

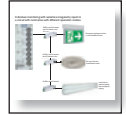
Emergency Lighting

CATALOGUE

CENTRAL POWER SYSTEMS

Beghelli-Präzisa GmbH is constantly developing and improving the product range. All descriptions, illustrations, drawings and specifications present only general particulars and shall not form part of any contract. The right is reserved to change specifications without prior notification or public announcement.

Publication date: July 2011



Central power systems

4



NZBVA NZBVE

8



NGBVA NGBVE

17



NGBVE-K

23



Options

27



Operation and monitoring modules

30



Monitoring and switching modules

32

4 Central power systems

The NZBVA and NZBVE central battery systems and the NGBVA and NGBVE group battery systems enable the installation of emergency lighting systems in medium and large-scale facilities. Both ranges are based on identical components. They only differ in the design of the cabinets:

- NZBVA and NGBVA: Control cabinets with a large inspection pane and detachable frame to accommodate 19" rack inserts.
- NZBVE und NGBVE: Control cabinets with a small inspection pane and fixed frame to accommodate 19" rack inserts.
- NZBVA and NZBVE: Use of a 216V battery with a lifetime expectation of 10+ years.
- NGBVA and NGBVE: Use of a 24V battery with a lifetime expectation of 5+ years.

Special features:

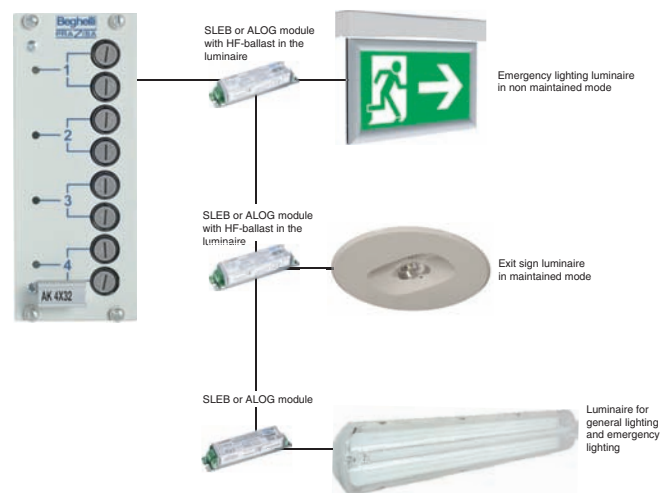
- Control and monitoring by the SleBLOGICA- or Auto-LOGICA-system
- Luminaire operation in:
 - Maintained mode
 - Non maintained mode
 - Non maintained mode with selective switching to maintained mode via external light switches
 - Non maintained mode with selective switching in case of partial mains incidents/switching via external mains monitoring modules
- Combination of all options in a single circuit
- Permanent check of the general lighting switches or of the mains monitoring modules via control inputs within the luminaire or system
- Allocation of control information to different luminaires and circuits without limitation
- No manual addressing of the luminaire number at the control and monitoring module within the luminaire required
- No manual coding of the control input at the control and monitoring module within the luminaire required
- Automatic allocation of the required circuits and detection of luminaires
- Individual monitoring of 32 luminaires in a circuit with or without selective irregularity report
- Automatic triggering of function and duration tests
- Automatic reporting to a test journal
- Centralised input and output of all parameters and data
- Operates luminaires with:
 - Incandescent lamps
 - Fluorescent tubes with electronic or magnetic ballast
 - HID lamps with electronic or magnetic ballast

Monitoring of emergency luminaires

The automatic test equipment of NGBVA, NGBVE, NZBVA and NZBVE systems monitors all exit signs and emergency luminaires. There are 2 options available:

- Individual monitoring with selective irregularity report enables immediate identification of a defective luminaire. The switching and monitoring modules SleB or ALOG check during the functional test lamps and ballasts and report the result to the central station. An eventual defect is being indicated and printed by giving details which circuit and which luminaire is not working properly. The modules SleB and ALOG are also available with integrated HF-ballast. The operation and monitoring modules to be used are AK...EÜ type.
- Individual monitoring without selective irregularity report does not enable immediate identification of a defective luminaire. There is just a comparison between the rated power of a circuit and the measured power during the functional test. An eventual defect is being indicated and printed by giving details which circuit is not working properly. The operation and monitoring modules to be used are AK...SÜ type.

Individual monitoring with selective irregularity report in a circuit with luminaires with different operation modes



Monitoring and control systems SlebLOGICA and AutoLOGICA

SlebLOGICA and AutoLOGICA enable all NGBVA, NGBVE, NZBVA and NZBVE emergency lighting systems to operate luminaires in one single circuit in different operation modes:

- Maintained mode.
- Non maintained mode.
- Switching from non maintained to maintained mode depending on the on/off position of the light switches. Either via SlebLOGICA or AutoLOGICA modules in the emergency luminaires or via a centrally placed LSSA module.
- Automatically switching on of all or of selected emergency luminaires in non maintained mode in case of partial mains failures. Either via SlebLOGICA or AutoLOGICA modules in the emergency luminaires or via a centrally placed LSSA module.
- Automatically switching off of all or of selected emergency luminaires in non maintained mode in case of return of mains voltage. Either with or without time delay.
- Manually switching off of all or of selected emergency luminaires in non maintained mode in case of return of mains voltage. Either via SlebLOGICA or AutoLOGICA modules in the emergency luminaires or via a centrally placed LSSA module.
- On/off switching of emergency luminaires in maintained mode either manually or via time switch.
- Allocation of operating modes to circuits and luminaires without limitation.
- Allocation of commands of control modules to circuits and luminaires without limitation.
- No manual coding of the control input at the modules in the luminaire is required.
- AutoLOGICA system offers the automatic identification of the luminaire address, no manual operation is required.

Advantages:

- Reduction of the number of circuits and wiring.
- Smaller dimensions of the control cabinets.
- Reduction of the quantity of inflammable items.
- Reduction of installation cost.
- Simplification of the design.
- Increased flexibility during installation.
- Increased flexibility in case of changes.

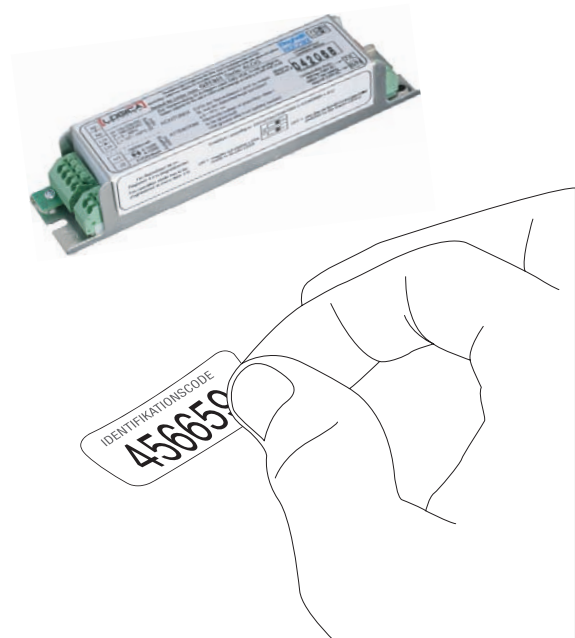
SlebLOGICA and AutoLOGICA systems offer control and switching but also monitoring of the function of emergency luminaires. All these actions can be triggered from the central cabinet.

SlebLOGICA and AutoLOGICA modules are either available as single modules that switch and monitor the lamp and ballast of the luminaire (type Sleb or ALOG) or combined with a HF-ballast (type ECSL or ECAL).

Additional advantages of the AutoLOGICA system

- Every module and every luminaire is equipped with an identification code. There is no manual addressing required.
- The AutoLOGICA system does not request wrong or double addressing. Consequently there is no time consuming troubleshooting necessary.
- The unconditional colour of the cabinets set a new trend in the industry.

All modules of the AutoLOGICA range are fitted with a self adhesive label showing the identification code.





Control and monitoring system KOMBI CONTROL

KOMBI CONTROL controls and coordinates all group and central battery systems. It is also an automatic test device according to EN 50171 and EN 50172. Four control buttons, a display, multimedia card (MMC) and a printer port are available for data input and output as well as for operating the module.

KOMBI CONTROL controls and monitors following key system functions:

- Battery charging with automatic switching between short time battery charging and maintaining battery charging. Display of charge and discharge current/voltage, check of the battery balance.
- Manual enabling/disabling of emergency mode suppression with push button or control input.
- Monitoring of mains supply on the main distribution board by an internal mains monitoring module.
- Automatic switching from mains to battery mode in the case of mains supply incidents/failures.
- Automatic cut-off of battery mode when the deep discharge protection is activated.
- Monitoring of mains supply on the sub distribution boards of general lighting by external mains monitoring modules (optional).
- Automatic switching on of non-maintained luminaires in all or selected luminaire circuits in case of mains supply incidents/failures via optional mains switch dependent control module LSSA.
- Automatic switching off – immediately or delayed – of non-maintained luminaires when mains supply is recovered. The delay can be programmed for all or selected luminaire circuits.
- Manual switching of non-maintained luminaires when mains supply is recovered – for all circuits via control push button or for selected circuits via optional mains switch dependent control module LSSA.
- Manual switching of maintained luminaires via push buttons or control input with or without time control. Time control to be programmed for all or selected luminaire circuits (2-week and 1-year control programme).
- Time controlled switching of emergency lighting and general lighting via push buttons from the general lighting system and via optional control module TSZ.
- Allocation of all luminaire circuits to maintained and non-maintained mode or to an optional control module LSSA or TSZ.
- Automatic charge monitoring in cycles < 5 minutes.
- Automatic function tests with configuration of test parameters according to local/national requirements.

- Automatic duration tests with configuration of test parameters according to local/national requirements.
- Automatic storage of all test results for 2 years (integrated test journal).
- Automatic allocation of luminaire circuits and luminaire detection (EVG/KCE/Sleb).
- Automatic insulation test selective for the central station or for each luminaire circuit (central battery systems only).

Control push buttons and control inputs:

- Emergency mode suppression ON/OFF
- Maintained mode ON/OFF
- Switching from maintained to non-maintained mode
- Function test triggering
- Insulation test triggering

Status indicators:

- Emergency mode suppression ON/OFF
- Mains mode
- Battery mode
- Maintained mode ON/OFF
- Mains failure main distribution board (phases L1, L2, and L3)
- Mains failure sub distribution board
- Switching from maintained to non-maintained mode

Fault indicators:

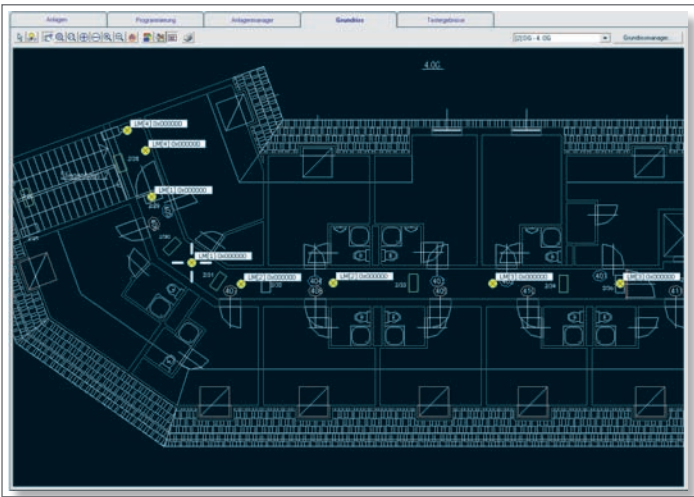
- Group alarm (detailed information via display or printer)
- Charge fault
- Battery fault
- Luminaire fault
- Bus fault
- Deep discharge
- Insulation fault
- Ventilator fault

Signal outputs:

- Emergency mode suppression
- Mains mode
- Battery mode
- Group fault

Monitoring software LOGICA-Visual

Software for centralised monitoring and controlling of emergency lighting systems of the series NZBVE, NZBVA, NGBVE and NGBVA.



Connection of the PC with the central unit:

- Interface USB/RS485
- TCP/IP – Ethernet adaptor
- GSM Interface via the telecommunication network

Input/output of monitoring and control data:

- Numerical and graphical allocation of emergency lighting luminaires to the location in the building plans or in the luminaire list.
- Import of building plans as dxf or dwg data.
- Programming of emergency lighting duration for every single luminaire or every circuit.
- Programming of emergency lighting mode for every single luminaire or every circuit.
- Programming of data for the functional tests and duration tests.
- Programming of the parameters of the LSSA inputs.
- Automatic printing of protocols for the configuration of the system and for failures.
- Clear visualisation of the test results.
- Manual triggering of functional and duration tests.
- Manual suppression of the emergency operation.

Visualisation during online mode:

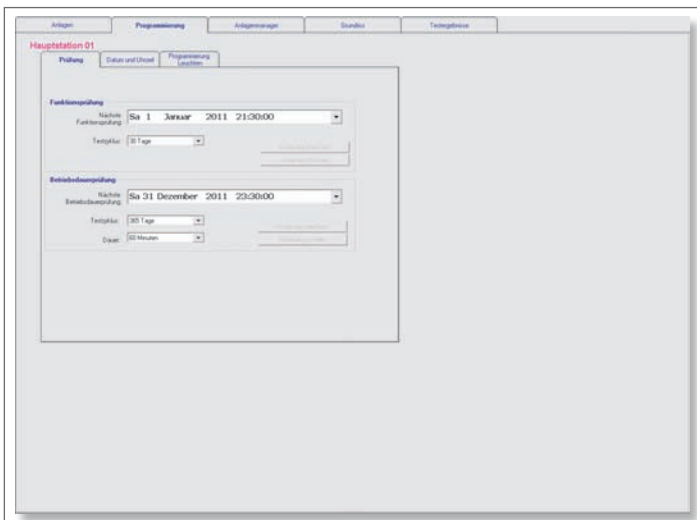
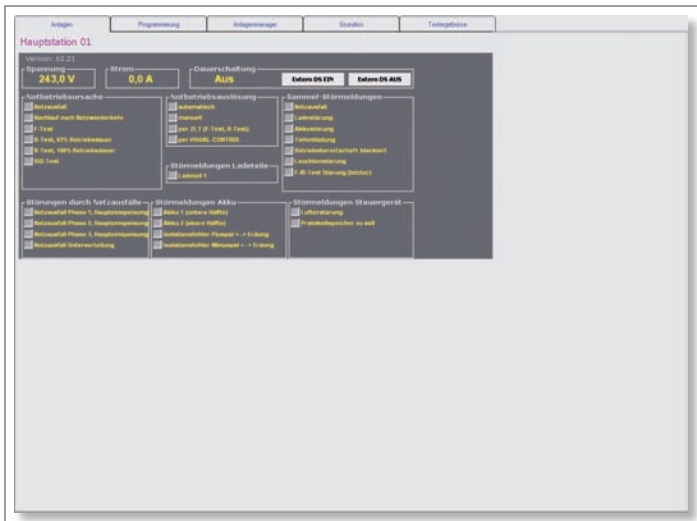
- Numerical and graphical visualisation of the status of all emergency luminaires and allocation to the building plans (dxf or dwg format) and the luminaire list.
- Status of the luminaires.
- Mode of emergency operation.
- Stand by modus.
- Irregularities within the system.
- Tests and results.

Hardware requirements (recommendation):

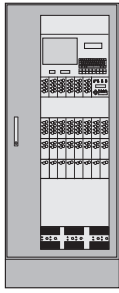
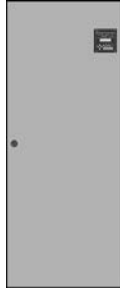
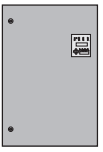

IBM compatible PC with Pentium 4 processor 2 GHz, 512 MB-RAM, 3 GB free store capacity.

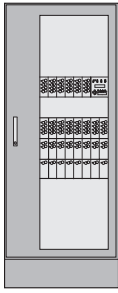
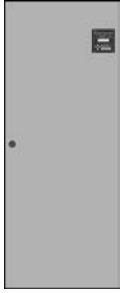

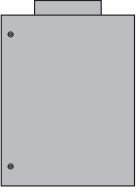
Software requirements (recommendation):

Windows 98 or any Windows of a later edition.

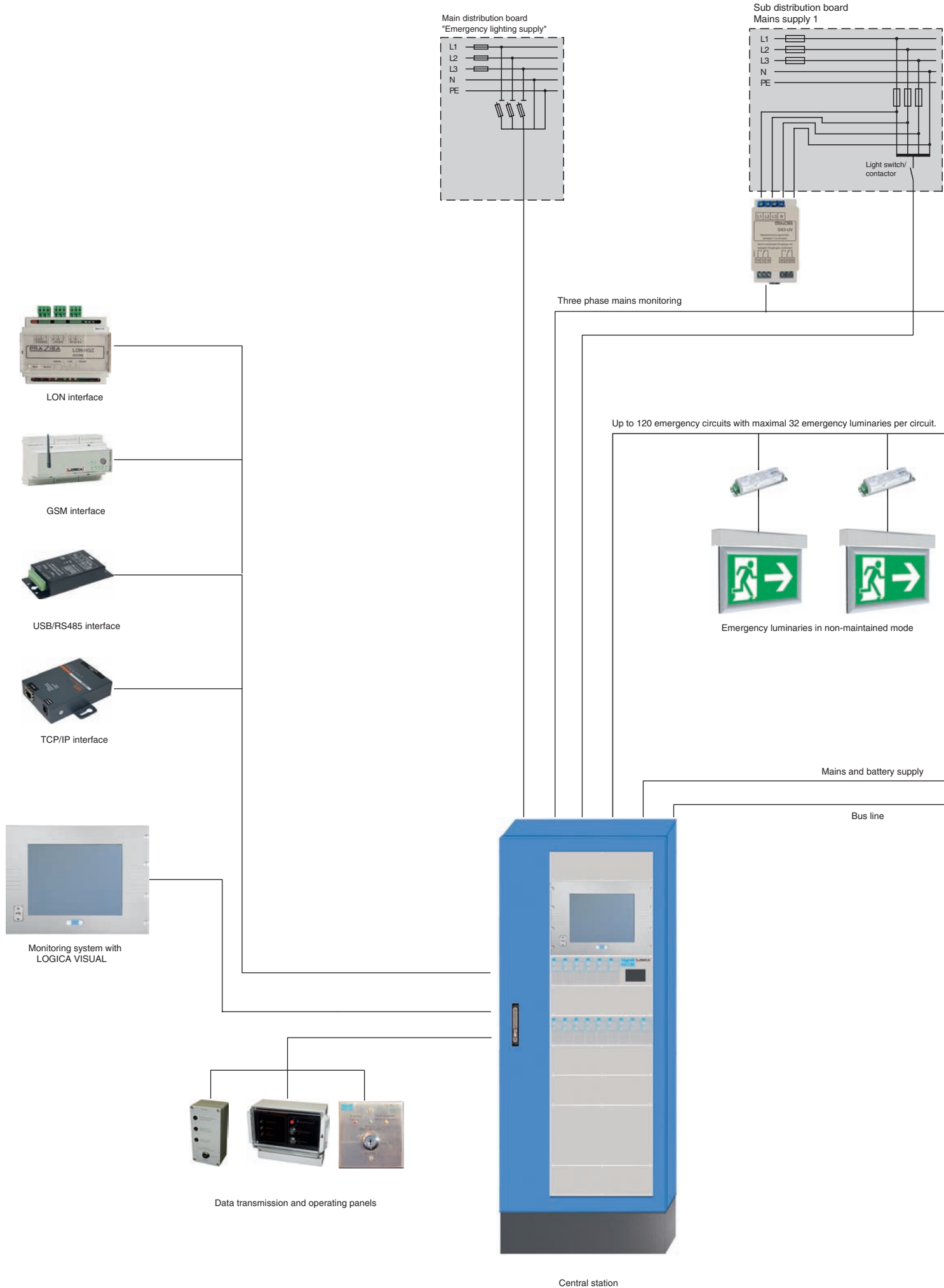


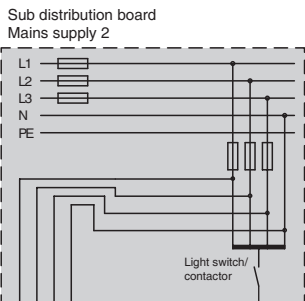
System spreadsheet NZBVA and NZBVE

				
Type	NZBVA-Z 230/ / /6 NZBVA-Z 230/ / /14 NZBVA-Z 230/ / /22 NZBVA-Z 230/ / /30	NZBVE-Z/S 230/ / /6 NZBVE-Z/S 230/ / /14 NZBVE-Z/S 230/ / /22 NZBVE-Z/S 230/ / /30	NZBVE-Z/A 230/ / /6 NZBVE-Z/A 230/ / /14	NZBVE-Z/K 230/ / /6 NZBVE-Z/K 230/ / /14
Charging unit L230/2	6 max.	6 max.	6 max.	6 max.
Batteries with a lifetime expectation of 10 years	33 Ah to 760 Ah	33 Ah to 200 Ah	33 Ah to 200 Ah	33 Ah to 96 Ah
Control and monitoring unit KOMBI CONTROL	integrated	integrated	integrated	integrated
Built-in printer ED	optional	optional	optional	optional
LON-BUS interface	optional	optional	optional	optional
Monitoring system LOGICA-Visual	optional	optional	only remote installation	only remote installation
USB interface	optional (1 max.)	optional (1 max.)	optional (1 max.)	optional (1 max.)
TCP/IP interface				
GSM interface				
Mains switch/contactor dependent control module LSSA 230/24	optional (8 max.) (8 max.) (8 max.) (8 max.)	optional (8 max.) (8 max.) (8 max.) (8 max.)	optional (1 max.) (2 max.)	optional (4 max.) (4 max.)
Operation and monitoring modules AK 1 x 32 EÜ AK 2 x 32 EÜ AK 4 x 32 EÜ	Rack compartments (6 max.) (14 max.) (22 max.) (30 max.)	Rack compartments (6 max.) (14 max.) (22 max.) (30 max.)	Rack compartments (6 max.) (14 max.)	Rack compartments (6 max.) (14 max.)
Operation and monitoring modules AK 1 x 32 SÜ AK 2 x 32 SÜ AK 4 x 32 SÜ				
Operation and monitoring module AK 32-SÜ-AC				
Design	Floor standing cabinets (electronics and battery)	Floor standing cabinets (electronics and battery)	Wall-mounted cabinet (electronics) Floor standing cabinet (battery)	Floor standing combined cabinet (electronics and battery)
Dimensions (HxWxD)	2000 x 800 x 600 mm	2000 x 800 x 400 mm	890 x 800 x 400 mm	2000 x 800 x 600 mm

				
Type	NZBVA-U/S 6 NZBVA-U/S 14 NZBVA-U/S 22 NZBVA-U/S 30	NZBVE-U/S 6 NZBVE-U/S 14 NZBVE-U/S 22 NZBVE-U/S 30	NZBVA-U/A 6 NZBVA-U/A 14 NZBVE-U/A 6 NZBVE-U/A 14	NZBVA-U/A 6-30 NZBVA-U/A 14-30 NZBVE-U/A 6-30 NZBVE-U/A 14-30
Charging unit L230/2	-	-	-	-
Batteries with a lifetime expectation of 10 years	-	-	-	-
Control and monitoring unit KOMBI CONTROL	integrated	integrated	integrated	integrated
Built-in printer ED	-	-	-	-
LON-BUS interface	-	-	-	-
Monitoring system LOGICA-Visual	No	No	No	No
USB interface	-	-	-	-
TCP/IP interface	-	-	-	-
GSM interface	-	-	-	-
Mains switch/contactor dependent control module LSSA 230	optional (8 max.) (8 max.) (8 max.) (8 max.)	optional (8 max.) (8 max.) (8 max.) (8 max.)	optional (1 max.) (2 max.)	optional (4 max.) (4 max.)
Operation and monitoring modules AK 1 x 32 EÜ AK 2 x 32 EÜ AK 4 x 32 EÜ	Rack compartments (6 max.) (14 max.) (22 max.) (30 max.)	Rack compartments (6 max.) (14 max.) (22 max.) (30 max.)	Rack compartments (6 max.) (14 max.)	Rack compartments (6 max.) (14 max.)
Operation and monitoring modules AK 1 x 32 SÜ AK 2 x 32 SÜ AK 4 x 32 SÜ				
Operation and monitoring module AK 32-SÜ-AC				
Design	Floor standing cabinet	Floor standing cabinet	Wall-mounted cabinet	Wall-mounted cabinet
Dimensions (HxWxD)	2000 x 800 x 600 mm 2000 x 800 x 600 mm 2000 x 800 x 600 mm 2000 x 800 x 600 mm	2000 x 800 x 400 mm 2000 x 800 x 400 mm 2000 x 800 x 400 mm 2000 x 800 x 400 mm	380 x 600 x 350 mm 760 x 600 x 350 mm	949 x 608 x 324 mm 1055 x 655 x 420 mm

10 System spreadsheet NZBVA and NZBVE





The mains switch control module LSSA 230/24 transfers the status of the mains switches to any emergency lighting circuit or to any emergency luminaire.

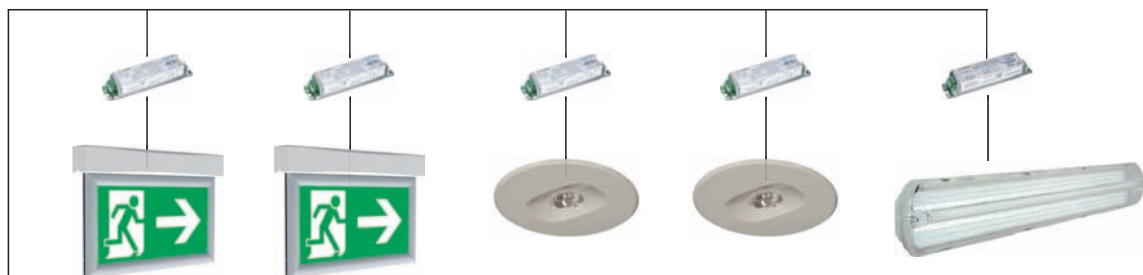


Emergency luminaires may be switched with the light switch by using the LSSA mains switch control module.



Emergency luminaires in maintained mode

Emergency luminaires in maintained mode connected to mains switches



Emergency luminaires in non-maintained mode

Emergency luminaires in maintained mode

Emergency luminaires in maintained mode connected to mains switches



Sub distribution board



Central station for NZBVA

Central station NZBVA-Z acc. to EN 50171 with:

- Control and monitoring system KOMBI CONTROL
- 6 rack compartments for charging unit L230/2
- Switching device to maintained mode
- Switching device to non-maintained mode
- Internal mains monitoring device for maintained mode
- Control input for external mains monitoring devices for non-maintained mode
- 6, 14, 22, or 30 rack compartments for operation and monitoring modules

Control cabinet including a lockable door with inspection pane and detachable frame. Modules for 19" rack technology. Battery cabinet with lockable door and ventilating apertures.

Technical data

Mains supply:	1 ~ N PE 50/60 Hz U : 230 V (+6%/-10) 3 ~ N PE 50/60 Hz U : 400 V (+6%/-10)	Cable entry:	from bottom
		Cabinet:	Steel sheet
		Mounting:	Floor standing
Battery supply:	U= 216 V	Degree of protection:	IP54
		Electrical class:	I
		Rated ambient temperature:	-5°C to +35°C

Fuses and terminal blocks according to technical specification

SlebLOGICA system:

Cabinet colour: light grey RAL 7035
Colour of modules: black/red

AutoLOGICA system:

Cabinet colour: brilliant blue RAL 5007
or light grey RAL 7035
Colour of modules: grey/blue



Central station for NZBVE KOMBI

Central station NZBVE KOMBI acc. to EN 50171 with:

- Control and monitoring system KOMBI CONTROL
- 6 rack compartments for charging unit L230/2
- Switching device to maintained mode
- Switching device to non-maintained mode
- Internal mains monitoring device for maintained mode
- Control input for external mains monitoring devices for non-maintained mode
- 6, 14, 22, or 30 rack compartments for operation and monitoring modules (with separate control cabinet)

Control cabinet with lockable door and inspection pane. Modules for 19" rack technology. Battery cabinet with lockable door and ventilating apertures.

Technical data

Mains supply:	1 ~ N PE 50/60 Hz U : 230 V (+6%/-10) 3 ~ N PE 50/60 Hz U : 400 V (+6%/-10)	Cable entry:	from top
		Cabinet:	Steel sheet
		Mounting:	Floor standing
Battery supply:	U= 216 V	Degree of protection:	IP21
		Electrical class:	I
		Rated ambient temperature:	-5°C to +35°C

Fuses and terminal blocks according to technical specification

SlebLOGICA system:

Cabinet colour: light grey RAL 7035
Colour of modules: black/red

AutoLOGICA system:

Cabinet colour: brilliant blue RAL 5007
or light grey RAL 7035
Colour of modules: grey/blue



Central station for NZBVE

Central station NZBVE-Z acc. to EN 50171 with:

- Control and monitoring system KOMBI CONTROL
- 6 rack compartments for charging unit L230/2
- Switching device to maintained mode
- Switching device to non-maintained mode
- Internal mains monitoring device for maintained mode
- Control input for external mains monitoring devices for non-maintained mode
- 6 or 14 rack compartments for operation and monitoring modules (with combined control and battery cabinet)
- 6, 14, 22, or 30 rack compartments for operation and monitoring modules (with separate control cabinet)

Control cabinet with lockable door and inspection pane. Modules for 19" rack technology. Battery cabinet with lockable door and ventilating apertures.

Technical data

Mains supply:	1 ~ N PE 50/60 Hz U : 230 V (+6%/-10) 3 ~ N PE 50/60 Hz U : 400 V (+6%/-10)	Cable entry:	from top
Battery supply:	U= 216 V	Cabinet:	Steel sheet
		Mounting:	Floor standing
		Degree of protection:	IP54
		Electrical class:	I
		Rated ambient temperature:	-5°C to + 35°C

Fuses and terminal blocks according to technical specification

SlebLOGICA system:

Cabinet colour: light grey RAL 7035
Colour of modules: black/red

AutoLOGICA system:

Cabinet colour: brilliant blue RAL 5007
or light grey RAL 7035
Colour of modules: grey/blue



Charging unit for NZBVA and NZBVE

Charging unit L230/2

Temperature-controlled charging based on IU characteristic with charging mode-dependent switching from charging to maintaining battery charging (float charging). When multiple charging units are used, each of them is independent from the other.

Technical data

Charge voltage:	244 V
Charge current:	2 A
Design:	19" rack insert (1 rack compartment)
Type:	L230/2

Order code: **G32893-SL**

Colour of modules: black/red

Order code: **G32893-AL**

Colour of modules: grey/blue



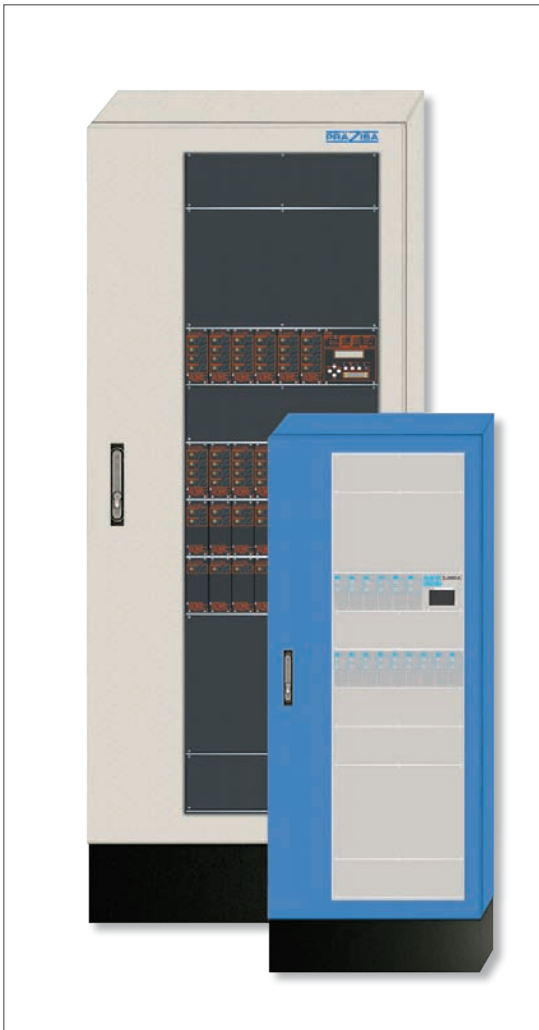
Batteries for NZBVA and NZBVE

Batteries

Sealed lead-acid battery with a lifetime expectation of 10+ years at an ambient temperature of 20°C acc. to EN 50171.
Battery capacity 7 Ah up to 760 Ah.

Further information about battery details available on request.





Sub-station for NZBVA (floor standing)

Sub-station NZBVA-U/S acc. to EN 50171 with:

- Control and monitoring system KOMBI CONTROL
 - Switching device to maintained mode
 - Switching device to non-maintained mode
 - Control input for external mains monitoring devices for non-maintained mode
 - 6, 14, 22, or 30 rack compartments for operation and monitoring modules
- Cabinet with lockable door, inspection pane and detachable frame. Modules for 19" rack technology.

Technical data

Mains supply:	1 ~ N PE 50/60 Hz	Cable entry:	from bottom
	U : 230 V (+6%/-10)	Cabinet:	Steel sheet
	3 ~ N PE 50/60 Hz	Mounting:	Floor standing
Battery supply:	U : 400 V (+6%/-10)	Degree of protection:	IP54
	U= 216 V	Electrical class:	I
		Rated ambient temperature:	-5°C to +35°C

Fuses and terminal blocks according to technical specification

SlebLOGICA system:

Cabinet colour: light grey RAL 7035
Colour of modules: black/red

AutoLOGICA system:

Cabinet colour: brilliant blue RAL 5007
or light grey RAL 7035
grey/blue
Colour of modules: grey/blue



Sub-station for NZBVE (floor standing)

Sub-station NZBVE-U/S acc. to EN 50171 with:

- Control and monitoring system KOMBI CONTROL
- Switching device to maintained mode
- Switching device to non-maintained mode
- Control input for external mains monitoring devices for non-maintained mode
- 6, 14, 22, or 30 rack compartments for operation and monitoring modules (system with separate control cabinet)

Cabinet with lockable door and inspection pane. Modules for 19" rack technology.

Technical data

Mains supply:	1 ~ N PE 50/60 Hz	Cable entry:	from bottom
	U : 230 V (+6%/-10)	Cabinet:	Steel sheet
	3 ~ N PE 50/60 Hz	Mounting:	Floor standing
Battery supply:	U : 400 V (+6%/-10)	Degree of protection:	IP54
	U= 216 V	Electrical class:	I
		Rated ambient temperature:	-5°C to +35°C

Fuses and terminal blocks according to technical specification

SlebLOGICA system:

Cabinet colour: light grey RAL 7035
Colour of modules: black/red

AutoLOGICA system:

Cabinet colour: brilliant blue RAL 5007
or light grey RAL 7035
grey/blue
Colour of modules: grey/blue



Sub-station for NZBVA and NZBVE (wall mounting)

Sub-station NZBVA-U/A or NZBVE-U/A acc. to EN 50171 with:

- Control and monitoring system KOMBI CONTROL
- Switching device to maintained mode
- Switching device to non-maintained mode
- Control input for external mains monitoring devices for non-maintained mode
- 6 or 14 rack compartments for operation and monitoring modules

Cabinet with lockable door and inspection pane. Modules for 19" rack technology.

Technical data

Mains supply:	1 ~ N PE 50/60 Hz U : 230 V (+6 %/-10) 3 ~ N PE 50/60 Hz U : 400 V (+6 %/-10)	Cable entry:	from top
Battery supply:	U= 216 V	Cabinet:	Steel sheet
		Mounting:	Wall mounting
		Degree of protection:	IP54
		Electrical class:	I
		Rated ambient temperature:	-5°C to + 35°C

Fuses and terminal blocks according to technical specification

SlebLOGICA system:

Cabinet colour: light grey RAL 7035
Colour of modules: black/red

AutoLOGICA system:

Cabinet colour: brilliant blue RAL 5007
or light grey RAL 7035
grey/blue
Colour of modules:



Sub-station with 30 minutes rated fire protection for NZBVA and NZBVE (wall mounting)

Sub-station NZBVA-U/A-30 or NZBVE-U/A-30 acc. to EN 50171 with:

- Control and monitoring system KOMBI CONTROL
- Switching device to maintained mode
- Switching device to non-maintained mode
- Control input for external mains monitoring devices for non-maintained mode
- 6 or 14 rack compartments for operation and monitoring modules

Cabinet with maintaining fire protection of 30 minutes following DIN 4102-2 with lockable door. Modules for 19" rack technology.

Technical data

Terminals:		Body:	Highly compressed fire protection panels
- Mains:	1 ~ N PE 50/60 Hz U : 230 V (+6 %/-10) 3 ~ N PE 50/60 Hz U : 400 V (+6 %/-10)	Surface coating:	Sprela, grey (similar to RAL 7035)
- Battery:	U= 216 V	Mounting:	Wall mounting
Cable entry:	From top via a fitted cable entry to which a fire protected cable duct can be tightly connected. ¹⁾	Degree of protection:	IP54
		Electrical class:	I
		Rated ambient temperature:	-5°C to + 35°C

Fuses and terminal blocks according to technical specification



Design and configuration of NZBVA and NZBVE

The central battery systems NZBVA and NZBVE can be designed according to the instructions below:

1. Determine from the customer's specifications:
 - Quantity and technical details of the exit sign and emergency luminaires to be supplied (lamp type, lamp power, ballast lumen factor and gear)
 - Quantity and technical details of the circuits (maintained mode, non-maintained mode, selectively switchable non-maintained mode, selectively switching-on non-maintained mode)
 - Type of luminaire monitoring
2. Power consumption in mains and battery mode (lamp and gear manufacturer data)¹⁾
3. Charging unit
4. Battery
5. Operation and monitoring modules for the central station (system spreadsheet)
6. Options for the central station (system spreadsheet)
7. Output(s) to sub-station(s) if required
8. Central station (system spreadsheet)

Type: Identification of the central station:

NZBVA-Z

230/___/___/___/___

NZBVE-Z

Rack compartment MULTI CONTROL-I

(0 = no, 1 = yes)

Duration (h) (1=1h/3=3h/8=8h)

Rack compartments needed for operation and monitoring modules

Battery capacity (Ah)

Charge current (A)

9. Operation and monitoring modules for the sub-station(s) (system spreadsheet)
10. Options for the sub-station(s) (system spreadsheet)
11. Sub-station(s) (system spreadsheet)

Type: Identification of the sub-station:

NZBVA-UV

/_ _ -

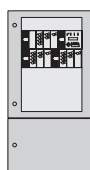
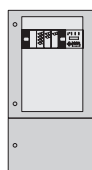
NZBVE-UV

Maintaining fire protection 30 min.(-30)

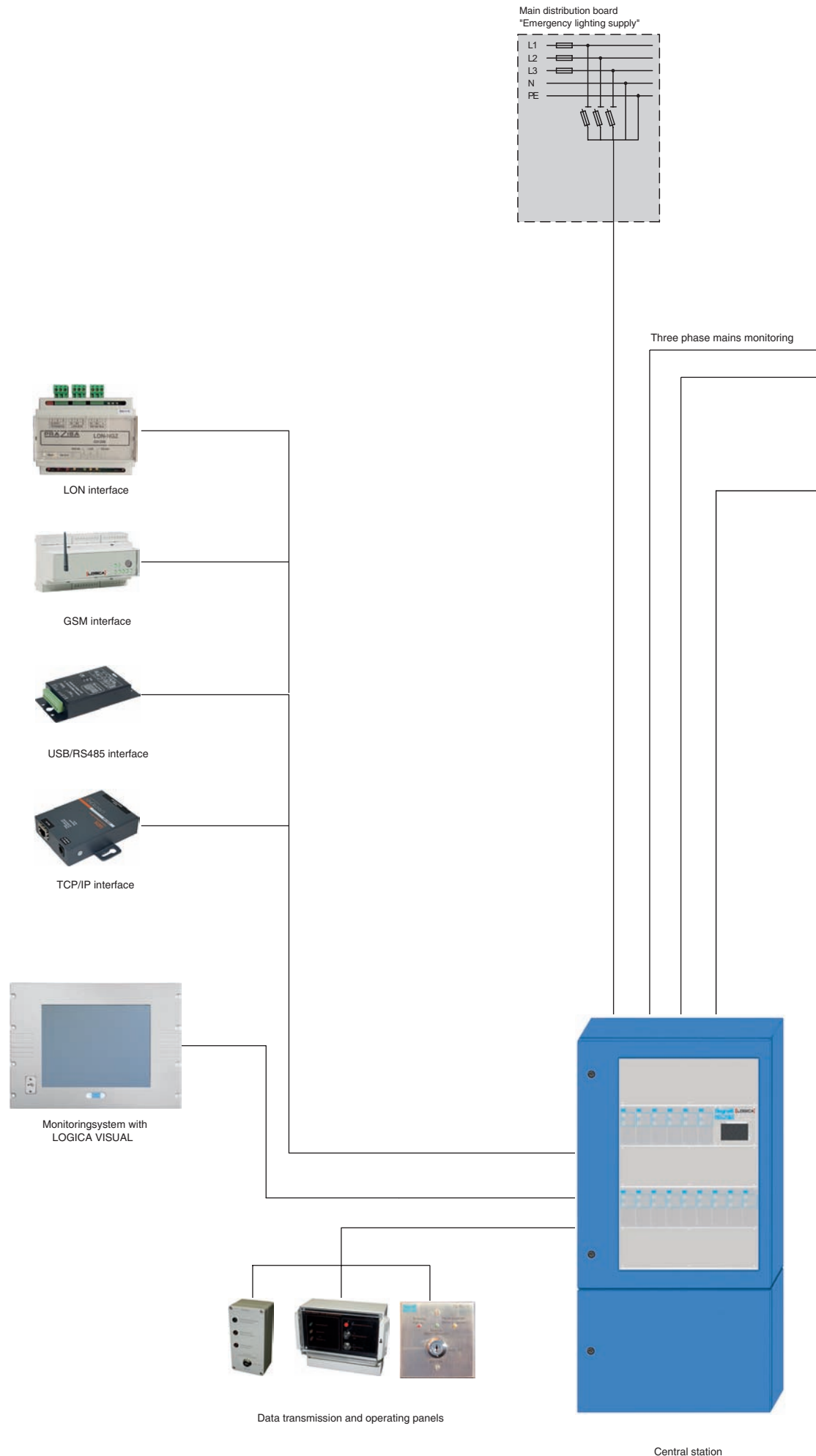
Rack compartments needed for operation and monitoring modules

Mounting (S = floor standing / W = wall mounting)

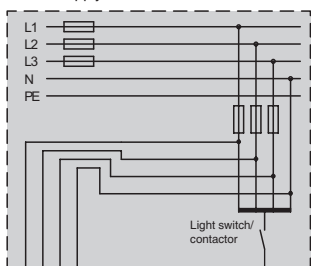
¹⁾ Power consumption of the ECSL, ECKC and EC modules on request.



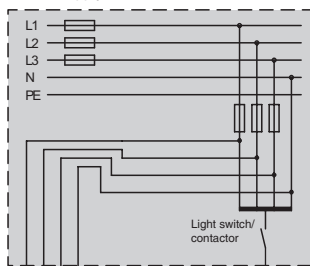
Type	NGBVA 24/6/_/1/3	NGBVA 24/6/_/3/9	NGBVE 24/6/_/1/3	NGBVE 24/6/_/3/9
Charging unit L24/6	integrated	integrated	integrated	integrated
Batteries with a lifetime expectation of 5 years	10Ah to 115Ah	10Ah to 115Ah	10Ah to 115Ah	10Ah to 115Ah
Transformers WLG	max. 1 x WLG 400 or 1 x WLG 750	max. 1 x WLG 750 + 2 x WLG 400 or 3 x WLG 400	max. 1 x WLG 400 or 1 x WLG 750	max. 3 x WLG 400 or 1 x WLG 750
Control and monitoring unit KOMBI CONTROL	integrated	integrated	integrated	integrated
Built-in printer ED	optional	optional	optional	optional
LON-BUS interface	optional	optional	optional	optional
Monitoring system LOGICA-Visual	No	No	No	No
USB interface	optional (max. 1)	optional (max. 1)	optional (max. 1)	optional (max. 1)
TCP/IP interface				
GSM interface				
Mains switch/contactor dependent control module LSSA 230	optional (max. 1)	optional (max. 1)	optional (max. 1)	optional (max. 1)
Mains switch/contactor dependent control module LSSA 24				
Staircase mains-/emergency lighting control module TSZ 230				
Operation and monitoring modules AK 1 x 32 EÜ AK 2 x 32 EÜ AK 4 x 32 EÜ	Rack compartments (max. 3)	Rack compartments (max. 9)	Rack compartments (max. 3)	Rack compartments (max. 9)
Operation and monitoring modules AK 1 x 32 SÜ AK 2 x 32 SÜ AK 4 x 32 SÜ				
Operation and monitoring module AK 32-SÜ-AC				
Design				
Dimensions (HxWxD)	1140x600x350 mm	1140x600x350 mm	1140x600x350 mm	1140x600x350 mm



Sub distribution board
Mains supply 1



Sub distribution board
Mains supply 2



The mains switch control module LSSA 230/24 transfers the status of the mains switches to any emergency lighting circuit or to any emergency luminaire.

Emergency luminaires may be switched with the light switch by using the LSSA mains switch control module.

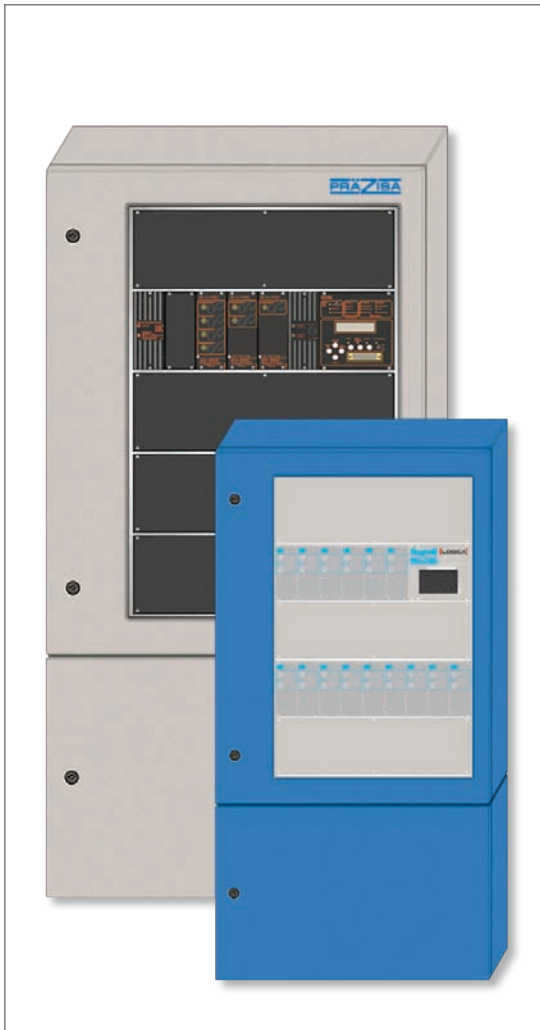
Up to 36 emergency circuits with maximal 32 emergency luminaires per circuit.



Emergency luminaires in non-maintained mode

Emergency luminaires in maintained mode

Emergency luminaires in maintained mode connected to mains switches



Group battery system NGBVA

Group battery system NGBVA acc. to EN 50171 with:

- Control and monitoring system KOMBI CONTROL
- Charging unit L24/6
- Switching device to maintained mode
- Switching device to non-maintained mode
- Internal mains monitoring device for maintained mode
- Control input for external mains monitoring devices for non-maintained mode
- 1 or 3 rack compartments for transformers
- 3 or 9 rack compartments for operation and monitoring modules

Control cabinet including a lockable door with inspection pane and detachable frame. Modules for 19" rack technology. Battery cabinet with lockable door and ventilating apertures.

Technical data

Mains supply:	1 ~ N PE 50/60 Hz U : 230 V (+6%/-10) 3 ~ N PE 50/60 Hz U : 400 V (+6%/-10)	Terminals:	25 mm ²
Fuse:	25 A, 3-pole	Cable entry:	from top
Terminals:	10 mm ²	Body:	Steel sheet
Battery supply:	U= 24 V	Mounting:	Wall mounting
Fuse:	max. 80 A, 2-pole	Degree of protection:	IP54/IP32
		Electrical class:	I
		Rated ambient temperature:	20°C

SlebLOGICA system:

Cabinet colour: light grey RAL 7035
Colour of modules: black/red

AutoLOGICA system:

Cabinet colour: brilliant blue RAL 5007
or light grey RAL 7035
grey/blue
Colour of modules:



Group battery system NGBVE

Group battery system NGBVE acc. to EN 50171 with:

- Control and monitoring system KOMBI CONTROL
- Charging unit L24/6
- Switching device to maintained mode
- Switching device to non-maintained mode
- Internal mains monitoring device for maintained mode
- Control input for external mains monitoring devices for non-maintained mode
- 1 or 3 rack compartments for transformers
- 3 or 9 rack compartments for operation and monitoring modules

Control cabinet with lockable door and inspection pane. Modules for 19" rack technology. Battery cabinet with lockable door and ventilating apertures.

Technical data

Mains supply:	1 ~ N PE 50/60 Hz U : 230 V (+6%/-10) 3 ~ N PE 50/60 Hz U : 400 V (+6%/-10)	Terminals:	25 mm ²
Fuse:	25 A, 3-pole	Cable entry:	from top
Terminals:	10 mm ²	Body:	Steel sheet
Battery supply:	U= 24 V	Mounting:	Wall mounting
Fuse:	max. 80 A, 2-pole	Degree of protection:	IP54/IP32
		Electrical class:	I
		Rated ambient temperature:	20°C

SlebLOGICA system:

Cabinet colour: light grey RAL 7035
Colour of modules: black/red

AutoLOGICA system:

Cabinet colour: brilliant blue RAL 5007
or light grey RAL 7035
grey/blue
Colour of modules:



Charging unit for NGBVA and NGBVE

Charging unit L24/6

Temperature-controlled charging based on IU characteristic with charging mode-dependent switching from charging to maintaining battery charging (float charging).

Technical data

Charge voltage:	27V
Charge current:	6 A
Design:	19" rack insert (1 rack compartment)
Type:	L24/6
Order code:	G32547
Colour of modules:	black/red



Batteries for NGBVA and NGBVE

Sealed lead-acid battery with a lifetime expectation of 5+ years at an ambient temperature of 20°C acc. to EN 50171.

Technical data:

Battery capacity (Ah)		24	40	65	85	115
Battery voltage (V)		24				
Battery current (A)	1 h	14,8	23,7	35,5	50,3	62,5
Maximum load (W)		355	568	852	1207	1500
Battery current (A)	3 h	5,7	9,1	13,6	19,5	20,8
Maximum load (W)		136	218	327	468	500

Battery capacity and maximum permissible load

Transformer modules for NGBVA and NGBVE

Transformers WLG

Unit for the conversion of 24V input D.C. voltage (battery) to 230V output D.C. voltage. One transformer supplies up to three operation and monitoring modules in battery mode.

Technical data

Power:	350 W	Power:	750 W
Design:	19" rack insert (1 rack compartment)	Design:	19" rack insert (2 rack compartments)
Type:	WLG 400	Type:	WLG 750
Order code:	G32812	Order code:	G32811
Colour of modules:	black/red	Colour of modules:	black/red

System equipment:

NGBVA/NGBVE 24/6/___/1/3: 1 x WLG 400 or 1 x WLG 750

NGBVA/NGBVE 24/6/___/3/9: 2 x WLG 400 + 1 x WLG 750 or 3 x WLG 400



Design and configuration of NGBVA and NGBVE

The group battery systems NGBVA and NGBVE can be designed according to the instructions below:

1. Determine from the customer's specifications:
 - Quantity and technical details of the exit sign and emergency luminaires to be supplied (lamp type, lamp power, ballast lumen factor and gear)
 - Quantity and technical details of the circuits (maintained mode, non-maintained mode, selectively switchable non-maintained mode, selectively switching-on non-maintained mode)
 - Type of luminaire monitoring
2. Power consumption in mains and battery mode (lamp and gear manufacturer data)¹⁾
3. Charging unit
4. Battery
5. Transformer(s) (system spreadsheet)
6. Operation and monitoring module (system spreadsheet)
7. Options (system spreadsheet)

Type: Defining the group battery system:

NGBVA

24/6/___/___/___/___

NGBVE

Duration (h) (1=1 h/3=3 h)

Rack compartments needed for operation and monitoring modules

Rack compartments needed for transformers

Battery capacity (Ah) (see above)

Charge current (A)

¹⁾ Power consumption of the ECSL, ECKC and EC modules on request.

The compact emergency lighting systems NGBVE-K offer a combination of decentralised power supply and centralised monitoring. Taking advantage from both self-contained and central battery systems these installations provide safety at its highest level. Depending on national regulations, these include:

- Decentralised supply of exit sign and emergency luminaires per building, section or fire protection zone
- Centralised monitoring of the complete emergency lighting installation
- Lower number of cables and distribution boards
- Minimised fire load in corridors and staircases
- Simplified battery replacement

Special features:

- Control and monitoring by the SuperLOGICA system
- Luminaire operation in:
 - Maintained mode
 - Non-maintained mode
 - Non-maintained mode with selective switching to maintained mode via external general lighting switches
 - Non-maintained mode with selective switching in case of partial mains incidents/failures via external mains monitoring modules
- Combination of all options in a single circuit
- Permanent check of the general lighting switches or of the mains monitoring modules via control inputs within the luminaire or system
- Allocation of control information to different luminaires and circuits without limitation
- No manual addressing of the luminaire number at the control and monitoring module within the luminaire required
- No manual coding of the control input at the control and monitoring module within the luminaire required
- Automatic allocation of the required circuits and detection of luminaires
- Individual monitoring of 20 luminaires in a circuit with or without selective irregularity report
- Automatic triggering of function and duration tests
- Automatic reporting to a test journal
- Centralised input and output of all parameters and data
- Operates luminaires with:
 - Incandescent lamps
 - Fluorescent tubes with electronic ballast

System spreadsheet NGBVE-K



Type	NGBVE-K 24/3/_/1/1-3	NGBVE-K 24/3/_/2/1-3	NGBVE-K 24/3/_/1/1-3	NGBVE-K 24/3/_/2/1-3
Charging unit L24/3	integrated	integrated	integrated	integrated
Batteries with a lifetime expectation of 5 years	24 Ah to 65 Ah	24 Ah to 65 Ah	24 Ah to 65 Ah	24 Ah to 65 Ah
Transformers WLG 400	integrated	integrated	integrated	integrated
Control and monitoring unit KOMBI CONTROL	integrated	integrated	integrated	integrated
Signalling and switching module MSM	optional	optional	optional	optional
Monitoring software LOGICA-Visual	optional	optional	optional	optional
USB interface	Choice of 1 only	Choice of 1 only	Choice of 1 only	Choice of 1 only
GSM interface				
TCP/IP interface				
Mains monitoring module DS 3 UV	optional	optional	optional	optional
Mains switch/contactor dependend control module LSSA 230	integrated (4)	integrated (4)	integrated (4)	integrated (4)
Mains switch/contactor dependend control module LSSA 24	integrated (4)	integrated (4)	integrated (4)	integrated (4)
Operation and monitoring modules AK 4 x 12 EÜ	Rack compartment (1)	Rack compartment (2)	Rack compartment (1)	Rack compartment (2)
Operation and monitoring modules AK 4 x 12 SÜ				
Design	Wall-mounted combi cabinet (electronics and battery)	Wall-mounted combi cabinet (electronics and battery)	Wall-mounted combi cabinet (electronics and battery)	Wall-mounted combi cabinet (electronics and battery)
Dimensions (HxWxD)	600x420x250 mm	600x420x250 mm	950x480x250 mm	950x480x250 mm

Compact emergency lighting system NGBVE-K

Compact emergency lighting system NGBVE-K acc. to EN 50171 with:

- Control and monitoring system KOMBI CONTROL
- Charging unit L24/3
- Switching device to maintained mode
- Switching device to non-maintained mode
- Internal mains monitoring device for maintained mode
- Control input for external mains monitoring devices for non-maintained mode
- 4 or 8 luminaire circuits
 - for individual monitoring without selective irregularity report
 - for individual monitoring with selective irregularity report
- 4 control inputs to switch selectively emergency lighting luminaire circuits from non-maintained to maintained mode depending on the general lighting. (control: 230V AC or DC)
- 4 control inputs switch individual emergency lighting luminaire circuits from non-maintained to maintained mode depending on partial incidents or failures of the general lighting. (control: isolated contact)
- Cabinet with separate electronics and battery compartments, lockable door with inspection pane and ventilation apertures in the battery compartment

Technical data

Mains supply:	1 ~ N PE 50/60 Hz U : 230 V (+6%/-10)	Cable entry:	from top
	3 ~ N PE 50/60 Hz U : 400 V (+6%/-10)	Cabinet:	Steel sheet, grey
Fuse:	20A, 3-pole	Mounting:	Wall mounting
Terminals:	6 mm ²	Degree of protection:	IP54/IP32
Battery supply:	U= 24V	Electrical class:	I
Fuse:	max. 50A, 2-pole	Rated ambient temperature:	
		Electronics	-5°C to +35°C
		Battery	20°C
SlebLOGICA system:		AutoLOGICA system:	
Cabinet colour:	light grey RAL 7035	Cabinet colour:	brilliant blue RAL 5007 or light grey RAL 7035
Colour of modules:	black/red	Colour of modules:	grey/blue



Batteries for NGBVE-K

Sealed lead-acid battery with a lifetime expectation of 5+ years at an ambient temperature of 20°C acc. to EN 50171.

Technical data

Battery capacity (Ah)		24	40	65
Maximum load (W)	1h	355	-	-
Maximum load (W)	3h	136	218	327

Battery capacity and maximum permissible load



Design and configuration of NGBVE-K

The compact emergency lighting systems NGBVE-K can be designed according to the instructions below:

1. Determine the following from the customer's specifications:
 - Quantity and technical details of the exit sign and emergency luminaires to be supplied (lamp type, lamp power, ballast lumen factor and gear)
 - Quantity and technical details of the circuits (maintained mode, non-maintained mode, selectively switchable non-maintained mode, selectively switching-on non-maintained mode)
 - Type of luminaire monitoring
2. Power consumption in battery mode (lamp and gear manufacturer data)¹⁾
3. Battery (table 1)
4. Operation and monitoring module (system spreadsheet)
5. Options (system spreadsheet)

Type: NGBVE-K 24/3/___/___/1-3

Charge voltage

Charge current

Battery capacity

Operation and monitoring modules

Operation duration

¹⁾Power consumption of the EC SL, ECKC and EC modules on request.

Battery capacity (Ah)		24	40	65
Maximum load (W)	1h	355	-	-
Maximum load (W)	3h	136	218	327
Table 1: Battery				

Note:

When using modules from the Sleb and KCE range consider a power consumption of 1W per module.

Consider 10W power consumption for every transformer.

Monitoring system LOGICA-Visual

Panel PC
 Processor: Pentium IV, 1,0 GHz
 15" touch screen
 80 GB hard disk
 512 MB-RAM
 WinXP and LOGICA-Visual pre-installed

Technical data

Design: 19" rack insert
 Type: LOGICA-Visual
 Order code: **F90210**



Interface modules for LOGICA-Visual

USB 2.0/RS485 interface

Module used to interface a group or central battery system with a PC running the monitoring software LOGICA-Visual.

Technical data

Design: Module for DIN rail
 Body: Metal
 Type: USB 2.0/RS485-NGZ
 Order code: **FB16319**



GSM interface

Module used to interface a group or central battery system with a PC running the monitoring software LOGICA-Visual via the GSM network.

Technical data

Design: Module for DIN rail
 Body: Plastic
 Type: GSM interface
 Order code: **FB16306-NZ**



TCP/IP interface

Module used to interface a group or central battery system with a PC running the monitoring software LOGICA-Visual via Ethernet.

Technical data

Design: Module for DIN rail
 Body: Metal
 Type: TCP/IP-NGZ
 Order code: **G31209**





LON bus interface for NGBVA, NGBVE, NZBVA and NZBVE

LON bus interface LON-NGZ

Module for communication with a building management system via LON bus.

Control of:

- Maintained mode ON/OFF, function test and insulation test triggering

Signalling of:

- Emergency mode suppression ON/OFF, mains mode, battery mode, mains failure on main distribution board (phase L1, L2, and L3), mains failure on sub distribution board, group fault, charge fault, battery fault, luminaire fault, bus fault, deep discharge

Technical data

Mounting:	DIN rail	Type:	LON-NGZ
Body:	Plastic	Order code:	G31206



Signalling and switching module for NGBVA, NGBVE, NZBVA and NZBVE

Signalling and switching module MSM

Display of:

- Emergency mode suppression
- Operating mode
- Group fault

Control of:

- Maintained mode ON/OFF

Technical data

Mounting:	Wall mounting	Electrical class:	II
Body:	Plastic	Type:	MSM
Dimensions (HxWxD):	160 x 80 x 60 mm	Order code:	G31015
Degree of protection:	IP 65		



Signalling and switching module MSM

Display of:

- Emergency mode suppression
- Operating mode
- Group fault

Control of:

- Maintained mode ON/OFF

Technical data

Mounting:	Recessed wall mounting	Electrical class:	I
Body:	Metal	Type:	MSM
Dimensions (HxWxD):	86 x 86 x 53 mm	Order code:	G31045
Degree of protection:	IP 20		



Signalling and switching module MSM

Display of:

- Emergency mode suppression
- Operating mode
- Group fault

Control of:

- Maintained mode ON/OFF
- Stand by operation ON/OFF
- Stand by operation with reduced light output (e.g. for cinemas)

Technical data

Mounting:	Wall mounting	Electrical class:	II
Body:	Plastic	Type:	MSM
Dimensions (HxWxD):	185 x 245 x 107 mm	Order code:	G31044
Degree of protection:	IP 65		

Mains monitoring module for NGBVA, NGBVE, NZBVA and NZBVE

Mains monitoring module DS 3 UV

Module used in sub distribution boards to monitor the mains supply for general lighting.

Mains input: 3-phase
Control output: 2 change-over contacts, isolated (230V/3A)

Technical data

Mounting:	DIN rail	Electrical class:	I
Body:	Plastic	Type:	DS 3 UV
Dimensions (HxWxD):	95 x 48 x 42 mm	Order code:	G31020A
Degree of protection:	IP 20		



Switching modules for NGBVA, NGBVE, NZBVA and NZBVE

Mains switch/contactor dependent control module LSSA 230

Module for selective switching of individual emergency lighting luminaire circuits from non-maintained to maintained mode depending on the general lighting. Allocation of control channels to the luminaire circuits without limitation.

Technical data

Control channels:	8	Body:	Plastic
Control:	230 V AC or DC	Type:	LSSA 230
Mounting:	DIN rail	Order code:	G31204
Version for mounting in central or sub station		Order code:	G31214
Version for mounting in distributor (max. 15 pieces)			



Mains switch/contactor dependent control module LSSA 24

Module used to selectively switch individual emergency lighting luminaire circuits from non-maintained to maintained mode depending on partial incidents or failures of the general lighting. Allocation of control channels to the luminaire circuits without limitation.

Technical data

Control channels:	8	Body:	Plastic
Control:	switching contact, isolated	Type:	LSSA 24
Mounting:	DIN rail	Order code:	G31207
Version for mounting in central or sub station		Order code:	G31215
Version for mounting in distributor (max. 15 pieces)			



Staircase general/emergency lighting control module TSZ 230

Module used to time-dependent control individual luminaire circuits of emergency and general lighting via push buttons of the general lighting system acc. to DIN VDE 0108-4, section 6.2 and DIN VDE 0108-5, section 6.2. Allocation of control channels to the luminaire circuits without limitation.

Technical data

Control channels:	4	Body:	Steel sheet
Control:	Push button	Type:	TSZ 230
Mounting:	DIN rail	Order code:	G31198



Printer for NGBVA, NGBVE, NZBVA and NZBVE

Printer ED

Technical data

Paper type:	Thermal paper	Type:	ED
Paper width:	80 mm	Order code:	M10053A
Design:	19" rack insert	Order code (Printer paper):	H14146





Operation and monitoring module for NGBVA, NGBVE, NZBVA and NZBVE

Operation and monitoring module AK 1 x 32 EÜ

Modules for one luminaire circuit to operate 1 x 32 luminaires with:

- Incandescent lamps
- Halogen lamps + electronic transformer
- Fluorescent tubes + electronic ballast

Monitoring:

- Individual monitoring with selective irregularity report

Technical data

Maximum load:	1 x 1296 W	Design:	19" rack insert (1 rack compartment)
Inrush current load:	1 x 42 500 W ¹	Type:	AK 1 x 32 EÜ
Colour of modules:	black/red	Colour of modules:	grey/blue
Order code:	G32754-SL	Order code:	G32100



Operation and monitoring module AK 2 x 32 EÜ

Modules for 2 luminaire circuits to operate 2 x 32 luminaires with:

- Incandescent lamps
- Halogen lamps + electronic transformer
- Fluorescent tubes + electronic ballast

Monitoring:

- Individual monitoring with selective irregularity report

Technical data

Maximum load:	2 x 648 W	Design:	19" rack insert (1 rack compartment)
Inrush current load:	2 x 35 000 W ¹	Type:	AK 2 x 32 EÜ
Colour of modules:	black/red	Colour of modules:	grey/blue
Order code:	G32818-SL	Order code:	G32101



Operation and monitoring module AK 4 x 32 EÜ

Modules for 4 luminaire circuits to operate 4 x 32 luminaires with:

- Incandescent lamps
- Halogen lamps + electronic transformer
- Fluorescent tubes + electronic ballast

Monitoring:

- Individual monitoring with selective irregularity report

Technical data

Maximum load:	4 x 324 W	Design:	19" rack insert (1 rack compartment)
Inrush current load:	4 x 27 500 W ¹	Type:	AK 4 x 32 EÜ
Colour of modules:	black/red	Colour of modules:	grey/blue
Order code:	G32824-SL	Order code:	G32102



Operation and monitoring module AK 1 x 12 SÜ-HL

Modules for 1 luminaire circuit to operate 1 luminaire with:

- High pressure lamp + electronic ballast

Monitoring:

- Individual monitoring with selective irregularity report

Technical data

Maximum load:	1 x 250 W	Design:	19" rack insert (1 rack compartment)
Colour of modules:	black/red	Type:	AK 1 x 12 SÜ-HL
Order code:	G32813		
Order code:	G32922 (capacitor module) ²		

¹ Max. power for 1 ms

² The AK 1 x 12 SÜ-HL needs an additional capacitor module. One capacitor module (1 rack compartment) supplies two AK 1 x 12 SÜ-HL. In one 19" rack it is possible to insert maximum four AK 1 x 12 SÜ-HL and two capacitor modules.

Operation and monitoring module for NGBVA, NGBVE, NZBVA and NZBVE

Operation and monitoring module AK 1 x 32 SÜ

Modules for one luminaire circuit to operate 1 x 32 luminaires with:

- Incandescent lamps
- Halogen lamps + electronic transformer
- Fluorescent tubes + electronic ballast

Monitoring:

- Individual monitoring without selective irregularity report

Technical data

Maximum load:	1 x 1296 W	Design:	19" rack insert (1 rack compartment)
Inrush current load::	1 x 42500 W ¹	Type:	AK 1 x 32 SÜ
Colour of modules:	black/red	Colour of modules:	grey/blue
Order code:	G32797	Order code:	G32103

¹ Max. power for 1 ms

Operation and monitoring module AK 2 x 32 SÜ

Modules for 2 luminaire circuits to operate 2 x 32 luminaires with:

- Incandescent lamps
- Halogen lamps + electronic transformer
- Fluorescent tubes + electronic ballast

Monitoring:

- Individual monitoring without selective irregularity report

Technical data

Maximum load:	2 x 648 W	Design:	19" rack insert (1 rack compartment)
Inrush current load::	2 x 35000 W ¹	Type:	AK 2 x 32 SÜ
Colour of modules:	black/red	Colour of modules:	grey/blue
Order code:	G32815	Order code:	G32104

¹ Max. power for 1 ms

Operation and monitoring module AK 4 x 32 SÜ

Modules for 4 luminaire circuits to operate 4 x 32 luminaires with:

- Incandescent lamps
- Halogen lamps + electronic transformer
- Fluorescent tubes + electronic ballast

Monitoring:

- Individual monitoring without selective irregularity report

Technical data

Maximum load:	4 x 324 W	Design:	19" rack insert (1 rack compartment)
Inrush current load:	4 x 27500 W ¹	Type:	AK 4 x 32 EÜ
Colour of modules:	black/red	Colour of modules:	grey/blue
Order code:	G32820	Order code:	G32105

¹ Max. power for 1 ms

Operation and monitoring module AK 1 x 12 SÜ-AC

Modules for one luminaire circuit to operate 1 x 12 luminaires with:

- Halogen lamps + magnetic transformer
- Fluorescent tubes + magnetic ballast (LPF circuit, non-compensated)

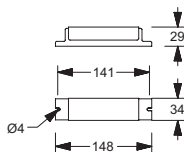
Monitoring:

- Individual monitoring without selective irregularity report

Technical data

Maximum load:	575 VA / 400 W	Design:	19" rack insert (1 rack compartment)
Rated frequency:	50 Hz (square wave)	Type:	AK 1 x 12 SÜ-AC
Colour of modules:	black/red		
Order code:	G32857		





Monitoring and switching module ALOG

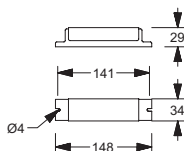
Module in *SuperLOGICA* technology with following functions:

- Luminaire monitoring (lamp + gear) with selective irregularity report
- Luminaire allocation to modes:
 - Non-maintained mode/maintained mode/non-maintained mode, selectively switchable via internal LSSA control input or external LSSA control module
 - Transmission of the control information from an internal LSSA control input to further luminaires within the same or other luminaire circuits
- No need to manually encode the luminaire address at the module
- No need for the manual coding of the LSSA control input at the module

Every module and every luminaire is equipped with an identification code. There is no manual addressing required.

Technical data

Lamp or system power:	5W to 120W	Mounting:	to be installed in luminaires
Mains voltage:	198V to 254V	Body:	Metal
Mains frequency:	50Hz	Degree of protection:	IP 20
Battery voltage:	176V to 254V	Electrical class:	I
Rated ambient temperature:	-10° C to +50 °C	Type:	ALOG
		Order code:	G31351

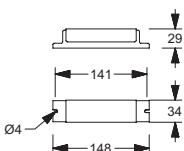


Monitoring and switching module ALOG-DALI

Module with the same functions as the module ALOG, but with DALI control input to connect with luminaires featuring a DALI control unit.

Technical data

Type:	ALOG-DALI
Order code:	G31354



Monitoring and switching module with HF-ballast

Module is a combination of a HF-ballast type EC and the ALOG monitoring and switching unit.

- HF-ballast available with fixed or variable ballast lumen factor

Technical data

Mains voltage:	198V to 254V
Battery voltage:	176V to 254V
Mains frequency:	50Hz
Ambient temperature:	-10° C to +50 °C
Mounting:	to be installed in luminaires
Body:	Metal
Degree of protection:	IP 20
Electrical class:	I

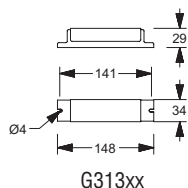
Order code	Lamp	Ballast lumen factor
G31352	T16-Lp 4 - 13W	75%
	TC-Lp 5 - 11W	75%
G31353	T16-Lp 14 - 21W	75%
	T26-Lp 18W	75%
	TC-Lp 13 - 26W	75%

Monitoring and switching module with LED ballast

Module is a combination of a operation unit for LEDs and the ALOG monitoring and switching unit.

Technical data

Output voltage:	15 - 22,5V to operate 2-5 Power LEDs (serial connection)	Order code	Lamp	Ballast lumen factor
LED current:	400 mA	G31355	2 - 4 PowerLEDs	100 %
		G31353	3 - 5 PowerLEDs	100 %



Monitoring and switching module Sleb

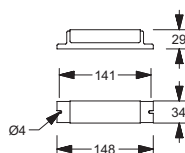
Module in *SuperLOGICA* technology with following functions:

- Luminaire monitoring (lamp + gear) with selective irregularity report
- Luminaire allocation to modes:
 - Non-maintained mode/maintained mode/non-maintained mode, selectively switchable via internal LSSA control input or external LSSA control module
 - Transmission of the control information from an internal LSSA control input to further luminaires within the same or other luminaire circuits
- No need to manually encode the luminaire address at the module
- No need for the manual coding of the LSSA control input at the module

Every module and every luminaire is equipped with an identification code. There is no manual addressing required

Technical data

Lamp or system power:	5 W to 120 W	Mounting:	to be installed in luminaires
Mains voltage:	198 V to 254 V	Body:	Metal
Mains frequency:	50 Hz	Degree of protection:	IP 20
Battery voltage:	176 V to 254 V	Electrical class:	I
Rated ambient temperature:	- 10° C to + 50 °C	Type:	Sleb
		Order code:	G31371



Monitoring and switching module Sleb-DALI

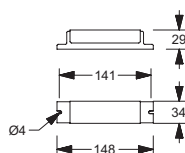
Module with the same functions as the module Sleb, but with DALI control input to connect with luminaires featuring a DALI control unit.

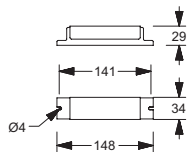
Technical data

Type:	Sleb-DALI
Order code:	G31372

Note:

As on the market a lot of DALI ballasts or converters with different functions it is necessary to check the combination of Sleb-DALI and DALI ballast or DALI converter before.





Monitoring and switching module with HF-ballast

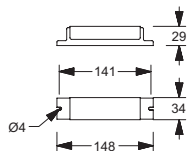
Module is a combination of a HF-ballast type EC and the Sleeb monitoring and switching unit.

- HF-ballast available with fixed or variable ballast lumen factor

Technical data

Mains voltage: 198 V to 254 V
 Battery voltage: 176 V to 254 V
 Mains frequency: 50 Hz
 Ambient temperature: - 10° C to + 50 °C
 Mounting: to be installed in luminaires
 Body: Metal
 Degree of protection: IP 20
 Electrical class: I

Order code	Lamp	Ballast lumen factor
G31373	T16-Lp 4 - 13 W	75 %
	TC-Lp 5 - 11 W	75 %
G31374	T16-Lp 14 - 21 W	75 %
	T26-Lp 18 W	75 %
	TC-Lp 13 - 26 W	75 %



Monitoring and switching module with LED ballast

Module is a combination of a operation unit for LEDs and the Sleeb monitoring and switching unit.

Technical data

Output voltage: 15 - 22,5V to operate
 2-5 Power LEDs (serial connection)
 LED current: 400 mA

Order code	Lamp	Ballast lumen factor
G31360	2 - 4 PowerLEDs	100 %
G31361	3 - 5 PowerLEDs	100 %



Beghelli PRÄZISA GmbH
Lanterstraße 34
D-46539 Dinslaken
Fon +49 (0)2064 9701 - 0
Fax +49 (0)2064 9701 - 99
info@beghelli.de
www.beghelli.de