

**Mounting and Operating Instructions of
RP105 Camera
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 18.01.2006

General information

Product overview

The weatherproof Verint RP105 Back Eye Camera offers a reliable mobile solution in buses and trucks as rearview camera system. The camera comes equipped with a wide-angle lens and makes backing up safer. The driver can immediately see obstacles that suddenly appear and can react to them more quickly.

The camera can be operated in very bright (outdoor areas) but also in dark areas (outdoor darkness or indoor areas). Integrated infrared LED lighting ensures that the device can be operated in complete darkness and it is automatically switched on at dusk.

When combined with our wide range of recorders and monitors, the RP 105 camera provides a comprehensive networked digital video surveillance solution to help public transport providers 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 buses and fulfills the required European standards for public transport.

Scope of Delivery

- High-resolution vehicle back eye camera with 3.0 mm 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



12 V DC (connection at recorder)
Video signal (connection at recorder)

The Back Eye Camera RP 105 requires a stabilized 12 V DC power supply and has a max. power input of approx. 2.5 W.

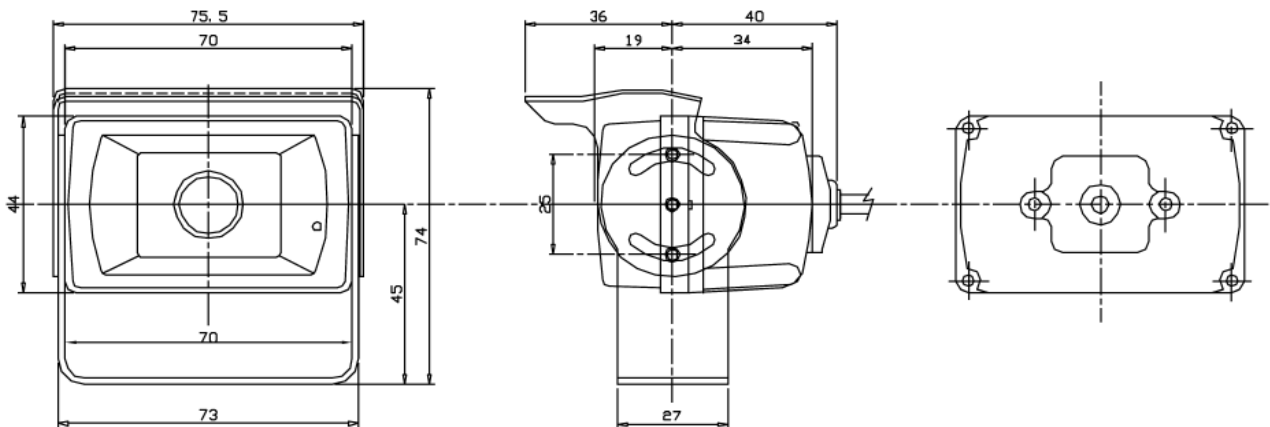
Cable connections

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!

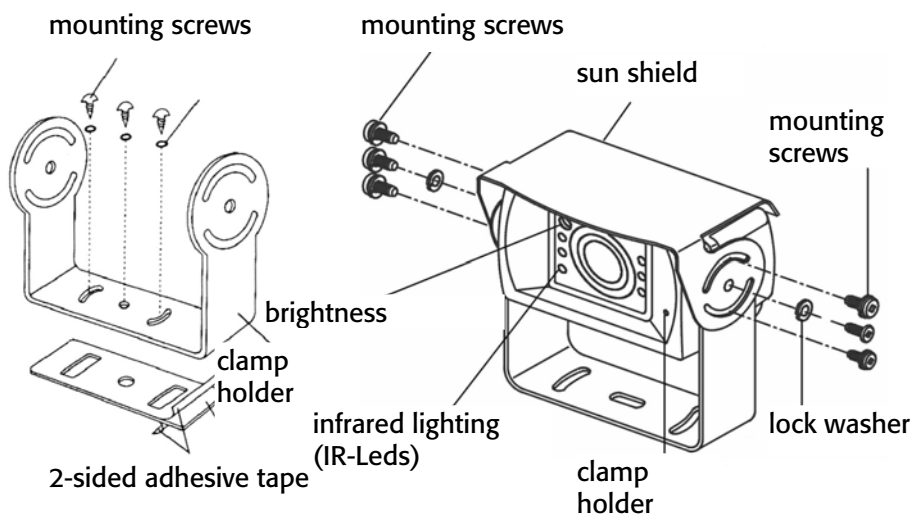
Installation

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

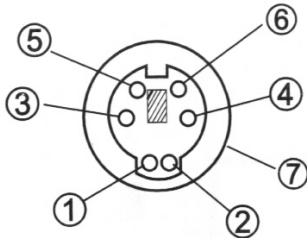
Attach the camera along with the accompanying mounting materials to the position you have chosen. The housing of the RP 105 can be used for marking the mounting holes.



Installation

Connecting Diagram

Plug assignment:



PIN 1	+12 V DC	red
PIN 2	Heat (optional)	green
PIN 3	Not assigned	-
PIN 4	Video output	clear
PIN 5	Audio (optional)	blue
PIN 6	Reversed display	yellow
PIN 7	Ground	shield

- Connect the video output signal of the camera (PIN 4, clear wire) using a suitable video cable (insulated coaxial cable, 75 Ohm) to the designated video input of the recorder.
- The recorder provides service voltage to the attached cameras (12 V DC). Use a suitable cable for connecting the power supply (PIN 1, red wire) 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 standard Back Eye Camera RP105 is designed to show reversed images. The reverse-image display should be used if the camera is mounted on the vehicle pointing backward. If the reverse-image display is not used, the PIN 6 (yellow wire) should be connected to ground (PIN 7).
- Lay the cable from the camera to the recorder (or to the monitor). Lay the cable from the camera directly into the interior of the vehicle. It is important to ensure that the safety of the driver is not impaired.

Initial operation

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

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

Appendix

Technical Data RP 105

CCD Sensor	1/3" Interline CCD (Sharp)
Max. pixels (h x v)	CCIR: 290,000 EIA: 270,000
Horizontal resolution	380 TV lines
Sensitivity to light	0 Lux @ 6 IR LED
Integrated infrared lighting	Automatically activated by brightness sensor if dark outside (5 lux)
TV standard	CCIR: 625 lines, 50 Hz EIA: 525 lines, 60 Hz
Enhancer	Yes
Gamma correction	0.45
Electronic Shutter	Automatic CCIR: 1/50 - 1/100,000 sec. EIA: 1/60 - 1/100,000 sec.
Signal-to-noise ratio	42 dB (AGC off)
AGC	Auto
Synchronization	Internal
Backlight	Automatic
Spectral response	380 - 1000 nm
Smear effect	0.01%
Video output signal	BAS 1V _{ss} / 75 Ohm, BNC
Operating voltage	12V/DC (+/- 10%)
Power consumptions	Max. 2.5 W
Operating temperature	-15° to +65°C
Storage temperature range	-20° to +75°C
Humidity	90 % (not condensed)
Protective system according to association of German electrotechnicians (VDE)	IP65, class III
MTBF	80,000 hours
Housing shape	Back Eye Camera exterior housing
Connections	Connector cable with 6 pin mini DIN plug
Weight	400g including mount
Installation	Mounting fixture (included)
Lens	3.0 mm (90° horizontal)
Dimensions (W x H x D)	70 x 44 x 57mm

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.

Troubleshooting

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 .

Verint Video Solutions GmbH
Norderhofenden 12-13
D-24937 Flensburg
Tel: +49 (0)461 - 14 15 90
Fax: +49 (0)461 - 14 15 9-10
Email: mobilesupport@verint.com

Service hotline: +49 (0)4321 – 269 81 36

Order no.: RP39100100 (RP 105)