EZ2

BUS monitoring system

OPERATING MANUAL

Gessler

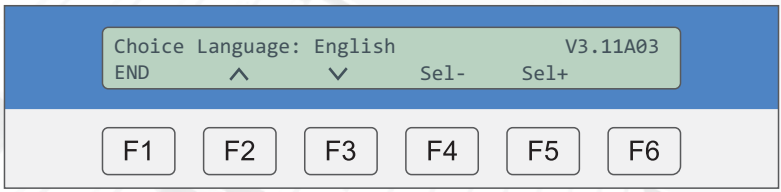
Step 1

English-speaking users please note: First of all, you should change the system language to English. Proceed as follows.

Setting system language

You have the option to select the system language.

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



Press **F4** [Sel-] or **F5** [Sel+] to select the language: German/English/Norwegian/Spanish/French

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1.1 System description

The **EZ2 BUS monitoring system** is a fully automated, microprocessor-controlled testing device. It comes with a plain text display for quick troubleshooting, showing detailed fault messages, indicating the location of the problem..

GENERAL
The self-contained monitoring system from Gessler can monitor up to 999 consumers from a central point in the building. The luminaires are connected via a 2-wire BUS cable. The BUS cable (J-Y-(ST)-Y 2x2x0.8mm^2) can be installed in star, stub or mixed topology (no ring).

MONITORING
As soon as a connected consumer is affected by a fault or malfunction, the problem is detected by the BUS monitoring system, which then generates a fault message. Faults are indicated on the backlit LED display and can also be output through a serial printer interface.

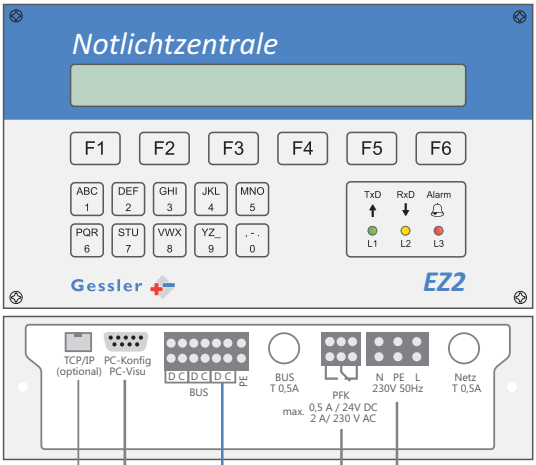
TEST FUNCTION
The BUS monitoring system performs weekly function tests as required by according to the VDE regulations. These tests are initiated and performed automatically, whereby the operator can choose the test time. All fault messages and events are logged for a period of 4 years.

FAULT OUTPUT
The faults are displayed in plain text on the display (e.g. battery voltage too high/low, rectifier fault, lamp fault or communication error).

1.2 Technical data

Input voltage	230V AC 50Hz
Power	14VA
Current consumption	max. 400mA
BUS voltage	max. 24V DC
BUS outputs	6
Interfaces	RS232 (printer & PC), Bluetooth (optional)
Max. address range	999
Fault signal contact (floating)	max. 0,5A / 24V DC, max. 2A / 230V AC
Temperature range	+10° C to +45° C
Housing material	Plastic
Housing colour	RAL 7035
Cable inlets	Bottom/rear
Degree of protection	IP 54
Insulation class	I
Dimensions	180 x 213 x 98 mm
Installation	Wall mounting

BUS topology and wiring diagram



EZ2-Web *(optional)*

Access via TCP-IP

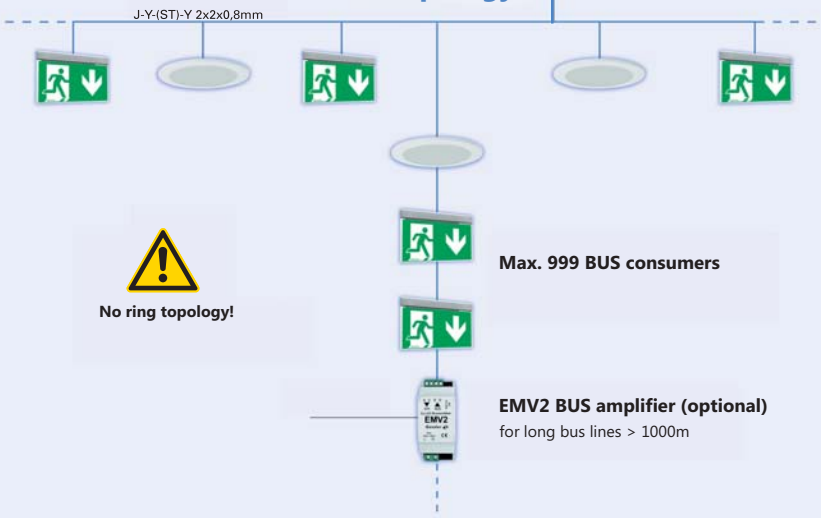
The EZ2 can be accessed through a standard web browser. The integrated visualisation software allows for user-friendly control and monitoring of the entire emergency lighting system.

PC visualisation

GLT

Power supply 230V, 50 Hz

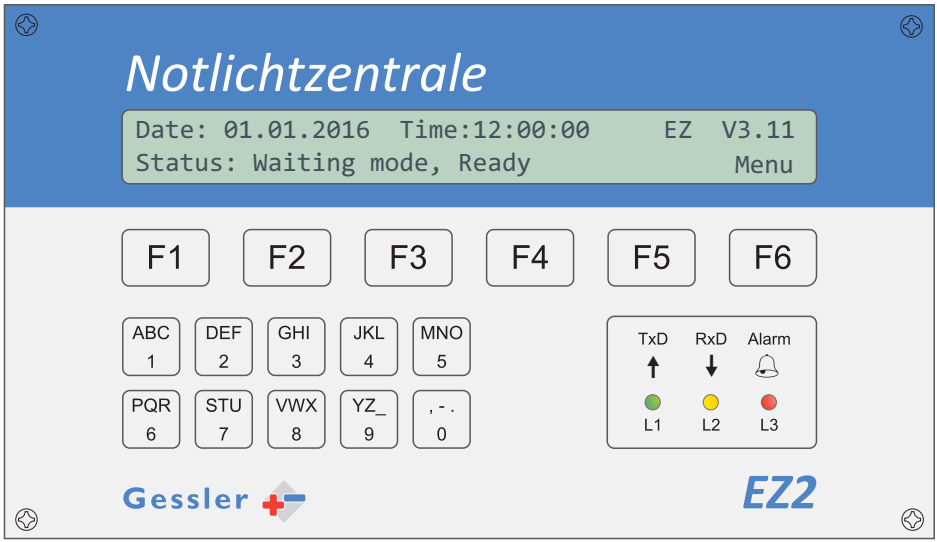
BUS Topology



3.1 Operation of EZ2

The EZ2 is equipped with a foil keypad for easy operation:

- The menus are accessed by means of the six function keys **F1** to **F6**.
- To facilitate navigation and operation, the command is displayed above the associated function key.
- In the above example **F6 = [Menu]**
- The **numerical buttons** are used to enter numerical values and shortcut commands.



3.2 Commissioning of EZ2

» Step 1

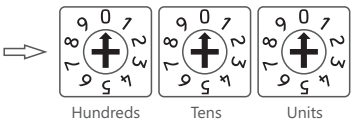
- Install the luminaires according to the ceiling layout

» Step 2

- Connect the luminaires to the power supply 230V/AC (continuous phase) and mount the batteries

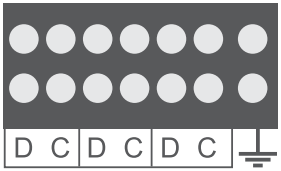
» Step 3

- Install the bus lines according to the wiring diagram and connect them to the luminaires (observe topology, see **page 6**).
- Assign the addresses to the luminaires according to the installation plan.



» Step 4

- Connect the EZ2 to the 230V/AC power supply and switch it on



EmLOC-BUS

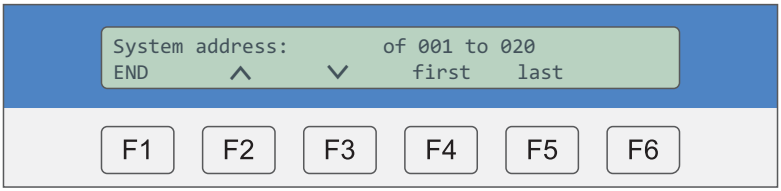
BUS connection of EZ2:

To shield of the BUS line should be connected only at the EZ2 side in order to prevent logging errors.

» Step 5

- Set the address range to be monitored by the EZ2

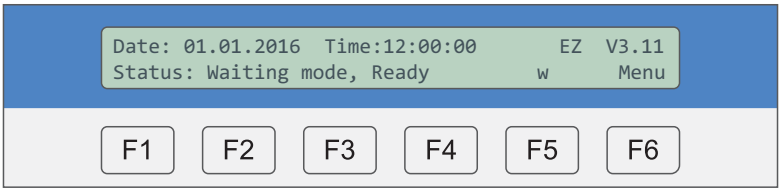
  [Menu] > [Syst.]



» Step 6

- Start the function test by pressing the following keys (shortcut command): A+P

The EZ2 sends the "start function test" command to all addresses. Display:



Please note: The above shortcut command can only be entered in the status menu (see **chapter 4.2**)! Wait until the test is completed.

» Step 7

- Call up test log to verify the test results (see **chapter 5.2**)

[Menu] > [T-STAT] > [Error]

To navigate to next fault message, press **F4 / F5 [< / >]**.

Example: A communication error occurred at address 098
Press F3 [location / Error] to toggle between the fault and location text.

See **chapter 5.2.2**: Viewing test results of addresses with faults
See **chapter 6**: Troubleshooting

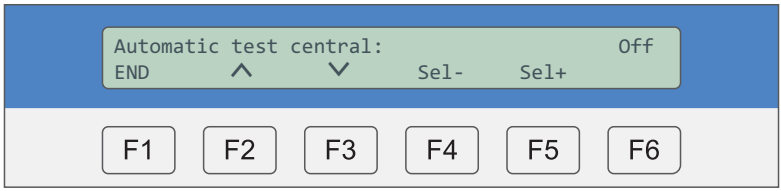
» Step 8

- Configure automatic function test

» Step 8.1

- Define function test intervals

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:

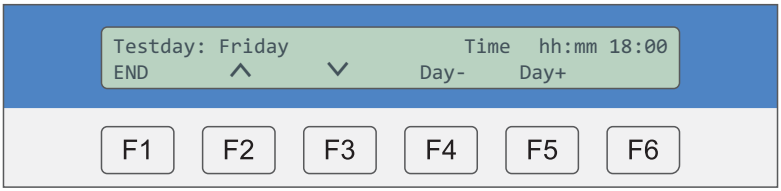


Press **F4**/**F5** [Sel- / Sel+] to select *monthly check / weekly check/ daily check / auto test off*

» **Step 8.2**

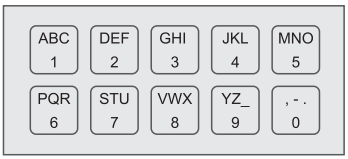
- Set test day and time

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



Press **F4** / **F5** [day -/day +] to select the day of the week.

Enter test time, using the numerical keys:



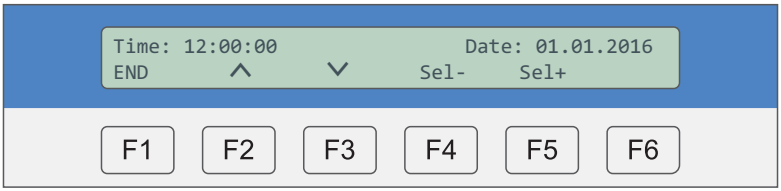
» **Step 9**

- Time settings

» **Step 9.1**

- Set current time and date

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:

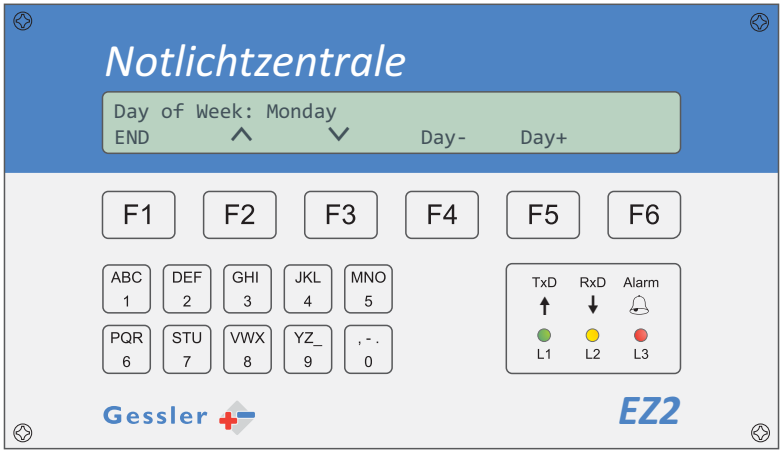


Enter the time and date, using the numerical keys and confirm with **F6**.

» **Step 9.2**

- Set day of week

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



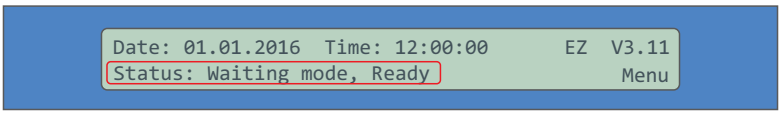
Press **F4**/**F5** [Day -/Day +] to select the day of the week. This entry does not need to be confirmed.

The EZ2 is now fully configured for operation. The system will now automatically perform the programmed function tests. **Your self-contained system is now ready for operation.**

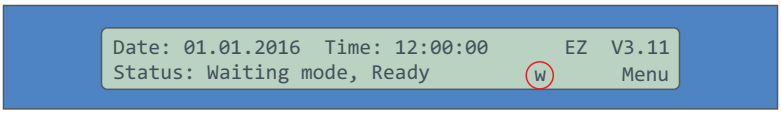
4.1 Status menu

The **status menu** (home menu) is automatically displayed if no key is pressed at the unit for 5 minutes. The top line of the display shows the date, time and software version of the EZ2. The bottom line indicates the current status.

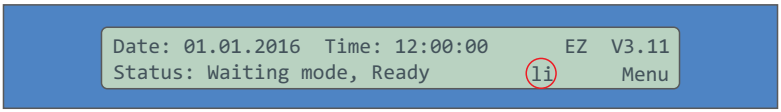
Status: Waiting mode, Ready (system in ready mode)



„w“ indicates that there are test results in the test log

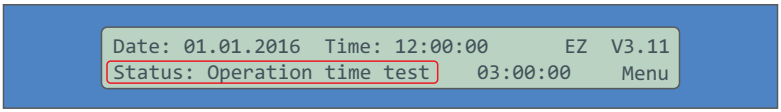


„li“ indicates that the display light is continuously on



Status: Automatic Test runs (system performing function test)

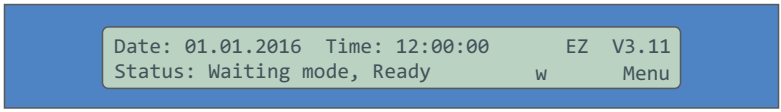
Status: Operation time test (system performing continuous operation test)



The remaining test time is displayed (here: 3 hours)

4.2 Shortcut commands

Shortcut commands can only be used in the **status menu** (home menu). The status menu is automatically displayed, if no key is pressed on the EZ2 for 5 minutes (see display below).



When the status menu is displayed, certain functions for commissioning and fault location can be executed by means of **shortcut commands**. To select a shortcut command, press the key combinations listed below and **confirm with F2**.

Start automatic test	ABC 1 ⇨ PQR 6 ⇨ F2
Start operation time test	ABC 1 ⇨ STU 7 ⇨ F2
Switch on display light	JKL 4 ⇨ DEF 2 ⇨ F2
Switch off display light	JKL 4 ⇨ ABC 1 ⇨ F2
Restart EZ2 (Reset)	PQR 6 ⇨ STU 7 ⇨ F2
Switch BUS watchdog on/off	ABC 1 ⇨ VWX 8 ⇨ F2
Switch emergency lighting blocking on/off	MNO 5 ⇨ ABC 1 ⇨ F2
Automatic search of addresses	ABC 1 ⇨ DEF 2 ⇨ F2
Auto-find restart (for new addresses)	PQR 6 ⇨ ABC 1 ⇨ F2
Assign emergency operating time	ABC 1 ⇨ YZ_ 9 ⇨ F2
Assign groups	GHI 3 ⇨ YZ_ 9 ⇨ F2
Assign operational status	MNO 5 ⇨ YZ_ 9 ⇨ F2
Request continuous monitoring status	DEF 2 ⇨ STU 7 ⇨ F2

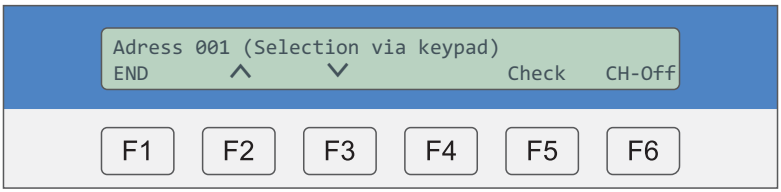
***Request continuous monitoring status**: The EZ2 continuously monitors all connected addresses/luminaires for faults. If required, a delay can be configured for the fault signals (see **chapter 5.4.19**). If continuous monitoring is enabled, no auto tests are performed (see **chapter 5.4.3**).*

5.1 Control menu

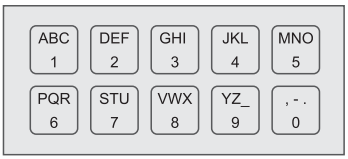
5.1.1 Status of individual addresses

The status of an individual address is displayed on the EZ2 display.

[Menu] > [Hand] > use the arrow keys (**F2**/**F3**) to navigate to the display below:



Enter the address, using the numerical keys:

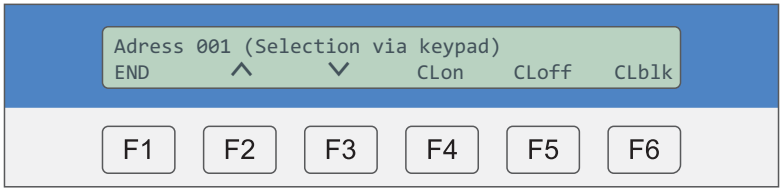


Use the arrow keys (**F2**/**F3**) to the view the information: Device type (e.g. self-contained module/rectifier) / software version / device status / battery voltage / ambient temperature in housing / duration of last mains failure / duration of last function test / result of last function test)

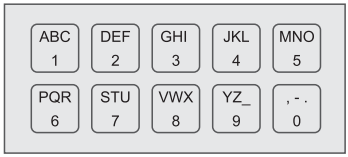
5.1.2 Programming operating mode (continuous/maintained) through EZ2

All Gessler luminaires are factory-configured for maintained operation. The operating mode can only be configured through the EZ2, if there is no continuous light bridge at the mains terminal (L and L' or 1 and 2) of the respective address.

[Menu] > [Hand] > use the arrow keys (**F2**/**F3**) to navigate to the display below:



Programming through EZ2.
Enter the address:

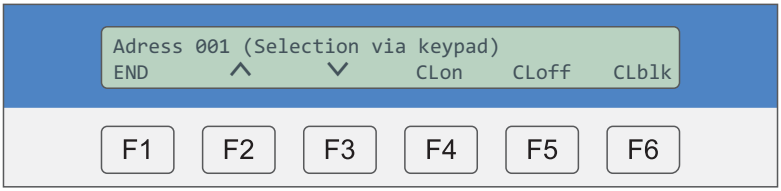


Press **F4** [CLon] to set the luminaire at the address to continuous mode.
Press **F5** [CLoff] to set the luminaire at the address to maintained mode.

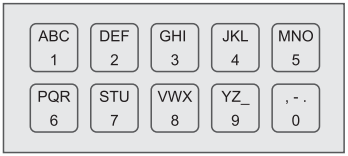
5.1.3 Location check function (briefly lights luminaire at selected address)

This help function is useful to locate specific addresses and to eliminate addressing errors.

[Menu] > [Hand] > use the arrow keys (**F2**/**F3**) to navigate to the display below:



Enter the address, using the numerical keys:



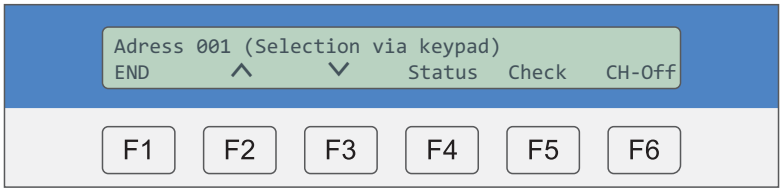
Press **F6** [CLblk] to operate the luminaire at the address in flash mode.

Example:
Address 5 has been assigned twice. Both luminaires with address 5 flash at intervals of 1 second. The addressing error can be eliminated by setting the correct address during or after the test by turning the rotary encoder.

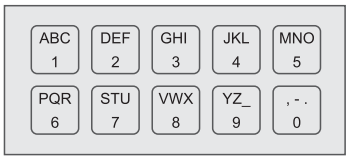
Terminating location check:
- Press the test button at the flashing luminaire(s) twice.
- Start a new function test and check the addressing of the luminaires in question

5.1.4 Starting function test

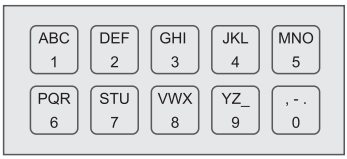
Start an automatic test for an individual address or for all addresses (duration: approx. 30 seconds).
[Menu] > [Hand] > use the arrow keys (**F2**/**F3**) to navigate to the display below:



All addresses: Start automatic test for all addresses (address 000 = all). Enter the target address (000), using the numerical keys:



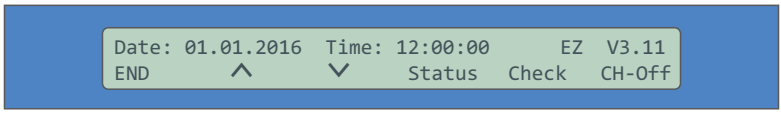
Individual Addresses: Start test for an individual address. Enter the target address (e.g. 005 = address 5), using the numerical keys:



Press **F5** [Check] to start the automatic test. To terminate the test at any point, press **F6** [CH-Off].
To view the test result, press **F4** [Status].

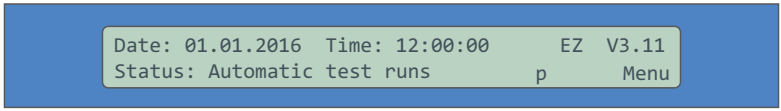
⇨ Additional option

When the status menu is displayed, the function test for all addresses can be started as follows:



Start automatic test 

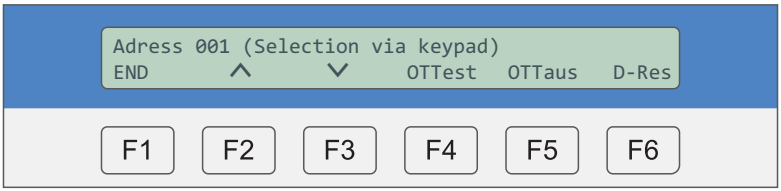
While the test is running, the following status message is displayed:



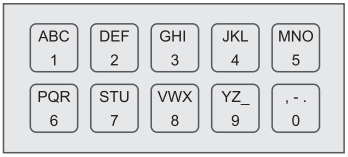
5.1.5 Starting operation time test

Start a operation time test for an individual address or for all addresses (duration: 1h, 3h, 8h).

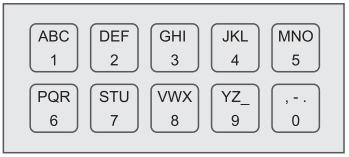
[Menu] > [Hand] > use the arrow keys (F2/F3) to navigate to the display below:



All addresses: Start operation time test for all addresses (address 000 = all). Enter the target address (000), using the numerical keys:



Individual addresses: Start the test for an individual address. Enter the target address (e.g. 005 = address 5), using the numerical keys:

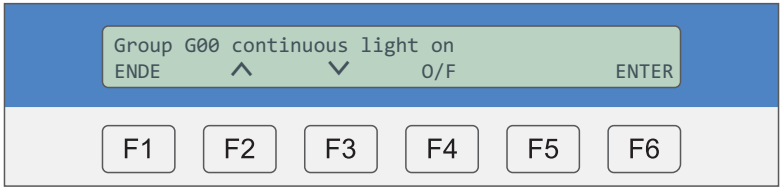


Depending on the configuration, the test takes 1, 3 or 8 hours. To terminate the test at any point, press **F5** [OTTAus].

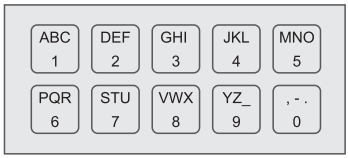
5.1.6 Group: switch on/off manually

Predefined groups (consisting of multiple addresses) can be switched on/off manually at the EZ2.

[Menu] > [Hand] > use the arrow keys (**F2**/**F3**) to navigate to the display below:



Enter the group address, using the numerical keys:



Switching group on:
Press **F4** [O/F] to switch on the group (display message: continuous light on) and confirm with **F6** [ENTER]. All addresses of the group are switched on.

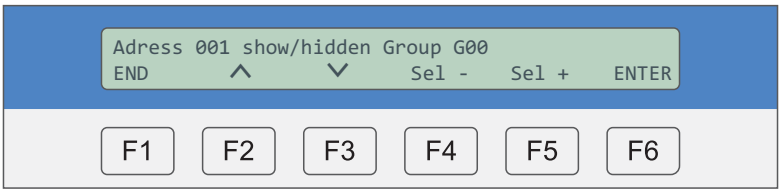
Switching group off:
Press **F4** [O/F] to switch off the group (display message: continuous light off) and confirm with **F6** [ENTER]. All addresses of the group are switched off.

For instructions on how to set up groups, see **chapter 5.4.12**

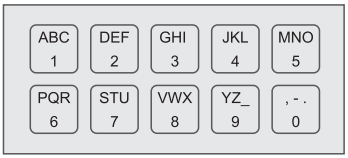
5.1.7 Group: hide/show individual addresses

This function allows you to deactivate individual luminaire addresses that are part of a group.

[Menu] > [Hand] > use the arrow keys (**F2**/**F3**) to navigate to the display below:

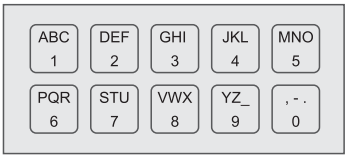


» **Step 1:** Enter the target address, using the numerical keys and confirm with **F6** [ENTER]



» **Step 2:** Press **F4**/**F5** [Sel -/Sel +] to select show or hidden and confirm with **F6** [ENTER].

» **Step 3:** Enter the group, using the numerical keys. Confirm with F6 [ENTER]. The selected address is now shown/hidden.

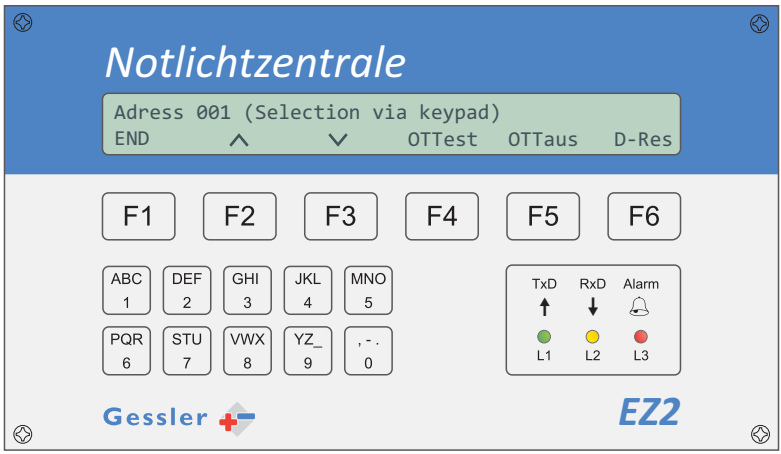


For instructions on how to set up groups, see **chapter 5.4.12**

5.1.8 Deleting test results from luminaire memory

The results of the automatic and operation time tests that are indicated by the status LEDs at the luminaires can be reset and deleted from memory as follows:

[Menu] > [Hand] > enter target address > [D-Res]



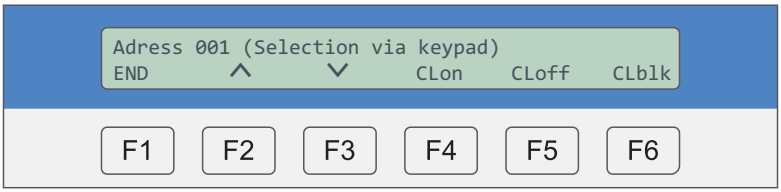
This function is useful to free up memory space in the luminaires.

Example:
- A fault is indicated at address 1 (status LED at luminaire flashes in RED)
- The fault has been rectified (status LED at luminaire continues flashing in RED)
- Delete test results from the memory of this luminaire
- The status LED at the luminaire does no longer indicate a fault

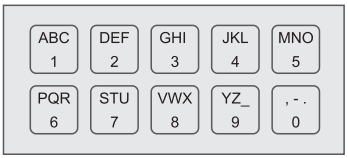
5.1.9 Switching emergency lighting blocking on/off

This function allows you to manually switch on/off emergency lighting blocking at individual addresses (**only in emergency mode!**). Please note that luminaires for which emergency lighting blocking is activated are not switched to battery mode in the event of a mains power failure!

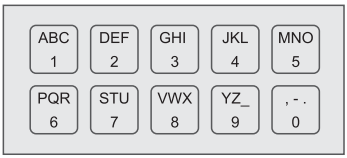
[Menü] > [Hand] > use the arrow keys (F2/F3) to navigate to the display shown below:



All addresses: Block all addresses. Enter the target address (000), using the numerical keys:



Individual adresses: Block individual addresses. Enter the target address (e.g. 005 = address 5), using the numerical keys:



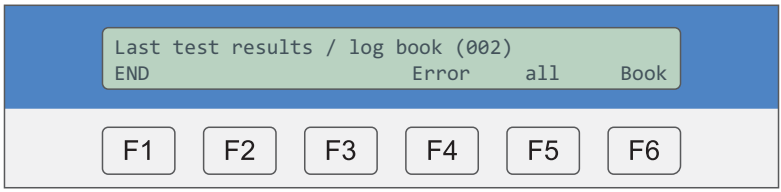
Press **F4** to switch blocking on. Press **F5** to switch blocking off.

5.2 Test log

5.2.1 Viewing test results

This menu enables you to view the results of the last test.
The number of logged tests is displayed in the top right corner (here: 002):

[Menu] > [T-STAT]



Test results can be viewed in a number of ways:

Press **F4 [Error]**	to view only pending faults	→ see **chapter 5.2.2**
Press **F5 [all]**	to view results of all addresses	→ see **chapter 5.2.3**
Press **F6 [Book]**	to view all results of the performed tests	→ see **chapter 5.2.4**

Overview of fault messages (see also **chapter 6**):

» **Communication error**
- BUS cable not connected to EZ2/luminaire or cable break
- Luminaire is in emergency mode or is fully discharged (exhaustive discharge)

» **Battery voltage fault**
- Battery voltage too low or too high
- Battery not connected

» **Battery charging fault**
- Battery cannot be charged (e.g. cell defective)
- Charger of emergency electronics defective

» **Lamp fault**
- Lamp in luminaire defective
- Lamp not connected

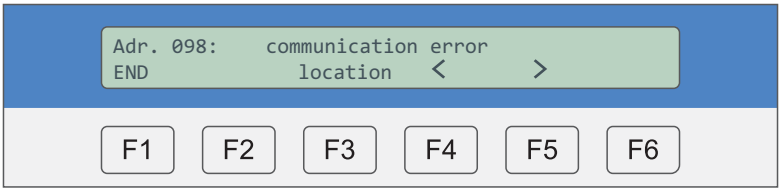
» **Logging error**
- Addressing error (duplication) among connected luminaires
- BUS line too long (>1000m)
- BUS line installed in ring topology

» **Temperature fault**
- Temperature inside luminaire housing >80°C

5.2.2 Viewing test results of addresses with faults

This menu allows you to view only the results from addresses where there is a fault:

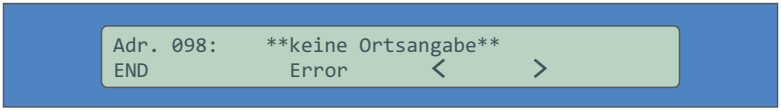
[Menu] > [T-STAT] > [Error]



To navigate to next fault messages, press **F4** / **F5** [< / >].

Note: The first and the last address of the monitored address range are always displayed, even if there are no faults at these addresses. This is done so that the operator can check the monitoring range.

Press **F3** [location/error] to toggle between the fault and location text:



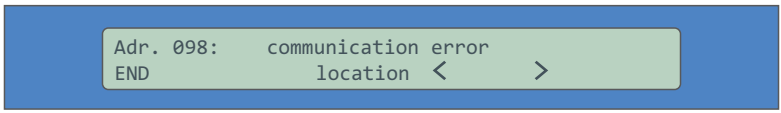
If no location has been entered, **keine Ortsangabe** (no location details) is displayed.
For each address, the operator can enter a location text (max. 30 characters).
This is done through the EZ2-Tool software on the PC.

Press **F1** [END] to return to the previous menu level.

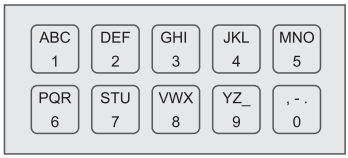
5.2.3 Viewing test results of all addresses

This menu shows the test results of all monitored addresses:

[Menu] > [T-STAT] > [all]



Enter the address, using the numerical keys:



Press **F3** [location/Error] to toggle between the fault and location text.

To navigate to next address, press **F4**/**F5** [</>].

Additional option

Press **F2** [**O/F**] to manually remove the address from the monitored range of addresses. The respective address is then no longer checked during future tests (***hidden***). If a fault occurs at this address, no fault message is triggered. Press the same key combination to include the address again in the monitored range of addresses.

Press **F6** [Status] to view the details of the respective address. The following information is displayed: group assignment, operating mode (continuous/maintained) bridging time (1h, 3h, 8h).

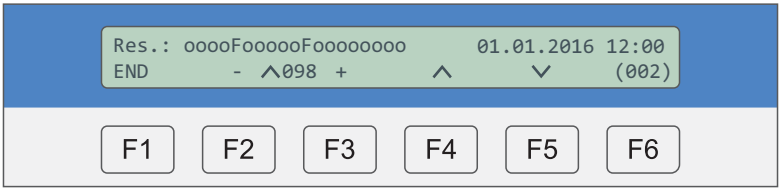
Press **F1** [END] to return to the previous menu level.

5.2.4 Viewing test log entries

In this menu, you can view the results of the performed function and continuous tests. The display shows the addresses at which a fault occurred:
[Menu] > [T-STAT] > [Book]

Displayanzeige:

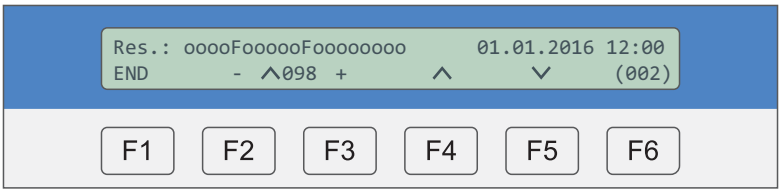
Res.:	status of the luminaires » o = no fault / F = fault
∧ [between F2/F3]	status of the address (here: 098)
F2 / F3 [- / +]	press to navigate through the address range
F4 / F5 [∨/∧]	call up older test results



Manually initiated tests for individual addresses are not included in the log.

5.2.5 Test log shortcut commands

The following shortcut commands are only valid for the log!



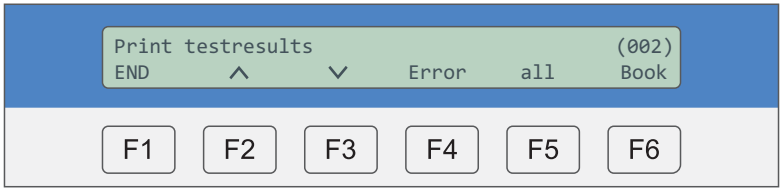
Auto-scroll start/stop	ABC 1 ⇨ STU 7 ⇨ F2
Show first monitored address	DEF 2 ⇨ ABC 1 ⇨ F2
Show last monitored address	JKL 4 ⇨ ABC 1 ⇨ F2

5.3 Print menu

5.3.1 Printing pending fault messages

Pending fault messages can be printed. For printing, connect a standard printer to the RS232 interface. For correct printing, select a terminal font (e.g. Courier).

[Menu] > [Print]



F4 [Error] Print pending faults only.

F5 [all] Print detailed information regarding the status (luminaire OK / fault) of all addresses of the set address range.

F6 [Book] Print summary information regarding the status (luminaire OK / fault) of all addresses of the set address range.

Example:

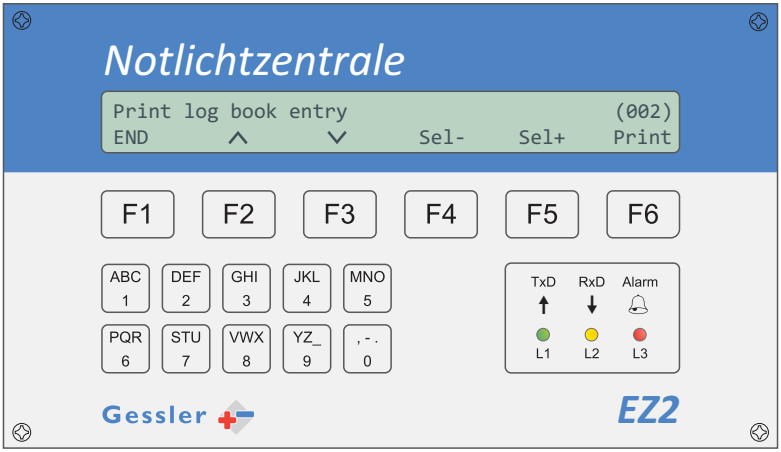
EZ 2 Status Report V3.10	
Date:	08.10.2016
Time:	10:10 h
Adr	Error messages
001	no errors reported
002	no errors reported
003	no errors reported
004	no errors reported
005	no errors reported
006	no errors reported
007	no errors reported
008	no errors reported
009	no errors reported
010	no errors reported
011	no errors reported
012	no errors reported
013	no errors reported
014	no errors reported
015	no errors reported

All print jobs can be viewed and processed with the EZ2-Tool PC software.

5.3.2 Printing old messages

Old fault messages can be printed. For printing, connect a standard printer to the RS232 interface. For correct printing, select a terminal font (e.g. Courier).

[Menu] > [Print] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



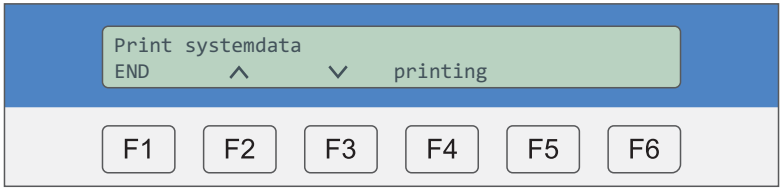
Press **F4** / **F5** [Sel -/Sel +] to navigate to the test logo entry you wish to print (here: 002). The list starts at the latest entry (highest number).

Press **F6** [Print] to print the selected log entry in summary format on the connected printer, or to send it to the EZ2-Tool software for further processing

5.3.3 Printing EZ2 configuration

For printing, connect a standard printer to the RS232 interface. For correct printing, select a terminal font (e.g. Courier).

[Menu] > [Print] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



Press **F4** [printing] to send the system data as a print job to the connected printer or the EZ2-Tool software.

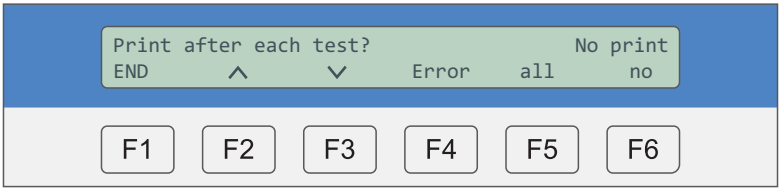
Example:

EZ 2 Status data	V3.10
Day of week: Freitag	
Date: 08.10.2016	
Time: 11:10 h	
First address: 001	
Last address: 100	
Test day: Monday	
Test time: 08:00 h	
Manually initiated printing	

5.3.4 Automatic printing after completion of test

For printing, connect a standard printer to the RS232 interface. For correct printing, select a terminal font (e.g. Courier).

[Menu] > [Print] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



Press **F4** [Error] to automatically print all pending faults.

Press **F5** [all] to print detailed information regarding the status (luminaire OK / fault) of all addresses of the set address range.

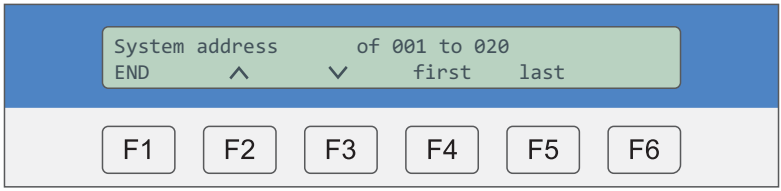
Press **F6** [nein] to disable automatic printing after completion of a function test.
The current settings are shown in the top right corner of the display (here: no printing).

5.4 Settings

5.4.1 Defining address range

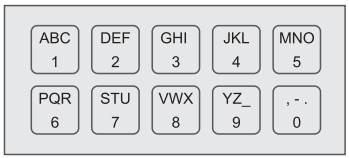
Set the range of addresses to be monitored.

[Menu] > [Print] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



Press **F4** / **F5** [erste/ letzte] to position the cursor so that the first and last address of the range to be monitored can be entered (here: addresses 1 to 20).

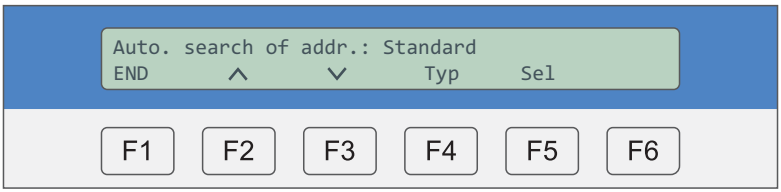
Enter the address:



5.4.2 Finding addresses

There are two search options available:
1. Automatic searching for addresses
2. Searching for new addresses

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



Press **F4** [Typ] to switch between the search options.

Display: **Auto. search of addr.**
All addresses within the set address range are searched for (example: search through addresses 1 to 20).

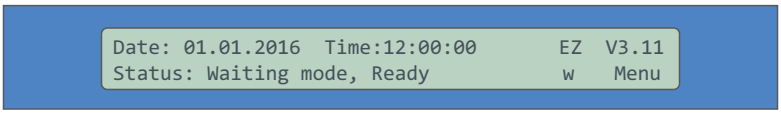
Display: **Search new addresses**
Only addresses that had previously not be assigned are searched for

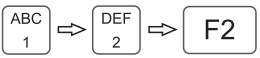
Press **F5** [Sel] to set the search repeat rate from standard (3x) to fast (2x)

All addresses are factory-configured to be searched for up to 3 times. If no response is received after all searches are completed, the EZ2 assumes that the address does not exist.

⇨ Additional option

When the status menu is displayed, the address search can be started as follows:



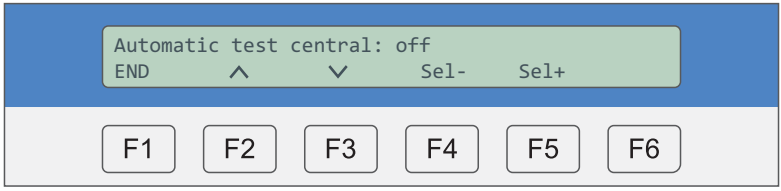
Automatic search of addresses 

5.4.3 Configuring automatic test central

» **Step 1**

Set interval of function tests

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:

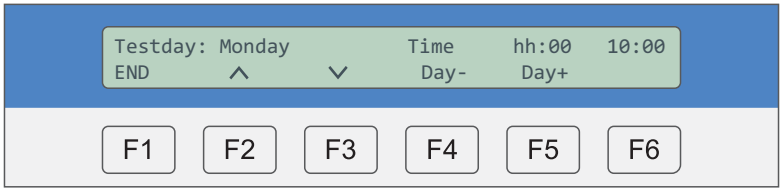


Press **F4** / **F5** [Sel -/Sel +] to select monthly check / weekly check (recommended) / daily check / OFF (no check)

» **Step 2**

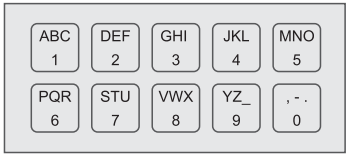
Set test day and time

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



Über **F4 / F5** [Day-/Day+] to select the day of the week.

Enter test time, using the numerical keys:

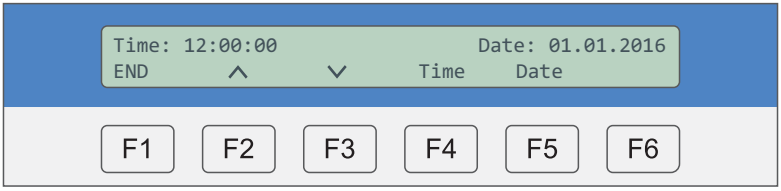


5.4.4 Setting time, date and day of week

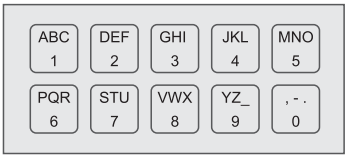
» **Step 1**

Set current time and date.

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



Enter time and date, using the numerical keys:

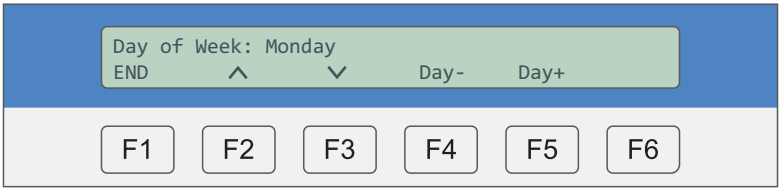


Press **F4**/**F5** [Time/Date] to move the cursor to enter the time or date.

» **Step 2**

Set day of the week.

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:

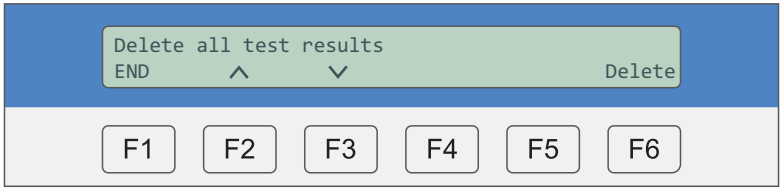


Press **F4**/**F5** [Tag -/Tag +] to select the day of the week.

5.4.5 Acknowledging pending fault messages

Pending faults (see **chapter 5.2.2**: Viewing test results of addresses with faults) can be acknowledged at the EZ2 before starting a new function test.

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



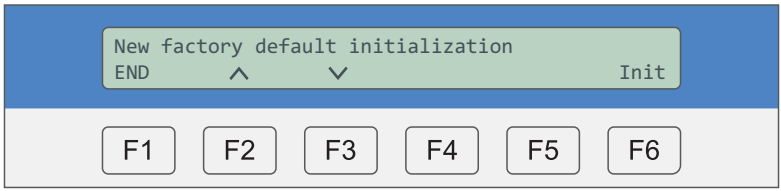
Press **F6** [Delete] to acknowledge all results of the last automatic test.

Note: The related test results in the test log are not deleted.

5.4.6 Restoring factory settings

You can reset the EZ2 to its factory default settings.
Resetting the EZ2 results in the permanent loss of all data!

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



Press **F6** [Init] to restore the EZ2 factory default settings.

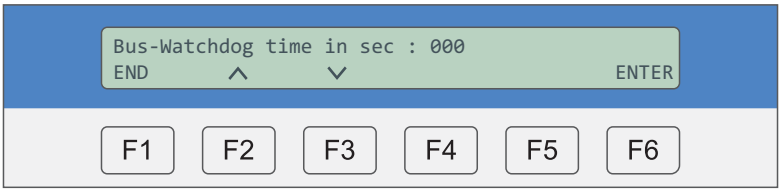
In this process:
- All luminaire texts are deleted
- All system addresses are deleted
- Automatic tests are deactivated
- Date and time are reset
- System addresses 1 to 20 are activated

Please note that any test result entries in the log are not deleted.

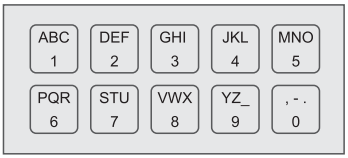
5.4.7 BUS line monitoring (watchdog)

Activate BUS line / wire break monitoring.

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



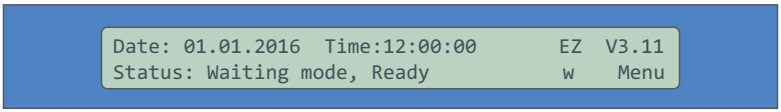
Enter the delay for the LED status indication at the address:

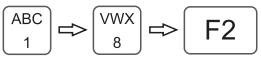


Default settings (recommended): 000 - no watchdog delay
If BUS signalling to the luminaire is interrupted, the status LED flashes twice in green.

⇨ **Shortcut command**

When the status menu is displayed, the BUS watchdog can be activated as follows:

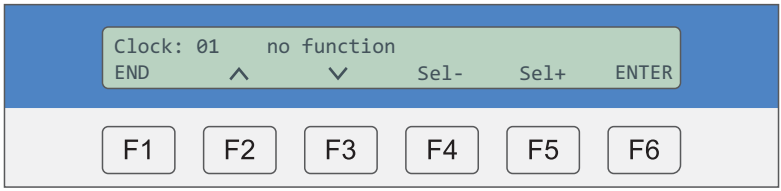


Switch BUS watchdog on/off 

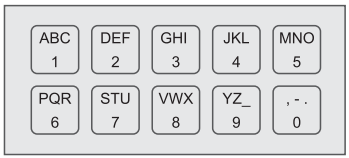
5.4.8 Timer

The timer function allows for automated, timer-controlled switching of addresses.
Note: For instructions on how to switch to daylight saving time, see **chapter 5.4.17**.

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



The EZ2 caters for up to 20 timer actions.
Using the numerical keys, enter the timer you wish to use (here: Timer 01):



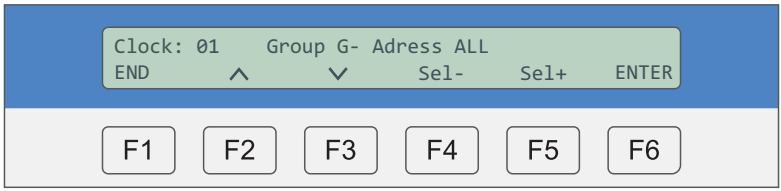
» Step 1

Press **F4** [Sel -] and **F5** [Sel +] to select the desired timer action:
- No function
- Continuous lighting on
- Continuous lighting off
- Emergency lighting blocking on (luminaire not switched in emergency mode)
- Emergency lighting blocking off (luminaire switched in emergency mode)

Example: Timer 01: Continuous light on – Timer 02: Continuous lighting off

Confirm with **F6** [ENTER]**.**

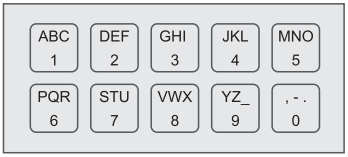
The display changes to:



» **Step 2**

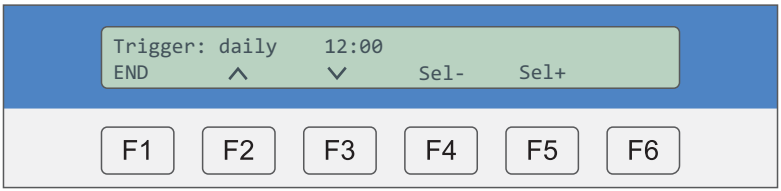
Press **F4** [Sel -] and **F5** [Sel +] to select a group or a single BUS address.

Use the keys to enter the group or the BUS address:



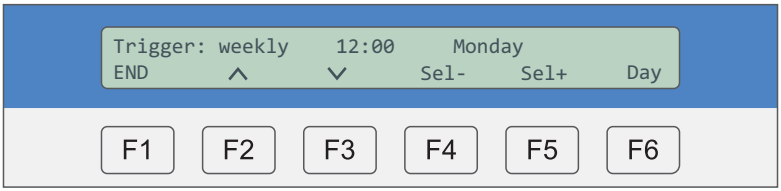
Confirm with **F6** [ENTER].

The display changes to:



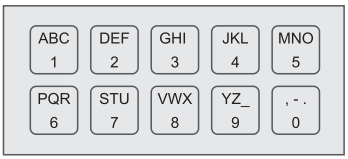
» **Step 3**

Press **F4** [Sel -] and **F5** [Sel +] to set the trigger time (repeat switching): daily / weekly / monthly



•Press **F6** [Day] to select the day of the week
•Press **F6** [Day or Tri] to select the day of the month. Example: TT 10 = every 10th day of the month
•Press **F6** [Day or Tri] to set the switching time. Example: 20:00 o'clock)

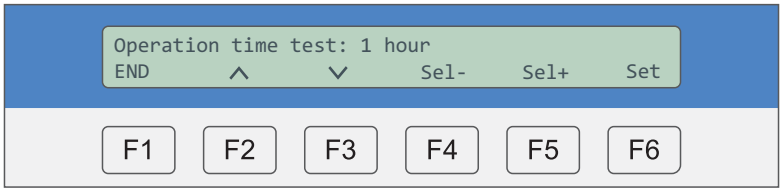
Use the numerical keys to enter the respective value:



5.4.9 Operation time test: test duration

The operation time test must be carried out for 1, 3 or 8 hours, depending on the classification of the respective building.

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:

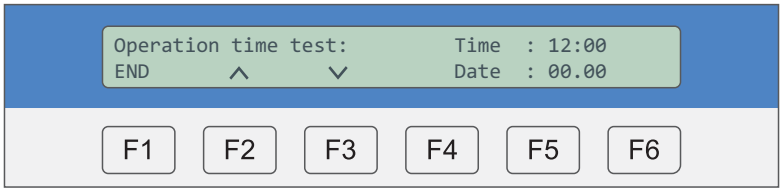


Press **F4** [Sel -] and **F5** [Sel +] to set the duration of the test: Off / 1h / 3h / 8h.
Confirm with **F6** [Set].

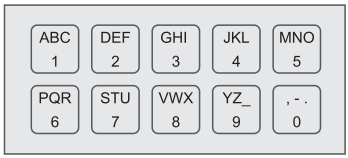
5.4.10 Operation time test: test time

Set the time at which the next automatic continuous operating test is to be started.

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



Enter the start time and date using the numerical keys:



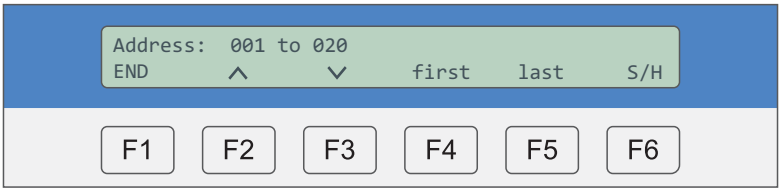
The next test is started automatically at the set time.

Note: In certain countries, automated battery tests are not permissible. In Germany, such tests with automated start times are only permitted, if a number of requirements and standards (DIN EN 62034) are met.

5.4.11 Hiding address(es)

Addresses within the address range that are not assigned must be hidden.
Note: Hidden addresses are not monitored.

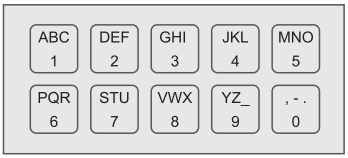
[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



» **Step 1**

Press **F4**/**F5** [first/last] to define the address range to be hidden.

Enter the addresses, using the numerical keys:

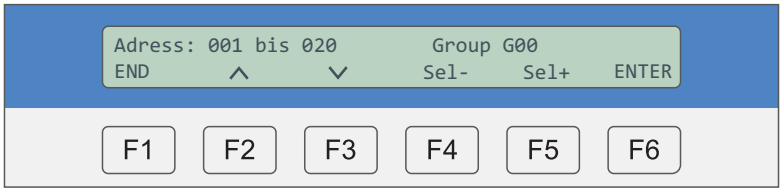


Press **F6** [S/H] to select:
- Hidden » address range is hidden
- Show » address range is active/not hidden

5.4.12 Defining groups

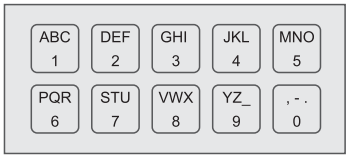
You have the option to combine one or more addresses to form a group. Such groups can then for example be controlled by means of timers.

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



» **Step 1**

Press **F4** [Sel -] and **F5** [Sel +] to position the cursor.
Enter the address or group, using the keys:

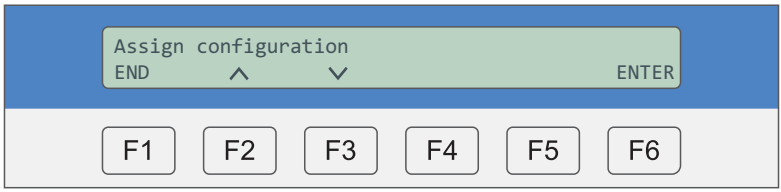


Confirm all changes with **F6** [ENTER].

» **Step 2**

Send the new settings to the respective addresses.

Use the arrow keys (**F2**/**F3**) to navigate to the display shown below:

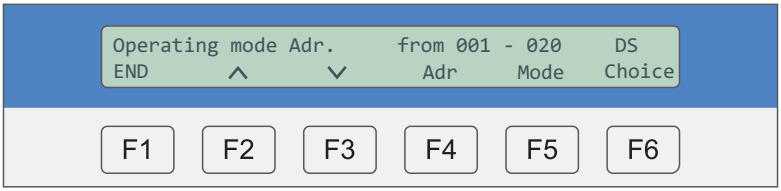


Press **F6** [ENTER] to confirm the settings. "OK" is displayed.
The transfer of the data might take some time, depending on the number of BUS addresses.

5.4.13 Programming operating mode for multiple addresses through EZ2

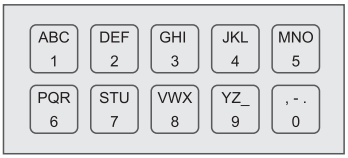
All Gessler luminaires are factory-configured for maintained operation. The operating mode can only be configured through the EZ3, if there is no continuous light bridge at the mains terminal (L and L' or 1 and 2) of the respective address.

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



» Step 1

Press **F4** [Adr] to move the cursor from the first to the last address and vice versa.



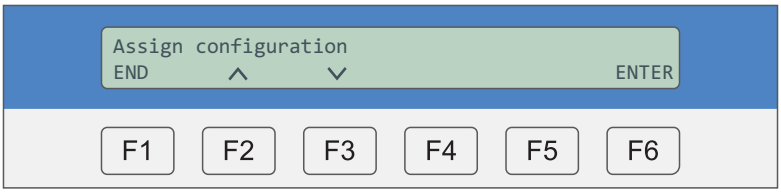
Enter the addresses, using the numerical keys.
Example 1: 001 – 001 » only this luminaire will be programmed
Example 2: 001 – 020 » luminaires 1 to 20 will be programmed

» Step 2

Press **F5** [Mode] to select the operating mode (continuous DS / maintained BS).
Press **F6** [Choice] to confirm the settings » "OK" is displayed. The settings have been applied.

» Step 3

Send the new settings to the respective addresses.
Use the arrow keys (**F2**/**F3**) to navigate to the display shown below:

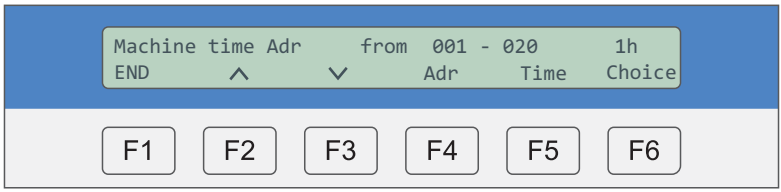


Press **F6** [ENTER] to confirm the settings. "OK" is displayed. The transfer of the data might take some time, depending on the number of BUS addresses.

5.4.14 Programming different operating times (1h, 3h, 8h) through EZ2

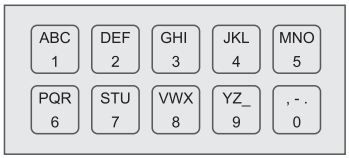
This option allows you to programme individual or multiple addresses through the EZ2 in the event that these need to be monitored with different bridging times (1h and 3h) from a single EZ2. In this menu, you can specify the addresses to which a different bridging time is to apply

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



» **Step 1**

Press **F4** [Adr] to move the cursor from the first to the last address and vice versa.



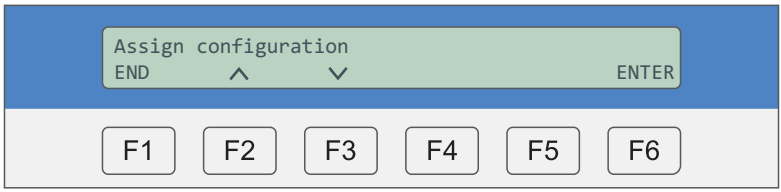
Enter the addresses, using the numerical keys.
Example 1: 001 – 001 » only this luminaire will be programmed
Example 2: 001 – 020 » luminaires 1 to 20 will be programmed

» **Step 2**

Press **F5** [Time] to select the operating time (1h/3h/8h).
Press **F6** [Choice] to confirm the settings. "OK" is displayed. The settings have been applied.

» **Step 3**

Send the new settings to the respective addresses.
Use the arrow keys (**F2**/**F3**) to navigate to the display shown below:

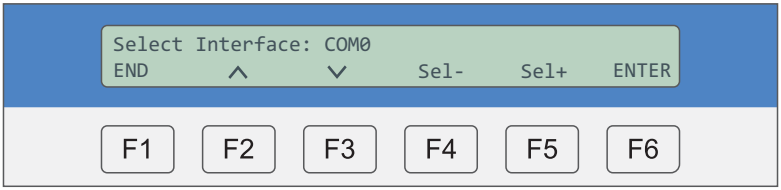


Press **F6** [ENTER] to confirm the settings. "OK" is displayed. The transfer of the data might take some time, depending on the number of BUS addresses.

5.4.15 Selecting PC interface

It is possible to send data from the EZ2 to a PC. To do this, you must select the data interface.
Factory settings: COM0

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



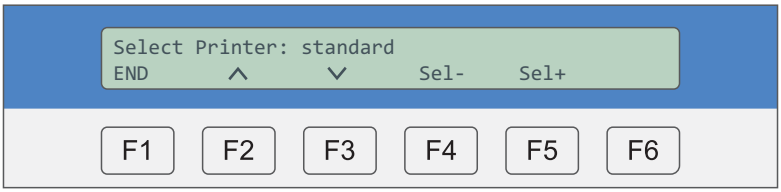
Press **F4** or **F5** to select the interface type:

- COM0	» serial cable (RS232/9-PIN)
- Bluetooth (optional)	
- COM0 EMLOC-Converter	» configure a third interface
- Bluetooth-EMLOC-Converter	» configure a third interface via Bluetooth
- Web Server	» optional; only for use with web server

5.4.16 Selecting printer

It is possible to send data from the EZ2 to a printer.
To do this, you must select the printer type. Factory settings: Standard

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:

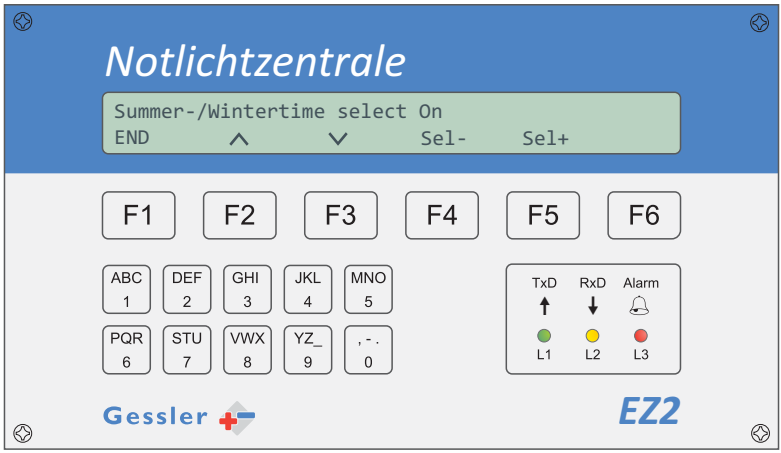


Standard:	Select this option to connect a standard printer with a serial cable (RS232).
WSP-3240:	Select printer type WSP-3240 to connect an optional special printer available.

5.4.17 Daylight saving time switching

Select whether you wish to enable automatic switching between normal and daylight saving time.

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:

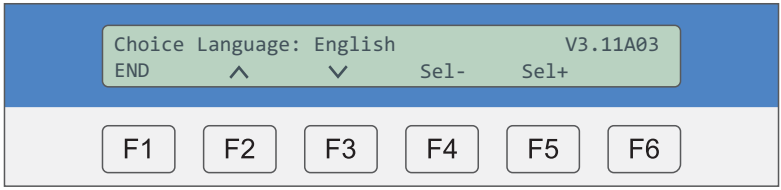


Press **F4** [Sel -] or **F5** [Sel +] to enable/disable automatic daylight saving time switching.

5.4.18 Setting system language

You have the option to select the system language.

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:

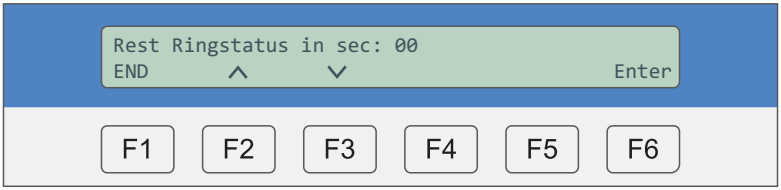


Press **F4** [Wahl-] or **F5** [Wahl+] to select the language: German/English/Norwegian/Spanish/French

5.4.19 Time delay for fault signals

While continuous monitoring is enabled, the system must be prevented from performing automatic tests (see **chapters 5.4.3** and **4.2**).

[Menu] > [Syst.] > use the arrow keys (**F2**/**F3**) to navigate to the display shown below:



Enter the time, using the numerical keys, and confirm with F6.

Request continuous monitoring status DEF 2 ⇨ STU 7 ⇨ F2

Continuous monitoring is started with the following short command in the status menu:

» **COMMUNICATION ERROR**
- BUS cable not connected to EZ2/luminaire or cable break
- Luminaire is in emergency mode or is fully discharged (exhaustive discharge)

» **BATTERY VOLTAGE FAULT**
- Battery voltage too low or too high
- Battery not connected

» **BATTERY CHARGING FAULT**
- Battery cannot be charged (e.g. cell defective)
- Charger of emergency electronics defective

» **LOGGING ERROR**
- Addressing error (duplication) among connected luminaires
- BUS line too long (>1000m)
- BUS line installed in ring topology

» **TEMPERATURE FAULT**
- Temperature inside luminaire housing >80°C

PROBLEM	REMEDY
Check BUS displayed on EZ2	**No communication with BUS subscribers** - Check BUS connection - Check polarity of connection - The BUS voltage between terminals C and D should be +14V ... +18V (DC) (D = + / C = -) BUS voltage < +14V (DC): - Short circuit - BUS cable polarity reversed - Voltage drop due to cable length >1000m » Install BUS amplifier (type EMC2) BUS voltage 0V: - Wire break
No response from BUS subscriber	- Check mains power at BUS subscriber (luminaire) - Check BUS line - Check address settings
No response from BUS subscriber (intermittent)	- Communication problems due to unsuitable cable installation or long lines (> 1000 m) » Install BUS amplifier (type: EMC2)
Lamp failure, while function OK (status LED: green)	- In EmLOC devices with current sensor, check the wiring (current at "hot end" of fluorescent lamp)
Lamp fails to switch to emergency mode	- Battery not connected / poles reversed - Check connection - Insufficient battery capacity, due to age; charge battery for minimum 24h before performing the next test
Address (luminaire) test performs function test at times that differ from the EZ2 test times	- Notify address (luminaire) that it is controlled through EZ2 » Perform function test from EZ2
LED lamp flashes	- One or more LEDs of luminaire defective (high-ohmic) » Replace LED

PROBLEM	DESCRIPTION	SIGNALLING TIME
Mains operation mode	No error	-
1 x **Test mode**	Test is being performed	For duration of test
2 x **BUS error**	BUS signalling interrupted, no connection to EZ2 (only if watchdog is active)	Automatically switched off when fault is eliminated
Power failure	Luminaire in emergency mode. Powered by battery	Automatically switched off when power returns / deep discharge
1 x **Battery voltage**	Battery fault / no battery	Automatically switched off when fault is eliminated
2 x **Charging fault**	Battery fails to charge / battery defective	Automatically switched off when fault is eliminated
3 x **Temperature fault**	Temperature fault / temperature in luminaire housing >68°C	Automatically switched off when fault is eliminated
4 x **Lamp fault**	Lamp fault; luminaire defective or already dark	Automatically switched off after successful test Start test by: » Pressing test button (at luminaire) » Starting test at EZ2

Troubleshooting » see **chapter 6**

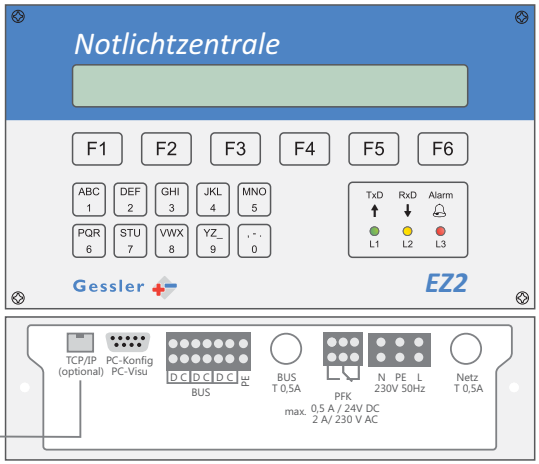
EZ2-Web

E 1 Direct connection of PC to EZ2-Web

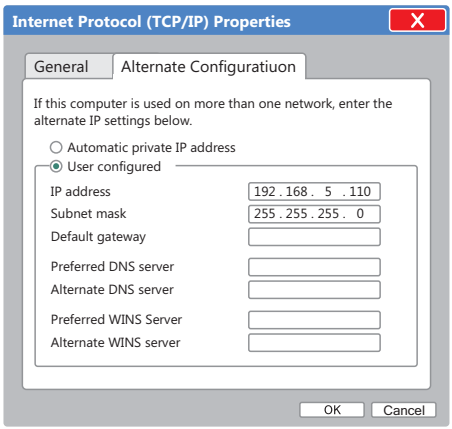
Connect the EZ2-Web to a PC, using a LAN cable.

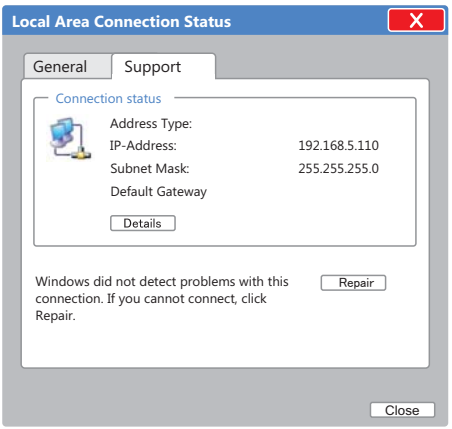
EZ2-Web (optional)

Access via TCP-IP
The EZ2 can be accessed through a standard web browser. The integrated visualisation software allows for user-friendly control and monitoring of the entire emergency lighting system



Connecting your PC to the EZ2-Web, using a cable:
On your PC, call up the LAN configuration options. In the properties of the TCP/IP protocol, select a unique IP address for your PC.

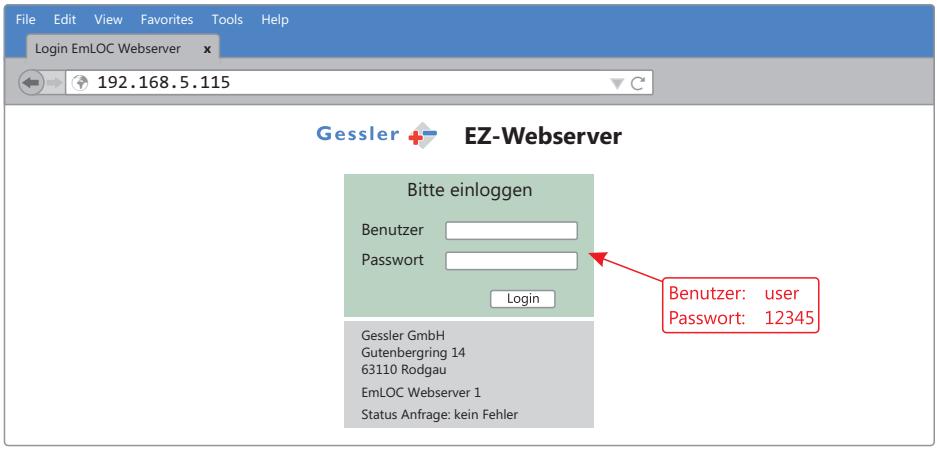




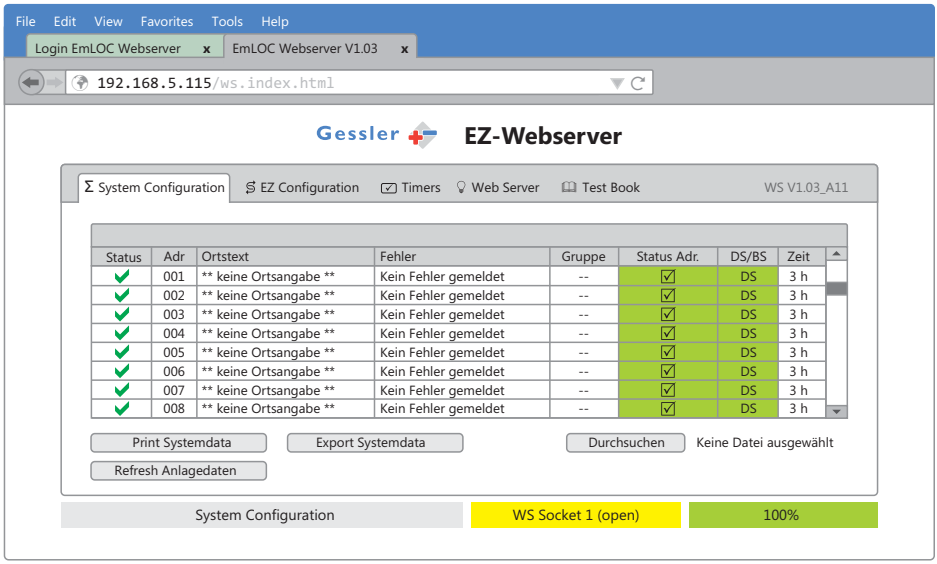
Note: For the initial installation, enter 192.168.5.110 as the IP address of your PC. Default IP address of EZ2-Web: 192.168.5.115. Confirm your settings with OK and check the status of your LAN connection.

E 2 Accessing EZ2-Web via web browser

Open your browser and enter the default IP address of the EZ2-Web (192.168.5.115) in the address bar. Press the "Enter" key. The login page of the web server is displayed:



Log in, using the „Benutzer" (**user name**) and „Passwort" (**password**) shown above. You can now access the web server. The EZ web server pages are displayed on a separate tab.

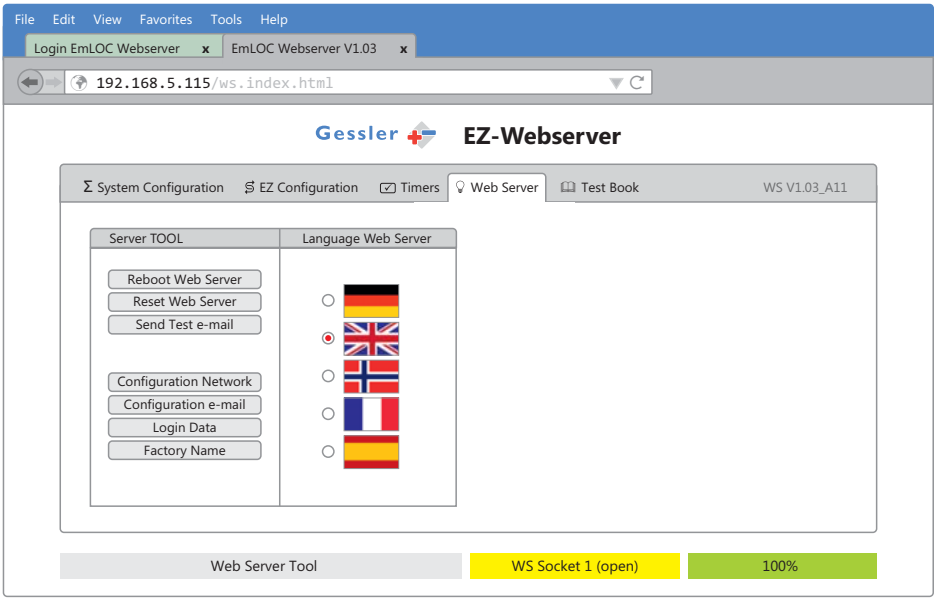


The green bar in the bottom right corner shows the reading progress of the system data. Before accessing the web server options, wait until data is transferred.

E 3 Web server options

E 3.X Switching the language (EZ2-Web menu)

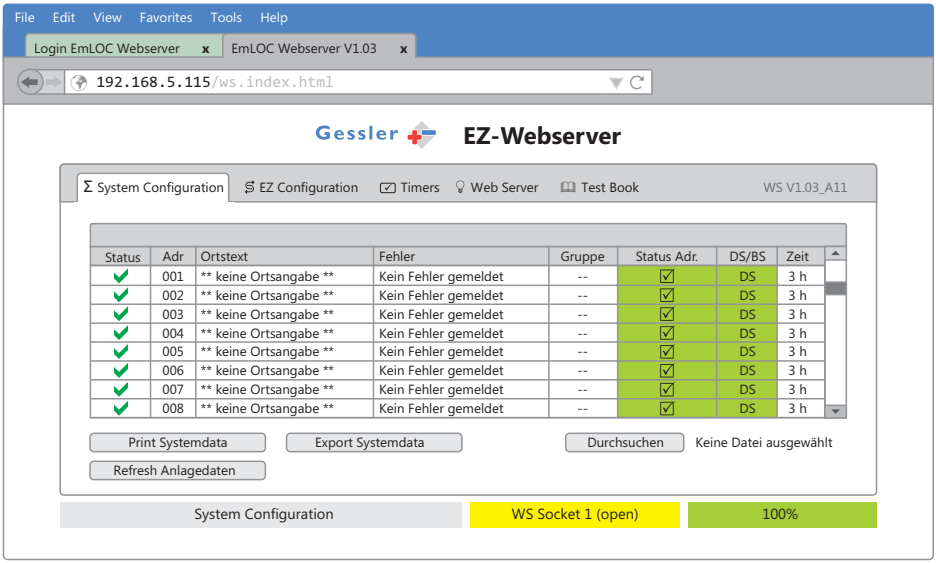
In this menu, you can set the IP address, the subnet mask and the gateway of your EZ2-Web.



In order to change the language of the EZ2-Web menu, click on the tab „Web Server“. Select the language of your choice by clicking on the appropriate flag.

E 3.1 System configuration

This tab shows the status of the connected EmLOC devices. Here, you can also change individual addresses.



» **Status** — Current device status:
- ✔ No fault
- ? Address status not yet read
- X Fault signal from address

» **Adr (address)** — Device address

» **Ortstext (location)** — You have the option to enter a location text for every address. Note: The location text must not be longer than 30 characters. After entering a location text, press the "Enter" key to write the text to the EZ2-Web.

» **Fehler (error)** — Result of last function test (see **chapters 6 and 7**)

» **Gruppe (group)** — You have the option to combine one or more addresses to form a group. Such groups can then for example be controlled by means of timers (see **chapter 5.4.8**).

» **Status Adr.** — You have the option to deselect individual addresses so that they are no longer monitored (see **chapter 5.4.11**)!

» **DS/BS** — Select the operating mode for the connected EmLOC device (DS = continuous mode / BS = maintained mode).

» **Zeit (Timers)** Enter the bridging times (1, 3, 8h) for the connected EmLOC devices (see **chapter 5.4.14**). After all settings have been made, you can print, save and delete the data. The information is of course stored so that it can be called up and edited again at any time.

» **System addresses** Select the range of addresses to be monitored (see **chapter 5.4.1**).

» **Print Systemdata** Print the system data through your browser.

» **Refresh Anlagedaten** Read the system data from an already configured EZ2-Web.

» **Export Systemdata** The system data can be exported in the form of and xml file for storage on your PC and inclusion in the system documentation (system backup).

» **Durchsuchen (browse)** Click this button to browse your filing system to import a system data file to the EZ2-Web for further editing in the web server program.

E 3.2 EZ configuration

On this tab, you can configure the EZ2-Web. Click the grey fields to change the parameter settings as follows:

» **Automatic Testing** — Set the time of the next automatic test; start/abort test (see **chapter 5.4.3**).

» **Operation Duration Test** — Set the time of the next operation time test; start/abort test (see **chapters 5.4.9 and 5.4.10**).

» **Service** — Set the time/date (based on system clock of your PC); read/restore factory settings (see **chapter 5.4.6**).
Reset EZ2-Web

» **System Addresses** — Select the range of addresses to be monitored (see **chapter 5.4.1**).

» **Fault Switch Module** — Enter the addresses for an optional fault switching module.

» **Buswatchdog** — Start/stop BUS watchdog (see **chapter 5.4.7**)

» **Search all Devices** — Initial search during commissioning: run a search for all EmLOC devices; start/stop search run (see **chapter 5.4.2**)

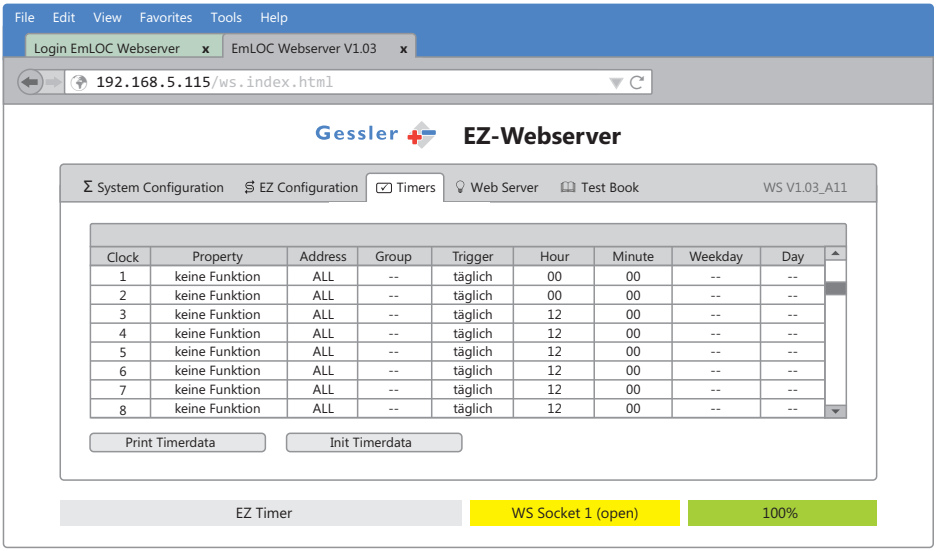
» **Repeat Search Devices** — Search for devices that have been added to the system.
Only devices that have not been previously been installed are found!
Start/ stop search run (see **chapter 5.4.2**)

» **Ringstatus** Start/abort continuous monitoring of individual addresses (see chapters 4.2 and 5.1.1). This option is only activated, if automatic function testing is deactivated (automatic test OFF)!

» **Language EZ2** Select system language (see **chapter 5.4.18**)

E 3.3 Timers

The timer function allows for automated, timer-controlled switching of addresses (see **chapter 5.4.8**).

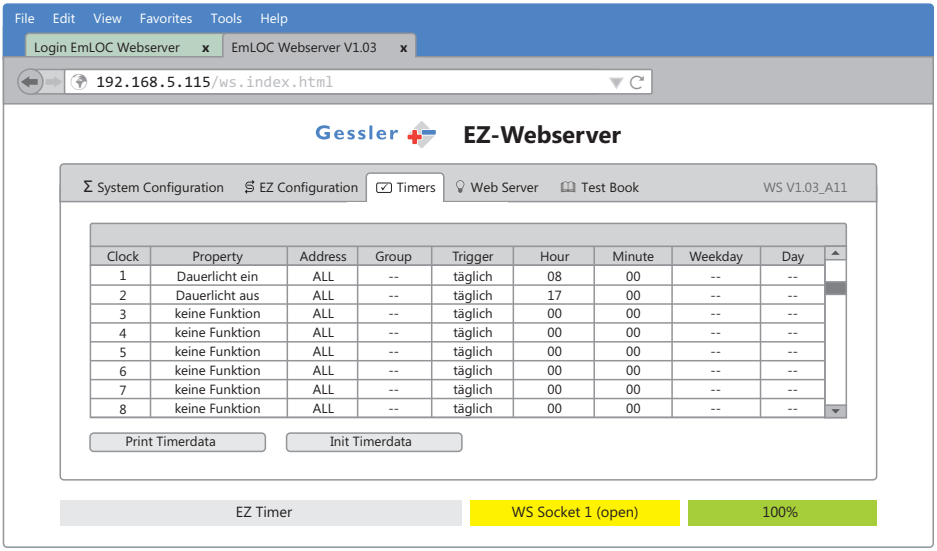


You can add more timers to the list. As soon as a command other than "keine Funktion" (no function) is displayed in the Property column, the respective timer is set up and active!

For example, see next page.

Example:
Select the first timer with function "Dauerlicht ein" (continuous light on) in the "Property" column. In columns "Address" and "Group", select the devices to be switched on. In the "Trigger" column select the interval for this function. Enter the switch-on time by entering the time in the "Hour" and "Minute" columns. If the trigger is set to "täglich" (daily), you do not need to select the day of the week. Configure the second time exactly like the first one.

For the second timer, change the entry in the "Property" column to "Dauerlicht aus" (continuous light off), *see picture*

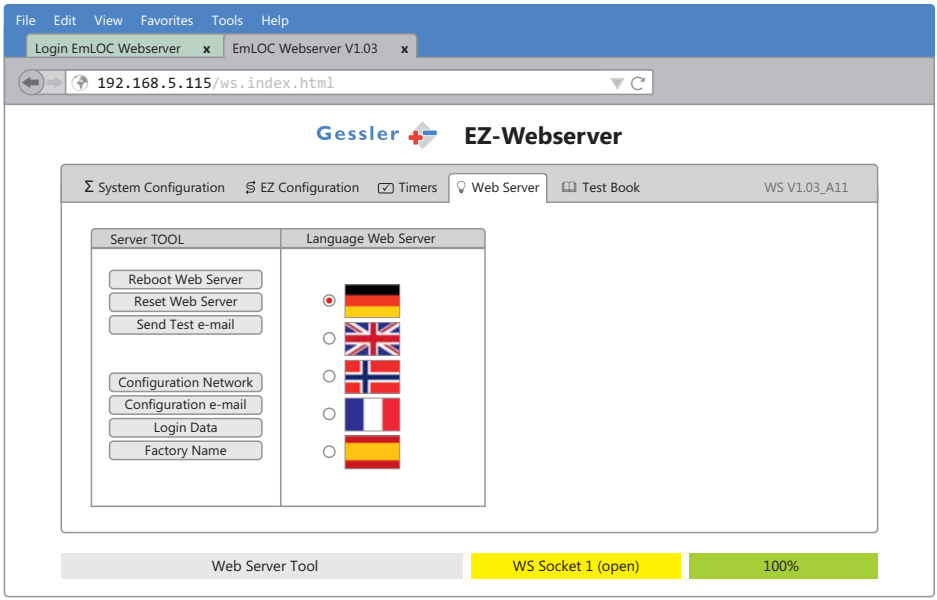


After you have configured all your times, press the "Init Timerdata" (initiate timer data) button to transfer the settings to the EZ2-Web.

All settings can be printed by pressing the "Print Timerdata" (print timer data).

E 3.4 Web Server

Use this menu to adjust the network settings of the EZ2-Web.



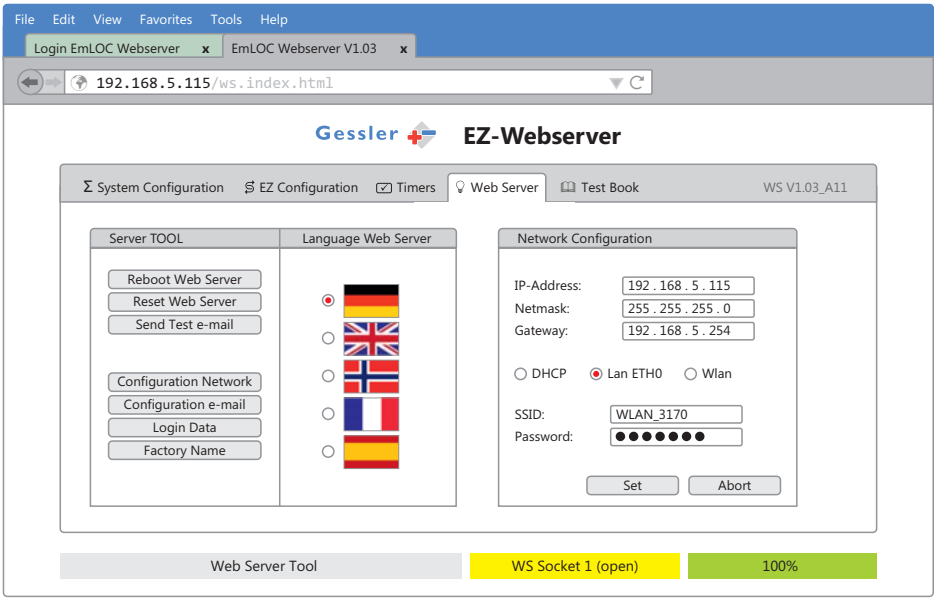
» **Reboot Web Server** Press this button to reboot the EZ2-Web web server, e.g. to change the IP address. In this case, you must log in again and enter the new IP address in the browser!

» **Reset Web Server** Resetting the web server sometimes helps to eliminate certain errors. Subsequently, you must restart the browser on your PC!

» **Send Test e-mail** Send a test e-mail to the e-mail address you have entered. In the event of a fault message to the EZ2-Web, you are then automatically notified by e-mail!

E 3.4.1 Network configuration

In this menu, you can set the IP address, the subnet mask and the gateway of your EZ2-Web.



Choose the connection type: DHCP, LAN ETH0 or WLAN (optional). By default, the device is set to LAN ETH0 (LAN connection with cable. Confirm your settings by clicking "Set".

Commissioning web server:

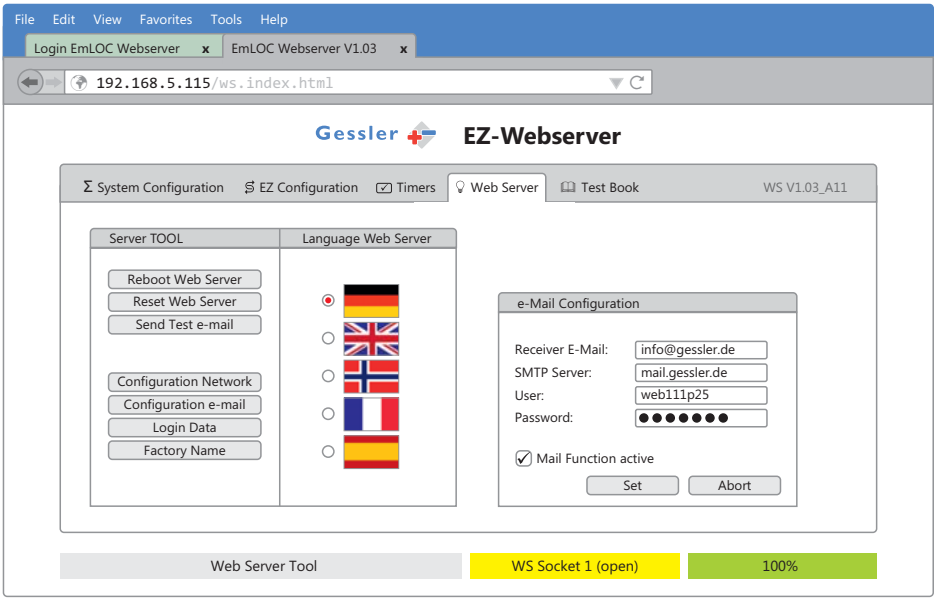
- If necessary, contact your network administrator for assistance. You will need a free IP address that is available in the network.
- Enter this IP address in the system settings of the EZ (menu option 23). Confirm with "Set" and wait for approx. 45 seconds. The web server is now re-initialised and the new IP address is applied. When this process is completed, the RxD LED at the EZ is lit.
- The web server is now listed with its IP address as a device in your network.
- Complete the configuration window and enter all missing parameters. As browsers differ slightly from each other, the screens might differ somewhat from those shown in this document.

The system has been successfully tested with the following browsers:

- Mozilla Firefox
- Microsoft Internet Explorer
- Google Chrome
- Apple Safari

E 3.4.2 e-mail Configuration

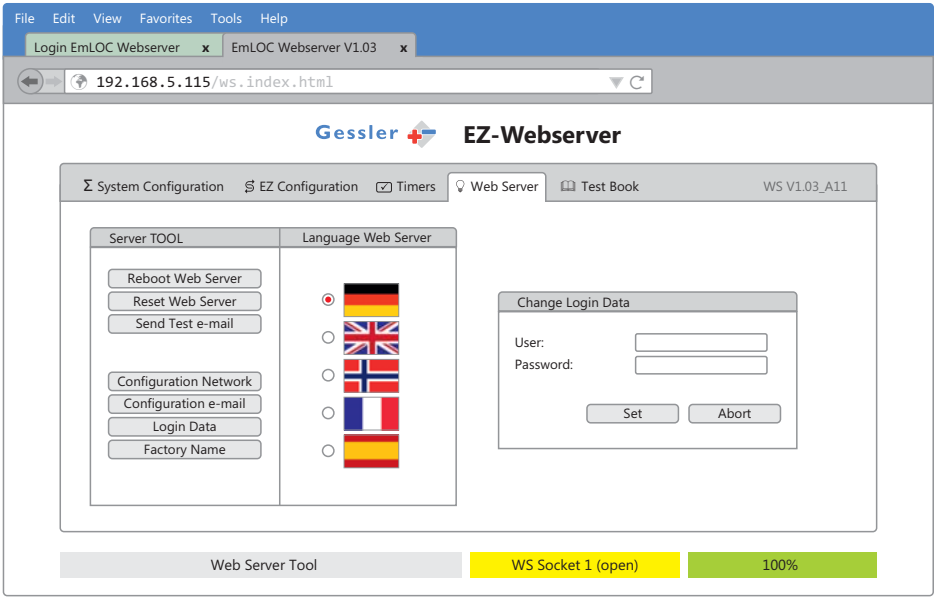
Enter the e-mail address to which you wish to receive notifications in the event of a fault.



Note: The e-mail notification function is only active, if option "Mail Function active" is selected!
Confirm your settings by clicking "Set".

E 3.4.3 Edit login data

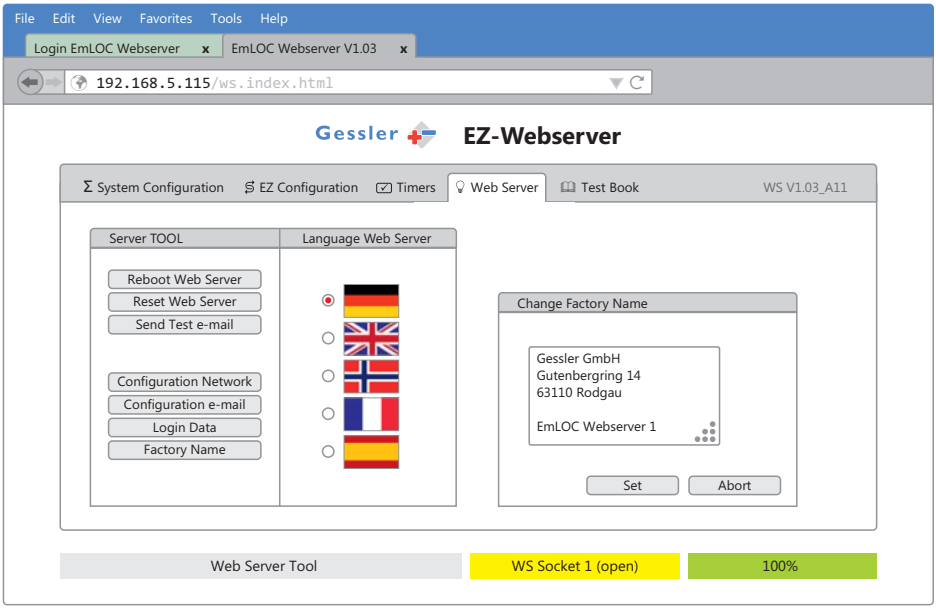
In this panel, you have the option to change the login data for the web server (user name and password).



Change your login details and confirm with "Set".

E 3.4.4 Edit name of system

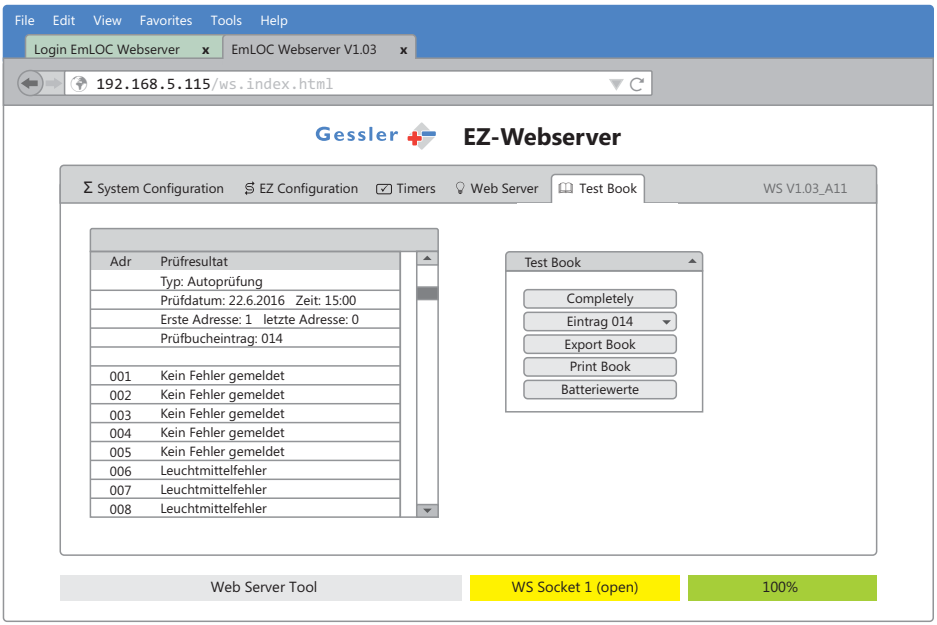
Enter a name for your EZ2-Web. This name is displayed upon login.



Change your name of the system and confirm with "Set".

E 3.5 Test log

On this tab, you can view, save, and print all tests performed in the respective system.

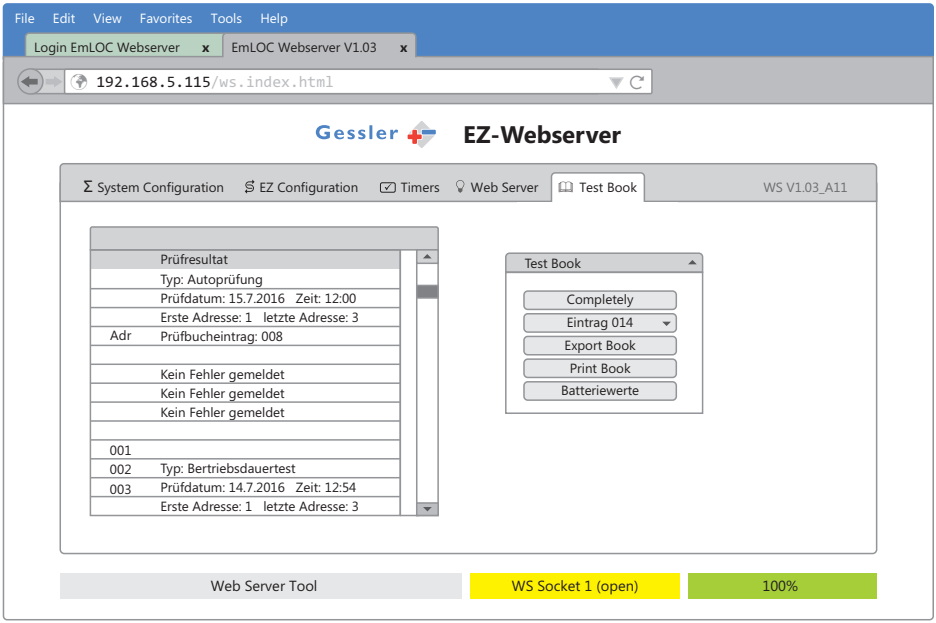


When this tab is called up, the results of the last function test are displayed. To view the results of an older test, select it from the "Eintrag" (entry) drop-down list (here: Eintrag 014).

Error Message Guide Overview

GERMAN	ENGLISH	DESCRIPTION OF THE PROBLEM
Akkuspannung	Battery fault	Battery fault / no battery
Ladefehler	Charging fault	Battery fails to charge / battery defective
Temperaturfehler	Temperature fault	Temperature in luminaire housing > 68°C
Leuchtmittelfehler	Lamp fault	Luminaire defective or failed
Kommunikationsfehler	Communication error	Address does not response
Protokollfehler	Protocoll error	For example: two luminaires do by mistake use the same address

To view the entire test log, click "Completely". The display panel features a scrollbar.



Click "Export Book" (export log) to export the content of the display panel in the form of a html file. To print the log, press "Print Book" (print log).


Gessler

Gessler GmbH
Gutenbergring 14 | 63110 Rodgau | Germany
Fon: +49 (0) 6106 / 8709 - 0 | Fax: +49 (0) 6106 / 8709 - 50
E-Mail: info@gessler.de | www.gessler.de

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