WISKA
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OPERATING INSTRUCTIONS

EX Dome Camera

D300 EX

Changes

Edition 1.0	First edition of this User Manual
Edition 1.1	Specific conditions
Edition 1.2	Addendum IEC Ex certificate, supplement camera module 42212-2
	This manual is a translation from the German original.

List of abbreviations

ATEX	French, for Atmosphéres Explosibles named in the Atex-Directive
DIN	German Institute of Standardization
EX	Explosive Atmospheres
IEC	International Electrotechnical Committee
ISO	International Standardization Organisation
SP	Spare Parts
TIA	Telecommunications Industry Association

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1 About this Instruction Manual

1.1 Design and purpose of this instruction manual

This User Manual is directed to the personnel in charge of installation, operation and maintenance of the purchased product.

The manual covers all instructions throughout the entire life cycle of the product.

1.2 Users and target groups

These operating instructions are intended for operators, skilled persons and operating personnel. If a chapter is intended for a specific target group, this is indicated in the relevant introduction. All persons operating and maintaining the product must have read and understood the contents of this manual and must follow all safety and handling instructions to ensure safe handling of the product. Every user must be appropriately trained and instructed on the product.

Any utilization of the product without assistance of this user manual is inadmissible.

1.3 Delivery documentation

The documents of the suppliers products built-in in this product are listed in chapter 10 "Supplier documentation and certificates" and are attached to this User Manual.

1.4 Safety precautions

WISKA's safety instructions are composed according to the SAFE principle and are derived from the residual risks of the risk assessment:

- Keyword
  The keyword reflects the gravity and probability of the emerging risk (danger, warning, caution, notice, information)
- Type and source of the risk
  The type and source of the risk is based on the standard ISO 12100
- Consequences
  Indicates possible consequences in case of non-compliance
- Evasion and/or prevention
  This section lists options to evade or prevent such risks entirely.

SIGNAL WORD

Type and source of hazard

Consequences arising from this risk

Escape and prevention of the risk

2 Safety

2.1 General safety instructions

The following applies principally as fundamental safety instructions when working with WISKA products:

- Please read the entire User Manual prior to using and working with the product in order to prevent risks for persons and the product.
- Please observe the valid instructions products dedicated to explosive atmosphere.
- Only electrically skilled persons are permitted to perform works at the product.
- Take the electrical system off power and secure it against reactivation.
- Do not perform unauthorised modification on the product. Any resulting risks are not predictable.
- Both operating permission and warranty of the product expire in case of unauthorised modifications.
- Use only original spare parts procured from WISKA.
- The product may heat up during operation. Only touch the product with suitable personal protective equipment [abbreviation: PPE]
- Ensure that the installation location is safe and accessible.
- Observe all safety instructions in this User Manual at all times.
- Observe the country and in-house regulations when working and during installations on the product.

2.2 Set-up safety precautions

The chapter on safety information and warnings describes their structure and use. A warning message refers to this avoidable situation prior to each dangerous situation.

DANGER

Risk refers to a dangerous situation, which, unless it is avoided, will result in immediate death or fatal injuries.

WARNING

Warning refers to a dangerous situation, which, unless it is avoided, can result in death or serious injury.

CAUTION

Caution refers to a low-level risk, which, unless prevented, may result in minor or moderate injuries ~~to persons~~.

NOTICE
Attention indicates the possibility of material damage to the product and its functions.

2.3 Safety precautions for explosive atmosphere

The following fundamental safety instructions for EX areas with explosive atmospheres apply in connection with WISKA products:

General

- Only personnel trained for the EX area is permitted to handle and install the product.
- Make sure that the product is approved for the application (EX labelling).
- Always comply with the classification of zone to install the product at the correct location.
- Select suitable equipment for EX zones.
- Please note that structural alterations are not permitted.
- Make sure that no damaged products are installed and operated in the EX zone.
- Changes to the device or the electrical plugs lead cause the expiration of the operational safety and explosion protection.
- Observe the core values and rated operating conditions of the type labels and data plates.
- Observe the national and local safety regulations, the accident prevention regulations and the assembly and installation regulations.
- Observe the general safety instructions.
- Observe the generally accepted regulations of technology.
- Observe any additional information plates on the device.

Product specific

- Ambient temperature range: -30°C to +55°C.
- The dome must be protected from electrostatic charge.

2.4 Application according to its intended purpose

The D300 EX-Dome camera is approved for EX areas zone 1, 2, 21 and 22, and may be fix-installed and operated at these locations. The D300 EX-Dome camera is suitable for indoor and outdoor operation. The camera is declared as follows:

II 2G Ex db IIC T6 Gb
II 2D EX tb IIIC T85°C Db

The camera was primarily developed for the application on seagoing vessels, offshore platforms and for safety purposes in the shore area. The certificate numbers are EPS 18 ATEX 1 125 X and IECEx EPS 18.0058 X.

2.5 Foreseeable misuse

The camera may only be used according to the specified intended use. All other types of use are prohibited. The camera may not be used as a portable device. This would terminate the EX protection.

2.6 Warranty

In the event of a defect in your product, please contact the WISKA service.

2.7 Users

It is fundamentally important that the user has been trained and instructed about the product's use prior to using, operating or installing the device.

2.7.1 Qualification of users

The user has to have read and understood the complete documentation in order to product. Instructions regarding the stay and conduct in EX zones is mandatory.

2.7.2 Qualification of technical personnel

Workers have to be trained on precautions and actions needed to safeguard themselves and others from explosions. The technical personnel have to be trained in accordance with a standard, which ensures that the person is capable of securely connecting mechanical combinations and test the function. Instructions regarding the work and conduct in EX zones is urgently required. According to IEC guidelines, an electrical expert is required for the connection of electrical components.

2.8 Danger zones and points of hazard

Among others, danger zones / points of hazard are located at:

- Danger zone according to the ATEX directive's classification
- Area of electrical connections
- Connecting parts and cable glands

2.9 Protective devices

No risks having impact on the user are known for this product.

2.10 Labels and symbols

Symbol	Description	Application
	Danger symbol Warns of immediate danger	Safety and warning messages
	Danger symbol Warns of electrical danger	Safety and warning messages
	Danger symbol Warns of suspended loads in case of overhead works	Safety and warning messages
	Danger symbol Warns of hazards in EX area	Safety and warning messages
	Mandatory sign Switch off power before works commence	Safety and warning messages
	Mandatory sign Connect to earth prior to works or use	Safety and warning messages
	Mandatory sign Observe operating instructions	Safety and warning messages
	Information An electrician/ electrical skilled person is required for the installation	Safety and warning messages

2.11 Personal Protection Equipment

Symbol	Description
	Safety helmet Always carry if suspended loads are in the work area
	Workwear Always wear to protect the body from external impacts
	Safety gloves Always wear to protect the hands from external impacts
	Safety shoes Always wear in the workspace at all times

3 Installation

DANGER

Hazard of explosion due to electrostatic discharge

A strong charge-generating area creates static electricity at the camera.

- Do not utilise the camera in severe charge-generating areas.
- Prevent particle flows
- Prevent unintentional friction

3.1 Transport and lifting

WARNING

Risk of injury due to suspended loads

The product or parts thereof coming loose may cause grave injuries.

- Always wear your personal protection gear.
- Do not step into the pivoting range or under the product.
- Secure the load carefully before continuing the installation.

Depending on the combination the products are placed on pallets and packaged stable and weatherproof.

Please ensure that the packaging does not exhibit transport damages. In the event of damage, please contact customer service.

Transport the product to the place of deployment. If the installation is delayed, please store the product in the interim according to the requirements in the Storage chapter.

3.2 Mounting

WARNING

Risk of injury at overhead works

If the product or parts of it should come loose, serious injuries are likely.

- Always wear your personal protection equipment.
- Do not step underneath the product.
- Secure the product carefully prior to installation.

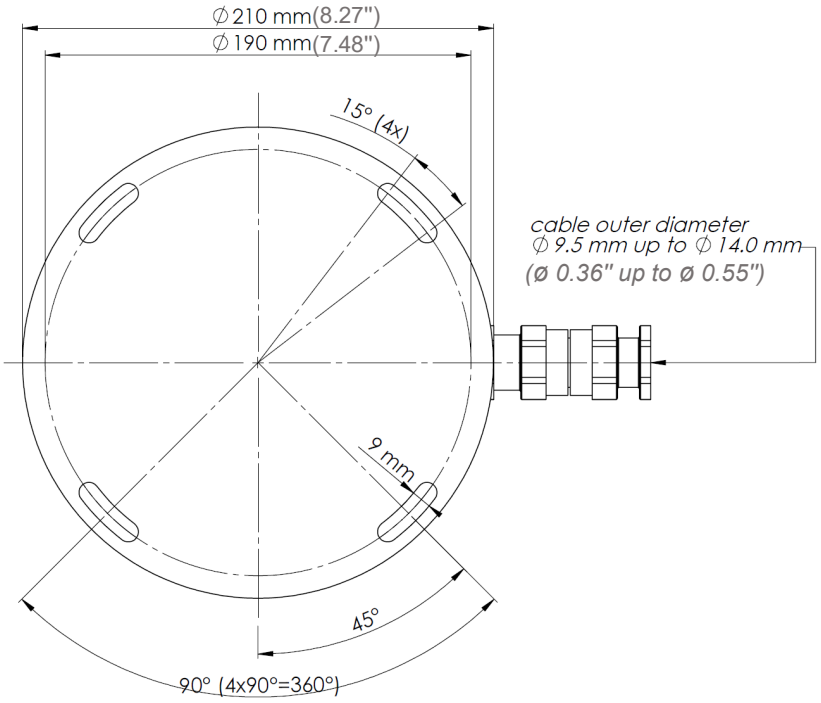

Illustration 1: Fitting dimensions D300 EX

1. Position the camera on the designated bores.
2. Fix the camera with screws, washers and nuts.
3. Connect the earthing to the external grounding bolt (M6) of the camera.

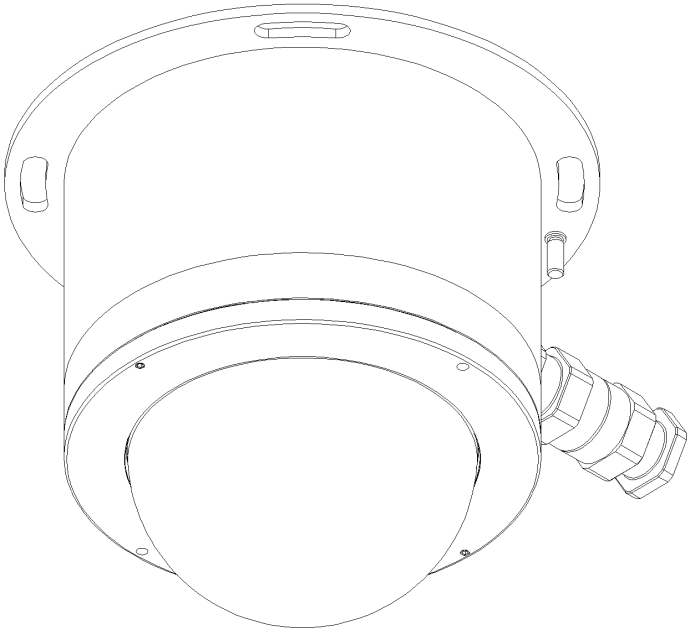

Illustration 2: Surface-mounted D300 EX

3.2.1 Connection of equipotential bonding cable

An external equipotential connection has to be established at the D300 EX Dome camera. The equipotential bonding terminal at the D300 EX Dome camera is located on the casing and is marked accordingly.

Use a cable with a wire cross-section of 4mm² (AWG 12) fitted with a crimp cable lug size 6 - 6 for the connection to the D300 EX-Dome camera according to DIN 46237.

3.3 Electrical connection

DANGER

Mortal danger due to electrical currents

Working at life electric circuits can lead to short circuits and short circuit to frame.

- An electrically skilled person is required for works on electric components.
- Please ensure ~~that~~ the system is disconnected from the electrical socket.
- Secure power supply against reactivation.
- Cover up open non-system components.
- Check that the power to the system is switched off.

The D300 EX-Dome camera is fitted with a WISKA MULTI CAT5e-GL-cable. This cable comprises three wires for power supply each having a wire cross section of 1.5mm² (AWG 16) and shielded CAT5e wire.

Unless explicitly labelled otherwise, network products from WISKA Hoppmann GmbH are wired according to TIA-568B!

The allocation of the individual wires is as follows:

		Wire colour	Variation: PoE+	Variation: 24V
WISKA MULTI CAT5e-GL	Power	**Brown***	Not used	24VAC
		Blue*	Not used	Neutral conductor
		Green/yellow*	PE	PE
	CAT5e	**Orange/white**	Network / PoE+	Network
		Orange	Network / PoE+	Network
		Green/white	Network / PoE+	Network
		Green	Network / PoE+	Network
		Blue/white	Network / PoE+	Network
		Blue	Network / PoE+	Network
		Brown/white	Network / PoE+	Network
		Brown	Network / PoE+	Network

*) Wires indicated with asterisks have a cross-sectional area of 1.5mm² (AWG 16).

4 Commissioning

DANGER

Danger of electric shock due to improper installation

Products installed by electricians not EX-trained can exhibit malfunctions.

- Allow installation only by EX-trained electricians.
- Please observe the national, local and in-house regulations for works in EX areas and on electrical systems.

For the commissioning, please proceed as follows:

- Ensure that there is no explosive atmosphere for the initial activation of the camera.
- Ensure that all electric cables are connected correctly.
- Ensure that all electric cables and wires were securely connected or stowed.
- Ensure that the system is correctly grounded.
- Ensure that there are no persons within the EX area.
- Check the camera's function.

5 Maintenance

DANGER

Mortal danger due to explosive atmosphere

There may be a risk of deflagration during works in explosive atmospheres.

- Works in EX areas may only be performed by personnel approved for EX areas.
- Do not work on the system in the event of an explosive atmosphere.
- Please observe the national, local and in-house regulations.
- Please observe the safety instructions in this User Manual.

DANGER

Mortal danger due to electrical currents

Working at life electric circuits can lead to short circuits and short circuit to frame.

- An electrical skilled person is required for works on electric components.
- Please ensure that the system is disconnected from the power supply.
- Secure power supply against reactivation.
- Cover up open non-system components.
- Check that the power to the system is switched off.

5.1 Maintenance

The camera is maintenance-free. In the event of problems or malfunctions, please contact WISKA-Service (service@wiska.de).

5.2 Inspection

Please conduct regular visual and functional inspections, however at least once every month.

Check the product for:

- External damages
- Functional installation points
- Functional camera module
- External damages to electrical installations
- External damage to electrical cables

5.3 Cleaning

DANGER

Mortal danger due to explosive atmosphere

There may be a risk of deflagration during works in explosive atmospheres.

- The dome must be protected from electrostatic charge.

  ➔ Cleaning only permitted with a clean, slightly damp cloth.

5.4 Repair

DANGER

Danger of electric shock due to improper repair

Products repaired by electricians not EX-trained can exhibit malfunctions.

- Please observe that the D300 EX may only be repaired by WISKA Hoppmann GmbH.
- Please observe the national, local and in-house regulations for works in EX areas and on electrical systems.

The D300 EX Dome camera must not be opened for repairs. Repair is only possible by WISKA Hoppmann GmbH by means of EX-trained personnel.

6 Disposal and decommissioning

DANGER

Mortal danger due to electrical currents

Working at life electric circuits can lead to short circuits and short circuit to frame.

- An electrical skilled person is required for any works on electric components.
- Please ensure that the system is disconnected from the power supply.
- Secure power supply against reactivation.
- Cover up open non-system components.
- Check that the power to the system is switched off.

6.1 Disposal

Please observe the local and national laws, directives and regulations for the disposal of materials and products.

In the event of doubt, please ask the manufacturer whether he takes back the products manufactured by him to dispose or recycle them.

6.2 Decommissioning

In order to decommission the product or deactivate the product, please proceed as follows:

1. Observe the safety and warning labels on the product and in the respective documents.
2. Switch the product off.
3. Disconnect the product from the power supply.
4. Disassemble the product/systems components to be suspended.
5. Repurpose or recycle the systems de-installed components.
6. The system / systems component is decommissioned.

7 Technical data

7.1 Specifications

Operating voltages	PoE+ (IEEE 802.3at)
Output	12 W
Operating temperature	-30°C … +55°C (-22°F…+131°F)
Colour	RAL 9016
Material casing	Stainless steel 1.4301
Material dome	Polycarbonate
Dimensions	*See 7.2 dimensional drawing*
Weight	6.5 kg [14.33 lb]
Protection class	IP 66/68 (0.2 bar, 2 h)
Ambient temperature range	-30°C to +55°C

7.2 Dimensional drawing

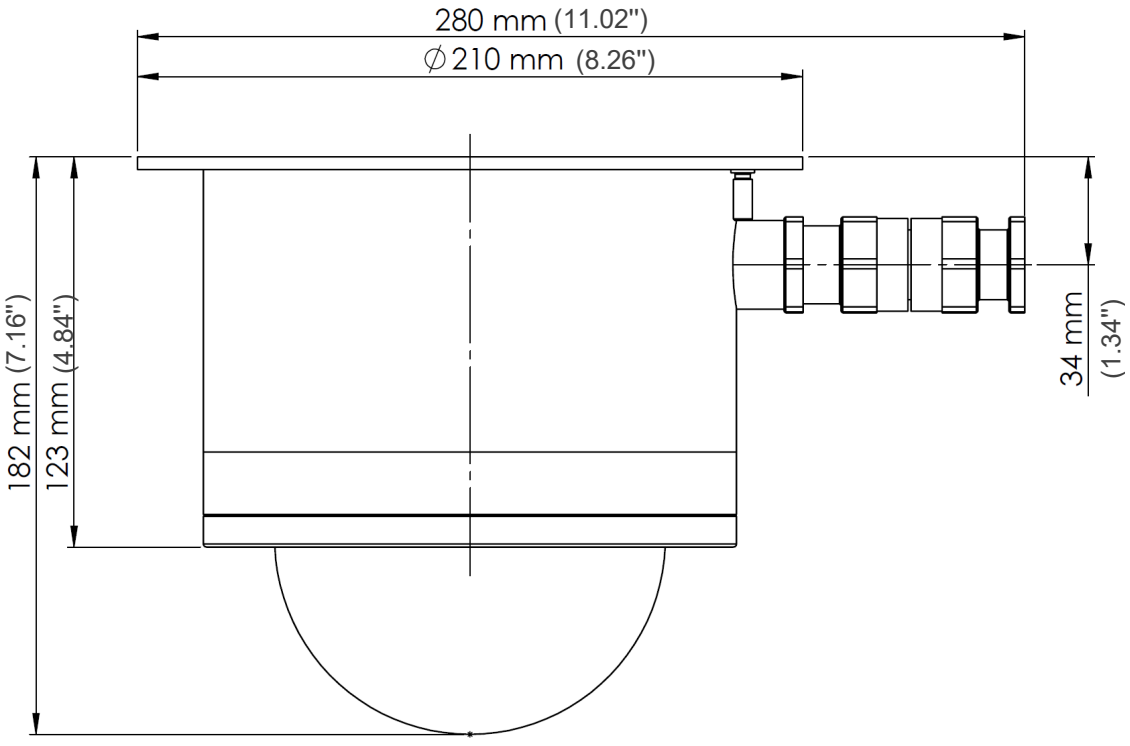

Illustration 3: Dimensional drawing D300 EX

7.3 Type key

The type key for the camera is as follows:

Position	Description of space holders	Options	
1	Camera casing	D300 EX	
2	Camera module	42212 42212-2	
3	Communication	IP	= IP camera
4	Function: pan/tilt/zoom	PTZ	= pan/tilt/zoom
5	Function: pre-set	P	
6	Operating voltage	N/S.	= PoE+ (IEEE 802.3at)
7	Cable length	N/S 10M 15M	= 5m = 10m = 15m

Positions 6 and 7 are optional specifications, which are only stipulated in case of deviations from the defined standard.

Example: D300 EX/42212/IP/PTZ/P

7.4 Type plate

Illustration 4: Type plate

The type plate is designed in three rows. The contents are:

- Description of article
- EX classification
- Operating temperature / protection class

7.5 ATEX labelling/EX classification

Equipment group II, equipment category 2G (gas), ignition protection category pressure-resistant capsuling "db", as well as group IIC, Temperature class T6, EPL Gb,

Labelling: II 2G Ex db IIC T6 Gb

and

Equipment group II, equipment category 2D (dust), ignition protection category through casing "tb" as well as group IIIC, max. surface temperature 85°C, EPL Db, protection class IP6X

Labelling: II 2D Ex tb IIIC T85°C Db

7.6 IP rating

The IP enclosure rating is based on DIN EN 60079-31. The product was tested as follows:

IP rating	Description
IP6X	Protection against the penetration of dust (dust-proof)
IPX6	Protection against strong spray water (100 l/min)
IPX8	Protection against submersion for a length of time (0.2bar, 2h)

8 Delivery documentation and certificates

8.1 Overview

A short version of the applicable documentation from the supplier article are recorded here and attached to the end of this User Manual in form of a PDF, to ensure the safe application of this overall product. The following supplier documentation has to be considered binding for this product:

- Barrier gland CR-U

8.2 Type examination certificate

The associated type examination certificate is attached to this User Manual separately. If it should get lost, it is possible to view a current version via the WISKA homepage:

https://www.wiska.com/de/

8.3 Manufacturer's declaration

The associated manufacturer's declaration is attached to this User Manual separately. If it should get lost, it is possible to view a current version via the WISKA homepage:

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8.4 CE - Compliance declaration

The associated CE compliance declaration is attached to this User Manual separately. If it should get lost, it is possible to view a current version via the WISKA homepage:

https://www.wiska.com/de/

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