



# Operating Manual

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# Product Description of the Machine

## INTENDED USE

The **ONE** optical inspection system with all cameras is intended exclusively for the inspection of pipes, shafts, and cavities.

Use the system only for these applications.

Operation is permitted only by qualified personnel.

The **ONE** will only be used as intended if all specifications contained in this operating manual are:

- for safety
- for operation
- for maintenance and servicing

## IMPROPER USE

Any other or further use will be considered improper use.

A contaminated inspection system must not be used for fresh water applications without prior cleaning and disinfection in accordance with legal requirements.

A system is considered contaminated if it has come into contact, in whole or in part, with wastewater, sewage, process water, or hazardous environments.

The inspection system is not suitable for medical or veterinary purposes. The manufacturer accepts no liability for personal injury or property damage resulting from improper use. Further information can be found in the Product Liability Act.

In the event of improper use, the manufacturer's liability is void under the Product Liability Act.

## USER INFORMATION

Any other or further use is considered improper. This operating manual has been prepared in accordance with the principles of technical writing and the minimum legal requirements of the Machinery Directive 2006/42/EC, which serves as its basis. This operating manual is intended for the operator and user of the system. Personnel may perform work in accordance with their qualifications. Specific qualifications and descriptions required for the respective area of application are not included in this operating manual.

There are no accompanying documents for this operating manual.

## PURPOSE

This operating manual provides information on the correct handling of the push/pull inspection system.

## COPYRIGHT

The operating instructions and all illustrations and information contained therein are the property of NSP3CT.PRO GmbH. Any use beyond the scope of the device's intended use is prohibited without written permission.

## MANUFACTURER INFORMATION

The **ONE** optical push/pull inspection system is manufactured by:

**NSP3CT.PRO GmbH**

Am Galgenbichl 14

87509 Immenstadt

Germany

Tel.: +498312053060

E-Mail: [info@nsp3ct.pro](mailto:info@nsp3ct.pro)

# Safety instructions

The ONE optical inspection system complies with current safety standards. Nevertheless, improper use can pose risks to people and property.

## Use only if:

- The system is technically sound.
- Wear parts have been inspected before use.
- It is used as intended.
- The user acts with safety awareness and follows the operating instructions.
- Legal regulations and standards are observed.

## Important Notes:

- No modifications or alterations except with original accessories and spare parts.
- Visually inspect for damage before each use.
- Repairs only by NSP3CT:PRO or authorized service centers.  
Charge the system exclusively with a USB-C charger.

## PERSONAL PROTECTIVE EQUIPMENT

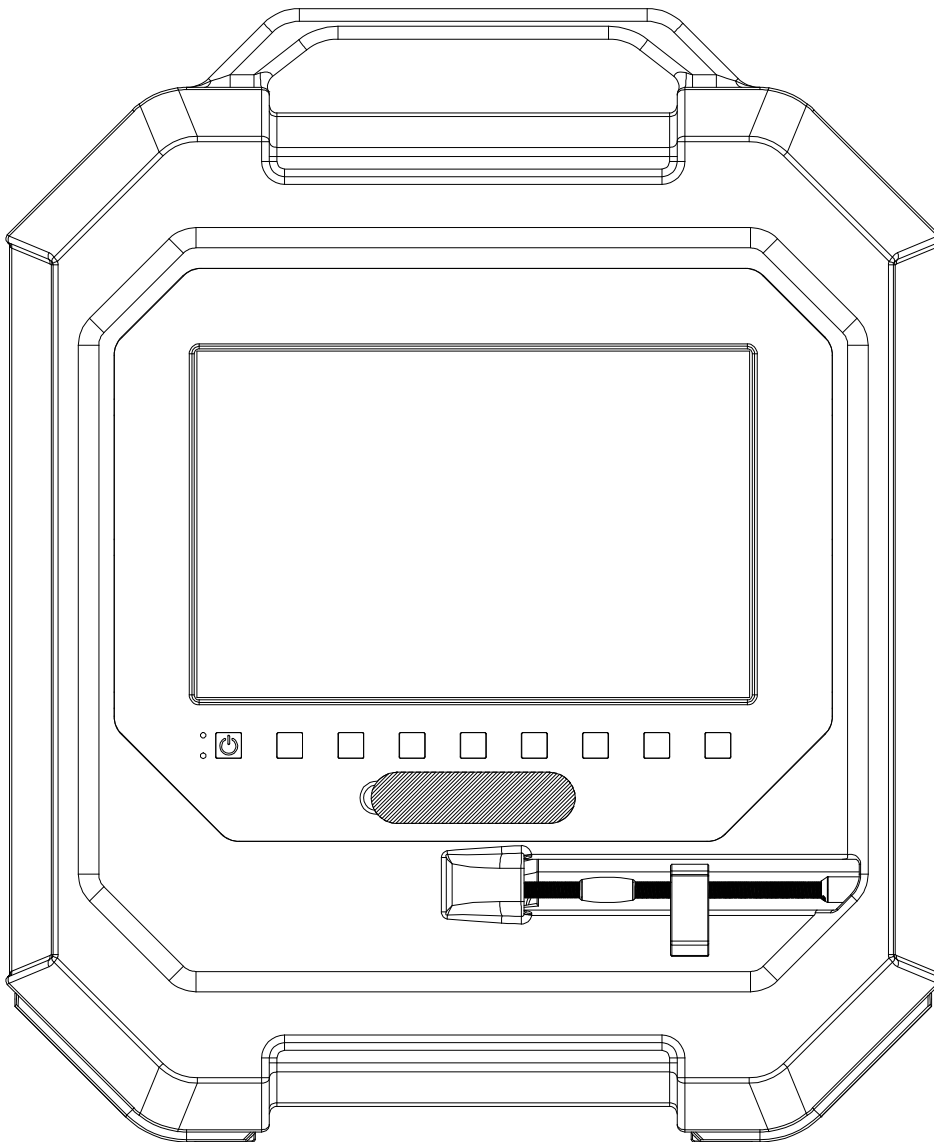
The ONE system is a handheld electrical device without its own drive or exposed output. Due to this design, there are no particular hazards posed by the device itself.

However, additional personal protective equipment may be required when performing work with the optical inspection system. The necessary protective equipment can be found in the applicable safety and hygiene regulations and relevant norms and standards for the work to be carried out.

# Technical Data

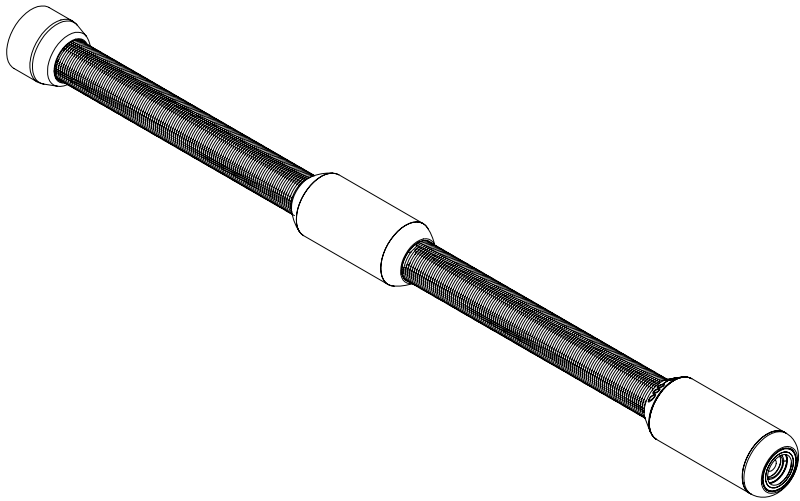
## NSP3CT ONE

Resolution	1080p30
Power supply	USB-C max. 20V DC
Housing material	ABS
Dimensions	460x390x160mm
Sliding cable/sliding rod	6/6.6mm with 30m length
Weight	6.5 kg/7 kg
Operating temperature	0-40°C
Protection class	IP54



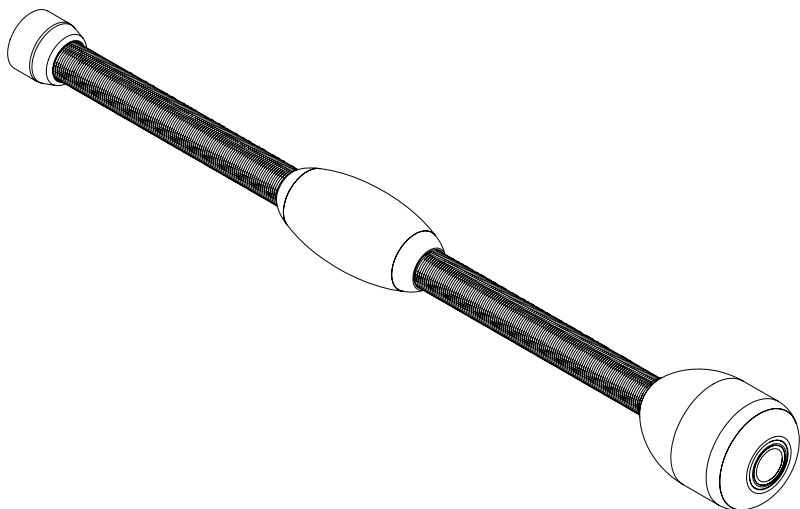
## CAMERA C10 (10 MM)

Resolution	1080p25
Diameter	10mm
Focus area	0-4 cm
Protection class	IPX8



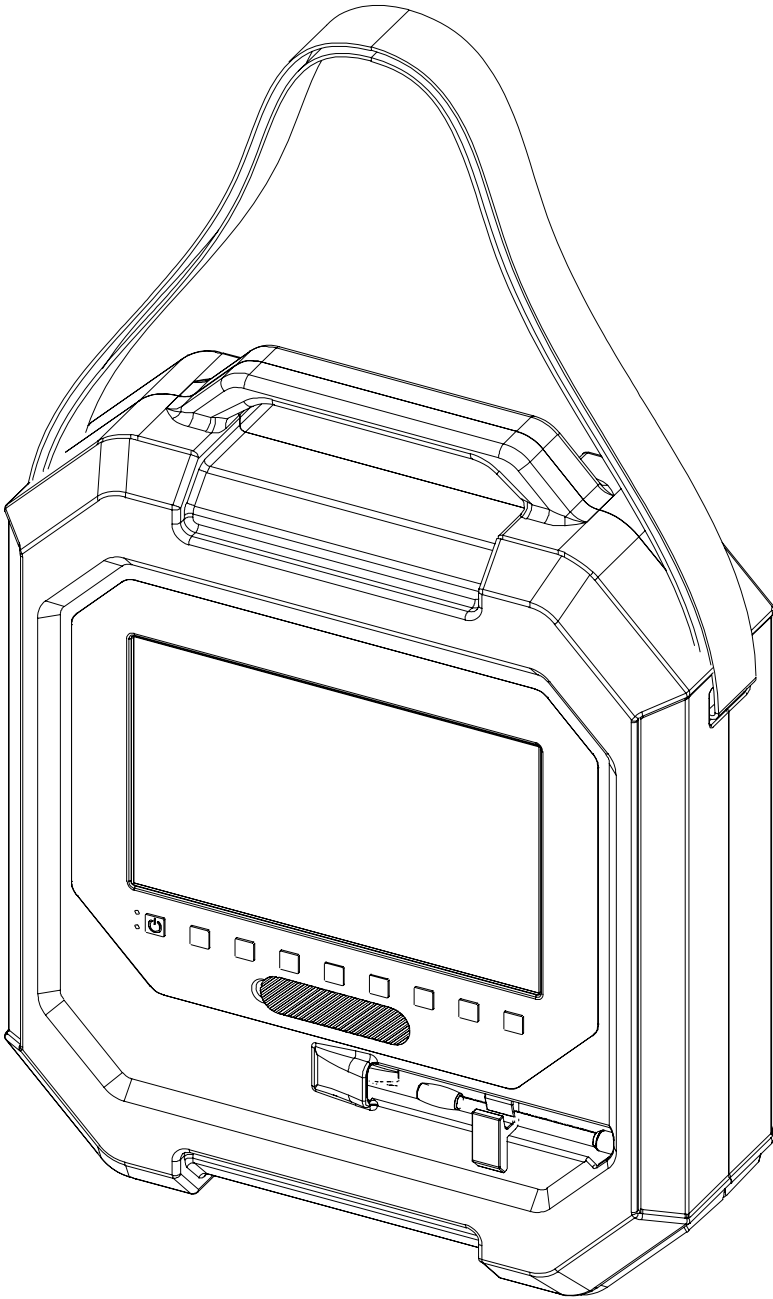
## TECHNISCHE DATEN KAMERA C18 (18 MM)

Resolution	1080p25
Diameter	18mm
Focus Area	0-8 cm
Protection class	IPX8



# Product Overview

The ONE push/pull inspection system consists of a base unit with a 30m push cable or push rod and a camera. The camera is available as either a C10 (10mm) or a C18 (18mm) axial camera. The system is designed for inspecting pipes and cavities with a diameter of 11mm and larger.



## ACCESORIES

The system comes standard with the following accessories:

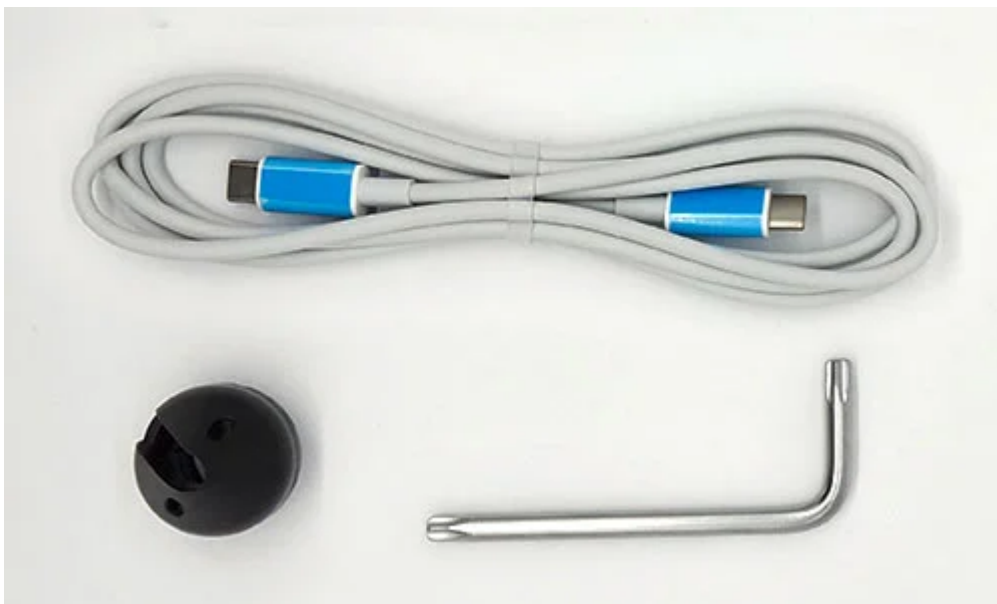
Camera 10mm (Standard)

USB-C Charging cable

TORX angle wrench for changing the Sliding ball/Camera Centering Guide

Sliding ball/Camera Centering Guide for the corresponding camera head

Shoulder strap



## CONNECTIONS

The ONE features the following ports from left to right:

- SD card for memory expansion
- USB-A port for connecting a USB flash drive
- USB-C port for charging the device



## PHYSICAL BUTTONS

The ONE has an on/off switch and 8 other physical buttons that can perform different functions depending on the operating status.



## CAMERAS

The system comes standard with a 30m push cable/rod and a camera. Additional accessories are included as described in the Accessories section.

# Commissioning

## INITIAL COMMISSIONING

Before initial use, the system should be fully charged. Afterwards, it can be used directly without any further setup.

Please note that the device should only be charged with a USB-C charger. Due to differing standards, proper charging can only be guaranteed with a USB-C charger (USB-C to USB-C).

## CHARGING

The ONE can be charged using the included USB-C charger or alternative USB-C chargers. Connect the charger to a power outlet and plug the USB-C connector into the ONE's port. The system can be used without restriction while charging.

## CABLE SECURITY

Ensure all cables are securely laid to avoid tripping hazards. Make sure no cables are loose or run across walkways. This is for your safety and the safety of others.

## SETUP ACTIVITY

### CAMERA CABLE REPLACEMENT INCLUDING BASKET

Please install a camera before commissioning.

- a. Place the unit switched off on a clean, soft surface – avoid scratches
- b. Remove the dust cap from the drum
- c. Loosen the screw (captive) using the supplied TORX wrench
- d. Remove the drum, ensuring that the camera or cable end is securely stowed inside.
- e. To reinstall, perform the steps in reverse order, ensuring that you insert the camera through the opening in the housing before beginning.

**Note: Ensure that a cable reel is installed and securely screwed in.**

## SETUP ACTIVITY

### REPLACING THE CAMERA ON THE CAMERA CABLE

- a. Open the cover and remove the camera
- b. Check the camera's O-ring and insert it into the corresponding part
- c. Reattach the cover and check that the camera is securely seated

#### NOTICE

##### LOSS OF CAMERA HEAD

Please check the camera head screws before each use

## SETUP ACTIVITY

### OPTIONAL: MOUNTING/REMOVING A CENTERING GUIDE

To center the camera in the inspection area, it can be equipped with a centering aid (sliding ball).

The centering aid is screwed on independently of the camera.

#### **Assembly/Disassembly**

- a. Unscrew the centering aid.
- b. Position the rear part over the camera spring.
- c. Screw on the front part and secure it.



# SETUP ACTIVITY

## LOCATION SYSTEM

The system is equipped with a location transmitter for all cameras, offering three switchable frequencies: **512 Hz, 640 Hz, and 32 kHz**.

The tracking frequency is changed by pressing and holding the touch button or the physical button. A **short press** activates or deactivates tracking. The color indicates the current status.

The centering aid is screwed on independently of the camera.

### Installation/Disinstallation

The camera head can be located using the **point tracking** method:

- At 512 Hz and 640 Hz, tracking occurs in parallel with the video image.
- At 32 kHz, the video image is deactivated.

# Operation/user interface

## OVERVIEW

The sliding system consists of a touchscreen with push buttons, a cable unit, and a camera head. A fold-out stand is also integrated.



## NOTICE

### DANGER OF TIPPING OVER

Please check that the system is positioned correctly before use.

## WINDING AND UNWINDING THE PUSH/PULL CABLE/PUSH ROD

1. Remove the camera head from the locking mechanism at the bottom
2. The cable is ready for use and can be extended and retracted. To extend it, pull the required length of cable/rod out of the housing. To retract it, push the cable/rod back into the housing.
3. Secure the camera in the housing after use



### NOTICE

#### DANGER OF TRIPPING

**Caution:** The cable may create a tripping hazard at the point of use.

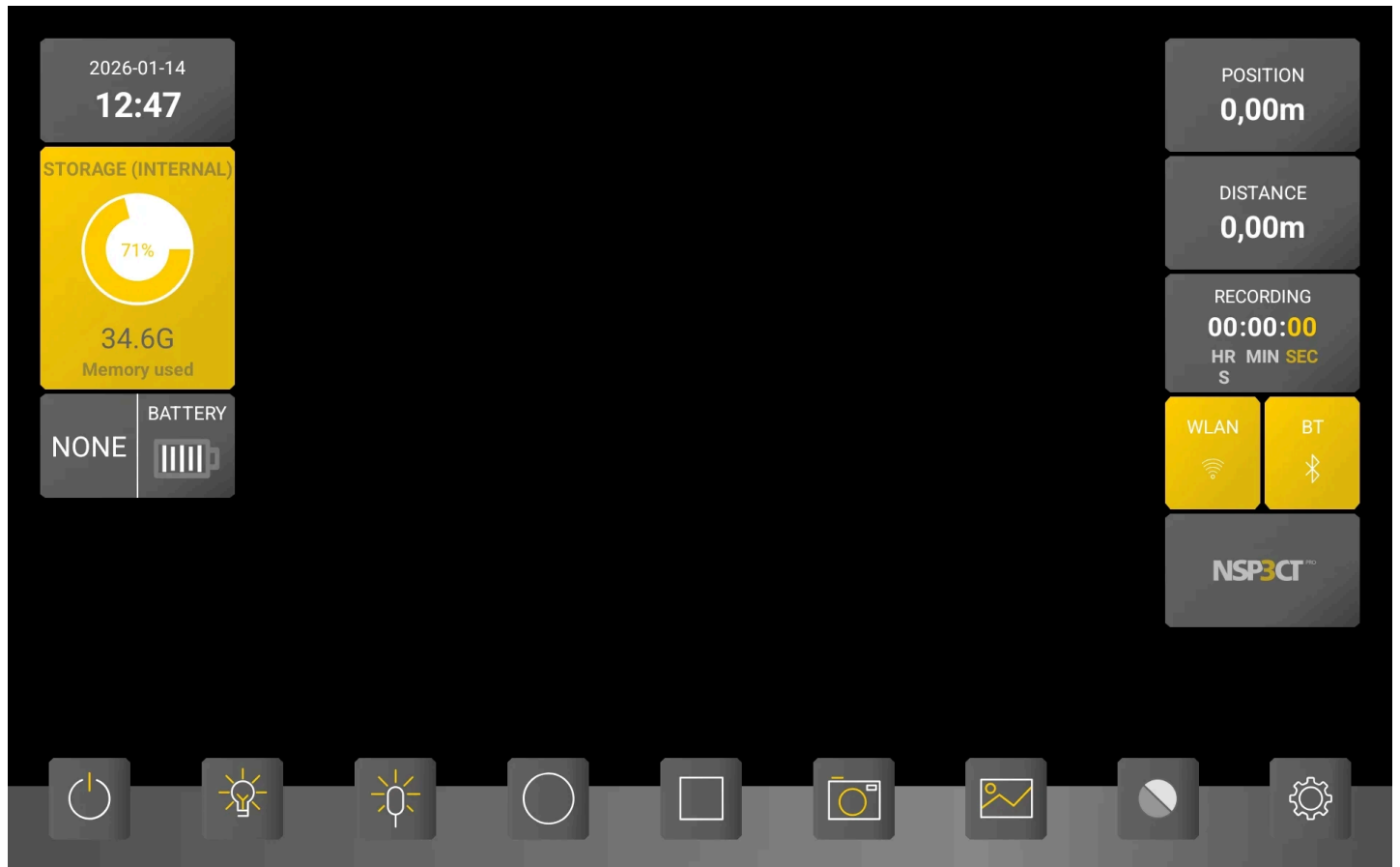
- Only remove the required amount from the housing
- Do not create loops
- Rewind any unused cable back into the housing

## GENERAL INFORMATION

After the system starts, the video screen is displayed. In the settings, you can specify whether the sidebars (left and right) should be permanently displayed or shown and hidden when the middle area of the active video screen is touched. The system's main functions include viewing the live image, recording videos, and taking pictures. These functions can always be operated via the touchscreen or physical buttons.

## MAIN SCREEN

In the basic layout, the sidebars are displayed on the left and right, and the functions are located at the bottom. These can be operated either via the physical buttons below the display (ideal for use with gloves) or directly via the touchscreen. The current live image, possibly with data overlays, is always displayed in the background.



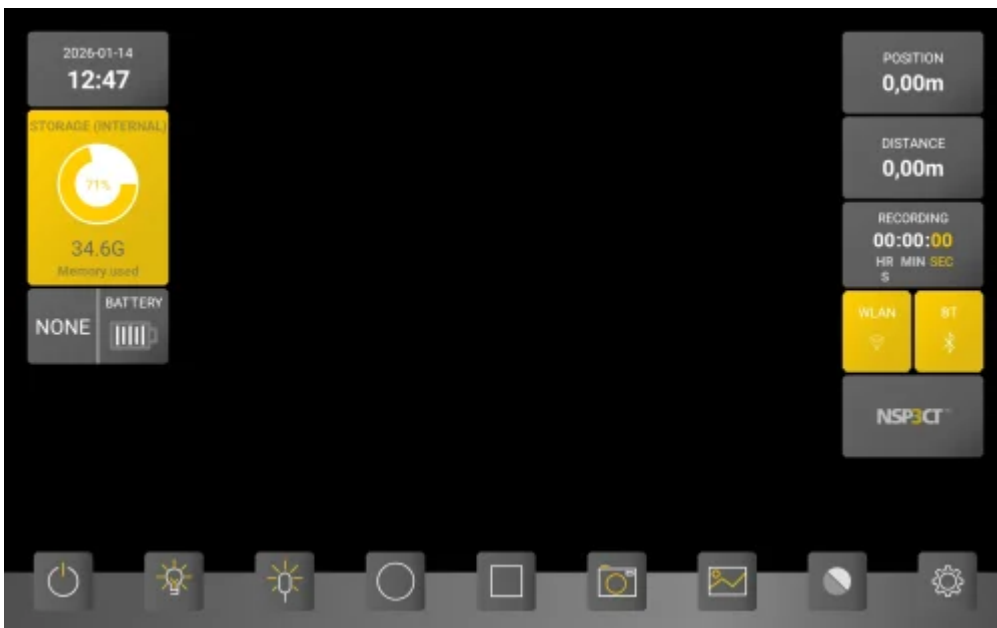
## BUTTON BAR

The touchscreen buttons for basic functions are always visible in the safe area below the active video. The physical buttons located below them on the casing have the same basic function as the corresponding touchscreen buttons on the display.



## SIDEBARS

The sidebars display important information and can be customized in the system settings. Menus can also be accessed directly via the keyboard shortcuts.



# Overview of the function keys





## POWER

### ON/OFF SYMBOL

**Long press** (physical or touch): The system switches on or off.



## LIGHTING

### LIGHTBULB SYMBOL

- **Long press physical button:** Symbol changes, light turns off.
- **Short press physical button:** Changes light levels.
- **Long touch touch control:** Opens slider to adjust light intensity (0%-100%).
- **Short touch touch control:** Changes light levels.



## LOCATION

### PROBE SYMBOL

- **Long press physical button:** Change frequency (33kHz/512Hz/640Hz).
- **Short press physical button:** On/Off.
- **Long touch of touch control:** Opens slider to adjust frequency.
- **Short touch of touch control:** On/Off.



## VIDEO CAPTURE

### RECORD/CIRCLE SYMBOL

- **Press record button** (physical or touch): Recording starts, timecode begins. Button changes to the "Pause" symbol.
- **Press pause button** (physical or touch): Recording pauses, timecode pauses. Button changes to the "Record" symbol.



## STOP

STOP/SQUARE SYMBOL

**Stop button** (physical or touch): Stop recording and save.



## IMAGE CAPTURE

PHOTO CAMERA SYMBOL

**Photo Capture Button** (physical or touch): Image is being captured



## MEDIA PREVIEW

GALLERY SYMBOL

- **Grid View:** Content is displayed in a grid view with small previews.
- **Tap Preview Image:** Show larger preview and media information.
- **Long Touch:** Select file, choose multiple files.



## SCREEN MODE

LIGHT/DARK SYMBOL

**Short press:** Toggles between a light and dark button scheme



## SETTINGS

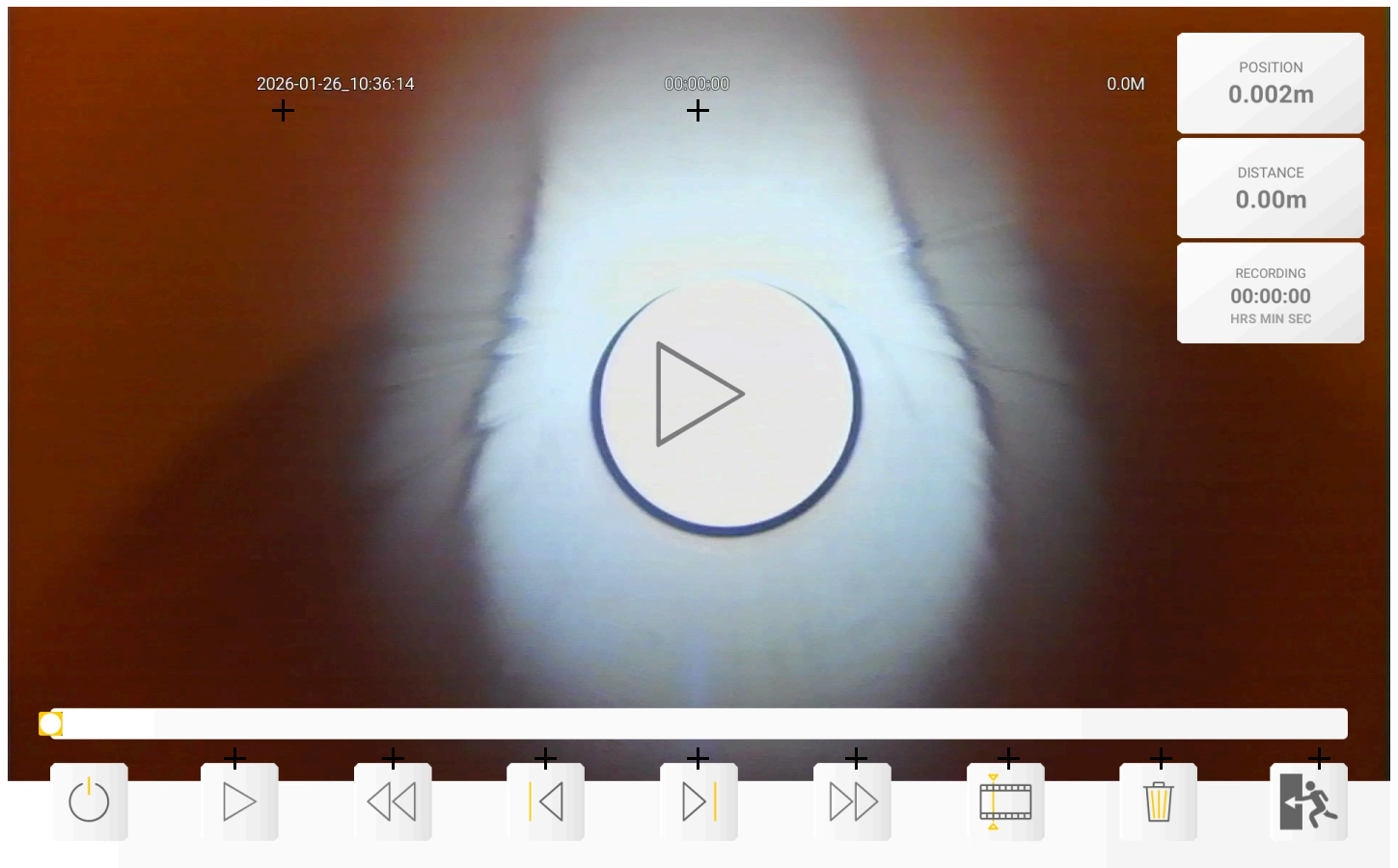
GEAR SYMBOL

**Short press:** Opens the menu with the System settings.

## PHYSICAL BUTTONS

**Function:** The functions of the physical buttons are analogous to the corresponding touch function button shown above them on the screen.

# Video and Image Capturing Mode



## OBERER BILDSCHIRMBEREICH

### TEXTEINSCHREIBUNG

Folgende Angaben werden fest in das aufgezeichnete Video geschrieben:

- **Erste Zeile:** Datum der Aufnahme
- **Zweite Zeile:** Uhrzeit der Aufnahme

Die Einstellungen hierzu sind im Menü "Einstellungen" vom Hauptbildschirm erreichbar.

### TIMECODE

Fest ins Video geschriebener, fortlaufender Timecode



## PLAY

PLAY/TRIANGLE SYMBOL

- **Press Play button** Playback starts. Button changes to the "Pause" symbol.
- **Press Pause button:** Pauses recording, timecode paused. Button changes to the "Play" symbol.



## BACK-TO-START

LINE/ARROW BACK SYMBOL

**Press the To-Start button:** Playback will restart from the beginning of the video; the timecode will jump to 00:00:00



## FAST REVERSE

DOUBLE ARROW BACK SYMBOL

**Schnellrück-Taste drücken:** Video spielt schnell zurück, bis die Taste wieder losgelassen wird.



## FAST FORWARD

DOUBLE ARROW SYMBOL

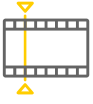
**Press the fast forward button:** The video will play quickly until the button is released.



## TO-END

ARROW/LINE SYMBOL

**Press the To-End button:** Playback will stop and the timecode and cursor jump to the end of the video



## SET MARKER VIDEO MARKER SYMBOL

**Press marker button:** Inserts a timecode marker into the video at the current position, which can later be navigated to.



## DELETE CLIP TRASH CAN SYMBOL

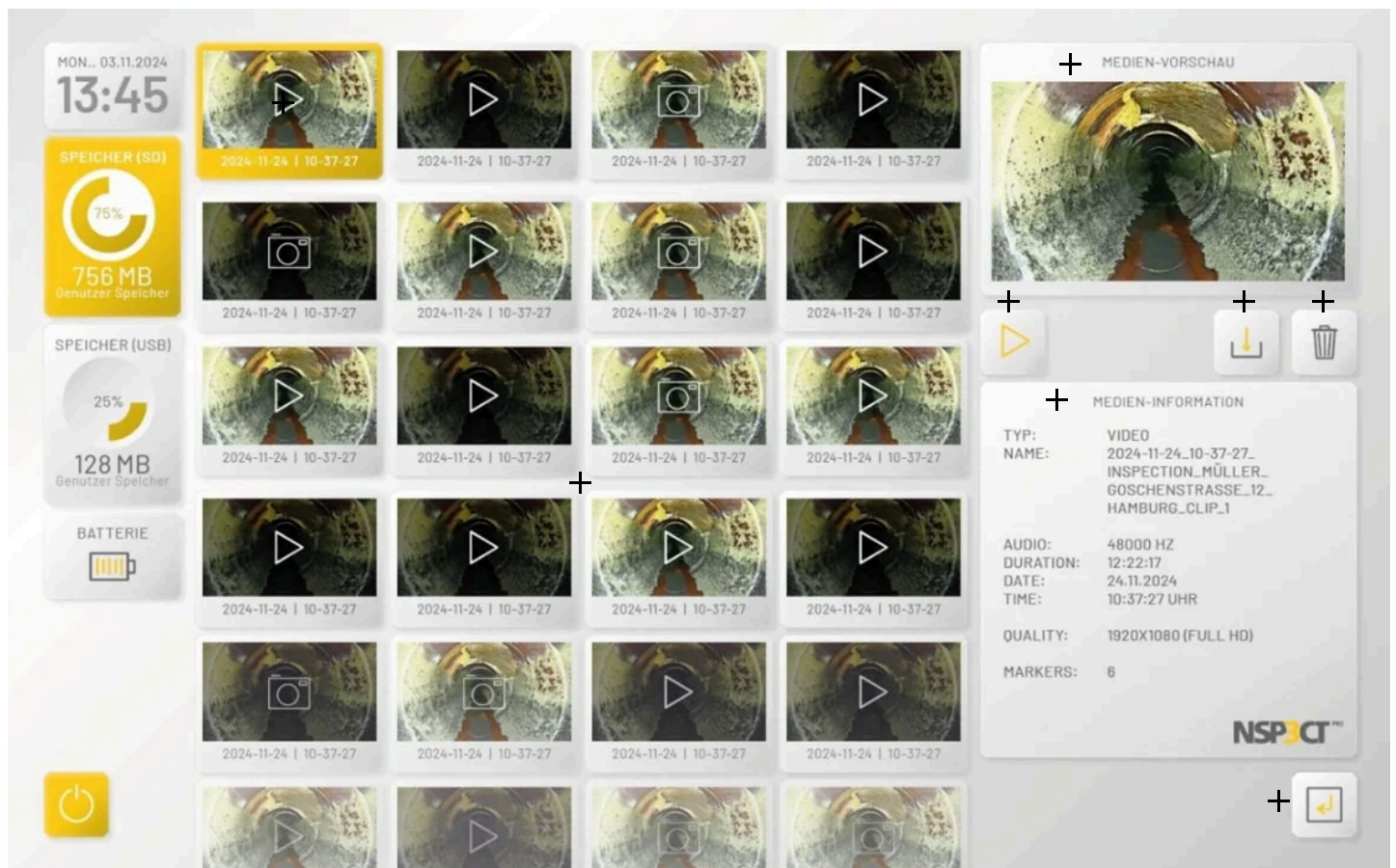
**Press the delete button** The selected file will be deleted from the device memory.



## BACK TO THE HOME SCREEN RETURN SYMBOL

**Short press:** Return to the main screen

# Gallery features



## MEDIA OVERVIEW

Content is displayed in a grid view with small preview images.

## THUMBNAILS (PREVIEW IMAGES)

**Tap preview image:** Show larger preview and media information.

**TIP:** Long press to select one file, tap other preview images to select multiple files.

## MEDIA PREVIEW

Video preview, controls, and file information for the selected video

## PLAY VIDEO

**Playback page:** Start, pause, fast forward, and rewind video.

SAFE VIDEO EXTERNALLY

**Press the download button** The selected file will be downloaded to an external storage device.

DELETE VIDEO

**Press the Trash Can button** The selected file will be deleted from the device memory.

## MEDIA INFORMATION

Displays all important meta information for the selected video

- **Type:**Video or Image
- **Name:**Pre-set recording name with prefix
- **Audio:**Recorded audio frequency
- **Duration:**Playback duration of the selected video
- **Date:**Date of recording
- **Time:**Time of recording
- **Quality:**Resolution of the recorded video/image
- **Markers:**Number of markers set in the video

## BACK TO HOME SCREEN

**Short press:** Return to the main screen

# FUNKTIONSTASTEN



## ABSPIELEN

### ABSPIELEN-SYMBOL

- **Abspieltaste drücken** Wiedergabe startet. Button wechselt zum „Pause“-Symbol
- **Pause-Taste drücken:** Aufnahme pausieren, Zeitcode pausiert. Button wechselt zu, „Wiedergabe“-Symbol



## PAUSE

### PAUSE-SYMBOL

**Pause-Taste** Wiedergabe vorübergehend anhalten



## STOPP

### STOPP-SYMBOL

**Stopp-Taste** Wiedergabe stoppen



## EXTERN SPEICHERN

### DOWNLOAD-SYMBOL

**Download-Taste drücken** Ausgewählte Datei wird auf ein externen Speichermedium geladen.

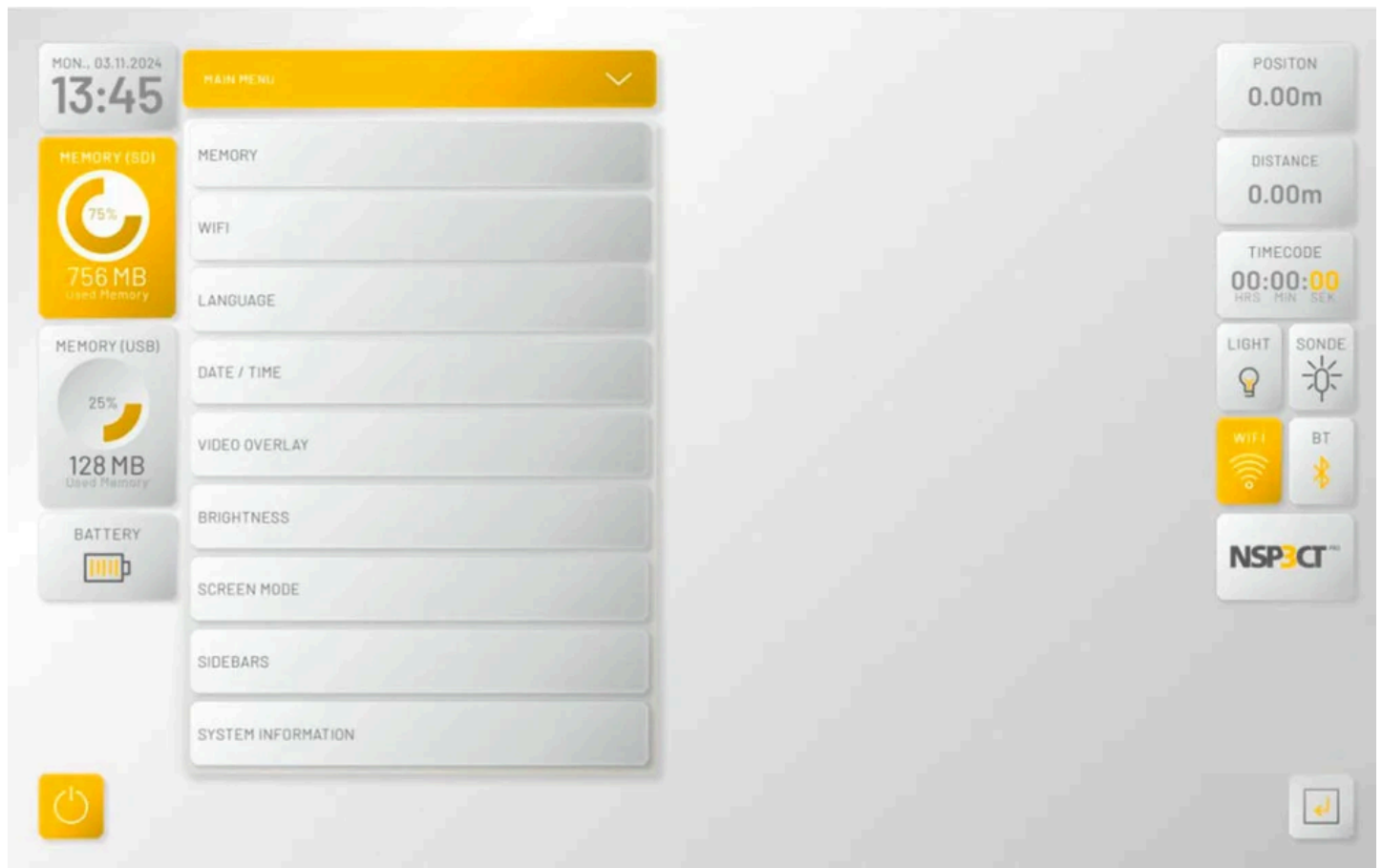


## ZURÜCK ZUM STARTBILDSCHIRM

### RETURN-SYMBOL

**Kurzes Drücken:** Rückkehr zum Hauptbildschirm

# Settings (Menu Structure)



## STORAGE

- **Select storage:** Automatic or manual (USB, SD).
- **Format storage:** Format SD card or USB drive.
- **File prefix:** Set a prefix for filenames.

## WIFI

- **Network settings:** Select and connect to a Wi-Fi network.
- **Connect to the app:** View connection settings and the QR code.

## LANGUAGES

**Select language:** English, German, Italian, etc

## DATUM/UHRZEIT

- **Format:** ISO, 12 Stunden, 24 Stunden.
- **Modus:** Automatisch (NTP) oder manuell einstellen.

## VIDEO-OVERLAY

**Overlay settings:** Set position, color, font size and text highlighting.

## SCREEN MODE

**Select mode:** Light/Dark

## SIDEBARS

**Sidebar settings:** Show/hide or display permanently.

## SYSTEM INFORMATION

- **Firmware Update:** Update the firmware.
- **Serial Number:** Display the serial number.
- **System Usage:** Display operating hours.

# Cleaning

Please clean the system after each use to ensure a long service life. Please check the cable for damage after each use. Please note the following points:

- When winding up the system, clean the sliding eel with a cloth to prevent dirt from entering the system.
- Do not use solvents or high-pressure cleaners for cleaning.

# Maintenance and Service

The device is generally low-maintenance. Always keep the device clean and clean it after use. We recommend having the device checked by your service partner at least once every 6 months, depending on usage. Should the device fail despite careful manufacturing and testing procedures, it must be repaired by an authorized service center or service partner.

For all inquiries and spare parts orders, please be sure to provide the device's serial number and the information from the type plate.

# Transport

## PREPARATION OF TRANSPORT

**Ensuring the Packaging:** Make sure the device is properly secured or packaged.

## MEANS OF TRANSPORT

**Selecting the means of transport:** Choose a suitable means of transport that ensures the safe transport of the device. Make sure that the means of transport offers sufficient space and that the load can be securely fastened. If shipping by mail, ensure proper packaging; you are welcome to use the original packaging.

## AFTER TRANSPORTATION

### CABLE SAFETY

**Safe Storage:** Store the device in a safe and dry place until it is put into operation. Observe the general rules for storing batteries.

## NOTICE

### AFTER TRANSPORTATION

After transport or storage of the device at extreme temperatures, it is necessary to acclimatize it before use. Allow the device to stand at room temperature (approx. 20°C) for at least 2 hours to prevent condensation and potential damage from temperature fluctuations. This measure ensures optimal functionality and a long service life for the device.

# Troubleshooting

## NO IMAGE OR POOR IMAGE QUALITY

- Check the connection between the camera head and the push rod
- Check the camera head lens.
- Check the push rod for damage.

## NO DEVICE FUNCTION

Check the system's charge level and fully charge it once.

For further errors, please contact our service department or our relevant service partner.

# Device take-back and disposal

## 1. LEGAL REGULATIONS

Disposal of the device must be carried out in accordance with applicable legal regulations. These include, in particular, the German Circular Economy Act (KrWG) and the German Electrical and Electronic Equipment Act (ElektroG).

## 2. ENVIRONMENTALLY SOUND DISPOSAL

Ensure that the device is disposed of in an environmentally sound manner to avoid negative environmental impacts. Separate the individual parts (e.g., batteries). Do not dispose of the channel mirror in household waste or unsorted commercial waste.

## 3. DEVICES USED PURELY FOR COMMERCIAL PURPOSES

This device is considered a “purely commercial device” under the WEEE Directive and may not be disposed of at municipal collection points like consumer devices such as washing machines, video recorders, or standard PCs.

### NOTICE

The WEEE symbol of a crossed-out wheeled bin on your device indicates that it is a WEEE-relevant device that must be disposed of separately. This symbol is not strictly required in EU countries like Germany for devices used purely for commercial purposes, but NSP3CT.PRO GmbH uses it uniformly throughout Europe. The symbol does not mean that the device can be returned to municipal collection points!

Should you require assistance with disposal or material identification, please contact us.

# Warranty conditions

## SCOPE

These warranty conditions apply to all electronic devices with batteries sold by our company in the B2B sector.

## WARRANTY PERIOD

The warranty period is 12 months from the date of purchase. The warranty period begins on the invoice date.

## WARRANTY SERVICES

- 1. Repair or Replacement:** During the warranty period, defective devices will be repaired or replaced at our discretion.
- 2. Refund:** If repair or replacement is not possible, we will refund the purchase price.

## EXCLUSIONS

**The following are excluded from the warranty:**

- Damage caused by improper handling, installation, or use.
- Damage caused by external influences such as fire, water, or force majeure.
- Consumable parts, such as batteries, that are subject to natural wear and tear.

## PROCEDURE IN THE EVENT OF A WARRANTY CLAIM

- 1. Contact:** In case of a warranty claim, please contact our customer service department or your local service partner.
- 2. Return:** Please return the defective device to us along with a return form including a detailed description of the fault.
- 3. Processing:** After receiving and inspecting the device, we will initiate the necessary steps to fulfill the warranty claim.

# Limitation of Liability

Our liability under this warranty is limited exclusively to the services mentioned above. Further claims, in particular for damages, are excluded unless mandatory legal provisions stipulate otherwise.

# Legal Notice

Our operating instructions, manuals, and software are protected by copyright.

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**3**



NSP3CT.PRO GMBH

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GERMANY

PAYMENT TERMS

SHIPPING & DELIVERY

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TERMS & CONDITIONS

RETURNS

LIABILITY DISCLAIMER

YOUR ACCOUNT

