WISKA
make power smile

Mounting instructions

IP Camera station
CS-S(W)160 / CS-S(W)160-2
CS-T160-2

Table of contents

Change log

Date	Designation	Reason for the change
02/2026	Edition 1.0	Original edition of these instructions

List of abbreviations

CS-S	Camera station – standard
IP IP 66 IP 68	Ingress protection (protection against the ingress of foreign bodies and water) Dust-tight. Complete protection against the ingress of foreign bodies. Protection against strong water jets Additional: Protection against permanent submersion.
Pan (H)	Swivel, horizontal
Tilt (V)	Tilt, vertical
Zoom (Z)	Zoom function of the camera module
A4 A4-70	Stainless steel 1.4401/ S316/ V4A Stainless steel 1.4401 of strength class 70: work-hardened

1 About these mounting instructions

1.1 Structure and purpose of these mounting instructions

The mounting instructions are important for installation and maintenance. They must be observed to avoid hazards, reduce repair costs and downtimes and increase reliability and service life.

Read the instructions carefully! WISKA Hoppmann GmbH is not liable for damage and malfunctions caused by failure to observe the mounting instructions.

1.2 Users and target groups

These instructions for use are intended for operators, specialist personnel and operating personnel. If a chapter is intended for a specific target group, this is indicated in the introduction.

Every person who operates and maintains the product must have read and understood the contents of these installation instructions and follow all safety and handling instructions in order to handle the product safely at all times. Every user must be appropriately trained and instructed on the product.

Work on the product without the aid of these instructions is not permitted.

1.3 Safety instructions

1.3.1 Standard safety instructions

Safety instructions at WISKA are drawn up according to the SAFE principle and derived from the residual hazards of the risk and hazard assessment:

- Keyword
  The keyword indicates the severity of the danger that occurs (danger, warning, caution, note, automation).
- Type and source of danger
  The type and source of the hazard are defined in the DIN EN ISO 12100 standard.
- Consequences
  Shows the possible consequences of non-compliance.
- Escape or avoidance
  This section lists ways to avoid or prevent the danger.

Keyword
Type and source of hazard Consequences arising from this risk Escaping and avoiding danger.

1.3.2 Structure Safety instructions

The chapter on safety and warning notices describes the structure and use of these notices. A warning notice is used to indicate a dangerous situation that needs to be avoided..

DANGER

Danger refers to a hazardous situation that, if not avoided, will result in immediate death or serious injury.

WARNING

Warning refers to a dangerous situation that, if not avoided, could result in death or serious injury.

CAUTION

Caution indicates a hazard with a low level of risk that, if not avoided, could result in minor or moderate personal injury.

ATTENTION

Caution indicates the possibility of material damage to the product and its function.

1.3.3 Embedded safety instructions

To avoid interrupting the reading flow during descriptive sections, additional embedded safety are used to execute activities. These look as follows:

1. Loosen screws...

   ⚠CAUTION

   Burning due to hot parts.

   Motors in operation heat up and can cause burns to the fingers.

   - Ensure that the unit has cooled down before starting work.
   - Do not touch inner parts.

2. Remove the part...

✓ The assembly is removed.

1.4 Labels and symbols

Icon	Meaning	Use
	Hazard symbols Warns of an imminent danger.	Safety and warning notice
	Hazard symbols Warns of an electrical hazard.	Safety and warning notice
	Hazard symbols Warns of suspended loads when working overhead.	Safety and warning notice
	Commandment sign De-energize the system before working on it.	Safety and warning notice
	Commandment sign Ground before working and using.	Safety and warning notice
	Commandment sign Follow the mounting instructions.	Safety and warning notice
	Information A qualified electrician is required for installation.	Safety and warning notice

1.5 Personal protective equipment

Icon	Meaning
	Safety helmet Must always be worn if there are suspended loads in the work area.
	Work clothes Must always be worn to protect the body from external influences.
	Safety gloves Must always be worn to protect the hands from external influences.
	Safety shoes Must always be worn in the work area.

2 For your safety

2.1 General safety instructions

The following basic safety instructions generally apply when working on WISKA products:

- Read the mounting instructions in full before using, maintaining or repairing the product. Failure to do so may result in danger to people and the product.
- Follow all safety instructions in these installation instructions.
- Only qualified personnel may work with the product.
- Switch off the appliance in the event of smoke, excessive heating or unusual noises.
- Do not touch during thunderstorms.
- Only touch the appliance with gloves at low temperatures or in icy conditions.
- Observe national and local regulations when installing and working on the product.
- The mounting position must be safe and accessible.
- Maintenance or repairs may only be carried out by qualified electricians.
- De-energize the electrical system and secure it against being switched on again.
- Ensure that the remote-control unit is also deactivated when working on the camera station.
- Do not modify products without authorization. This results in unforeseeable risks.
- Unauthorized modifications will invalidate the product warranty.
- Only use original spare parts purchased from WISKA.

2.2 Intended use

The camera station is designed to record images and videos in a video surveillance system, which are displayed on monitors or stored on data carriers.

It is mounted either vertically or suspended on a solid surface or on a pole. The permitted load-bearing capacity of the base must be sufficient for the weight of the camera station.

The camera station has been developed primarily for use on seagoing vessels and for security applications in coastal areas and industrial plants.

It is not permitted to weld the camera to the ground, to use it as an attachment for other objects, e.g. ropes, or to attach anything to it. The camera station is not suitable for holding on to or using as a step. The camera station must not be painted over, as this may impair movement and visibility. Cable glands must not be shrunk.

2.3 EMC

The Electromagnetic Compatibility Regulation 2014/30/EU regulates the influence of technical devices on each other. Electromagnetic compatibility means the ability of a piece of equipment to operate satisfactorily in its electromagnetic environment without itself causing electromagnetic disturbance that would be unacceptable to other equipment in the same environment.

If necessary, WISKA products have been checked for conformity and are provided with the CE mark and declaration of conformity.

2.4 Qualification of technical staff

Knowledge of a qualified electrician is required for installation, commissioning and repair. The technical personnel must have a level of training that enables them to safely connect mechanical and electrical connections and test the function

2.5 Danger areas and danger spots

Danger areas or danger spots are:

- Weight of the camera when mounted on a ceiling or pole.
- The camera must be installed at a sufficient distance from a wall or fixed structures, otherwise there is a risk of fingers being trapped during rotation.
- Objects in the swivel range obstruct the view.

2.6 Protective devices

Carrying handles are fitted to ensure safe transportation and assembly even in damp and cold conditions.

2.7 Data protection

The recording and storage of video surveillance data is subject to national data protection laws and guidelines. The operator of video surveillance systems is responsible for compliance with local laws and regulations.

3 Technical description

3.1 Description

The network-compatible camera station made of A4 stainless steel is used in surveillance systems. The CS-S camera station is aligned and electronically controlled by the PC. It‘s upper section with the camera head can be swiveled endlessly. The zoom function is employed to enhance and decrease the size of the surveillance area. One version also has a windshield wiper that removes water splashes in rough seas and rain. Another version with an optional water tank allows the windshield to be cleaned.

The camera is addressed in the network via the IP protocol. Videos can be transmitted to one or more monitors. The camera is remotely controlled by using software on a PC.

3.2 Overview of the product

3.2.1 PTZ camera station

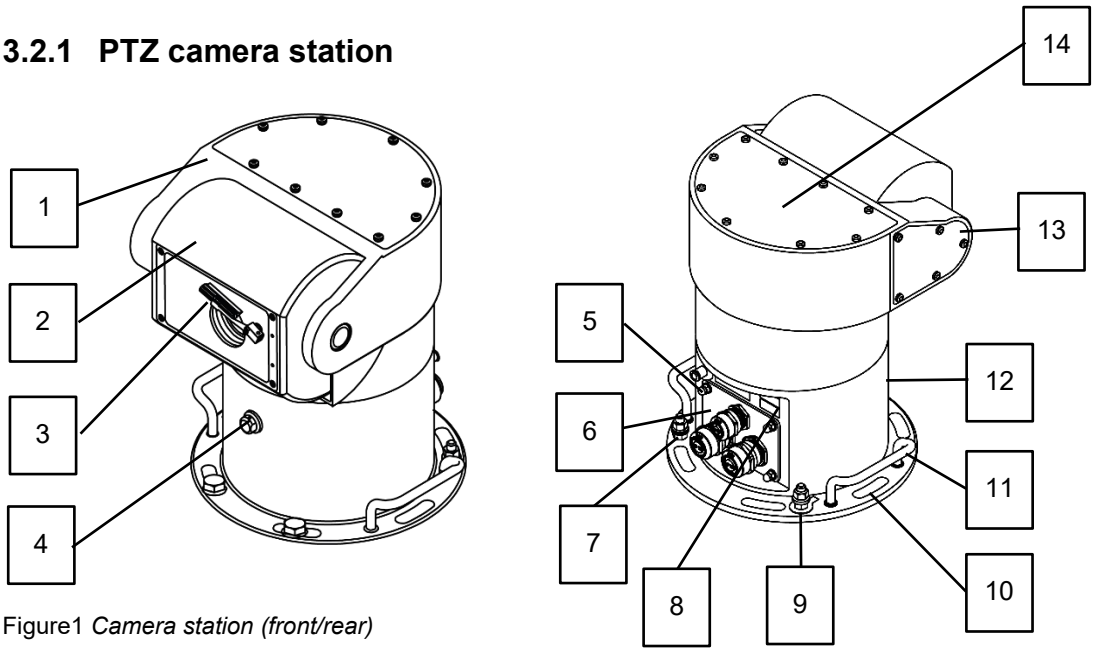


Figure1 *Camera station (front/rear)*

Pos.	Designation	Pos.	Designation
1	Upper part	**2**	Camera head
3	Wiper (optional)	**4**	Wiper water nozzle
5	Wiper water connection	**6**	Connection module
7	Fastening point (M8) safety cable	**8**	Type plate, plate for IP address
9	Earthing bolt		Slotted holes for fastening
11	Carrying handles	**12**	Lower part
13	Cover side	**14**	Top cover

Technical components

The camera station is designed for outdoor installation on ships or industrial plants. Electrically controlled actuators make sure that the CS-S model can tilt and rotate. Presets can be set in the software and stored permanently on the camera. It's feasible to have an automatic preset tour.

The model essentially consists of:

- Fixed base part with slotted holes for mounting.
- The upper part of CS-S can be rotated endlessly and tilted (+90/-70°).
- Camera head with a protected built-in camera module.
- Connection module for the electrical connection (input power supply 230VAC 50/60Hz or optional 24 VDC network connection RJ45, output power supply: 24 VDC).
- Wiper water nozzle.
- Wiper water connection for a hose from an external wiper water tank.

Optional

- Windshield wiper on the camera head for cleaning the windshield.
- Wiper water tank IBS

Required

- Network cable CAT 5 or higher.
- Power supply cable 230 V AC, 50/60 Hz.
- Fastening material.

4 Assembly

4.1 Transport/lifting/moving

Depending on the composition, the product comes on one or more pallets, weatherproof and sturdily packaged.

Check whether there is any obvious transport damage to the packaging. If there is any damage, contact customer service.

WARNING

Risk of injury from suspended loads.

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

- ➔ Wear personal protective equipment.
- ➔ Do not step into the swivel area or under the product.
- ➔ Secure the load carefully before fitting it.

Transport the product to the installation site. If installation is delayed, the product must be stored temporarily in a storage room, see chapter Storage.

4.2 Unpacking

Loosen the lashing straps on the package or pallet.

Remove the tape used for securing.

Remove packaging material.

Remove the product, operating instructions, and other components.

Dispose of packaging properly.

✓ *The product is unpacked.*

4.3 Installation

WARNING

Risk of injury from suspended loads.

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

- ➔ Wear personal protective equipment.
- ➔ Do not step into the swivel area or under the product.
- ➔ Secure the load carefully before continuing assembly.

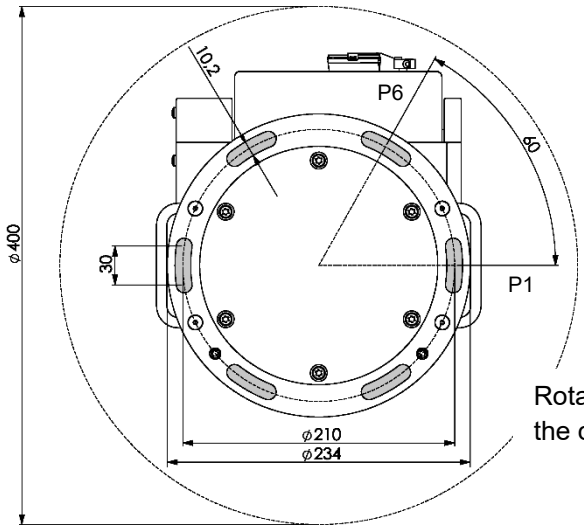
CAUTION

Risk of injury due to the heavy weight of the product (approx. 20 kg).

Injuries are possible if the product falls.

- ➔ Check the load-bearing capacity of the ceiling or mast.
- ➔ A second person is required for mounting on a pole or ceiling.

4.3.1 Mounting the camera station



Center point Oblong hole	Horizontal axis	Vertical axis
P1*	105 mm	0 mm
P2	52.5 mm	-90.9 mm
P3	-52.5 mm	-90.9 mm
	-105 mm	0 mm
	52.5 mm	-90.9 mm
P6*	52.5 mm	90-9 mm

Rotation radius of the camera head

Figure 2 Mounting points CS-S (bolt circle diameter Ø 210 mm)

NOTES

- The movement radius (360°) of the camera head must always remain free. There must be no walls, objects or people in it.

* Mount the camera station with at least 4x M8 screws.
* Recommendation: Use the slotted holes P1, P4, P5, and P6.

Attaching the CS-S camera station

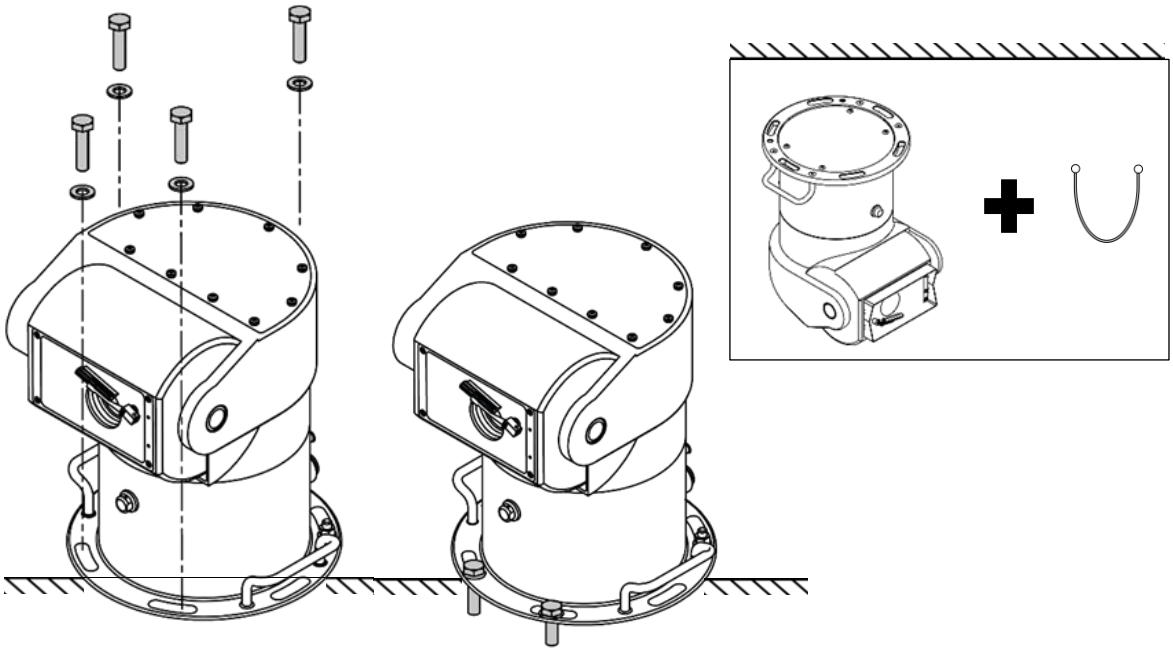


Figure 3 Mounting (example, upright or suspended mounting, right side)

The camera station can be mounted either suspended or standing.

Note: Safety cable is essential for suspended mounting and is included in the scope of delivery. For upright installation, please order the safety cable separately.

- Attach the safety cable to the attachment point [7] (M8 threaded hole).
- Drill 4 to 6 holes with a diameter of 9 mm each for the mounting points, see Figure 2. Alternatively, attach 4 to 6 M8 bolts (stainless steel A4 (AISI316L)) to a ship.
- Only for suspended installation: Attach the safety cable to the ceiling.
- Place the camera station on the holes or bolts and fasten with 4 to 6 M8 screws (at least A4-70 stainless steel) or nuts and suitable washers. Nominal torque: 12 Nm.

✓ The camera station is fixed.

4.3.2 Optional: Installing the water tank

If the configuration includes a water tank, this must be installed in a suitable location (see separate instructions).

4.3.3 Optional: Connecting the wiper water hose

After installing the water tank, the hose is connected to the wiper water connection (5),
Notes: The water tank is supplied with a hose.

NOTICE The hose must not kink. Otherwise, the wipe-wash function of the camera station will no longer work. Ensure that the bending radii are sufficiently large when laying the hose.

1. Check both ends of the hose. There must be no fraying, cracks or other damage. This can be caused by shortening the hose with unsuitable tools.
2. Insert the wiper water hose into the wiper water connection.
3. Check for correct fit: the wiper water hose can no longer be pulled out of the wiper water connection.

4.4 Electrical connections

DANGER

Danger to life due to electrical currents.
Working on open circuits can lead to short circuits and short circuits in the body.

- ➔ A qualified electrician is required when working on electrical components.
- ➔ Ensure that the system is disconnected from the electrical connection.
- ➔ Secure the power supply against being switched on again.
- ➔ Cover open external system parts.
- ➔ Short-circuit system parts if necessary.
- ➔ Test whether the system is de-energized.

4.4.1 Electrical connection values

Mains voltage: 230 VAC, 50/60 Hz, maximum 70 W.

4.4.2 Notes on mains connection

- ➔ The applicable national and international regulations must be observed.
- ➔ A secure and properly assigned connection must be established.
- ➔ Check that the earthing/grounding is carried out correctly (the individual components should be connected to a common earthing point).
- ➔ The grid connection is designed according to the output of the overall system.
- ➔ Cable protection must be provided on site.

4.4.3 Protection against moisture ingress

NOTES

Watertight (IP66/68) installation of all connection cables

- ➔ All cable glands must be tightened so that they are watertight.
- ➔ This also applies to housing covers with the associated seals during installation to maintain the protection class.
- ➔ To avoid premature material fatigue, the correct cable types for the application environment must be used.
- ➔ Always observe the bending radii for the cables used in order to avoid malfunctions and damage to the cables.
- ➔ When mounting on the pole or ceiling, place a loop in the cable to prevent water from creeping along the cable through the cable gland.

4.4.4 Connect CS-S

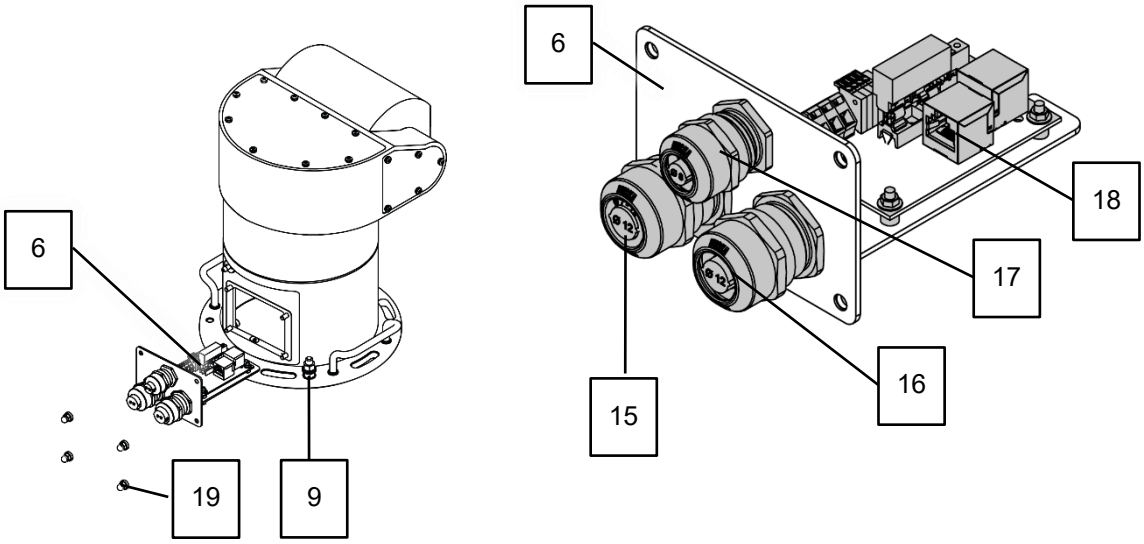


Figure 4 Connection compartment for electrical connection (open), unit

Pos.	Designation	Pos.	Designation
6	Connection compartment (with connection board)	**9**	Earthing bolt
15	M20 cable gland	**16**	M25 cable gland Network connection
17	M25 cable gland Power supply	**18**	RJ45 socket
19	Cap nuts (M5)/ washers		

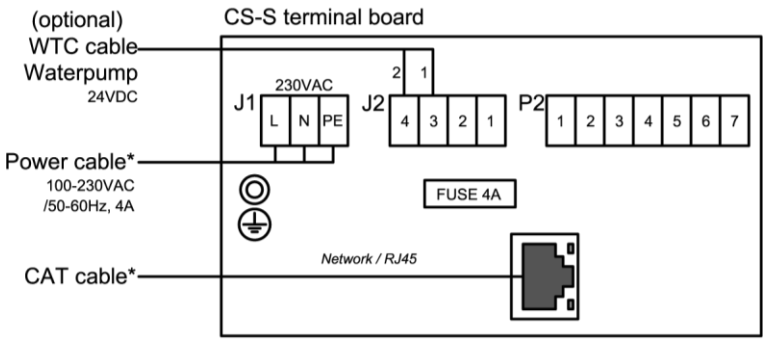


Figure 5 Connection board

Note: A network cable is required to connect the camera.

Tools required: Screwdriver, open-end wrench M5, torque wrench M20, M25.

1. Loosen 4x M5 cap nuts (19) / washers on the insert of the connection compartment (7) and set aside.
2. Pull out the cover with the connection board.
3. Power supply (J1, Power cable):
    a. Prepare the cable: L, N, and PE. Cable diameter 9 to 17 mm, cable cross-sections minimum-maximum:1.5 to 2.5 mm^2.
    b. Strip the cable and fit wire end ferrules.
    c. Loosen the cap nut (M20) of the cable gland (15) and insert the cable.
    d. Connect the cable to terminal J1 on L, N, and PE.
4. Network connection: a switch is required on-site.
   CAT-5 (or higher) network cable with RJ45 plug required.
    a. Loosen the cap nut (M25) of the cable gland (16).
    b. Push the network cable through the cable gland.
    c. Connect to the RJ45 socket (18).
5. Optional: Connection of the external water tank with the connection cable (J2) supplied by Wiska.
6. Tighten all cap nuts on the cable glands.
   (15) and (16) with 10 Nm and (17) with 8 Nm.
7. Earthing connection
    a. Loosen the nut (M8) of the earthing bolt (9).
    b. Connect the earthing cable to the camera station and then to the customer.
    c. Fasten the nut (M8) and tighten to 15 Nm.
8. Insert the slide-in unit into the housing and secure it with the cap nuts and washers.
9. Tighten all M5 cap nuts (19) hand-tight (to 3.5 Nm).

✓ The camera station is connected.

5 Commissioning

DANGER

Danger to life due to electrical currents.

Risk of electric shock due to improper installation: Products that are not installed by qualified electricians may malfunction.

➔ The product may only be connected by a qualified electrician.

ATTENTION

Functional error possible

After applying the voltage, the camera station immediately starts a calibration run, during which all end positions are approached.

Objects could block the view or stop the camera movement.

➔ Ensure that there are no objects or structures within the movement radius of the camera station.

Proceed as follows for commissioning:

- Ensure that a line fuse is available on the customer side.
- Ensure that all electrical cables are connected correctly.
- Ensure that all electrical lines and cables have been laid or stowed safely.
- Ensure that all screw connections are correctly tightened.
- Ensure that the safety cable is correctly fastened when mounting the device in a suspended position.
- Ensure that the earthing is correctly established.
- Ensure that the camera station cannot hit any obstacles within the pan and tilt radius.
- Test the function of the camera station on the PC: image, pan and tilt camera. See separate software instructions.

6 Operation

General operation

The settings and operation are software-controlled on a PC. A separate software manual is available for this purpose.

7 Troubleshooting

If faults occur on the product, the necessary measures can be determined here to provide the operator with measures for rectification within the scope of his possibilities

*Qualified electrician required

Error	Cause	Remedy
No picture and no response to input on the PC	Supply voltage is not present Network cable defective Fuse defective Incorrect IP address	Check the fuse. Check power supply*. Check cable*. Check the supply line. Replace fuse*. Check the IP address.
Image interference	Configuration software	Check the configuration
	Video standard	Check whether incompatible.
Delay > 1 second	Network problem	Check the network.
Wiper does not work	Wiper motor defective	Check by Wiska Service.
	Wiper missing	Fit a new wiper.
Condensation in the housing	Heating defective / water ingress	Check by Wiska Service.
Flash rust	Objects in the vicinity of the camera will rust. (The camera station is made of S316L stainless steel)	Clean with a clean, slightly damp cloth.
No wiping water	Tank empty Nozzle clogged Nozzle iced up Hose detached/kinked Pump defective	Fill the tank. Clean the nozzle. Fill the wiper fluid tank with antifreeze. Check, replace if necessary. Replace pump*.
Ice formation on the windshield	Heating failed Incorrect fluid in the (optional) wiper water tank Prolonged interruption of the power supply	Check the heating. s. Wiper water tank instructions Wait for the heating to start up.

8 Maintenance




DANGER

Danger to life due to electrical currents.

Working on open circuits can lead to short circuits and short circuits in the body.

- ➔ A qualified electrician is required when working on electrical components.
- ➔ Ensure that the system is disconnected from the electrical connection.
- ➔ Secure the power supply against being switched on again.
- ➔ Cover open external system parts.
- ➔ Short-circuit system parts if necessary.
- ➔ Test whether the system is de-energized.

8.1 Regular Maintenance

Maintenance is recommended to maintain the function over the service life.

NOTE

A function test must be carried out after every maintenance: Check all functions on the PC.

Visual inspection Before every trip or every 4 weeks	Replace CS-S if damaged. Any rust spots detected must be removed using suitable means.
	Scratches on the front glass. Front glass destroyed/missing.
	Safety rope
	Screws: rust/ damage/ position Anchor points: check for damage. If damaged, the damaged part must be replaced.
	Check cable glands: Cap nuts tight, cable tight.
	Cable, possibly hose: cracks, kinks, cable breakage
Gasket connection compartment Every 4 years at the latest	Cracks, damage, foreign bodies Check every time the connection compartment is opened. Replace if necessary.
Function test Before every trip or every 4 weeks	Pan and tilt the camera Wiper wash function, wiper fluid (if available) Check the camera image for function.

8.2 Cleaning

- Clean the outside of the camera station with a damp, clean cloth.
- The cleaner must not contain any coarse particles or solvents.
- Do not allow any liquids to penetrate the inside of the appliance during cleaning.
- Rust spots on fastenings must be removed using suitable means. If necessary, remove rust film with a damp, clean cloth.

8.3 Repair

DANGER

Risk of electric shock.

➔ Switch off the system's main switch and remove the fuses.

➔ Ensure that the entire electrical system is de-energized and secured against being switched on again.

Replacing parts at the camera station

The following parts are replaced at the camera station or camera:

- Wiper
  For article number, see chapter 9Spare parts
  Replacement instructions are supplied with the wiper.

The following parts are replaced in the connection compartment:

- Fuse type glass fuse, designation 5x20 mm 4 A medium time-lag (MT)
- Check seal, replace it if damaged.

8.3.1 Preparations

Switch off the system's main switch and remove the fuses.

Ensure that the entire electrical system is de-energized and secured against being switched on again.

Only use original components from WISKA.

The defective parts must be replaced in accordance with the general rules of technology.

The defective parts must be disposed of in accordance with national regulations.

NOTES

➔ Check the seal every time the connection compartment is opened.

➔ When tightening several screws to the same tightening torque, all screws must be tightened alternately to 2/3 of the correct tightening torque and only then brought to the correct torque in a second pass.

➔ Make sure that no water gets into the housing when the lid is open.

8.3.2 Replace the device fuse

1. Obtain an appliance fuse of the glass fuse (5x20 mm 4 A medium time-lag (MT)).
2. Open the 4 M5 cap nuts (19) from the connection compartment.
3. Pull out the connection board (6), see page 16.
4. Remove the cover over the fuse.
5. Remove the fuse.

   ATTENTION **Danger of a short circuit**

   The circuit board must not be damaged in the process.
   Carefully lever out with a screwdriver, for example.
6. Insert a new glass fuse.
7. Fit the cover over the fuse.
8. Check the seal and replace it if damaged.
9. Push-in the connection board (6).
10. Tighten the M5 cap nuts from the connection compartment to 3.5 Nm.

✓ Replacement of the fuse completed.

8.3.3 Replace the seal

1. Obtain seal, see chapter 9Spare parts
2. Open the 4x M5 cap nuts from the connection compartment.
3. Disconnect the plug (P2 with slotted screwdriver and network connection).
4. Pull out the connection board (6), see page 16.
5. Replace seal.
6. Push-in the connection board (6).
7. Tighten the 4 M5 cap nuts from the connection compartment to 3.5 Nm.

✓ Replacement of the seal completed.

9 Spare parts

Please contact WISKA Service for spare parts packages.

No.	Item no.	Spare part designation
1	22001313	SP-CCTV Wiper CX-SW 160
2	22001437	SP-CCTV Bottom cover CS-Sx160-2/RAL9016
3	22001438	SP-CCTV Bottom cover CS-Sx160-2/RAL190-6
4	22001439	SP-CCTV Bottom cover CS-Sx160-2/RAL7040
5	22001440	SP-CCTV Upper cover CS-Sx160-2/RAL9016
6	22001441	SP-CCTV Upper cover CS-Sx160-2/RAL190-6
7	22001442	SP-CCTV Upper cover CS-Sx160-2/RAL7040
8	22001443	SP-CCTV Side cover CS-Sx160-2/RAL9016
9	22001444	SP-CCTV Side cover CS-Sx160-2/RAL190-6
10	22001445	SP-CCTV Side cover CS-Sx160-2/RAL7040
11	22001446	SP-CCTV Seal electric area CS-Sx160
12	22001447	SP-CCTV Module Unit 4032H/W
13	22001403	SP-CCTV/PTCU160/IP

10 Disposal and decommissioning




DANGER

Danger to life due to electrical currents.

Working on open circuits can lead to short circuits and short circuits in the body.

- ➔ A qualified electrician is required when working on electrical components.
- ➔ Ensure that the system is disconnected from the electrical connection.
- ➔ Secure the power supply against being switched on again.
- ➔ Cover open external system parts.
- ➔ Short-circuit system parts if necessary.
- ➔ Test whether the system is de-energized.

10.1 Waste disposal

Waste electrical and electronic equipment (Applies in the European Union and other European countries with separate collection systems).
The electrical appliances of WISKA Hoppmann GmbH are professional electrical appliances, so-called business-to-business (B2B) appliances. We take back old electrical appliances in accordance with § 19 ElektroG and dispose of them properly. Please contact us before sending the WISKA waste electrical equipment - contact@wiska.de. Components such as cable glands are not covered by the law.
Do not mix or dispose of used electrical appliances from WISKA Hoppmann GmbH with other commercial waste.

10.2 Decommissioning

Shut down or decommission the product as follows:

1. Follow the safety instructions and warnings on the product and in the associated documentation.
2. Disconnect the product from the power supply.
3. Dismantle product/system parts that are to be.
4. Dispose of dismantled system parts for further use or in the disposal cycle.

✓The plant or part of the plant is shut down.

10.3 Storage

For storage, the camera station must be dismantled, packed and protected against moisture and external damage.

Storage must be protected from water and dust.

The stored products must be checked for completeness and proper condition at regular intervals.

11 Technical data

11.1 Specifications

See separate data sheet

11.2 Type plate

Figure 6 Type plate structure

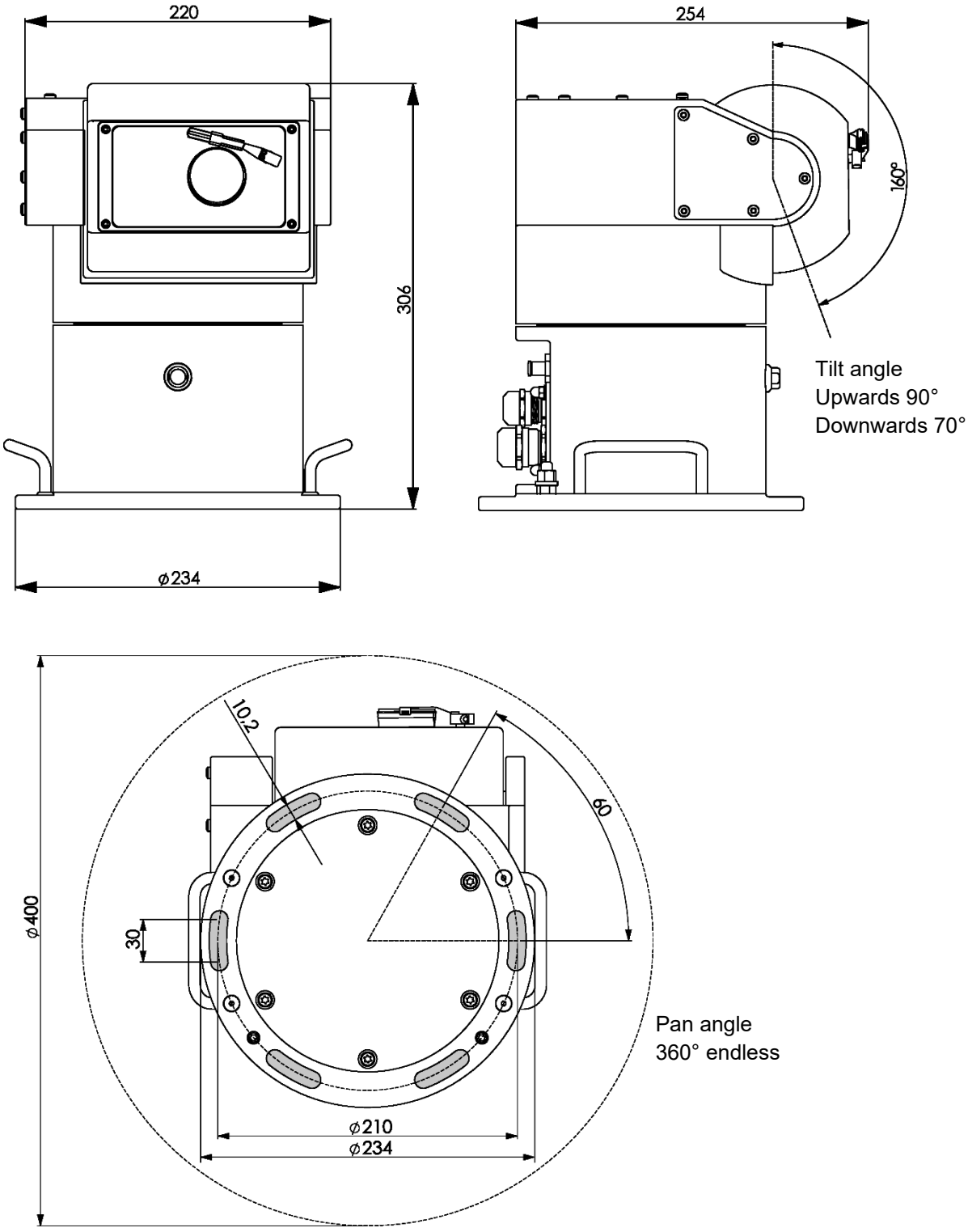
11.3 Scope of delivery

1x CS-S(W) 160-2 camera station, 1x RJ-45 network connector

11.4 Protection class

IP 66	Dust-tight. Complete protection against the ingress of foreign bodies. Protection against strong water jets
IP 68	Additional: Protection against permanent submersion.

11.5 Dimensions



11.6 Electrical connection diagram

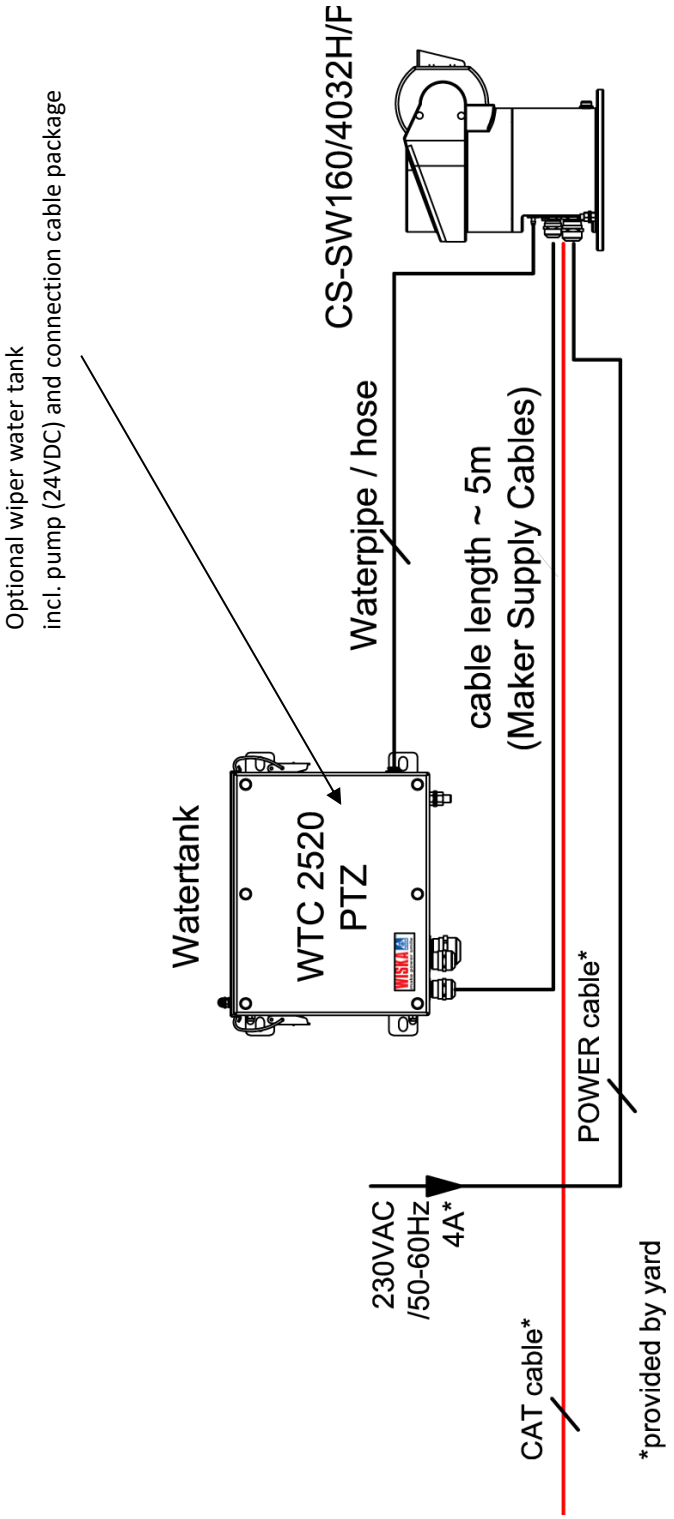


Figure7 Wiring diagram

12 Certificates

12.2 DNV certificate

See separate DN certificate

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Mounting instructions
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