dLAN® LiveCam





The Network Innovation

devolo dLAN[®] LiveCam

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1 Preface

1.1 Thank you for placing your trust in this devolo product.

The dLAN LiveCam from devolo lets you always have your home in sight — even when you're out and about. Thanks to the integrated dLAN AV adapter, with dLAN technology from devolo, only a power cable is required for the connection to integrate the dLAN LiveCam into your dLAN network flexibly and quickly via any power outlet in the house. Using the direct Internet connection and the free devolo dLAN Cockpit App for smartphones and tablets, individual monitoring is possible anywhere in the world.

To protect your data, simply and conveniently enable secure 128-bit "AES (Advanced Encryption Standard)" encryption on the dLAN LiveCam at the push of a button.

1.1.1 About this manual

Along with a short introduction to the basics of the "dLAN" and a presentation of the devolo dLAN Cockpit App and the dLAN LiveCam in **Chapter 2**, **Chapter 3** describes how to quickly set up the dLAN LiveCam with default values. In **Chapter 4**, you will then learn in detail how you can successfully bring

the dLAN LiveCam into operation. While **Chapter 5** describes the configuration of the dLAN AV network as well as everything you need to know about **dLAN Cockpit**, in **Chapter 6** notes on product safety and environmental compatibility of the device and our warranty terms form the end of the manual.

Description of the symbols

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Here we briefly describe the meaning of the symbols used in this manual.

Very important note. Failure to observe this note may result in damage.

Important note that should be observed.

Additional information, background material and configuration tips for your device.

If you have any further ideas or suggestions related to our products, we would be delighted to hear from you at <u>support@devolo.com</u>!

devolo on the Internet

For detailed information on our products or "dLAN", visit <u>www.devolo.com</u>. The **Service Centre** area contains downloadable product descriptions and documentation, as well as updates to devolo software and device firmware.

2 Introduction

dLAN is an intelligent, secure technology that lets you set up a home network easily, quickly and economically via your household electrical wiring, without the need for complex and expensive dedicated cabling.

2.1 What exactly is dLAN?

dLAN (direct Local Area Network) uses the household power grid to transfer data between computers equipped with suitable adapters and other network components. As a result, any power outlet can be used as a network access point. The data is modulated prior to transfer and sent as a signal via household power lines. State-of-the-art technology ensures that the power and data networks do not interfere with one another. Networking via dLAN is fast and secure. The data is encrypted using a key to prevent easy interception by third parties.

2.2 dLAN LiveCam

Greater security in your home!

- Easy to set up and connect throughout the house
- Easy installation: Insert the camera, download and install dLAN Cockpit App to your smartphone or tablet—finished!

- Secure video transmission via the household power line
- The live video is accessible over the Internet from any smartphone or tablet (Apple/Android 2.3 or later)
- The integrated power supply makes the camera available 24 hours a day
- Top image quality with transmission of up to 7 frames per second
- Perfect visibility, even in poor lighting conditions using integrated infrared LEDs
- Six additional dLAN LiveCams can be added easily



When setting up the camera, make ABSOLUTELY certain that neighbouring public or private property or strangers are not being recorded. Only your property and private space may be monitored with the camera.

2.2.1 dLAN Cockpit App

dLAN Cockpit App is devolo's free app for keeping an eye on your dLAN home network at all times via smartphone or tablet even when you're away. Smartphones and tablet can connect to the dLAN LiveCam at home via the mobile phone network (3G/4G) or wireless LAN.



2.2.2 Sample applications

Using the **dLAN LiveCam** and the free **dLAN Cockpit App**, monitoring your private valuables is possible from anywhere via smartphone or tablet.



Fig. 2: From the workplace



3 Quick start

Follow the steps listed below to quickly set up the dLAN LiveCam in the standard environment. The default settings for the dLAN LiveCam are:

- Resolution: 640*480 pixel
- View: Interior
- Image orientation: Normal
- Infrared mode: Automatic

Setting up/installing the dLAN LiveCam

The dLAN LiveCam can be installed and set up in various ways:

- Wall mounting
- Installation on a camera base
- Setting up the dLAN LiveCam on a level surface

For more information on setup and installation, refer to Chapter **4.4 Setup instructions**.



When setting up the camera, make ABSOLUTELY certain that neighbouring public or private property or strangers are not be-

ing recorded. Only your property and private space may be monitored with the camera.

Connecting the dLAN LiveCam

- Connect the dLAN LiveCam to the mains supply using the included power cable.
- ② In order to set up a dLAN AV network or add another dLAN AV adapter, proceed as follows:
 - Connect the dLAN AV adapter via the included network cable to a network jack on your router or to another network component.
 - Plug the dLAN AV adapter into an available electrical outlet.
- ③ Once you have connected the dLAN LiveCam and at least one dLAN AV adapter as described above, your dLAN AV network has been set up. To secure your dLAN AV network, continue with the configuration of your network. To do so, continue reading in Chapters 4.5.1 Installing the software and 5 dLAN network.

Installing the devolo app and adding the camera

 Download dLAN Cockpit to your smartphone or tablet from the corresponding store. You can find the devolo app quickest by clicking on the magnifying glass in the store and searching directly for **dLAN Cockpit**.

- ⑤ On the screen, the app link to dLAN Cockpit appears. Tapping on it takes you to the dLAN Cockpit start menu.
- Sow, to connect the camera to your smartphone or tablet, tap the My dLAN LiveCams symbol.
- ⑦ During initial installation of the camera, select the Add dLAN LiveCam option on the bottom edge of the screen.
- ③ Enter the corresponding string of characters and numbers in the LiveCAM ID and Password fields. You can find the CAM-ID and the default access password for the dLAN LiveCam on the label on the bottom of the device. Confirm your entry with Add.

For security reasons, we recommend setting an individualised access password. To assign an individualised access password, continue reading in Chapter 5.3.3 Settings menu.

 As soon as your smartphone or tablet is connected to the dLAN LiveCam, the camera appears in the My dLAN LiveCams overview. Tapping on the name or on the preview of the dLAN LiveCam takes you to the live image.

Tapping the 🔊 symbol takes you to the settings menu of the dLAN LiveCam.

4 Initial use

In this chapter, you will learn everything useful to know about initial use of your dLAN LiveCam. It will explain

how to connect the dLAN LiveCam and its functions. We will also briefly introduce the included devolo software and then guide you through its installation.



4.1 Package contents

Please ensure that your delivery is not missing anything before beginning to install your dLAN LiveCam:

Single kit

- O dLAN LiveCam
- Power cable
- Hard copy of installation guide
- CD containing software and online documentation

or

Starter kit

- O dLAN LiveCam
- O Power cable
- O dLAN 200 AVduo or dLAN 200 AVmini
- O Network cable
- Hard copy of installation guide
- CD containing software and online documentation

devolo AG reserves the right to change the package contents without prior notice.

4.2 System requirements

dLAN LiveCam

- Smartphone OS: iOS 4.x, 5 and 6 Android: version 2.3 or later
- dLAN 200 AVduo or dLAN 200 AVmini (see Starter kit)
 - Operating systems: Windows XP (32-bit), Windows Vista Home Premium (32-bit/64-bit), Windows 7 Home Premium (32-bit), Linux (Ubuntu), Mac (OS X) and all operating systems with network support
 - Network connection

Please note that your computer or other device must have a network adapter with a network port.

To set up a dLAN AV network, you need two dLAN AV devices (200 Mbps or 500 Mbps).

4.3 Functions

The dLAN LiveCam has a lens, an indicator light (LED), a power outlet, a reset button and an encryption button.

4.3.1 Camera

In order to allow you to align the camera precisely tailored to your objective, the outer camera head can be turned by 270° and the internal camera head can be tilted by 90°.



By **turning** the **lens**, you align the **sharpness** of the picture and change the focus of the dLAN LiveCam.

The **infrared LEDs** arranged around the lens improve the view in poor lighting conditions (e.g. darkness). The infrared mode is defined in the settings menu of the dLAN LiveCam. Additional information can be found in Chapter **5.3.3 Settings menu**.

4.3.2 Indicator light

The indicator light (LED) shows all of the statuses for the dLAN LiveCam by illuminating and/or flashing in different ways:

- **Green** flashing and illumination behaviour:
 - The LED flashes at regular, quick intervals (0.5 s) if the dLAN LiveCam is connecting to the dLAN network (pairing).
 - The LED **illuminates** if the dLAN LiveCam is accessing the server.
 - The LED flashes at irregular, quick intervals (0.1 s/0.2 s) if data is being transferred and a smartphone or tablet is accessing the dLAN LiveCam.
- The LED lights up in orange if the dLAN LiveCam is ready to operate and a dLAN connection exists.
- The LED flashes red at irregular intervals (0.5 s/2 s) if there is no dLAN connection.

The light function of the LED can be switched off in the settings menu of the dLAN LiveCam for safety reasons (see 5.3.3 Settings menu).

4.3.3 Encryption button

Data encryption at the touch of a button; for a functional description of the encryption button, please continue reading in chapter **5.2 Encryption at the touch of a button**.



4.3.4 Reset 5

To reset the dLAN LiveCam camera settings to the **factory default**, press the **Reset** button.



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Keep in mind that all settings that have already been made will be lost! In this case, the dLAN password is reset to the default password.

The reset button can be pressed using the tip of a ball-point pen.

4.3.5 Power supply



You can connect the dLAN LiveCam to the mains supply here.

Make sure that all dLAN AV devices that are to be connected to your network are also connected to the mains supply. A dLAN AV device switches into standby mode after a short time if no network device (e.g. a computer) connected to the network interface is switched on. In Standby mode, the dLAN AV device cannot be accessed over the mains supply network. As soon as the network device (e.g. computer) connected to the network interface is switched on again, your dLAN AV device can also be accessed via the electrical wiring.

4.4 Setup instructions

The dLAN LiveCam can be installed and set up in various ways:

- Wall mounting to the sockets incorporated on the side and underside of the housing
- Installation on a camera base with the help of the threaded hole in a common size on the underside of the housing
- Setting up the dLAN LiveCam on a level surface

Align the camera according to what you wish to record.



When setting up the camera, make ABSOLUTELY certain that neighbouring public or private property or strangers are not being recorded. Only your property and private space may be monitored using the camera.

4.5 Connecting the dLAN LiveCam

- Connect the dLAN LiveCam to the mains supply using the included power cable.
- ② In order to set up a dLAN AV network or add another dLAN AV adapter, proceed as follows:
 - Connect the dLAN AV adapter via the included network cable to a network jack on your router or to another network component.
 - Plug the dLAN AV adapter into an available electrical outlet.
- ③ Once you have connected the dLAN LiveCam and at least one dLAN AV adapter as described above, your dLAN AV network has been set up. To secure your dLAN AV network, continue with the configuration of your network. To do so, continue read-

ing in Chapter 4.5.1 Installing the software and 5 dLAN network.

(4) Finally, download the devolo **dLAN Cockpit** app to your smartphone or tablet from the corresponding store. A detailed description for this can be found in Chapter **5.3 dLAN Cockpit App**.

4.5.1 Installing the software

Software for Windows

Using the installation wizard, install the devolo **dLAN** Cockpit software for operating the dLAN AV adapter on the Windows operating system on your computer:

dLAN Cockpit finds all reachable dLAN adapters in vour dLAN AV network, displays information about these devices and encrypts your dLAN AV network individually.

To install the software, insert the included CD-ROM in the CD drive of your computer.

If AutoPlay is active on your computer, the in-(0)stallation will start automatically. Otherwise, open the directory with the Windows Explorer by right-clicking on Start (or the Windows logo) and selecting Explorer from the context menu. Then start the installation wizard manually.

During the installation process, you will be given the choice of installing all software components (Standard installation) or selecting individual ones (Custom installation).

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To take full advantage of the functions of (0)your device, we recommend installing all of the applications.

You will be asked for permission to transfer anonymous performance data related to your dLAN adapter to devolo. The data sent to devolo pertains only to the performance values of your dLAN devices. The data is anonymised and will be used exclusively for statistical purposes. By providing it, you can help us improve our products. You can find the installed software applications in the Start \Diamond All Programs \Diamond devolo program group.

Software for Mac (OS X)

The **software** \Diamond **mac** folder contains the dLAN configuration software.

Software for Linux (Ubuntu)

The **software** \triangleright **linux** folder contains the dLAN configuration software.

5 dLAN network

5.1 Security in the dLAN

Before you can use the dLAN LiveCam in your dLAN network, first you have to connect it to other dLAN AV devices as a home network. Two specific pieces of information are especially important for this:

- Shared use of a dLAN password results in a delimited dLAN network.
- Shared use of the dLAN password serves as access control to the dLAN network as well as the encryption, and thereby the interception protection, of the transmitted data.

Please note the following basic principle when choosing your encryption method:

- The dLAN password can be specified automatically via the encryption button (see
- or manually using the dLAN Cockpit program (see

5.2 Encryption at the touch of a button

To encrypt a dLAN AV network, in which all associated devices are equipped with an encryption button, simply

press the encryption button that is located on the device. Pressing this button will encrypt your dLAN AV network with a randomly generated password.



Adapters cannot be configured while in Standby mode.

The following section contains exact instructions on the basis of possible network scenarios:

Encrypting a new dLAN AV network consisting of a dLAN LiveCam and another dLAN AV adapter (fig. 8)

Once the dLAN LiveCam and the other dLAN AV adapter have been successfully connected, press each en-

cryption button for **1 second within two minutes** of one another.

That's it! Your dLAN AV network is now protected against unauthorized access.



devolo dLAN LiveCam

Expanding an existing dLAN AV network with a new dLAN LiveCam (fig. 9)

If you have already secured your existing dLAN AV network using the encryption button, use the same method to integrate other adapters. Once you have successfully connected the new dLAN LiveCam, first press the encryption button of one of your network's existing adapters (**1 second**), then press the encryption button of your new dLAN LiveCam (1 second) within two minutes.

That's it! The new dLAN LiveCam is now integrated in your network. To integrate additional adapters in your network, repeat the above steps.



Excluding a dLAN LiveCam from your network (fig. 10)

To exclude a dLAN LiveCam from an existing network, press its encryption button **for at least ten seconds**. The device will be assigned a new randomly generated password and will thus no longer be able to access the

network. To integrate the device in a different dLAN AV network, follow the steps described above, depending on whether you are setting up a new network or add-ing the adapter to an existing one.



Fig. 10 is country-specific

5.3 dLAN Cockpit App

dLAN Cockpit App is devolo's free app for keeping an eye on your dLAN LiveCams via smartphone or tablet.

5.3.1 Installing dLAN Cockpit and adding dLAN LiveCam

- ① After you have successfully connected the dLAN LiveCam and another dLAN AV adapter and integrated them into your dLAN network, download the dLAN Cockpit App to your smartphone or tablet from the corresponding store.
- *You can find the devolo app quickest by clicking on the magnifying glass in the store and searching directly for* **dLAN Cockpit**.
- ② On the screen, the app link to dLAN Cockpit appears. Tapping on it takes you to the dLAN Cockpit start menu.
- ③ Now, to connect the camera to your smartphone or tablet, tap the My dLAN LiveCams symbol.



④ During initial installation of the camera, select the Add dLAN LiveCam option on the bottom edge of the screen.



⑤ Enter the corresponding string of characters and numbers in the LiveCAM ID and Password fields. You can find the CAM ID and the default access password on the label on the bottom of the device of the dLAN LiveCam. Confirm your entries with Add.

dLAN LiveCam MT:2218 230V~, 50Hz, 0.1A S/N: 1206041112222221

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LiveCam ID: BCF2AF000001 Sec. ID/Password: ITSA-NICE-DAYT-ODAY

Tap on the password line so that a keyboard is displayed on the smartphone or tablet. You can ensure upper-case letters remain activated by tapping the arrow key twice (shift lock).

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Son as your smartphone or tablet is connected to the dLAN LiveCam, the camera appears in the My dLAN LiveCams overview. Tapping on the name of the dLAN LiveCam takes you to the live image.

The screen interface and the camera image in the dLAN Cockpit App are automatically adapted to the alignment (horizontal/vertical) of the smartphone or tablet.

5.3.2 Overview page

You can page through the list of adapters by **swiping** across the screen (left/right or up/down).

Tapping the **camera image** changes the image size from regular to full-screen and vice versa.



The house icon displays the connection over LAN.



The **globe** indicates a public Internet connection between the smartphone and the camera.



Using this symbol takes you to the settings menu of the dLAN LiveCam.

5.3.3 Settings menu



By tapping on **Camera**, you can cause the camera to take a picture, which is stored as a preview image under **My dLAN LiveCams** (see **5.3.4 Menu on the bottom edge of the screen**), if you have activated the option **Use the image as preview of this dLAN LiveCam**.



Here, you determine the image quality. You can choose from three different image resolutions. You can set the image quality of your recordings from low to high. Confirm this entry with **Apply**.



Define and change the access password for the dLAN LiveCam under **Password**. For security reasons, we recommend always setting an individualised access password. Confirm your entries with Add.

Tap on the password line so that a keyboard is displayed on the smartphone or tablet. You can ensure upper-case letters remain activated by tapping the arrow key twice (shift lock).

Furthermore, the **status LED** can be switched on or off. In darkness, the LED lighting can be disruptive.



Tapping the **camera with the arrow** stores the picture in the photo gallery so that you can also easily send it by e-mail (e. g. via Bluetooth, Skype, Google Mail).



Here, you determine the lighting options. Select **Indoor** if the camera is recording indoors, select **Outdoor** if the camera is recording outdoors. Select **Improve contrast** if you would like to record in the dark or outdoors in poor lighting conditions. The infrared mode can be turned **on** or **off** or set to **automatic**. Confirm your entries with **Apply**.



Here, you reset the camera settings to the **factory defaults**.

The dLAN password is not affected by this.



Tapping this symbol **turns the view** of the camera image horizontally or vertically. Enable the **Mirror image** function for mirroring the image depending on the positioning of the camera (e.g. camera head pointing downward).



Here, you can assign an individual name to your camera. Confirm your entry with **Ap-ply**.



Tapping the **recycle bin** deletes the connected camera.

In order to apply all of the modified settings, you have to save changes with Apply changes before you leave the settings menu. If you have made changes in the settings menu but have not yet saved them via this menu item, a red exclamation point appears above the menu item.

This save process also causes the dLAN LiveCam to restart each time. This operation can take a short amount of time.

5.3.4 Menu on the bottom edge of the screen

The functions of the menu on the bottom edge of the screen are self-explanatory and can be operated intuitively. Depending on which submenu you are in, the following functions appear:



- **Start**: dLAN Cockpit App start menu
- To update the camera image, tap **Refresh**.
- During initial installation of the camera, select the Add dLAN LiveCam option.

 In the Help menu you can found more installations tips and answers to frequently questions (FAQs).



- All connected cameras are listed with corresponding preview images under **My dLAN LiveCams**.
- You can switch to the next connected camera using the Forward/Backward arrow keys.
- In order to apply all of the modified settings, you have to save changes with Apply changes before you leave the settings menu. If you have made changes in the settings menu but have not yet saved them via this menu item, a red exclamation point appears above the menu item.

This save process also causes the dLAN LiveCam to restart. This operation can take a short amount of time.

5.4 dLAN Cockpit

devolo **dLAN Cockpit** is a monitoring and encryption program that detects all reachable dLAN AV devices in your home network and combines them in a secure network. Due to its logical graphic design, the dLAN Cockpit is easy and intuitive to operate. After installing the devolo software, it can be found in the **Start** ◊ **Programs** ◊ **devolo** program group.



After starting the dLAN Cockpit, all reachable dLAN devices in your home network will appear. This may

All adapters found in the network appear with as adapter icon with a corresponding product name. The adapter in the middle of the dLAN network identified with the symbol shown here symbolises your locally connected device. If you have multiple dLAN devices connected locally, you can jump back and forth between them. Clicking an adapter icon with the mouse enables the corresponding dLAN AV device and highlights it.

The coloured connecting lines of the adapters illustrate the current transmission quality:

- **Green**: the network connection is suitable for HD video streaming.
- Orange: the network connection is suitable for SD video streaming and online gaming.
- **Red**: the network connection is suitable for simple data transfer and Internet access.

If data transmission from one device to another is actually taking place, the data rate is displayed on the respectively highlighted adapter.

Settings and functions

You can configure settings for the respectively highlighted device or for the network

- via the buttons at the bottom edge of the screen
- or via tabs arranged at the side of each adapter.

You can always use the **Refresh** button to display the current status of devices that have been found (if this hasn't happened automatically).

By means of the **Options** button or the corresponding tabs of the respective adapter, you can learn device information such as the firmware version used and the individual MAC address.

Options are given like assigning an **additional name**, resetting the respective device to the **factory default settings** or **removing** a **device** from the existing dLAN network.

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The above-mentioned setting options vary depending on the function and features of your device.

You can also specify whether information on the performance of your dLAN adapters will be transferred to devolo.

> The data sent to devolo pertains only to the performance values of your dLAN devices. The data is anonymised and will be used exclusively for statistical purposes. By providing it, you can help us improve our products.

The **Troubleshooting Guide** includes installation instructions and information about how to connect your devices optimally with one another.

5.4.1 Encrypting a network with dLAN Cockpit

If you use dLAN AV devices **without an encryption button**, data can be encrypted only via **dLAN Cockpit**.

Before the networking procedure, note the security IDs of all dLAN AV adapters. This unique identifier of each dLAN device is located on the label on the housing. It consists of 4 x 4 letters separated by dashes (e.g. ANJR-KMOR-KSHT-QRUV). Ensure that all dLAN adapters are connected to the power grid and computers or other network components as appropriate.

Scan for local adapter

After dLAN Cockpit is started, it searches for the dLAN adapter connected directly to your computer first.

Adding an adapter

Add all the dLAN devices you want to your dLAN network by selecting the **Add adapter** button. You will need the **16**-character security IDs of the adapters

from the label on the housing. Enter it now in the **Security ID** field and confirm with **OK**. If a security ID is correct and the device can be reached in the dLAN network, it will be added to your network of configured adapters and also displayed in the program.

Entering a network password

After you have added all the dLAN devices you want to your dLAN network, select the **Change password** button to assign a shared network password that will apply for all registered adapters in your personal home network.

You can choose between your own password, a random password and the default password. To define your own password with a length of at least eight characters, enter this into the **Network password** text field. Alternatively, you can have a randomly selected, highly secure password assigned using the **Generate secure password** button. Use the **Factory default password** button to reset the dLAN adapter to the default password. Normally, the display of the password is hidden for security reasons. If you enable the option **Show characters**, the current password is displayed in legible form in the text field. The factory default password is HomePlugAV. Assigning a specific password to a single adapter will exclude it from the remaining dLAN network.

If **dLAN Cockpit** is called up again later after a successful initial installation, for example to **integrate** a **new adapter** into a network, the application remembers the devices that were entered earlier. Enter the new device as described in the **Adding an adapter** section. The **current network password** is assigned **automatically** to the newly added device.

6 Appendix

6.1 Important safety instructions

All safety and operating instructions should be read and understood before using the device, and should be kept for future reference.

• Never open the device. There are no user-serviceable parts inside the device.

Do not try to service this product yourself! Contact qualified technicians each and every time your device needs maintenance. There is a risk of electric shock!

- Use the device in a dry location only.
- Always use the included network cable to connect the device.

The outlet must be within reach of the connected network devices. The adapter and the network devices must be easily accessible.

- To switch the device off, pull the power plug.
- To disconnect the device from the power supply grid, pull the power plug.

- Do not insert any objects into the openings of the device.
- Do not keep the device in direct sunlight.
- Slots and openings on the case serve as ventilation. Never block or cover them.
- Never set up the device near a heater or radiator.
- The device should be located only where sufficient ventilation can be ensured.
- Disconnect the device from the power supply grid before cleaning. Use a moist towel to clean the device. Never use water, paint thinner, benzene, alcohol or other strong cleaning agents when cleaning the device, as these could damage the case.
- Never use the device with a power supply that does not meet the specifications provided on the rating plate. If you do not know what type of power supply you have at home, contact your dealer or energy supplier.
- In the event of damage, disconnect the device from the power supply grid and contact customer service. This applies, for example, if
 - the power cable or plug is damaged.
 - liquid has been spilled on the device or objects have fallen into the device.
 - the device has been exposed to rain or water.



- the device does not work, even though the operating instructions have been followed properly.
- \bigcirc the device's case is damaged.

6.2 Disposal of old devices

To be used in the countries of the European Union and other European countries with a separate collecting system:

The icon with crossed-out wastebasket on the device means that this adapter is an electrical or electronic device that falls within the scope of application of the German Electrical and Electronic Equipment Act ("Elektrogesetz"). Since 24 March 2006, these types of devices may no longer be disposed of with household waste. Rather, in Germany, they can be given to a municipal collection point free of charge. Contact your municipal government to find out the address and hours of the nearest collection point.

6.3 Warranty conditions

The devolo AG warranty is given to purchasers of devolo products in addition to the warranty conditions provided by law and in accordance with the following conditions:

Warranty coverage

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- The warranty covers the equipment delivered and all its parts. Parts will, at devolo's sole discretion, be replaced or repaired free of charge if, despite proven proper handling and adherence to the operating instructions, these parts became defective due to fabrication and/or material defects. Alternatively, devolo reserves the right to replace the defective product with a comparable product with the same specifications and features. Operating manuals and possibly supplied software are excluded from the warranty.
- b) Material and service charges shall be covered by devolo, but not shipping and handling costs involved in transport from the buyer to the service station and/or to devolo.
- c) Replaced parts become property of devolo.
- d) devolo is authorized to carry out technical changes (e.g. firmware updates) beyond repair and replacement of defective parts in order to bring the equipment up to the current technical state. This does not result in any additional charge for the customer. A legal claim to this service does not exist.

2 Warranty period

The warranty period for this devolo product is three years. This period begins at the day of delivery from the devolo dealer. Warranty services carried out by devolo do not result in an extension of the warranty period nor do they initiate a new warranty period. The warranty period for installed replacement parts ends with the warranty period of the device as a whole.

3 Warranty procedure

- a) If defects appear during the warranty period, the warranty claims must be made immediately, at the latest within a period of 7 days.
- b) In the case of any externally visible damage arising from transport (e.g. damage to the housing), the person carrying out the transportation and the sender should be informed immediately. On discovery of damage which is not externally visible, the transport company and the sender are to be immediately informed in writing, at the latest within 3 days of delivery.
- c) Transport to and from the location where the warranty claim is accepted and/or the repaired device is exchanged, is at the purchaser's own risk and cost.
- d) Warranty claims are only valid if a copy of the original purchase receipt is returned with the device. devolo reserves the right to require the submission of the original purchase receipt.

4 Suspension of the warranty

All warranty claims will be deemed invalid

- a) if the label with the serial number has been removed from the device,
- b) if the device is damaged or destroyed as a result of acts of nature or by environmental influences (moisture, electric shock, dust, etc.),
- c) if the device was stored or operated under conditions not in compliance with the technical specifications,
- d) if the damage occurred due to incorrect handling, especially to non-observance of the system description and the operating instructions,
- e) if the device was opened, repaired or modified by persons not contracted by devolo,
- f) if the device shows any kind of mechanical damage, or
- g) if the warranty claim has not been reported in accordance with 3a) or 3b).

5 Operating mistakes

If it becomes apparent that the reported malfunction of the device has been caused by unsuitable hardware, software, installation or operation, devolo reserves the right to charge the purchaser for the resulting testing costs.

Additional regulations

6

The above conditions define the complete scope of devolo's legal liability.

- a) The warranty gives no entitlement to additional claims, such as any refund in full or in part. Compensation claims, regardless of the legal basis, are excluded. This does not apply if e.g. injury to persons or damage to private property are specifically covered by the product liability law, or in cases of intentional act or culpable negligence.
- b) Claims for compensation of lost profits, indirect or consequential detriments, are excluded.
- c) devolo is not liable for lost data or retrieval of lost data in cases of slight and ordinary negligence.
- d) In the case that the intentional or culpable negligence of devolo employees has caused a loss of data, devolo will be liable for those costs typical to the recovery of data where periodic security data back-ups have been made.
- e) The warranty is valid only for the first purchaser and is not transferable.
- f) The court of jurisdiction is located in Aachen, Germany in the case that the purchaser is a merchant. If the purchaser does not have a court of jurisdiction in the Federal Republic of Germany or if he moves his domicile out of Germany after conclusion of the contract, devolo's court of jurisdiction applies. This is also applicable if the purchaser's domicile is not known at the time of institution of proceedings.
- g) The law of the Federal Republic of Germany is applicable. The UN commercial law does not apply to dealings between devolo and the purchaser.

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