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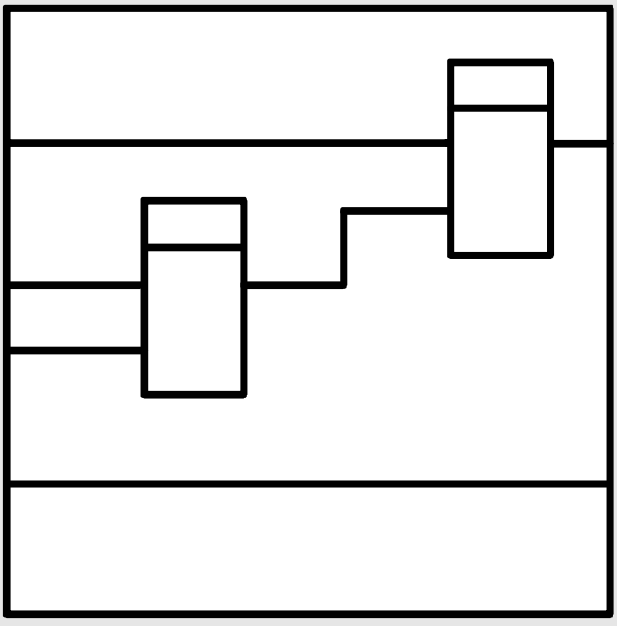
Find the *Siemens MS5* at our website: ***Click HERE***

SIEMENS

SIMADYN D
Digital Control System

User Manual

Program memory submodule
MS5/51/55



Edition 11.98

DK-Nr. 252441

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User Manual, Program memory submodule MS5/51/55

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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.

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Contents

Warning information 1
1. Ordering information 3
2. Function description 3
3. Application information 3
    3.1. MS55 SRAM memory card 3
4. Technical data 4
5. Others 4
    5.1. Attachments 4
6. ECB instructions 5

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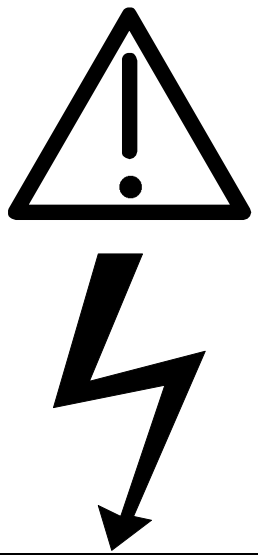
N O T E !

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.

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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.

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1. Ordering information

MS5	6DD 1610 - 0AH0
MS51	6DD 1610 - 0AK0
MS55	6DD 1610 - 0AH5

2. Function description

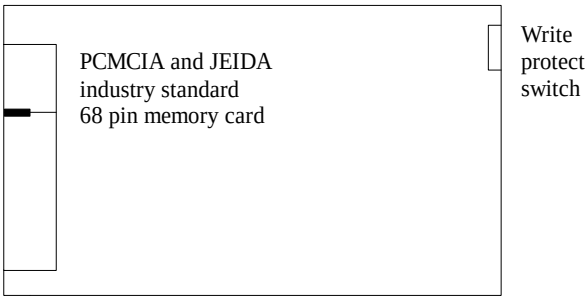
Program memory sub-modules MS5/51 and MS55 are used to store the processor program.

The program memory sub-modules are inserted at slot X50 of the PM3, PT31, PT32,PM4,PM5 and PM6 processor modules in the front panel recess.

The MS5/51 memory sub-module has a 2/4 Mbyte flash memory to store the engineering information and 8 kbyte EEPROM for operating parameters which can be modified.
The flash memory is a non-volatile flash memory which can be erased and programmed electrically.

The MS55 memory sub-module has a 2 Mbyte SRAM for storing the engineering information and 8 kbyte EEPROM for operating parameters which can be changed.
The SRAM contents are buffered when the voltage fails via a battery inserted in the module. The battery can be replaced without data loss.

The MS5/51 and MS55 memory sub-modules are based on the JEIDA / PCMCIA industrial standard for memory cards with a 68-pin connection.



3. Application information

3.1. MS55 SRAM memory card

The MS55 memory card has a lithium battery **(CR2325, 3.0V/200mAh, 23mm * 2.5mm)**
Supplier: e.g. VARTA Batterie AG Hannover

To change the battery, a pointed object is inserted in the hole at the upper end of the memory card. The battery holder can then be withdrawn and the battery changed. Please observe the correct polarity when replacing the battery. The battery must be replaced within 30 minutes to prevent data loss. The battery should be changed every 13 months.

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4. Technical data

	MS5	MS51	MS55
- Connection acc. to JEIDA/ PCMCIA	68 pin	68 pin	68 pin
- Storage temperature	-20 to +60°C	-20 to +60°C	-20 to +60°C
- Memory	2 Mbyte flash memory + 8 kbyte EEPROM	4 Mbyte flash memory + 8 kbyte EEPROM	2 Mbyte SRAM + 8 kbyte EEPROM
- Access time	200 ns	200 ns	200 ns
Current drain	5V / 100 mA	5V / 100 mA	5V / 190 mA
Dimensions (W x H x D)	3.3 x 54 x 85.6 mm	3.3 x 54 x 85.6 mm	3.3 x 54 x 85.6 mm
Order No.	**6DD1610-0AH0**	**6DD1610-0AK0**	**6DD1610-0AH5**
Weight	0.03 kg	0.03 kg	0.03 kg

5. Others

5.1. Attachments

Dimension drawing 4SE. 465 610. 9007. 00 MB

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6. 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.

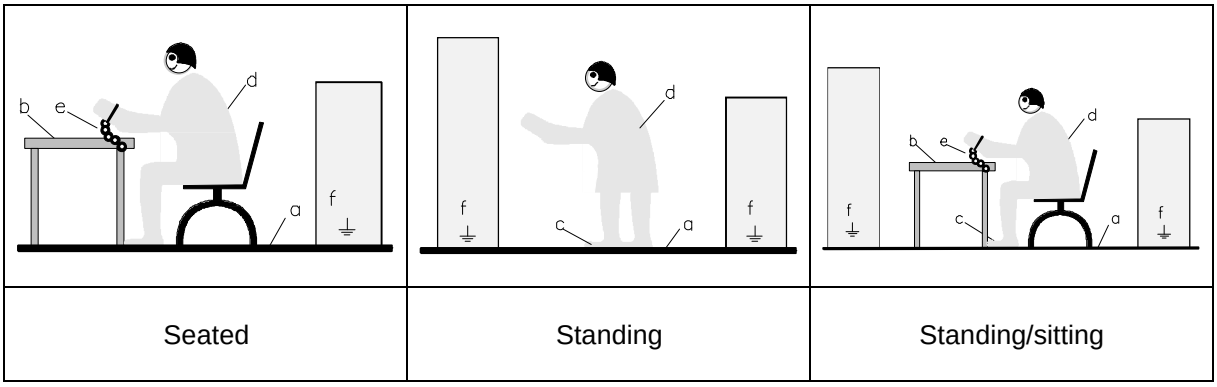
When soldering, the soldering iron tip must be grounded.

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

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