

Short instruction



Starterkit ROTARNOCK mit PROFIBUS

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Deutschmann Automation GmbH & Co. KG

1 Introduction

In order to be able to follow this brief instruction step-by-step you have to install a few software programs on your PC:

Programming software "WINLOC32" on the Support CD under: \Software\WINLOC\32Bit\SETUP_WINLOC_29*_D.exe

The menu item can be found under "Programme\Deutschmann\LOCON_ROTARNOCK\WINLOC32\DEUTSCH"

Data component generator "DBGenerator" on the Support CD under: \Software\Tools\NEW DB Generator\SetupS7DBGenerator.exe

The menu item can be found under "Programme\Deutschmann\LOCON_ROTARNOCK\tools\S7DBGenerator

Data component simulator "DBSimulator" on the Support CD under: \Software\Tools\DB Simulator\SetupDBSimulator.exe

The menu item can be found under "Programme\Deutschmann\LOCON_ROTARNOCK\tools\Datenbausteinsimulator

After the software-installation the hardware is to be set up as described in the "appendix".

*Version status

2 Generating an AWF-file automatically through WINLOC32

Starting WINLOC32

(For the further operation of WINLOC32 the menue Help is available)



The communication interface between PC and RS232-interface from the ROTARNOCK has to be defined under "Extras -> Options".

🖪 Optionen								
Anwender-Schnittstelle Farbe Ports Lizenz	<u> </u>							
Port COM 1	<u>C</u> ancel							
Geraet regelmaessig testen								
Testintervall in Millisekunden 100								
✓ Test nach Erfolg aus								

Supply the device with voltage. A window with the device's switch-on message opens.

Winloc/32 V	2.98 for WIN32				
Elle Extras Q	nine <u>W</u> indow <u>H</u> elp				
(2) (Comune (R 100-48-0)	5232 1096-F8(126)-232 03	.9 OK		× □.×	
COM 1 direct	ROTARNOCK 100 V3.0	Winloc/32 V2.98			

Read-out the device now (File-> Upload) (configuration + cam data)

Winloc/32 V2.98 for	NIK32	_ O ×
Date Extras Online H	nator Hilfe	
Neu	1261-222 H2 A AL	
Oeffnen Strg+O	1207-232 V3.0 UK	
Speichern		
Speichern als		
Alles Speichern		
C Schlessen		
Linkad Stro+U		
Drawnload Stra+D		
Terminal Strate		
Drucker Optionen		
Druck Vorschau		
× Beenden		
COM 1 direct ROTAR	400K 100 V3.0 Winkec/32 V2.98	li li

The graphic window displays an empty data record after the upload.

Datei	loc/32 V2.9 Editor Extr	18 for WIN32 as Online Ansicht Fe	nster Hilfe		
2) TO R100	rminal RSZ 1-48-040	32 96-PB(126)-232 V	3.0 Ok	ad X	
	Uplo	ad 2			
	Progra	amm 🔍 🌻 🛒 Sp	eicher 0/1000		
	Q: Kgnfig	Contraction Contract	Nocken ITC turn. dir. g ' ' 0,0 both 0,0 both 0,0 both	···· \$60`·· \$600`· \$500`· \$500`· \$500`· \$500`· \$500`· \$	
	Source Fr	Out 4 Out 5 Out 7 Out 7 Jour 9 Out 7 Out 10 Out 11 Out 12 Out 13 Out 14 Out 15	0.0 both 0.0 both		
	R 100 V3	Out 16 Out 17 0 P:64 A:48 E:A 4096 bits	0,0 both 0,0 both wise Geändert 1	()149	
COM 1	direct	ROTARNOCK 100 V3.0	Winloc/32 V2.98		

Now the cam values can be entered...

(Depending on the device some sectors or functions may be different from the picture below)

Upload 1													_ 🗆 ×
Programm 0	•	Speicher	7/1	000									
<u></u>	<->	Namen Nocke	ITC	turn. dir.	b'''	' 500' '	4 doo '	' 4soo' '	2000 '	' 2500 '	' 5000 '	' 5500	'''
Grafik	Out 1	0.100;	100,0	positive									
K <u>o</u> nfiguration	Out 2	100-20	0,0	negative									
	Out 3	200-30	0,0	both									
Kommentar	Out 4	300-40	0,0	both									
<u>R</u> ommentar	Out 5	400-50	0,0	both									
	Out 6	500-60	0,0	both									
	Out 7		0,0	both									
Analog	Out 8		0,0	both									
	Out 9		0,0	both									
	Out 10		0,0	both									
	Out 11		0,0	both									
	Out 12		0,0	both									
	Out 13		0,0	both									
	Out 14		0,0	both									
	Out 15		0,0	both									
	Out 16		0,0	both									
	Out 17		0,0	both									
	Out 18		0.0	both									-
R 100 V3.0 P:64 A:4	8 E:A 40	196 hitwise	8192 B	de Unverän	c 2422								

After entering the cams the data should be saved by: File -> Save as.

erminal RS232 0-48-04896-1	B(126)-2	232 V3.0 Ok		×				
Sat LOX								
Programm	0	y Speicher	7/1	0				
<u>G</u> rafik	↔ 0x1	Namen Nocken	100.0	um de þ''''sóo'''hóoò''hóoò''zóoò''zóoò''sóoò''sóoò''	4			
Konfigura	0.42	100-200	0.0	egalive				
	044	300-400	0.0	ath _				
Kommen	lar Out 5	400-500	0.0	oth _				
9- 1-	Out 6	500-600;	0,0	oth				
Logic	0.47		0,0	oth				
techor	Out 8		0,0	oth				
5000	0.4.9		0.0	oth				
	Out 10)	0,0	oth				
	Out 11	1	0,0	oth				
	Out 12	2	0,0	oth				
	Out 13	1	0,0	oth				
	Out 14	1	0.0	oth				
	Out 1	5	0,0	oth				
	Out 16	5	0.0	oth				
	00/12	-	0,0	on ,	1			
R 100 V3.0 P	64 A:40 E:A 4	096 bitwise		University (739				
		,			-			

Now the values that have been entered into WINLOC32 have to be transferred to the software "S7DBGenerator.exe". This is made by:

(Note: To transfer the data with WINLOC32 the file "s7csv.csv" is generated by WINLOC32 when calling the function "S7 Tool").

Winloc/32 V2.98 for WIN32 Date: Editor Dates Online Ansisti Exector	Life	_ [] ×
Cate Editor Elitras crime Andole Perder		_
Drerminal 🖸 Optionen		
Netz Beobachter	UR	
vergleiche Daten		
P P Daten übertragen	7/1000	
	en litt lawn de b'''' kón''' kón''' kón'' kénn '' bónh '' bénn '' kénn '' kénn '' kénn '' !▲	
57 1001); 100,0 positive	
Product Option Activation	100; 0,0 negative	
Out 3 200	300: 0.0 both	
Kommentar Out 4 300	1400: 0.0 both	
- Out 5 400	9500; 0.0 both	
Logik Out 6 500	6600: 0.0 both	
047	0.0 both	
Analog Out 8	0.0 both	
0410	0.0 both	
0411	00 byb	
0012	0.0 both	
Out 13	0.0 both	
Out 14	0.0 both	
Out 15	0.0 both	
Out 16	0.0 both	
0 ut 17	0.0 both	
D 100 KD 0 Durid Audo Fut 4000 hiturian		
A 100 1000 P.01 A.10 E.M. 1090 DAME		
COM 1 direct ROTARNOCK 100 V3.0 W	/nioc/32 V2.90	

The following window opens...

륣 \$7T00lDlg	_ 🗆 🗵
complete path to Generator programm	 ок
data components filename	Cancel
DB-Nr Version 1 1.0	
data component descriptive name Data_CMP	

...searching for the drive path of the "S7DBGenerator.exe" (please use the Browser symbol [...] for it). The other input fields are not important for further proceeding. Confirm with OK afterwards.

The following window should open now.

T Winloc/32 V2.9	8 for W	VIN32										. D ×
File Edit Extras	Online	View	Window	Help								_
Start		1				_				- O ×		
program 0	9	▼ me	mory [7/1	000							
<u> </u>	$\langle \circ \rangle$	names	cams	ITC	turn dir.	0 1020304050607080	000000000000000000000000000000000000000	12012220207	20203031323234363	2373600		
Graphic	Out 1		0-100;	100.0	positive					_		
Configuration	Out 2		100-200;	0,0	negative							
- Stringerwoon	Out 3		200-300;	0,0	both							
Comment	Out 4	_	300-400;	0,0	both					- 11		
	Out 5	-	400-500;	Î	S7D8Ger	nerator						
	0.47		500/600;	Da	tei Hilfe							
	048			8	Datenbau	stein	_					
	Dut 9				B-Nocke	0 HallufishalMashan	Data-Block-DB	1		\$		
	Out 10				-Wr	kel-Zeit-Nocken	Name	Data_CMP				
	Out 11			1	Ric	hlungsnocken	Version	1.0		- 11		
	Out 12			R	- Totzeit	en	Cabar Cabir de	Norman das Datastas	ander any la des			
	Out 13			1	Loge.		Namen und die Ve	nion an. Die Nummer de	es Datenbausteins			
	Out 14			1			darf zwischen 1 u noch Leerzeichen	id 65535 sein, der Name enthalten	darf weder leer sein			
	Out 15			1								
	Out 16			4								
	Out 17											
R 100 V3.0 P:64 A:	48 E:A 40	096 bitw	68						_	<u> </u>		
										24		
									2			
				Dat	enbaustei	n			¥ 1.53			
COM 1 direct	ROTARN	10CK 10	0.V3.0	W	inloc/32 V	2.98						
Start 1	a 📰		12 0	H		. 🤊 🗃 💽 📋	OPostel 9793470	🐛 Clipbo 🖂 🔾	:\Do 🕅 Winloc.	DBGe	0:20 × 0 40	13:09

3 Operation of the "data component generator"

Start "S7DBGenerator" (provided that it has not been started through WINLOC32 yet) and switch the language to English by left click on the English flag.

(For further operation of the DBGenerator the Help menue is available)

F7DBGenerator		
<u>D</u> atei <u>H</u> ilfe		
Datenbaustein Nocken Winkeł-Winkeł-Nocken Winkeł-Zeit-Nocken Gichtungsnocken Totzeiten Logik	Data-Block-DB Name Version Geben Sie hier die Namen und die Ver darf zwischen 1 und noch Leerzeichen e	1 Data_CMP 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

The software "S7DBGenerator.exe" received all cam values.

The line "angle-angle-cams" should now contain the value "6" (=number of angle-angle cams, that have been set in WINLOC32).

If desired, the value can also either be increased or reduced. If a value is defined > 6, then the first 6 cams are set in accordance with the WINLOC32-file and the following remain empty. If a value < 6 is selected it results in a deprecuation of value!

df S7DBGenerator		_ _ _ ×
Datei Hilfe		
DB erzeugen	Bestimmen Sie, wieviel Speicher für Logik re Wenn Sie eine Beintragen wird kein Speich	serviert werden soll. er fijr Logik reserviert
- Winker-Winkel-Nocken - Winkel-Zeit-Nocken - Richtungsnocken - Totzeiten	Anzahl Logik-Datensätze	ei für Lügik feserviert.
WebCull		
.ogik		V 1.53

Angle-angle cams	= 6
Angle-time cams	= 0
Direction cams	= 2
Idle times	= 1
Logic	= 0

In order to generate the data component click on "File" and "Create DC".

G7DCGenerator		×
File Help Create DC Exit angle-angle-cams angle-time-cams	Please enter how much memory	has to be reserved für logic-records
 Direction Cams Deadtimes Logic 	Number logic-records	
Logic		V 1.53

Allocate a file name...



... and save.

4 Operation of the "data component simulator"

Start "DatenbausteinSimulator.exe"

d Datenba	ustein Simulator Profib	us DP		- D ×
<u>D</u> atei <u>O</u> pti	onen			
Datenbaustei	in Simulator	COM2	V 1.45	11.

Under "Optionen" -> "Einstellungen" you will get to the settings...



... for the PROFIBUS-Dongle.

E Settings	
ProfibusOptions	ок
Profibus UART Port	
COM2	Cancel
Profibus Slave ID	
126	
GSD-Datei	
C:\Dokumente und Einstellung Open File	
Modulname	
S7DB(universal)	
Watchdog, 1-655 s	
5	

• Adjust the COM-port for the PROFIBUS UART Dongle.

• Enter the PROFIBUS Slave ID. "126" is default on delivery (current ID is passed out with "(126)" with the switch-on message).

• Select the GSD-file "R100.gsd" under "Option File" (on the Support DVD: Disc drive: \Sup port\Profibus)

GSD Datei suche	n			? ×
<u>S</u> uchen in:	Profibus	•	+ 🗈 💣 🎟 -	
Verlauf Desktop Eigene Dateien Arbeitsplatz	 Dagw2079 DAGW2862 L100 L100PARA R100Para R100Para R2P82935 R4P83231 UGIC3218 			
Netzwerkumg	Dateiname:	R100	•	Ö <u>f</u> fnen
	Dateigyp.	usp-pater	<u> </u>	Abbicchen

- Select the module name "S7DB(universal)" from the GSD-file
- Set Watchdog to "5"

Confirm with OK.

There is a second window in the background. After setting the right COM-port it should look as followed:

🚮 State Window	
Open Profibus Uart on COM Port 2 DP Open Com Port 2 successful Hardware initialized, ready to communicate Can't change Port while initialized	*

Under "Datei" -> "Oeffnen"

🚮 Datenbaustein Simulator Profibu	is DP	
Datei Optionen		
Oeffnen Ende		
Datenbaustein Simulator	COM2 V 1.45	1.

Select the generated AWL-file with a click of the left mouse button on the browser box [...].

Öffnen					<u>?</u> ×
<u>S</u> uchen in:	🕞 🔂 Starterkit Tes	ł	•	+ 🗈 💣 🎟•	
	Start.awl				
Desktop					
Arbeitsplatz					
Netzwerkumg					
	' Datei <u>n</u> ame:	Start.awl		•	Ö <u>f</u> fnen
	Datei <u>t</u> yp:	AWL-Dateien		•	Abbrechen

The view changes and the data component is displayed in the background.

Select "laden und Übertragung starten" afterwards.

After a short moment you can see the current position and the "address index" should be running continuously.

🛃 Datenba	ustein Simulator Profibus DP			
<u>D</u> atei <u>O</u> ptio	nen			
-Prozessdate	en			
Position	632 Output 0000000 0000000 Error 0	Adressindex	90	
Speed	0 0000000 00000000 Program 0	Aktualwerte üb	ertragen	
Einanna		00.00.00.00.00		
Eingang	80 54 00 00 00 00 00 00 00 00 02 78	00 00 00 00 00	00 00 00 00 0	
Ausgang	80 60 00 00 00 04 00 00			
Adresse	Name Typ	Anfangswert	Aktualwert	Kommentar 🔺
0.0	OFFSET_TABLE.Offset_Table.Offset_TyWORD	W#16#0001	W#16#0001	
2.0	OFFSET_TABLE.Offset_Table.Offset_Le WORD	W#16#0024	W#16#0024	
4.0	OFFSET_TABLE.Offset_Table.Offset_Ac WORD	W#16#0000	W#16#0000	
6.0	OFFSET_TABLE.Processdata_Long_Ta WORD	W#16#0006	W#16#0006	
8.0	OFFSET_TABLE.Processdata_Long_Ta WORD	W#16#000C	W#16#000C	
10.0	OFFSET_TABLE.Processdata_Long_Ta WORD	W#16#0024	W#16#0024	
12.0	OFFSET_TABLE.Idle_Table.Idle_Type WORD	W#16#0004	W#16#0004	
14.0	OFFSET_TABLE.Idle_Table.Idle_Length WORD	W#16#0006	W#16#0006	
16.0	OFFSET_TABLE.Idle_Table.Idle_Addres WORD	W#16#0030	W#16#0030	
18.0	OFFSET_TABLE.Control_Table.Control_WORD	W#16#0005	W#16#0005	
20.0	OFFSET_TABLE.Control_Table.Control_ WORD	W#16#0006	W#16#0006	
22.0	OFFSET_TABLE.Control_Table.Control_WORD	W#16#0036	W#16#0036	
24.0	OFFSET_TABLE.CAM_MT_Table.CAM_WORD	W#16#0007	W#16#0007	
26.0	OFFSET_TABLE.CAM_MT_Table.CAM_WORD	W#16#0048	W#16#0048	
28.0	OFFSET_TABLE.CAM_MT_Table.CAM_WORD	W#16#003C	W#16#003C	
30.0	OFESET_TABLE Direction_Cam_New_TWOBD	W#16#000F	W#16#000F	
Datenbausteir	n Simulator COM2 V 1.45			

Output 1 should now be set from "0-100" (h0 - h64)

n Datenba Datei Opti	lustein Simulator Pronbus DP				
	JIIGH .				
Prozessdat Position	en 20 Output 00000001 00000	000 Error 0	Adressindex	96	
Speed	0 0000000 00000	000 Program 0	Aktualwerte üb	ertragen	
Eingang	80 60 00 00 00 00 00 00	00 00 00 14	00 00 00 00 01	00 00 00 00 0	0
Ausgang	80 66 01 2C 00 00 01 90				
Adresse	Name	Тур	Anfangswert	Aktualwert	Kommentar 🚽
57.0	Control_Table.Res_1	BYTE	B#16#00	B#16#00	
58.0	Control_Table.Res_2	BYTE	B#16#00	B#16#00	
59.0	Control_Table.Res_3	BYTE	B#16#00	B#16#00	
60.0	CAM_MT_Table.Cam_MT[1].ProgNo	WORD	W#16#0000	W#16#0000	
62.0	CAM_MT_Table.Cam_MT[1].Output	WORD	W#16#0000	W#16#0001	
64.0	CAM_MT_Table.Cam_MT[1].On	DWORD	DW#16#00000000	DW#16#00000000	
68.0	CAM MT Table.Cam MT[1].Off	DWORD	DW#16#00000000	DW#16#00000064	
72.0	CAM MT Table.Cam MT[2].ProgNo	WORD	W#16#0000	W#16#0000	
74.0	CAM MT Table.Cam MT[2].Output	WORD	W#16#0000	W#16#0002	
76.0	CAM MT Table.Cam MT[2].On	DWORD	DW#16#00000000	DW#16#0000064	
80.0	CAM MT Table.Cam MT[2].Off	DWORD	DW#16#00000000	DW#16#000000C8	
84.0	CAM MT Table.Cam MT[3].ProgNo	WORD	W#16#0000	W#16#0000	
86.0	CAM MT Table.Cam MT[3].Output	WORD	W#16#0000	W#16#0003	
88.0	CAM MT Table.Cam MT[3].On	DWORD	DW#16#00000000	DW#16#000000C8	
92.0	CAM MT Table.Cam MT[3].Off	DWORD	DW#16#00000000	DW#16#0000012C	
					î

Besides, the output status should change when the shaft is turned to a position between 0 and 100.

If you change a value, then the changed data has to be transferred to the PROFIBUS. This is made by selecting "Aktualwerte übertragen" with the left mouse button.

This method makes the testing of a data component rather simple. It can now be imported into the S7 as decribed in the instruction manual V3526E "L100, 200, R80, 100 with Fieldbus connection".

A sample project for the S7 can be found on the Support or it is available for download at www.deutschmann.de.

5 Appendix

5.1 Hardware connection

A:	Cam control	V3406
B:	PROFIBUS Dongle	V2766
C:	Power supply	V2757
D:	RS232 cable	V2771

D: RS232 cable V2771 E: Cable cam control - PC V3467



6 Servicing

Should an error message occur, please first 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 also following chapter '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 4.00 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 Control office & cales departme	nt: 140 (0)6424 0422 40
Fax Central onice & sales department	111.+49-(0)0434-9433-40
Fax technical Hotline:	+49-(0)6434-9433-49
E-mail technical Hotline:	hotline@deutschmann.de

6.1 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 number was displayed?
- How is the unit externally wired (encoders, outputs, ..)? Please state all connections of the unit.
- What is the magnitude of the 24V supply voltage (± 0.5V) with connected LOCON?
- What were you last doing on the unit (programming, error on power-up, ...)?

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

Devices, that are sent in without an error description undergo a standard test. You have to bear the costs for that test even though no defect was found.

6.2 Internet

The current software WINLOC32 is available for download from our Internet-homepage (URL). There you can also find topical information on Deutschmann products, instruction manuals and a list of our distribution partners.

URL: www.deutschmann.de