Eingänge 25-32 zum NSW wenn Unterstützt / Hardwaresteckplatz 8	BIN		2#0000_0100
14	E	B 22	*NSW_Out_33_40*	Ausgänge 33-40 vom NS/V wenn Unterstützt / Hardwaresteckplatz 8	HEX		
15							
16							
17	11	VFB3					
18	N	at 10.0	"M10.0"	Reset "Error Kommunikation NSW"	BOOL		false
19	N	WV 12	"M/V12"	Fehlernummer Kommunikation NSW	DEZ		
20	D	083.DBW 30	"Instanz_zu_FB3".answer_Count	wird hochgezählt, solange keine Antwort vom NSW da ist	HEX		
21	D	083.DBW 10	"Instanz_zu_FB3".Zaehler	Datenwortzähler	HEX		
22							
23							
24							
25							
26							
Für	Hilfe	drücken Sie F	1.			Offline	Abs < 5.2

8.6.2 Deleting an entry of the process data (optional)

If a symbol was deleted according to chapter 8.5.2, then only the operand is placed at that location.

≝ B -₩	shalla Ra		iten NSW_¥Z_D\SIMATIC 300	(1)\CPU 315-2 DP\S7-Programm(1)]			_ 8 >
-14	appare Re-	arbeit	en Einfügen Zielsystem ⊻ariable	e Ansicht E≿tras Eenster Hilfe			_82
				2- 2 № 00 07 00 07 Ke			
1	Operand		Symbol	Symbolkommentar	Anzei	Statuswert	Steuerwert
1	//Prozess	dater	1				
2	ED 8		"NSYV_Position"	aktuelle Position NSW / Hardwaresteckplatz 1	DEZ		
3	EW 12		"NSVY_Speed"	aktuelle Geschwindigkeit NSVV / Hardwaresteckplatz 2	DEZ		
4	EB 14		"NSW_ProgNr"	aktuelle Programmnummer NSW / Hardwaresteckplatz 3	HEX		
5	EB 15		"NSVY_Error"	aktuelle Fehlernummer NSW / Hardwaresteckplatz 4	DEZ		
6	EW 16		"NSW_Out_1_16"	Ausgänge 1-16 vom NSW an die S7 / Hardwaresteckplatz 5	BIN		
7	AVV 8		"NSVY_Logik_E_1_16"	Logik_Eingänge 1-16 zum NSW wenn Unterstützt / Hardwaresteckplatz 6	BIN		2#0000_0100_0000_0000
8	//Optional	e Aus	s- bzw. Eingänge				
9	EB 20		"NSW_Out_17_24"	Ausgänge 17-24 vom NSW wenn Unterstützt / Hardwaresteckplatz 7	BIN		
10	AB 20		"NSVV_Logik_E_17_24"	Logik_Eingänge 17-24 zum NSW wenn Unterstützt / Hardwaresteckplatz 7	BIN		2#0000_0100
11	//Optional	e Aus	s- bzw. Eingänge				
12	EB 21		"NSVV_Out_25_32"	Ausgänge 25-32 vom NSW wenn Unterstützt / Hardwaresteckplatz 8	BIN		
13	AB 21		"NSVV_Logik_E_25_32"	Logik_Eingänge 25-32 zum NSW wenn Unterstützt / Hardwaresteckplatz 8	BIN		2#0000_0100
14	EB 22				HEX		
15							
16							
17	//FB3						
18	M 10.0		"M10.0"	Reset "Error Kommunikation NSM"	BOOL		false
19	MVV 12		"MM/12"	Fehlernummer Kommunikation NSW	DEZ		
20	DB3.DBV	/ 30	"Instanz_zu_FB3".answer_Count	wird hochgezählt, solange keine Antwort vom NSW da ist	HEX		
21	DB3.DBV	/ 10	"Instanz_zu_FB3".Zaehler	Datenwortzähler	HEX		
22							
23							
24							
25							
26							

This entry can be deleted by simply marking the line and pressing ENTF.

8.6.3 Displaying the process data

In order to be able to see the process data, now the complete project has to be written into the PROFIBUS-Master. Besides, all electrical connection between LOCON and Master have to be established.

After the rotation of a connected encoder the item modification should have become visible after the *online function* was called .

Indefe Image: Second sec	Bearbeiter Bearbeiter Bearbeiter Sand S and S Sand S 112 T 112 T 113 T 116 T 8 T 9 T 9 T 9 T 9 T 9 T 9 T 9 T 9 T T 9 T T T 9 T T T T 9 T T T T 9 T T T T 16 T T T T 16 T T T T 17 T T T T 16 T T T T 17 T <th< th=""><th>b Enforçan Zelaystem (yariable Symbol NSW, Position* NSW, Position* NSW,</th><th>Arsicht Egtoss Eenstern Effe Emilia Styr Bollionmentar Bollion Bollion Bollion Symbolionmentar Biduele Position NSW / Hardwaresteckplatz 1 Biduele Position NSW / Hardwaresteckplatz 2 Biduele Position NSW / Hardwaresteckplatz 3 Biduele Position NSW / Hardwaresteckplatz 3 Biduele Position NSW / Hardwaresteckplatz 4 Augange 1-16 vom NSW and e.S7 / Hardwaresteckplatz 4 Logik_Eingänge 1-16 zum NSW wenn Unterstützt / Hardwaresteckplatz 5 Logik Biduele Position NSW and e.S7 / Hardwaresteckplatz 5</th><th>Anzei DEZ DEZ HEX DEZ BIN BIN</th><th>Statuswert L#1122 0 B#16#00 0 2#1000_0000_0000_0000 2#1000_0000_0000_0000</th><th><u>_</u> (đ) × Steuerwert</th></th<>	b Enforçan Zelaystem (yariable Symbol NSW, Position* NSW,	Arsicht Egtoss Eenstern Effe Emilia Styr Bollionmentar Bollion Bollion Bollion Symbolionmentar Biduele Position NSW / Hardwaresteckplatz 1 Biduele Position NSW / Hardwaresteckplatz 2 Biduele Position NSW / Hardwaresteckplatz 3 Biduele Position NSW / Hardwaresteckplatz 3 Biduele Position NSW / Hardwaresteckplatz 4 Augange 1-16 vom NSW and e.S7 / Hardwaresteckplatz 4 Logik_Eingänge 1-16 zum NSW wenn Unterstützt / Hardwaresteckplatz 5 Logik Biduele Position NSW and e.S7 / Hardwaresteckplatz 5	Anzei DEZ DEZ HEX DEZ BIN BIN	Statuswert L#1122 0 B#16#00 0 2#1000_0000_0000_0000 2#1000_0000_0000_0000	<u>_</u> (đ) × Steuerwert
Hai Diam 1 //Proze 2 ED 6 3 EW 1 4 EB 1 5 EB 12 6 EW 1 7 AWV 8 //Option 9 EB 21 10 AB 2 11 //Option 12 EB 21 13 AB 2 13 AB 2	and \$ and \$ ressolation \$ 8 \$ 12 \$ 14 \$ 15 \$ 16 \$ 8 \$ 00ale Aus- 20 \$ 20 \$	Image: Section Image:	Image: Symbolic moment ar Symbolic moment ar adduate Position NSW / Hardwarestockplatz 1 adduate Position NSW / Hardwarestockplatz 1 adduate Porgrammummer NSW / Hardwarestockplatz 3 adduate Porgrammummer NSW / Hardwarestockplatz 4 Auzgänge 1-16 vom NSW an de 57 / Hardwarestockplatz 5 Logit_Enginge 1-16 zum NSW wenn Unterstützt / Hardwarestockplatz 5	Anzei DEZ HEX DEZ BIN BIN	Statuswert L#1122 0 B#16#00 0 2#1000_0000_0000_0000 2#0000_0000_0000_0000	Stouerwert
Image: Constraint of the second sec	and S 2005Sdaten 1 8 1 12 1 14 1 15 1 16 1 00nale Aus- 20 20 1 20 1	Symbol NSW, Position* NSW_Speed* NSW_CrogN* NSW_Cold_1_16* NSW_Lodg, E_1_16* NSW_Lodg, E_1_16* NSW_Lodg, I7_24*	Symbolikommentar elikuele Position NSW / Hardwaresteckplatz 1 elikuele Geschwindigkelt NSW / Hardwaresteckplatz 2 elikuele Programmunner NSW / Hardwaresteckplatz 3 elikuele Felirenrunner NSW / Hardwaresteckplatz 3 elikuele Felirenrunner NSW / Hardwaresteckplatz 5 Logil., Eingänge 1-16 zun NSW wenn Urterstützt / Hardwaresteckplatz 6	Anzei DEZ DEZ HEX DEZ BIN BIN	Statuswert L#1122 B#16#00 0 2#000_0000_0000_0000 2#0000_0000_	Steuerwert
1 //Proze 2 ED 8 3 EW 1 4 EB 1 5 EB 12 6 EW 1 7 AW 8 //Option 9 EB 21 10 AB 2 11 //Option 12 12 EB 21 13 AB 2	ressdaten 8 "1 12 "1 14 "1 15 "1 16 "1 8 "1 onale Aus- 20 "1 20 "1	NSW_Position" NSW_Speed" NSW_FrogN* NSW_Error" NSW_Lougik_E_1_16" NSW_Lougik_E_1_16" Dsw. Einginge NSW_Cout_17_24"	duolle Postion NSW / Hardwaresteckplatz 1 altuele Geschwindigket NSW / Hardwaresteckplatz 2 altuele Porgrammummer NSW / Hardwaresteckplatz 3 altuele Felterunnen NSW / Hardwaresteckplatz 4 Ausgänge 1-16 vom NSW an de 57 / Hardwaresteckplatz 4 Logil.,Eingänge 1-16 zum NSW wenn Unterstützt / Hardwaresteckplatz 6	DEZ DEZ HEX DEZ BIN BIN	L#1122 0 B#16#00 0 2#1000_0000_0000_0000_0000	
2 ED 6 3 EW 1 4 EB 1 5 EB 1 6 EW 1 7 AWV 1 8 //Option 9 EB 21 10 AB 2 11 //Option 12 EB 21 3 AB 2	8 1 12 1 14 1 15 1 16 1 8 1 onale Aus- 20 1 20 1	NSW_Position" NSW_Speed" NSW_ProgN* NSW_Etron" NSW_Lotd_1_16" NSW_Logk_E_1_16" NSW_Logh_Et_16" NSW_Cod_17_24"	elituele Position ISW/ Hardwaresteckplatz 1 distuele Geschwardgeln ISW/ Hardwaresteckplatz 2 distuele Porgrammunnen ISW/ Hardwaresteckplatz 3 distuele Feiternamen ISW Hardwaresteckplatz 4 Ausginge 1-16 von NSW an de 57 / Hardwaresteckplatz 5 Logil, Einginge 1-16 zun NSW wenn Litterstützt / Hardwaresteckplatz 5	DEZ DEZ HEX DEZ BIN BIN	L#1122 0 B#16#00 0 2#1000_0000_0000_0000_0000	
3 EW 1 4 EB 1 5 EB 1 6 EW 1 7 AW 1 8 //Option 9 EB 21 10 AB 2 11 //Option 12 EB 2 13 AB 2	12 1 14 1 15 1 16 1 8 1 onale Aus- 20 1 20 1	NSW_Speed" NSW_ProgN* NSW_Cot_1_16" NSW_Logk_E_1_16" bzw. Einginge NSW_Loud_17_24"	eltuelle Geschwindigkeit NSW / Hardwaresteckplatz 2 eltuelle Programmunner NSW / Hardwaresteckplatz 3 eltuelle Fehremmen NSW / Hardwaresteckplatz 4 Ausginge 1-16 vom NSW an de 57 / Hardwaresteckplatz 5 Logil-Eingänge 1-16 zum NSW wenn Urterstützt / Hardwaresteckplatz 6	DEZ HEX DEZ BIN BIN	0 B#16#00 0 2#1000_0000_0000_0000 2#0000_0000_0000_0000	
4 EB 1 5 EB 1 6 EW 1 7 AW 8 //Option 9 EB 20 10 AB 2 11 //Option 20 12 EB 2 13 AB 2	14 1 15 1 16 1 0 nale Aus- 20 1 20 1	NSW_ProgN* NSW_Error" NSW_Out_1_16" NSW_Logik_E_1_16" bzw. Eingänge NSW_Out_17_24"	aktuele Programmunner NSW / Hardwaresteckplatz 3 aktuele Fehernumer NSW / Hardwaresteckplatz 4 Ausgänge 1-16 von NSW an die 57 / Hardwaresteckplatz 5 Logil_Eingänge 1-16 von NSW wenn Urterstützt / Hardwaresteckplatz 6	HEX DEZ BIN BIN	B#16#00 0 2#1000_0000_0000_0000 2#0000_0000_0000_0000	
S EB 11 6 EW 1 7 AWV 8 //Option 9 EB 21 10 AB 2 11 //Option 12 12 EB 21 13 AB 2	15 1 16 1 8 1 onale Aus- 20 1 20 1 onale Aus	NSW_Error" NSW_Out_1_16" NSW_Logik_E_1_16" bzw. Eingänge NSW_Out_17_24"	aktuele Fehlernummer NSW / Hardwaresteckplatz 4 Ausgänge 1-16 vom NSW an die S7 / Hardwaresteckplatz 5 Logik_Eingänge 1-16 zum NSW wenn Unterstützt / Hardwaresteckplatz 6	dez Bin Bin	0 2#1000_0000_0000_0000 2#0000_0000_0000_0000	
6 EVV 1 7 AVV 8 //Option 9 EB 2/ 10 AB 2 11 //Option 12 EB 2 13 AB 2	16 1 8 1 onale Aus- 20 1 20 1	NSW_Out_1_16" NSW_Logik_E_1_16" bzw.Eingänge NSW_Out_17_24"	Ausgänge 1-16 vom NSW an die S7 / Hardwaresteckplatz 5 Logik_Eingänge 1-16 zum NSW wenn Unterstützt / Hardwaresteckplatz 6	BIN BIN	2#1000_0000_0000_0000	
7 AW 8 //Option 9 EB 2 10 AB 2 11 //Option 2 12 EB 2 13 AB 2	8 1 onale Aus- 20 1 20 1	NSW_Logik_E_1_16" bzw. Eingänge NSW_Out_17_24"	Logik_Eingänge 1-16 zum NSW wenn Unterstützt / Hardwaresteckplatz 6	BIN	2#0000 0000 0000 0000	
8 //Option 9 EB 24 10 AB 2 11 //Option 12 EB 2 13 AB 2	onale Aus- 20 1 20 1	bzw. Eingänge NSW_Out_17_24"			Freeco_0000_00000_00000	2#0000_0100_0000_0000
9 EB 2 10 AB 2 11 //Option 12 EB 2 13 AB 2	20 1 20 1	NSVV_Out_17_24"				
10 AB 2 11 //Option 12 EB 2 13 AB 2	20 "		Ausgänge 17-24 vom NSW wenn Unterstützt / Hardwaresteckplatz 7	BIN	2#0000_0000	
11 //Option 12 EB 2 13 AB 2	onele Aue	NSVY_Logik_E_17_24"	Logik_Eingänge 17-24 zum NSW wenn Unterstützt / Hardwaresteckplatz 7	BIN	2#0000_0000	2#0000_0100
12 EB 2 13 AB 2	onuic Aus-	bzw. Eingänge				
13 AB 2	21 1	NSW_Out_25_32"	Ausgänge 25-32 vom NSW wenn Unterstützt / Hardwaresteckplatz 8	BIN	2#0000_0000	
	21 1	NSW_Logik_E_25_32"	Logik_Eingänge 25-32 zum NSVV wenn Unterstützt / Hardwaresteckplatz 8	BIN	2#0000_0000	2#0000_0100
14						
15						
16						
17 //FB3						
18 M 10	10.0	M10.0"	Reset "Error Kommunikation NSW"	BOOL	false	false
19 MVV 1	12 1	MV/12"	Fehlernummer Kommunikation NSW	DEZ	0	
20 DB3.D6	DEWV 30 "I	Instanz_zu_FB3".answer_Count	wird hochgezählt, solange keine Antwort vom NS/V da ist	HEX	VV#16#0001	
21 DB3.D6	DEWV 10 1	Instanz_zu_FB3".Zaehler	Datenwortzähler	HEX	VV#16#0005	
22						
23						
24						
25						
26						

9 Setting the PROFIBUS-ID at LOCON and ROTARNOCK

9.1 Setting the PROFIBUS-ID

By default the PROFIBUS address is set to 126 Dez. There are the following possibilities to change the ID:

9.1.1 Example for S7 with PC-adapter

The PROFIBUS-Slave is directly connected to the PC with the programming adapter. The ID can then be changed in the Simatic "Manager-target system-Change PROFIBUS-address" by means of a projecting tool, e. g. Step 7 Software.

9.1.2 Example through RS232-interface via WINLOC32

The line of proceeding described in the following applies to ROTARNOCK 80 only. The device is connected to a PC's RS232-interface with the 25-pole plug (also compare to chapter "Basic device ROTARNOCK", subsection "25-pol. D-SUB" in the manual "Electronic cam control ROTARNOCK"). In a simple terminal window, such as WINLOC32 the ID can be changed with the key combination "Clrg + N" or "Strg + N".



9.1.3 Example for WINLOC32-Upload

The device has to be connected with the PC via the RS232-connection. If WINLOC32 is started then only an "Upload" has to be carried out afterwards. The desired PROFIBUS-ID can be entered into the "Configuration" now.

Winloc/32 Va	2.8 for WIN32				
Hie Edit Extra	s Online View W	(indow Help			
📂 🖬 🖷		💐 🍭 - 🕘 🧮 💻		C2 C3	
₿ 1ermina1 R100-48-0	R 100 V3.0 Pr64 Act	232 U3.0	english	Hardware Software Software Kroparans Wrad changeable V variable params Device Reconfiguration	
COM 1 direct	ROTARNOCK 100	V3.0 Winloc/32 V2.8			4

A "Donwload" has to be performed in order to take over the change. The device carries out a restart and with it the new ID is set.

9.1.4 External setting of the PROFIBUS-ID

The devices LOCON 100 & LOCON 200 can be adjusted to the corresponding address through the rotary coding switches (hexadecimal) located at the bottom side.

At ROTARNOCK 100 it is also possible to select the PROFIBUS-ID externally. For further information please have a look at the manual "ROTARNOCK 100".

10 History

29.7.21

Device	ROTARNOCK 80	ROTARNOCK 100	LOCON 100	LOCON 200
Supported				
table types				
1	Х	X	Х	X
2				
3	Х	X	Х	X
4	X	X	Х	X
5	Х	X	Х	X
6				
7		[X]	Х	Х
8	Х			
9				
A				
В		X	Х	X
С		X	Х	X
D				
E				

11 Programming cable for ROTARNOCK

The programming cable for ROTARNOCK PROFIBUS is available by the article no. V3467-n^{*}, where n^* = cable length in meters.

This cable is required for the configuration of the fieldbus parameters (ID, DB-number etc.) via the RS232-interface.

ROTARNOCK (25pol. D-SUB) PC (9pol. D-SUB) Signal Pin ws — 2 Rx Тx 17 gn Rx - 3 Tx 18 bn GND 25 — 5 GND 24V24

A voltage supply to the pins 24 (24V) and 25 (Gnd) has to be made externally.

12 Error messages

Complementary to the error messages (see chapter "Error messages" in the instruction manual for ROTARNOCK or LOCON) the following error messages are possible for cam controls with fieldbus connection:

Error	Meaning	Remark
9	Error in the internal communication between pro- cessor and fieldbus-chip	Restart the device or send it in
36	Addressed data component not existent in the S7	E. g. DB1 not existent at PROFIBUS
43	No connection between ROTARNOCK and S7	E. g. wrong setting of the ID Defective connection cable
80	Error in the structure of the S7-data component	DB-number might be set the wrong way. Generate the data component again with the generator
22	Error when saving a cam value	Wrong value (e. g. too big)
82	Logic confic error	Logic not configures

12.1 Status LED at the ROTARNOCK

In the operating state the LED lights up red to the "zero point". A LED that flashes red (4 times as fast as in case of a "regular" error) indicates an error, which can be analysed by means of the above stated table. The number can either be seen via the diagnosis data from PROFIBUS or via the RS232-interface of the WINLOC32-online-window.

13 Servicing

Should an error message occur, first off all please take all measures described in chapter Error messages.

Should questions occur that are not covered by this manual, please contact the responsible sales partner (see internet: http://www.deutschmann.de) or contact us directly.

Please keep the following information ready at hand when you call:

Device designation	
Serial number (S/N)	
Item No.	
Error number and error description (see chapter 13.1 "Returning a unit")	

You can reach us on the following Hotline number. Lines are open from

Monday to Thursday from 8 am to 12 pm and from 1 pm to 4 pm, Friday from 8 am to 12 pm.

Central office & sales department:	+49-(0)6434-9433-0
Technical hotline:	+49-(0)6434-9433-33
Fax Central office & sales department:	+49-(0)6434-9433-40
Fax technical hotline:	+49-(0)6434-9433-49

E-mail Technical hotline: hotline@deutschmann.de

13.1 Returning a unit

If you return a unit to us, we require as comprehensive a description of the error as possible. We require the following information in particular:

- What error no. is indicated
- How is the unit externally wired (outputs, ..)? Please state all connections of the unit.
- What were you last doing on the unit (error on power-up, ...)?

The more precise your information and error description, the more precisely we can check the possible causes.

For devices that are returned without an error description a standard test is made. We have to charge this standard test even if no error was found.

13.2 Internet

On our Internet-homepage (URL) various software can be loaded. Beyond that you will also find topical information on Deutschmann products, instruction manuals and a list of our distribution partners.

URL: www.deutschmann.de

S7 example project for:

Device	Project	PROFIBUS-ID
ROTARNOCK 80 / ROTARNOCK 100	NSW_v2_d.zip (German)	9
LOCON 100 / LOCON 200	NSW_v2_d.zip (English)	9