

## Important information



### Introduction

Read the following instructions carefully. Keep these instructions and give them to any other users of the product.

The safety instructions are divided into different categories. Please note the categories that apply to the respective component of the product.

This product meets legal, national and European requirements. All company names and product names contained therein are trademarks of their respective owners. All rights reserved.

### Symbol explanations



This symbol informs you of special dangers during handling, operation or usage.



This symbol is used if there is a danger to your health, e.g. by electric shock.

### Safety

**We assume no liability for property damage or personal injury caused by improper handling or non-observance of the safety instructions! In such cases, the warranty/guarantee expires.**



#### 1) General

- For safety and approval reasons, unauthorized modification and/or modification of the product is not permitted. Maintenance, adjustment or repair work may only be carried out by an authorized specialist/workshop who is familiar with the associated hazards and relevant regulations.
- This product is not a toy, it does not belong in children's hands. Mount or place the product so that it cannot be reached by children. It is not allowed to put objects in the product. This not only damages the product, but also poses a risk of injury and life due to an electric shock!
- Use the product only in temperate climates. Operation in excessively humid, hot or cold environments should be avoided. Take note of the operating conditions noted in the instruction manual.
- The product must not be exposed to extreme temperatures, direct sunlight or strong vibrations. Protect the product from dust and dirt.
- Operation in environments with a high dust content, with flammable gases, vapors or solvents is not permitted. There is a risk of explosion and fire!
- The environment of the product must be kept clean. Excessive dust build-up on or immediately next to the device can lead to increased operating temperature and



thus to fire hazard! Furthermore, the product may not be operated if it is covered by objects or other objects have been stacked on the product. Covering of the product can lead to insufficient air circulation and thus to increased operating temperature and fire hazard!

- The connection of the product must only be made in a voltage-free state. Check the absence of voltage with a suitable meter.
- Never connect the product to the power supply immediately after it has been moved from a cold room to a warm room (e.g. during transport). The resulting condensation may destroy the product or lead to an electric shock! Let the product reach ambient temperature first. Wait for the condensation to evaporate, this may take a few hours. Only then may the product be connected to the power supply and put into operation.
- Do not overload the product. Note the input/output voltages and currents or output powers listed on the product.
- Depending on the output current and output voltage or the output power of a product, suitable connecting cables with corresponding line cross-section shall be used.
- Make sure that the product is sufficiently cooled. This includes placing the device with enough space to allow air circulation. Operation in a confined space (e.g. directly on a wall) is not permitted.
- Handle the product carefully, it will be damaged by bumps, slips or falling from a low height. If the product is exposed to such an incident, it should only be put back into operation if damage can be ruled out.
- In commercial facilities, the accident regulations of the Association of Employers' Liability Insurance Associations for electrical systems and equipment must be adhered to!
- Do not use the product if it is damaged. It can be assumed that safe operation is no longer possible if:
  - the product does not work or does not work properly (escaping smoke or smell of burning, audible crackling noises, discoloration on the product or adjacent surfaces or similar signs)
  - the product has been stored under adverse conditions
  - severe transport stress has occurred

Do not operate the product anymore. Bring it to a specialist workshop or dispose of it in an environmentally friendly manner.

- Do not leave the packaging material carelessly, this can pose a danger to children or animals.



- All connection cables must be fixed in a suitable manner and, if necessary, provided with a strain relief.
- The devices must be supplied with the operating voltage DC 12 Volt from a SELV source.
- The devices may not be connected to a direct current network.
- Any connections that are part of the SELV network may not be connected to any other electrical networks. This also applies to any parts that are galvanically connected to any parts of the SELV network.
- The plug-in terminals may only be plugged in/disconnected without a voltage source connected!
- The numbering of the plug-in terminals and the associated socket strips must be observed!
- Unoccupied terminals (NC) should not be wired!
- If terminals (NC) are not occupied, the clamping screws must be screwed in completely.

#### 2) Product for connection to mains voltage

- Improper handling of products that are operated on the mains voltage poses a risk of life due to an electric shock!
- Depending on the design of the product, it may only be connected and installed by a qualified electrician (e.g. electronics technician) who is familiar with the relevant regulations (e.g. VDE). It is important to ensure that the connection may only be made in the voltage free/current less state. Secure the mains supply line against accidental restart. Check the absence of voltage with a suitable meter.
- If the product and/or the connection cable has been damaged, do not touch it, there is danger to life due to an electric shock!  
First, switch off the mains voltage for the product all-pole (switch off the associated residual current circuit breaker). Due to capacitive components, the presence of a dangerous voltage cannot be ruled out even after switching off, so it is always necessary to check the absence of voltage with a suitable measuring device.
- The mains supply line must be fused with a residual current circuit breaker (RCCB) with a tripping current  $\leq 30$  mA.

#### 3) Product with power cord

- The cord may not be crushed or exposed to sharp edges or corners. Do not place objects on the power cord, do not step on them. Route the power cord so that no one can trip over it. Do not run the power cord under carpets or similar. Before plugging in any cord, the cord must be checked for any damages.
- If the product has a power plug, the wall outlet used for connection shall be close to the product and easily accessible.
- Always pull a power plug out of the socket at the intended grip surface,



- never pull the power plug out of a socket by the cable!
- If a damaged power cord is firmly connected to the device, it may only be replaced by an authorized specialist.
- In the case of a detachable power cord, the damaged power cord must be replaced by an identical power cord with the same nominal specifications (e.g. cable cross-section). Repair of a damaged power cord is not permitted.

#### 4) LED Driver

- Always connect the LED lamps/bulbs to the LED driver first before connecting the LED driver to the operating voltage. Otherwise, the LED lamps/bulbs will be destroyed. LED lamps/bulbs must not be replaced during operation. First, turn off the operating voltage for the LED driver and check the absence of voltage with a suitable meter.
- In the case of LED drivers intended for installation, sufficient cooling must be ensured. Keep enough distance from thermal insulation material.
- Only use cables with a sufficient cable cross-section to connect LED lamps/bulbs. Check the relevant regulations in your country. A cable length of 8 m between LED driver and bulb must not be exceeded.

#### 5) Degree of protection and water

- The product may only be connected, assembled and operated according to its degree of protection. Improper handling endangers life due to an electric shock!
- Never pour liquids over or next to the product. There is a high risk of fire or life-threatening electric shock. Should liquid nevertheless get inside the device, immediately switch off the operating voltage with all poles. Contact a professional. Do not operate the product anymore.
- The product must not become damp or wet. Never operate the product in the immediate vicinity of a water source (e.g. shower, leaking windows, etc.). This poses a danger to life due to electric shock!
- The product must never be touched, operated, plugged in or unplugged with damp or wet hands. There is danger to life due to an electric shock!
- The product may only be used indoors and is not intended for outdoor use.

#### 6) Installation of the product

- The product must be placed on a horizontal, stable, level, sufficiently large surface. Never place the product on carpets.
- Protect valuable surfaces from pressure points or scratches with a suitable pad or mat.

#### 7) Switching fuses

- Disconnect the product from the operating voltage with all poles before changing the fuse. Check the absence of voltage with a suitable meter.





- Never bridge a defective fuse, there is a risk of fire and a life-threatening electric shock.
- Only replace the defective fuse with an identical new fuse with the same nominal specifications.
- If the fuse is tripped again, disconnect the product from the operating voltage with all poles and then have it tested by an authorized specialist.
  - 8) CE marking and EMC
- The combination or combined use of CE marked equipment or components does not necessarily create a "compliant" system. A reassessment of compliance with the Low Voltage Directive (2014/35/EU) and the EMC Directive (2014/30/EU) by the manufacturer of the new product becomes necessary.
- Power supplies, which have the limit values of class B according to EN 55032 or EN 55011, are products that are suitable for residential, commercial and commercial areas, or can be connected to a low-voltage network, which also supplies residential areas.
- Power supply components which have class A limit values according to EN 55032 or EN 55011 are intended for use in purely industrial environments without residential areas and may be connected to low-voltage networks that do not supply residential areas. They can then be used in residential areas if measures have been taken against possible radio interference and the requirements of class 8 are met by additional external filtering.

## Maintenance and cleaning


The product is maintenance-free for you. Leave maintenance or repair to a professional. Disconnect the product from the operating voltage with all poles before cleaning. Before cleaning, the device must be disconnected from the power supply. For cleaning, you can use a clean, soft, dry cloth. Dust is very easy to remove with a clean, soft brush and a vacuum cleaner. Do not use aggressive, chemical or abrasive cleaning agents, as this can lead to discoloration or even material changes and corrosion. Compressed air can lead to condensation. When using compressed air for cleaning, it is therefore necessary to wait with a subsequent powering on of the device until any moisture could evaporate, this can take several hours. When cleaning, make sure that no moisture can get into the product or in contact with electrical connectors. Avoid excessive amounts of damp detergents and do not use damp detergents directly on or next to plugs, housing cut-outs, etc.

## Disposal



The product does not belong in the household waste. Dispose of the product at the end of its life in accordance with current legal regulations; hand it in, for example, at an authorized collection point.

## Specifications

Supply voltage	12 V DC
Power consumption max.	50 W (one AC adapter) 100 W (dual power supplies)
Operating temperature	+5°C...+50°C
Storage	+5°C...+50°C
Room humidity	<= 85%
Class	

## Directions

These instructions refer to the structure of the control unit with LED pixel chains, pixel cable, Wago terminals and power supply. This guide refers only to the relevant requirements and safety instructions applicable to the control unit. Before assembly, the safety instructions of all other components must also be read and considered. The assembly must be carried out by a specialist who is familiar with the relevant regulations. Relevant regulations must always be considered in addition to the instructions given in this manual.

## Tools

Crimping pliers and stripping tools are included with the control unit. Furthermore, a Pozidriv 1 screwdriver is required for assembly.

## Installation

The pixels can be installed above or below the climbing holds. Install the pixel chains on the wall, either in 13 mm holes or with the supplied LED holders. When installing with the LED holders, a pixel must first be pressed into the holder, the holder should be placed in the notch of the pixel and the holder must then be fastened with one or two wood screws (not included; 3.5x16 mm). A 13 or 14 mm hole is necessary for installation with the LED holders. Two pixel chains must always be connected to a T-connector and should never be inserted directly into each other. The screw connectors on the pixel chains and T-connectors must be screwed completely closed, only then can a stable connection of the pixel chains be ensured.

Note the direction of the pixel chains. The male plug is the input of the pixel chain, the female socket is the output (see picture). Plan the routing of the pixel chains in advance. Each pixel chain has 50 pixels. The distance between the pixels is 35 cm. The pixel chains should never be under mechanical stress. If, e.g. because of a wooden brace, the distance between two installation points is greater than the pixel pitch, one pixel can simply be omitted and the next in the row can be used. The control unit should be placed in such a way that the first pixel chain can be screwed directly into the control unit, taking into account the direction of the pixel chain. We recommend sketching the pixel routing on a piece of paper beforehand. Efficient arrangement makes installation much easier.

The choice of a sensible pattern also allows versatile possibilities when resetting the spray wall.

After all pixel chains have been routed and connected to T-connectors, the control unit can be placed at the beginning of the first pixel chain. The control unit shall be placed on a flat, protected surface with free air circulation. The control unit can be attached with double-sided adhesive tape, if necessary. The instructions of the adhesive tape must be observed. Adhesive tapes that could lead to chemical reactions with the control unit should be avoided. The male plug of the first pixel chain must be connected to the female input socket of the initial line and screwed together (see picture). The initial cable is screwed to the screw connector of the control unit. The green wire of the initial cable is screwed to the "D1" screw contact, the blue and yellow wires are connected to "-1" and the red wire is screwed to the "+1" contact. It must be checked that the initial cable is provided with ferrules. Pull on the cable with moderate force to check that a secure connection has been made.

If your setup uses several data lines (this will be pointed out to you at the time of purchase, this section can be ignored if you do not use several data lines), you should have received several initial lines. The first initial line should be connected directly to the control unit, just as described in the previous section. If possible, the other initial lines should also be connected directly to the control unit, alternatively use the included 3-wire extension line to extend your initial line to the control unit. Connect the remaining initial lines appropriately to D2, D3, and D4.

After the initial lines are all connected, the grey pixel lines are connected. Connect the pixel line to the control box. The end of the pixel cable is stripped about 5 cm, the ends are stripped with a stripper to 5mm. The cable ends are crimped with crimping pliers with ferrules (see picture 1.). The red cable is screwed to the first free "+" (from left) contact. The black lines at the first free "-" (from left) contact. Route the pixel line to a T-connector. Cut off the pixel line at the location of the T-connector. Leave enough line to establish a mechanically unloaded connection. It may be necessary to install a strain relief. Repeat the stripping and stripping steps from before. The red conductor of the pixel cable is connected to the red line of the T-connector with a Wago terminal and the same is repeated for the blue to the black lines with a separate Wago terminal (see picture). 3 additional pixel cables can be connected to each of these Wago terminals and connected with further T-connectors with the smaller 2-pole Wago terminals (see picture 2.). This means that a maximum of 4 T-connectors may be connected to a "+", "-" pair of connections on the control unit. A maximum cable length of the pixel cable of 10m is not to be exceeded (length of the pixel cable from the control unit to the wago terminal plus length of the pixel cable from the wago terminal to the T-connector must be <= 10m). This maximum length maintains a maximum voltage drop of 3% over the line. In the case of other voltage drop requirements due to relevant regulations, the maximum cable length must be adjusted accordingly.

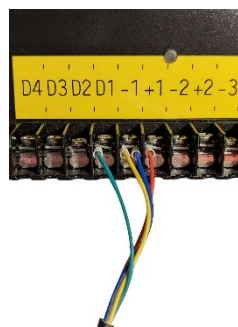
In this way, all T-connectors are to be connected to the control unit via a pixel cable. Make sure that only red lines are connected to the "+" inputs of the control unit and only black/blue lines to the "-" connections. Check that red and black/blue lines are not connected to any same Wago terminal. Check that there are either only black/blue or only red lines connected to 1 Wago terminal. Connecting red to black/blue lines will cause a short circuit and can damage the power supply, control unit, pixel lines or pixel chains and lead to a fire hazard!

Now the on/off switch can be mounted. A 22 mm diameter hole is required. Through this, the switch structure can be inserted from the outside. The switch is pressed into the hole until it is securely friction

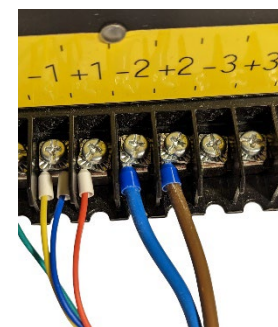
fitted. The cable is now routed to the control unit and plugged into the green plug (see picture).

Make sure that all previous steps have been completed and that the safety instructions have all been followed. Set the power button to the "0" position. You can now connect the supplied power supplies. Now you can set the on/off switch to position "1". The switch should be lit and the indicator lamp on the control box should come on. If this is not the case, immediately switch the switch back to the "0" position and disconnect the power supplies. Check your setup carefully. If you do not find an error, please contact our customer service. When the switch and the indicator lamp are lit, briefly press the black button on the control box. The indicator light should turn purple after a few seconds. Now use your mobile phone to connect to the Wi-Fi network "Stokt\_WiFi\_Setup". If prompted for a password enter "hardpassword". A pop-up on your mobile phone will prompt you to log in to the Wi-Fi network. Press this pop-up and select the "Configure WiFi" section. After a few seconds, a list of WiFi networks will appear. Select the network to be used by the controller. The SSID field should now be automatically filled in with the selected workname. Now fill in the field "Password" with the password of the network. Press "Save". After a few seconds, the pop-up on your phone should close and the indicator light on the control unit should turn green. The pixel chains will flash in different colors for a few seconds. Press the small black button again and reconnect to the WiFi network. Select "Setup". Enter "/broker/your Wall ID" in the filed "mqtt topic". Your Wall ID has either been included on a piece of paper with your order or been sent to you via Email. It can also be found in the admin section of the App. Press "Save". Navigate back to the Main Menu and press "Exit". Congratulations: you have done it. Now you can link the pixels in the Stokt app to your holds. On [www.getstokt.com](http://www.getstokt.com) you will be informed about the next steps.

If the indicator light does not light up green, connect to the WiFi network "Stokt\_WiFi\_Setup" again and re-enter the data of your desired WiFi network. It is case-sensitive. If the indicator lamp is red, contact customer service. If the indicator lamp is green/red, press and hold the "AP" button for 15 seconds until the indicator lamp lights up purple (blue/red). Wait 2 minutes. Reconnect to the Wi-Fi network "Stokt\_WiFi\_Setup" and enter the data provided to you in the "Setup" section. After pressing "Exit", the indicator light should now turn green, if this is not the case, contact our customer service.



Initial cable connected to controller



Pixel cable connected to controller



T-connector connected to Pixel cable via Wago terminal



*Switch side of on/off switch cable (labeling is facing up, consider the polarity if the connectors are removed and reattached)*



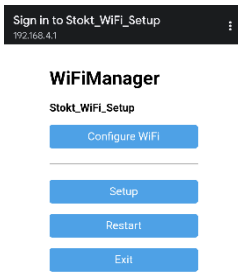
*Controller side of on/off switch cabling*



*Female plus; output*



*Male plug; input*



*Webconfiguration  
Portal*