



# Operating Instructions

## Webmodule ZB-S

Target group: Skilled electricians

400 71 860 051 (A)



# Operating Instructions Webmodule ZB-S

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# Operating Instructions

## Webmodule ZB-S



### 1 Safety Instructions

- The Webmodule ZB-S shall only be used for its intended purpose and in undamaged and perfect condition!
- When working on the electronic device make sure that it is disconnected from the voltage! Pay attention to the different power supplies in mains or battery operation.
- Observe the national safety rules and regulations for prevention of accidents as well as the safety instructions included in these operating instructions marked with

### 2 Conformity with standards

Conform to: EN 60950-1.  
Developed, manufactured and tested acc. to ISO 9001.

### 3 Technical data

Supply voltage: 24 V DC  
Power

consumption: < 1.5 W

Connection: RJ45

Insulation class: III

Degree of protection acc. to EN 60529: IP 20

Ambient temperature:

-10 °C .. +55 °C

Connection

terminal: 1,5 mm<sup>2</sup>

Weight: 0,1kg

Dimensions:

90 x 35 x 58mm

### 3.1 Description / Scope of application

The webmodule ZB-S for visualisation and monitoring of a central battery system ZB-S via local ethernet (LAN) with a customary WEB-browser (e. g. Internet Explorer™). Integrated mail-client for a comfortable and event based failure notification for up to 5 email addressees. Password protected access accounts capable of parametrisation.



Note:  
For operation of the webmodule with a ZB-S system the following software-state must be installed in the control module:  
P/F/H (Mega 128/RS485/  
FTT 10A)

### 4 Installation



For the mounting and operation of electrical apparatus, the respective national safety regulations as well as the general rules of engineering will have to be observed!

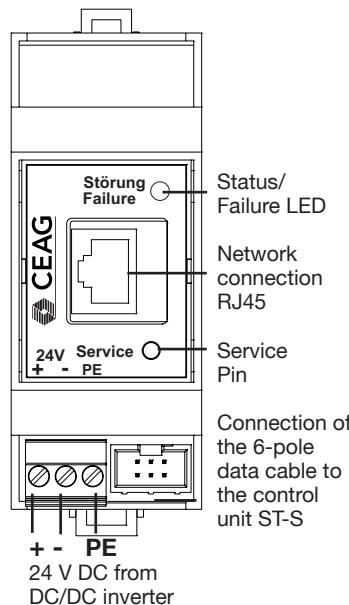
#### 4.1 Mounting

Pay attention to temperatures outside the permitted range during operation. The permissible ambient temperature may not exceed 55°C.

The module was designed for DIN rail mounting (2TE) to be only mounted in the cabinet. An external mounting outside the ZB-S cabinet is not

permitted.

### 4.2 Electrical connection



The webmodule ZB-S is supplied with 24V DC of the DC-DC inverter of the ZB-S. The PE connector must be connected to the protection earth (PE) in the ZB-S.

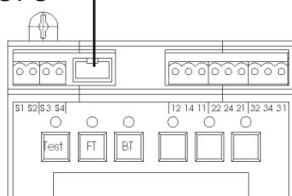
Note: The DC-DC inverter can supply max. 20 pcs. further DLS/3Ph-busmodules/TLS-modules!

The 6-pole data cable connects the webmodule with the ST-S control unit:

# Operating Instructions

## Webmodule ZB-S

Connection of the data cable to the control unit ST-S



### Note:

Keep the distance of the data cable between the webmodule and the control unit ST-S as short as possible. Please avoid a wiring around the charging unit.

### 4.3 Commissioning the Webmodule on the ZB-S

After connection of the power supply (24V DC), the webmodule needs approx. 1.5 minutes for booting. After the booting, the red LED of the webmodule flashes slowly. To log on the webmodule on the ST-S control unit, the service pin of the webmodule must be pressed for approx. 1 second.

The menu „webserver setup“ appears in the display of the control unit of the ZB-S. During the log on procedure the display shows a lot of question marks.

After approx. 3-5 seconds the display shows the standard settings of the webmodule:



The webmodule gets automatically activated to the control unit, which is displayed by the red LED (some seconds) of the control unit and the webmodule. After 1-2 minutes the procedure is finished and the webmodule is ready to operate.

#### LED-display of the web-module:

LED flashes slowly: webmodule is not activated on the control unit.

Status-LED flashes fastly 3x :

when pushing the service pin for approx. 10 seconds the webmodule will be set back into delivery status.

#### Service pin of the web-module:

Pressing the service pin for: 1 sec.: login/logout of the webmodule on the control unit ST-S

> 10 sec.: resets the module to the delivery status



#### Attention!

All programmed data get lost!

### 4.4 Deactivate the webmodule on the control unit ZB-S

The webmodule can be deactivated on the control unit. For this, the service pin of the webmodule has to be pressed for approx. 1 sec. The screen showed in the picture above appears. With the push button „arrow left“ or „arrow right“ the webmodule can be set as „not installed“. Press o.k. and back with menu button. Now the webmodule is offline and the red LED flashes slowly.

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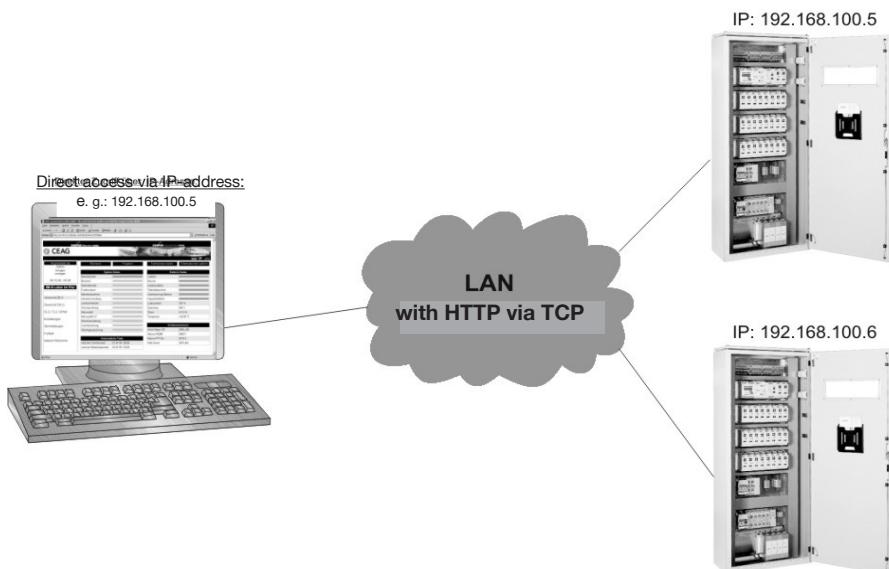
## Webmodule ZB-S

During activities on the control unit of the ZB-S, e.g. programming of luminaires, it is possible that the connection between the control unit and the webmodule is interrupted for a short time. This gets displayed by a red LED on the control unit or rather on the webmodule.

Furthermore the webbrowser shows „data is synchronized“. The connection will automatically be restored after a short time.

### 4.5 Monitoring via an internet browser

Functional schematic:



The webmodule allows a visualisation of a ZB-S/US-S central battery system via ethernet.

If the device shall be installed in a factory intranet it is necessary to get all required information, like network settings or mail settings from the IT-department in charge (see chapter 6.4, Settings)

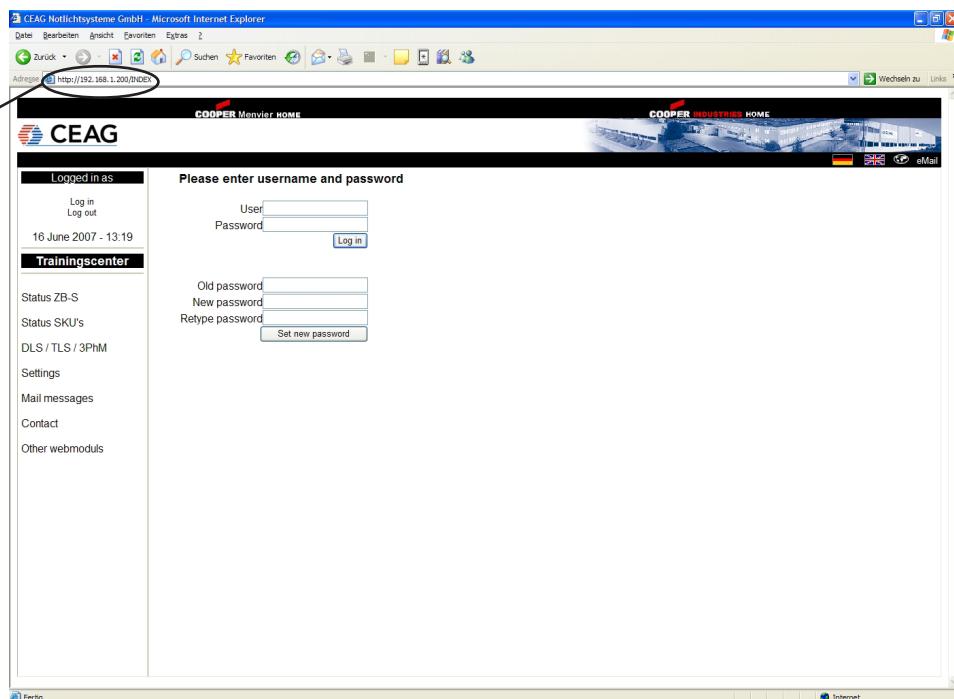
# Operating Instructions Webmodule ZB-S

## 5 Homepage / Login

By entering the TCP/IP-address (s. 5.a: ex works: 192.168.1.200) in the internet-browser the homepage will open.

Ex works 2 logins are given which can be modified individual at anytime:

5.a



# Operating Instructions Webmodule ZB-S

5.1: User: Admin  
Password: ceag

Permits unlimited use of the web server.

5.2: User: Guest  
Password:(no password required)

Permits only access to status information.



**Note:**  
Change the factory set password to avoid an unauthorized access!

5.3: A change of the password for the acutal account is possible in the lower part of the entry mask. Herefore it is necessary to enter the old password, too.

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## Webmodule ZB-S

## 6 Submenus

### 6.1 Overview ZB-S

6.1.1 After successful login the mask „Overview ZB-S“ appears by showing all relevant statuses of the system (control unit), battery and charging unit as well as display of the next automatic test (FT/BT) and software information on the control unit ZB-S.

The statuses are shown

coloured:

- green:** function o.k.
- yellow:** FT/BT runs
- red:** function failure

6.1.3 Choosing the menus on the left side you get in the marked submenus.

6.1.2 When logged in as „admin“ it is possible to push the buttons for the following commands:

- block device
- release device
- start function test
- reset deep discharge protection

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## Webmodule ZB-S

### 6.2 Overview SKU

6.2.1 In the mask „overview SKU“ the information about the equipment of the subracks with the corresponding SKU's is displayed with the following statuses:

**green:** circuit o.k.

**red:** circuit failure

6.2.2 With a click on the individual circuit the appendant mask starts.

6.2.1

6.2.2

# Operating Instructions

## Webmodule ZB-S

### 6.2.3 Circuit mask

6.2.3.1 The circuit mask shows the status of circuit as well as

6.2.3.2 the installed luminaires with marking of destination and switch allocation.

The status of the luminaire is shown as follows:

**grey:** offline

**yellow:** online

**red:** failure

The screenshot shows a web browser window for CEAG Notlichtsysteme GmbH. The URL in the address bar is <http://192.168.1.200/CGS/sku=020&SESSION=2066202819>. The page title is "COOPER Menvier HOME". The left sidebar contains a "Trainingscenter" section with links for Admin, Log in, Log out, and the date 16 June 2007 - 13:25. Below this are links for Status ZB-S, Status SKU's, DLS / TLS / 3PhM, Settings, Mail messages, Contact, and Other webmoduls. The main content area displays a table titled "SKU 1/3 CG-S 2x3A" under "Circuit 1". The table has columns for State, Name, Switch 1, and Switch 2. It lists five entries, each with a red background, indicating failure. The rows are numbered 1 through 5. To the right of the table is a large number 6.2.3.2. Below the table is a green bar labeled "Rated current I < Imin". The bottom of the browser window shows the status bar with the URL again and the word "Internet".

| State | Name             | Switch 1 | Switch 2 |
|-------|------------------|----------|----------|
| 1     | RZ 79011 CG-S    | DLS 1/1  |          |
| 2     | RZ 71021 CG-S WM | DLS 1/1  |          |
| 3     | RZ 71011 CG-S    | DLS 1/1  |          |
| 4     | RZ 70021 CG-S WM | DLS 1/1  |          |
| 5     | RZ 70011 CG-S    | DLS 1/1  |          |
| 6     |                  |          |          |
| 7     |                  |          |          |
| 8     |                  |          |          |
| 9     |                  |          |          |
| 10    |                  |          |          |
| 11    |                  |          |          |
| 12    |                  |          |          |
| 13    |                  |          |          |
| 14    |                  |          |          |
| 15    |                  |          |          |
| 16    |                  |          |          |
| 17    |                  |          |          |
| 18    |                  |          |          |
| 19    |                  |          |          |
| 20    |                  |          |          |

6.2.3.1

6.2.3.2

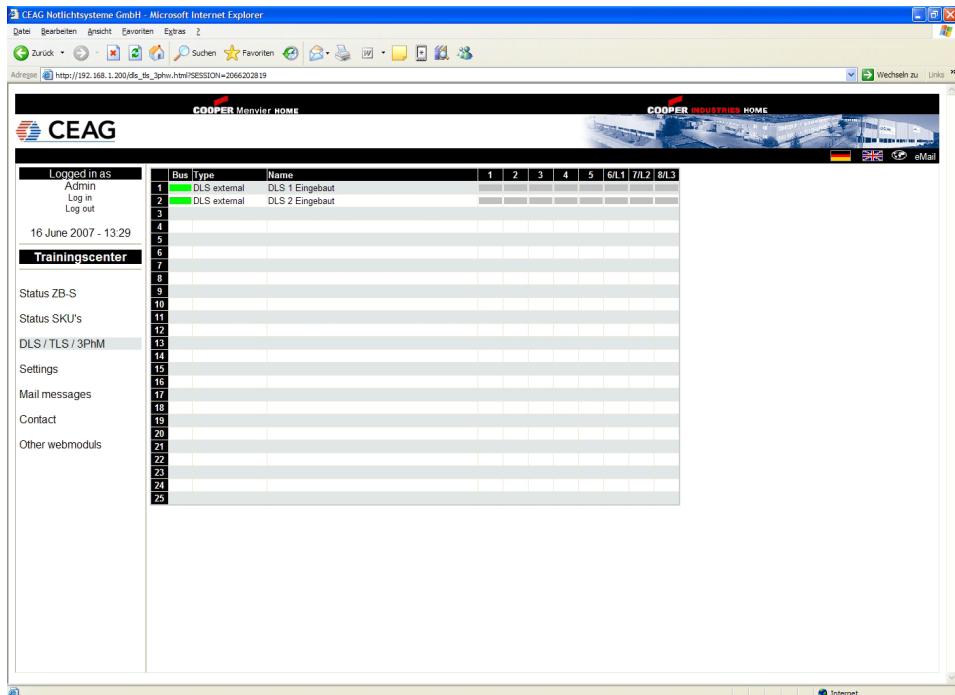
# Operating Instructions

## Webmodule ZB-S

### 6.3 DLS/TLS/3PhW

In the following mask all installed DLS-modules, TLS-modules, DLS/3PhW-modules are shown with the information on destination, status of module and input:

**yellow:**      input active  
**grey:**      input not active  
**red:**      phase failed



The screenshot shows a Microsoft Internet Explorer window displaying a web-based monitoring interface for a lighting system. The title bar reads "CEAG Notlichtsysteme GmbH - Microsoft Internet Explorer". The main content area is a table titled "DLS / TLS / 3PhM" showing the status of various modules. The table has columns for Bus, Type, Name, and eight input channels (1 through 8). The first two rows show external DLS modules, while the rest of the table is mostly empty.

| Bus | Type         | Name            | 1 | 2 | 3 | 4 | 5 | 6/L1 | 7/L2 | 8/L3 |
|-----|--------------|-----------------|---|---|---|---|---|------|------|------|
| 1   | DLS external | DLS 1 Eingebaut |   |   |   |   |   |      |      |      |
| 2   | DLS external | DLS 2 Eingebaut |   |   |   |   |   |      |      |      |
| 3   |              |                 |   |   |   |   |   |      |      |      |
| 4   |              |                 |   |   |   |   |   |      |      |      |
| 5   |              |                 |   |   |   |   |   |      |      |      |
| 6   |              |                 |   |   |   |   |   |      |      |      |
| 7   |              |                 |   |   |   |   |   |      |      |      |
| 8   |              |                 |   |   |   |   |   |      |      |      |
| 9   |              |                 |   |   |   |   |   |      |      |      |
| 10  |              |                 |   |   |   |   |   |      |      |      |
| 11  |              |                 |   |   |   |   |   |      |      |      |
| 12  |              |                 |   |   |   |   |   |      |      |      |
| 13  |              |                 |   |   |   |   |   |      |      |      |
| 14  |              |                 |   |   |   |   |   |      |      |      |
| 15  |              |                 |   |   |   |   |   |      |      |      |
| 16  |              |                 |   |   |   |   |   |      |      |      |
| 17  |              |                 |   |   |   |   |   |      |      |      |
| 18  |              |                 |   |   |   |   |   |      |      |      |
| 19  |              |                 |   |   |   |   |   |      |      |      |
| 20  |              |                 |   |   |   |   |   |      |      |      |
| 21  |              |                 |   |   |   |   |   |      |      |      |
| 22  |              |                 |   |   |   |   |   |      |      |      |
| 23  |              |                 |   |   |   |   |   |      |      |      |
| 24  |              |                 |   |   |   |   |   |      |      |      |
| 25  |              |                 |   |   |   |   |   |      |      |      |

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## 6.4 Settings

In the mask „Settings“ the main parameters of the webserver can be installed:

6.4.1 „User administration“: Input of new user with different authorities. By setting/removing the marking the authorities get activated/deactivated.

6.4.2 „Website setup“: - choosing language

- Update interval of the website (standard on 30 sec.)

6.4.3 „Network setup“:

Please contact the IT-department, which dictates the parameters in the intranet:

- IP-address: obtain automatically
  - > IP-address gets awarded over DHCP-server
- IP-address: use following values      -> static IP-address
- IP-address:                                xxx.xxx.xxx.xxx
- Subnet-mask:                                xxx.xxx.xxx.xxx
- Gateway:                                    xxx.xxx.xxx.xxx
- DNS-server:                                xxx.xxx.xxx.xxx

The screenshot shows the CEAG Notlichtsysteme GmbH website in Microsoft Internet Explorer. The left sidebar includes links for Status ZB-S, Status SKU's, DLS / TLS / 3PhM, Settings (which is selected), Mail messages, Contact, and Other webmoduls. The main content area has several tabs: User administration, Website setup, Network setup, and E-Mail options. Arrows from the text descriptions point to specific sections of the interface:

- An arrow labeled "6.4.1" points to the "User administration" tab, which contains a table of users with checkboxes for various permissions like Show device status, Block device, etc.
- An arrow labeled "6.4.2" points to the "Website setup" section, which includes a dropdown for Language (set to Great Britain - english) and an input field for Update interval (set to 10 sec).
- An arrow labeled "6.4.3" points to the "Network setup" section, which contains fields for IP-address (192.168.1.200), Subnet mask (255.255.255.0), Gateway (0.0.0.0), and DNS server (0.0.0.0).
- An arrow labeled "6.4.4" points to the "E-Mail options" section, which includes fields for POP3 server, SMTP server (set to 25), User, Password, Sender, and five recipient fields (Recipient 1 to Recipient 5).

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6.4.4 „E-mail Options“:  
The CEAG ZB-S webmodule has an integrated mail-client, which can send an Email to up to 5 email-addressees in case of an adjustable event (s.chapter 6.5: „Email-messages). You get the necessary information from your relevant IT-department (e.g. POP3 or SMTP-server).

# Operating Instructions Webmodule ZB-S

## 6.5 Email-Messages

In this menu it can be chosen in which case of failure an Email shall be send.

The screenshot shows a web-based configuration interface for the CEAG Notlichtsysteme GmbH. The top navigation bar includes links for Datei, Bearbeiten, Ansicht, Favoriten, Extras, Zurück, Suchen, FAVORITEN, and Wechsel zu. The address bar shows the URL: http://192.168.1.200/stoerermeldungen.html?SESSION=2066202819. The main content area displays a table titled "Send e-Mail when:" with the following data:

| Error                         | E-Mail                              |
|-------------------------------|-------------------------------------|
| Communication failure to ZB-S | <input checked="" type="checkbox"/> |
| Mains failure                 | <input checked="" type="checkbox"/> |
| Function test is finished     | <input checked="" type="checkbox"/> |
| Duration test is finished     | <input checked="" type="checkbox"/> |
| Circuit failure               | <input checked="" type="checkbox"/> |
| Charger failure               | <input checked="" type="checkbox"/> |
| Battery circuit failure       | <input checked="" type="checkbox"/> |

Below the table is a "Save" button. On the left sidebar, under "Trainingscenter", are links for Admin, Log in, Log out, and the date 16 June 2007 - 13:31. Other links include Status ZB-S, Status SKU's, DLS / TLS / 3PhM, Settings, Mail messages (which is selected), Contact, and Other webmoduls. The top right features the COOPER logo and links for German, English, and eMail. The bottom right corner shows the Internet icon.

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## Webmodule ZB-S

### 6.6 Other webmodules

This menu shows all installed ZB-S webmodules in the network including their addresses and acutal

statuses (exact function has to be permitted by the IT-department)  
Choose webserver by clicking on its name, than the relevant mask will appear.

The screenshot shows a Microsoft Internet Explorer window with the title bar "CEAG Notlichtsysteme GmbH - Microsoft Internet Explorer". The address bar contains the URL "http://192.168.1.200/websrvr.htm?SESSION=2066203819". The main content area displays a table titled "Other webmoduls". The table has columns: Name, IP-address, Other webmoduls, MAC-address, Version, and Operation. One row is visible, showing "Trainingscenter", "192.168.1.200", "00:40:9D:28:1D:50", "2470 c06", and "Operation". On the left side of the page, there is a sidebar with a "Logged in as" section showing "Admin", "Log in", and "Log out", followed by the date "16 June 2007 - 13:32". Below this is a list of links: "Status ZB-S", "Status SKU's", "DLS / TLS / 3PhM", "Settings", "Mail messages", "Contact", and "Other webmoduls". The "Other webmoduls" link is underlined and highlighted with a black box. The top right of the page features the "COOPER INDUSTRIES HOME" logo and navigation links for "Deutsch", "English", and "eMail". The bottom of the browser window shows standard Internet Explorer status icons.

| Name            | IP-address    | Other webmoduls | MAC-address       | Version  | Operation |
|-----------------|---------------|-----------------|-------------------|----------|-----------|
| Trainingscenter | 192.168.1.200 |                 | 00:40:9D:28:1D:50 | 2470 c06 |           |

# Operating Instructions

## Webmodule ZB-S

### 7 Example of locating a luminaire failure

When locating a failure after a function test the following statuses are shown on the mask „Overview ZB-S“:

7.1 „Failure“ and „Luminaire failure“ are red.

7.2 By clicking on „Status SKU's“ the relevant circuit will open.

The screenshot shows the 'CEAG Notlichtsysteme GmbH - Microsoft Internet Explorer' window. The main content area displays the 'OVERVIEW ZB-S' page. On the left, a sidebar lists navigation options like 'Logged in as Admin', 'Trainingscenter', 'Status ZB-S', 'Status SKU's', 'DLS / TLS / 3PhM', 'Settings', 'Mail messages', 'Contact', and 'Other webmoduls'. The main content area is divided into several sections: 'Device status' (Operation, Blocked, Battery operation, Function test is active, Duration test is active, Manual reset, Delay on mains return, Failure, Mains failure, Mains failure on sub db, Circuit failure, Luminaire failure, Transmission failure), 'Battery status' (Charger, Booster, ISO failure, Deep discharged, Battery circuit failure, Battery capacity too low, State of charge 99 %, Voltage 243 V, Current +0.84 A, Temperature +77.88 °F), 'Automatic tests' (Next function test 01.01.99 / 00:00, Next duration test 02.01.99 / 02:00), and 'Software information' (Atmel Mega 128, Z400 P, Neuron RS485, Z405 F, Neuron FT10A, Z410 H, Webmodul, Z470.c06). A red circle highlights the 'Luminaire failure' status in the 'Device status' section. A callout arrow labeled '7.1' points to this red status bar. Another callout arrow labeled '7.2' points to the 'Status SKU's' link in the left sidebar.

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## Webmodule ZB-S

### 7 Example of locating a luminaire failure

In the most „Status SKU's“ the failed circuits are shown in a red colour.

7.3 When clicking on the relevant circuit the attended mask appears.

The screenshot shows a web-based monitoring system for lighting fixtures. On the left, a sidebar lists navigation links: Logged in as Admin, Log in, Log out; Date 16 June 2007 - 13:36; and categories like Trainingscenter, Status ZB-S, Status SKU's (which is selected), DLS / TLS / 3PhM, Settings, Mail messages, Contact, and Other webmodules. The main area displays a grid of 40 luminaires arranged in 5 rows and 8 columns. Each luminaire is labeled with its position (e.g., 1, 2, 3, 4, 5, 6, 7, 8) and a model identifier (e.g., CG-S 2x3A). The status of each luminaire is indicated by a colored square: green for normal operation, yellow for warning, and red for failure. A callout arrow originates from the text '7.3' and points to the red status cell of the fourth luminaire in the second row (luminaire 4, row 2).

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## Webmodule ZB-S

### 7 Example of locating a luminaire failure

The failed luminaires are shown red coloured under the point „state“. For an easier orientation name the

location of the luminaire.

After repairing the luminaire a further function test has to be done for reset the display.

Screenshot of the CEAG Notlichtsysteme GmbH - Microsoft Internet Explorer web interface showing a list of luminaires and their status:

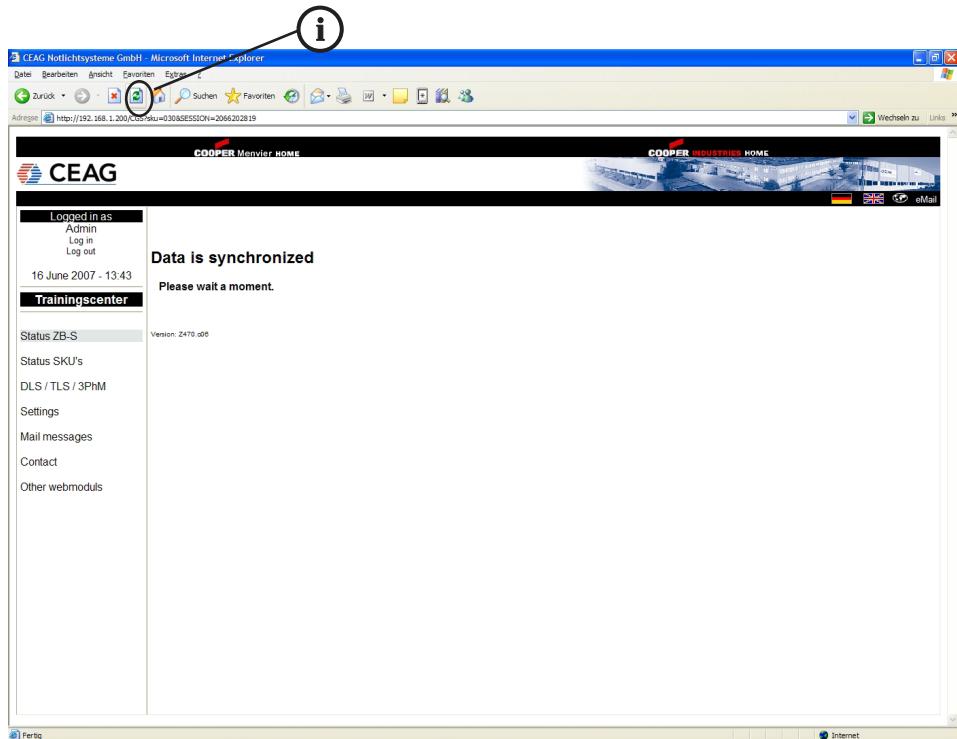
| State | Name                  | Switch 1 | Switch 2 |
|-------|-----------------------|----------|----------|
| 1     | RZ 51021 CG-S, Decke  | DLS 1/3  |          |
| 2     | RZ 51021 CG-S, Ausl.  | DLS 1/3  |          |
| 3     | RZ 51011 CG-S, Pendel | DLS 1/3  |          |
| 4     | SL 51011 CG-S, Wand   | DLS 1/3  |          |
| 5     | SL 57011 CG-S, Ausl.  | DLS 1/3  |          |
| 6     | SL 57011 CG-S, Wand   | DLS 1/3  |          |
| 7     | RZ 22021 CG-S, Pendel | DLS 1/3  |          |
| 8     | RZ 22011 CG-S, Wand   | DLS 1/3  |          |
| 9     | RZ 55021 CG-S, Decke  | DLS 1/3  |          |
| 10    | SL 55011 CG-S, Wand   | DLS 1/3  |          |
| 11    | RZ 57021 CG-S, Decke  | DLS 1/3  |          |
| 12    | RZ 57011 CG-S, Wand   | DLS 1/3  |          |
| 13    |                       |          |          |
| 14    |                       |          |          |
| 15    |                       |          |          |
| 16    |                       |          |          |
| 17    |                       |          |          |
| 18    |                       |          |          |
| 19    |                       |          |          |
| 20    |                       |          |          |

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## Webmodule ZB-S

### 8 Data gets synchronized

Changing the configuration on the ZB-S control unit (e.g. with CGVision) the following mask could be shown:



It is shown that changes of configuration on the control unit get synchronized with the webserver. It takes approx. 1 - 2 minutes until the procedure ends.

The website will be updated every 10 seconds.



Note: If necessary an update of this display in the internet-browser should be done!



In case of returns you need a RMA-number from us. For further information see  
[www.ceag.de](http://www.ceag.de)!

- We reserve the right to carry  
out technical changes! -

400 71 860 051 (A)/xxx/01.10/  
Gültig ab 01.10

**COOPER**

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| Internet | <a href="http://www.ceag.de">http://www.ceag.de</a> |
| E-Mail   | <a href="mailto:info-n@ceag.de">info-n@ceag.de</a>  |