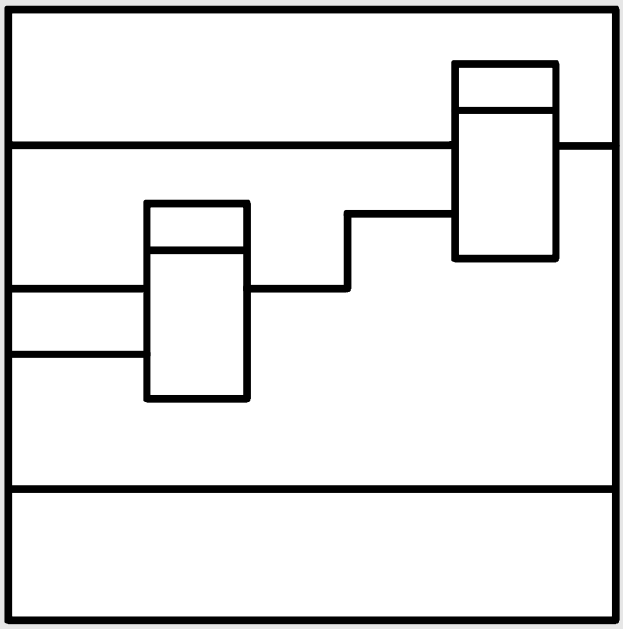
SIMADYN D
Digital Control System

User Manual

Interface board SA10



Edition 05.95

DK-Nr. 281342

User Manual, Interface board SA10

Edition		Edition status
1	Interface board SA10	04.93
2	Interface board SA10	09.94
3	Interface board SA10	05.95

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

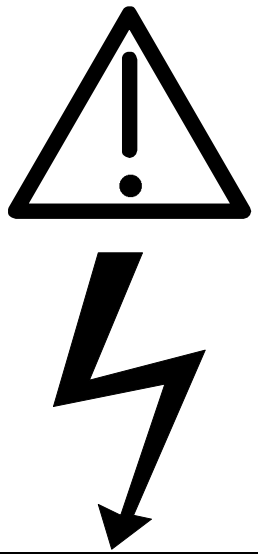
N O T E !

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. Ordering information

SA10: 6DD 1681- 0AH2

2. Function description

The *SA10* interface board*,10-channel analog I/O block* is used to connect 10 analog signals as input/output signals to/from the SIMADYN D boards.

The board consists of a 20-pin flat connector X1 for connecting to SIMADYN D boards, and a terminal block with 2*10 screw terminals for the analog inputs/outputs.

3. Board design

* Housing, which can be snapped onto mounting rails
* Terminal block consisting of screw terminals
- 20 terminals as analog signals (10 channels)
* 20-pin ribbon cable connector
- 20 pins for analog signals
* Labels or print to identify the board

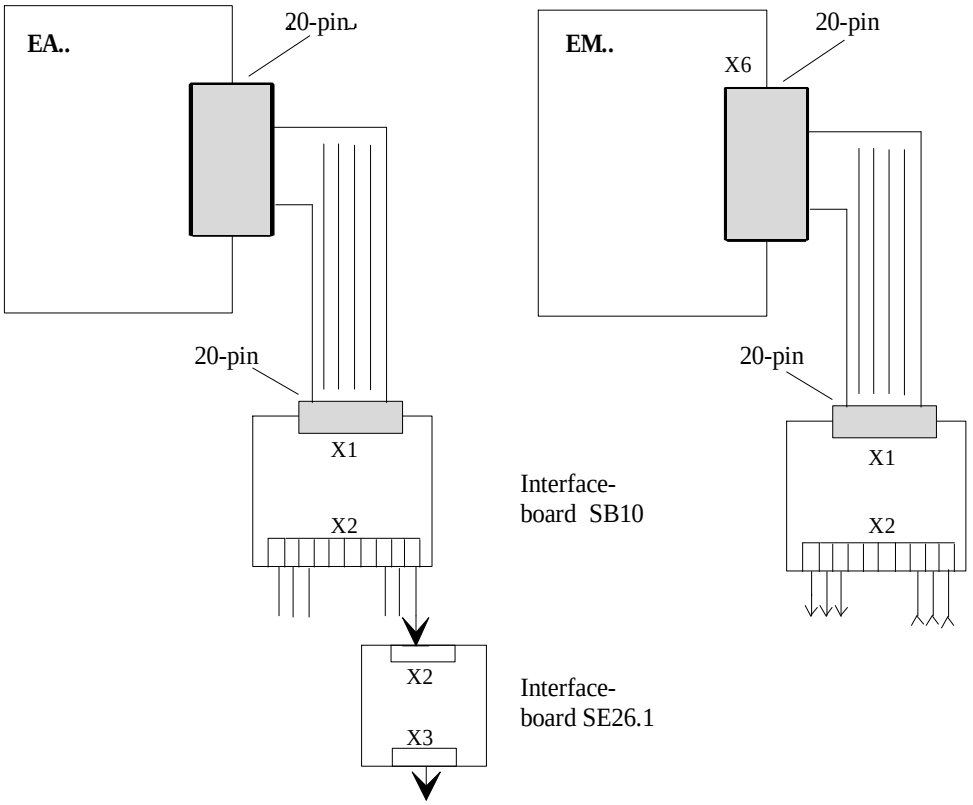
4. Application information

The SA10 interface module is required for analog signal input/outputs to the system boards.

The connection to SIMADYN D boards in the subrack is established using a 20-core ribbon cable. Recommended cable:

SC12: MLFB 6DD1684-0BC0 (twisted pair ribbon cable)

A typical application is illustrated in the following diagram.



5. Technical data

INSULATION GROUP	acc. to VDE 0160/Draft, came into force 12/90
AMBIENT TEMPERATURE	0 to 55 ^{o}C
STORAGE TEMPERATURE	-40 to 70 ^{o}C
HUMIDITY CLASS acc. to DIN 40040	F
DEGREE OF PROTECTION acc. to DIN 40050	IP00
MECHANICAL STRESSING	acc. SN 29010, Class 12
MOUNTING SYSTEM	Can be mounted on mounting rails
DIMENSIONS	118mm*135mm*42mm
WEIGHT	approx. 250g

ANALOG SIGNALS	
-quantity	10
-max. current/cable	0.1A
-analog voltage range	-15V to +15V

6. Connector assignment

6.1. Assignment, ribbon cable connector X1

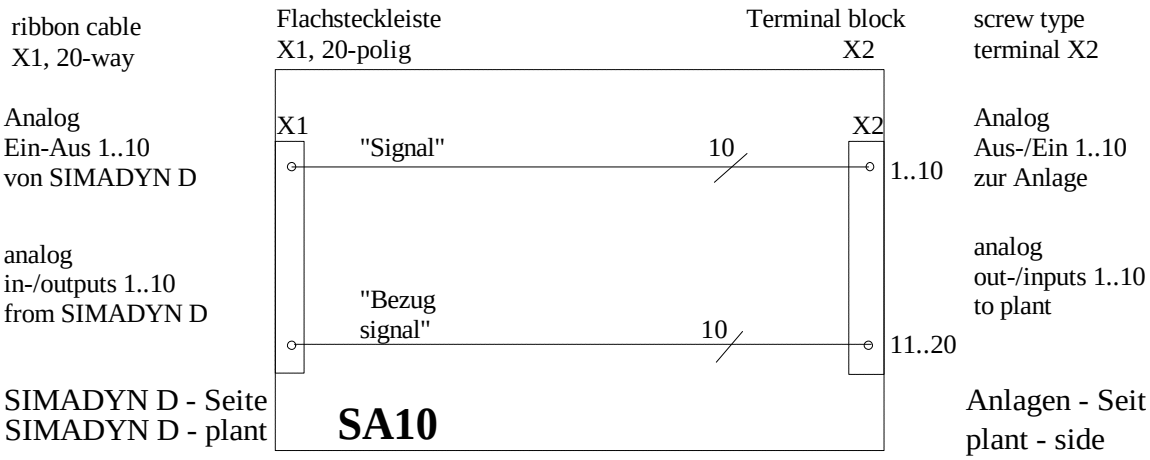
Pin at X1	Designation	Pin at X1
1 ("Signal")	Channel 1	2 ("Ref. signal")
3 ("Signal")	Channel 2	4 ("Ref. signal")
5 ("Signal")	Channel 3	6 ("Ref. signal")
7 ("Signal")	Channel 4	8 ("Ref. signal")
9 ("Signal")	Channel 5	10 ("Ref. signal")
11 ("Signal")	Channel 6	12 ("Ref. signal")
13 ("Signal")	Channel 7	14 ("Ref. signal")
15 ("Signal")	Channel 8	16 ("Ref. signal")
17 ("Signal")	Channel 9	18 ("Ref. signal")
19 ("Signal")	Channel 10	20 ("Ref. signal")

6.2. Assignment of the analog input/outputs, terminal block X2

Terminal	Designation	Terminal
1 ("Signal")	Channel 1	11 ("Ref. signal")
2 ("Signal")	Channel 2	12 ("Ref. signal")
3 ("Signal")	Channel 3	12 ("Ref. signal")
4 ("Signal")	Channel 4	14 ("Ref. signal")
5 ("Signal")	Channel 5	15 ("Ref. signal")
6 ("Signal")	Channel 6	16 ("Ref. signal")
7 ("Signal")	Channel 7	17 ("Ref. signal")
8 ("Signal")	Channel 8	18 ("Ref. signal")
9 ("Signal")	Channel 9	19 ("Ref. signal")
10 ("Signal")	Channel 10	20 ("Ref. signal")

7. Attachments

7.1. Block diagram



SIMADYN D SA10, 6DD1681-0AH2, block diagram

7.2. Dimension drawing

Dimension drawing 3SE 465 681.9007.20 MB

8. 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.

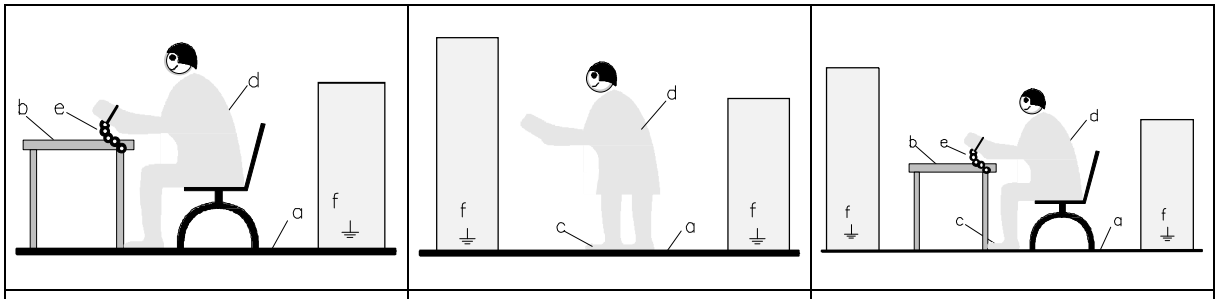
When soldering, the soldering iron tip must be grounded.

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.

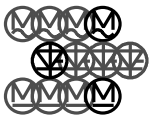
The necessary ECB protective measures are clearly shown in the following diagram.

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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