



Dustlight

EN – Operating Manual

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1 Production and manufacturer

1.1 Product

This operating manual describes the following product:

Dustlight Mini **Model number: 20003.3**

Serial number: _____

You can enter the serial number yourself here. You will find it on the name plate on the back of the unit in this location:



Fig. 1: Product name plate

Please always refer to this information when making enquiries about warranty and maintenance.

The contents of this operating manual are subject to change without notice and will be made available on our website. The instructions provided there always correspond to the current publication and can be found at www.dustlight.de/pages/manual.

1.2 Manufacturer

Name and address	Latai GmbH Agnes-Pockels-Bogen 1, 80992 Munich Germany
	
E-mail	info@dustlight.de
Internet	www.dustlight.de

Tab. 1: Manufacturer

2 About this operating manual

Please read this operating manual carefully before start-up. For proper and safe use of the product, it is essential to follow the descriptions and recommendations for action in this operating manual.

2.1 Purpose

This operating manual contains information on the safe, trouble-free and economical use of the product. This information is intended for persons who perform tasks related to the product.

2.2 Availability

The operator shall make this operating manual or extracts thereof available to persons who perform tasks with or in connection with the product. The operator shall keep this operating manual or extracts thereof readily available in the immediate vicinity of the product. When transferring ownership of the product to another person, the operator shall pass on this operating manual to that person.

2.3 Warnings

This operating manual contains warnings that alert you to residual hazards. The classification of warnings is based on the severity of the damage that may occur if the warnings are disregarded and the recommended actions are not followed.

Symbol	Meaning
	Warning: Indication of a potentially dangerous situation. If this is not avoided, death or serious injury may occur.
	Consequences of non-compliance: Property damage or environmental damage possible.

Tab. 2: Warnings

3 Basic Safety Instructions

- Before using the product, carefully read this operating manual and the one for the associated products.
- Follow the instructions for use carefully. All users must fully understand the instructions and follow them precisely. The product may only be used for its intended purpose.
- Do not dispose of the instructions for use. Storage and proper use by users must be ensured.
- Local and national regulations concerning this product must be followed at all times.
- Maintenance work on the unit may only be carried out by the manufacturer itself or by specialist personnel trained by the manufacturer. Otherwise, Latai shall not be held responsible for the proper functioning of the product after repair and for the validity of approvals.
- Only original Latai parts and accessories may be used for maintenance work, otherwise the functionality of the product could be impaired.
- Check the unit before use. Defective or incomplete products must no longer be used, nor should units that have been modified. In such cases, contact the manufacturer immediately for repair.
- Although the unit is designed for harsh environments such as construction sites, you should handle it with care, as you would any optical or electrical unit. After a fall or other mechanical impact, the unit must be checked by Latai.
- If faults or failures occur in the product or product parts, stop using them immediately and inform the manufacturer.
- Store the product only at temperatures between 0°C and 40°C and away from exposure to solvents, plasticizers, exhaust gases, or fuels. Protect from rain and moisture.
- **The product must never be used in potentially explosive environments**
- Do not open the product or throw it into a fire.

Caution: Laser radiation – Class I

	This unit complies with the safety requirements of laser class 1 according to IEC 60825-1:2014 and is classified as safe. Do not modify the unit or disassemble it, as this may result in significant safety risks.
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Tab. 3: Caution: Laser radiation – Class 1

3.1 Intended use

The product is intended exclusively for the following use:

The product is a specialized unit for monitoring fine dust concentrations in workplaces and is used exclusively for measuring fine dust in the air, visualizing the measured values, and recording this data (logging function). In accordance with the ArbStättV (Workplace Ordinance), it is intended for use in workrooms or other locations in buildings on company premises, on construction sites and in similar workplaces.

It should be noted that DUSTLIGHT is not a measuring device within the meaning of the Technical Rules for Hazardous Substances TRGS 402 'Identification and assessment of the risks from activities involving hazardous substances: inhalation exposure', August 2023 edition, and may therefore only be used for monitoring workplaces.

The unit is designed to operate in various environments within the specified environmental conditions and within its calibrated measurement ranges. Using the product outside the parameters specified in the data sheet or for measurements other than those intended may lead to inaccurate results and damage the unit or its sensors.

The product is in no way intended for the purpose of process control or as the sole tool for workplace assessment. It provides only supporting information for assessing elevated fine dust concentrations and is based on an optical measurement principle. The product therefore provides an indicative measurement and cannot replace workplace limit value measurements as part of risk assessment. The product provides information about the size distribution of particles in the air, but cannot provide any information about their material properties. It is therefore a tool to support health and safety in the workplace, but should not be used as the sole basis for deciding on safety measures.

In the event of conflicting statements regarding the risk level between the product and the Hazardous Substances Ordinance or the associated Technical Rules for Hazardous Substances, in particular TRGS 402 'Identification and assessment of the risks from activities involving hazardous substances: inhalation exposure', these must be followed without exception. For personal protection, it is recommended to always

follow the statement that requires or recommends stricter protective measures (safety principle).

Any use of the product beyond its intended purpose shall be deemed improper use. The manufacturer accepts no liability for damage resulting from such use. Intended use also includes observing and complying with all instructions in the accompanying product documentation.

Any other use is not in accordance with the intended purpose.

3.2 Reasonably foreseeable misuse

The product is designed as a fine dust measuring device for use in commercial and industrial environments. While the unit is optimised for these environments, we must consider some reasonably foreseeable misuse to ensure the safety and effectiveness of the product. The misuse described below represents some examples of improper use of the unit. However, this list is not exhaustive and does not claim to be complete.

Overinterpretation of measured values:

Users may mistakenly assume that the product can be used for comprehensive workplace assessment or as the sole tool for determining safety measures. The unit is only intended as an aid for assessing and monitoring fine dust concentrations. Furthermore, the unit alone does not protect against excessive exposure to fine dust, nor can it purify the air. Appropriate protective measures must always be taken by the user and are their sole responsibility.

Carrying the unit incorrectly:

Ensure that both the air inlet and air outlet are not covered by clothing or other objects at any time. In addition, the air inlet on the front of the product should always face the user's line of sight and be positioned close to the respiratory tract.

Dirty or damaged air intake or air outlet:

DUSTLIGHT MINI is equipped with stainless steel filters at the inlet and outlet, which protect the internal air flow and sensors from coarse and excessive dust. Contamination can alter the properties of the filters. If contamination or damage is detected on the filter, stop operating the unit and immediately replace the damaged, contaminated or clogged filter with an original spare part as described in the Maintenance section.

Use in non-target environments:

A foreseeable misuse could be that the product is used in environments that are outside its specifications, such as in areas with excessive humidity, potentially explosive atmospheres or under the influence of splashing water.

Use as a process control instrument:

Another foreseeable misuse could be that users employ the product for the direct control or regulation of work processes, even though it is not intended for this purpose.

Carelessness or lack of concentration:

Users may fail to take necessary protective measures due to carelessness or lack of concentration, even if the product indicates high fine dust concentrations and issues a warning. Naturally, the product cannot verify the implementation and effectiveness of appropriate protective measures.

Incorrect or untrained personnel:

The product is expressly intended only for users who are of legal age and have been trained in the use of the product.

3.3 Tasks and qualification of personnel

Work with and on the product may only be carried out by persons who have been instructed in this regard and who have the necessary knowledge and experience.

3.4 Information on occupational safety

The operators of the DUSTLIGHT MINI are responsible for implementing occupational health and safety obligations. The occupational health and safety regulations of the country in which the DUSTLIGHT MINI is used apply.

The obligations include the following points, among others:

- When measuring dust concentrations with DUSTLIGHT for the first time, respiratory protection (at least a type FFP2 filtering half mask) should be worn until the relevant measurements, taking into account the working method, duration and any other factors, have shown that no limit values are exceeded. The knowledge gained can then be used to monitor dust concentrations in comparable future working environments using DUSTLIGHT without respiratory protection.
- This operating manual or excerpts thereof must be made available to all persons who perform tasks with or in connection with the DUSTLIGHT MINI
- Provide these persons with the relevant documents
- Instruction of persons regarding proper use and misuse
- Instruction of persons with regard to protective equipment and supplementary protective equipment
- Instruction of persons with regard to residual risks

This list is not exhaustive and does not claim to be complete.

4 Functional description of the product

This section contains information to help you better understand the DUSTLIGHT MINI and its features.

4.1 General product description

The product is a fine dust measuring device with direct and language-neutral display of the current dust exposure. The unit was designed for indicative measurement in working environments where fine dust poses a health risk. The unit is designed to be portable and for mobile use and operates at an operating voltage of 5V, which is supplied by an internal rechargeable battery. The product is designed to monitor the concentration of fine dust particles in the air and provide users with direct feedback on air quality in the workplace using a simple colour system in green, yellow and red, as well as the integrated high-resolution colour display. The product provides information about the size distribution of particles in the air, but cannot provide any information about their material properties.

The product provides an indicative measurement and cannot replace workplace limit value measurements as part of risk assessment.

4.2 Operation and use

The product is intended exclusively for use by the following user groups in the described usage environments and operating modes. In all other scenarios, use is considered improper.

User groups:

Commercial or industrial users: The product is specially designed for use in commercial and industrial working environments. It is aimed at trained professionals who work in areas where monitoring fine dust concentrations is important, such as on construction sites, in workshops or in industrial manufacturing facilities.

Usage environment:

On covered areas and in rooms enclosed on all sides: The product is optimised for indoor use, such as in factory buildings or workshops.

The unit is **not** intended for use in areas exposed to **splashing water**, including rain, in **potentially explosive atmospheres** or under **extreme environmental conditions**. The ambient conditions must not exceed or fall below the ranges specified in the data sheet.

Operating modes:

The operating modes of the product can be divided into four states:

1. Set-up

This mode is used to initialise and calibrate the unit before use or after maintenance. This also includes establishing a Bluetooth connection with the product app.

2. Charging the battery

The product is connected to the mains via the magnetic charging cable and a USB power supply, and the internal battery is charged. During charging, the unit can be in either measurement mode or standby mode.

3. Measurement mode

This is the normal operating mode of the product after it has been activated using the power button. In this operating mode, the LEDs on the illuminated surfaces light up and measurement is active. The display activation time and measurement interval are configured via the settings in the app.

4. Standby

In this mode, the product does not measure, and the display and illuminated areas are deactivated. Due to the integrated battery, voltage is still present in the unit's electronics.

ATTENTION

The product is not intended for process control or as the sole tool for comprehensive workplace assessment.

Intended use also includes compliance with all safety and operating instructions described in the documentation supplied with the unit.

The precise definition of these types of use and operating modes is intended to ensure that the product is used exclusively in suitable environments and by qualified, trained personnel.

4.3 Operating controls

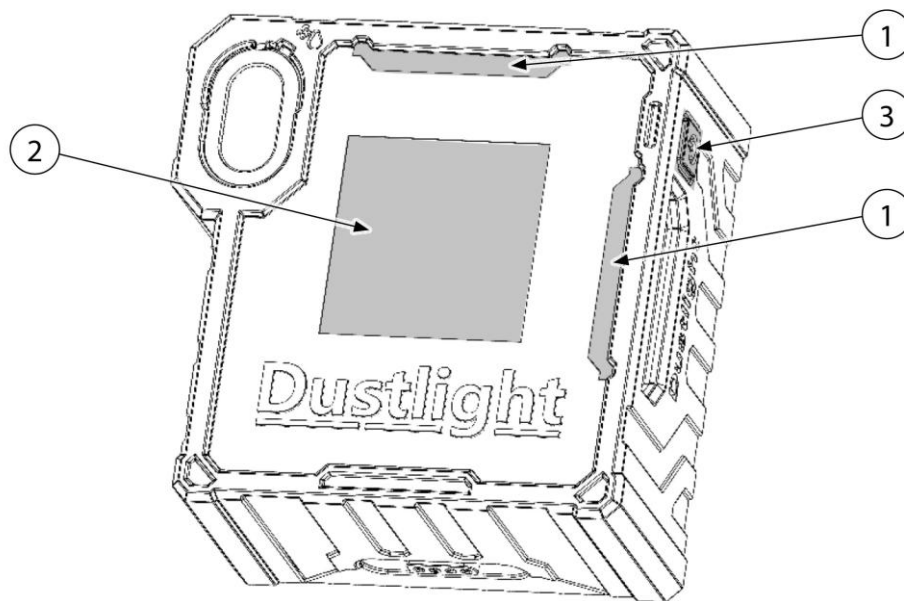


Fig. 2: Operating controls

Pos.	Description	Pos.	Description
1	Illuminated areas	3	Operating knob
2	Display		

Tab. 4: Operating controls

The product has only one button (item 3) as an operating control, which is located on the right-hand side of the housing in the upper third part. To protect it from dust, the button is integrated into the flexible part of the housing and marked with a tactile on/off symbol. The button distinguishes between a single, short press for navigation and a long press (press and hold) to turn the unit on and off.

4.4 Optical display devices

The product has two optical display devices, the illuminated areas (item 1) and the display (item 2).

Colour		Meaning
Green		The current measured value is below the set limit value; dust pollution is at a low level.
Yellow		The first limit value has been reached; there is significant pollution from fine dust particles. Preventive measures should be taken here to reduce dust emissions.
Red		The second limit value has been exceeded; the dust concentration is at a level that is harmful to health in the long term. More effective measures should be taken to prevent dust, and personal protective equipment should be worn if dust exposure cannot be avoided.
Blue		The unit is waiting for confirmation of the Bluetooth pairing with a smartphone and the product app. Please press the button on the unit to confirm the connection.
Purple		There is a fault with the unit. Please check the display and try to rectify the error using the instructions in section 8.4 or contact the manufacturer.

Tab. 5: Optical display devices

The unit also features a high-resolution 1.54" colour LCD display. In addition to the home page, the product has three further displays with different content, which are explained below.

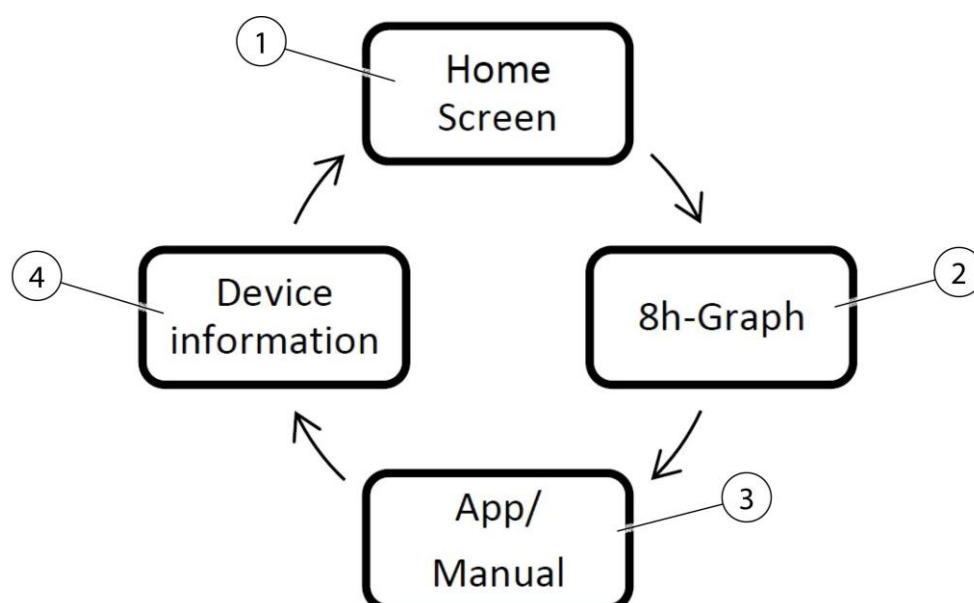


Fig. 3: Product menu system

Pos.	Description	Pos.	Description
1	Main screen	3	App manual
2	8 hour diagram	4	Unit information

Tab. 6: Product menu system

Status bar

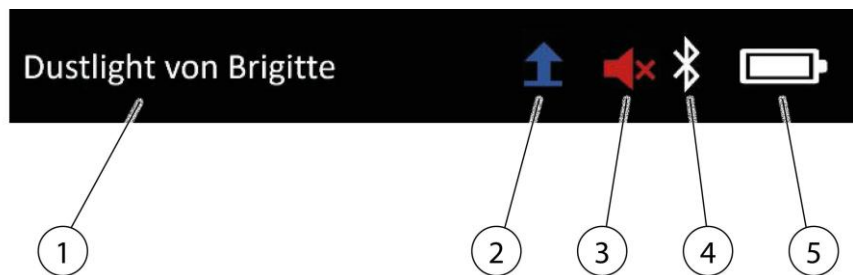


Fig. 4: Status bar

Pos.	Description
1	Product name
2	The unit synchronises with the app
3	Acoustic warning symbol, red: Switched off
4	Bluetooth status
5	Battery charge status; the flash indicates that the battery is currently charging.

Tab. 7: Status bar

Start page

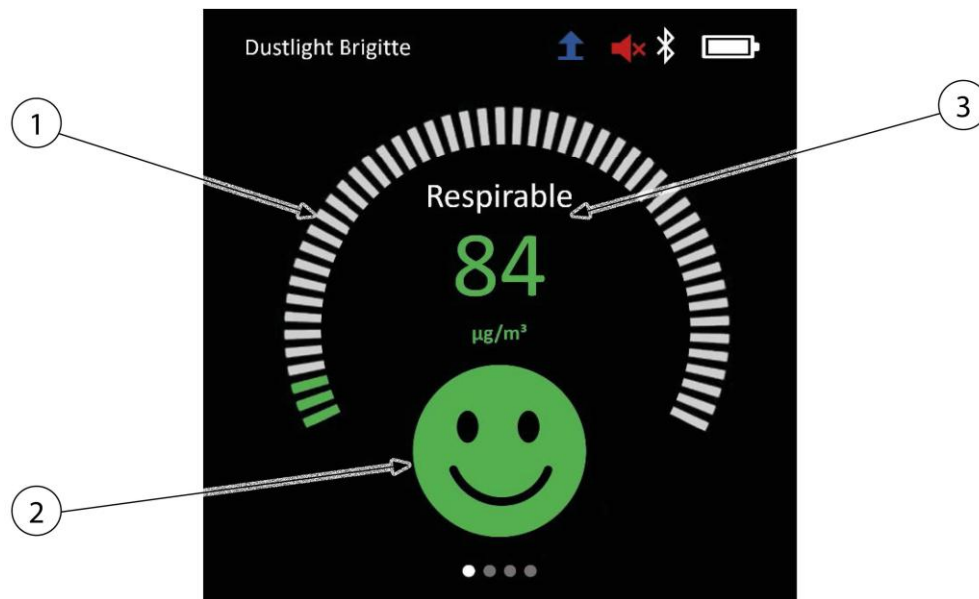


Fig. 5: Display

Pos.	Description
1	Scale display of current fine dust pollution
2	Graphical display of the current warning level
3	Value of the current A-dust concentration in $\mu\text{g}/\text{m}^3$

Tab. 8: Display

Progression

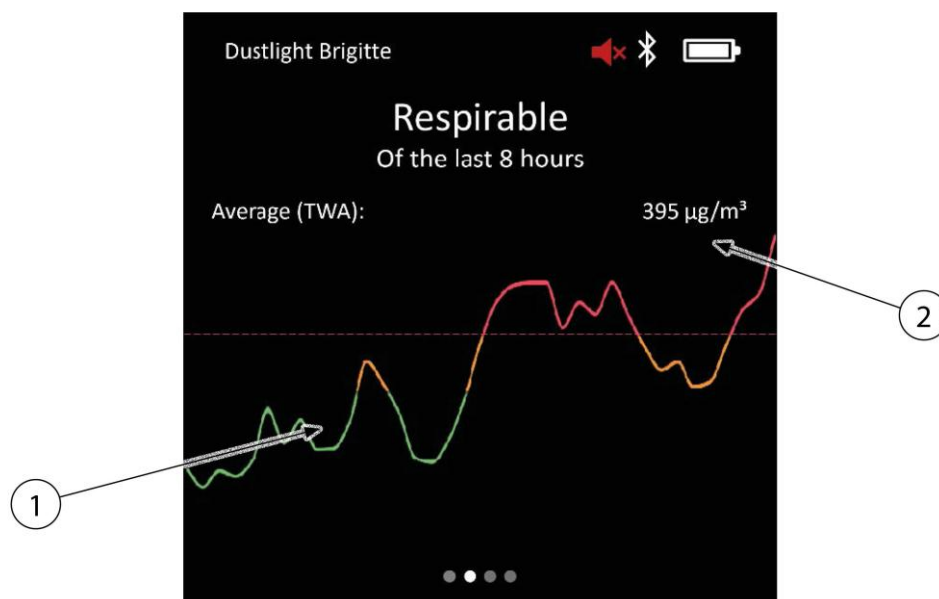


Fig. 6: Display

Pos.	Description
1	Temporal progression of measured values
2	Time-weighted average TWA of the last 8 hours

Tab. 9: Display

Additional screens

	The QR code displayed can be scanned with a mobile phone (some models require an app for this) and will take you to your product website. Here you will find further information, the operating manual and download links for the app for Android and iPhone.
	The last screen displays unit information, including the product's software version, the country in which the product is operated, and the applicable limits for fine dust in the air, which are automatically transferred via the app. Furthermore, the UTC time and date of the unit are displayed. If these differ too much from the actual time, please synchronise your product via the app. The values are displayed in the app in your correct time zone.

Tab. 10: Additional screens

4.5 Acoustic warning signals

The product has an acoustic warning device with a volume of 85dB at a distance of 10cm. This can be deactivated via the app if necessary.

Meaning of the signal tones

Signal tone	Meaning
Single short tone	First warning level reached, the unit changes from green to yellow and confirms this with a single beep.
Three short tones	The second warning level has been reached and the unit changes from yellow to red and confirms this with three short beeps in quick succession.

Tab. 11: Meaning of the signal tones

4.6 Interfaces

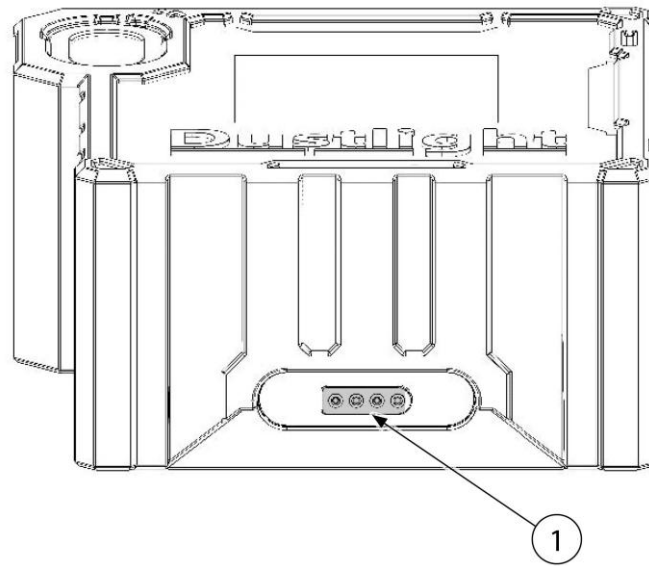


Fig. 7: Interfaces

The product has a four-pole magnetic connection on the underside of the unit (item 1). This is used to supply power to the unit via the pin connector on the original USB charging cable. The connection is protected against contamination, splashing water and reverse polarity due to its design. The USB cable can also be used to transfer the measured values to a connected PC.

The product has Bluetooth for connection to the free product app. Further information on downloading, setting up, pairing and using the app can be found in section 6.3. App.

5 Assembly

The unit is delivered ready for operation and no further assembly steps are necessary before start-up.

When delivered, the product comes with a plastic clip that can be used to attach it to clothing.

Removing the clip

To remove the clip, loosen the Phillips screw on the back of the unit in the clip by turning it anticlockwise. Now the clip and screw can be removed and replaced with the Click Fast® connector or a new clip.

Klick Fast adapter assembly

Insert it into the cloverleaf-shaped recess on the back of the unit in the orientation shown. Ensure that the U-shaped opening of the adapter faces the top of the product.

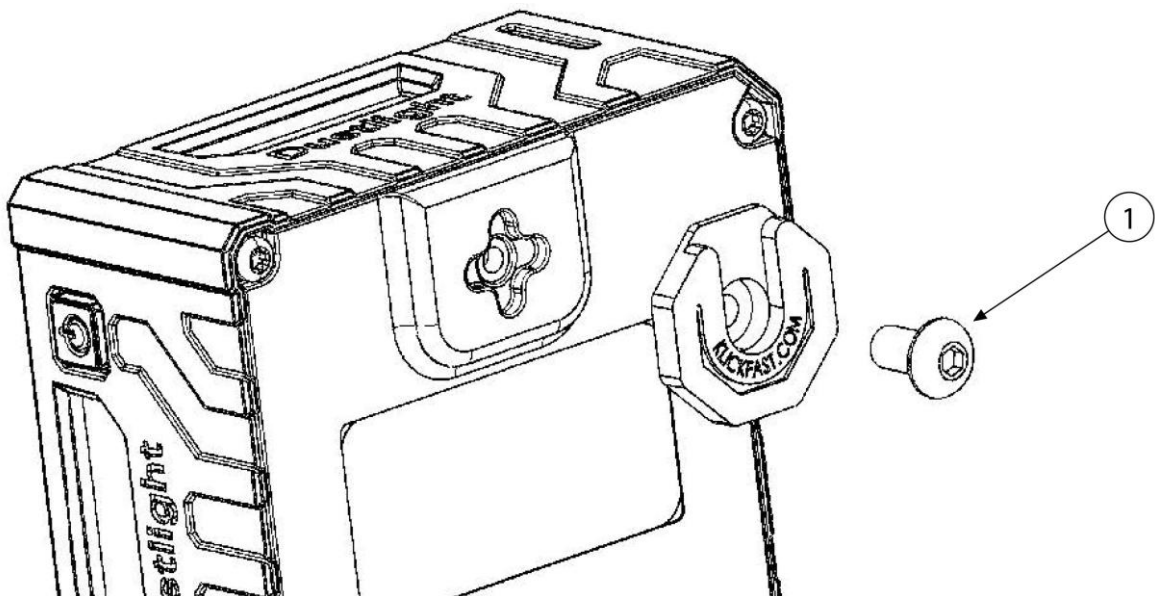


Fig. 8: Assembly

Now secure the adapter by tightening the enclosed screw clockwise by hand. The screws supplied are already coated with locking varnish, which prevents the screw from accidentally loosening. If the screw is opened repeatedly, it is recommended to renew it with a removable locking varnish or to use a new screw.

ATTENTION

Attention! Only use the screws supplied and never use screws that are longer than specified. Failure to observe this may result in serious damage to the unit and personal injury. Do not use permanent threadlocker.

Klick Fast system

If a secure attachment to clothing, helmets or stationary objects is required, this clip can be replaced with our Klick Fast® connector, allowing the product to be used with all certified product accessories from the Klick Fast® range.

To attach the product to a Klick Fast accessory, simply press it in with the adapter attached until you hear a click.

To remove the product, turn it 180° in the holder and pull it upwards.

6 Start-up and set-up

6.1 Product start-up

The battery must be fully charged before start-up. To do this, remove the product and the supplied USB charging cable from the packaging and charge as described in section 7.2.

Before each start-up, check that the unit, especially the air inlet and air outlet grilles, are free from visible damage. If not, contact the manufacturer or replace the air inlet grille yourself as described in section 9.

Before each start-up, check that the unit, especially the air inlet and air outlet grilles, are free from visible contamination and clean it with a damp cloth or brush. If there is dirt such as dried paint on the air intake grille that cannot be removed, replace it as described in section 9.

6.2 Setting up the product

The product can be used immediately after purchase and does not require calibration, set-up or connection to the product app to start measuring.

However, in order to be able to use the full range of functions offered by the product, we strongly recommend downloading and setting up the app, as this is the only way to adjust the settings on the unit and visualise the measured values.

The following parameters can be adjusted via the app:

Limit values:

The preset limits at which the product warns users correspond to the workplace limit values valid for Germany at the time of delivery. The upper limit (switch to red warning indicator) is therefore preset to $1250 \mu\text{g}/\text{m}^3$, and the lower limit (switch to yellow warning indicator) to $125 \mu\text{g}/\text{m}^3$ (corresponding to 10% of the applicable limit value). In the app, the applicable limit values of other countries can be selected as the default setting if the product is operated outside Germany. In addition, the values can also be customised to suit your own requirements.

NOTICE

Despite careful review, due to the constantly changing legal framework, it cannot be guaranteed that the limit values stored in the app will comply with the latest regulations at all times. Therefore, the limit values set for colour change should be understood as examples. Responsibility for researching and correctly setting the limit values lies with the users at all times and not with the manufacturer of the product.

Operating modes

The product has various operating modes that affect the measurement interval, brightness and thus the battery life. In addition to the standard profile, which is activated ex works, the unit has a continuous mode and an energy-saving mode.

All modes distinguish between active and passive operation. After switching on, the unit is in active mode. After a certain period of time, it switches to passive mode, in which it continues to measure and warn, but various energy-saving measures are taken depending on the mode. As soon as the button is pressed, the unit switches back to active mode. The following table provides an overview of the different modes:

Operating mode	Continuous	Standard	Eco
Switch from active mode to passive mode after	5 minutes	5 minutes	30 seconds
Active mode measurement interval	Every second	Every second	Every second
Passive mode measurement interval	Every second	60 seconds	60 seconds
Bluetooth	Permanently activated	Activated within 5 minutes of pressing the button	Activated within 1 minutes of pressing the button
Active mode illuminated area brightness	High	High	Low
Passive mode illuminated area brightness	High	High	Low
Active mode display brightness	High	High	Low
Passive mode display brightness	Low	Display off	Display off
Battery life	Up to 7 hours	Up to 20 hours	Up to 40 hours

Tab. 12: Operating modes

In addition to the mode, the brightness of the illuminated areas and the display can also be adjusted to suit your preferences via the app.

6.3 Setting up the app

The app is available for free download under the name 'DUSTLIGHT' in the Google Play Store and the Apple App Store.



The product app can be used to access the following functions and configure the unit:

- Display of current fine dust values for A-dust and the PM10 fraction of E-dust, as well as recommendations for action
- Synchronisation, storage and display of historical values
- Graphical presentation of measured values
- Option to export measured values as a .csv file
- Configuration of limit values, brightness, measurement intervals and operating modes
- Configuration of the acoustic warning and device name
- Overview of sensor service life and maintenance intervals, easy booking of services
- Unit firmware update
- Knowledge database on dust as a health hazard and proper protection
- And many more features to come in the future...

To pair the product with the app, follow the instructions in the app after downloading it. By default, the product is in pairing mode for five minutes after each time it is switched on and a button is pressed, and can be found via the app. You can recognise this by the Bluetooth symbol in the status bar on the product's screen. Tap the green button in the app to start the search. Once your product appears in the list, select it. The unit will then flash blue and show the pairing request on the display. Please press the button on the product to confirm pairing. The pairing is now complete and you can use the app with your device. If your unit is not listed in the list of found units in the app, make sure that Bluetooth is enabled on your mobile device and that the Bluetooth icon is displayed in the status bar of the product. Otherwise, press the side button on the product or restart it until the icon appears, then try searching again using the app.

7 Operation

The product is used to analyse workers' exposure to harmful particles and can therefore help to identify potential health risks through continuous monitoring of air quality and subsequently minimise these risks by taking appropriate protective measures.

In addition to dust-generating work in enclosed spaces, such as during construction, renovation or refurbishment projects, there are many other conceivable applications for the product. Applications include production facilities, factories and other industrial environments where dust and particles are generated during many processes. Warehouses and storage areas can also be sources of dust, especially if dry materials are stored or handled there. A fine dust measuring device can help monitor air quality in such environments and provide early warning of potential problems. This section contains information for the safe use of the product.

7.1 Warning of residual risks

Although this operating manual provides detailed instructions for the safe use of the product, there may be residual risks that are not explicitly mentioned in this manual. These residual risks may occur unpredictably during operation and pose potential hazards. Always remain alert and pay attention to your surroundings.

The product is designed to provide you with a general overview of the fine dust concentration in the environment by means of indicative measurements. It was not developed for use as an official measuring device in the context of official or legal workplace measurements. In the case of mandatory fine dust measurements within the scope of the Hazardous Substances Ordinance or the Federal Immission Control Act, we recommend contacting certified measuring stations in accordance with the Hazardous Substances Ordinance and Section 29b of the Federal Immission Control Act. Further information can be found at the Federal Association of Measuring Stations for Environmental Protection and Occupational Safety (Bundesverband der Messstellen für Umwelt- und Arbeitsschutz e.V.). (BUA) at www.bua-verband.de. Only they can carry out the necessary measurements in accordance with applicable standards and regulations.

Regular calibration and maintenance must be carried out in accordance with the manufacturer's instructions in order to guarantee long-term accuracy.

7.2 Charging the product

Only use the magnetic charging cable supplied to charge the unit. The cable is specially designed for the product and ensures safe and efficient charging.

Connect the charging cable to a USB power supply. You can either use a USB power supply that you already own or purchase one from us. Ensure that the USB power supply meets the recommended specifications (5V, at least 1A charging power) to ensure optimal charging speed.

Connect the magnetic end of the charging cable to the connector on the DUSTLIGHT MINI. The charging process starts automatically and the display on the screen shows the progress. Charging stops automatically when the unit is fully charged or if the temperature rises during charging.



SAFETY INSTRUCTIONS

Only use the magnetic charging cable supplied and a suitable USB power supply. The use of unauthorised accessories may damage the unit and invalidate the warranty.

Place the Dustlight fine dust measuring device on a stable, non-flammable surface and away from liquids when charging. Ensure that the charging port on the unit is clean and dry to ensure an optimal connection.

Monitor the unit while it is charging and disconnect it from the power supply when charging is complete. This prevents overcharging and optimises the battery's service life.

Avoid exposing the unit to excessive heat during charging. Do not expose it to direct sunlight or other sources of heat.

7.3 Switching on the product

To switch on the DUSTLIGHT MINI, press and hold the button on the right-hand side of the switched-off unit for at least 2 seconds.

7.4 Switching off the product

To switch off the product, press and hold the button on the right-hand side of the unit for at least 2 seconds while it is running. The unit switches off automatically when it reaches a critical charge level in order to protect the internal battery.

7.5 Using the product

After switching on, the product can be attached to clothing using the clip mounted on the back. Care should be taken to ensure that the unit is always placed as close as possible to the respiratory tract, i.e. in a breast pocket or on the collar. The separately available Klick Fast® accessories, such as the armband or chest strap, are also helpful here, as they allow the DUSTLIGHT MINI to be securely attached to the body. To do this, replace the clip with the Klick Fast® adapter as described in section 5.

During operation, the product signals to the wearer that the set fine dust limit values have been exceeded via an optical and optionally activatable acoustic signal. In addition, the current measured value is shown in large, clear print on the display. Depending on the energy setting, the display will deactivate after a certain period of time, but the unit will continue to measure and warn. The display is reactivated by briefly pressing the side button. The duration can be adjusted in the app settings.

Even though the unit is designed for such pollution, please ensure that it is not exposed to excessive amounts of dust and flying debris, as these can negatively affect the service life of the unit.

When the charge level is low, the unit should be recharged in accordance with the instructions in section 7.2.

8 Maintenance

This section contains information for the safe maintenance of the product. It includes all technical and organisational measures taken during the product's life cycle to ensure that the unit remains safe, economical and functional and to prevent damage to the environment.

Maintenance includes:

- Maintenance
- Repair
- Troubleshooting and fault rectification

8.1 Loss of warranty claims

The manufacturer's warranty for the product guarantees that the product will function properly under normal operating conditions. To maintain the validity of this warranty, please observe the following conditions:

Unauthorised opening of the housing:

Any attempt to open the product's housing will result in the immediate loss of warranty claims. The housing may only be opened by authorised service personnel.

Modifications to the unit:

Any unauthorised modifications, manipulations or alterations to the unit will result in the immediate loss of warranty claims. This also includes attempting to modify firmware, software or other system components.

Independent replacement of components:

The independent replacement of components that has not been expressly approved by the manufacturer will result in the loss of all warranty claims. All repairs or replacements must be carried out by authorised service personnel.

Please note that the loss of warranty claims due to the above conditions is not exhaustive and further conditions may apply in accordance with the manufacturer's warranty provisions.

8.2 Maintenance and calibration

The product does not require any maintenance or calibration by the user; it should only be cleaned regularly as described in section 9.

The product has an intelligent maintenance and calibration indicator. Depending on the operating time and the dust concentration in the working environment, the product calculates the minimum maintenance intervals itself. However, in order to guarantee safe operation and accurate measurement at all times, maintenance and calibration must be carried

out by the manufacturer at least every 12 months, or sooner depending on environmental conditions and operating time. The current sensor status can be checked via the app. When the maintenance threshold reaches 80%, a notification about the upcoming maintenance will be displayed on the integrated display and in the app. Once the maintenance date has been reached, this warning will remain active every time the unit or app is started.

8.3 Repair

Any repair work, including the replacement of components or the repair of malfunctions, may only be carried out by the manufacturer itself or by its authorised service personnel.

The product contains complex structures and safety-related components. Unauthorised repairs by users or unauthorised third parties can lead to serious safety risks.

In the event of malfunctions or the need for repairs, please contact the manufacturer with the serial number to receive appropriate support and instructions:

8.4 Troubleshooting and fault rectification

If you encounter problems with your unit, you can perform the following troubleshooting steps to identify possible causes and find solutions:

Problem: The unit cannot be switched on

- Check the battery charge level and connect the Dustlight to the mains using the supplied charging cable and a USB power supply unit. Try again after a while.

Problem: The unit cannot be charged

- Check the charging cable for external damage and replace it if necessary.
- Check the power supply unit used for damage and sufficient power (at least 1A). Replace it if necessary.
- Check that the socket you are using is working and use another one if necessary.

Problem: The unit does not appear to be measuring correctly

- Check the air inlet and air outlet of the unit for contamination and clean or replace them if necessary.
- Check whether there are any maintenance and calibration warnings in the app or on the unit screen.

- Check whether there are any error messages on the unit display or in the app and resolve them as described below.

Problem: The unit shows an error message on the display

Please proceed as follows depending on the error message:

Error code	Fault	Solution
E01	Critical error	Please contact the manufacturer or your local service partner.
E02	Sensor error	Please restart the product. If the fault persists, contact the manufacturer or your local service partner.
E03	No sensor found	Please restart the product. If the fault persists, contact the manufacturer or your local service partner.
E04	Fan fault	Please check the air inlet and air outlet of the product for damage and dirt, and clean them if necessary. Restart the product. If the fault persists, contact the manufacturer or your local service partner.
E05	Fan speed fault	Please check the air inlet and air outlet of the product for damage and dirt, and clean them if necessary. Restart the product. If the fault persists, contact the manufacturer or your local service partner.
E06	Time error	The product has lost the time due to insufficient battery charge. Please connect the product to the app to update the time.
E07	Memory full	The internal memory of the product is full. Please connect the product to the app to synchronise the data to your smartphone and prevent data loss.
E08	Maintenance instruction	
E09	Maintenance interval reached	

Tab. 13: Troubleshooting

9 Cleaning

To ensure the proper functioning and safety of your product, use dry and soft materials, such as a microfibre cloth or a brush, to clean the exterior of the housing. Carefully remove dust and dirt, paying particular attention to the air inlet and air outlet grilles to ensure that no dust enters the air vents of the unit. Regularly check the charger, charging cable and connections for any dirt and remove it if necessary.

For stubborn dirt, you can also wipe the product with a damp cloth, taking special care to ensure that no moisture can get into the openings of the unit. Do not use cleaning agents, solvents or aggressive chemicals, as these can damage the housing and surfaces.

ATTENTION

Under no circumstances should you use compressed air or a vacuum cleaner to clean the product. This can damage the air flow and sensor technology of the unit.

As the air inlet on the front of the unit is naturally subject to the most contamination, the stainless steel grille can be removed for easier cleaning. To do this, insert a pointed object such as a screwdriver into the designated point on the upper right-hand side of the metal grille (see Figure 5) and lift it out. Now you can wash it under running water with a brush and mild detergent. If there are any paint residues on the grille, you can also remove them with cleaning solvent or acetone. Allow the grille to dry thoroughly after cleaning.

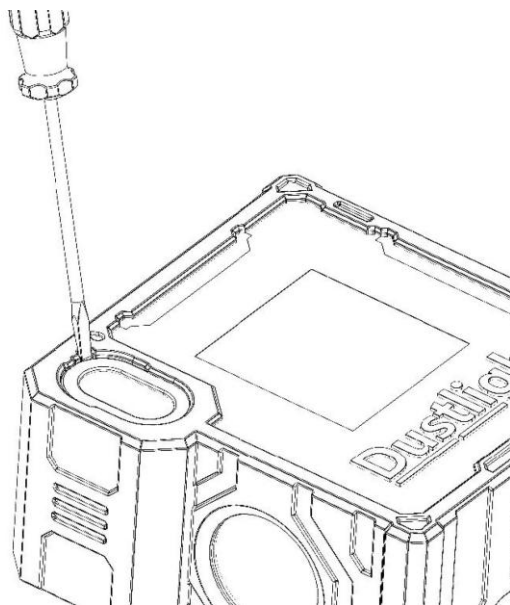


Fig. 9: Cleaning the product

If the grille is damaged or can no longer be cleaned, you can simply replace it. Replacement filters are available in our shop at www.dustlight.de or by emailing info@dustlight.de. When removed, the air duct's pre-chamber can also be easily cleaned by shaking it out. More stubborn dirt can be loosened with a long, pointed object such as a small screwdriver, cotton bud or small round brush and removed by shaking again.

To insert the grille, slide it into the rubber holder from above and press it down so that the tab at the top of the inlet holds the grille in place again. If this does not work by pressing alone, lift the nose with your fingernail or a small object so that it rests above the grille and holds it in position.

NOTICE

Please follow these cleaning instructions carefully to extend the life of your unit and ensure safe use. Any improper cleaning may result in damage that is not covered by the warranty.

10 Storage

To ensure optimal functionality and longevity of your unit, please observe the following guidelines for proper storage of the DUSTLIGHT MINI. The DUSTLIGHT MINI is stored in the following cases:

- After decommissioning for a prolonged period of non-use
- After decommissioning for relocation
- After decommissioning for calibration or repair

Store the product in a dry place and do not expose it to extreme temperatures, whether cold or heat, to avoid possible damage. Also avoid direct sunlight, as this can reduce the performance and service life of the components, especially the built-in batteries and sensors.

Store the unit in an environment that is as dust-free as possible and protect it from dirt particles. This helps to ensure that the sensor and other components continue to function properly in the long term.

If you purchased the unit with accessories, store them in a safe place together with the product to prevent loss or damage. This ensures full functionality when needed. If possible, store the unit in its original packaging. This offers optimum protection and also makes it easier to send in for maintenance and repair work.

Do not store the unit near electrical equipment that could generate strong electromagnetic fields.

Check the charge status of the batteries before storage. Never store the unit with completely discharged batteries; instead, charge them fully before storing.

11 Disposal

12 Disposal



Please note that electrical and electronic equipment must not be disposed of with household waste. Old units can be handed in free of charge at designated collection points. There, they are professionally collected, disposed of or prepared for possible reuse. We appeal to you to participate actively so that together we can contribute to the environmentally friendly and sustainable disposal of electrical and electronic equipment.

The return of old units is required by law, as some of these units may contain harmful substances that can damage both the environment and human health. Furthermore, returning the product enables the raw materials it contains to be recycled, which benefits the environment. If the old electrical or electronic device contains personal data, you are responsible for deleting it before returning it.

In accordance with the provisions of Directive 2008/98/EC on waste and its implementation in the legislation of the Member States of the European Union, waste prevention measures take precedence over waste recovery measures. In the field of electrical and electronic units, preference is given to extending the service life of such units by repairing defective units and selling functional used units, rather than disposing of them. Further information can be found at <https://www.bundesregierung.de/breg-de/themen/nachhaltigkeitspolitik/elektrogeraete-entsorgen-2155168>

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