

# Emergency Lighting

OPERATOR'S INSTRUCTION

Central Power Supply System  
Low Power Supply System  
Mains Replacement System

Date: 13.08.2018  
SLEB: V62 R23 / V80 R50 / V81 R27  
ALOG: V70 R18 / V80 R50 / V81 R27



English





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## Information of the operating instruction

### Important instructions

According to EN 50110-1:2004-11 any work on the installation has to be executed by qualified electricians only.

Other activities described in this operating instruction have to be executed only by persons who:

- have been instructed by qualified persons
- have fully understood their tasks and the functions of the installation
- are under observation and being checked regularly by qualified persons

Please observe the local rules and regulations.

## Symbol explanation

### The following symbols must be observed.

**Attention:**

Indicates hazards that may be the cause for damage to human, plant or environment as well as very important instructions.

**Note:**

Provides information and advice for navigating within the described plant, components or functions.

**SLEB LOGICA**

Entries with this hint are only related to SLEB software for central and group battery systems as well as for mains replacement systems.

**AUTO LOGICA**

Entries with this hint are only related to ALOG software for central and group battery systems as well as for mains replacement systems.

## Manufacturer, further documents

Manufacturer:

**Beghelli PRÄZISA GmbH**

Internet: [www.beghelli.de](http://www.beghelli.de)  
E-mail: [kontakt@beghelli.de](mailto:kontakt@beghelli.de)

## Further documents:

### Catalogues

Low Power Supply Systems NGB, Central Battery Systems NZB, Mains Replacement Systems NEA

The catalogue contents are also available over the internet – [www.beghelli.de](http://www.beghelli.de).

### CD-ROM

Catalogue CD

## Type codes

### German:

<b>NGB</b>	<b>Notlicht Gruppen Batterie Versorgungsgerät</b>
<b>NZB</b>	<b>Notlicht Zentral Batterie Versorgungsgerät</b>
<b>NEA</b>	<b>Netz Ersatz Anlage</b>

### English:

<b>GBS</b>	<b>Group Battery System</b> resp.	<b>LPS-System</b>	<b>Low Power Supply System</b>
<b>CBS</b>	<b>Central Battery System</b> resp.	<b>CPS-System</b>	<b>Central Power Supply System</b>
<b>MRS</b>	<b>Mains Replacement System</b>		

Designation:	Station type:	Mains monitoring:	Mains supply:	Battery supply:	Mains output voltage:	Battery output voltage:
NZB	main station	3~	400 V AC 50/60 Hz 3~	216 V DC	230 V AC 50/60 Hz 1~	216 V DC
NZB	sub station	1~	230 V AC 50/60 Hz 1~	216 V DC from main station	230 V AC 50/60 Hz 1~	216 V DC
NZB	sub station	3~	400 V AC 50/60 Hz 3~	216 V DC from main station	230 V AC 50/60 Hz 1~	216 V DC
NGB	main station	3~	230 V AC 50/60 Hz 1~	24 V DC	230 V AC 50/60 Hz 1~	230 V DC
NEA	main station	3~	400 V AC 50/60 Hz 3~	no	230 V AC 50/60 Hz 1~	230 V AC 50/60 Hz 1~



### Attention:

The specified mains and battery output voltages are only valid if output circuit cards of the types AK 1/2/4x12/32 EÜ/SÜ are used.

The specified mains and battery output voltages are only valid if the operating mode "9=CCSD" in menu item 4-3 "Line Operating Modes" is not used.

### Mains output voltage:

- > The mains output voltage designates the voltage with which the output circuits of an emergency light station can be operated if no supply failure is present.
- > The mains output voltage designates the voltage with which the output circuits of an emergency light station are operated if a partial supply failure is present.

### Battery output voltage:

- > The battery output voltage designates the voltage with which the output circuits of an emergency light station are operated if a general supply failure is present.
- > The battery output voltage designates the voltage with which the output circuits of an emergency light station are operated if a function test, a battery test, an insulation test or a read-in is executed.

## **Preface**

This operator's instruction describes installation conditions and measures recommended by the manufacturer using the internal unit KCGZ as well as the software Logica Visual. Furthermore device functions and device parameters are documented. The information provided conforms to the functional scope of mentioned software versions. Additional information can be requested from the above mentioned address.

The technical content of this operating instruction is correct at time of print.  
Subject to change without prior notification.

## Normal condition of an emergency light station – definition

The normal condition describes an emergency light station, which has the following properties:

- operational condition and general permanent setting switched on
- mains operation without supply failures (mains failures)
- fault-free
- no executed function test / battery test
- no active reset function
- executed insulation test of the battery supply at NZB system (insulation test enabled)



**Note:**

**Detailed information regarding the operation of the NGB/NZB/NEA systems are to be found in the respective operating instruction.**

## General interpretation of the device messages

DISPLAY UNITS G32640C, G32200, G32213			
Category:	Designation:	Meaning:	Normal condition:
Operational displays	Standby LED	standby active	On
	Mains operation LED	mains operation active	On
	Battery operation LED	battery operation active	Off
Mains failure displays	Phase L1 LED	L1 phase fault	Off
	Phase L2 LED	L2 phase fault	Off
	Phase L3 LED	L3 phase fault	Off
	Sub distribution LED	sub distribution supply failure, generator operation at NEA system	Off
Fault displays	Charging circuit LED	charger fault / no charge current available	Off
	Battery circuit LED	battery circuit fault	Off
	Deep discharge LED	deep discharge	Off
	Insulation LED	insulation fault	Off
	Data bus LED	bus fault - internal or between main and sub stations	Off
	Luminaire circuit LED	luminaire circuit fault	Off
	Blower LED	blower fault	Off
Function displays	Display LED	collective fault message - see display for details	Off
	Function test LED	test active	Off
	Reset LED	reset to standby with "T6" possible	Off
	Insulation test LED	insulation test active	off / on (in interval) at NZB system off at NGB system
	Permanent setting LED	permanent setting active	On

### Approach at deviations from normal condition:

#### Standby LED:

- > Check whether the operational condition is deactivated over the switch "S1" on the display unit.
- > Check whether the operational condition is deactivated over a signalling and switching module (MSM).
- > Check whether the operational condition is deactivated over a computer resp. a building management system (BMS).
- > Otherwise contact service.

#### Mains operation LED / Battery operation LED:

- > Check whether a function test, battery test or insulation test of the output circuits is executed.
- > Check whether supply failures are present. Remedy supply failures.
- > Otherwise contact service.

#### Phase L1 LED / Phase L2 LED / Phase L3 LED / Sub distribution LED:

- > Check whether supply failures are present. Remedy supply failures.
- > Otherwise contact service.

#### Charging circuit LED / Battery circuit LED / Data bus LED / Blower LED:

- > Contact service.

**Deep discharge LED:**

- > Check whether supply failures are present. Remedy supply failures.
- > Check whether the battery supply has reached the switch-off value for the deep discharge protection.  
Reset deep discharge protection (deep discharge protection deactivated).
- > Otherwise contact service.

**Insulation LED – NZB system:**

- > Contact service.

**Insulation LED – NGB system:**

- > Contact service (possibly wrong software version installed).

**Luminaire circuit LED:**

- > Check which display messages are shown in menu item 7 "Test Reports" in combination with this device message.  
Further approach considering the shown display messages.

**Display LED:**

- > Check which display messages are shown in combination with this device message.  
Further approach considering the shown display messages.
- > Otherwise contact service.

**Function test LED:**

- > Check whether a function test, battery test or insulation test of the output circuits is executed.
- > Otherwise contact service.

**Reset LED:**

- > Check whether a reset function is active.
- > Check installation safety for reset of the operating modes.  
Check whether no supply failure is present.
- > Execute reset of the operating modes.

**Insulation test LED, permanently on – NZB system:**

- > Check whether a function test, battery test or insulation test of the output circuits is executed.
- > Otherwise contact service.

**Insulation test LED, permanently off – NZB system:**

- > Contact service.

**Insulation test LED, permanently on or off / on (in interval) – NGB system:**

- > Contact service (possibly wrong software version installed).

**Permanent setting LED:**

- > Check whether the general permanent setting is deactivated over the switch "S2" on the display unit.
- > Check whether the general permanent setting is deactivated over a signalling and switching module (MSM).
- > Check whether the general permanent setting is deactivated over a computer resp. a building management system (BMS).
- > Otherwise contact service.



## General interpretation of the display messages

DISPLAY UNITS G32640C, G32200, G32213			
Category:	Text:	Meaning:	Normal condition:
Operational displays	"PLANT OFF"	operational condition off	not shown
	"FEEDING: MAINS"	mains operation	Shown
	"FEEDING: ACCU"	battery operation	not shown
	"FEEDING: DIESEL"	generator operation	not shown
Mains failure displays	"MAINS FAILURE / MAINS FAIL."	general supply failure, partial supply failure, generator operation at NEA system	not shown
	"SDnn-MAINS-FAIL / SD-MAINS-F."	partial supply failure	not shown
	"FAULT: TWILI.SWI."	special application – failure regarding twilight switch	not shown
Fault displays	"FAULT: CHARGER 1"	failure regarding charging circuit	not shown
	"FAULT: ACCU (SYMM)"	voltage symmetry failure regarding battery supply	not shown
	"DISCHARGE: / DEEP DISCHARGE"	deep discharge	not shown
	"ISO-ERROR (A+)"	insulation failure on plus pole	not shown
	"ISO-ERROR (A-)"	insulation failure on minus pole	not shown
	"OM-BUS-ERROR / FAULT: OM-BUSERR"	bus failure regarding output circuit card	not shown
	"SSnn BUS ERROR"	bus failure regarding shown sub station	not shown
	"FAULT: OM/LA / OM/LA-FAULT"	failure regarding output circuit / luminaire module	not shown
	"TOTAL CURRE.> 6A"	total current of an output circuit card more than 6 A	not shown
	"FAULT: ACCU (FuH)"	fuse failure regarding battery supply	not shown
	"FAULT: L-FUSE-F1 / F2 / F3 / F4"	fuse failure on control frame – AC	not shown
	"Fu-Fail"	fuse failure on output circuit card	not shown
	"MEMORY: FULL"	memory for protocols and events full	not shown
	"PRINTER ERROR"	printing failure	not shown
	"FAULT: F-/O-TEST"	failure at last insulation test / function test / battery test	not shown
Function displays	"NO AUTO-F-TEST / NO AUTO-F-TEST"	no automatic function test	not shown
	"NO AUTO-O-TEST / NO AUTO-O-TEST"	no automatic battery test	not shown

### Approach at deviations from normal condition:

#### "PLANT OFF":

- > Check whether the operational condition is deactivated over the switch "S1" on the display unit.
- > Check whether the operational condition is deactivated over a signalling and switching module (MSM).
- > Check whether the operational condition is deactivated over a computer resp. a building management system (BMS).
- > Otherwise contact service.

#### "FEEDING: MAINS" / "FEEDING: ACCU":

- > Check whether a function test, battery test or insulation test of the output circuits is executed.
- > Check whether supply failures are present. Remedy supply failures.
- > Otherwise contact service.

#### "FEEDING: DIESEL":

- > Check whether supply failures are present. Remedy supply failures.
- > Otherwise contact service.

#### "MAINS FAILURE / MAINS FAIL." / "SDnn-MAINS-FAIL / SD-MAINS-F.":

- > Check whether supply failures are present. Remedy supply failures.
- > Otherwise contact service.

#### "FAULT: TWILI.SWI.":

- > Special application – read individual documentation of the product.  
Further approach considering the individual documentation.
- > Otherwise contact service.

#### "FAULT: CHARGER 1" / "FAULT: ACCU (SYMM)" / "OM-BUS-ERROR / FAULT: OM-BUSERR" / "SSnn BUS ERROR":

- > Contact service.

**"DISCHARGE: / DEEP DISCHARGE":**

- > Check whether supply failures are present. Remedy supply failures.
- > Check whether the battery supply has reached the switch-off value for the deep discharge protection.  
Reset deep discharge protection (deep discharge protection deactivated).
- > Otherwise contact service.

**"ISO-ERROR (A+) / "ISO-ERROR (A-) – NZB system:**

- > Contact service.

**"ISO-ERROR (A+) / "ISO-ERROR (A-) – NGB system:**

- > Contact service (possibly wrong software version installed).

**"FAULT: OM/LA / OM/LA-FAULT":**

- > Check which display messages are shown in menu item 7 "Test Reports" in combination with this display message.  
Further approach considering the shown display messages.

**"TOTAL CURRE.> 6A" / "FAULT: ACCU (FuH)" / "FAULT: L-FUSE-F1 / F2 / F3 / F4" / "Fu-Fail":**

- > Contact service.

**"MEMORY: FULL":**

- > If necessary: print / storage of the reports and events in menu item 7 "Test Reports" and menu item 8 "Event Reports" on all emergency light stations.
- > Deletion of the reports and events in menu item 7 "Test Reports" and menu item 8 "Event Reports" on all emergency light stations.

**"PRINTER ERROR":**

- > Check on printer, whether paper is present and installed correctly.
- > Otherwise contact service.

**"FAULT: F-/O-TEST":**

- > Check which display messages are shown in menu item 7 "Test Reports" in combination with this display message.  
Further approach considering the shown display messages.

**"NO AUTO-F-TEST / NO AUTO-F-TEST":**

- > If necessary: enable automatic function test in menu item 3 "Test Parameters".
- > Check all further settings in menu item 2 "Setup Date / Time" and menu item 3 "Test Parameters".

**"NO AUTO-O-TEST / NO AUTO-O-TEST":**

- > If necessary: enable automatic battery test in menu item 3 "Test Parameters".
- > Check all further settings in menu item 2 "Setup Date / Time" and menu item 3 "Test Parameters".

## General interpretation of the reports

DISPLAY UNITS G32640C, G32200, G32213			
Category:	Text:	Meaning:	Normal condition:
Fault displays	"B"	no luminaire module found or bus failure	not shown
	"I"	SLEB/ALOG luminaire module found, illuminant resp. connected equipment defective	not shown
	"V"	SLEB/ALOG luminaire module found, bus failure on DALI bus related to the connected equipment	not shown

### Approach at deviations from normal condition:

#### "B":

- > Contact service.

#### "I":

- > Check whether illuminant failures are present. Remedy illuminant failures. Execute a function test subsequently.
- > Otherwise contact service.

#### "V":

- > Contact service.

## KCGZ – start function test

Either press button "T5" in automatic mode or:

- Call up menu item 0 "Run Functional Test".
- Answer with "yes" regarding input prompt.

## Logica Visual – start function test

In navigation window:

- Mark respective emergency light station and open context menu.
- Execute menu item "Execute Functional Test".

Update status of the installation after the function test is finished.

## KCGZ – start battery test

In automatic mode:

- Call up menu item 1 "Run Battery Test".
- Answer with "yes" regarding input prompt.

## Logica Visual – start battery test

In remote console, in automatic mode:

- Call up menu item 1 "Run Battery Test".
- Answer with "yes" regarding input prompt.

Update status of the installation after the battery test is finished.

## KCGZ – display of the reports

In automatic mode:

- Call up menu item 7 "Test Reports".
- Select "DISPLAY".
- Select respective report with "+" and "-".
- Select "D".

**Logica Visual – display of the reports**

In navigation window:

- Mark respective emergency light station.

In main window:

- Select tab "Test results".
- Press button field "Download last test".
- Update status of the installation.
- Mark respective report.

**KCGZ – display of the events**

In automatic mode:

- Call up menu item 8 "Event Reports".
- Select "DISPLAY".
- Select respective event with "+" and "-".
- Select "D".

**Logica Visual – display of the events**

In navigation window:

- Mark respective emergency light station.

In main window:

- Select tab "Test results".
- Press button field "Download last test".
- Update status of the installation.
- Mark respective event.

**KCGZ – print of the reports**

In automatic mode:

- Call up menu item 7 "Test Reports".
- Select "PRINT".
- Either select "ALL" for the print of all reports or select "nnnREPO." and enter quantity for a specific quantity of reports starting with the oldest report.
- Answer with "yes" regarding input prompt.
- Select respective medium.
- Answer with "yes" or "no" regarding input prompt.

**Logica Visual – print of the reports**

In navigation window:

- Mark respective emergency light station.

In main window:

- Select tab "Test results".
- Press button field "Download last test".
- Update status of the installation.
- Select respective reports with checkbox.
- Press button field "Print Details of selected Tests".

**KCGZ – print of the events**

In automatic mode:

- Call up menu item 8 "Event Reports".
- Select "PRINT".
- Either select "ALL" for the print of all events or select "nnnREPO." and enter quantity for a specific quantity of events starting with the oldest event.
- Answer with "yes" regarding input prompt.
- Select respective medium.
- Answer with "yes" or "no" regarding input prompt.

**Logica Visual – print of the events**

In navigation window:

- Mark respective emergency light station.

In main window:

- Select tab "Test results".
- Press button field "Download last test".
- Update status of the installation.
- Select respective events with checkbox.
- Press button field "Print Details of selected Tests".

**Maintenance**

The maintenance of installations for emergency lighting must be done in accordance with EN 50172 as well as EN 50272-2. Furthermore national rules and laws must be observed.

**NOTES:**

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