

eUV Touch control box

for Electronic Power Supplies type eUV with colour display



eUV Touch, Art. No. A008040

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1 Introduction

This manual shall assist customers to use an eUV Touch device to control, configure and diagnose Electronic Ballast's type eUV. The eUV Touch is a device which facilitates the main functionality of the OPA (*Operating Performance Analyzer*) program, which is available for Windows computers.

2 Scope of delivery

When you receive the goods, please immediately check that the delivery is undamaged and complete. Any damages identified must be documented instantly and reported to the manufacturer or sales partner without delay. The following is included in the scope of delivery:

- 1x eUV Touch
- 1x 2m RJ45 patch cable
- 1x 2m RJ45 to 9-PIN SUB-D
- 1x 2m USB cable with AC-Adapter (100-240VAC, 50/60Hz)
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3 Getting Started

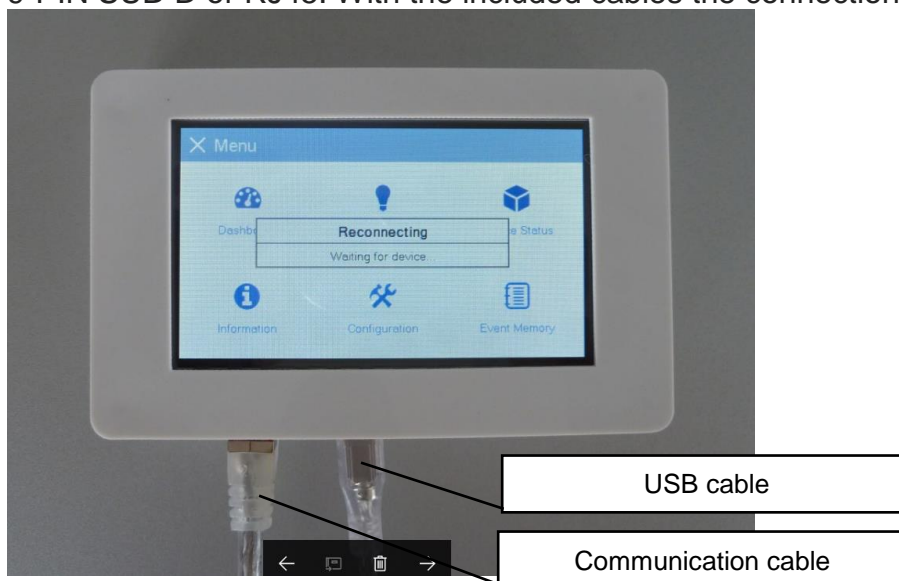
It is recommended to make use of the information mentioned in this document as it especially helps to overcome first-time usage issues and get familiar with the device and its capabilities quickly.

3.1 Device Description and Features

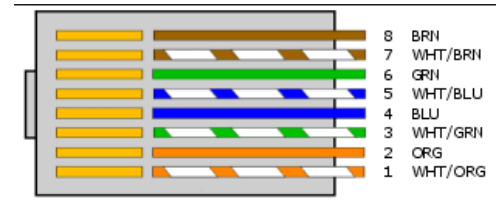
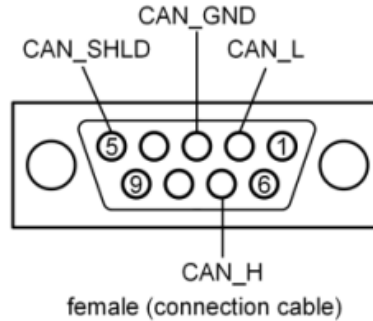
The eUV Touch device is equipped with a 4.3-inch capacitive touch screen and is powered through a 5 V micro USB port. It supports powering via a computer's USB port as well as via common USB power banks or USB power adapters. The maximum power consumption of the device is approximately 500mA. The main communication interface to connect to Electronic Ballast's is a RJ45 to 9-PIN SUB-D Cable or a RJ45 Patch Cable.

3.2 Connection

The eUV Touch device communicates with Electronic Ballast's with the proprietary CAN-Native protocol. Depending on the device version, the CAN-Native interface is available via 9-PIN SUB-D or RJ45. With the included cables the connection can be established.



- RJ45 to 9-PIN SUB-D Cable



9-Pin SUB-D	RJ45	Signal	Colour	Description
1		-		reserved
2	2	CAN_L (dominant low)	ORG	CAN_L bus line (dominant low)
3	3	CAN_GND	WHT/GRN	CAN ground
4	4	-		reserved
5	6	CAN_SHLD	GRN	optional CAN shielding
6	7	GND	WHT/BRN	optional CAN ground
1	1	CAN_H	WHT/ORG	CAN_H bus line (dominant high)
8	5	-		reserved
9	8	CAN_V+	BRN	optional positive supply voltage

- RJ45 Patch Cable



3.3 Usage and Navigation Concept

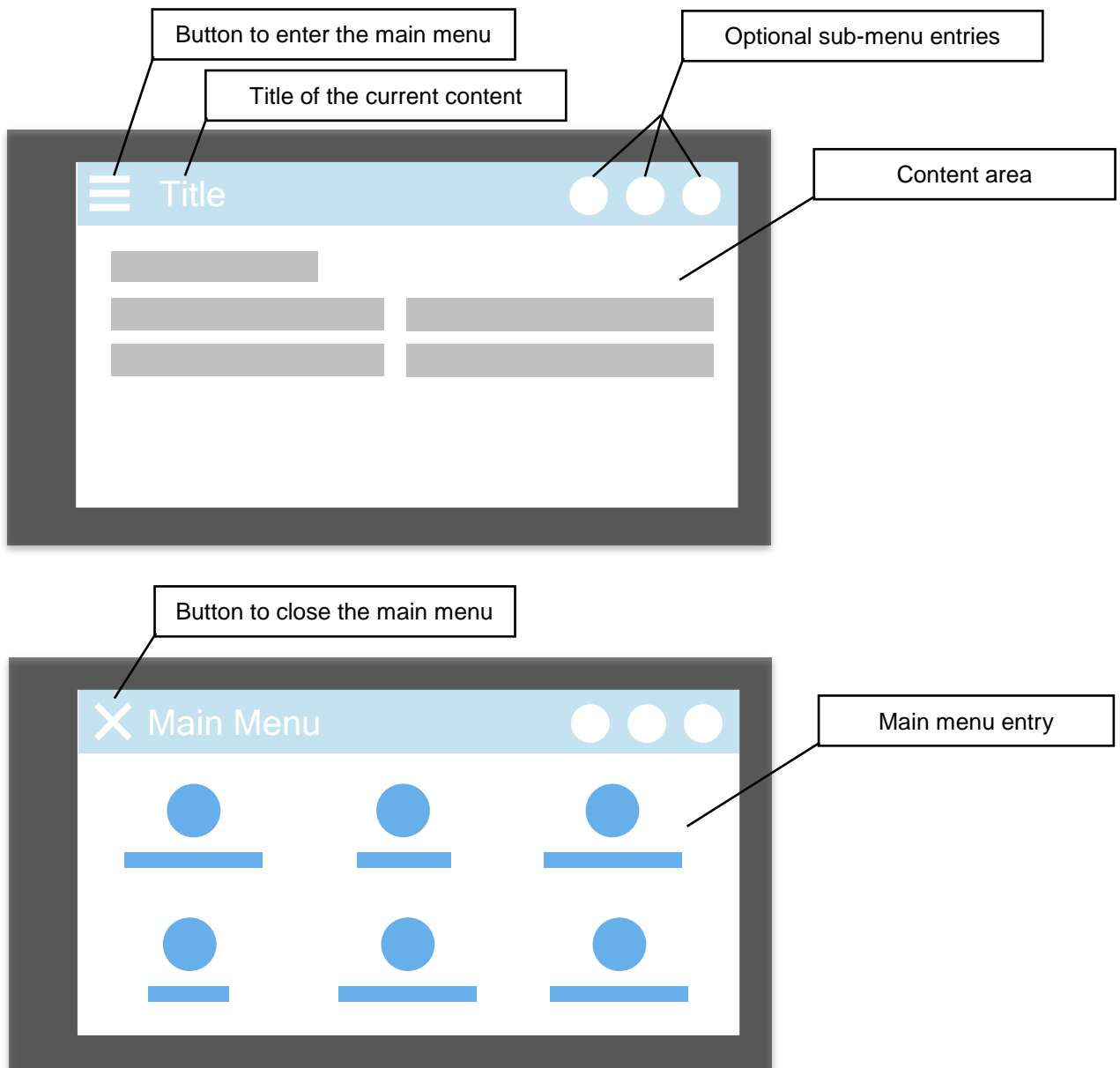
eUV Touch devices are controlled via a touchscreen, whereby the navigation concept was designed in a way that all operations can be performed by single-click actions, i.e. no long-click or double-clicks are needed for using eUV Touch. Some components support swipe actions to use them more efficiently, however, such components are also fully usable with single-click actions.

The eUV Touch application facilitates a navigation bar in the top area, which includes a menu icon, the title of the current content and an optional icon-based sub-menu.

The navigation between the main pages of eUV Touch is done via the main menu. The main menu can be opened at any time by clicking on the menu icon in the navigation bar.

Analogously, the main menu can be closed by clicking on the close icon in the navigation or by clicking on a menu entry.

The following illustration shows the basic usage and navigation concept.

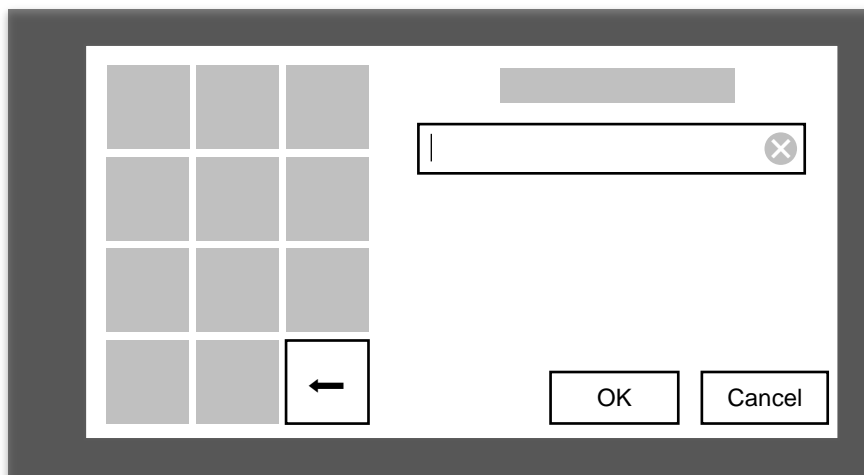
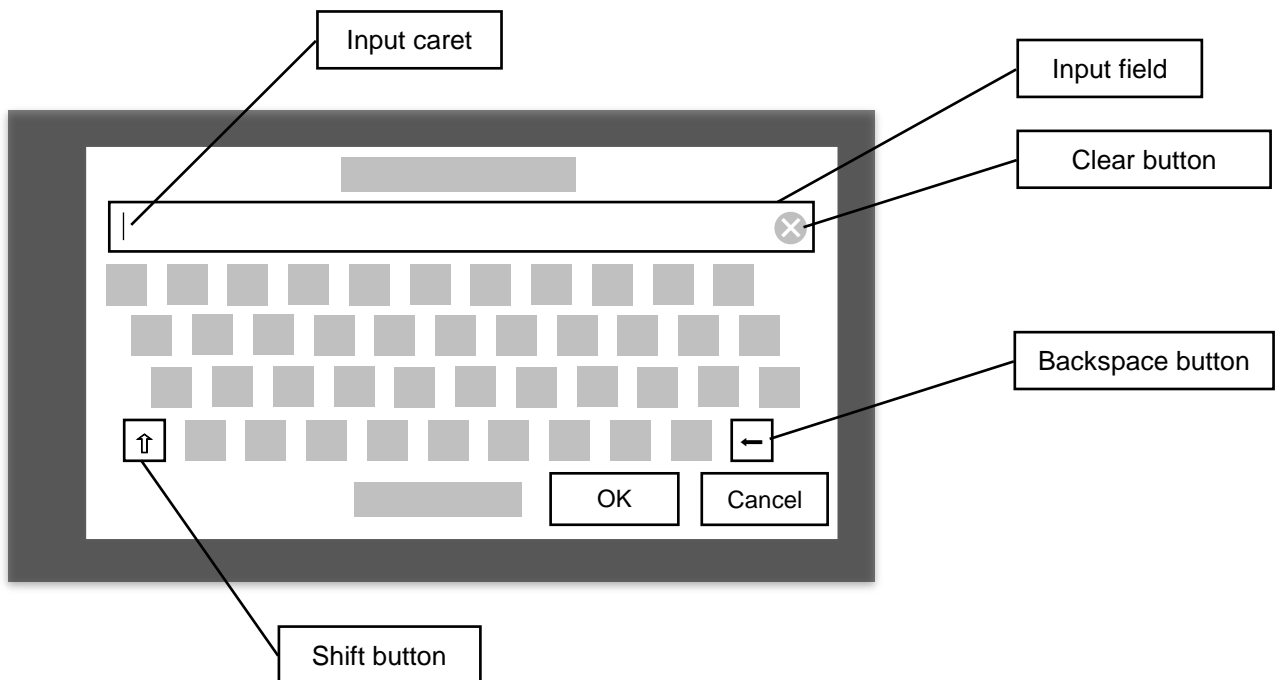


3.4 Software-Keyboard Input

Some use-cases require the input of numbers or text. For this purpose, eUV Touch devices provide both, a numeric keyboard for entering integer and decimal numbers, as well as a QWERTY keyboard for entering text. Both keyboards are shown in full-screen mode. The following illustrations show the layout and the important elements of the keyboards.

The *input field* is initially populated with the current value of the selected *input field*. The *input caret* indicates the current input position. The caret can be moved freely by swiping over the text to change the input position. The character left to the caret position can be deleted by pressing the backspace button. The *input field* can be cleared completely by pressing the *clear button*.

New characters can be input by clicking the respective input buttons. Finally, the input can be confirmed by the OK button. Confirming an empty input will assign the defined default value for the input field. Cancelling the input will dismiss the keyboard without applying the new input.



4 Turning on

An eUV Touch device does not provide an explicit switch for turning it on or off. The device is turned on by providing DC 5V via the micro USB port of the device. Immediately after the device is powered the screen will turn on and the startup procedure is initiated. The device may also be turned on if no physical connection is established to an Electronic Ballast.



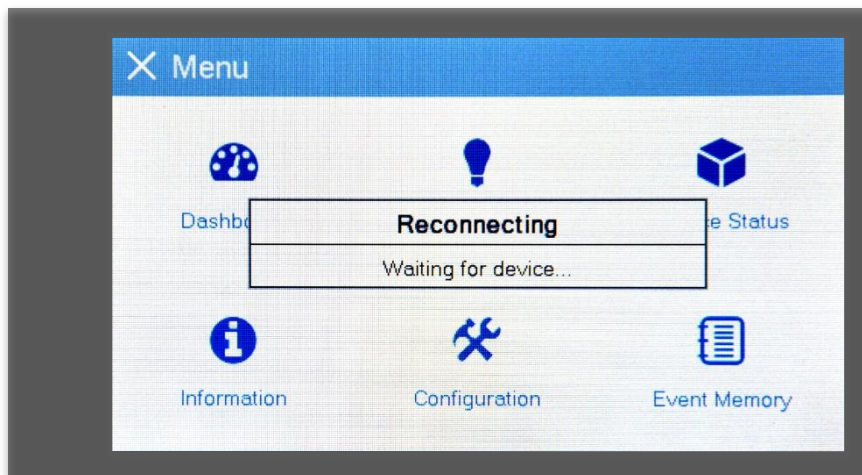
NOTICE

Due to the fact that the eUV Touch device does not provide an on/off switch, a device restart has to be performed by disconnecting and reconnecting the power supply of the device.

5 Startup

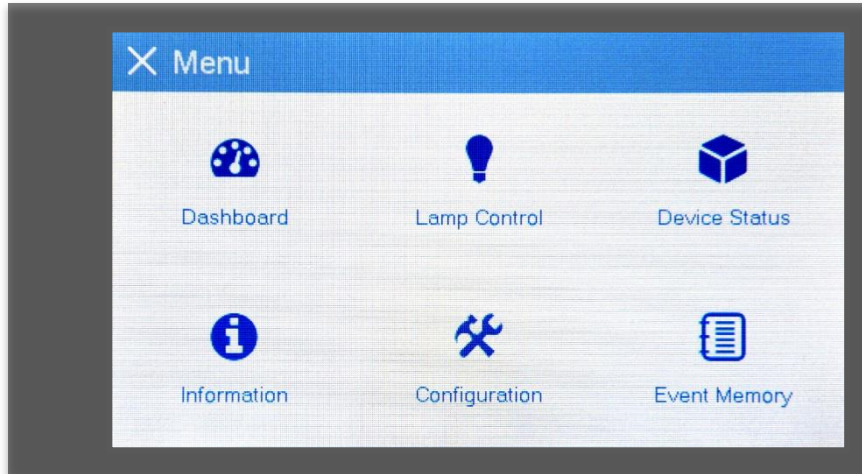
After the eUV Touch is turned on it will automatically boot the application, which is visually indicated. The boot process takes about five to ten seconds.

If a connection to an Electronic Ballast is present, the application will enter its main menu after the boot process has finished, otherwise it will indicate that the connection was not established via a non-dismissible dialog. The application will try to reconnect to the Electronic Ballast automatically. The below image shows eUV Touch in automatic reconnect mode.



6 Main Menu

The main menu of eUV Touch consists of six menu entries. The below image shows the structure of the main menu.



The main menu can be closed at any time with the close button on the top left of the screen, respectively can be reopened at any time by pressing the menu button. Closing the main menu via the close button will go back to the currently active page. After startup, the initially active page is the *Dashboard*.

The entries of the main menu are linking to individual main pages, which are roughly covering the following content:

1. Dashboard
The *Dashboard* page gives a quick visual view on the Electronic Ballast's voltage, lamp current and power status.
2. Lamp Control
The *Lamp Control* page allows to control the connected lamp, i.e. enabling and disabling the lamp and defining the power setpoint.
3. Device Status
This page gives detailed information about the status of the Electronic Ballast, as well as the connected lamp.
4. Information
The *Information* page shows persistent details about the Electronic Ballast, such as the serial number, firmware version, device description, operating times and operating counters etc.
5. Configuration
This page allows to configure the behavior of the Electronic Ballast, e.g. the warm-up and operational limits of the power setpoint.
6. Event Memory
The *Event Memory* page allows to load the actual event memory from the Electronic Ballast. The event memory logs operational and failure states of the Electronic Ballast individually and is primarily used to diagnose error states or misbehavior.

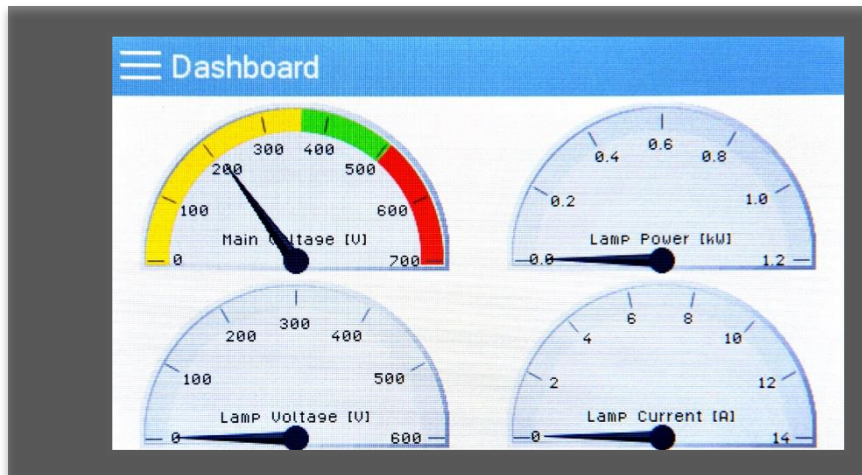


NOTICE

The *Event Memory* page is password protected to limit the access to authorized users only.

7 Dashboard

The following image shows an exemplary screenshot of the *Dashboard* page. The *Dashboard* page does not allow any input and should be considered as a visualization of the current Electronic Ballast status only.



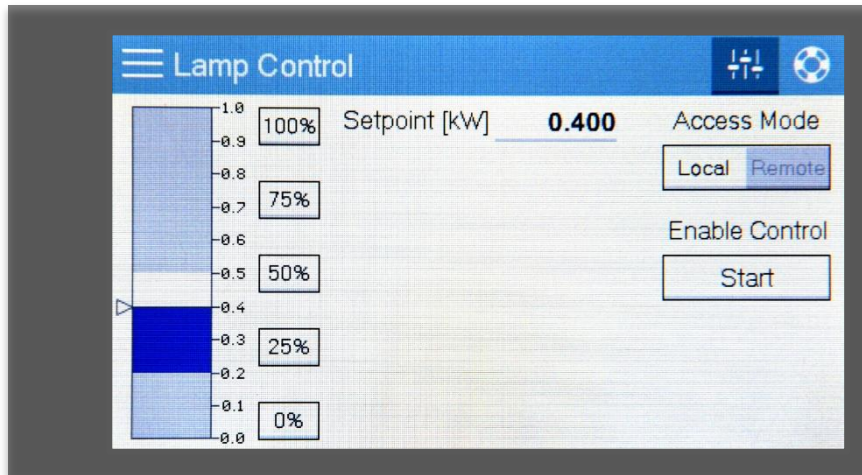
The below table gives a detailed overview over the shown values and their description.

Value	Unit	Description
Mains Voltage	V	Voltage of the mains input of the Electronic Ballast.
Lamp Power	kW	Power of the connected lamp.
Lamp Voltage	V	Voltage of the connected lamp.
Lamp Current	A	Current drawn by the connected lamp.

8 Lamp Control

The *Lamp Control* page allows the user to control the Electronic Ballast, i.e. enabling output, defining the setpoint and switching the access modes. Generally, an Electronic Ballast can only be controlled via eUV Touch if the access mode is set to *Local*. The sub-menu of the *Lamp Control* page allows to directly switch to the *Device Status* page.

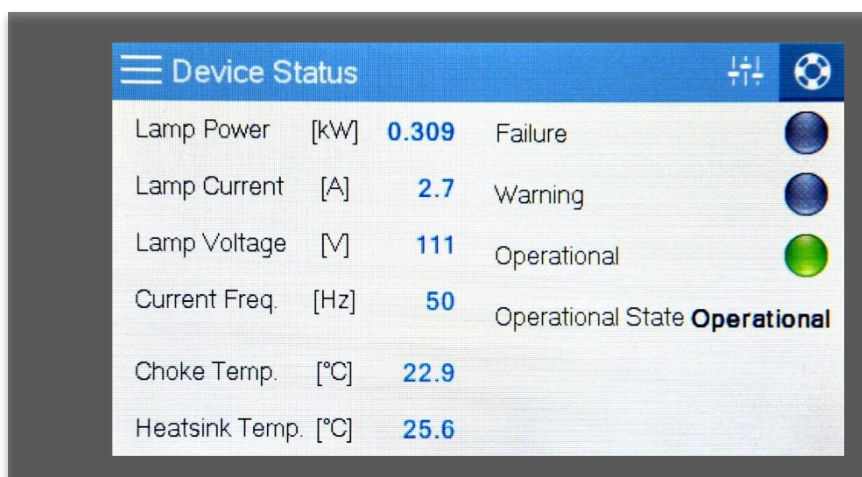
The below image shows the *Lamp Control* page in *Local* access mode, i.e. all controls are enabled. The access mode is switched by toggling the *Local/Remote* button. Enabling the output of the Electronic Ballast can be done by clicking on the *Start* button, respectively can be disabled by clicking on the *Stop* button. The lamp power setpoint can be controlled by clicking or swiping the slider's handle, the text input or by frequently used percent values via the buttons to the right of the slider.



9 Device Status

The *Device Status* page is a visualization of the device and lamp state. The current general state, i.e. error, warning and operational state, of the Electronic Ballast is indicated by three LEDs, as well as a textual description of the state, including error and warning descriptions. Furthermore, the *Device Status* page shows the following values in textual form:

Value	Unit	Description
Lamp Power	kW	Power of the connected lamp.
Lamp Current	A	Current drawn by the connected lamp.
Lamp Voltage	V	Voltage of the connected lamp.
Current Frequency	Hz	The current frequency of the device input.
Choke Temperature	°C	Temperature of the Electronic Ballast's choke.
Heatsink Temperature	°C	Temperature of the Electronic Ballast's heatsink.



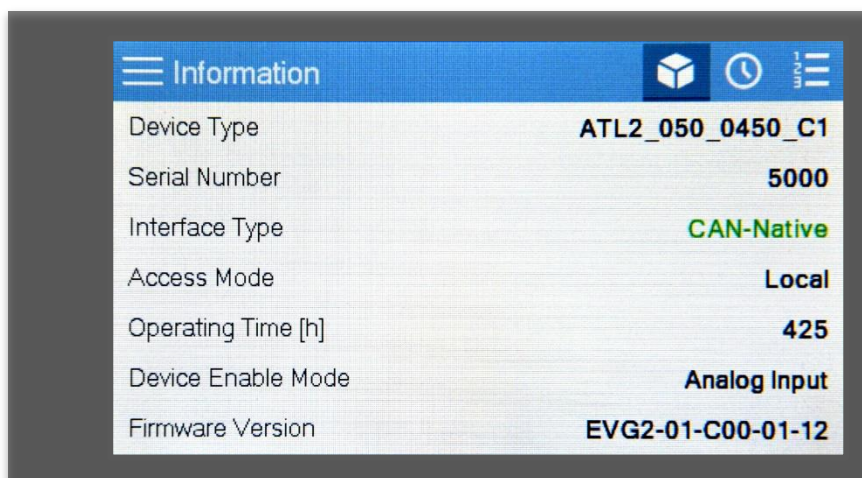
10 Information

The *Information* page consists of the following sub-pages, each showing different device information categories:

1. Device Information
2. Operating Times
3. Operating Counters

10.1 Device Information

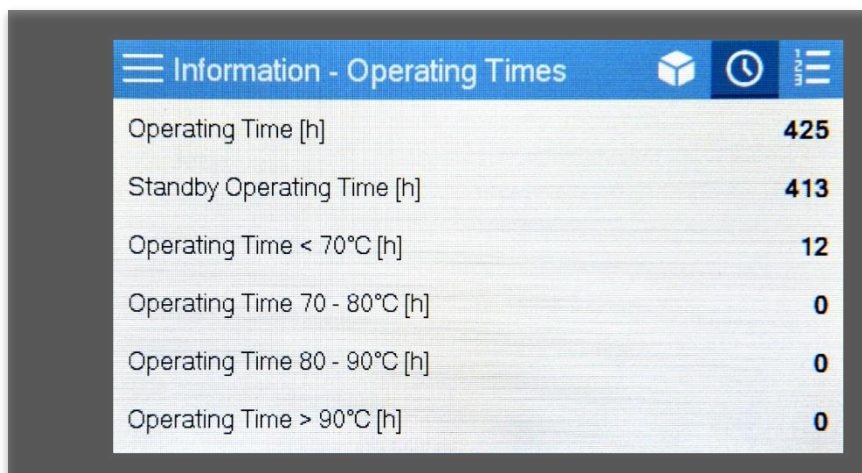
This page gives a quick overview of the connected Electronic Ballast, e.g. the actual device type, firmware version etc. The below image shows an exemplary image of the *Device Information* page.



Information	
Device Type	ATL2_050_0450_C1
Serial Number	5000
Interface Type	CAN-Native
Access Mode	Local
Operating Time [h]	425
Device Enable Mode	Analog Input
Firmware Version	EVG2-01-C00-01-12

10.2 Operating Times

This page shows Electronic Ballast-internal time trackers for different device states. The following image shows an example of the *Operating Times* page.



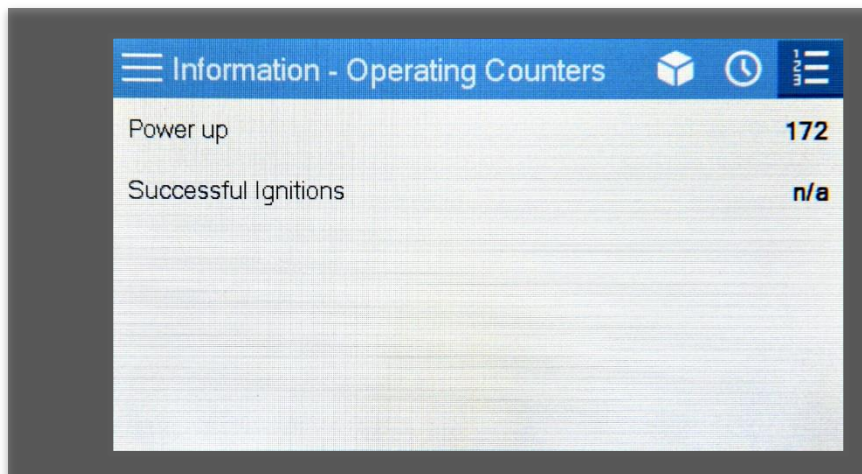
Information - Operating Times	
Operating Time [h]	425
Standby Operating Time [h]	413
Operating Time < 70°C [h]	12
Operating Time 70 - 80°C [h]	0
Operating Time 80 - 90°C [h]	0
Operating Time > 90°C [h]	0

The page is covering the following values:

Value	Unit	Description
Operating Time	h	The time the Electronic Ballast was powered.
Standby Operating Time	h	The time the Electronic Ballast's output was turned off.
Operating Time < 70°C	h	The time the Electronic Ballast's output was turned on and the device temperature was below 70°C.
Operating Time 70 - 80°C	h	The time the Electronic Ballast's output was turned on and the device temperature was between 70°C and 80°C.
Operating Time 80 - 90°C	h	The time the Electronic Ballast's output was turned on and the device temperature was between 80°C and 90°C.
Operating Time > 90°C	h	The time the Electronic Ballast's output was turned on and the device temperature was over 90°C.

10.3 Operating Counters

This page shows the Electronic Ballast-internal counter in occurrences of device power-ups and successful lamp ignitions. The following image represents an exemplary image of this page.



NOTICE

Not all Electronic Ballast's support the feature to count successful lamp ignitions. If the device does not support this feature, the missing value is indicated by *n/a*.

11 Configuration

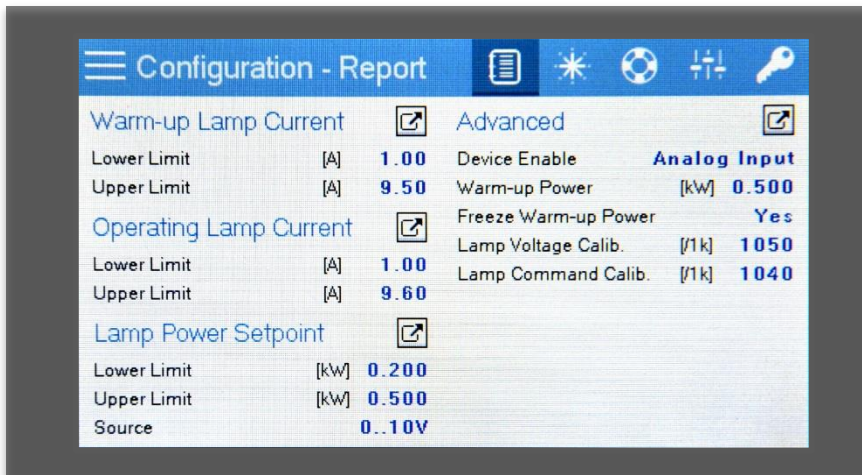
The *Configuration* page consists of four sub-pages:


1. Configuration Report
2. Warm-up Lamp Current Configuration
3. Operating Lamp Current Configuration
4. Lamp Power Setpoint Configuration
5. Advanced Configuration

11.1 Configuration Report

The *Configuration Report* shows a summary of the current Electronic Ballast's configuration. The report also provides quick links located to the right of each configuration category to change the current configuration. The individual configuration categories can also be accessed by the sub-menu in the top right.

The below image shows an exemplary configuration report.

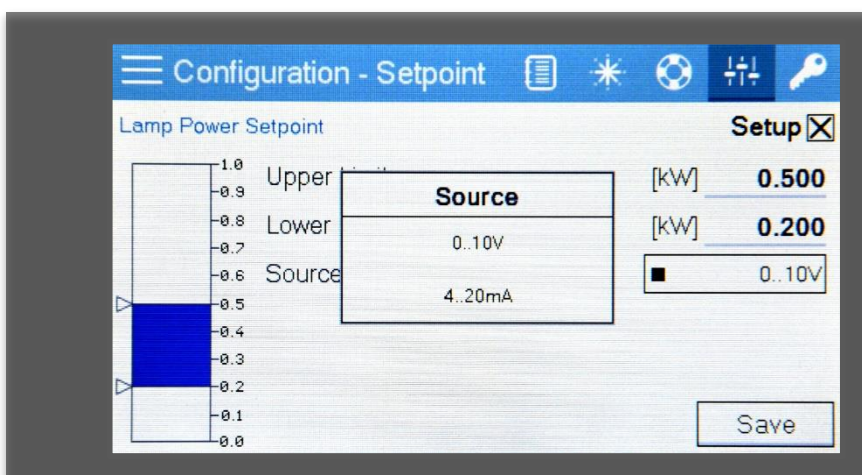


 **NOTICE**
The *Advanced* category is only visible if the user has been authorized beforehand.

11.2 General Device Configuration

The general device configuration, that is the device’s behavior for each phase, i.e. warm-up phase and operational phase, as well as the general configuration for the lamp power setpoint, all follow the same concept. To re-configure an Electronic Ballast via eUV Touch, first, the configuration page must be enabled by checking the *Setup* checkbox. This action will enable the controls to change the configurable values. After the desired changes have been done, the configuration can be persisted by clicking the *Save* button. eUV Touch will automatically leave the setup mode and will respond whether the save operation was successful or not.

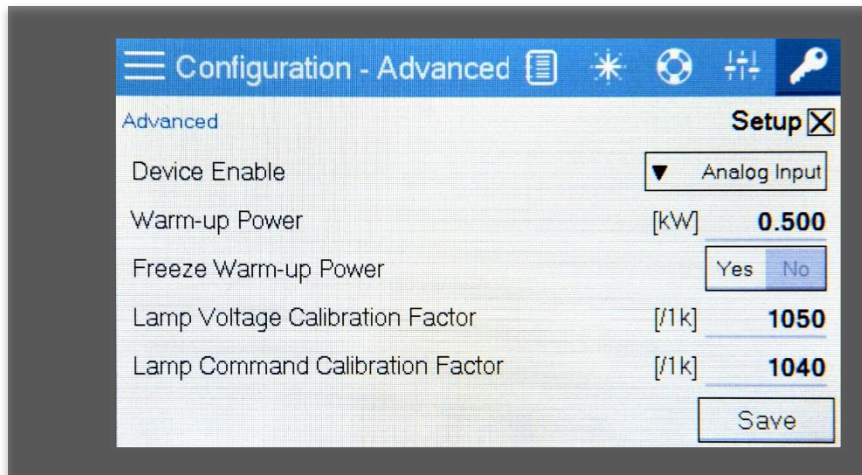
The following image shows the configuration page for the lamp power setpoint in setup mode as an example.



11.3 Advanced Configuration

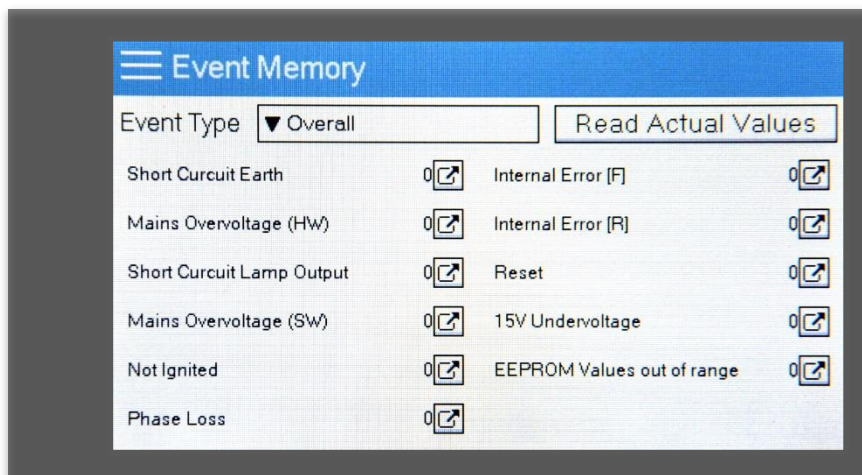
The password-protected device configuration allows to change advanced and device-specific configurations of the device, such as individual calibration factors. The advanced configuration can be updated by activating the *Setup* checkbox. The new configuration can be persisted by clicking the *Save* button. eUV Touch will automatically leave the setup mode and will respond whether the save operation was successful or not.

The following image shows the advanced configuration page in setup-mode before saving.




12 Event Memory

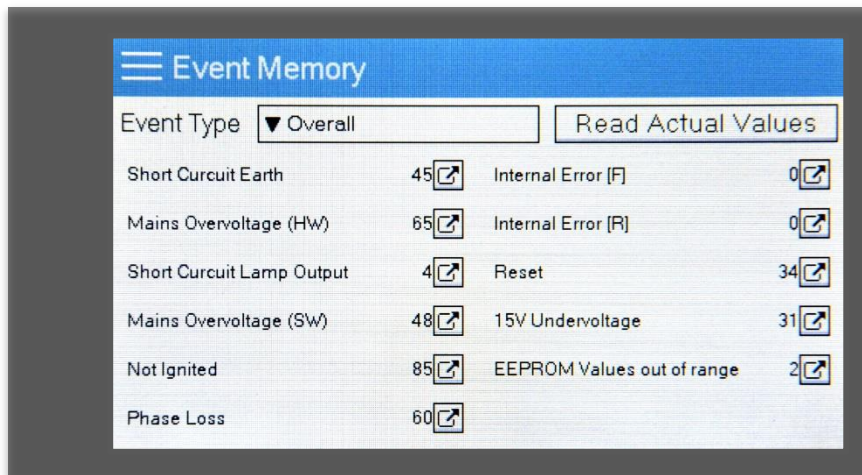
The *Event Memory* page allows to access the Electronic Ballast-internal activity and error log. Below image shows a screenshot of the initial Event Memory page.



To populate the page, it is necessary to download the values from the Electronic Ballast by clicking the *Read Actual Values* button. This action will open a dialog asking whether the Electronic Ballast should be reset before loading the values. Proceeding without resetting the Electronic Ballast will load all values which were logged until the last reset of the Electronic Ballast. Proceeding with resetting the Electronic Ballast will load the most actual values, however, resetting the device may lead to a power-off of the connected lamp.

 **ATTENTION**
Loading the event memory with a Electronic Ballast reset will power-off the connected lamp. It is highly recommended NOT to perform this action if the Electronic Ballast is in *Warm-up* or *Operational* state.

The following image shows a populated overall view of the *Event Memory* page.



After loading the values, the page shows an overview of all logged events along with their respective count. To access details of a specific event you either can click on the link button next to an event memory entry or selecting the corresponding event in the dropdown list.