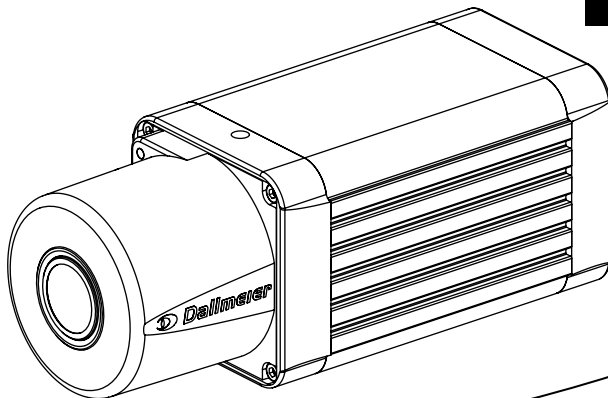


# DF5(X)00HD-DN

## Commissioning

English



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This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org>) and cryptographic software written by Eric Young ([ey@cryptsoft.com](mailto:ey@cryptsoft.com)).

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# 1 Validity

This document applies to the following devices:

- DF5200HD-DN
- DF5300HD-DN

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 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](http://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 (➡).

➡ Always carry out instructions one after the other in the sequence described.

“Expressions” in quotation 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 procedure 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**

Read the documents included in the delivery carefully and thoroughly.

Always observe the contained instructions, notes and warnings.

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

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

- **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.

- **Opening**

The device may only be opened by qualified personnel for 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:

- Documentations (published in print 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.

## Approvals/Certifications

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

- CE, FCC, RCM, UL, DIN 50130-4 compliant



*Visit [www.dallmeier.com](http://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.

## Appropriate Use

The DF5(X)00HD-DN is a HD network camera built into a compact and lightweight box housing.

Equipped with a 1/4" tripod socket located on the top and bottom side, the camera fits all standard brackets with UNC threaded screws.

The camera is designed for indoor installations on ceiling/wall brackets and can be powered via PoE (Power over Ethernet, Class 0, IEEE 802.3af) or supplied with a separate power supply unit.

### ***NOTICE***

For an outdoor use, the camera must be installed in a proper weather-proof housing.

However, note that direct sunlight can cause extremely high temperatures inside the housing.

In this case, it is absolutely necessary to use a ventilated, temperature-controlled weather-proof metal housing and a sunshield, where required.

In addition, a metal slide should be used if the camera is installed in a (weather-proof) housing to ensure optimal heat dissipation.

## Operation

- When using a separate power supply unit, interference caused by a ground loop may occur in the analog video preview signal. In this case, use a video signal transformer (balun) for galvanic (ground) isolation between the signal source (camera) and the RG-59 cable.
- In order to prevent damage to the device, a galvanic isolator (balun) must be installed if the BNC interface is permanently in use.
- If the device or the cables connected to the device are located near sources with strong radiation, the video image may be distorted.
- The device is equipped with automatic gain control (AGC). In low-light conditions the image may be altered (e.g. noise). However, this is not a malfunction.
- The quality of the video image depends on the lighting conditions and the used monitor.
- The accuracy of the automatic white balance (AWB) algorithm depends on the used lighting. Mixed light (consisting of artificial light and daylight) may cause color distortions (inaccurate color reproduction).
- Poor lighting can lead to an incorrect white balance.

## 6 Requirements

### Ambient Conditions

Unfavorable local conditions may shorten the lifetime of the product and may cause malfunctions or damages.

➔ Do not install/operate the device in places

- with a large amount of dust and dirt,
- with steam or oil vapors (e.g. kitchen),
- with direct sunlight,
- with strong heat emissions (e.g. radiator),
- with improper ambient temperatures,
- near sources with strong radiation (e.g. radio transmitters, magnetic fields),
- with corrosive surroundings (e.g. gases, salt water),
- with insufficient air ventilation (e.g. closed cabinet).



## Power Supply

The device can be powered via PoE (Power over Ethernet, Class 0, IEEE 802.3af) or supplied with a separate power supply unit.

### **▲ WARNING**

#### **Electric shock hazard**

Danger of death or serious injury

- ➔ Always disconnect the separate power supply unit from the mains socket (pull out the power plug) before connecting or disconnecting the device.

#### **Over-voltage (electrical surge)**

Danger of death or serious injury as well as damage to the device

- ➔ To ensure the safety of persons (protection against dangerous contact voltages) and to prevent damage to the device caused by electrical surge, a standard-compliant earthing of the device is mandatory.

### **NOTICE**

#### **Damage to the device resulting from improper power supply**

- ➔ Always ensure the correct polarity when using a separate power supply unit.
- ➔ Do not use PoE (Power over Ethernet) and a separate power supply unit simultaneously.

## 7 Maintenance

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

### Cleaning

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

#### ***NOTICE***

##### **Damage to the surface of the device**

- ➔ Clean the housing with a soft, dry and antistatic cloth.
  - Do not use detergents.
- ➔ If necessary, remove dust from the lens element with a suitable bulb blower.
  - Always beware not to touch the lens element in order to avoid damages due to scratching or loss of image quality due to fingerprints.
  - Do not use canned air.
  - Do not use organic solvents (alcohol, benzine) or cotton buds for cleaning.

## 8 Installation

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

### ▲ CAUTION

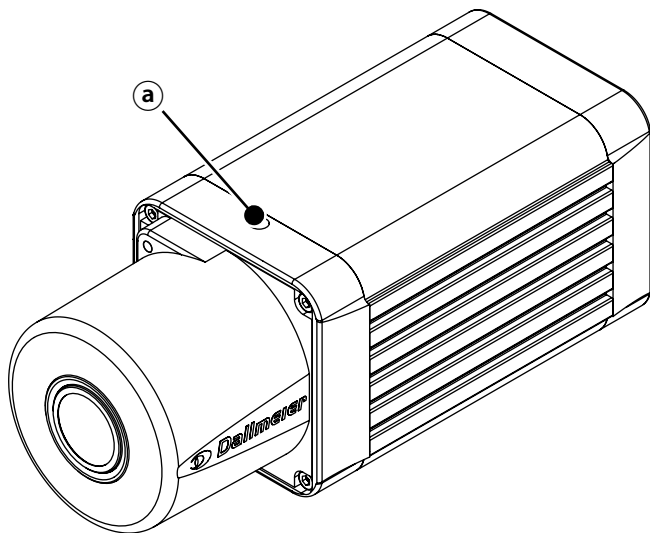
#### Falling device

Danger of injury

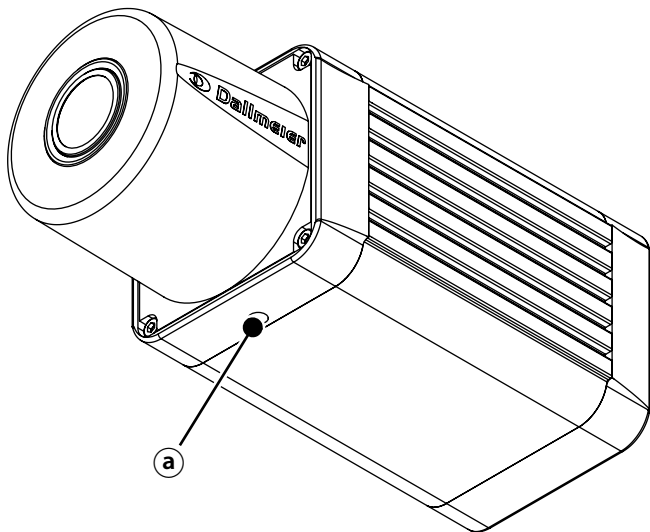
- ➔ Observe the manufacturer's instructions about the maximum adequate carrying capacity of the supporting structure.
- ➔ For the installation of ceiling/wall brackets, always use screws and anchors suitable for your ceiling/wall type:
  - Plastic screw anchors for solid wall material (concrete/brick)
  - Toggle-bolt-style anchors for drywall/hollow wall type (plaster)

You need:

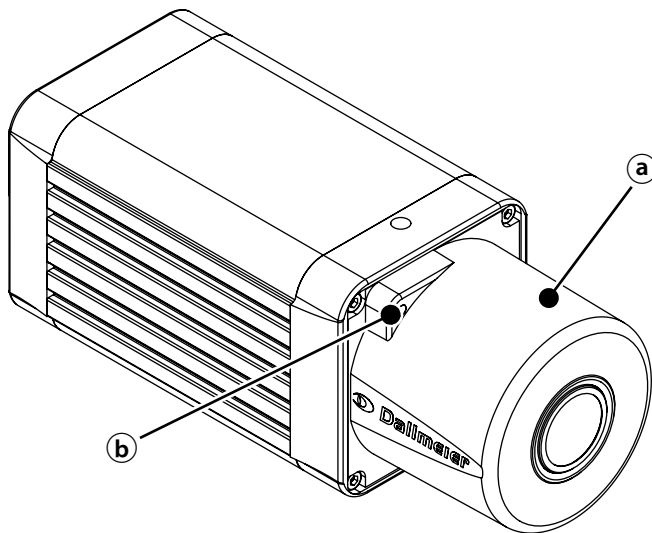
- Ceiling/wall bracket with tripod screw (1/4"-20 UNC)

**1**

**a** *Tripod socket UNC 1/4"-20 for brackets with standard tripod screws*



**a** Tripod socket UNC 1/4"-20 for brackets with standard tripod screws

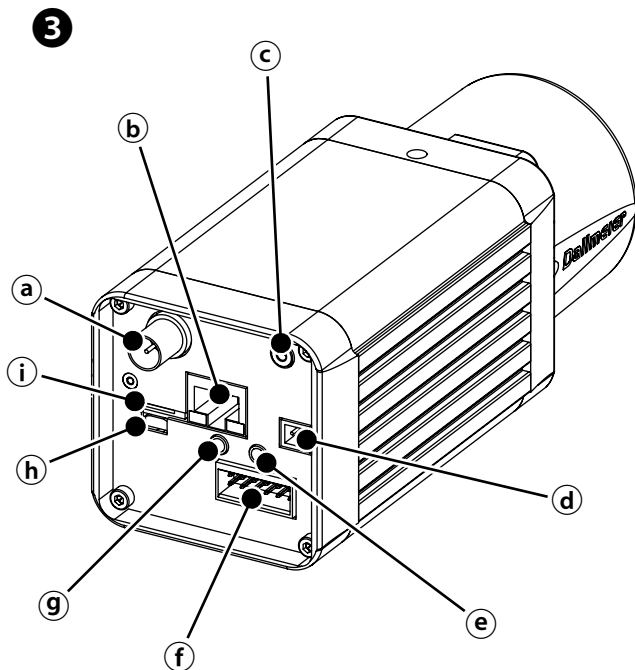
**2**

- a** *Motor-driven P-Iris varifocal lens*
- b** *Ambient light sensor*

#### **Remote Zoom & Focus Control**

The camera is equipped with a motor-driven P-Iris varifocal lens.

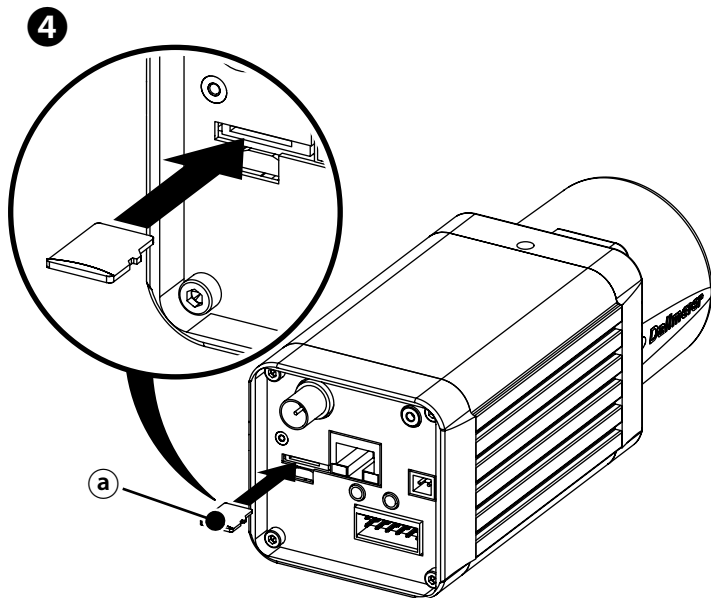
The focal length (zoom) and the focus are adjusted over the network in the “WebConfig” user interface of the camera (more information can be found in the documentation on camera configuration).





- a** *Analog video preview output (BNC, CVBS, 1.0 V<sub>p-p</sub>, 75 Ω)*
  - b** *LAN / PoE (RJ45 jack, PoE conformity IEEE 802.3af)*
  - c** *Earthing connection (functional earth)*
  - d** *Power IN (Weidmüller male connector SL 3.50/02/90G)*
  - e** *Audio Line IN (3.5 mm phone jack)*
  - f** *Contact I/O, RS485 interface (Weidmüller male connector S2L 3.50/12/90G)<sup>1)</sup>*
  - g** *Audio Line OUT (3.5 mm phone jack)*
  - h** *Video output (HDMI<sup>1)</sup> Micro port – Type D)*
  - i** *Memory card slot (microSDXC<sup>1)</sup> compatible)*
- i** *You can disable the LAN LEDs in the “WebConfig” user interface of the camera. For more information and detailed descriptions of the possible LAN LED states, read the documentation on camera configuration.*

1) Optional (ex factory only)



**a** *microSDXC card (optional)*

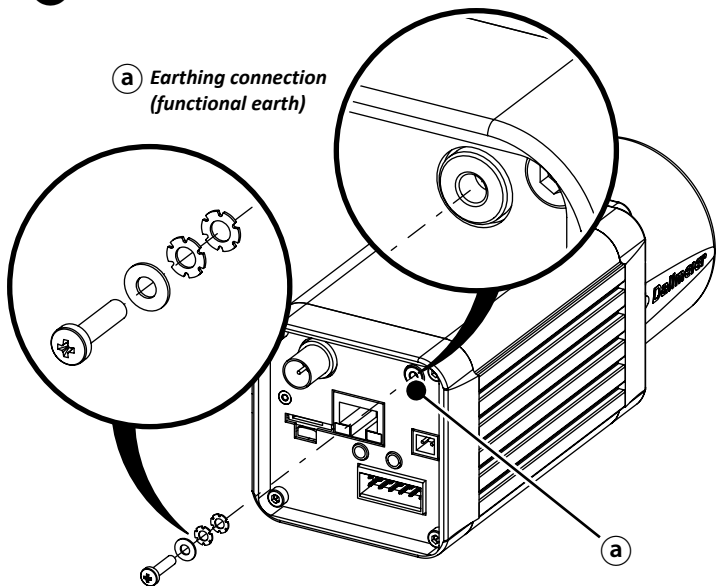
**NOTICE**

Only use memory cards that have been tested and approved by Dallmeier. Inappropriate memory cards may cause malfunctions, damages as well as data loss and may result in the loss of warranty.

**Damage to the device or to the optional memory card**

Make sure that the contacts of the used memory card are facing downwards when inserting the card into the camera (as shown in the preceding illustration).

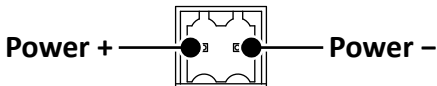
 *The memory card locks into place by use of a spring mechanism.*

**5****a** Earthing connection  
(functional earth)



- Recommended accessories for earthing connection:*
- 1× Pan head screw M3 × 12 (EN ISO 7045 / DIN 7985)*
  - 1× Flat washer M3 (DIN 125 A3.2)*
  - 2× Tooth lock washer M3 (DIN 6797 A3.2)*

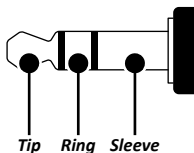
## 9 Pin Assignment



Power IN

Weidmüller male connector SL 3.50/02/90G  
(mating connector: Weidmüller BL 3.50/02/180 SN)

- i** *In order to comply with UL's requirements, always use a UL-certified, Limited Power Source (LPS) Class 2 power supply unit when operating the device with a separate power supply unit.*



Audio Line IN / Line OUT (2× 3.5 mm phone jack, for stereo plug)

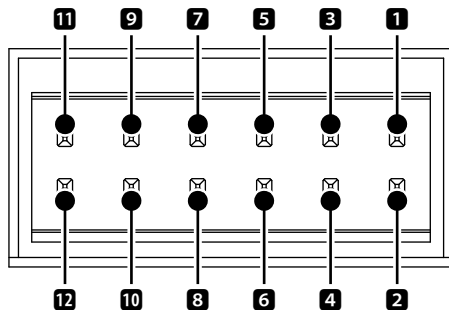
Audio	Line IN (stereo)	Line OUT (stereo)
<b>Tip</b>	Left channel	Left channel
<b>Ring</b>	Right channel	Right channel
<b>Sleeve</b>	Ground	Ground

### Audio Line IN (stereo)

Input level: max.  $2.83 V_{p-p}$   
Input impedance:  $29 k\Omega$

### Audio Line OUT (stereo)

Output level at  $10 k\Omega$  load: max.  $3.11 V_{p-p}$   
Output impedance:  $320 \Omega$



Contact I/O<sup>2)</sup>, RS485 interface<sup>2)</sup> (full duplex, half duplex)  
Weidmüller male connector S2L 3.50/12/90G  
(mating connector: Weidmüller B2L 3.50/12/180 SN)

2) Optional (ex factory only)



Pin No.	Function	Pin No.	Function
1	RS485_Y	2	RS485_Z
3	RS485_A	4	RS485_B
5	Contact OUT	6	GND
7	Contact IN 1	8	GND
9	Contact IN 2	10	GND
11	Contact IN 3	12	GND

### Full Duplex

RS485\_A: RX+ (Non-inverting Receiver Input)

RS485\_B: RX- (Inverting Receiver Input)

RS485\_Y: TX+ (Non-inverting Driver Output)

RS485\_Z: TX- (Inverting Driver Output)

### Half Duplex

RS485\_Y: TX+/RX+ (Non-inverting Driver Output and Non-inverting Receiver Input)

RS485\_Z: TX-/RX- (Inverting Driver Output and Inverting Receiver Input)

### Contact IN 1–3


For use with potential-free switch contacts

### Contact OUT

Open-Drain output (max. 5 V DC, 500 mA switched to GND)

## 10 Connection and Login

The configuration of the device is carried out with a PC and web browser over the local area network (LAN).

 *Alternatively, the PC can be directly connected to the device via an Ethernet crossover cable (if the device is powered via Power over Ethernet, a PoE injector is additionally required).*

To configure the device, the client PC must meet the following system requirements:

System Requirements	
Operating system (OS)	Microsoft <sup>®</sup> Windows <sup>®</sup> 7 /10 (each with latest service pack)
Web browser	Microsoft Internet Explorer <sup>®</sup> 11 (Windows 7) Microsoft Edge <sup>®</sup> (Windows 10) Google <sup>®</sup> Chrome <sup>®</sup> Mozilla <sup>®</sup> Firefox <sup>®</sup> (latest available version of each browser)
Browser settings	JavaScript <sup>®</sup> enabled
Ethernet	100 Mbps (or more)
Sound	Sound card or on-board sound chip (min. 16 bit)

## Connection

The factory default IP address of the device is:

**192.168.2.28**

- ➔ Ensure that your PC/web browser can establish a connection to the device via Ethernet (if necessary, contact your network administrator for more information and assistance).
- ➔ Start the web browser.
- ➔ Enter the IP address of the device into the address bar of the web browser.
- ➔ Confirm the input.

The connection to the device is then established.

After the successful connection to the device, the login dialog is displayed.

## Login

The graphical user interface (GUI) of the configuration mode is displayed for authenticated and authorized users only.

The factory default login credentials of the administrator account are:

User name: **admin**  
Password: **3**

### ***NOTICE***

#### **Risk of misuse by unauthorized users**

- ➔ Change the default login credentials of the administrator account as soon as possible.

- ➔ Enter your login credentials.
- ➔ Confirm with "OK".

After the successful login, the graphical user interface of the configuration mode is displayed.

- ➔ Configure the required settings.
- ➔ Finally click "LOGOUT" to log out of the device.



## 11 Technical Specifications

Connections/Interfaces	
Video preview output	1× BNC (CVBS, 1.0 V <sub>p-p</sub> , 75 Ω) 1× HDMI Micro port (Type D)
Audio Line IN (stereo)	1× 3.5 mm phone jack Input level: max. 2.83 V <sub>p-p</sub> Input impedance: 29 kΩ
Audio Line OUT (stereo)	1× 3.5 mm phone jack Output level at 10 kΩ load: max. 3.11 V <sub>p-p</sub> Output impedance: 320 Ω
Ethernet	1× RJ45 female connector 10BASE-T/100BASE-TX/1000BASE-T PoE
Serial interface <sup>3)</sup>	1× RS485 (full duplex, half duplex) for the connection of external devices (e.g. pan/tilt heads)
Contact I/O <sup>3)</sup>	3× Contact IN 1× Contact OUT
Memory card slot <sup>4)</sup>	1× (microSDXC compatible)
Power IN	1× Weidmüller male connector SL 3.50/02/90G (mating connector: Weidmüller BL 3.50/02/180 SN)


3) Optional (ex factory only)

4) Only use memory cards that have been tested and approved by Dallmeier.

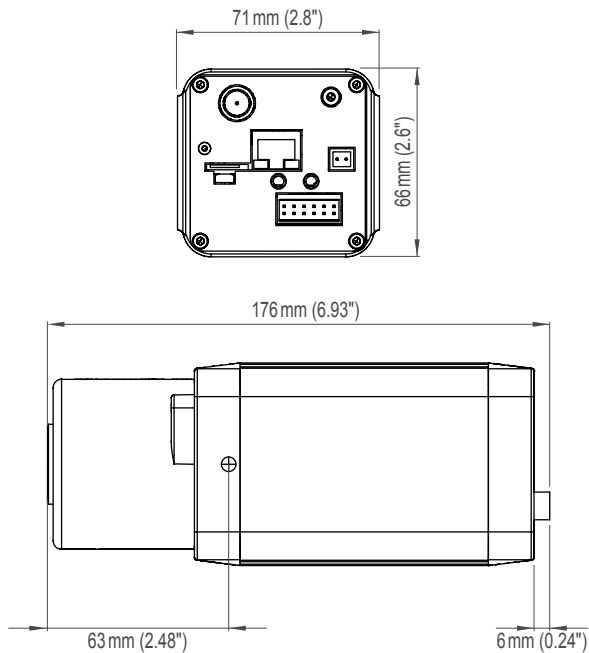
Electrical Data	
Voltage supply	24 V DC or PoE (Class 0)
PoE standard	IEEE 802.3af
Power consumption	Max. 6 W

Mechanical Data	
Color	Black/grey
Dimensions	Approx. W 71 × H 66 × L 176 mm (W 2.8" × H 2.6" × L 6.9")
Weight	Approx. 560 g (1.23 lbs)

Environmental Conditions	
Suitable installation sites	Indoor
Operating temperature	-20 °C to +50 °C (-4 °F to 122 °F)
Relative humidity	0% – 90% RH, non-condensing

 For detailed technical specifications and possible updates, see the current product data sheet (available on [www.dallmeier.com](http://www.dallmeier.com)).

## 12 Dimensions













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