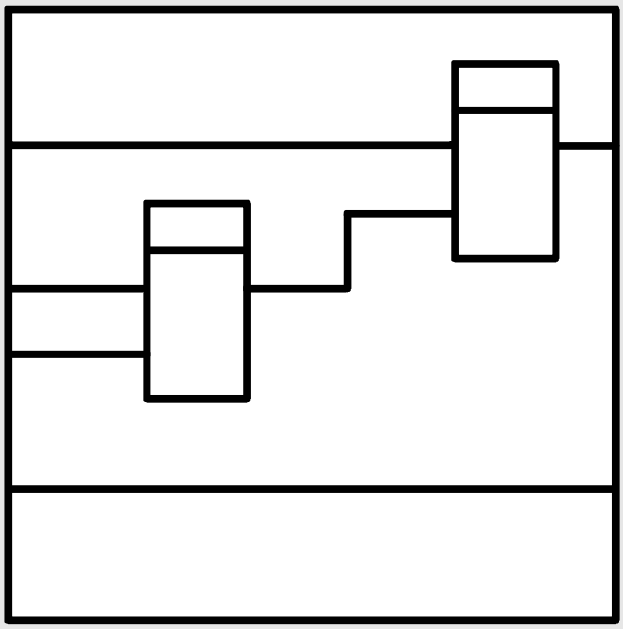
SIMADYN D
Digital Control System

User Manual

Interface module SE42



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User Manual, Interface module SE42

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1	Interface module SE42	04.91
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We have checked the contents of this Manual to ensure that they coincide with the described hardware and software. However, deviations cannot be completely ruled-out, so we cannot guarantee complete conformance. However, the information in this document is regularly checked and the necessary corrections included in subsequent editions. We are thankful for any recommendations or suggestions.

Contents

Warning information 1
1. Description 3
2. Board Design 3
3. Applications Notes 3
4. Technical Specification 4
5. Plug Connector Allocation 5
6. Appendix 6
    6.1. Block Diagram 6
    6.2. Dimension Drawing 6
    6.3. Dimension Drawing for the Cable 6
    6.4. Diagrams 7
7. ECB instructions 8

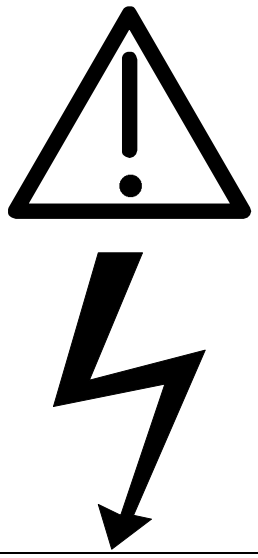
N O T E !

The information in this Manual does not purport to cover all details or variations in equipment, nor to provide for every possible contingency to be met in connection with installation, operation or maintenance.

Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, please contact your local Siemens office.

Further, the contents of this Manual shall not become a part of or modify any prior or existing agreement, committment or relationship. The sales contract contains the entire obligation of Siemens. The warranty contained in the contract between the parties is the sole warranty of Siemens. Any statements contained herein do not create new warranties nor modify the existing warranty.

Warning information



W A R N I N G !

Electrical equipment has components which are at dangerous voltage levels.

If these instructions are not strictly adhered to, severe bodily injury and material damage can result.

Only appropriately qualified personnel may work on this equipment or in its vicinity.

This personnel must be completely knowledgeable about all the warnings and service measures according to this User Manual.

The successful and safe operation of this equipment is dependent on proper handling, installation, operation and maintenance.

Definitions

* **QUALIFIED PERSONNEL**

For the purpose of this User Manual and product labels, a „Qualified person“ is someone who is familiar with the installation, mounting, start-up and operation of the equipment and the hazards involved. He or she must have the following qualifications:

1. Trained and authorized to energize, de-energize, clear, ground and tag circuits and equipment in accordance with established safety procedures.
2. Trained in the proper care and use of protective equipment in accordance with established safety procedures.
3. Trained in rendering first aid.

* **DANGER**

For the purpose of this User Manual and product labels, „Danger“ indicates death, severe personal injury and/or substantial property damage will result if proper precautions are not taken.

* **WARNING**

For the purpose of this User Manual and product labels, „Warning“ indicates death, severe personal injury or property damage can result if proper precautions are not taken.

* **CAUTION**

For the purpose of this User Manual and product labels, „Caution“ indicates that minor personal injury or material damage can result if proper precautions are not taken.

* **NOTE**

For the purpose of this User Manual, „Note“ indicates information about the product or the respective part of the User Manual which is essential to highlight.

C A U T I O N !

This board contains components which can be destroyed by electrostatic discharge. Prior to touching any electronics board, your body must be electrically discharged. This can be simply done by touching a conductive, grounded object immediately beforehand (e.g. bare metal cabinet components, socket protective conductor contact).

W A R N I N G !

Hazardous voltages are present in this electrical equipment during operation.

Non-observance of the safety instructions can result in severe personal injury or property damage.

It is especially important that the warning information in all of the relevant Operating Instructions are strictly observed.

1. Description

The terminal block SE42 is utilized when more than two racks are connected together via the parallel rack link. The maximum configuration is a link between four racks, whereby the CS11 board is inserted into one of the racks and the CS21 board in the other three racks. The cables are connected in star formation from the terminal block to the boards.

The cable screening can be implemented either via the slide lock on the plug connector or via screw terminals to the terminal block screen. This must in turn be connected via screw terminations and a short cable to the cubicle ground.

2. Board Design

- Casing mounted on a snap-on rail
- eight 50 pin Sub-D socket strips for the connection to the boards CS11 and CS21
- five screw terminations (M4) for the connection of screen and ground

3. Applications Notes

The SE42 is utilized as an inter-connection module for two or three CS21 boards to the CS11 board. (diagram 1).

The following connections must be made:

CS11/X5	-	SE42/X1	(Rack 1)
CS11/X6	-	SE42/X2	
CS21/X5	-	SE42/X3	(Rack 2)
CS21/X6	-	SE42/X4	
CS21/X5	-	SE42/X5	(Rack 3)
CS21/X6	-	SE42/X6	
CS21/X5	-	SE42/X7 *)	(Rack 4)
CS21/X6	-	SE42/X8 *)	

*) These connections are unnecessary when only two CS21 boards are connected to a CS11 board.

All connection cables between the terminal block and the boards are implemented with the cable SC36.1 . This cable runs the screen via the sliding lock on the terminal block.

Cable to be used for the terminal block SE42:

Cable SC36.1 50 pin / 2,5m Order no. : 6DD1684-0DG1

The connection cable 6DD1684-0DG1 is required as follows:

- six cables for three racks
- eight cables for four racks

Only the above mentioned pre-assembled cable can be ordered from the GWE. Implement the following when other lengths are required: GWE will supply a component set of pin strips (order no.: 6DD1680-0AE0), of which two sets are required per cable. The sets contain pin strips (cut and clamp), lock, casing as well as the necessary mechanical parts. The cable must be ordered directly from the manufacturer.

The cable must have the following features to exhibit a high fault security

- screened
- twisted pair

(i. e. SCOTCHFLEX MTP round cable, order no. 3784-25P-540A from 3M)

The appendix contains a dimension drawing with all the important information for making the cable.

The terminal block must be connected to the cubicle ground via the screw terminal S5 (M4) and a short cable (6mm^2). This cable should first be manufactured when the complete configuration is ready in order to meet the correct length. The screens of the connection cables must be fixed to the screw terminals S1 - S4, as long as they are not connected to the terminal block screen via the sliding lock and connector casing. When the connection cable of the SE42 is attached to a remotely located cubicle, then the cable screens must be connected to the ground bars of both cubicles directly upon entry into the cubicles.

The terminal block SE42 must be located in the same cubicle that also houses rack containing the CS11 board, such that the connection cable between the CS11 and the SE42 can be kept as short as possible (maximum 2.5m). The connections to the CS21 boards can be longer (maximum 15m).

4. Technical Specification

INSULATION GROUP	B according to VDE 0110 at 36 V DC
AMBIENT TEMPERATURE	0 to 70 deg. C
STORAGE TEMPERATURE	-40 to 120 deg. C
HUMIDITY CLASS	F according to DIN 40050
PROTECTION TYPE	IP00 according to DIN 40040
MECHANICAL STRESS	according to SN 29010 class 12
PACKAGING SYSTEM	Snap-on rail
DIMENSIONS	320 * 77 * 34 mm
WEIGHT	0,45 kg

5. Plug Connector Allocation

	X2	X4,X6,X8	X1,X3,X5,X7
1	GRANT21	GRANT11	---
2	GRANT32	---	---
3	REQ21	REQ11	---
4	REQ32	---	DATWRH2
5	2RDY1	2RDY1	ENAS1
6	DBD41	DBD41	DATRD2
7	DBD52	DBD52	ABD131
8	DBD61	DBD61	DT/*RD2
9	DBD32	DBD32	ABD112
10	DBD12	DBD12	ABD92
11	DBD121	DBD121	ABD82
12	DBD152	DBD152	ABD72
13	DBD141	DBD141	ABD62
14	DBD81	DBD81	ABD42
15	DBD92	DBD92	ABD12
16	DBD101	DBD101	ABD22
17	CIR11	CIR11	CIR31
18	GRANT31	---	---
19	GRANT42	---	---
20	REQ31	---	DATWRH1
21	REQ42	---	DATWRL2
22	DBD42	DBD42	DATRD1
23	DBD72	DBD72	DENB2
24	DBD62	DBD62	DT/*RD1
25	DBD01	DBD01	ABD112
26	DBD11	DBD11	ABD91
27	DBD21	DBD21	ABD102
28	DBD151	DBD151	ABD71
29	DBD132	DBD132	ABD52
30	DBD82	DBD82	ABD41
31	DBD112	DBD112	ABD32
32	DBD102	DBD102	ABD21
33	CLKCY1	CLKCY1	CIR02
34	GRANT22	GRANT12	---
35	GRANT41	---	---
36	REQ22	REQ12	---
37	REQ41	---	DATWRL1
38	2RDY2	2RDY2	ENAS2
39	DBD71	DBD71	DENB1
40	DBD51	DBD51	ABD131
41	DBD02	DBD02	ABD121
42	DBD31	DBD31	ABD111
43	DBD22	DBD22	ABD101
44	DBD122	DBD122	ABD81
45	DBD131	DBD131	ABD51
46	DBD142	DBD142	ABD61
47	DBD111	DBD111	ABD31
48	DBD9	DBD91	ABD11
49	CLKCY2	CLKCY2	CIR01
50	CIR12	CIR12	CIR32

6. Appendix

6.1. Block Diagram

Block Diagram	3GE 465 681 9042.00 SU

6.2. Dimension Drawing

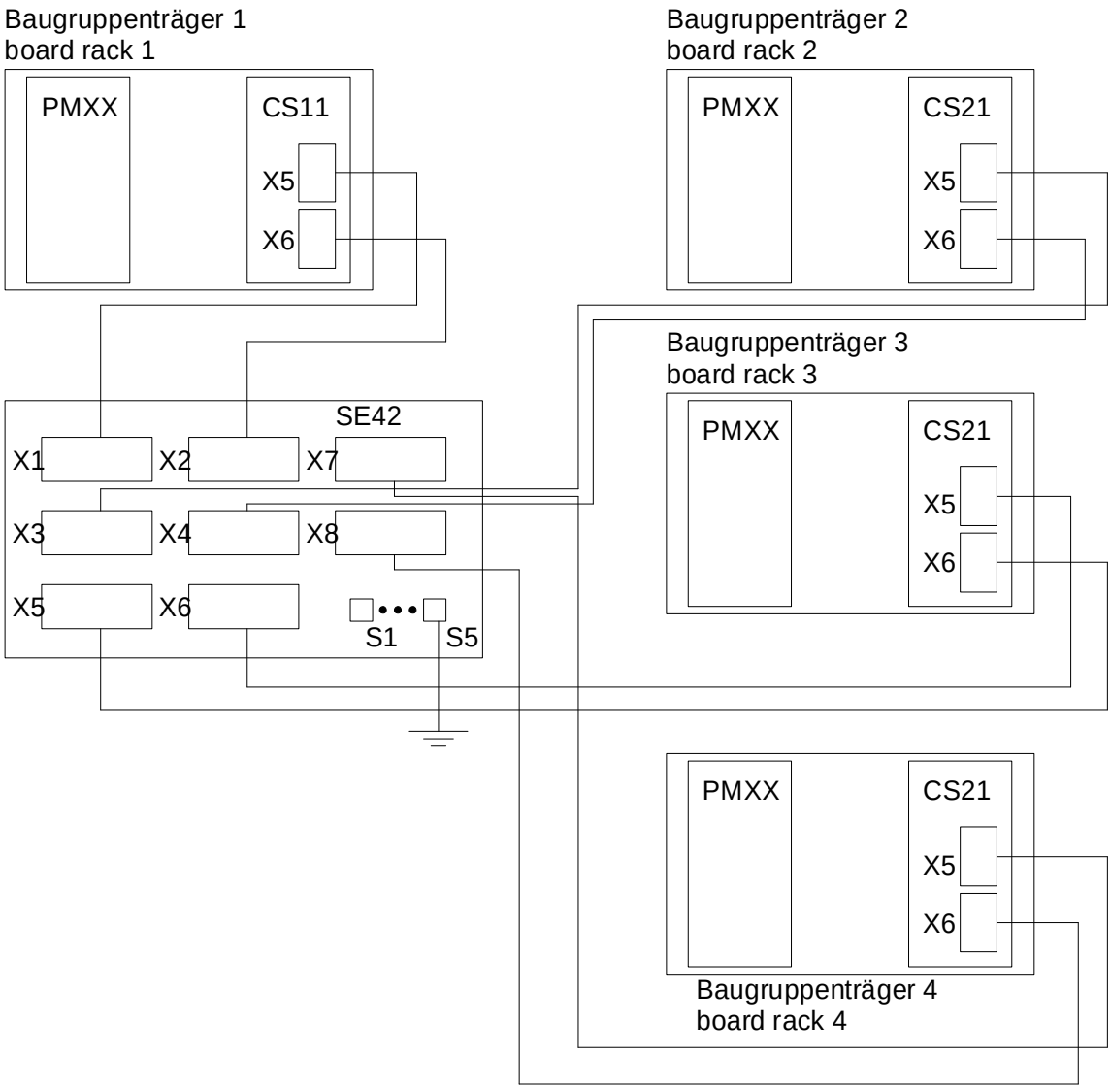
Dimension drawing	3GE 465 681 9042.00 MB

6.3. Dimension Drawing for the Cable

Dimension drawing for the cable	3GE 465 684 9000.09 MB

6.4. Diagrams

Diagram 1: Linking four racks



7. ECB instructions

Components which can be destroyed by electrostatic discharge (ECB)

Generally, electronic boards should only be touched when absolutely necessary.

The human body must be electrically discharged before touching an electronic board. This can be simply done by touching a conductive, grounded object directly beforehand (e.g. bare metal cubicle components, socket outlet protective conductor contact.

Boards must not come into contact with highly-insulating materials - e.g. plastic foils, insulated desktops, articles of clothing manufactured from man-made fibers.

Boards must only be placed on conductive surfaces.

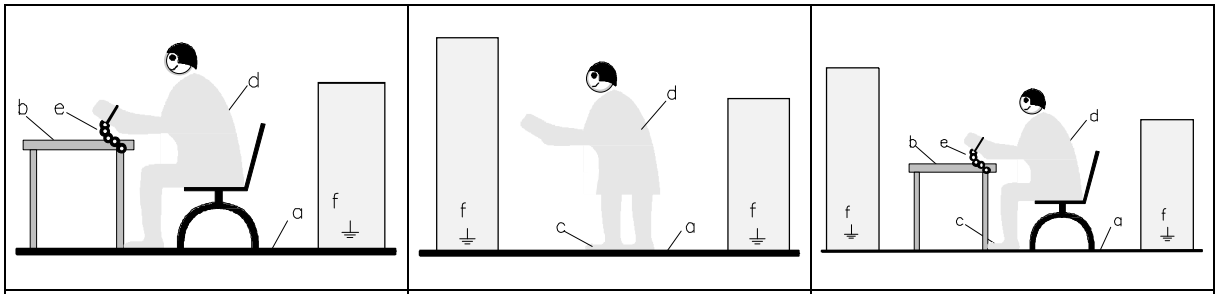
When soldering, the soldering iron tip must be grounded.

Boards and components should only be stored and transported in conductive packaging (e.g. metalized plastic boxes, metal containers).

If the packing material is not conductive, the boards must be wrapped with a conductive packing material, e.g. conductive foam rubber or household aluminum foil.

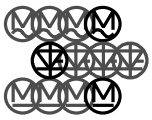
The necessary ECB protective measures are clearly shown in the following diagram.

a = Conductive floor surface
b = ECB table
c = ECB shoes
d = ECB overall
e = ECB chain
f = Cubicle ground connection



Seated	Standing	Standing/sitting

Drives and Standard Products
Motors and Drives Systems Group
Postfach 3269, D-91050 Erlangen



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