AREBOS

Pipe Inspection Camera System

AR-HE-RK710USB

Please follow all security measures in this user´s manual to ensure a secure use.

CE

Thank you for trusting in AREBOS.

List of contents

Please read and save these instructions. Read through this user's manual carefully before using this product. Protect yourself and others by observing all safety information, warnings and cautions. Failure to comply with instructions could result in personal injury and/or damage to product or property. Please retain instructions for future reference.

1. Safety instructions

1.1 Explanation of the symbols

This product must **not be** disposed of with household waste!

By means of a CE marking, it can be recognized that a product complies with the legal requirements of European legal standards and therefore may be traded within the European Community.

Warning! To avoid electrical shock, put the item indoor when charging.

Warning! Use Input 110 240 V AC Output DC 12.6 V, 1000 mA Charger ONLY.
Charge the battery first before use!

Warning! Do not use the USB- and SD-connection at the same time!

1.2 General safety instructions

- Read this manual carefully before operating this system.
- Avoid using the device in extreme humidity or temperatures as this may cause damage to the device.
- Do not drop or press on the system as this may cause damage to the device.
- Do not disconnect the SD card while recording or playing as this may damage the system and/or the SD card.
- Remember to always back up the data on your SD card.
- Do not attempt to insert, use or charge a battery not designed for this inspection system.
- Use the power supply only on even surfaces, without any cover. Open air and circulation around the product must be available. The maximum ambient temperature is 50°C.
- Risk of explosion may occur if an incorrect battery type is inserted or used. Dispose of used batteries according to their instructions.
- Keep the inspection system and its accessories out of the reach of babies, toddlers, and

children. In particular, small parts such as memory cards and battery could be easily dismantled and swallowed.
- Use only the original accessories to avoid possible risks to health and property, and thus meet all related legal regulations.
- When using the LED lights, do not use to close to human or animal eyes (particularly for babies, toddlers and children) to avoid injury.
- In very rare occasions, Li-ion Batteries such as the one provided with this inspection system could explode if a conductive material such as jewelry, keys or beaded chains touch exposed terminals. The material may complete an electrical circuit and become quite hot. Exercise care in handling any batteries, particularly when placing it inside your pocket, purse, or other container with metal objects. In such an event, this could result in property damage, injury or burns. Do not dispose of batteries in fire as they may explode.
- Warranty is void if damage or system failure occurred due to outside factors such as collision, fire, flood, dirt, sewage, earthquake, and other force majeure events as well as incorrect usage of electricity or use of non-original accessories.
- It is the sole responsibility of the user if problems (such as data loss and system failure) occurred due to non-factory installed software, parts, and/or non-original accessories.

1.3 Taking care of your inspection system

- Always keep the inspection system in the pouch provided or other suitable cases for increased protection against splashes, dust, and collision.
- The only way of replacing the battery and the memory card is to open the Battery / Memory cover. Use care when opening this cover to avoid damage the inspection system.
- Dispose of unwanted batteries and inspection systems as permitted by the laws in your country.
- Water may cause a fire or electric shock. Therefore, store your battery in a dry place.
- If your control component becomes wet, wipe it with a dry cloth as soon as possible.
- Do not drop, knock, or shake the inspection system. Inappropriate behavior when using the camera system may damage the internal electronic circuit board or deform the lens shape.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the inspection system.
- To avoid unclear images, be sure to clean the inspection system lens before taking pictures or recording videos. Use a lens brush or soft cloth to clean the lens.
- To avoid the loss of video and photos on the memory card, you should make a backup copy to a computer or optical disc as soon as possible. Memory cards should not be considered as a long term storage device.
- Before initial use of a memory card, it is recommended to use the inspection system to format the card first.
- Remember to slide the write-protect tab (if available) to the unlock position. Otherwise, all data (if any) on the memory card is protected and the card cannot be edited or formatted.

1.4 Operating environment

- The camera system operating temperature is between -10°C - 50°C. It is normal for the operating time to be shortened when the temperature is low.
- The capacity of your inspection system battery will reduce each time it is charged/emptied.
- Storage at too high or low temperatures will also result in a gradual capacity loss. As a result, the operating time of your inspection system may be considerably reduced.
- It is normal for the camera system to become warm during operation, because the inspection system casing can conduct heat.

2. Parts List

2.1 Accessories

Item	Image	Description
Camera Head & Skids		Camera size: ø 0.906 x 4.724 in (23 x 120 mm) Sensor size: 1/4 in (6,35 mm) View angle: 120° Camera work current: 100 mA Camera power supply: DC 12V Camera light: 12 pcs white LEDS LEDs adjustable Total Pixels: PAL: 720 x 576; NTSC: 720 x 480 Camera glass material: sapphire glass Camera shell material: Aluminum alloy Waterproof: IP68 Camera color: black and silver
Camera Head & Skids		Ø 1.575 in (40 mm) skid Ø 3.15 in (80 mm) skid
Control box		DVR power supply: 12V DVR work current: 200 mA Storage medium: SD card (max 256GB) Digital clock and digital calendar Battery level indicator function DVR Total Pixels: 720 x 576 (D1) Picture snap and movie record Movie format: MP4 USB stick (max 256GB) AV1 and AV2 manually
Cable wheel		Cable size: ø 12.6 x 4.13 in (320 x 105 mm) Wire material: fiberglass rod Fiberglass length: 65.6 ft (20 m) (max 50 m) Fiberglass diameter: ø 0.197 in (5 mm) Fiberglass color: yellow red black blue
Charger		Input: AC 100-240 V ~ 50/60 Hz Output: DC 12.6V / 1000 mA DC plug diameter: 0.0827 in (2.1 mm)
Monitor		Monitor size: 7 inch TFT color monitor Monitor Total Pixels: 800 x 480 Monitor power supply: DC 12V Osd language: English Battery level display Up, down, left, right adjustable 16:9 & 4:3 model Sunshade include

LI-Ion Battery		Total Power: 14W Charge time: 5 hours Protective voltage: 8.1 V Work time: ≧ 260 minutes
Cable connection		Size: Φ 0.197 x 59.06 in (5 x 1500 mm) GX16-6 and GX16-6 Elbow air head
Case		Size L x W x H: 18.9 x 16.34 x 7.87 in (480 x 415 x 200 mm) Material: fire board + Aluminum alloy Empty case weight: 7.5 lbs (3.4 kg)
Carton		Size: 19.29 x 8.27 x 18.3 in (490 x 210 x 465 mm) Size: 20.28 x 16.73 x 17.72 in (515 x 425 x 450 mm) Carton material: A = A paper

2.2 Control box

1	AV1/AV2 switch	11	Menu left
2	Camera signal cable connector	12	Menu back
3	Video output	13	Menu
4	Recorded directory	14	Power control
5	Record/stop recording	15	Charge jack
6	Menu up	16	Microphone jack
7	Menu OK/pause/snap	17	Earphone jack
8	Menu right	18	USB stick jack
9	Menu down	19	SD card slot
10	LED brightness adjuster		

Operation order:

- Press ▲ to switch on "USB STICK", •⟵⟶ shows up.
- Press ▲ again to switch off "USB STICK", •⟵⟶ disappears.

Attention:
- Turn off the unit before pull out the "USB STICK".
- Do not use the "USB STICK" and "SD card" at the same time.

3. Quick start guide

3.1 Charging the battery

- Connect the charger to the socket, the indicator of charger will turn into green (1).
- Connect the plug to the jack of control box (2).
- Turn the switch knob to "CHARGE" position (3).
- The indicator of charger will turn into red. When the Li-ion battery is full of power, the indicator of charger will turn into green (4).
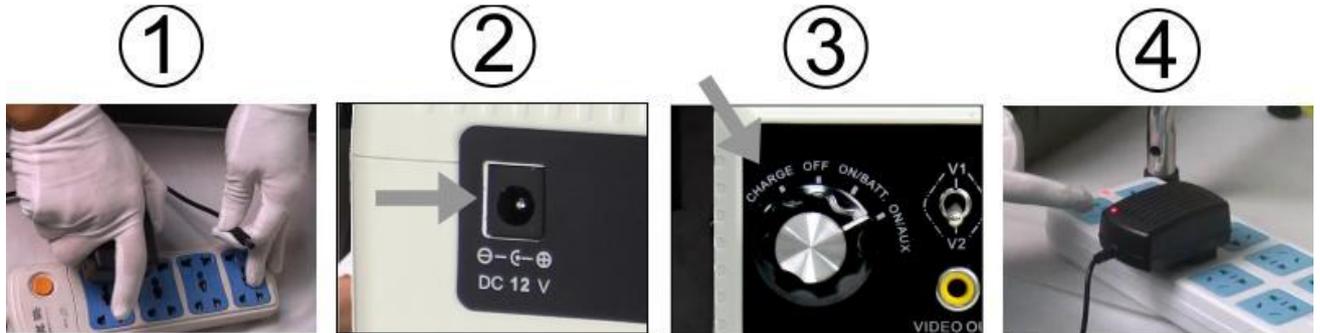
3.2 Starting up

- Open the suitcase and spread the sunshade (1).
- Connect the camera to the cable wheel (2).
- Connect one end to the control box (3).

- Connect the other end of connection wire to the cable wheel (4).
- Turn the switch knob to "ON/BATT" position (5).
- Switch to "AV1" (6).

④   ⑤   ⑥

3.3 Checking waterproof ring & Assembling SKID

3.3.1 Check waterproof rubber ring on the bottom of the camera head

3.3.2 40 mm SKID and 23 mm camera head

- Set the SKID in the camera head (1).
- Fasten the SKID with a screwdriver by tightening its screws (2).
- The SKID assemble completed (3).

①   ②   ③

3.3.2 80 mm SKID and 23 mm camera head

- Set the SKID in the camera head (1).
- Fasten the SKID with a screw rod by tightening its screws (2).
- The SKID assemble completed (3).

①   ②   ③

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4. Recording and Menu
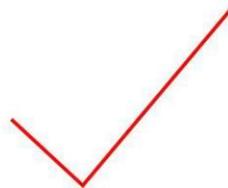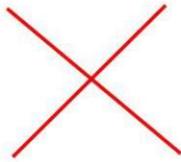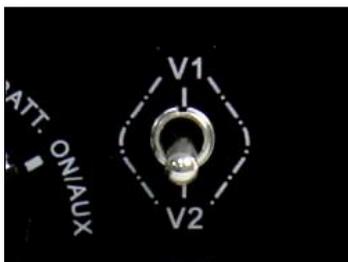
4.1 Inserting the SD card

- **Warning:** Pay attention to the direction of the SD card and plug it in as shown below!

4.2 AV1 & AV2 switch

- Press the "AV1/AV2" key on screen to switch the AV1 and AV2 mode.
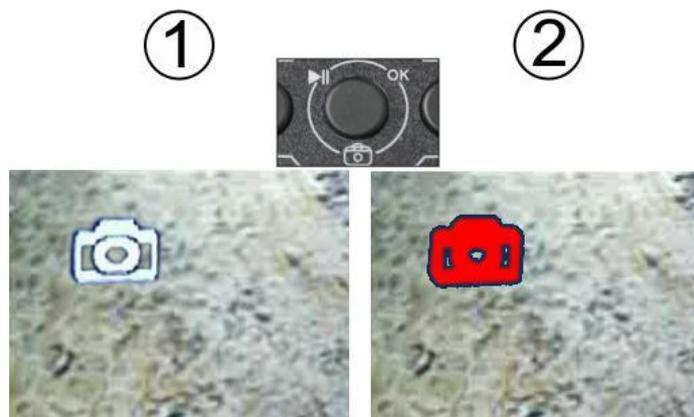- In AV1 mode, can both take picture and record video, in AV2 mode, can only monitor.

4.3 Recording the video

- Press the "REC" button to start record video (1 & 2).
- Press the "REC" button again to finish the recording (3).

4.4 Recording the photo

- Press the "OK" button to snap a picture.

4.5 Playback video

- Press the "RECORDING DIRECTORY" button (1 & 2).
- Press the "OK" button to enter the "Video Files" (3).

- Select the file you need (4).
- The monitor plays the video (5).
- Press the "OK" button to pause the video (6).
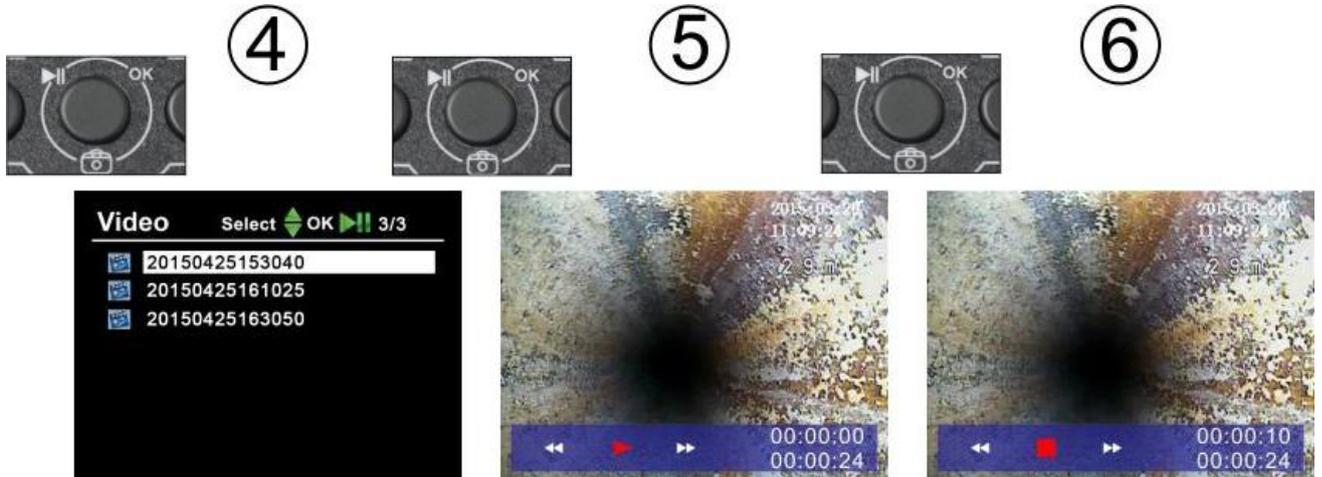
4.6 Playback photo

- Follow the same steps that the "Playback Video" has mentioned.

4.7 Menu

- Press "menu" key enter into main menu.

 Recorder Setting

 System Setting

 Event Playback

4.8 Recorder Setting

- **Work Mode**
- Video: Record videos
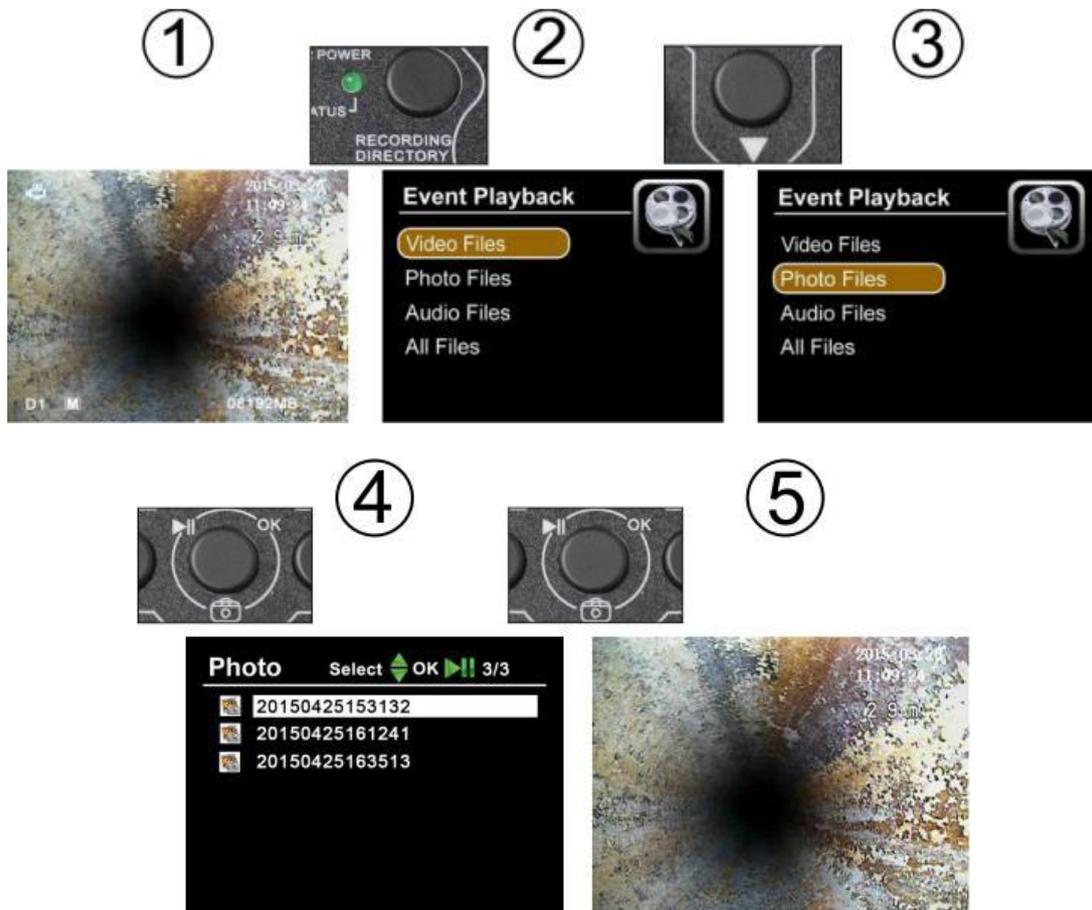- Photo: Snapshot photos
- Audio: Record audio

- **Motion Detection**
- Off: Stop the motion detection
- On: Start the motion detection

- **Sensitivity**
- High: Highest sensitivity
- Medium: Standard sensitivity
- Low: Lowest sensitivity

- **Resolution**
- 720X576
- 720X480
- 640X480

- **Video Quality**
- High: High resolution
- Medium: Standard resolution
- Low: Low resolution

- **Time Stamp**
- Off: Time stamp will not be showed on the screen
- On: Time stamp will be shown on the screen

- **Video Time**
  Length of the video recording
- 5 minutes
- 10 minutes
- 15 minutes
- 30 minutes
- 60 minutes

- **FPS Set**
- 15 FPS: 15 frames per second
- 30 FPS: 30 frames per second

- **Audio record volume**
  Work with audio record mode
- 10 level can be adjusted

- **Overwrite**
- Off: The recording will be stop when the disk full
- On: The recording will overwrite old video files when the disk full

4.9 System Setting

- <u>Language</u>
  Select the operating language

- <u>Date Time</u>
  Set the date and time, press OK to confirm

- <u>Video Output</u>
  Choose whether PAL or NTSC to suit your monitor and TV Video Output

- <u>Format</u>
- No: The system will not format the SD card
- Yes: The system will format the SD card. (caution: PLS backup the data of the SD card before operating).

- <u>Firmware Update</u>
- No: The system will not update the firmware
- Yes: The system will update the firmware

- <u>Memory info</u>
- All: The SD full capacity
- Free: The SD free capacity

- <u>Default Setup</u>
- No: Leaves set up as it is
- Yes: Factory resets the system

- <u>Version</u>
- Booc: 12.11.05 (soft version)

4.10 Delete Files

- Please make sure the files you really want to delete, the files won't be found after deleting.
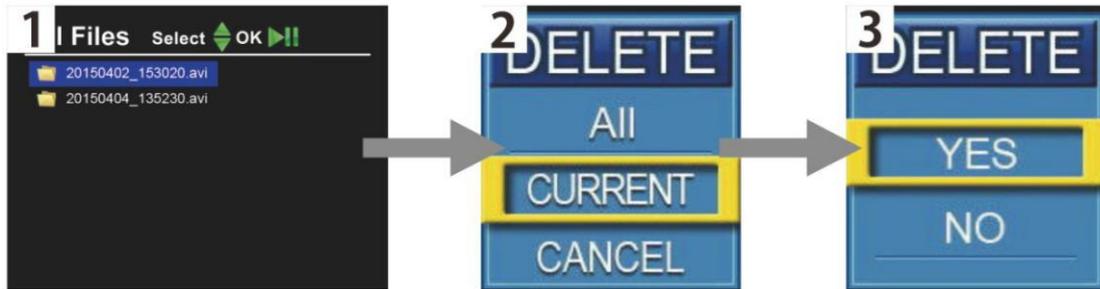
- Press "Playback" key to find the files.
- Press "menu" to choose the file you want to delete, one and all.
- Press "OK" to delete it.

4.11 Zoom in & Zoom out the image (10 levels)

- Press navigation button "right" to zoom in the image^.

ZOOM   10

- Press navigation button "left" to zoom out the image.

ZOOM   0

5. Troubleshooting Guide

Common Faults & Repair

- Video without sound
    - Didn't connect microphone or there are faults in microphone
    - Didn't connect earphone or there are faults in earphone
    - Control box DVR abnormal

- Unable to input letters
    - Too quick to restart control box
    - There are faults in Control box USB plug
    - There are faults in keyboard
    - There are faults in control box PCB

- Able to input, but no image
    - 1.5 m connect wire disconnects
    - There are faults in camera installation or Camera damage
    - When press F2, the image has already switch to no-image type mode, press F3 return to type mode
    - Control box PCB board abnormal

- Time display error
- Control Box DVR board abnormal

- AV1 no image, AV2 display normally
- Control Box DVR abnormal

- AV1 no image, AV2 no image
- If 1.5 m connect wire connect between cable wheel and control box
- Does camera head screw tightly
- The aviation jack of control box that connected to monitor looses
- There are faults in monitor
- There are faults in control box DVR

- Battery is unable to be charged
- Charger didn't insert correctly or there are faults in AC plug
- Please don't use non-original charger
- There are faults in charger
- Li-ion battery damage

- The power of the battery runs out quickly
- Use the full power battery
- The capability of battery is low

- SD card cannot work
- Didn't insert SD card correctly
- The write protection switch of SD card is open
- SD card is full, please replace SD card or transfer the files to free the space
- DVR SD card slot damage

- Turned on but no power
- Battery disconnects
- Fuse didn't install or Fuse broke down
- There are faults in control box DVR

- • Display normally, Camera LED cannot light
- Camera didn't install correctly
- There are faults in camera head
- There are faults in cable wheel
- There are faults in Control box PCB board

- • Monitor cannot display
- Didn't turn on monitor
- Monitor disconnects
- There are faults in monitor
- There are faults in control box

6. Disposal instruction

6.1 Disposal of the packaging

- • Please make reference to the guidelines and standards for appropriate disposal of the packaging valid in your region. In part, the package may consist of plastic bags - watch this respect, with special care to ensure that this is not out of the reach of children. There is a risk of suffocation!

6.2 Disposal of waste equipment

- • Equipment must be disposed of in accordance with the rules and regulations of the local waste disposal.

6.3 Meaning of the "dustbin"

The symbol of the crossed-out dustbin on batteries or accumulators indicates that they must not be disposed of with household waste at the end of their service life. If batteries or accumulators contain mercury (Hg), cadmium (Cd) or lead (Pb), you will find the respective chemical symbol below the symbol of the crossed-out trash can. You are legally obliged to return old batteries and accumulators after use. You can do this free of charge in a retail store or at another collection point near you. Addresses of suitable collection points can be obtained from your city or local government.

Batteries may contain substances that are harmful to the environment and human health. Special care must be taken when handling batteries containing lithium due to the particular risks involved. The separate collection and recycling of old batteries and accumulators is intended to avoid negative effects on the environment and human health.

Please avoid the generation of waste from old batteries as much as possible, e.g. by preferring batteries with a longer life or rechargeable batteries. Please avoid littering public spaces by not carelessly leaving batteries or electrical and electronic equipment containing batteries. Please consider ways to reuse a battery instead of disposing of it, for example by reconditioning or repairing the battery.

You can also find more information on the Battery Act on the Internet at www.batteriegesetz.de.

You can also visit our website at www.arebos.de to find out about other return options we have created.

Our customer service number: +49 (0) 931-45232700

Canbolat Vertriebs GmbH • Gneisenaustraße 10-11 • 97074 Würzburg

EU Declaration of Conformity

We,

Canbolat Vertriebs GmbH, Gneisenaustraße 10-11, 97074 Würzburg, Germany,

Hereby declare that the product named below, seen its design and construction as well as according to our sales, has been complied with the relevant and basic health and safety EU-requirements.

Name of the product: Arebos Pipe Inspection Camera System
Model Nr.: AR-HE-RK710USB
Art. Nr.: 4260551589454

If the product has any modification not allowed by us, this declaration loses its validity.

Tested acc. to:
EU Standard:

IEC62321-4:2013	EN 61000-3-2:2014
IEC62321-5:2013	EN 61000-3-3:2013
IEC62321-6:2015	EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013
IEC62321-7:2015	
EN 55032:2015+AC:2016	
EN 55024:2010+A1:2015	
EN 550535:2017	

Date/Manufacturer Signature/Location: Würzburg, 04 Feb. 21

Identification of the signatory:
Korhan Canbolat, head of the company

Authorised representative for the technical documentation:
Korhan Canbolat

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Return address can be found in the imprint: https://www.arebos.de/impressum/

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