

**Mounting and Operating Instructions of
RP406K and RP406K-IC
for mobile video surveillance**



Foreword

Dear customer,

By selecting a product from Verint Video Solutions GmbH you have purchased a professional device that ensures highest quality and reliability. Thank you for your confidence in our product. We would like to ask you to read through the following information carefully before you begin operating the device. This way you can completely enjoy all the benefits this product provides.

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Version	Date
Ver 1.0	08.12.2005

General Information

Product overview

The Verint® RP 400 Series mini dome camera housings provide a reliable solution for mobile vehicles such as buses, trams or trains.

The RP 400 Series has a vandal-resistant mini dome housing that can be either wall or ceiling mounted. The RP 400 Series provides high-resolution pictures for day or night operation, and is available in a color or black and white model.

The lightly smaller housing has rounded edges to minimize the risk of injury to passengers. The cameras are designed to operate in very bright but also in dark places and under extreme weather conditions. The RP 400 Series meets common mobile transportation standards for Europe.

When combined with our wide range of recorders and monitors, the RP 400 Series provides a comprehensive networked digital video surveillance solution to help transit personnel protect people and property, refute false claims, and reduce frivolous lawsuits.

Safety information

- Read these instructions carefully before operating the device. This will help prevent possible damages from improper use.
- The device should only be installed by qualified professionals according to existing VDE (Association for Electrical, Electronic & Information Technologies) regulations.
- Operate the cameras exclusively using the normal service voltage indicated.
- Observe any warnings on the device.
- The camera should only be used in a dry, dust-free and non-hazardous environment.
- Never use the device for purposes others than those for which it was intended.
- The device should be repaired only by qualified professionals.
- Should liquids or hard objects enter the housing, disconnect the power supply immediately. Have the device checked by a qualified professional before you use it again (risk of electric shock).
- Operate the device only indoors.
- To avoid internal heat build-up in the device:
 - the device should not be subjected to direct sunlight
 - should have adequate distance from direct heat sources
- For cleaning and maintaining the camera, follow the directions given in these instructions.

General Information

Place of installation

The camera is specially designed for video surveillance in busses and trains and fulfils the required European standards for public transport.

Scope of delivery

- High resolution vandalism-proof dome camera with fixed lens
- connection cable
- Mounting materials
- Mounting instructions

Accessories / Additional Equipment

- Video cable 75 Ohm (e.g. RG-59)
- BNC connector

Warranty

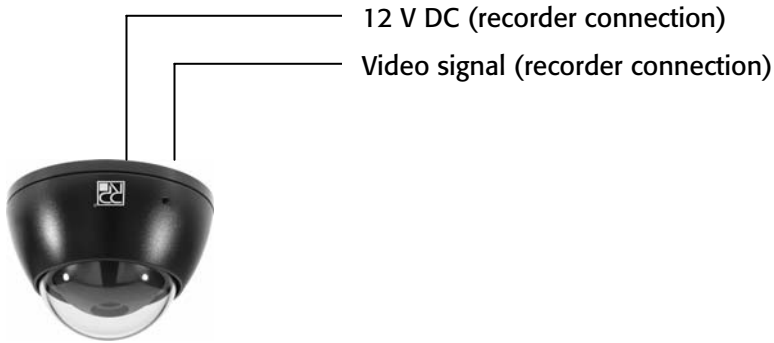
The warranty is valid for 24 months and begins on the date of delivery. Any defects must be reported within 10 working days following delivery of the product. Hidden defects must be reported immediately when they are discovered.

The warranty does not include damages to the products caused by accidents, unsuitable or improper usage, non-authorized or incorrect mounting or startup, incorrect or improper handling, damages during transport or improper maintenance. The warranty does not include costs you incur from installation or initial operation as part of a warranty claim.

In response to a warranty claim we can choose to provide a replacement or repairs within an appropriate period of time. If the defect is not successfully remedied we have the option of rescission or reduction, in case of a negligible defect of reduction only.

Installation

System overview



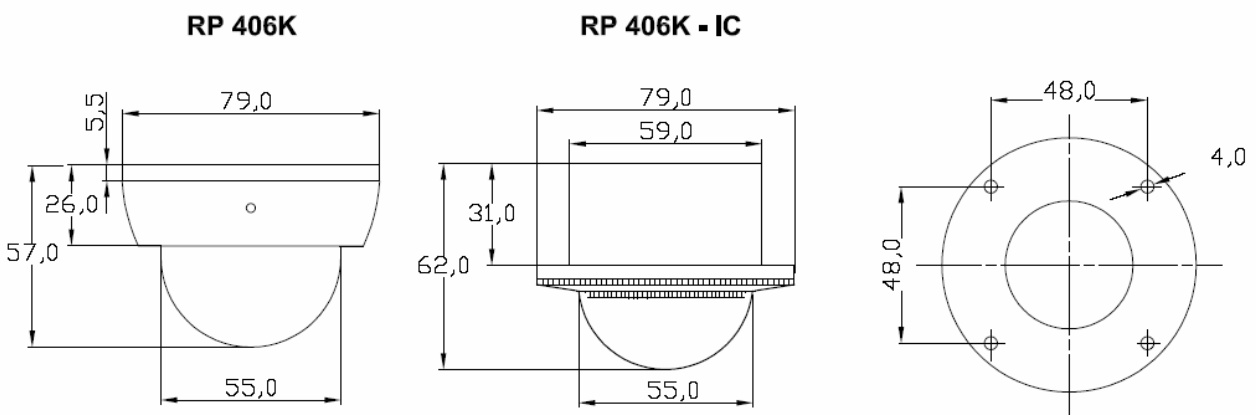
The RP 406K (-IC) dome camera needs a stabilized power supply of 12 V DC and has a power consumption of max. 2.0 W.

Cable connections

It is possible to lay separate cables for all connections.

Video = coaxial cable 75 Ω , (F)BAS, 1 Vss/75 Ω
Power supply = Operating Voltage: 12 V DC / GND

Detailed view



All specifications in mm!

Installation

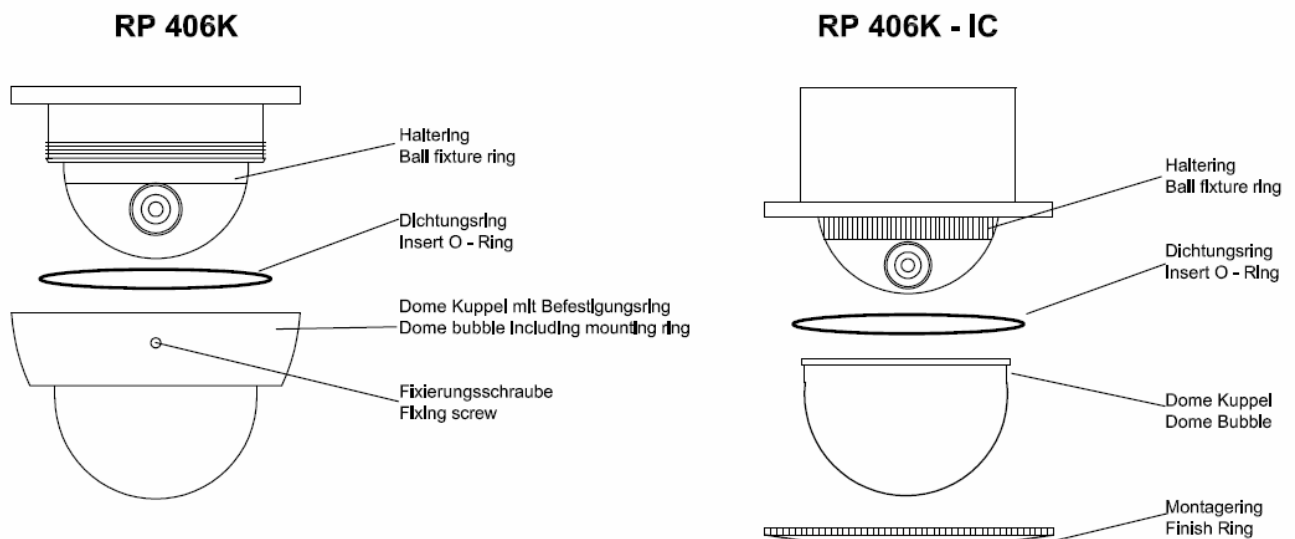
Mounting

Information on camera mounting location

- Keep an adequate distance to direct heat sources.
- Do not point the camera towards artificial lighting, the sun, the sky or in the direction of a window. The best image quality will be achieved if both camera and lighting point to the area you want to record.
- Reduce the picture section to the essential area and install the camera as close to the object as possible.
- Avoid head lights as back light in the video picture (also caused by reflections, e.g. on window panes).

Mounting the camera on a wall or ceiling

Always proceed in the following order to mount the camera:



Installation

RP 406K

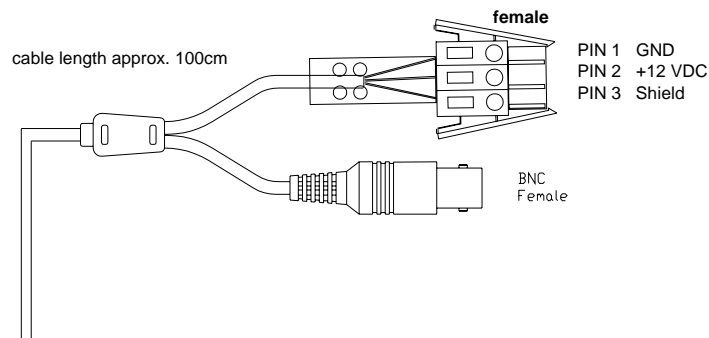
- Fix the camera mounting plate on an adequate surface with the mounting materials that come in the shipment. The camera can be installed on a ceiling or wall. (Dimensions – see detailed view on page 6)
- Loosen the inside camera ball fixture ring and set the required viewing angle. Ensure that the lens is not touched by fingers. Then fix the camera position by locking the ball fixture ring. When mounting the camera on a wall, the ball fixture ring may be exchanged for the flat ring included with the shipment, if necessary. This has a low adjustment range in the vertical axis, but it does not have a clamp over the camera unit. This way the lens is not covered when mounted on a wall.
- Screw on the housing once the correct viewing angle has been set and ensure the housing seal fits correctly.
- Protect the housing from unauthorized opening by using the fixing screw with the hexagonal socket screw key included in the shipment.

RP 406K - IC

- Make a suitable fitting – mounting aperture (diameter 60mm, fitting depth approx. 35mm) for the fitted camera and fasten the camera with the mounting material included in the shipment. The camera can be installed on a ceiling or wall. (Dimensions – see detailed view on page 6)
- Loosen the inside camera ball fixture ring and set the required viewing angle. Ensure that the lens is not touched by fingers. Then fix the camera position by locking the ball fixture ring.
- Screw on the housing once the correct viewing angle has been set with the mounting ring and ensure the housing seal fits correctly.
- Protect the housing from unauthorized opening by using the fixing screw with the hexagonal socket screw key included in the shipment. The fixing screw is screwed into the mounting ring.

Installation

Connecting diagram



- Connect the video output signal of the camera (BNC jack) using a suitable video cable (insulated coaxial cable, 75 Ohm) to the designated video input of the recorder. Make sure that the BNC connector fits correctly and cleanly.
- The recorder provides service voltage to the attached cameras (12 V DC). Use a suitable cable for connecting the power supply and make sure the connector fits correctly and cleanly and has the correct polarity. Operate the camera exclusively using the normal service voltage indicated. The mating component of the system voltage plug (Wago male) is included in the scope of delivery.

Initial operation

Check to see that the camera provides an acceptable video signal and that the picture section was chosen correctly.

The camera switches on automatically to a black and white signal at dusk. This ensures a higher level of detail recognition under poor lighting conditions.

Please never open the dome camera itself. There are no further setting options on the inside of the camera module.

Appendix

Technical Data RP 406K (-IC)

CCD Sensor	1/3" Sony Exview Interline CCD
Max. pixels (h x v)	768 x 576
Horizontal resolution	470 TV lines
Sensitivity	0.015 lux on sensor / 0.3 lux with F2.0
TV standard	PAL, 625 lines
Enhancer	Yes
Gamma correction	0,45
Electronic shutter	Automatic, 1/50 -1/100,000 sec.
Signal-to-noise ratio	50 dB (AGC off)
AGC	30 dB
Synchronization	Internal
Backlight	Automatic
Spectral response	380 -660 nm
Smear effect	0,005%
Video output signal	FBAS 1Vss / 75 Ohm, BNC
Operating voltage	12V/DC (DC 8,0 -15.0 V)
Performance	Max. 2 W
Operating temperature	-10° to +50°C
Extended temperature area according to EN501155-T1	-25° to +70°C
Humidity	90 % (not condensed)
Protective system according to association German electrotechnicians (VDE)	IP41, class III
MTBF	80,000 hours
Housing shape	Mini dome camera (black)
Connections	Connecting cables with open cable ends (12VDC) / BNC plugs (video)
Weight	Approx. 300 g
Installation	RP 406K: Wall/ceiling mounting RP 406K-IC: Wall/ceiling installation
Lens	RP 406K: 2.9mm; 3.6mm; 4.3mm, 6mm; 8mm RP 406K-IC: 4.3mm
Dimensions (diameter / height)	RP 406K: 79 mm / 56.5 mm RP 406K – IC: 79 mm / 62 mm
Extended product standards	EN 50155 "e" mark EN 50121-3-2 DIN 5510

Appendix

Cleaning and maintenance / Servicing information

Before cleaning or servicing the camera, disconnect it from the power supply.

Clean the camera housing with a dry or slightly moist cloth (add a few drops of dishwashing liquid). Never use organic solutions such as thinners, alcohols, petroleum products etc. for cleaning.

The interior of the device should only be cleaned by customer service or by qualified professionals. To safeguard the electrical components, the interior of the device should never be cleaned with water or other liquids or be immersed in water.

The instructions should be included if giving the device to a third party.

Error search

Error description	Cause
Camera station does not send a video signal.	<ul style="list-style-type: none"> ◆ Check the connection of the service voltage (12 V DC). ◆ Check the connection of the video cable at the camera. ◆ Check to see that your power supply is functioning (12 V DC). ◆ Check the connections to the camera (video / voltage).
The video picture is too dark	<ul style="list-style-type: none"> ◆ There is insufficient lighting.
The video picture is out of focus	<ul style="list-style-type: none"> ◆ The focus is not adjusted properly.
Video picture has double images (ghosts)	<ul style="list-style-type: none"> ◆ Incorrect 75 Ω terminating resistance. ◆ Video cable shielding is broken.

If there is still no change after following the help measures described above, please contact Technical Support with an exact description of the error.

Appendix

Technical support

Should difficulties arise while installing or operating the device, we offer you technical support at +49 (0) 4321 269 81 36 or at mobilesupport@verint.com.

Notes

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