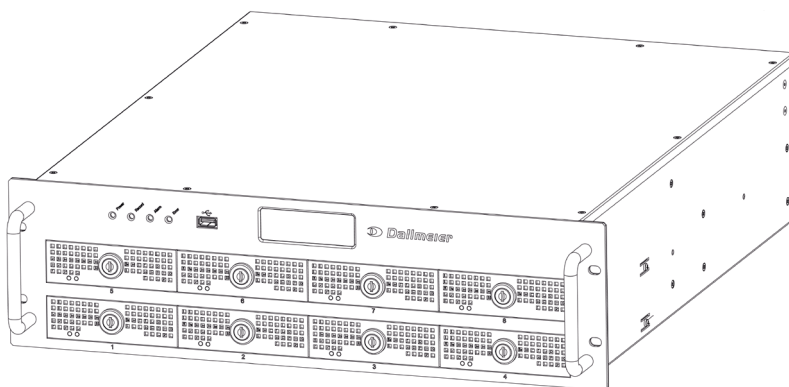


IPS 2400 II

Commissioning

English



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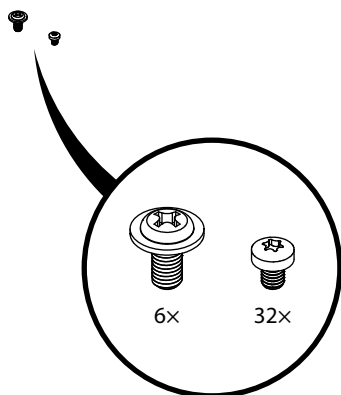
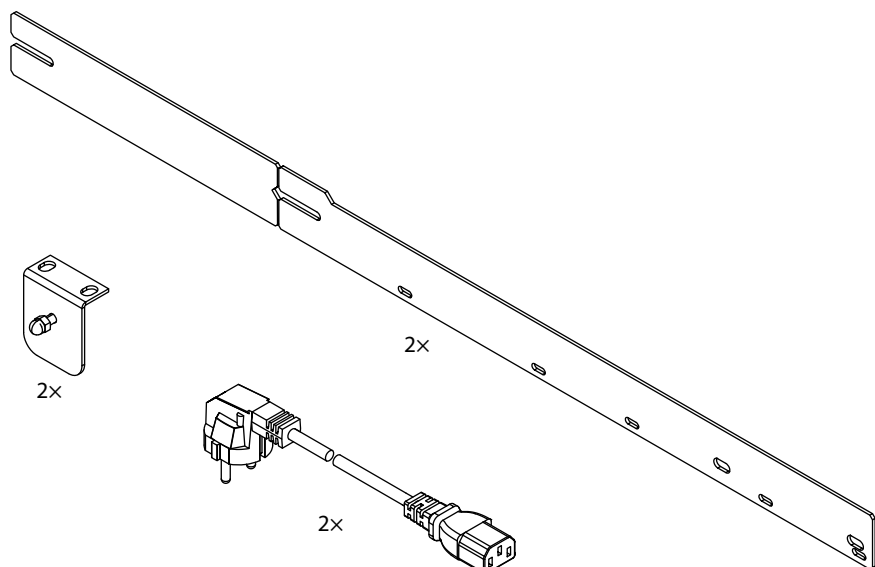
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1 Validity

This document applies to the SMAVIA Appliance IPS 2400 II.

Figures in this document may differ from the actual product.

2 Documents

The product documentation contains several documents which are included in the scope of delivery in a printed form and/or on a digital medium.

Read all documents included in the scope of delivery carefully and thoroughly before using the device.

Always follow the contained instructions, notes and warnings and observe the technical specifications.

Keep all documents in legible condition and in a suitable location for future reference.

Regularly check the website www.dallmeier.com for the latest updates on product documentation.

This Document

Commissioning

The document “Commissioning” (this document) contains detailed descriptions on installation, connection and commissioning of the device as well as safety instructions and general notes.

The target audience of this document is trained system integrators.

Other Applicable Documents

Data Sheet

The document “Data Sheet” contains detailed technical specifications, features and characteristics of the device.

The target audience of the document is trained system integrators.

Configuration

The document “Configuration” contains detailed descriptions on the configuration of the device.

The target audience of the document is trained system integrators.

3 Typographical Conventions

This document may contain various warning words and symbols that indicate potential sources of danger:

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

For reasons of clarity and readability, various text formatting elements and types of emphasis are used in this documentation:

Instructions are indicated by arrows (➡).

Expressions in bold and italic marks generally indicate a ***control element*** on the device (switches or labels) or on its user interface (buttons, menu items).



Paragraphs in italics provide information on basic principles, special features and efficient procedures as well as general recommendations.

4 Safety Instructions

Only use the device if it is technically in proper working condition and for the intended purpose while keeping safety and potential dangers in mind.

Qualified Personnel

The installation, mounting, connection, commissioning and configuration of the device may only be carried out by qualified personnel.

This also applies to the maintenance, testing and repair, whereat the regulations of the DIN VDE 0701 series of standards (repair, modification and inspection of electrical appliances) must be followed.

Regulations

The use of video and audio surveillance systems is, in general, strictly regulated.

Inform yourself about the currently valid laws and regulations regarding data, worker and environmental protection before using the device and ensure compliance with them.

System Components

Only use internal components that have been tested and approved by Dallmeier.

Inappropriate internal components may cause malfunctions, damages and data loss and may result in the loss of warranty.

Modifications

Do not make any modifications to the hardware or software that have not been tested and approved by Dallmeier.

Inappropriate modifications may cause malfunctions, damages and data loss and may result in the loss of warranty.

Documentation

The product documentation contains several documents which are included in the scope of delivery in a printed form and/or on a digital medium.

Read the documents included in the delivery carefully and thoroughly. Always follow the contained instructions, notes and warnings and observe the technical specifications in the product data sheet.

Keep all documents in legible condition and in a suitable location for future reference.

Regularly check the website www.dallmeier.com for the latest updates on product documentation.

Condensation Water

If the device is brought from a cold to a warm environment, resulting condensation water may cause malfunctions and damages.

In this case, wait (up to 8 hours) until the device has reached room temperature before commissioning.

Earthing & Equipotential Bonding

For the safety of persons (protection against dangerous contact voltages) and devices (protection against over-voltages) as well as for the immunity of information and communication technology equipment to electromagnetic interferences (EMI), all protective measures, which are specified by the currently valid DIN, VDE and ISO standards and which provide for a standard-compliant earthing and a correct equipotential bonding of electrical and electronic devices, are mandatory and must be fulfilled by all means.

Lightning Storms

To avoid damage to the device by electrical surge during lightning storms, all protective measures, which are specified by the currently valid DIN, VDE and ISO standards and which provide for a standard-compliant lightning protection equipotential bonding, are mandatory and must be fulfilled by all means.

Operating Conditions

Unfavorable operating conditions may shorten the life of the device and may cause malfunctions, damages and data loss and may result in the loss of warranty.

Observe the specifications given in the technical data, the operating condition requirements and the maintenance instructions.

Foreign Bodies

If objects or liquids get into the device, immediately disconnect it from the power supply (pull out the power plug).

Contact the sales partner responsible for your area.

Burnt Smell

If you notice burnt smell or a formation of smoke coming from the device, immediately disconnect it from the power supply (pull out the power plug).

Contact the sales partner responsible for your area.

Shocks

Shocks can cause malfunctions and damages. The unit may not be moved while in operation.

Opening

The device may only be opened by qualified personnel for commissioning, inspection, maintenance and repair.

Disposal



Do not dispose waste electrical and electronic equipment into the household trash. Disconnect the device from the power supply. Remove all connected devices. Return the device to your respective sales partner.

5 General Notes

Scope of Delivery

Included in the standard scope of delivery is:

- 1× SMAVIA Appliance IPS 2400 II
- 1× 19-inch rack mount kit (for fixed installation):
 - 2× Side mount fixing rail
 - 2× Rear mount fixing bracket (L-shaped with threaded pin)
 - 6× Mounting screw (combi-cross-recess type Z, M4 × 8 mm)
- 32× Hard drive mounting screw (six-lobe, 6-32 UNC × 5/32")
- 2× Key for HDD tray cam lock
- 2× Power cord (IEC 60320 C-13 connector to European plug)
- 1× Weidmüller plug-in connector B2L 3.50/14/180 SN BK
- 1× Documentations (printed and on DVD-ROM)



The scope of delivery may differ depending on the ordered equipment, device variant or country of destination.

The functional range of the device depends on the ordered equipment or device variant and may differ from this document's content.

Certain functions and features may require the purchase of an additional license.

Transportation and Packaging

Store the original packaging for later transportation.

Dallmeier is not responsible for any damage resulting from unprofessional/improper transportation.

The device should only be shipped in the original packaging.

If the original packaging is no longer available, ensure that the used packaging sufficiently protects the device against damage, moisture, heat and cold.

Warranty

The terms and conditions valid at time the contract was signed shall apply.

Appropriate Use

The IPS 2400 II is a high performance appliance with a processing capacity for up to 24 IP video channels and an integrated storage system. In conjunction with the dedicated software SMAVIA Recording Server it is optimally suited for all applications which require a high recording speed, enhanced storage capacity and low power consumption while providing maximum security.

Approvals/Certifications

The following approvals/certifications were valid for the device at the time of this document's compilation:

- CE
- FCC
- ACA
- UL
- DIN 50130-4 compliant



Visit www.dallmeier.com for possible updates.

Note (USA)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

6 Requirements

The device is designed for mounting and operation in a 19" standard rack with active ventilation. The required rails are included in the scope of delivery.

Rack Installation

- ➔ Ensure a free space of at least 60 cm at the front of the rack in order to be able to fully open the door.
- ➔ Ensure a free space of at least 75 cm at the rear of the rack in order to enable sufficient air circulation and access for maintenance.
- ➔ Install the rack at a place with limited access (device or server room).
- ➔ Ensure that the rack is installed in a stable way and is suitable to withstand the weight of the mounted devices.

Device Installation

- ➔ Install heavy devices at the bottom of the rack.
- ➔ Note that the temperature in the top of the rack can be higher than at the bottom.
- ➔ Plan a distance between the devices in order to allow a better air circulation.
- ➔ Ensure a sufficient air circulation by a free space of 10 cm at the front and rear side of the device.

Operation in the Rack

- ➔ Keep the doors of the rack closed in order to ensure a sufficient air circulation.

Secure Earthing

- ➔ Ensure anytime a proper grounding, preferably through a direct grounding of the rack.

Power Supply

- ➡ Operate the device with 100/240 V AC, 50/60 Hz.
- ➡ Use an uninterruptible power supply (UPS) to protect the device from voltage spikes and to keep it in operation in case of power failure.

NOTICE**Prevention of separation from the circuit**

The plug of the supply line serves as separator from the supply circuit.

- ➡ Use an outlet installed close to the device.
- ➡ Make sure the outlet is easily accessible.

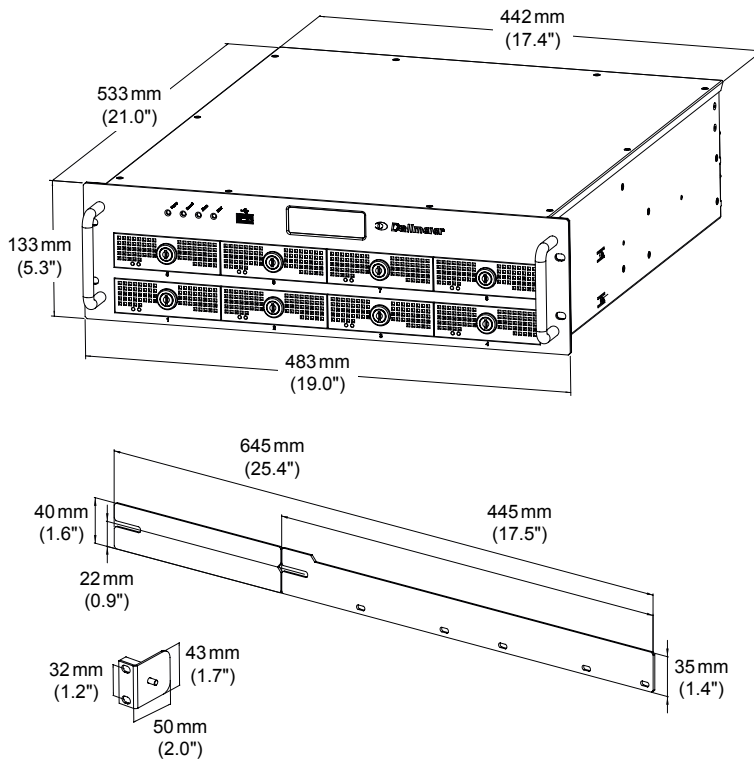
7 Rack Installation

The installation and commissioning of the device may only be carried out by qualified personnel.

The following tools are needed for the installation:

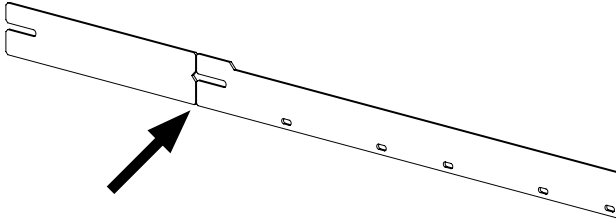
- Cross recess screwdriver (5 mm)
- Star screwdriver (T10)

Dimensions

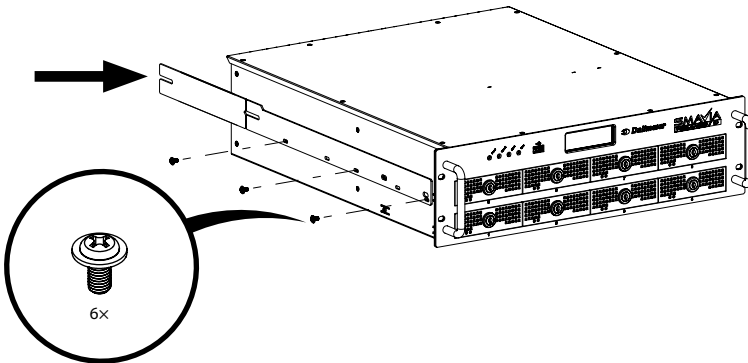


Preparation

- ➔ Use the 19" rails included in the scope of delivery.



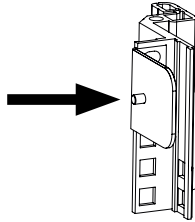
- ➔ Shorten the rails if necessary.



- ➔ Align the guidance of the rails to the rear side.
- ➔ Align the rails according to the depth of the rack.
- ➔ Fasten the rails on the housing.

Mounting

- ➔ Mount the 19" brackets at the rear side of the rack.



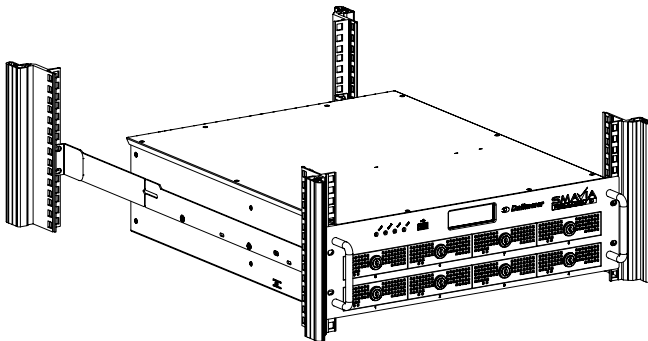
- ➔ Ensure that the guidances face towards the inner side.

CAUTION

Risk of injury due to heavy weight

- ➔ Ensure that at least two persons are available for the installation of the device (holding/mounting).

- ➔ Insert the device with the rails into the guidances.
- ➔ Insert the device completely into the rack.



- ➔ Ensure at least 10 cm of free space at the front and rear side.
- ➔ Mount the device at the front side of the rack.

8 HDD Mounting

The device has to be equipped with six identical hard disk drive at least to ensure the required storage speed.

Note that all mounted hard disk drives

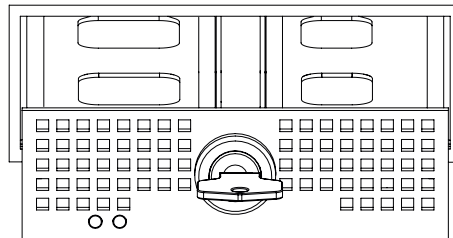
- have to be tested and released for mounting by Dallmeier (see HDD whitelist at www.dallmeier.com).
- may not be formatted or partitioned.
- should have the same capacity (number of sectors).
- should be from the same production series with identical firmware.

NOTICE

Risk of damages

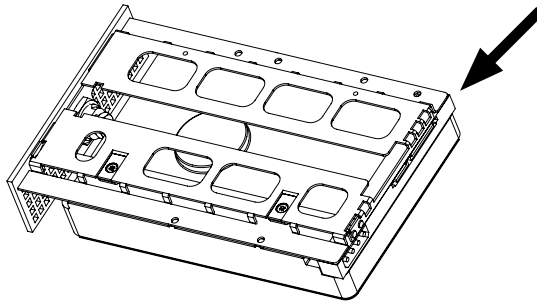
- ➔ Ensure that the device is disconnected from the mains supply.

- ➔ Note the labels on the HDD bays.
- ➔ Start with the mounting of the hard drive in the HDD bay 1.
- ➔ Mount the hard drives in a sequentially.

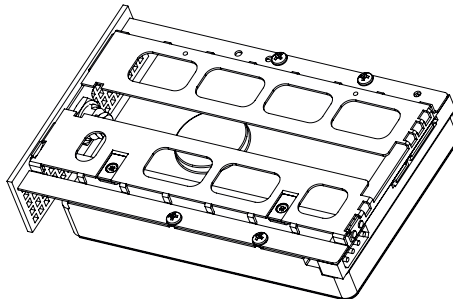


- ➔ Unlock the HDD tray with the key.
- ➔ Pull the HDD tray carefully out of the bay.
- ➔ Remove the cover panel mounted on the HDD tray.

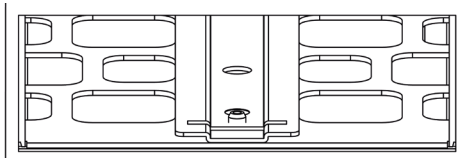
- ➔ Place the HDD tray on the bottom side of the HDD.
- ➔ Ensure that the connections of the HDD are positioned at the rear side of the HDD tray.
- ➔ Ensure that HDD and HDD tray are flush at the rear side.



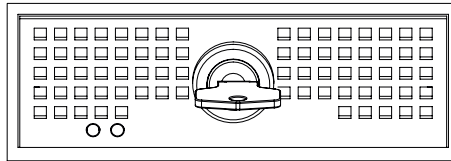
- ➔ Mount the HDD tray on the HDD with 4 screws.



- ➔ Place the HDD tray into the guidance rail.



- ➔ Slide the HDD tray carefully into the housing.



- ➔ Ensure that the HDD tray and housing are flush.
- ➔ Lock the HDD tray with the key.

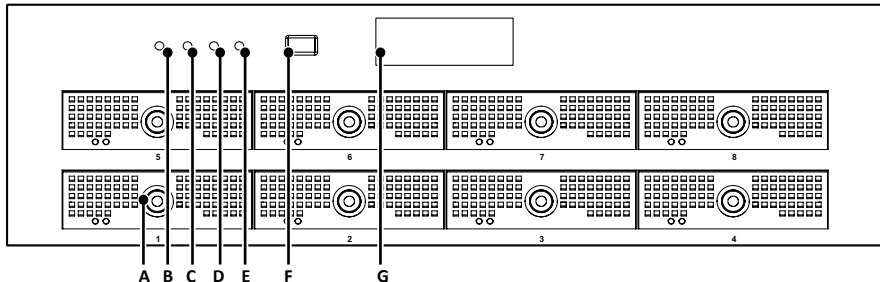
The HDD will be initialized and set into operation during the first start of the device.

i *Depending on the number and properties of the mounted hard disk drives, various messages and dialogs are displayed during the first start and the initialization.*

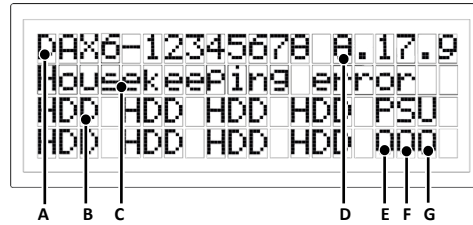
- ➔ Confirm the messages if required.
- ➔ Observe the instructions given in the dialogs.
- ➔ Note the appropriate “Configuration” documentation.
- ➔ Load the “Default System Parameters” as first step of the configuration.

9 Indicators

Information and status messages are output with a display and status LEDs on the front side of the device. The hard disk drives can be accessed with the integrated HDD trays.



- A Hard disk drive 1**
3,5" HDD on HDD tray
- B Power (blue)**
Always lights up while the device is switched on.
- C Record (green)**
Indicates the recording activity (hard disk activity) of the device.
- D Alarm (orange)**
Indicates the alarm status of the device.
- E Error (red)**
Indicated failures, e.g. camera failures or hard disk faults.
- F USB interface**
USB 2.0, type A
- G Display**
Shows information and status messages.



A Serial number

B Status hard disk drives 1 to 8

HDD	HDD is active and OK
XXX	HDD is defective
SSS	HDD is not active and OK (RAID spare HDD)
ooo	HDD is in recovery process (RAID)
---	HDD is not mounted

C Line for status messages

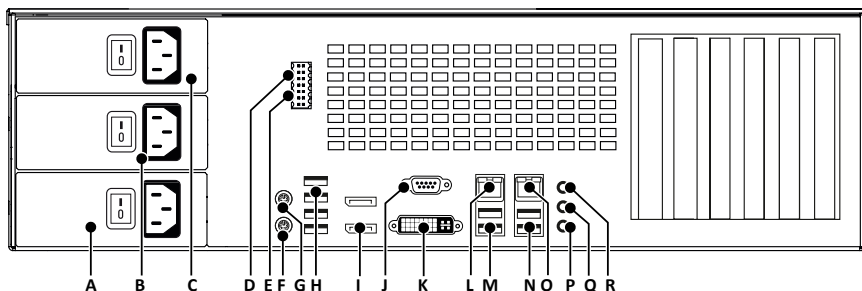
D Version number SMAVIA Recording Server

E,F,G Status power supply units 1 (E), 2 (F) and 3 (G)

O	PSU is active and OK
X	PSU is defective / switched off
*	PSU fan is defective
-	PSU is not mounted

10 Connections

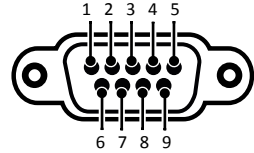
The connections can differ depending on the ordered equipment or variant.



- | | |
|---|--|
| <p>A Power Supply Unit 1
IEC C14 socket, 115/230 V AC $\pm 5\%$, 50/60 Hz</p> <p>B Power Supply Unit 2
IEC C14 socket, 115/230 V AC $\pm 5\%$, 50/60 Hz</p> <p>C Power Supply Unit 3
IEC C14 socket, 115/230 V AC $\pm 5\%$, 50/60 Hz (optional)</p> <p>D Relay OUT (1-4)
Weidmüller socket, 8 pins, max. 12 V DC / 24 V AC / 0,5 A, 150 mOhm</p> <p>E Contact IN (1-4)
Weidmüller socket, 6 pins, only for switch / push button (dry contact)</p> <p>F Keyboard
PS/2, purple</p> <p>G Mouse
PS/2, green</p> <p>H USB Interface
4× USB 2.0, type A</p> <p>I Video OUT Interface
2× DisplayPort (configuration)</p> <p>J Serial Interface COM 1
D-SUB, 9 pins, 1× RS232</p> | <p>K Video OUT Interface
DVI-D, Dual Link (24 + 5), 1920 × 1080 (configuration)</p> <p>L Ethernet Interface 2
RJ45, 10/100/1000 Mbps (optional)</p> <p>M USB Interface
2× USB 3.0, type A</p> <p>N USB Interface
2× USB 2.0, type A</p> <p>O Ethernet Interface 1
RJ45, 10/100/1000 Mbps</p> <p>P Microphone IN
3.5 mm phone jack, red, 4.3 kOhm, 2.828 V_{pp}</p> <p>Q Audio OUT
3.5 mm phone jack, green, 1 kOhm, 2.828 V_{pp}</p> <p>R AUX / Line IN
3.5 mm phone jack, blue, 16 kOhm, 2.828 V_{pp}</p> |
|---|--|

Serial interface (J)

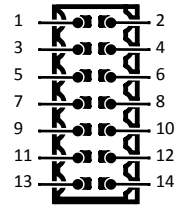
D-SUB, 9 Pins



Pin	Assignment	Pin	Assignment	Pin	Assignment
1	DCD (Data Carrier Detect)	4	DTR (Data Terminal Ready)	7	RTS (Request to Send)
2	RxD (Receive Data)	5	GND	8	CTS (Clear to Send)
3	TxD (Transmit Data)	6	DSR (Data Set Ready)	9	RI (Ring Indicator)

Relais OUT (D)

Weidmüller, 8 Pins



Pin	Assignment	Triggering event	Type
1 + 2	Relay 4	Configurable function	Normally open
3 + 4	Relay 3	Configurable function	Normally open
5 + 6	Relay 2	Configurable function	Normally open
7 + 8	Relay 1	Configurable function	Normally open

Contact IN (E)

Weidmüller, 6 Pins

Pin	Assignment	Function
9	Contact 3	Configurable event
10	Contact 4	Configurable event
11	Contact 1	Configurable event
12	Contact 2	Configurable event
13	GND	None
14	GND	None

11 Commissioning and Local Login


Commissioning

- ➔ Connect the device to the voltage supply.
- ➔ Ensure that a monitor and a mouse are connected.
- ➔ Switch on the monitor and the device.

The user interface is displayed in the initial state as soon as the start is complete.

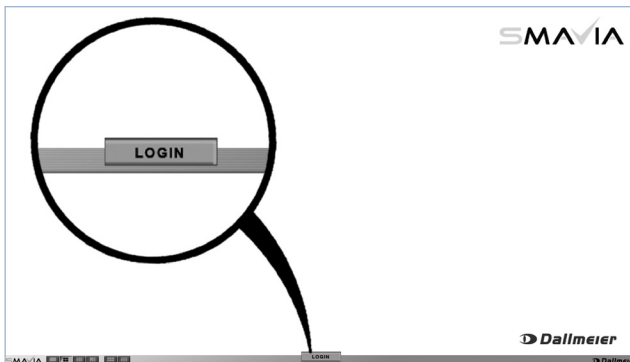
Login

In the initial state it is possible to login without a password. The rights of the Administrator group are valid.

 *The definition of the passwords and of the network parameters is necessary for remote access with SMAVIA Viewing Client.*

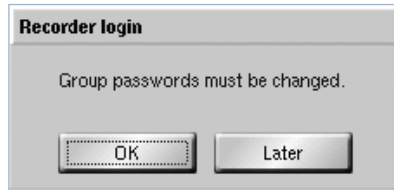
- ➔ Drag the mouse pointer to the lower screen edge.

The task bar with the **Login** button is displayed.



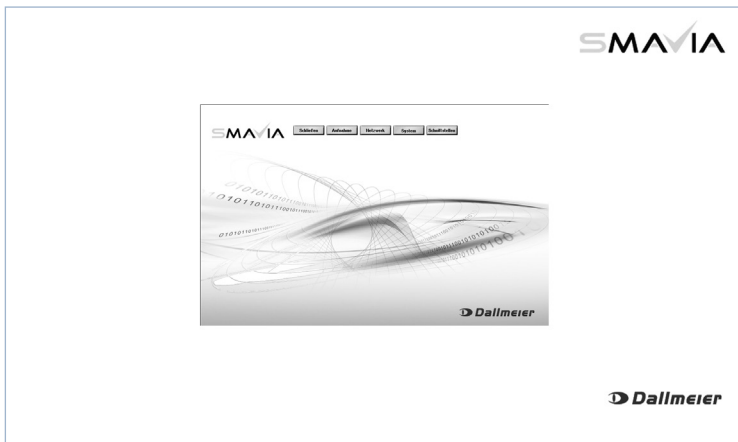
- ➔ Click the **Login** button.

The **Recorder Login** dialogue is displayed.



➔ Click **Later** to login without changing a password.

The configuration interface is displayed.




➔ Observe the appropriate “Configuration” documentation.

12 Commissioning and Remote Login

Commissioning

- ➔ Connect the device to the network.
- ➔ Connect the device to the power supply.
- ➔ Switch on the device.

The device is ready for remote configuration via Ethernet as soon as the start is complete (up to approx. 5 minutes).

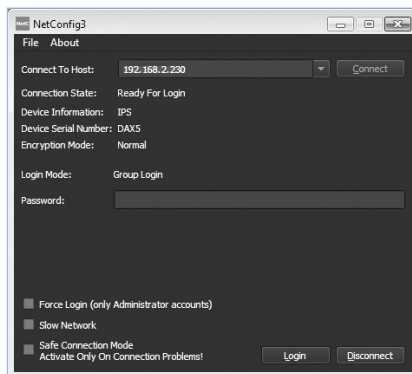
 *The IP address of the device (default 192.168.2.230) can be changed without login using the software PService3.*

Login

In the initial state a remote login is possible using the serial number as password. The rights of the Administrator group are valid.

- ➔ Observe the “Operation” documentation for **PService3**.
- ➔ Select the device from the scanner list.
- ➔ Start the function **NetConfig3** over the context menu.

The connection will be established and device information displayed.



- ➔ Enter the serial number (e.g. DAX5-12345678) as **Password**.
- ➔ Confirm with **Login**.

The configuration interface is displayed.



i *The configuration interface is compressed for slow network connections before transmission if the **Slow Network** check-box is activated.*

- ➔ Observe the appropriate “Configuration” documentation.

13 Specifications

Components	
CPU	Multi-Core
RAM	8 GB
Flash module	8 GB (for operating system and application)
Hard disks	Up to 8× 3.5" HDD (optional)
Max. storage capacity	Currently up to 48 TB (without RAID)
Fan	3× with automatic speed adaptation
Power supply unit 1	Integrated
Power supply unit 2	Integrated
Power supply unit 3	Optional (hardware 004064, required for redundant operation)

Interfaces	
Video OUT	2× DisplayPort, only for configuration 1× DVI, only for configuration
AUX / Line IN	1× 3.5 mm phone jack
Microphone IN	1× 3.5 mm phone jack (for intercom, license 003801 required)
Audio OUT	1× 3.5 mm phone jack (for intercom, license 003801 required)
USB	2× USB 3.0 (rear side) 6× USB 2.0 (rear side) 1× USB 2.0 (front side)
Ethernet 1	RJ45, 10/100/1000 Mbps
Ethernet 2	RJ45, 10/100/1000 Mbps (optional, license 003803)
Ethernet protocols	IPv4, TCP, UDP, ARP, ICMP, DHCP, NTP, HTTP
Contact IN	4×, with galvanic isolation, only for switch / push button (dry contact), with 4 functions each
Relay OUT	4×, with galvanic isolation, max. 12 V DC / 24 V AC / 0,5 A, 150 mOhm, as NC or NO
SATA interface	RAID controller board for JBOD storage extension (optional)
PS/2	Mouse, keyboard

Electrical Data

Voltage supply	115/230 V AC $\pm 5\%$, 50/60 Hz
Power consumption	Max. 230 W
Thermal output	Max. 785 BTU/h

Mechanical Data

Dimensions (W × H × D)	Approx. 483 × 133 × 533 mm (19.0 × 5.3 × 21.0 inches)
Weight	Approx. 20 kg (44 lbs) with 8 HDDs

Ambient Data

Temperature	+ 5°C up to +40°C (41°F – 104°F)
Recommended temperature	+20°C up to + 25°C (68°F – 77°F)
Humidity	5 – 70% RH, non-condensing
Atmospheric load	Dust-free



For detailed technical specifications and possible updates, see the current technical product data sheet that is available at www.dallmeier.com.

14 Maintenance

The device may only be opened by qualified personnel for commissioning, inspection, maintenance and repair.

WARNING

Danger of electric stroke

The device is equipped with redundant power supply units.

- ➔ Ensure that all supply lines are disconnected from the supply circuit.

CAUTION

Danger of explosion if battery is incorrectly replaced

- ➔ Replace and discard the battery of the main board in accordance with the instructions of the manufacturer.

Cleaning

If it is necessary to clean the device, observe the following notes:

NOTICE

Damage to the surface of the device

- ➔ Clean the housing (outside) with a soft, dry and anti static cloth.
- ➔ Do not use detergents.

Notes



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