

EN

OPERATING MANUAL
VIDEOSCOPE



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Notes regarding the operating manual**Symbols****Warning of electrical voltage**

This symbol indicates dangers to the life and health of persons due to electrical voltage.

**Warning**

This signal word indicates a hazard with an average risk level which, if not avoided, can result in serious injury or death.

**Caution**

This signal word indicates a hazard with a low risk level which, if not avoided, can result in minor or moderate injury.

Note

This signal word indicates important information (e.g. material damage), but does not indicate hazards.

**Info**

Information marked with this symbol helps you to carry out your tasks quickly and safely.

**Follow the manual**

Information marked with this symbol indicates that the operating manual must be observed.

You can download the current version of the operating manual and the EU declaration of conformity via the following link:



B021



<https://hub.trotec.com/?id=43269>

Safety

Read this manual carefully before starting or using the device. Always store the manual in the immediate vicinity of the device or its site of use.

- Do not use the device in potentially explosive rooms or areas and do not install it there.
- Do not use the device in aggressive atmosphere.
- Do not use the device in atmospheres containing oil, sulphur, chlorine or salt.
- Protect the device from permanent direct sunlight.
- Only use the device in de-energized facilities and objects. For reasons of safety, de-energize all plant components and objects prior to every inspection.
- Before using the measuring probes and camera heads, de-energize any circuits located in walls.
- Before using the measuring probes and camera heads in metal pipes inside a wall, have an authorised specialist company carry out a check to ensure that the metal pipes are not electrically charged.
- For reasons of safety, do not use the measuring probes and camera heads for inspections in moving parts.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
- Do not open the device.
- Observe the storage and operating conditions (see Technical data).

Intended use

Only use the device for the visualization of objects.

To use the device for its intended use, only use accessories and spare parts which have been approved by Trotec.

Foreseeable misuse

Do not use the device in potentially explosive areas. Do not use the control unit with display underwater. Never use the device on persons or animals. Trotec accepts no liability for damages resulting from improper use. In such a case, any warranty claims will be voided. Any unauthorised modifications, alterations or structural changes to the device are forbidden.

Personnel qualifications

People who use this device must:

- take measures to protect themselves from direct contact with live parts.
- have read and understood the operating manual, especially the Safety chapter.

Residual risks



Warning of electrical voltage

Risk of death due to electric shock!

An electric shock can result in severe personal injury or death! The device may only be used in accordance with all safety instructions listed here.



Warning of electrical voltage

Electric shock due to contact with live parts! Do not touch any live parts. Secure neighbouring live parts by covering them or by switching them off.



Warning of electrical voltage

There is a risk of a short-circuit due to liquids penetrating the housing!
Do not immerse the device and the accessories in water. Make sure that no water or other liquids can enter the housing.



Warning of electrical voltage

Work on the electrical components must only be carried out by an authorised specialist company!



Warning

Risk of suffocation!
Do not leave the packaging lying around. Children may use it as a dangerous toy.



Warning

The device is not a toy and does not belong in the hands of children.



Warning

Dangers can occur at the device when it is used by untrained people in an unprofessional or improper way!
Observe the personnel qualifications!



Caution

Keep a sufficient distance from heat sources.

Note

To prevent damages to the device, do not expose it to extreme temperatures, extreme humidity or moisture.

Note

Do not use abrasive cleaners or solvents to clean the device.

Information about the device

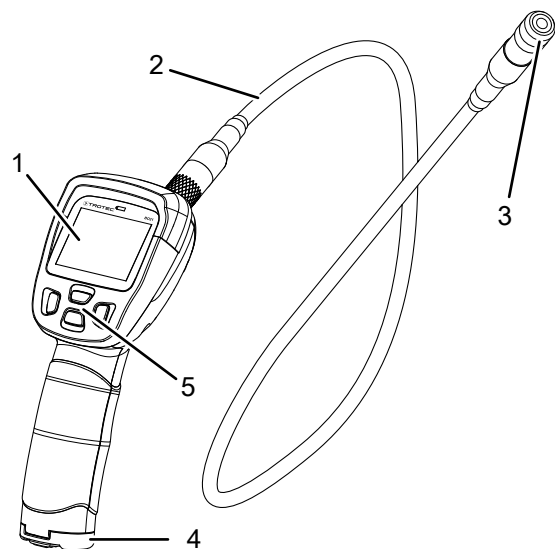
Device description

The videoscope B021 serves for inspecting concealed machine components and poorly accessible or inaccessible hollows.

The camera is connected to the device via a flexible gooseneck probe.

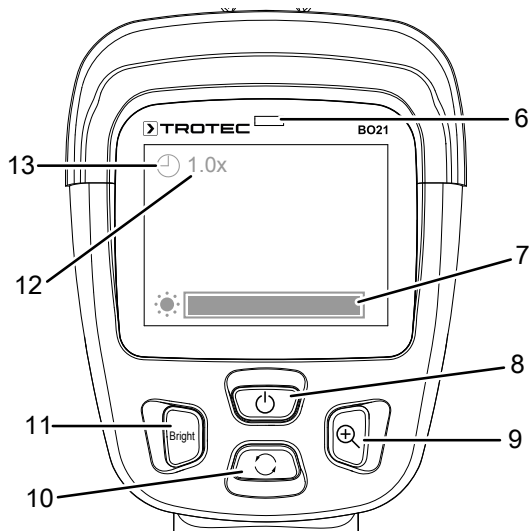
The probe is water-proof and can be immersed in water along with the camera head, e.g. to check whether there are any objects underneath the surface (e.g. for leak detection or drainage or sanitary work).

Device depiction



No.	Operating element
1	Display
2	Gooseneck probe
3	Camera
4	Battery compartment
5	Operating elements

Display and operating elements



No.	Operating/display element
6	Battery status indication
7	LED brightness indication
8	Power button
9	Zoom button
10	Image rotation button
11	Brightness button
12	Enlargement factor indication
13	Image rotation indication

Technical data

Parameter	Value
Model	B021
Weight	584 g
Dimensions (length x width x height)	240 mm x 160 mm x 100 mm
Display	2.4 inch digital LC colour display
Resolution	480 x 234 pixels
Frame rate	30 fps
Camera diameter	17 mm
Length of the gooseneck probe	1 m
Range of vision	5 to 15 cm
Field of vision	68 °
Zoom	2x
Operating temperature	-10 °C to 50 °C
Storage temperature	-10 °C to 50 °C
Type of protection (gooseneck probe and camera head)	IP 67
Power supply	4 x Alkaline LR6 AA 1.5 V battery

Scope of delivery

- 1 x Videoscope B021
- 4 x Alkaline LR6 AA 1.5 V battery
- 1 x Accessory kit with mirror, hook and magnet attachment
- 1 x Quick guide

Transport and storage

Note

If you store or transport the device improperly, the device may be damaged. Note the information regarding transport and storage of the device.

Transport

For transporting the device, use the bag included in the scope of delivery in order to protect the device from external influences.

Storage

When the device is not being used, observe the following storage conditions:

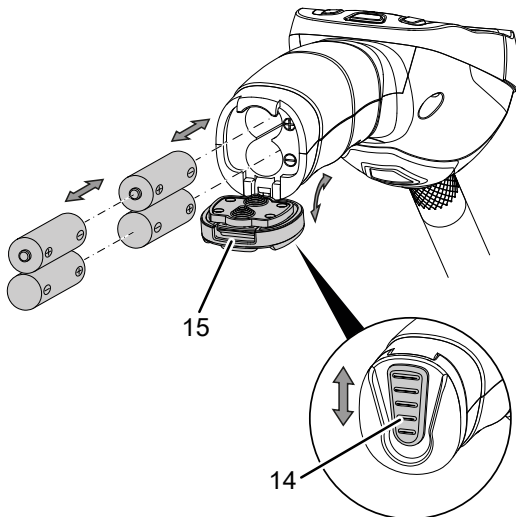
- dry and protected from frost and heat
- protected from dust and direct sunlight
- with a cover to protect it from invasive dust if necessary
- the storage temperature complies with the values specified in the Technical data
- Remove the batteries from the device.

Operation

Inserting the batteries

Note

Make sure that the surface of the device is dry and the device is switched off.

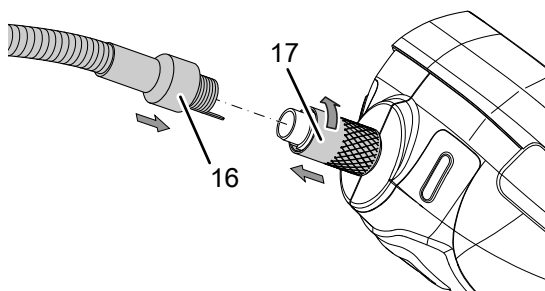


1. Slide the switch (14) down.
⇒ The battery compartment's lock is released.
2. Open the cover (15) of the battery compartment.
⇒ Remove any used batteries.
3. Insert the batteries with correct polarity.
4. Close the cover (15) again.
⇒ The switch (14) snaps into place and the battery compartment is locked.

Connecting the gooseneck probe

Note

Make sure that the surface of the device is dry and the device is switched off.



1. Connect the gooseneck probe (16) to the device (17).
To do so, insert the probe's detent pin into the corresponding recess at the plug of the camera housing until they are connected in a way preventing rotation.
2. The device port (17) comes with a screw joint. Connect it to the gooseneck probe.

Switching on and off

1. Press the power button (8) for approx. 2 seconds.
⇒ The display switches on.
⇒ The device is ready for operation.
2. Press the power button (8).
⇒ The device switches off.

Aligning / moving the camera

1. Move the gooseneck probe (2) into the desired position.
2. If required, you can rotate the camera image on the display by 180°. To do so, press the image rotation button (10).
⇒ The display shows the image without 180° rotation.
3. Press the image rotation button (10) again.
⇒ The display shows the image without 180° rotation.
4. For underwater photos the gooseneck probe can be immersed.
Make sure that the device itself does not make contact with water, otherwise it might be damaged.

Setting the camera illumination

1. Press the brightness button (11) until the desired level of illumination is set at the camera head.
⇒ The LED brightness indication (7) displays the current setting.

Setting the zoom factor

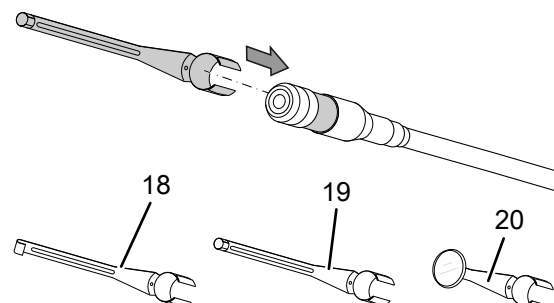
1. Press the zoom button (9) until the desired zoom level is set.
⇒ The enlargement factor indication (12) displays the current value.
⇒ The value range is between 1.0 and 2.0.

Using accessories

The accessories include 3 attachments for the camera head:

- hook (18): for recovery or taking samples
- magnet (19): for withdrawing ferromagnetic metal parts
- mirror (20): side-view adapter

If required, these attachments can be fastened to the camera head.



Errors and faults

The device has been checked for proper functioning several times during production. If malfunctions occur nonetheless, check the device according to the following list.

The device does not switch on:

- Check the charging status of the battery. Change the battery, if required (see chapter Inserting the battery).
- Make sure that the battery is properly positioned. Check the polarity is correct.

For repairs or device testing, contact the manufacturer.

Maintenance and repair

Battery change

Change the batteries, when the battery status indication (6) is illuminated in red or the device can no longer be switched on. See section Inserting the batteries in chapter Operation.

Cleaning

Clean the device with a soft, damp and lint-free cloth. Make sure that no moisture enters the housing. Do not use any sprays, solvents, alcohol-based cleaning agents or abrasive cleaners, but only clean water to moisten the cloth.

Repair

Do not modify the device or install any spare parts. For repairs or device testing, contact the manufacturer.

Disposal



The icon with the crossed-out waste bin on waste electrical or electronic equipment stipulates that this equipment must not be disposed of with the household waste at the end of its life. You will find collection points for free return of waste electrical and electronic equipment in your vicinity. The addresses can be obtained from your municipality or local administration. You can also find out about other return options that apply for many EU countries on the website <https://hub.trotec.com/?id=45090>. Otherwise, please contact an official recycling centre for electronic and electrical equipment authorised for your country.

The separate collection of waste electrical and electronic equipment aims to enable the re-use, recycling and other forms of recovery of waste equipment as well as to prevent negative effects for the environment and human health caused by the disposal of hazardous substances potentially contained in the equipment.



In the European Union, batteries and accumulators must not be treated as domestic waste, but must be disposed of professionally in accordance with Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators. Please dispose of batteries and accumulators according to the relevant legal requirements.

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