

Operating Instructions

Wi-Fi Endoscope

Item No. 2108950 (BSK-2035)

Item No. 2109094 (BSK-2100)

Intended use

The product is suitable for optical troubleshooting or inspection of pipe systems as well as powered-down (voltage-free) systems and facilities. The water resistance only applies to contact with liquids (no acids or alkaline solutions). It is forbidden to use the product on people and animals and in potentially explosive environments.

The camera lens and body have an ingress protection rating of IP67. They are protected against dust and submersion in water up to 1 meter deep for 30 minutes. It is recommended to use the included lens sealing cap for increased protection against water ingress. Do not get the dimmer, USB-A connector or Wi-Fi box wet. There is a water level sticker on the cable (between the camera body and dimmer) which indicates where the IP protection starts and stops.

For safety and approval purposes, you must not rebuild and/or modify this product. If you use the product for purposes other than those described above, the product may be damaged. In addition, improper use can result in short circuits, fires, electric shocks or other hazards. Read the instructions carefully and store them in a safe place. Make this product available to third parties only together with its operating instructions.

This product complies with the statutory national and European requirements. All company names and product names are trademarks of their respective owners. All rights reserved.

Delivery content

- Endoscope
- Wi-Fi box
- Lens sealing cap
- 3x attachments: (hook, magnetic, mirror)
- Charging cable
- Operating instructions



Up-to-date operating instructions

Download the latest operating instructions at www.conrad.com/downloads or scan the QR code shown. Follow the instructions on the website.

Explanation of symbols



The symbol with the lightning in the triangle is used if there is a risk to your health, e.g. due to an electric shock.



The symbol with the exclamation mark in the triangle is used to indicate important information in these operating instructions. Always read this information carefully.

→ The arrow symbol indicates special information and advice on operation.

Safety instructions



Read the operating instructions carefully and especially observe the safety information. If you do not follow the safety instructions and information on proper handling in this manual, we assume no liability for any resulting personal injury or damage to property. Such cases will invalidate the warranty/guarantee.

a) General information

- The device is not a toy. Keep it out of the reach of children and pets.
- Do not leave packaging material lying around carelessly. This may become dangerous playing material for children.
- Protect the appliance from extreme temperatures, direct sunlight, strong jolts, high humidity, moisture, flammable gases, steam and solvents.
- Do not place the product under any mechanical stress.
- If it is no longer possible to operate the product safely, take it out of operation and protect it from any accidental use. Safe operation can no longer be guaranteed if the product:
 - is visibly damaged,
 - is no longer working properly,
 - has been stored for extended periods in poor ambient conditions or
 - has been subjected to any serious transport-related stresses.
- Please handle the product carefully. Jolts, impacts or a fall even from a low height can damage the product.
- Consult an expert when in doubt about the operation, safety or connection of the appliance.
- The use of electrical devices must be supervised by trained staff in schools, training centers, hobby and do-it-yourself workshops.
- In industrial facilities, heed all applicable accident prevention regulations for electrical installations and equipment.
- Maintenance, modifications and repairs must only be completed by a technician or an authorised repair centre.
- If you have questions which remain unanswered by these operating instructions, contact our technical support service or other technical personnel.

b) Endoscope

- The endoscope is suited for inspection only in voltage-free systems. The camera head is made of metal and can cause short-circuiting.
- For safety reasons, make sure all system components are voltage-free before inspection.
- Hold the camera neck and head only in voltage-free liquids. Do not submerge the camera neck past the "max. water level" mark.
- Avoid heavy mechanical loads and/or vibrations. Do not exceed the minimum bending radius of 30 mm.

c) LED light

- Attention, LED light:
 - Do not look directly into the LED light!
 - Do not look into the beam directly or with optical instruments!

d) LiPo Battery

- The rechargeable battery is permanently built into the product and cannot be replaced.
- Never damage the rechargeable battery. Damaging the casing of the rechargeable battery might cause an explosion or a fire! Unlike conventional batteries/rechargeable batteries (e.g. AA or AAA type), the casing of the LiPo rechargeable battery does not consist of a thin sheet but rather a sensitive plastic film only.
- Never short-circuit the contacts of the rechargeable battery. Do not throw the battery or the product into fire. There is a danger of fire and explosion!
- Charge the rechargeable battery regularly, even if you do are not using the product. Due to the rechargeable battery technology being used, you do not need to discharge the rechargeable battery first.
- Never charge the rechargeable battery of the product unattended.
- When charging, place the product on a surface that is not heat-sensitive. It is normal that a certain amount of heat is generated during charging.
- Before charging the battery, make sure that the USB power source can deliver sufficient current, otherwise you may damage the source. Do not use a USB port of a computer, keyboard or USB hub without a power adapter as the current supplied by these ports is insufficient.

Operating elements

→ Item No. 2109094 shown below.



- | | | |
|------------------------------|--------------------|---------------------------|
| 1 Ring light dimmer | 5 Charging cable | 10 Power indicator light |
| 2 Camera cable | 6 Lens sealing cap | 11 Wi-Fi box power button |
| 3 Camera body | 7 Mirror tip | 12 Status indicator |
| 4 Camera lens LED ring light | 8 Magnetic tip | 13 MicroUSB charging port |
| | 9 Hooked tip | 14 USB-A camera input |

Charge the Wi-Fi box battery

Connect one end of the charging cable (5) to the MicroUSB charging port (13), and the other end to a suitable power supply.

The status (12) indicator will light red when charging and go off when the battery is fully charged.

→ The status indicator will flash blue when the battery is low.

Adjust LED brightness

Use the ring light dimmer (1) to +▲— (increase "+") or decrease "—" the brightness of the LED ring light (4).

Use with mobile device

a) Setup

1. Visit the App or Google Play store and download the "HD wifi Endoscope" app by Basetech.
2. Connect the endoscope to the USB-A camera input (14) on the Wi-Fi box.
3. Press and hold the power button (11) to turn the Wi-Fi box on.
- Press and hold the power button to turn it off again.
4. The name of the endoscope Wi-Fi is:
 - Item No. 2108950: BASeTech BSK-2035
 - Item No. 2109094: BASeTech BSK-2100
5. After connecting to the endoscope Wi-Fi, launch the app. The camera image appears on screen.



→ If the following message pops up: "... No data connection. Allow Wi-Fi assistant to switch the network to a better one?" select "Decline".

b) Troubleshooting

Problem	Suggestion
Cannot save pictures or videos to your phone.	Allow "HD wifi Endoscope" to access your albums.
Live image does not show after launching the app.	<ul style="list-style-type: none"> Make sure your phone is connected to the "HD wifi Endoscope" Wi-Fi. Close the app and open it again. Check the Wi-Fi box battery level. Enter your mobile device settings and allow the "HD wifi Endoscope" app to access "WLAN" or "WLAN & Cellular Data". Turn the mobile phone data on then off again.

Use with laptop or desktop PC

a) Connection

- You cannot connect wirelessly to a laptop or desktop PC using the Wi-Fi box. The endoscope should be tethered via an available USB-A port on your computer. Your computer will automatically configure the device and set it up as a camera upon connection. Wait a few moments for this to happen and follow any on screen prompts to complete the setup process.
- You can set the endoscope up as a video capture device using media players that come bundled with your computer, or download alternative ones online e.g. VLC Media Player (www.videolan.org/vlc).

b) Windows®

- We suggest using the bundled "Smart Camera" application:
 - Visit www.conrad.com/downloads and enter the Item number.
 - Download the "Smart Camera" application.
 - Install the application on your computer.
- Connect the Endoscope to an available USB-A port on your computer.
- Double click the "Smart Camera" icon  to launch the application.

Problem	Suggestion
Live image does not show after launching the app.	<ul style="list-style-type: none"> Make sure the correct "Device" is selected. See section: Application overview → "Settings". <ol style="list-style-type: none"> Exit the app then disconnect the endoscope. Wait a few moments then reconnect the endoscope. Give your computer time to load the USB device. Restart the app.

Application overview: "Se ttings"

Setting	Description
"Device"	Select the endoscope from the dropdown menu.
"Video Format"	Set the resolution and frame rate.
"Recording Method"	Choose a recording quality.
"Video Renderer"	Not applicable
"Video Compressor"	Select the compression format.
"Audio Device"	Not applicable
"Audio Compressor"	Not applicable
"IP cameras"	Not applicable
"Video Advanced Settings..."	Fine tune the video recorder and camera settings.
"Photo Snap Setting"	<ul style="list-style-type: none"> Set where to save photos and videos. Add a prefix to saved filenames. Set up intervals for auto photo capture.

c) MacOS

The "Smart Camera" application is not compatible with the Mac operating system. We suggest using the following: "Photo Booth", "QuickTime Player" or "VLC Player".

Care and cleaning

- Disconnect the camera from the Wi-Fi box or computer before each cleaning.
- After use in liquids, always thoroughly rinse the camera neck with clean water and dry before storing the product in the case. The camera can be rinsed up to the flag label.
- To clean the camera lens, use a small brush or cotton swabs.
- Wipe any soiled areas using a clean, dry, fibre-free cloth.
- Do not use any aggressive cleaning agents, rubbing alcohol or other chemical solutions as they can cause damage to the housing and malfunctioning.

Declaration of Conformity (DOC)

Conrad Electronic SE, Klaus-Conrad-Straße 1, D-92240 Hirschau hereby declares that this product conforms to the 2014/53/EU directive.

→ Click on the following link to read the full text of the EU declaration of conformity: www.conrad.com/downloads

Select a language by clicking on a flag symbol and enter the product order number in the search box. You can then download the EU declaration of conformity in PDF format.

Disposal



Electronic devices are recyclable waste and must not be disposed of in the household waste. At the end of its service life, dispose of the product in accordance with applicable regulatory guidelines. You thus fulfill your statutory obligations and contribute to the protection of the environment.

Technical data

a) General

Power supply	5 V/ DC via USB-A
Battery	Lipo 3.7 V 550 mAh (2.035 Wh)
Battery charge time	approx. 1 hr
Battery runtime	approx. 70 mins
LED	Quantity: 8 pcs Power consumption: 3.2 V 100 mA Brightness: max. 104 Lumen Colour temp. 5500 - 6000 k
Ingress protection	IP67 (camera body and cable only)
Camera sensor	2 megapixel CMOS
Camera resolution	1600 x 1200 pixels
Photo resolution	640 x 480, 1280 x 960, 1600 x 1200, 1920 x 1440 px
Video resolution	640 x 480, 320 x 240 px
Frame rate	25 fps
Depth of field	4 -10 cm
Field of view	70°
White balance/exposure	Automatic
Video format	MP4
Photo format	JPEG
Bending radius	> 30 mm
Operating conditions	0 to +70 °C, <95 % RH (non-condensing)
Storage conditions	0 to +50 °C, <95 % RH (non-condensing)
Dimensions	Wi-Fi box: 94 x 22 x 21 mm (L x W x H) Camera body: ø8 mm (without tip) Camera cable: Item No. 2108950 (BSK-2035): 3.5 m Item No. 2109094 (BSK-2100): 10 m
Weight	100 g

b) Wi-Fi

SSID	Item No. 2108950: BASETech BSK-2035 Item No. 2109094: BASETech BSK-2100
Connectivity	Wi-Fi 802.11b/802.11n
Frequency range	2.4000 - 2.4835 GHz
Transmission distance	approx. 10 m (line of sight)
Transmission power	< 20 dBm

c) Mobile device/ PC

App support	iOS 8.0 or higher, Android 4.4 or higher,
Plug and play support	Windows® and Mac OS
Bundled application	Windows® XP or higher (16/ 32 bit)
Bundled applications	Windows®: Smart Camera Android: HD wifi Endoscope iOS: HD wifi Endoscope