

SIEMENS



SIMATRIX 648 V3 with user-definable parameterization

Operating instructions

Fire Safety & Security Products

Siemens Building Technologies

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Safety information



WARNING

Certain parts of this device carry dangerous voltages during operation. Incorrect use of the device can therefore result in death or severe personal injury and extensive damage to property.

Connection, commissioning and maintenance must only be carried out by suitably qualified personnel.

Disconnect the device from the power supply before carrying out any work on it.

We recommend that you use the support and services of the nearest, responsible Siemens servicing centers if a device is faulty.



NOTE:

This Instruction Manual cannot describe every possible case in connection with installation, operation or maintenance

Before using the device, read the safety information and this Instruction Manual.

Correct and safe operation of this device is dependent on proper transport, storage, installation and connection, as well as careful operation and maintenance.

Only connect device to appropriate power supplies (see Section 7.13 Power Supply Connection).

Make sure that no objects, especially those made of metal, enter the inside of the device.

Liquids or moisture must not enter the device.

The device must only be opened by qualified personnel.

Should you require further information, or should particular problems occur which are not handled in sufficient depth in this Manual, help can be requested through your local Siemens office or representative.

Your attention is additionally drawn to the fact that the contents of this Instruction Manual are not part of a previous or existing agreement, commitment or statutory right and do not change these. All commitments on the part of Siemens are contained in the respective sales contract which also contains the complete and solely applicable warranty conditions. These warranty conditions in the contract are neither extended nor limited by the contents of this Instruction Manual.

Contents

Safety information	3
1 Introduction	7
1.1 Performance	7
1.2 Principle of Operation	8
1.2.1 Standard Programs	9
1.2.1.1 Basic Program	10
1.2.1.2 Alarm Program 1	10
1.2.1.3 Alarm Program 2 (Factory Setting)	11
1.2.1.4 Alarm Program 3	11
1.2.1.5 Alarm Program 4	12
1.2.1.6 Alarm Program 5	12
1.2.1.7 Alarm Program 6	13
2 Ordering Data	14
3 Technical Data	16
4 System Design	17
4.1 Controller Design	18
4.1.1 Standard Interfaces	18
4.1.2 Options	21
5 Connected Devices	22
6 Installation Information	23
7 Connection	23
7.1 Connection of SIMATRIX 648	24
7.1.1 Assignments of 37-contact Sub-D Socket 'ALARM 1-16/SCU'	25
7.1.2 Assignments of Sub-D socket 'ALARM-OUT'	26
7.2 Connection of Terminals	26
7.2.1 Terminal Connected to "Terminal Socket 1-4"	27
7.3 Connection of Power Supply Units (CDCx)	28
7.3.1 CDCx Connected to Terminal Socket	29
7.3.2 CDCx to "ALARM x/SCU"	30
7.4 Connection of CAC0101 to "ALARM x/SCU"	30
7.5 Connection of Alarm Lines	31
7.5.1 Alarm Line to "ALARM x/SCU"	32
7.6 Connection of a Video Recorder	32
7.7 Connection of a Digital Picture Storage Unit	32
7.8 Connection of Picture Storage Unit and Video Recorder	33
7.9 Connection of an External Computer	34
7.9.1 Assignments of Sub-D Plugs COM 2, COM 3 and COM 4	34
7.9.2 External Computer at COM 2, COM 3 or COM 4	35
7.10 Connection of Video Inputs	35
7.10.1 Video Signal Requirements	36
7.11 Connection of Video Outputs	36
7.12 Power Supply Connection	36
7.13 Extension with SIMATRIX 648	37
7.13.1 Extension of the video inputs with SIMATRIX 648 (all types) (input module 2GF2208-8AB)	37
7.13.2 Extension of the video outputs with SIMATRIX 648 (2GF2208-8AA) up to serial number 001399 (output module 2GF2208-8AC)	38
7.13.3 Extension of the video outputs with SIMATRIX 648 V3 (2GF2208-8EA) from serial number 001400 (output module 2GF2208-8EB)	38

7.13.4	Extension of interfaces of the terminals with SIMATRIX 648 (all types) (interface card for terminals 2GF2208-8AD)	39
7.13.5	Extension of the TTY control outputs and alarm inputs with SIMATRIX 648 (all types) (interface card ALARM/SCU 2GF2208-8AE)	40
8	Startup	41
8.1	Standard parameterization.....	42
8.2	Video signal monitoring.....	42
9	Operation	43
9.1	Basic Program.....	44
9.1.1	Manual Selection of Camera and Monitor using Terminal 1	44
9.1.2	Start and Stop Monitor Cycle using Terminal 1	44
9.1.3	Manual Selection of Camera and Monitor using Terminals 2,3,4	44
9.1.4	Start and Stop Monitor Cycle using Terminals 2,3,4	45
9.1.5	Control of Cameras with Pan-and-tilt Drive and Lens Control	45
9.1.6	Position Control.....	45
9.1.7	Enter or Modify Monitor Cycles	45
9.1.7.1	Delete Access	46
9.1.7.2	Picture Cycle with Terminal 1	46
9.1.7.3	Automatic Picture Cycle with Terminals 2, 3, 4	46
9.1.8	Enter or Modify Positions	47
9.1.9	Alarm Programs	47
9.1.9.1	Enter Password.....	47
9.1.9.2	Switch Alarm Lines to Active.....	48
9.1.9.3	Switch Alarm Lines to Passive	49
9.1.9.4	Delete Access	50
9.2	Alarm Programs	50
9.2.1	Alarm Program 1	50
9.2.2	Alarm Program 2	51
9.2.3	Alarm Program 3	52
9.2.4	Alarm Program 4	54
9.2.5	Alarm Program 5	55
9.2.6	Alarm Program 6	56
10	Index	58

1 Introduction

1.1 Performance

The SIMATRIX 648 video matrix consists of a system controller and matrix unit as well as parameterization software, and permits the connection of up to 64 video input signals to a maximum of 8 video outputs as desired.

Matrix

- Minimum configuration: 16 / 4
Maximum configuration: 64 / 8
- Inputs can be extended in steps of 16
Outputs can be extended in steps of 4
- Connection of video signals via BNC sockets
- Monitoring of video signal failure

System controller

Basic configuration

- Three serial interfaces (V.24) for connection of external systems, such as IVM, TELEMAT MD/MTD, SISTORE NT, and for parameterization via a PC and selection of substations
- Connection of 2 terminals with 32 freely-assignable keys each
- Basic program and 4 alarm programs pre-parameterized
- 8 serial TTY (20-mA) interfaces for connection of power supply units for cameras with pan-and-tilt drive and lens control
- Interfaces for connection of 16 alarm lines
- Position memory can be called in conjunction with the CDC0502 power supply unit
- Control of remote camera in conjunction with the CAC0101 supplementary module
- 8 control outputs for video recorders and picture storage units
- Relay with 2 floating changeover contacts for master alarm
- Connection of a serial logging printer

Options

- Interface card for connection of 2 further terminals (max. 4)
- Alarm/CDCx interface card with 8 serial TTY (20-mA) interfaces for connection of power supply units for cameras with pan-and-tilt drive and lens control (max. 32) and 16 alarm lines (max. 64)
- Extension module for 16 further video inputs (max. 64)
- Extension module for 4 further video outputs (max. 8)

Operation

- Simple graphic input and visualization using the interactive video management system (IVM)
- Terminals with freely-assignable keys

Parameterization

The following functions of the SIMATRIX 648 can be parameterized:
Input terminals with selection assignment

- Freely parameterizable picture cycle (can be started automatically following switching-on)
- Selection of group (max. 4 cameras)
- Key function of terminals
- Screen menus in English, German and Spanish
- Parameter set can be stored on data medium (library function)
- On-screen output of text and time of input
- On-screen time/date can be assigned to up to 8 monitors
- Freely-editable camera and alarm texts
- Position memory can be called in conjunction with the CDC0502 power supply unit
- Home positioning of cameras with pan-and-tilt drive and lens control
- Password protection for activation/deactivation of alarm lines
- Time-controlled alarm programs (with day-of-week function)
- Selection of alarm line (max. 4 cameras)
- Alarm positioning of cameras with pan-and-tilt drive and lens control
- Alarm picture cycle on monitor
- Logging functions using the optional IVM user desktop

1.2 Principle of Operation

The **SIMATRIX 648** permits a compact, modular design for CCTV systems with video inputs and outputs.

The video signals applied to the video inputs of the **SIMATRIX 648** video matrix can be connected in any combination to the video monitors, picture storage units, video printers etc. which are connected to the video outputs. The **SIMATRIX 648** can be selected manually from up to 7 terminals (max. 4 input terminals and max. 3 IVM terminals) and by means of alarm signals from external contacts or from the TELEMAT (see Fig. 1).

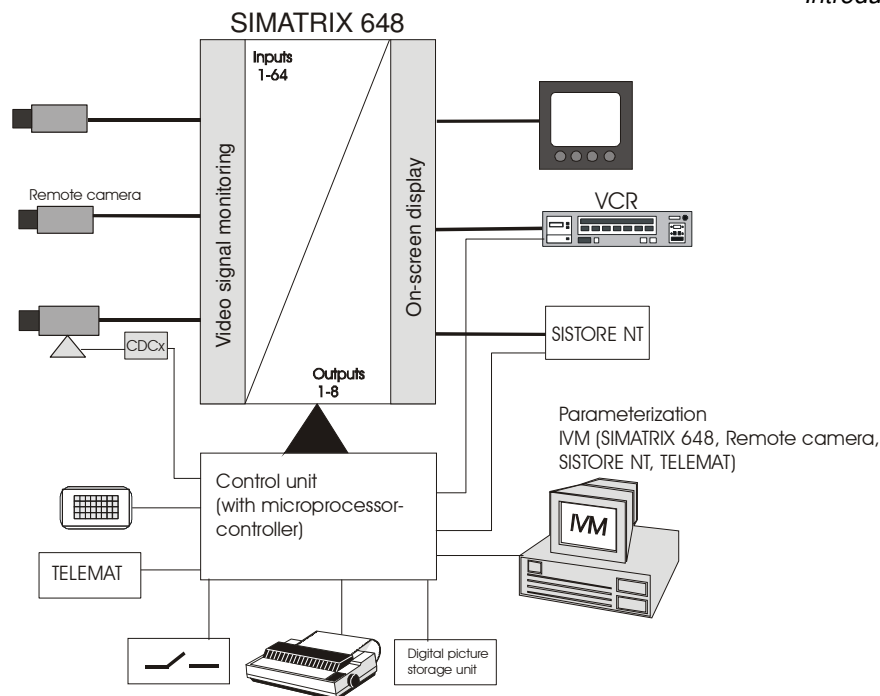


Fig. 1 Video monitoring system with SIMATRIX 648 as control center

The facility of user-definable parameterization, i.e. combination of the basic functions present in the operating software in any manner, permits easy adaptation of the **SIMATRIX 648** video matrix to the respective system configuration.

In addition to the main task of connecting pictures, it is also possible to remote-control cameras with a pan-and-tilt drive and lens controller including control of their position.

On-screen displays are possible for the date and time as well as texts for identifying cameras and for definition of automatic picture cycles.

An important feature is the processing of incoming alarms structures (alarm lines, TELEMAT) with switching of the "Alarm camera" to the envisaged monitor, as well as control of video recorders and picture storage units.

Assignment of alarm lines to cameras, assignment of alarm pictures to individual monitors, and selection of group or individual switching can be set as desired.

1.2.1 Standard Programs

The basic program and 6 alarm programs supplied on diskette already provide operational parameter settings which can be used directly.

These programs include the most frequent applications. Based on these, it is easily possible to carry out parameter settings according to customer-specific requirements.



NOTE:

Alarm program 2 is factory-set

1.2.1.1 Basic Program

The basic program operates without alarm processing:

Number of connectable:

- Cameras: 1 to 16
- CDCx: 1 to 16
- Monitors: 1 to 4
- Terminals: 1 to 4
- IVM terminals: 1 to 3

The following functions are implemented:

- Terminal 1 for central selection, terminals 2 to 4 for distributed selection (see Operator's Guide).
- The monitor cycles can be defined for all monitors, and also protected by a password.
- Camera identification, date, time, camera failure message on screen of monitor.
- Using one terminal, it is possible to remote-control 16 cameras with a pan-and-tilt drive and lens control via the **SIMATRIX 648**.
- Position memory can be parameterized per CDCx (camera with pan-and-tilt drive and lens control with potentiometer and special CDCx are required).

1.2.1.2 Alarm Program 1

The alarm program contains the basic program with the following extension for alarm processing:

- An alarm line can be additionally connected for each camera.
- The 16 alarm line inputs are parameterized for external alarm lines.
- In the event of an alarm, the 1st alarm picture is output on monitor 1. If a 2nd alarm occurs before the 1st alarm has been acknowledged, the 2nd alarm picture is output on monitor 2.
- The first two alarm pictures are output on monitors 1 and 2, i.e. selected alarm pictures are not overwritten by new alarms.
- All alarm pictures in the alarm picture cycle are output on monitor 4:

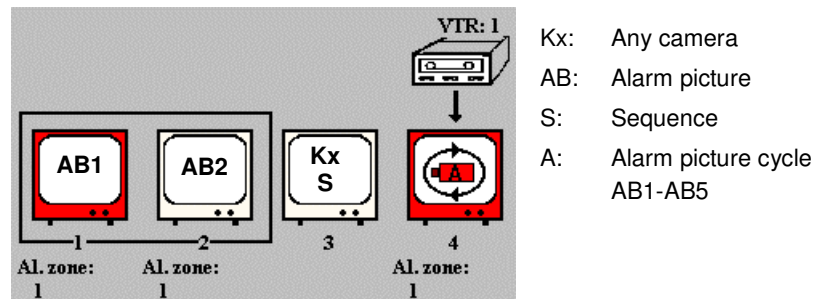


Fig. 2 Alarm connection sequence of alarm program 1

- Alarms output on monitors 1 and 2 can be acknowledged. If more than 2 alarms are present, the next alarm picture is output on the monitor which has just been acknowledged. This guarantees that every alarm must be acknowledged manually.

- A video recorder is automatically started when the 1st alarm occurs, or a picture storage unit can also be controlled. The video recorder is stopped when the last alarm has been acknowledged, or switched over to the previously set time-lapse mode.

1.2.1.3 Alarm Program 2 (Factory Setting)

Like alarm program 1, but with the following differences:

- The last alarm pictures are always output on monitors 1 and 2, i.e. the selected alarm pictures are overwritten by new ones.

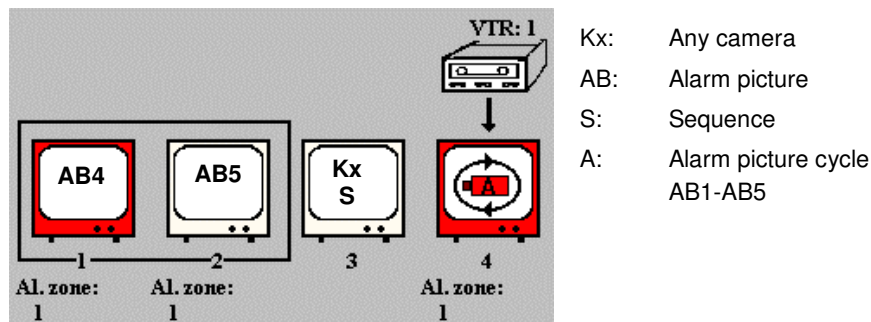


Fig. 3: Alarm connection sequence of alarm program 2

- All alarms can only be acknowledged in the reverse order to which they have occurred. This guarantees that every alarm must be acknowledged manually.

1.2.1.4 Alarm Program 3

Like alarm program 1, but with the following differences.

The alarm program is not recommended for combination with a TELEMAT or IVM.

The following differences exist with respect to alarm program 1:

- In the event of an alarm, the 1st alarm picture is output on monitor 1. If a 2nd alarm occurs before an alarm has been acknowledged, the 1st alarm picture is "shifted" to monitor 2. The 2nd alarm picture is output on monitor 1.
- If there are further alarms, the alarm pictures are "shifted" on by one monitor each. Thus the last alarm picture which has occurred is always displayed on monitor 1.

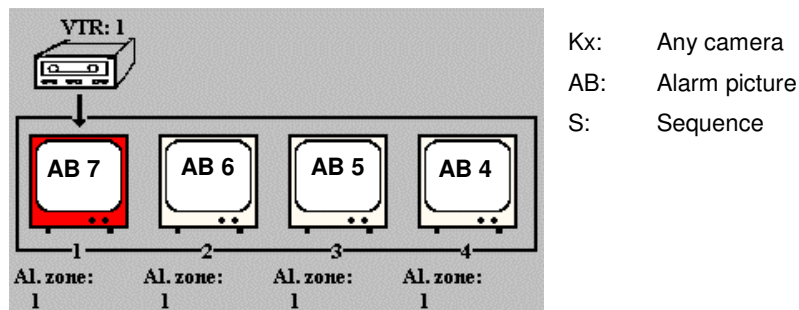


Fig. 4: Alarm connection sequence of alarm program 3

- If 4 alarms are present, the alarms which occurred first are automatically acknowledged when further alarms occur, i.e. the 1st alarm is acknowledged when a 5th alarm occurs, the 2nd when a 6th occurs etc.
- A video recorder or picture storage unit is started when an alarm occurs.

1.2.1.5 Alarm Program 4

Like alarm program 1, but with the following differences:

- In the event of an alarm, the alarm camera is connected to monitor 1, and the adjacent camera to monitor 2. The alarm picture is simultaneously output on monitor 4.
- If further alarms occur before the 1st alarm has been acknowledged, these alarm pictures are incorporated into the alarm sequence and output on monitor 4.

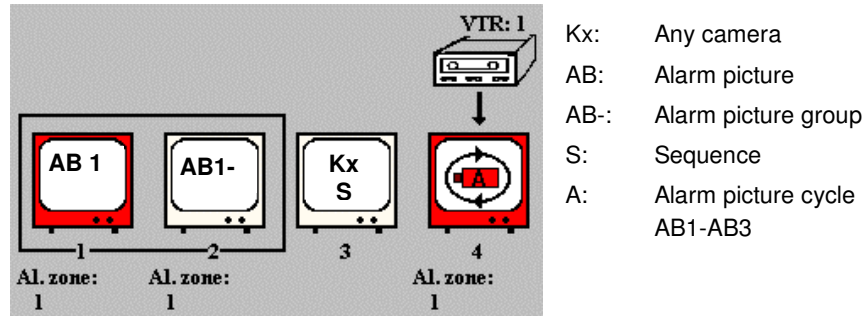


Fig. 5: Alarm connection sequence of alarm program 4

An alarm on monitor 1 can be acknowledged; monitor 2 becomes free simultaneously. If further alarms are present, the two pictures of the 2nd alarm are output on monitors 1 and 2. This guarantees that every alarm must be acknowledged.

1.2.1.6 Alarm Program 5

Like alarm program 2, but with the following differences:

- The picture of the alarm camera is output on monitor 1, and the picture of the adjacent camera on monitor 2. Alarm pictures which are already displayed are overwritten by the new alarm pictures. Every alarm must therefore be acknowledged manually.

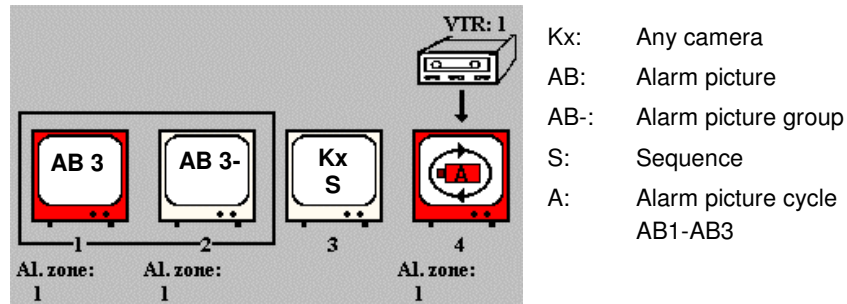


Fig. 6: Alarm connection sequence of alarm program 5

1.2.1.7 Alarm Program 6

Like alarm program 3, but with the following differences:

- In the event of an alarm, the alarm camera is connected to monitor 1, and the adjacent camera to monitor 2.
- If a 2nd alarm occurs, the pictures of the 1st alarm are "shifted" to monitors 3 and 4. The pictures of the 2nd alarm are then output on monitors 1 and 2.
- If a further alarm occurs before the 1st and/or 2nd alarm has been acknowledged, alarm 1 is acknowledged automatically, the 2nd alarm is "shifted" to monitors 3 and 4, and the new alarm is output on monitors 1 and 2.

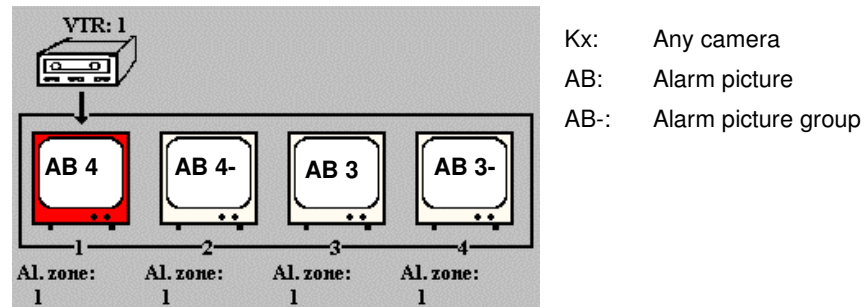


Fig. 7 Alarm connection sequence of alarm program 6

2 Ordering Data

Item	Order No.	Approx. weight in kg
SIMATRIX 648 video matrix V3 16 video inputs, 4 video outputs; PAL version * 8 TTY interfaces for CDCx/SCU, 16 alarm inputs for alarm lines, 2 TTY interfaces for terminals, with basic program and 4 alarm programs	2GF2208-8EA	4.3
*NOTE: NTSC version on request		
Options for extension		
Input module (matrix card 16/8) to extend the video matrix by groups of 16 video inputs (max. 64 video inputs)	2GF2208-8AB	0.24
Output module to extend the SIMATRIX 648 video matrix V3 by 1 video output (4 output modules max.) up to a total of 8 video outputs	2GF2208-8EB	0.03
Interface card for terminals * to connect two further terminals (max. 4)	2GF2208-8AD	0.35
Interface card (alarm/CDCx) to extend by 8 TTY control outputs for power supply units (max. 32) and 16 alarm inputs for alarm lines (max. 64)	2GF2208-8AE	0.06
Extension of basic version Installation of all selected options into basic version	2GF2208-8AF	
*NOTE: The additional CKAx terminals must be powered with DC 12 V, 200 mA from an external plug-type power supply unit		
Accessories, not included in delivery!		
CKA3210 terminal with 32 keys, for selection of video matrix for remote-control of cameras with pan-and-tilt drive and lens control, with optical and audible alarm outputs	2GF2207-8AC	0.5
CKA4820 terminal in desktop housing with 31 keys and 1 joystick, for selection of the video matrix and for remote control of cameras with pan-and-tilt drives and lens control, with optical and audible alarm signaling devices	2GF2400-8EC	1.05
Plug-type power supply unit for power supply to terminals, 230 V, 50 Hz/DC 12 V, 640 mA, for indoor use, with 2 m DC cable with open, tin-plated ends	2GF1800-8BE	0.53
Cable for connection of terminal to video matrix, with plug connectors		
– 3 m long	2GF2207-8AE	
– 7 m long	2GF2207-8AF	
– 10 m long	2GF2207-8AG	

Item	Order No.	Approx. weight in kg
Cable for connection of an external computer with 9-contact AT connector, 2 m long, for parameterization of video matrix and loading of an alarm program	2GF2208-8AG	
Pan / Tilt Head CDD2410	2GF1708-8EA	7.0
Control unit CDC0501 for pan/tilt head, without position memory	S24245-B5015-A1	2.85
Control unit CDC0502 for pan/tilt head, with 64 position memory	S24245-B5017-A1	2.85

3 Technical Data

Matrix unit

Video inputs	BNC sockets U _{pp} = 1 V video, 75 Ω
Video outputs	BNC sockets U _{pp} = 1 V video, 75 Ω
Detection of video signal failure	Checking of vertical sync pulses
On-screen display	Full IBM character set, Internal synchronization Character representation: white with black border Field size: 12 text lines with 24 characters each Character height: 18 screen lines
Crosstalk attenuation	≥ 56 dB at 5 MHz ≥ 52 dB at 10 MHz
Differential gain	≤ 1 %
Differential phase	≤ 1.5 °
Frequency response flatness	• 1 dB up to 10 MHz • 3 dB up to 20 MHz
Matrix point switching time following command input on video matrix	80 ms (typ.), 200 ms (max.)

System controller

Computer	8-bit microprocessor system
Interfaces for: Parameterization PC, IVM, TELEMAT, SISTORE NT	3 x V.24 interfaces Baud rate: 1200 to 19200 bits/s Connection: 3 x 9-pin sub-D plugs
Terminals	2 x TTY (20 mA) interfaces with power supply for terminals (not present with serial numbers 6950xxx) Cable length up to 2 km with wire diameter 0.8 mm Baud rate: 1200 to 9600 bits/s Connection: 2 x 9-contact sub-D sockets
Power supply units (CDCx)	8 x TTY (20-mA) interfaces and Cable length up to 2 km with wire diameter 0.8 mm Baud rate: 1200 to 9600 bits/s Alarm lines 16 x alarm inputs for alarm lines Cable length up to 10 m Connection: 1 x 37-contact sub-D socket
Video recorder, picture storage unit	8 control outputs (open-connector); max. 30 V, max. 50 mA; Relay with 2 floating changeover contacts for master alarm output; max. 48 V, 250 mA Connection: 1 x 25-contact sub-D socket
Power supply	230 V, 50 Hz, 100 mA, switchable to 110 V, 60 Hz, 200 mA using plug-in jumper
Temperature of use	+5 °C to 45 °C
Relative humidity	30 to 85 %
Design	Desk-top housing (19-inch installation possible) 427 mm x 133 mm x 210 mm (W x H x D), 3 HU

4 System Design

The **SIMATRIX 648** permits a compact, modular design of CCTV systems.

The **SIMATRIX 648** video matrix not only permits the switching of video signals, it can be additionally used to connect signals to other systems, to process alarms etc. The system configuration could be as follows (Fig. 8):

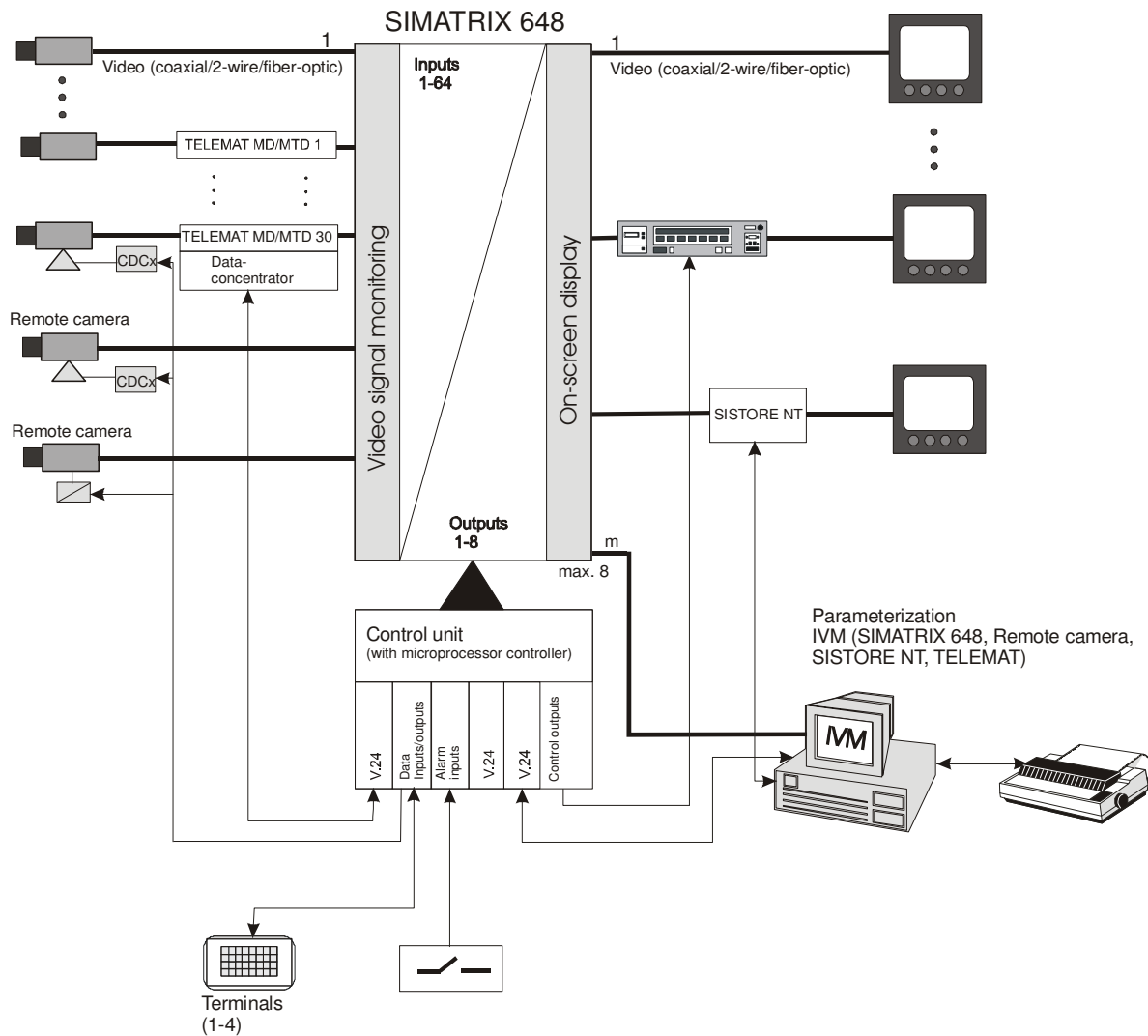


Fig. 8: System configuration with TELEMAT, IVM, SISTORE NT, remote camera and alarm lines

4.1 Controller Design

The CPU/8 (8-bit) which controls the complete system is located on the motherboard (basic unit). The interfaces can be extended by the following modules:

- Interface card for connection of 1 or 2 further terminals (max. 4)
- Interface card for connection of up to 8 CDCx and 16 alarm lines ('ALARM x/SCU') (max. 4)

4.1.1 Standard Interfaces

The CPU is responsible for controlling and administering the complete **SIMATRIX 648** system with its video inputs and outputs, as well as alarm lines and switching outputs, interfaces to terminals, CDCx or external computers.

The control depends on the free parameterization of the user (see parameterization instructions for **SIMATRIX 648**).

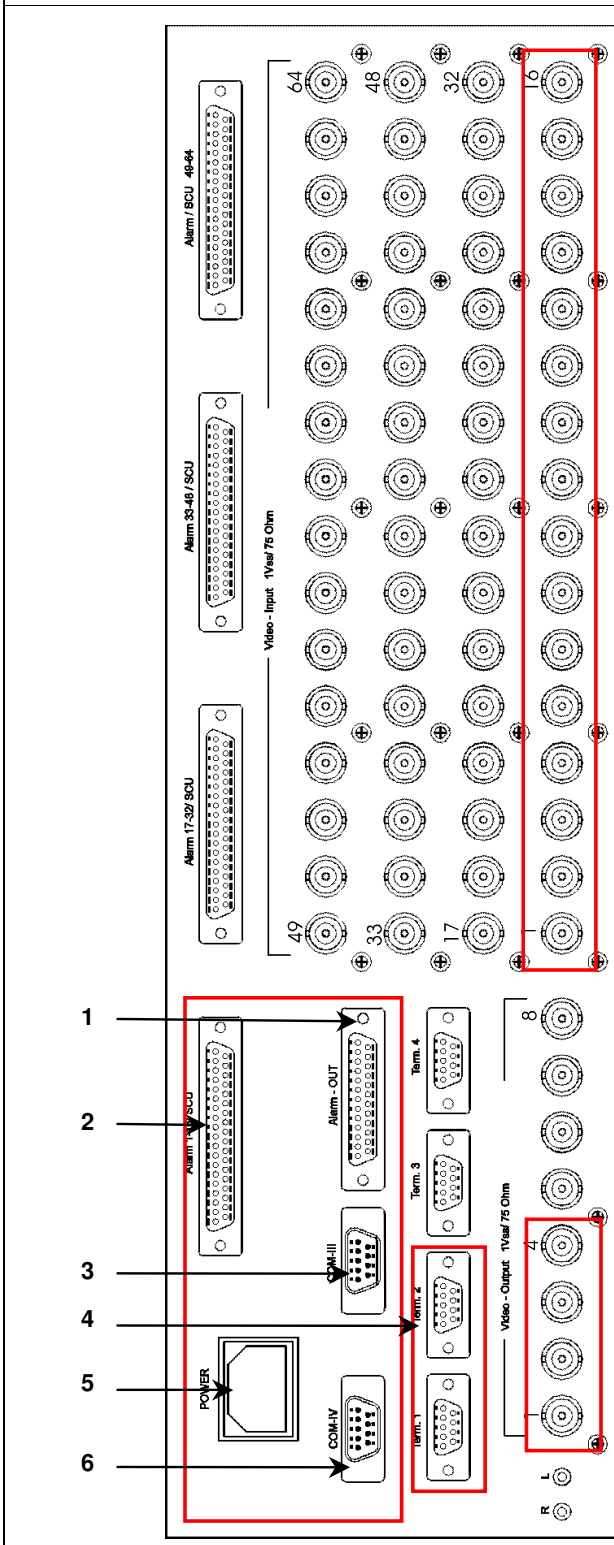
The processor evaluates the following signal lines (Fig. 9):

Rear view with connections

COM 2 (front panel) Communication interface for data exchange with external computers or systems (V.24), preferably for **parameterization**



Standard configuration



- 1 **ALARM-OUT**
for connection of a terminal via V.24, video recorder, digital picture storage unit, master alarm
- 2 **ALARM 1-16/SCU**
for connection of SCUs and alarm lines
- 3, 6 **COM 3 and 4**
Communication interfaces for data exchange with external computers or systems (V.24) e.g. IVM
- 4 **Term.1, Term.2**
for connection of terminals 1-2
- 5 **Power supply connection**
230/110 V, 50/60 Hz

Fig. 9 Interfaces

Standard interfaces for external use:

Interface type	Number	Application	Possible baud rate
V.24 COM 2	1	For parameterization of SIMATRIX 648 and for connection of external computer	19.2 kbits/s
V.24 COM 3, COM 4	2	TELEMAT (COM 4), IVM, SISTORE NT, logging printer, substation	See parameterization instructions
4-wire TTY interface 'Terminal'	2	For connection are up to 2 terminals or CDCx	See parameterization instructions; standard setting 2400 bits/s
TTY (20-mA) interfaces ALARM 1-16/SCU	8	For connection of CDCx, interface for remote camera and alarm lines	See parameterization instructions; standard setting 2400 bits/s
Alarm input ALARM 1-16/SCU	16	For connection of alarm lines	
Open-collector outputs ALARM-OUT	8	For connection of digital picture storage units and video recorders	See parameterization instructions
Rel.-Out with floating relay contacts ALARM-OUT	2	Master alarm	

COM 2 V.24 communication interface for data exchange with external computer.

- Connection of an external computer for parameterization of video matrix and IVM control
- Connection of other computer interfaces

COM 3, COM 4 are V.24 communication interfaces for data exchange with external computers.

- Connection to external PCs for IVM control
- Connection of TELEMAT MD/MTD video sensor (COM 4)
- Connection of substations

'Term.1, Term.2' 2 x TTY (20-mA) interfaces for direct connection of up to 2 terminals or CDCx.

ALARM 1-16/SCU

- 8 data outputs (TTY (20-mA) interfaces) for CDCx with TTY control and for interface for remote camera
- 16 alarm inputs

ALARM-OUT

- COM 1 for connection of a terminal via V.24 interface
- 8 open-collector outputs for control of external devices via 8-bit parallel (e.g. digital picture storage units, video recorders)
- Relay for master alarm (e.g. recorder control); can be parameterized as NO or NC contact.
The relay switches (opens/closes) as soon as an alarm has been triggered for at least one alarm line, and is only de-energized when all alarms have been deleted.
It can be used to control a video recorder or a signal transmitter.

**NOTE:**

The relay (parameterized as NC contact) also switches in the event of a power supply failure

4.1.2 Options

In addition to the basic configuration, 2 modules can be inserted as options.

- Interface card for connection of 1 or 2 further terminals (Term.3, Term.4) (max. 4)
- Interface card for connection of up to 8 CDCx and 16 alarm lines ('ALARM x/SCU') (max. 4)
The alarm lines can be parameterized as
 - NO contacts
 - NC contacts(see parameterization instructions).

5 Connected Devices



Note:

In all Devices, such as keyboards:

- CKA3210
- CKA4810
- CKA48120

PTZ-controller::

- CDC0501/0502

Converters:

- CAC0101
- CAC0102
- CAC0103

A unique adress must be set up.

Power supply units and interfaces for remote camera must always be assigned to a camera. The address is the same as the number of the video input of the **SIMATRIX 648** to which the camera associated with the CDCx or interface is connected. (In special cases, other numbers can be defined in the **SIMATRIX 648**. Please refer to the parameterization instructions of the **SIMATRIX 648**).



NOTE:

All devices must be operated with the same baud rate. The standard setting is 2400 bits/s.

More detailed setup-information you will find in the operation manuals of the devices.

6 Installation Information

The video matrix in bench-top housing is designed as a 19-inch subrack and can thus also be directly fitted in corresponding racks and cabinets. When installing the subrack, make sure that sufficient air can circulate for cooling.

7 Connection

**WARNING**

Installation, connection and commissioning of the devices must only be carried out by qualified personnel. The appropriate safety regulations must be observed, in particular the general installation and safety regulations for working on power systems (e.g. DIN VDE).

The failure to observe these regulations may result in death, severe personal injury or extensive damage to property.

We recommend that you use the support and services of the appropriate Siemens departments for installation and commissioning.

**CAUTION**

The devices are designed for operation on earthed three-phase networks, so-called TN systems (to VDE 0100 Part 300 or EN 60950). Operation on IT systems, i.e. systems without an earthed conductor (insulated) or via conductors only earthed via an impedance is not envisaged.

7.1 Connection of SIMATRIX 648

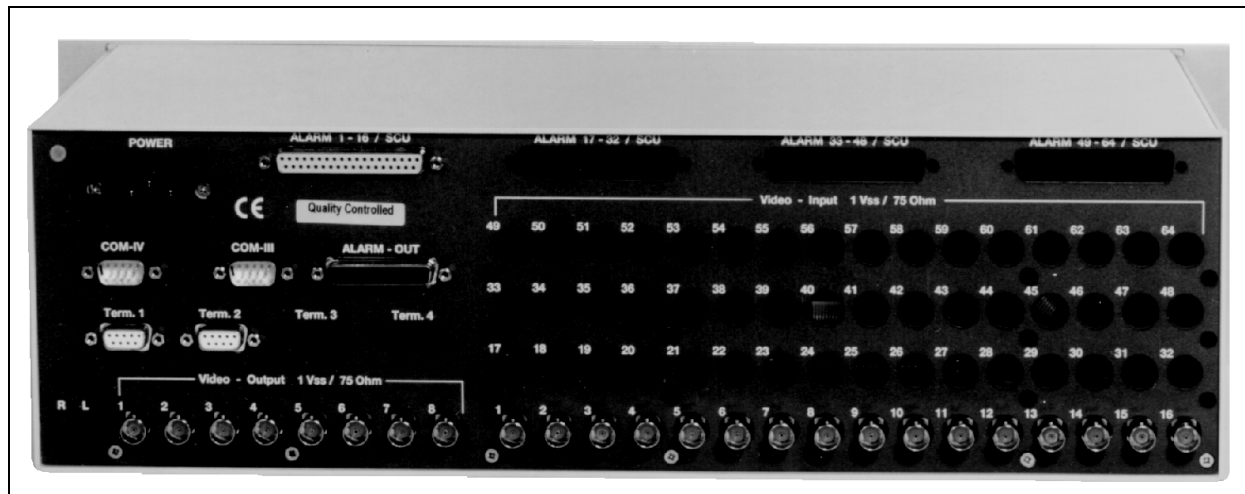


Fig. 10 Rear view of SIMATRIX 648

Standard interfaces

ALARM 1-16/SCU	37-contact sub-D socket with 8 data outputs (TTY (20-mA) interfaces) for connection of CDCx and 16 alarm inputs for connection of alarm lines
Term.1, Term.2	2 x 9-contact sub-D socket for connection of terminals 1-2
ALARM-OUT	25-contact sub-D socket with V.24 interface for connection of a terminal, relay for master alarm, parallel interface for control of digital picture storage units and video recorders
COM 2	9-pin sub-D plug , communication interface for connection of an external computer (parameterization) and for control of external devices
COM 3, 4	9-pin sub-D plug , communication interface for external computers, TELEMAT (COM 4), SISTORE NT, substations and serial logging printers
Video inputs/outputs	Connect all video inputs/outputs with 75-Ω cable and BNC plugs

Options

Interface card for terminals 3-4	2 x 9-contact sub-D socket for connection of terminals 3-4
Interface card for 'ALARM x/SCU'	37-contact sub-D socket with 8 data outputs (TTY (20-mA) interfaces) for connection of CDCx and 16 alarm inputs for connection of alarm lines

7.1.1 Assignments of 37-contact Sub-D Socket 'ALARM 1-16/SCU'

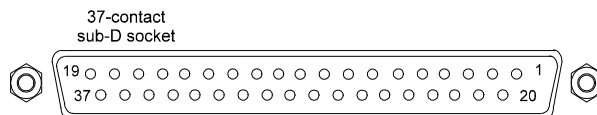


Fig. 11 View onto socket side ALARM 1-16/SCU

Interface (ALARM x/SCU)	Standard/option	Function
ALARM 1-16/SCU	Standard	Alarm inputs 1-16 CDCx connection 1-8
ALARM 17-32/SCU	Option	Alarm inputs 17-32 CDCx connection 9-16
ALARM 33-48/SCU	Option	Alarm inputs 33-48 CDCx connection 17-24
ALARM 49-64/SCU	Option	Alarm inputs 49-64 CDCx connection 25-32

Tab. 1 Table with list of interfaces

Pin	Function	Pin	Function
1	Alarm input A 1	20	TTY-OUT - TTY OUTPUT
2	Alarm input A 2	21	TTY-OUT + TTY OUTPUT
3	Alarm input A 3	22	TTY-OUT - TTY OUTPUT
4	Alarm input A 4	23	TTY-OUT + TTY OUTPUT
5	Alarm input A 5	24	TTY-OUT - TTY OUTPUT
6	Alarm input A 6	25	TTY-OUT + TTY OUTPUT
7	Alarm input A 7	26	TTY-OUT - TTY OUTPUT
8	Alarm input A 8	27	TTY-OUT + TTY OUTPUT
9	Alarm input A 9	28	TTY-OUT -
10	Alarm input A 10	29	TTY-OUT +
11	Alarm input A 11	30	TTY-OUT -
12	Alarm input A 12	31	TTY-OUT +
13	Alarm input A 13	32	TTY-OUT -
14	Alarm input A 14	33	TTY-OUT +
15	Alarm input A 15	34	TTY-OUT -
16	Alarm input A 16	35	TTY-OUT +
17	GND	36	GND
18	GND	37	GND
19	GND		

Tab. 2 Assignments of 37-contact sub-D socket ALARM 1-16/SCU

7.1.2 Assignments of Sub-D socket 'ALARM-OUT'

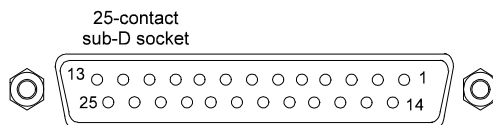


Fig. 12 View onto socket side 'ALARM-OUT'

Pin	Function	Pin	Function
1	N.C.	14	Open-collector D0
2	COM 1 TD	15	Open-collector D1
3	COM 1 RD	16	Open-collector D2
4	Relay NO contact 1	17	Open-collector D3
5	Relay changeover contact 1	18	Open-collector D4
6	Relay NC contact 1	19	Open-collector D5
7	GND	20	Open-collector D6
8	Relay NO contact 2	21	Open-collector D7
9	Relay changeover contact 2	22	According to connection of protective diodes (D0-D7) ⁽¹⁾
10	Relay NC contact 2	23	GND
11	Connector output/relay control	24	N.C.
12	N.C.	25	N.C.
13	N.C.		

Tab. 3 Assignments of sub-D socket 'ALARM-OUT'

D0 to D7 are open-collector outputs for control of external devices such as picture storage units or video recorders.

7.2 Connection of Terminals

Terminal 1 is always connected as the central terminal; terminals 2 to 4 can be connected as central or distributed terminals. (Whereas every camera can be switched to every monitor in the case of a central terminal, cameras can only be connected to the monitor assigned to the terminal in the case of a distributed terminal; see Section "Operation").

A 4-core cable is required to connect a terminal, max. permissible length approx. 2 km with 0.8 mm conductor diameter.

If the power supply is taken from the SIMATRIX, a 6-core cable is required. For lengths greater than 300 meters, a separate power supply in the terminal must be used.

⁽¹⁾ Common connection of protective diodes at the 8 open-collector outputs. Connection need only be made if inductive loads such as relays are to be controlled.
The connection must then be made to the positive pole of the relay power supply

7.2.1 Terminal Connected to "Terminal Socket 1-4"

Fig. 13 and Fig. 14 show the connection of a 9-contact socket "Term.x" of the **SIMATRIX 648** to a 9-pin plug of the terminal.

If an alarm signal is required in the event of an alarm, pins 8 and 9 must be connected together on the CKA3210 terminal (Fig. 13; Fig. 14). Pins 5 and 7 must only be connected together if pin 7 is not connected to a non-regulated 15 V supply (Fig. 14).



CAUTION

From serial number xxxxxxGxxx onwards, pin 5 of the 9-contact sub-D plug of the CKA3210 terminal is connected to 12 V DC.
Pin 5 (12 V DC) is not protected against incorrect polarity.

Up to 4 terminals can be connected to the "Terminal sockets".

Term.1- 4

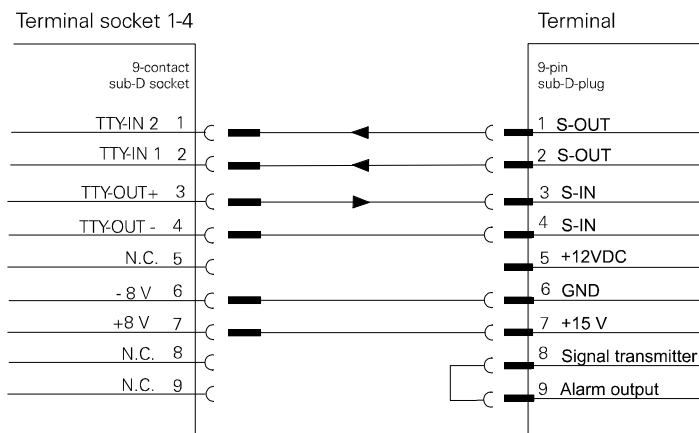
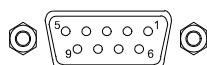


Fig. 13 Connection of terminal to terminal socket 1-4



CAUTION

In the case of devices with serial number 6950xxx, the terminals 1-4 must be powered via an external plug-type power supply unit (Fig. 21).

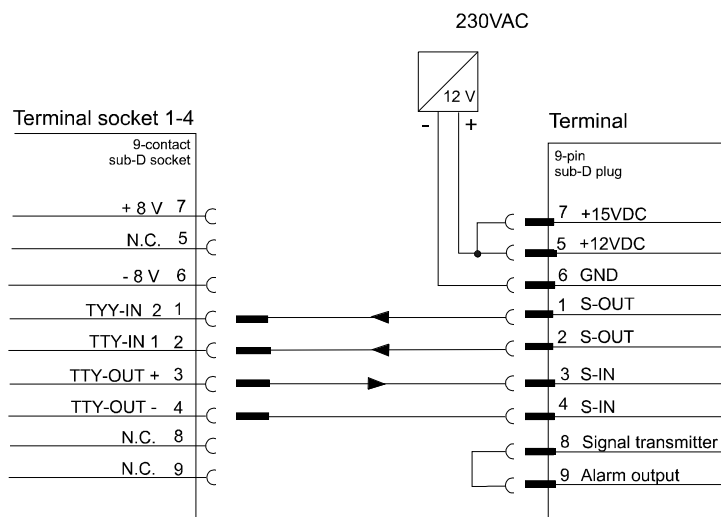


Fig. 14 Connection of terminal to terminal socket powered via an external plug-type power supply unit

7.3 Connection of Power Supply Units (CDCx)

Each camera with a pan-and-tilt drive and lens control requires a power supply unit.

There are two possibilities for connecting power supply units to the **SIMATRIX 648**:

1. The CDCx can be connected directly to the 37-contact sub-D socket or to the sockets "Terminal 1-4" of the SIMATRIX 648 using a 2-core control cable (see Sections 7.3.2, 7.3.1).
2. The control line can be looped through from power supply unit to power supply unit using a cable up to approx. 2 km long (with conductor diameter of 0.8 mm). The following example with 3 CDCx shows a possible configuration.

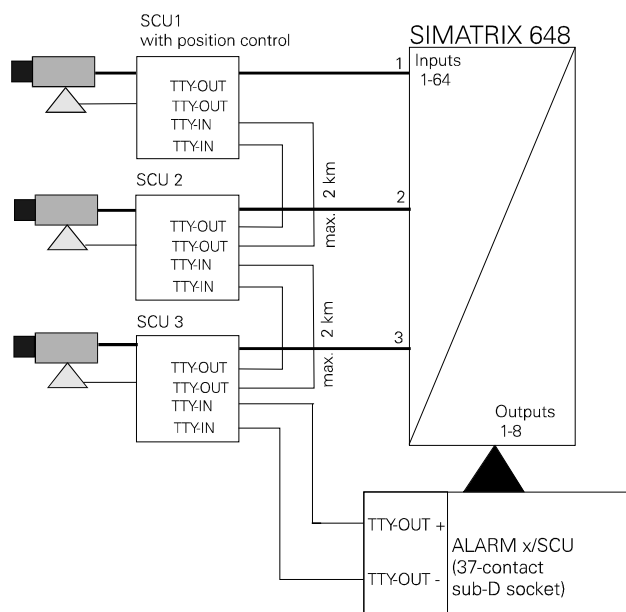


Fig. 15 Connection of several CDCx

7.3.1 CDCx Connected to Terminal Socket

If a terminal socket is vacant, the CDCx can be connected as follows:

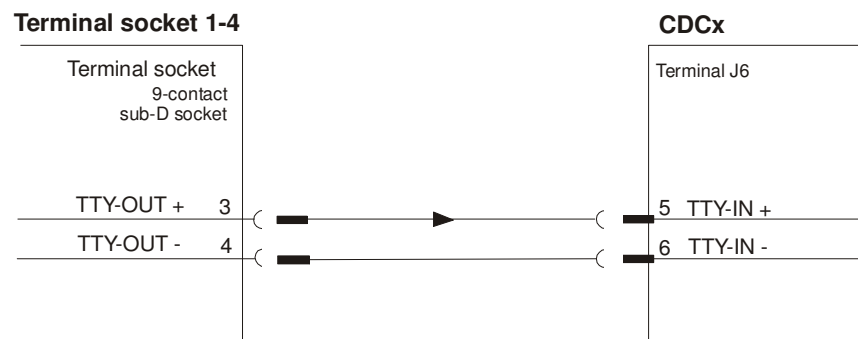


Fig. 16 Connection of CDCx to terminal socket

7.3.2 CDCx to "ALARM x/SCU"

The power supply unit can be directly connected to the 37-contact sub-D socket "ALARM x/SCU" of the **SIMATRIX 648** as follows.

Fig. 17 shows the possible connection.

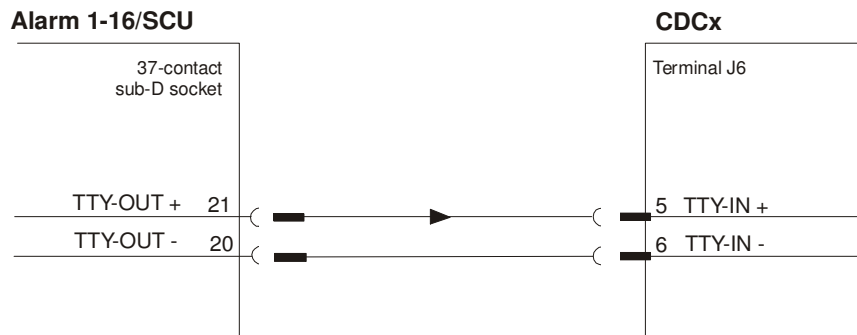


Fig. 17 Connection of CDCx to TTY (20-mA) interface

7.4 Connection of CAC0101 to "ALARM x/SCU"

Connection of the CAC0101 to the **SIMATRIX 648** is the same as with the CDCx. The CAC0101 converts the TTY signals into the corresponding TTL levels required for the remote camera.

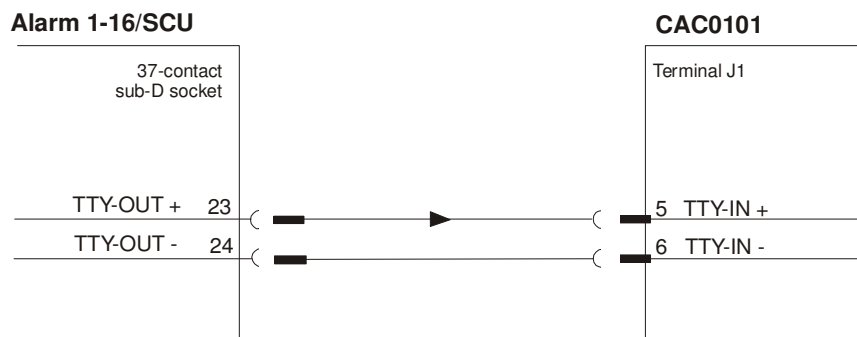


Fig. 18 Connection of interface to TTY (20-mA) interface

7.5 Connection of pan/tilt head CDD2410 to 'ALARM x/SCU'

The pan/tilt head can be directly connected to the 37-contact sub-D socket "ALARM x/SCU" of the **SIMATRIX 648** as follows.

Fig. 19 shows the possible connection.

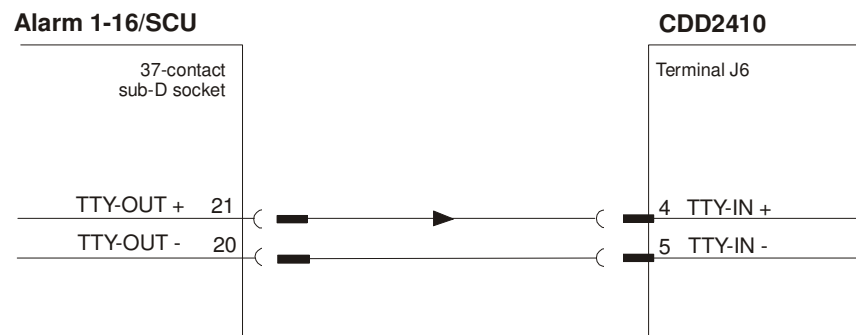


Fig. 19 Connection of pan/tilt head CDD2410

7.6 Connection of Alarm Lines

Alarm lines are a combination of alarms for which a separate display per line is provided on the control center (**SIMATRIX 648**). In the extreme case, an alarm line may consist of only one alarm. This is the case in the following example.

The **SIMATRIX 648** can process alarms from alarm lines operating as NC or NO contacts.

This is set using the parameterization software.

7.6.1 Alarm Line to "ALARM x/SCU"

Alarm contacts or alarm lines must be connected to the 37-contact sub-D socket "ALARM x/SCU" as follows:

See Section 7.1.1 for the assignments of the 37-contact sub-D socket.

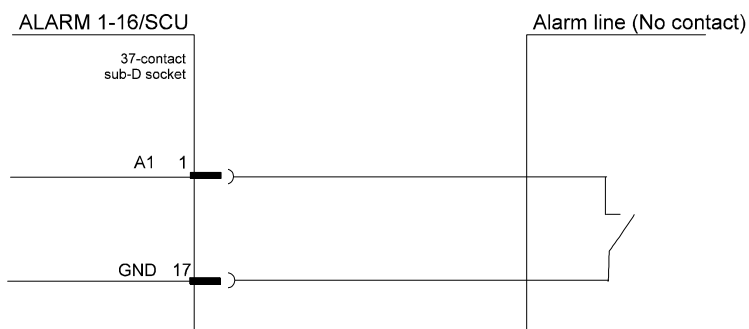


Fig. 20 Connection of alarm line to "ALARM 1-16/SCU" alarm input 1

The maximum distance of the alarm line from the **SIMATRIX 648** is 10 m.

7.7 Connection of a Video Recorder

The connection of the video recorder to the video output of the video matrix or to the video monitor depends on the system configuration.

The start/stop input of the video recorder must be connected to a changeover contact of the relay for a master alarm via the 25-contact sub-D socket "ALARM-OUT" (relay for master alarm) in the video matrix.

For alarm program 2, the video recorder must be connected to the video output "V-out 4" (Tab.4). If more than one recorder is connected, the control outputs D0-D7 of the interface "ALARM-OUT" are used.

Alarm program	Video output/monitor
1	4 (alarm picture cycle)
2	4 (alarm picture cycle)
3	1 (current alarm)
4	4 (alarm picture cycle)
5	4 (alarm picture cycle)
6	1 (current alarm)

Tab. 4 Connection of video recorder to video output

7.8 Connection of a Digital Picture Storage Unit

The video input of a digital picture storage unit for the alarm program must be connected to the corresponding output/monitor as described in Section 7.7. For the storage command, connect the corresponding input of the picture storage unit to pins 22 (GND) and 14 (D0) of the sub-D socket "ALARM-OUT" of the **SIMATRIX 648**.

When connecting further picture storage units, these must be connected to the control outputs D0-D7 of the interface "ALARM-OUT" according to the configuration.

7.9 Connection of Picture Storage Unit and Video Recorder

When using a picture storage unit **and** a video recorder, these must be connected to the **SIMATRIX 648** as follows:

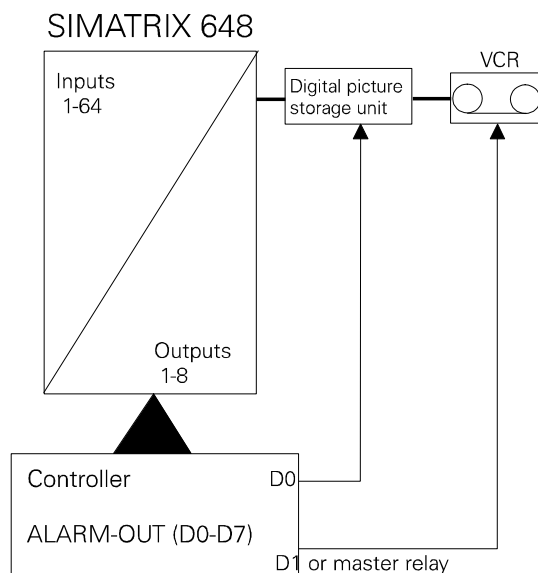


Fig. 21 Connection of picture storage unit and video recorder

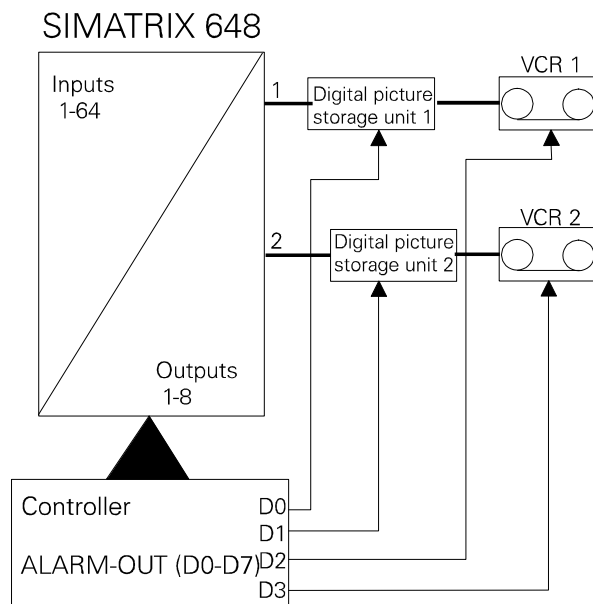


Fig. 22 Connection of picture storage unit and video recorder

7.10 Connection of an External Computer

COM 2, COM 3 and COM 4 are V.24 interfaces for connection of IVM, TELEMAT (COM 4), SISTORE NT, substations or a serial logging printer.

The loading of another program, or modification of the parameter settings of the factory setting must be carried out by connecting the computer to COM 2 (front panel).



NOTE:

The TELEMAT must be connected to COM 4.

7.10.1 Assignments of Sub-D Plugs COM 2, COM 3 and COM 4

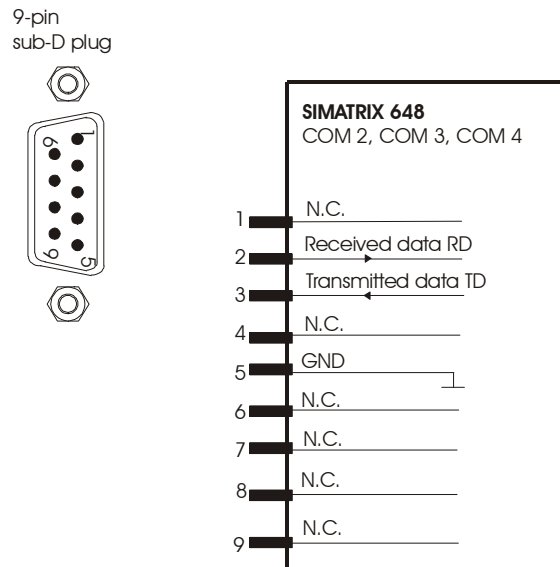


Fig. 23 Assignments of COM 2, COM 3, COM 4

7.10.2 External Computer at COM 2, COM 3 or COM 4

In the following Fig, the connection of the **SIMATRIX 648** (COM 2, COM 3, COM 4) is shown to a computer with a 9-pin or 25-pin sub-D plug for the V.24 interface:

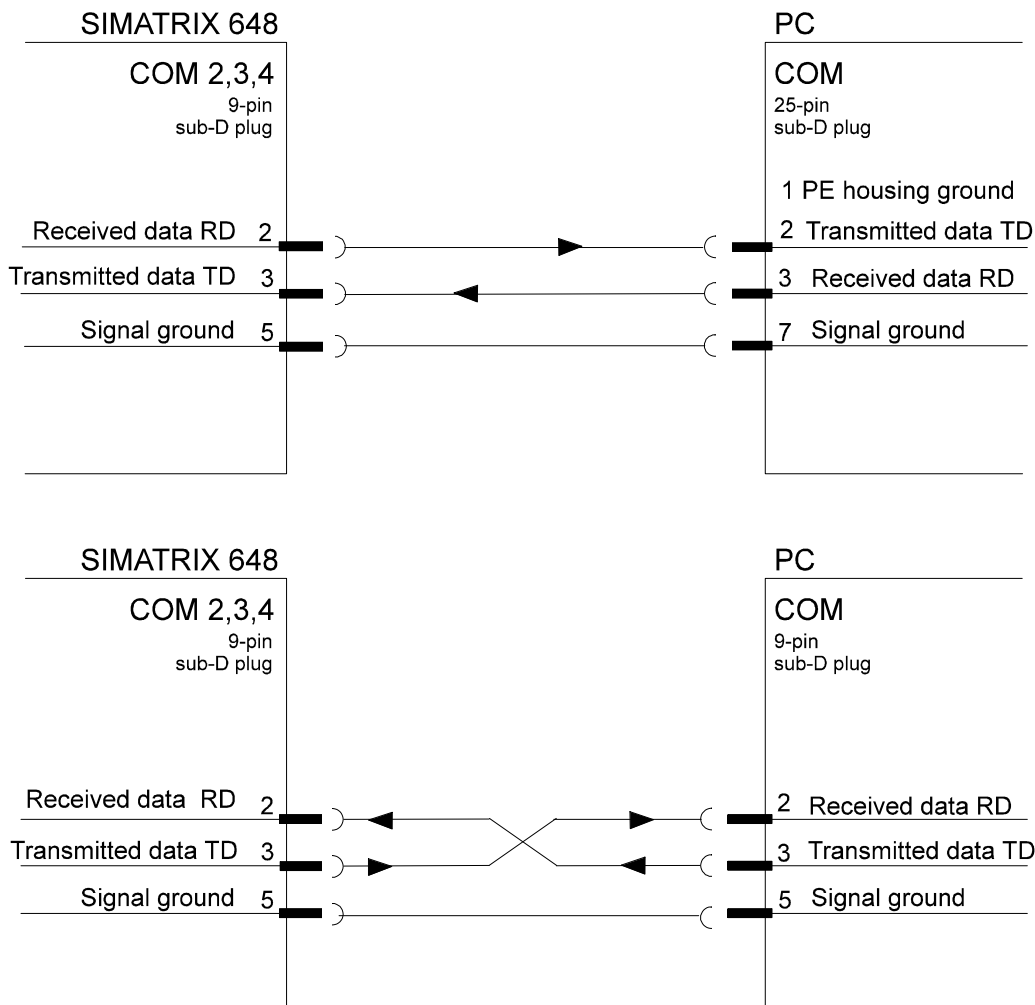


Fig. 24 Connection of PC to COM 2, COM 3, COM 4



NOTE:

Only the shown conductors must be connected!

7.11 Connection of Video Inputs

The video inputs are connected to the BNC sockets labelled "Video-In". Suitable video sources for operation of the **SIMATRIX 648** deliver a PAL/CCIR video signal with a voltage of 1 V_{pp} across an input termination of 75 Ω.

A video input is usually connected to the video output of a camera.

Up to 16 video sources can be connected to the BNC sockets per input module ME.

Each video input is terminated by a fixed resistance of 75 Ω.

7.11.1 Video Signal Requirements

The incoming video signal must satisfy the following requirements to guarantee perfect synchronization and on-screen display of the **SIMATRIX 648** and for a high picture quality:

- The amplitude of the sync pulse at each video input must be between 0.2 V and 0.4 V.
- The peak amplitude of the video signal at each video input must not exceed $1.3 V_{pp}$.
- With color cameras, the burst level at the video input must be at least 120 mV.



NOTE:

If the video level is too low, a cable equalizer should be connected to the video source. The equalizer should then be set such that the value is boosted to the values specified above.

7.12 Connection of Video Outputs

The video outputs are connected to the BNC sockets labelled "Video-Out".

The video output is usually connected to a monitor, video recorder or IVM computer (with video overlay card).

The video outputs are designed for a load of 75 Ω . The signal is present at the BNC sockets.

With long video signal cables, fine adjustment (0-3 dB) of the video output level ($1 V_{pp}$ /no frequency-dependent amplification) can be carried out using potentiometer R134 on the output stage (MA-AS).



NOTE:

If the signal cables are too long, a cable equalizer can be connected to the monitor.

7.13 Power Supply Connection

Do not connect the video matrix if external damage is visible!

If the local voltage and frequency agree with the data on the rating plate of the control unit, the video matrix can be connected to the power supply using the mains cable. First connect the mains cable to the video matrix. The socket must be located close to the **SIMATRIX 648** and readily accessible.

7.14 Extension with SIMATRIX 648



NOTE:

Connection, commissioning and repair must only be carried out by sufficiently qualified staff. Reliable and safe operation of this equipment is dependent on correct transport, storage, installation and assembly, as well as careful operation and maintenance.

Do not use the equipment if external damage is visible.

Only carry out extensions when the SIMATRIX 648 is switched off.

7.14.1 Extension of the video inputs with SIMATRIX 648 (all types) (input module 2GF2208-8AB)

1. Unpack the SIMATRIX 648.
2. Unscrew the top cover (2 screws each on the left and right sides).
3. The mounting screws are screwed on the input module in each case and must first be removed.
4. Fit the input modules (16/8) individually from bottom to top.
5. Secure the input modules from the rear using the 4 countersunk screws.
6. Connect the ribbon cable (see motherboard plug J110) to the input modules on plug J110 (see also component mounting diagrams).
7. Set the addresses of the input modules (see also component mounting diagram).

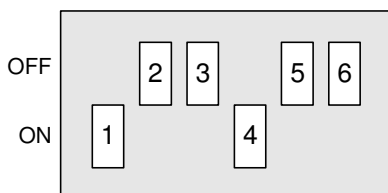


Fig. 25: 6-way sliding switch S1 for setting the address of the input module

Address of the input module		Switch segment (sliding switch S1)					
		1	2	3	4	5	6
1	For video inputs 17-32	ON	OFF	OFF	ON	OFF	OFF
2	For video inputs 33-48	OFF	ON	OFF	OFF	ON	OFF
3	For video inputs 49-64	OFF	OFF	ON	OFF	OFF	ON

3. Screw on the top cover again (2 screws each on the left and right sides).
4. Switch on the equipment, adapt the parameter settings to the modified hardware, and check that everything is functioning correctly.

7.14.2 Extension of the video outputs with SIMATRIX 648 (2GF2208-8AA) up to serial number 001399 (output module 2GF2208-8AC)

1. Unpack the SIMATRIX 648.
2. Unscrew the top cover (2 screws each on the left and right sides).
3. Unscrew the upper interface card ALARM/SCU 1-16 (MASTER) using a SW4 socket spanner.
4. Place interface card ALARM/SCU 1-16 (MASTER) with cable onto the side such that the 64-contact socket (J17) for the output module on the motherboard becomes accessible (see also component mounting diagrams).
5. Insert the plug connector of the output module (J17) onto the motherboard (J17) carefully and uniformly (see also component mounting diagrams).
6. Screw the output module onto the 3 spacer bolts using the supplied screws.
7. Screw the interface card ALARM/SCU 1-16 (MASTER) on again, and connect.
8. Screw on the top cover again (2 screws each on the left and right sides).
9. Switch on the equipment, adapt the parameter settings to the modified hardware, and check that everything is functioning correctly.

7.14.3 Extension of the video outputs with SIMATRIX 648 V3 (2GF2208-8EA) from serial number 001400 (output module 2GF2208-8EB)

The output module 2GF 2208-8EB consists of 1 plug-in module for extension of the basic system by one additional video output (up to 4 output modules) to a total of 8 video outputs.

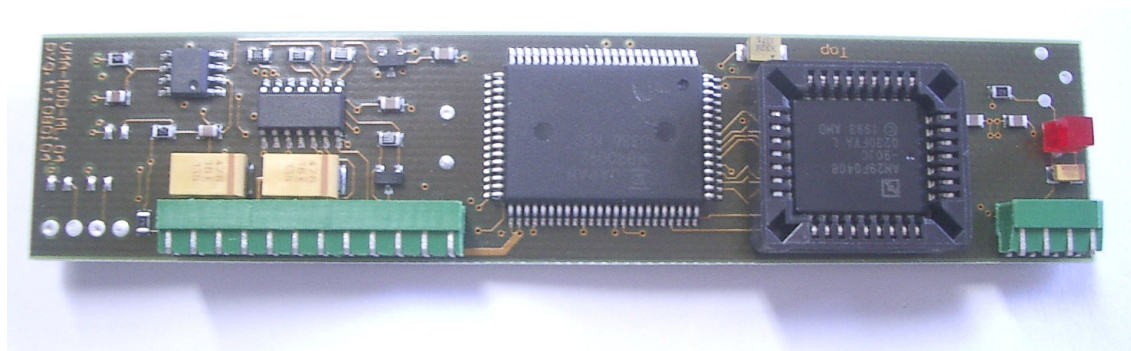
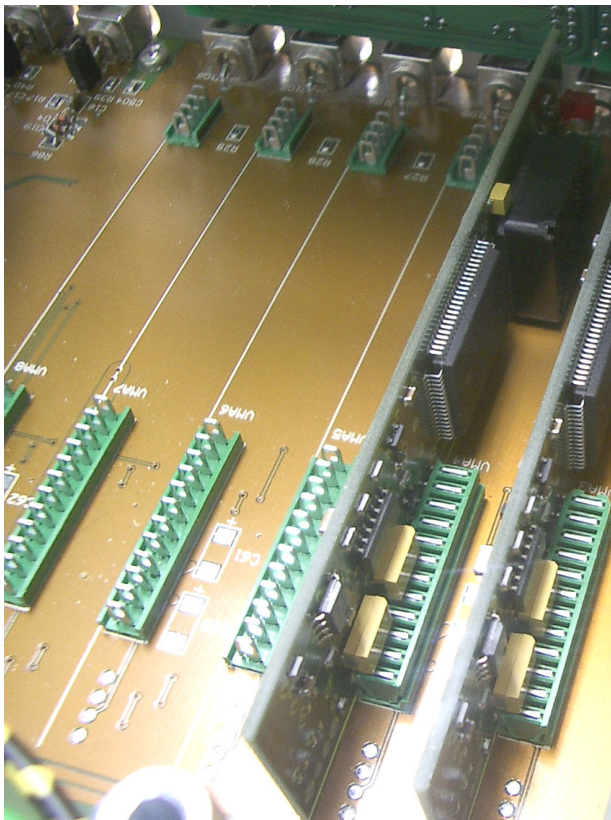


Fig. 26 Extension module

Mounting instructions



1. Unpack the SIMATRIX 648 V3; if it has been installed already unplug the power cord.
2. Unscrew the top cover (2 screws each on the left and right sides).
3. Select the module location: 4 output modules are already inserted in the module locations VMA1 to VMA4 (see diagram on the left). The module locations VMA5 to VMA8 are provided for the extension modules.
4. Plug the modules into the sockets *in upright position* carefully. Make sure the plug connector is inserted into the socket correctly!
5. Screw on the top cover again (2 screws each on the left and right sides).
6. Switch on the equipment, adapt the parameter settings to the modified hardware, and check that everything is functioning correctly.

7.14.4 Extension of interfaces of the terminals with SIMATRIX 648 (all types) (interface card for terminals 2GF2208-8AD)

1. Unpack the SIMATRIX 648.
2. Unscrew the top cover (2 screws each on the left and right sides).
3. Remove the 4 screws on the 9-contact Sub-D sockets (terminal sockets) on the interface card for terminals (3-4) (SLAVE).
4. Unscrew the interface card for terminals (1-2) (MASTER) using a SW4 socket spanner.
5. Plug the second interface card for terminals (3-4) (SLAVE) (J4) onto the side of the MASTER interface card for terminals (1-2) (J1) (see component mounting diagrams).
6. Screw into the rear panel as a complete unit (interface card for terminals MASTER + SLAVE) using the 8 screws of the 9-contact Sub-D sockets (terminal sockets).
7. Screw on the top cover again (2 screws each on the left and right sides).
8. Switch on the equipment, adapt the parameter settings to the modified hardware, and check that everything is functioning correctly.

7.14.5 Extension of the TTY control outputs and alarm inputs with SIMATRIX 648 (all types) (interface card ALARM/SCU 2GF2208-8AE)

1. Unpack the SIMATRIX 648.
2. Unscrew the top cover (2 screws each on the left and right sides).
3. Set the address of the interface card ALARM/SCU (see also component mounting diagrams).

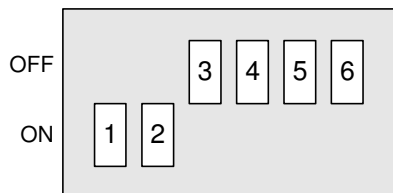


Fig. 27: 8-way sliding switch S1 for setting the address of the interface card ALARM/SCU

Address of the interface card ALARM/SCU		Switch segment (sliding switch S1)							
		1	2	3	4	5	6	7	8
1 MASTER	Alarm inputs 1-16 CDCx connections 1-8	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
2 SLAVE	Alarm inputs 17-32 CDCx connections 9-16	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
3 SLAVE	Alarm inputs 33-48 CDCx connections 17-27	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
4 SLAVE	Alarm inputs 49-64 CDCx connections 25-32	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON

5. Unscrew the interface card ALARM/SCU 1-16 (MASTER) which is already installed using a SW4 socket spanner.
6. Plug the second interface card ALARM/SCU 17-32 (SLAVE) (J2) onto the side of the interface card ALARM/SCU 1-16 (MASTER) (J3), etc. (see also component mounting diagrams).
7. Fit into the guide as a complete unit (ALARM/SCU MASTER + n x ALARM/SCU SLAVE), insert all screws of the 37-contact Sub-D plug (J1) into the rear panel, and screw hand-tight using the socket spanner (see also component mounting diagrams).
8. Screw on the top cover again (2 screws each on the left and right sides).
9. Switch on the equipment, adapt the parameter settings to the modified hardware, and check that everything is functioning correctly.

8 Startup

The **SIMATRIX 648** is started up when you connect it to the mains socket.

A number of self-test routines are executed when the **SIMATRIX 648** is switched on; these check the microprocessor circuits and the devices connected to the I/O channels.

The following two displays briefly appear in succession on all connected monitors:

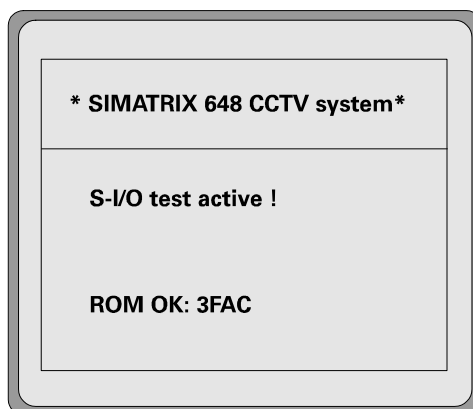


Fig. 28: 1st display following system startup

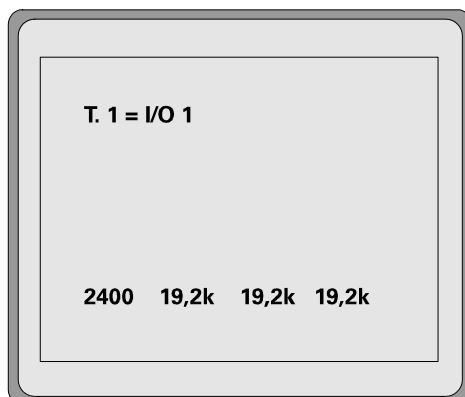


Fig. 29: 2nd display following system startup with connection of terminal to I/O 1

T.1 = I/O 1 Fixed assignment of terminal with address 1 to I/O 1

2400 19.2k 19.2k 19.2k CDCx, remote camera and terminals communicate with the **SIMATRIX 648** at 2400 bits/s (see COM 1 parameterization software).

Connected systems such as a parameterization PC, TELEMAT, SISTORE NT etc. communicate via COM 2, COM 3, COM 4 at 19.2 kbits/s

8.1 Standard parameterization

The **SIMATRIX 648** is factory-set with standard parameter settings (alarm program 2). Alarms can therefore be immediately received and processed. The 4 terminals and the IVM PCs can be used to switch cameras and to control cameras with a pan-and-tilt drive and lens control.

Please proceed as described in the parameterization instructions in order to load a program or to modify the parameters of a loaded program.

8.2 Video signal monitoring

This function is possible only if an automatic repetition cycle of the camera signals to be monitored is activated on one of the video outputs.

Parameterization is possible as follows: cycle started after power-on reset; dwell time 1s; all inputs to be monitored have to be included in the cycle (also inputs without a signal).

If the signal monitoring is not to be visible the cycle has to be activated on an output that is not assigned to a monitor.



IMPORTANT:

If the automatic repetition cycle is stopped, the inputs are no longer checked for loss of signal.

9 Operation

All programs can be used for the following system configurations:

- **3 IVM systems** (to COM 2, COM 3, COM 4)
- **4 terminals**
 - Central terminal (to 9-contact socket Terminal 1)
 - Distributed terminal (to 9-contact socket Terminal 2)
 - Distributed terminal (to 9-contact socket Terminal 3)
 - Distributed terminal (to 9-contact socket Terminal 4)
- **16 cameras with pan-and-tilt drive and lens control** (video inputs 1-16)
- **16 CDCx with position control**
- **16 alarm lines**
- **4 monitors** (video outputs 1 to 4)

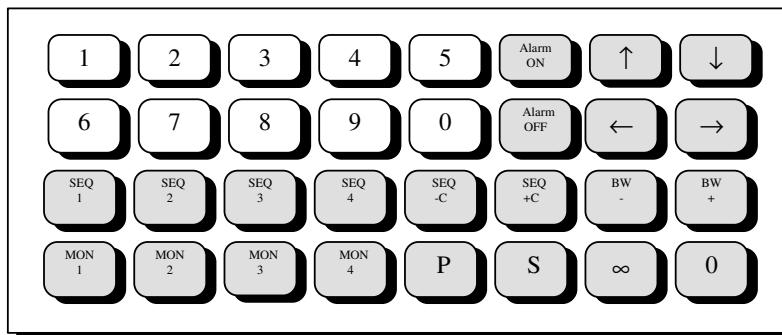


Fig. 30 Central terminal

The inscriptions of the unused keys showed be removed from a distributed terminal.

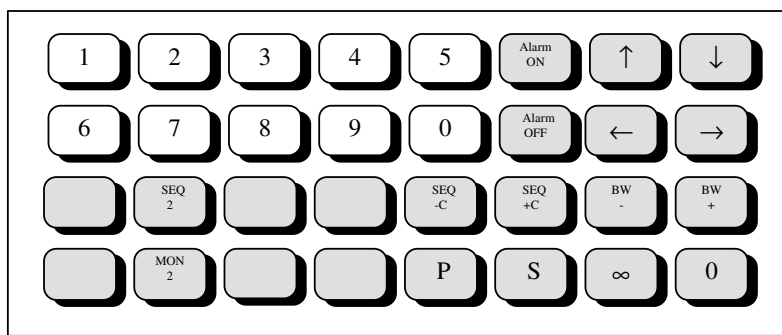


Fig. 31 Distributed terminal (example shown here for terminal 2)

9.1 Basic Program

Alarm processing is not possible with this program.

All steps described here also apply to the described alarm program.

The 32 keys of the terminal are always divided into a numeric block with 10 keys and a function block with 22 keys.

The input is as follows:

- Numeric input (max. 3 digits).
- Function input using function key.

9.1.1 Manual Selection of Camera and Monitor using Terminal 1

Terminal 1 can be used to switch any camera to any monitor by entering a specific key sequence.

Key sequence:



1. Enter camera number 'x x'.
The date, time and "Input" with the entered number are displayed on monitor 1.
2. Press monitor key MON 1...4 ('MON y').
The picture of the selected camera is output on the selected monitor. The picture on monitor 1 is deleted.
If the monitor key is not pressed, the picture on monitor 1 is automatically deleted after approx. 5 seconds.

9.1.2 Start and Stop Monitor Cycle using Terminal 1

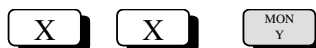
Key:



1. Start desired monitor cycle using a key 'SEQ 1,2,3,4' ('SEQ z').
2. Stop sequence by manually switching a camera to this monitor or by pressing the monitor key (the monitor is then blanked).

9.1.3 Manual Selection of Camera and Monitor using Terminals 2,3,4

Key sequence:



Using these terminals, each camera can only be switched to be monitor assigned to the terminal.

1. Enter number of camera 'x x' using numeric keyboard.
The date, time and "Input" of the entered number are displayed on the monitor.
2. Press monitor key 'MON y' (key 'MON 2' with terminal 2 etc.).

9.1.4 Start and Stop Monitor Cycle using Terminals 2, 3, 4

Key: 

1. These terminals can only be used to start the associated monitor cycle, i.e. start monitor cycle 2 with terminal 2 by pressing the key (**SEQ z**), 'SEQ 2' etc.
2. To stop an automatic picture cycle, manually select a camera or press the monitor key (the monitor is then blanked).

9.1.5 Control of Cameras with Pan-and-tilt Drive and Lens Control

Cameras with a pan-and-tilt drive and lens control can be remote-controlled using:

- Terminal 1 for camera connected to monitor 1.
- Terminals 2, 3, 4 for camera connected to associated monitor.

Key sequence:    




1. The horizontal and vertical ranges of the camera can be moved using the keys '←' '→' '↑' '↓' or the joystick.
2. The focal length of the lens can be adjusted using the keys '**BW-**' and '**BW+**', and the focus using the keys '**∞**' and '**0**'.

9.1.6 Position Control

If the power supply unit for pan-and-tilt drive and zoom lens is designed for a position control (CDC0502), stored positions for the pan-and-tilt drive and the lens drive can be called using:

Terminal 1 for the camera switched to monitor 1

Terminal 2, 3, 4 for the camera switched to the associated monitor.

Key sequence:   

- Enter desired position number '**x x**' and press key '**P**'.

9.1.7 Enter or Modify Monitor Cycles

Entering or modifying a monitor cycle must be enabled using the password (factory setting 1234; see parameterization instructions on how to change it).

The password must be known, and entered as follows:

Key sequence:      

1. Enter the first two digits of the password
2. Press key '**ALARM ON**'
3. Enter the last two digits of the password
4. Press key '**ALARM ON**'
The reference "Password" is displayed on the monitor

You can now carry out entries or modifications.

9.1.7.1 Delete Access

Following entries or modifications, delete the access again.

Key sequence:    

1. Enter '254'
2. Press key 'ALARM ON'
The reference "Password" is deleted.

9.1.7.2 Picture Cycle with Terminal 1

Terminal 1 can be used to enter or modify automatic picture cycles for monitors 1 to 4.

Key sequence:     

Key sequence:     

1. Enter camera number 'x x'
2. Press key 'MON 1...4' for which the picture cycle is to be entered or modified (camera picture is switched to monitor).
3. Enter number of automatic picture cycle (equivalent to monitor number y).
4. To include the camera into the automatic picture cycle, press key 'SEQ. +C'; to remove the camera from the automatic picture cycle, press key 'SEQ. -C'.

9.1.7.3 Automatic Picture Cycle with Terminals 2, 3, 4

Terminals 2, 3, 4 can be used to enter or modify an automatic picture cycle **only** for the associated monitor.

Key sequence:     

Key sequence:     

1. Enter camera number 'x x'
2. Press key 'MON 2, 3 or 4' for which the picture cycle is to be entered or modified (camera picture is switched to monitor).
3. Enter number of automatic picture cycle (equivalent to monitor number y).
4. To include the camera into the automatic picture cycle, press key 'SEQ. +C'; to remove the camera from the automatic picture cycle, press key 'SEQ. -C'.

9.1.8 Enter or Modify Positions

An **initialization operation** must be carried out for each pan-and-tilt drive and each lens drive when commissioning the system to permit position control of the camera pan-and-tilt drives and lens drives (see parameterization instructions).

Using the terminal, positions can be defined, modified and stored for cameras with pan-and-tilt drive and lens controls as follows:

- Terminal 1 for camera switched to monitor 1
- Terminal 2, 3, 4 for the camera switched to the associated monitor

Key sequence:    

1. Move pan-and-tilt drive and lens drive of selected camera into the desired position by pressing the keys '←' '→' '↑' '↓' 'BW-' 'BW+' '0' '∞'.
2. Enter position number 'z z'.
3. Press key 'S'.
4. The position for the corresponding power supply unit (CDC0502) has now been stored and can be recalled at any time (see Section 9.1.6).

9.1.9 Alarm Programs

The various inputs described for the basic program can be carried out with both alarm programs.

The processing of alarms is possible in addition (1 alarm line is provided per camera input).

48 cameras are stored in these programs, including the previous camera as the adjacent one (example: camera triggering alarm = camera 15, adjacent camera = camera 14).

The parameter settings must be modified according to the parameterization instructions if fewer than 48 cameras are present, or if other assignments have to be defined.

Following enabling by input of the password, the alarm lines can be switched to active or passive either individually or together.

Following each input of a number, the date, time and "Input" with the entered digit/number are displayed on the monitor.

9.1.9.1 Enter Password

Key sequence:      

1. Enter the first two digits of the password 'x x'.
2. Press key 'ALARM ON'.
3. Enter the other two digits of the password 'x x'.
4. Press key 'ALARM ON'.
5. The reference "Password" appears on the monitor.

9.1.9.2 Switch Alarm Lines to Active

- Press key '**ALARM ON**'.

The following table of alarm inputs is displayed on the monitor (example):

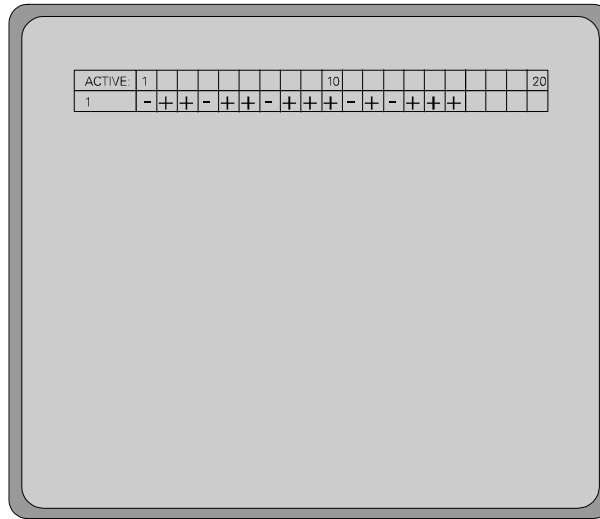


Fig. 32 On-screen display of table "Alarm lines" on monitor

Key sequence:



1. Enter number of alarm line '**x x**' which is to be switched to active.
The date, time, "Input" and the entered number are displayed on the monitor.
2. Press key '**ALARM ON**'.
The table with a "+" for an input switched to active is displayed on the monitor.
3. Enter '**255**' to switch all alarm inputs to active. Press key '**ALARM ON**'.
The following table is displayed on the monitor.

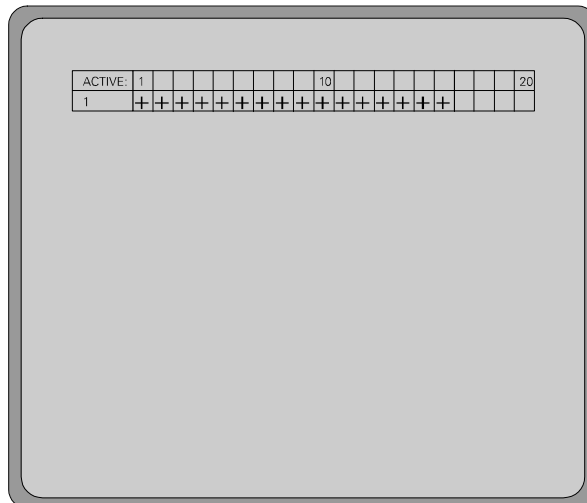


Fig. 33 On-screen display of table "Alarm lines" on monitor

9.1.9.3 Switch Alarm Lines to Passive

Key: 

- Press key 'ALARM ON'

The following table of alarm inputs is displayed on the monitor (example):

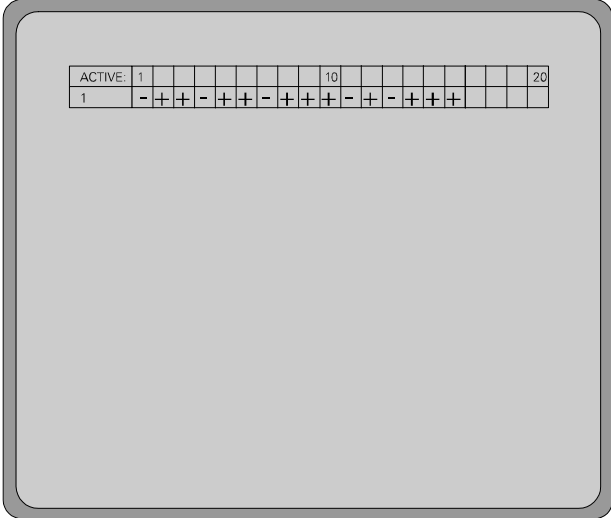


Fig. 34 On-screen display of table "Alarm lines" on monitor

Key sequence:    

1. Enter number of alarm line 'x x' which is to be switched to passive. The date, time, "Input" and the entered number are displayed on the monitor.
2. Press key 'ALARM OFF'. The table with a "-" for an input switched to passive is displayed on the monitor.
3. Enter '255' to switch all alarm inputs to passive. Press key 'ALARM OFF'. The following table is displayed on the monitor.

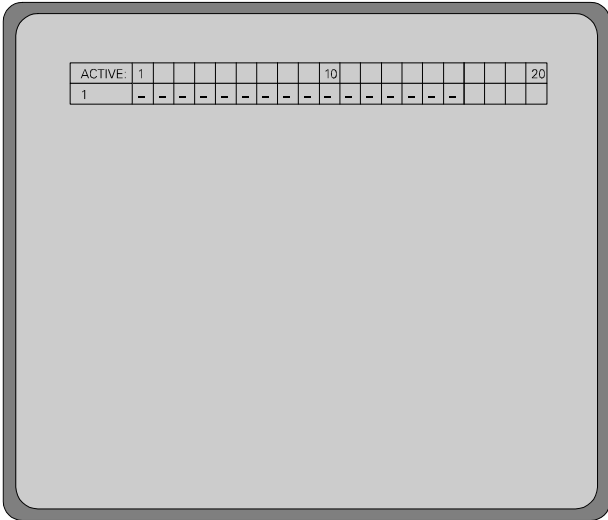


Fig. 35 On-screen display of table "Alarm lines" on monitor

9.1.9.4 Delete Access

Key sequence:    

1. Enter '254'
2. Press key 'ALARM ON'
The reference "Password" is deleted.

9.2 Alarm Programs

9.2.1 Alarm Program 1

The inputs possible for the basic program (Section 9.1) also apply to this alarm program.

If the password is known, alarm lines can be switched to active or passive as described in Section 9.1.9.

The table of alarm lines can be recalled at any time by pressing the key 'ALARM ON'.

If the SIMATRIX 648 operates together with the TELEMAT video sensor from Siemens, the zone triggering the alarm is displayed brightly on the alarm picture. The TELEMAT is also reset when an alarm is acknowledged.

Alarms can be processed as follows:

- In the event of an alarm, the alarm picture (picture of camera in area in which alarm was triggered) is output on monitors 1 and 4 with the reference ALARM!.
- The alarm can be acknowledged (deleted) using the key 'MON 1'.
The original pictures appear again on the monitors.
- If a 2nd alarm occurs before the 1st alarm has been acknowledged, this 2nd alarm picture is output on monitor 2.
- If 2 or more alarm pictures are present simultaneously, all are output in sequence on monitor 4.

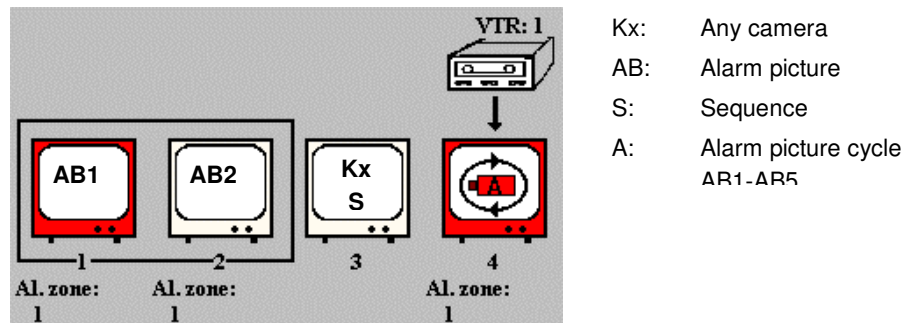


Fig. 36 Output of 5 alarm pictures

- Alarms output on monitor 1 or 2 can be acknowledged using the keys 'MON 1' and 'MON 2'.
- If several alarms are present, the next alarm picture of those already present is displayed on the monitor which has become vacant as a result of acknowledging.
(This guarantees that every alarm must be acknowledged manually.)

- A video recorder connected to output 4 is automatically started when the 1st alarm occurs.
It records the pictures displayed on monitor 4.
- The recorder stops on acknowledgment of the last alarm, or switches to the preset long-term recording.

9.2.2 Alarm Program 2

The inputs possible for the basic program (Section 9.1) also apply to this alarm program.

If the password is known, alarm lines can be switched to active or passive as described in Section 9.1.9.

The table of alarm lines can be recalled at any time by pressing the key 'ALARM ON'.

The table disappears when you press the key 'ALARM ON' again.

If the SIMATRIX 648 operates together with the TELEMAT video sensor from Siemens, the zone triggering the alarm is displayed brightly on the alarm picture. The TELEMAT is also reset when an alarm is acknowledged.

Alarms can be processed as follows:

- In the event of an alarm, the alarm picture (picture of camera in area in which alarm was triggered) is output on monitors 1 and 4 with the reference ALARM!.
- The alarm can be acknowledged (deleted) using the key 'MON 1'.
The original pictures appear again on the monitors.
- If a 2nd alarm occurs before the 1st alarm has been acknowledged, this 2nd alarm picture is output on monitor 2.
- Every further alarm picture overwrites an existing one which means that the last two alarm pictures are always output on monitors 1 and 2.
- If 2 or more alarm pictures are present simultaneously, all are output in sequence on monitor 4.

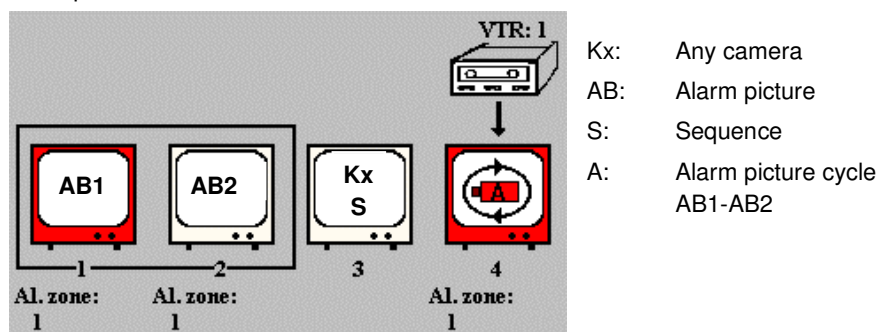


Fig. 37 Output of 2 alarm pictures

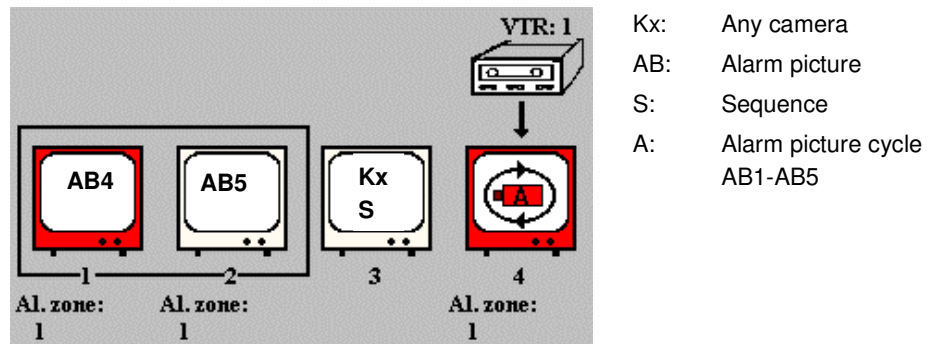


Fig. 38 Output of 5 alarm pictures

- Alarms output on monitors 1 and 2 can be acknowledged. The oldest alarm picture which is present is then output on the "acknowledged" monitor. The second oldest alarm picture is output when the next alarm picture is deleted etc.
- Cameras can always be manually switched to monitor 3, or the automatic picture cycle can be output.
- A video recorder connected to output 4 is automatically started when the 1st alarm occurs. It records the pictures displayed on monitor 4.
- The recorder stops on acknowledgment of the last alarm, or switches to the preset long-term recording.

9.2.3 Alarm Program 3

The inputs possible for the basic program (Section 9.1) also apply to this alarm program.

If the password is known, alarm lines can be switched to active or passive as described in Section 9.1.9.

The table of alarm lines can be recalled at any time by pressing the key 'ALARM ON'.

The table disappears when you press the key 'ALARM ON' again.

This alarm program is not suitable for systems with TELEMAT MD/MTD or IVM.

Alarms can be processed as follows:

- In the event of an alarm, the alarm picture (picture of camera in area in which alarm was triggered) is output on monitor 1 with the reference ALARM!.
- The alarm can be acknowledged (deleted) using the key 'MON 1'. The original picture appears again on the monitor.
- If a 2nd alarm occurs before the 1st alarm has been acknowledged, the 1st alarm picture is shifted onto monitor 2. The 2nd alarm picture is then output on monitor 1.
- If further alarms occur, the alarm pictures are each shifted on by one monitor. The last alarm picture which has occurred is therefore always output on monitor 1. All 4 monitors are used for this purpose.

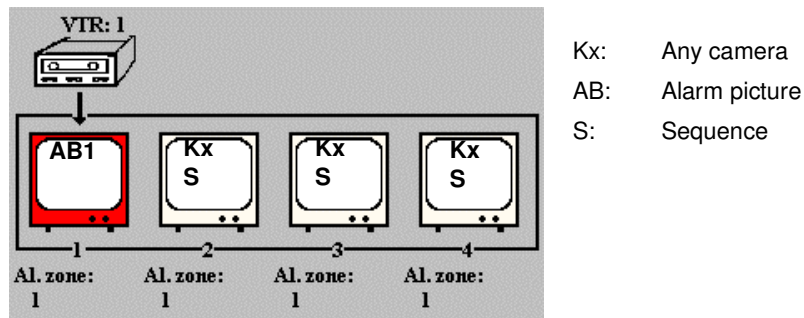


Fig. 39 Output of 1 alarm picture

Output of 3 alarm pictures:

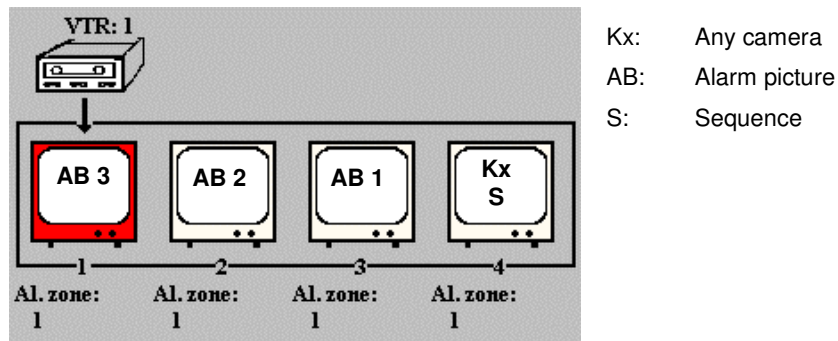


Fig. 40 Output of 3 alarm pictures

- If 4 alarms are already present, the first alarms are automatically acknowledged when further alarms occur, i.e. the 1st alarm is acknowledged when a 5th alarm occurs, the 2nd alarm when a 6th alarm occurs etc.

Output of more than 4 alarms (the alarms 1 to 3 have been deleted automatically):

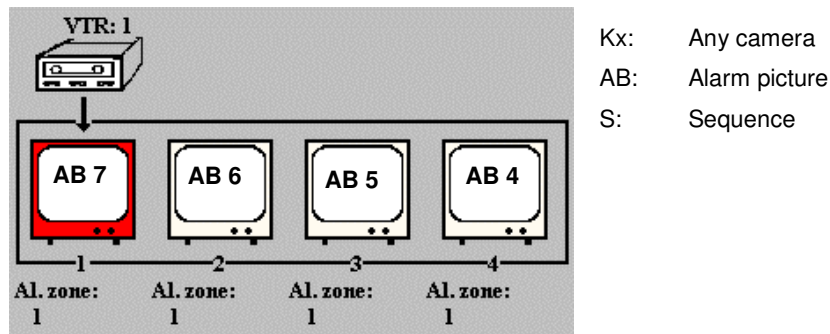


Fig. 41: Output with more than 4 alarms

- An alarm output on monitor x can be acknowledged using the associated key 'MON x'.
- A video recorder connected to output 1 is automatically started when the 1st alarm occurs. It records the pictures displayed on the monitor. The recorder stops on acknowledgment of the last alarm, or switches to the preset long-term recording.

9.2.4 Alarm Program 4

The inputs possible for the basic program (Section 9.1) also apply to this alarm program.

If the password is known, alarm lines can be switched to active or passive as described in Section 9.1.9.

The table of alarm lines can be recalled at any time by pressing the key 'ALARM ON'.

The table disappears when you press the key 'ALARM ON' again.

If the SIMATRIX 648 operates together with the TELEMAT video sensor from Siemens, the zone triggering the alarm is displayed brightly on the alarm picture. The TELEMAT is also reset when an alarm is acknowledged.

Alarms can be processed as follows:

- In the event of an alarm, the alarm picture (picture of camera in area in which alarm was triggered) is output on monitor 1 and the picture of the adjacent camera on monitor 2, both pictures with the flashing reference "Alarm!".
- The alarm can be acknowledged using the key 'MON 1'. The original pictures appear again on the monitors.
- If further alarms occur before the 1st alarm has been acknowledged, these alarm pictures are incorporated into the alarm sequence and output on monitor 4.

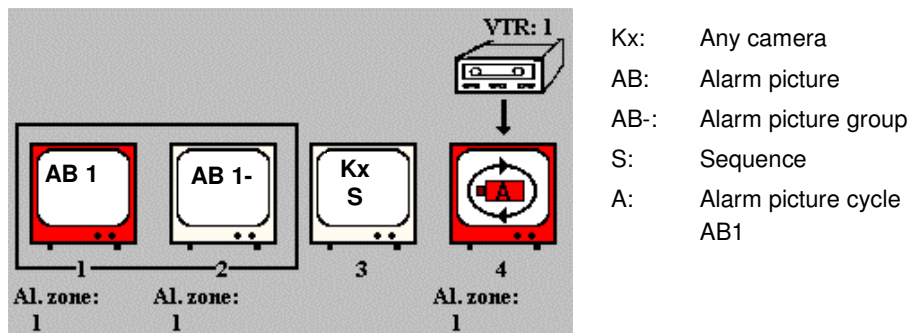


Fig. 42 Output of 1 alarm picture

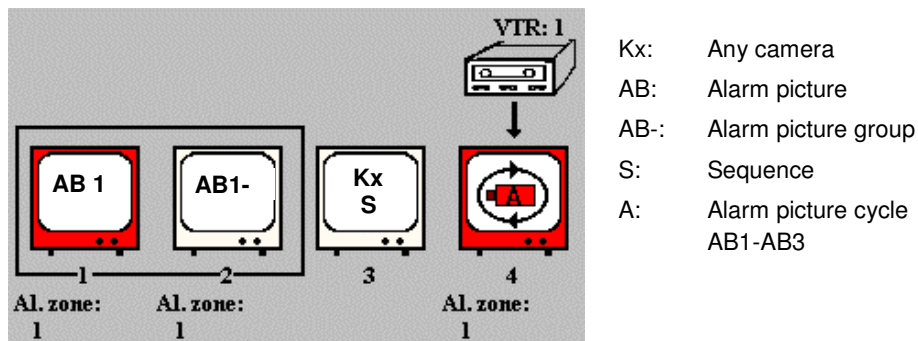


Fig. 43 Output of 3 alarm pictures

- An alarm on monitor 1 can be acknowledged by pressing the key 'MON 1'. Monitor 2 becomes free at the same time.

- If further alarms are still present following acknowledgment of the 1st alarm, the 2nd alarm picture is then output on monitor 1, and the picture of the adjacent camera on monitor 2 etc. Thus every alarm must be acknowledged manually, and this automatically takes place in their order of occurrence.
- Cameras can always be manually switched to monitor 3, or the camera sequence output.
- A video recorder connected to output 4 is automatically started when the 1st alarm occurs.
The recorder stops on acknowledgment of the last alarm, or switches to the preset long-term recording.

9.2.5 Alarm Program 5

The inputs possible for the basic program (Section 9.1) also apply to this alarm program.

If the password is known, alarm lines can be switched to active or passive as described in Section 9.1.9.

The table of alarm lines can be recalled at any time by pressing the key 'ALARM ON'.

The table disappears when you press the key 'ALARM ON' again.

If the SIMATRIX 648 operates together with the TELEMAT video sensor from Siemens, the zone triggering the alarm is displayed brightly on the alarm picture. The TELEMAT is also reset when an alarm is acknowledged.

Alarms can be processed as follows:

- In the event of an alarm, the alarm picture (picture of camera in area in which alarm was triggered) is output on monitors 1 and 4, and the picture of the adjacent camera on monitor 2, both pictures with the flashing reference "Alarm!".
- The alarm can be acknowledged using the key 'MON 1'.
The original pictures appear again on the monitors.
- If a 2nd alarm occurs before the 1st alarm has been acknowledged, this 2nd alarm picture is output on monitor 1, and the picture of the adjacent camera on monitor 2.

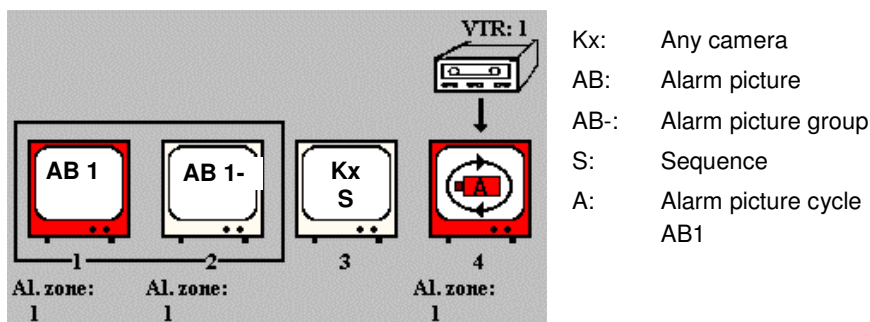


Fig. 44 Output of 1 alarm picture

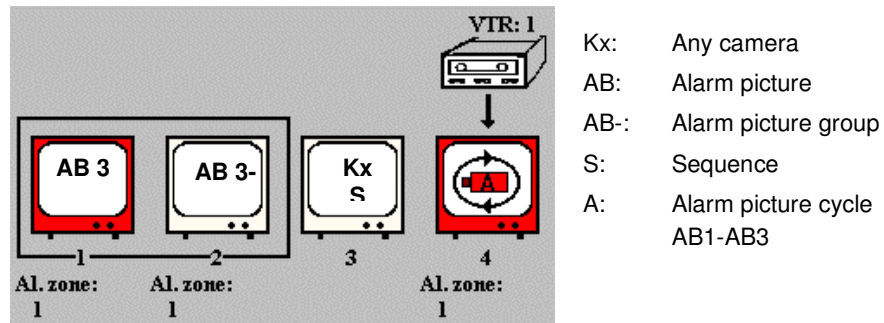


Fig. 45 Output of 3 alarm pictures

- The alarm output on monitor 1 can be acknowledged by pressing the key 'MON 1'. All alarms must be acknowledged manually.
- If 2 or more alarm pictures are present simultaneously, they are output as a sequence on monitor 4.
- Cameras can always be manually switched to monitor 3, or the camera sequence output.
- A video recorder connected to output 4 is automatically started when the 1st alarm occurs.
The recorder stops on acknowledgment of the last alarm, or switches to the preset long-term recording.

9.2.6 Alarm Program 6

The inputs possible for the basic program (Section 9.1) also apply to this alarm program.

If the password is known, alarm lines can be switched to active or passive as described in Section 9.1.9.

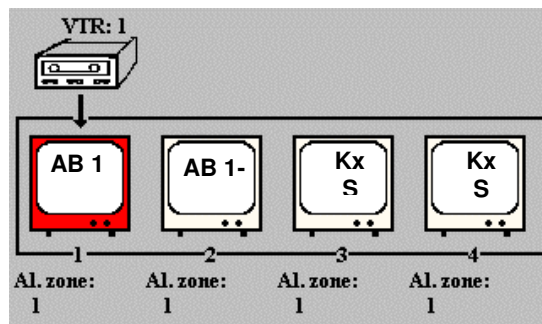
The table of alarm lines can be recalled at any time by pressing the key 'ALARM ON'.

The table disappears when you press the key 'ALARM ON' again.

This alarm program is not suitable for systems with TELEMAT MD/MTD or IVM.

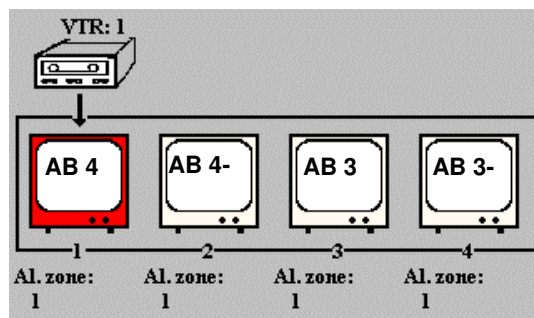
Alarms can be processed as follows:

- In the event of an alarm, the alarm picture is output on monitor 1, and the picture of the adjacent camera on monitor 2, both pictures with the flashing reference "Alarm!".
- The alarm can be acknowledged using the key 'MON 1'.
The original pictures appear again on the monitors.
- If a 2nd alarm occurs before the 1st alarm has been acknowledged, the pictures of the 1st alarm are shifted onto monitors 3 and 4. The 2nd alarm picture is then output on monitor 1, and the picture of the adjacent camera on monitor 2.



Kx: Any camera
 AB: Alarm picture
 AB-: Alarm picture group
 S: Sequence

Fig. 46 Output of 1 alarm picture



Kx: Any camera
 AB: Alarm picture
 AB-: Alarm picture group

Fig. 47 Output with more than 2 alarms

- If 2 alarms are present, the first alarms which have occurred are automatically acknowledged when further alarms occur, i.e. the 1st alarm when the 3rd occurs, the 2nd when the 4th occurs etc.
- Alarms output on the monitors 1,2 and 3,4 can be acknowledged by pressing the keys 'MON 1' or 'MON 3'.

A video recorder connected to output 1 is automatically started when the 1st alarm occurs.

The recorder stops on acknowledgment of the last alarm, or switches to the preset long-term recording.

10 Index

A

Alarm Line to "ALARM x/SCUx" 32
Alarm Program 1 10, 50
Alarm Program 2 51
Alarm Program 2 (Factory Setting) 11
Alarm Program 3 11, 52
Alarm Program 4 12, 54
Alarm Program 5 12, 55
Alarm Program 6 13
Alarm Programs 50
Anschluss
 Schwenk/Neige-Kopf 31
Assignments of Sub-D Plugs COM 2, COM 3 and
 COM 4 34
Automatic Picture Cycle 46

B

Basic Program 10, 44

C

CDCx Connected to Terminal Socket 29
CDCx to "ALARM x/SCUx" 30
Computer at COM 2, COM 3 or COM 4 35
Connected Devices 22
Connected to "Terminal Socket 1-4" 27
Connection 23
 Alarm Lines 31
 an External Computer 34
 CAC0101 to "ALARM x/SCUx" 30
 Digital Picture Storage Unit 32
 Picture Storage Unit and Video Recorder 33
 Power Supply 36
 Video Inputs 35
 Video Outputs 36
 Video Recorder 32
Connection of Power Supply Units (CDCx) 28
Connection of SIMATRIX 648 24
Connection of Terminals 26
Control of Cameras 45

E

Extension of interfaces of the terminals 39
Extension of the TTY control outputs 40
Extension of the video inputs 37
Extension of the video outputs 38
Extension with SIMATRIX 648 37

I

Installation Information 23
Interface 20

M

Manual Selection 44

O

Operation 8, 43
Ordering Data 14

P

Performance 7
Position Control 45
Power Supply Connection 36
Programs 9

S

Standard parameterization 42
Startup 41
Sub-D Socket 'ALARM 1-16/CDCx' 25
Sub-D socket 'ALARM-OUT' 26
System Design 17

T

Technical Data 16

V

Video signal monitoring 42
Video Signal Requirements 36

Issued by
Siemens Building Technologies
Fire & Security Products GmbH & Co. oHG
D-76181 Karlsruhe

www.sbt.siemens.com/fsp

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Siemens Building Technologies AG
Data and design subject to change without notice.
Supply subject to availability.
Printed in the Federal Republic of Germany
on environment-friendly chlorine-free paper.

Document no. **A24205-A336-B489**
Edition 02.2005