PRÄZISA
GRUPPO BEGHELLI

Emergency lighting systems
06/07

Modern design and technology
for innovative lighting concepts

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Member of Fördergemeinschaft Gutes Licht

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PRÄZISA GRUPPO BEGHELLI

The company

In the last 40 years, Präzisa Industrieelektronik GmbH has become one of the leading companies in the sector of emergency lighting. It sets the pace of the market by way of innovative technology and functional design.

Präzisa Industrieelektronik GmbH has been a member of the Beghelli group for five years. The Beghelli group comprises more than 10 companies in Europe, America, and Asia. The activities of theBeghelli group focus on the development, manufacturing, and sales of products for general and emergency lighting, industrial and commercial security systems, and other commercial products.

Our products

Our product portfolio comprises exit sign and emergency luminaires, self-contained power packs, group and central battery systems, exit sign and emergency luminaires for external power supply, as well as monitoring and control systems. The high standards of our luminaires, devices, and systems reflect our expertise in the field of functional and cost-effective emergency lighting. This is backed by ongoing new developments and improvements. Thereby, the integration of new technologies and materials ensures a quick response to varying market requirements. The result is a continuous flow of innovative products, features, and styles.

Exit sign and emergency luminaires in compact design, like AESTETICA, or with optimised reflectors, like LOGICA, are only examples of our innovative power. Also the multifunctional monitoring and control system LOGICA for self-contained emergency lighting systems or the flexible mode systems *Super*LOGICA for group and central battery systems reflect the knowhow of the Beghelli group.

The LOGICA system meets all the criteria of a system for cost-effective monitoring and the control of self-contained emergency lighting systems. This modular concept is based on exit signs, emergency luminaires, and power packs with test facilities for autonomous monitoring (Autotest). The same luminaires and devices can be connected to a LOGICA-S monitoring and control station (Centraltest). A DALI-compatible bus is used for communications. Connection is performed via cables or radio. Enterprises with large-scale or multiple buildings can monitor their emergency lighting systems from our LOGICA-Z monitoring and control centre or from a PC via a data or GSM network. Specific features of our LOGICA system include:

- Codeable or programmable duration (1h or 3h) and mode (maintained or non-maintained mode) for all exit signs, emergency luminaires or power packs
- No manual address allocation at the luminaires or devices is required.
- 16 programmable control groups
- 16 programmable control scenarios
- Setting of control groups and control scenarios without limitations
- Facility to control other luminaires using the DALI interface

The *Super*LOGICA system enables operation of luminaires in group or central battery systems. Any luminaire operating on the same circuit in group or central battery systems in the same or in a different mode:

- Maintained mode
- Non-maintained mode
- Selective switching from non-maintained to maintained mode depending on the status of the general lighting
- Selective switching to the non-maintained mode in the case of partial incidents or failures of the mains supply
- Automatic or manual switching of all, or individual luminaires into non-maintained mode upon recovery of the mains supply
- Free programmable allocation of modes and control inputs to the circuits and luminaires
- Control via the *Super*LOGICA module within the luminaire or via a control module in the system
- No manual addressing and coding at the luminaires is required

Benefits of the *Super*LOGICA system include the reduction of circuits within a system, a lower number of cables and connectors, reduced installation cost and finally a minimisation of the fire load.

Self-contained exit sign, emergency luminaries, and power packs enable the installation of emergency lighting systems in small, medium sized, and large areas. Additionally, the LOGICA system enables automatic control and monitoring of the emergency lighting system.

Concept:

- LOGICA control and monitoring system
- Exit sign luminaires
- Emergency luminaires
- External power packs
- Inverter kits incorporated into the luminaires

Special features:

- Luminaires and power packs in the LOGICA design:
  - Can be coded or programmed for 1h or 3h
  - Adaption of fittings to auto or central test
  - Modular concept
- Auto test mode without overriding monitoring and control system:
  - Monitoring of exit sign, emergency luminaries, as well as power packs
- Central test mode with 1 LOGICA-Z monitoring and control central unit and max. 32 LOGICA-S monitoring and control stations:
  - One LOGICA-S can control and monitor max. 127 exit sign, emergency luminaries, and power packs with the LOGICA interface or general lighting luminaires with the DALI interface.
  - DALI-compatible
  - Connection via cables or radio
  - Optional monitoring from a PC via data or GSM network
  - No manual addressing at luminaires or devices required
  - 16 programmable control groups
  - 16 programmable control scenarios
  - Setting of control groups and control scenarios without limitations
- Exit sign and emergency luminaires in architectural or industrial style
- Exit sign and emergency luminaires in compact design
- Emergency luminaires with optimised reflectors for maximised light distribution
- Power packs for the operation of luminaires with:
  - Incandescent lamps
  - Halogen lamps with elecronic or magnetic transformers
  - Fluorescent tubes with electronic or magnetic ballast

Mounting options of Exit sign luminaires	LOGICA	T16-Lp	T26-Lp	TC-SEL-Lp	TC-DEL-LP	TC-TEL-Lp	TC-L-Lp	TC-F-Lp	TC-DSE-Lp	TC-TSE-Lp	A-Lp	QT-Lp	LED	Protection	Electrical class	
	x															
	x	8W												IP 40	I	33 m
	x	8W												IP 40	I	
	x	6 W 8 W												IP 40	I	23 m 35 m
	x	8W												IP 40	I	
	x	6 W 8 W												IP 20	I	22 m 29 m
	x												x	IP 20	I	22 m 29 m
	x	6 W 8 W 13 W												IP 40	I	23 m 35 m 60 m
	x	8 W												IP 40	I	
	x	8 W												IP 65	II	24 m
	x	8 W												IP 40 IP 65	II	24 m
	x	8 W												P 40 IP 65	II	24 m
	x			9 W										IP 42	I	44 m
	x				13 W									IP 20	I	
	x		18 W 36 W 58 W											IP 66	I	
												2x20W 2 x55W		IP 54	I	
												10 W		IP 40	II	
	x	x	x	x	x	x	x	x	x	x	x	x		IP 65 IP 32 IP 20	II I	

LOGICA is a modular system for cost-effective monitoring and control of self contained emergency lighting installations. It is designed to ensure the protective function of emergency lighting installations. Moreover, the LOGICA system ensures the testing of the emergency lighting system as according to different local or national regulations. LOGICA can be installed as an auto test and central test system.

Auto test

In the auto test mode, exit sign, emergency luminaries, as well as power packs are self-contained components of the emergency lighting installation without any connection to remote monitoring and control equipment. The duration can be set to 1 h or 3 h by coding at the luminaire or at the device. All luminaires or devices can be operated in maintained or non-maintained mode. An integrated test functionality automatically executes function tests on a weekly basis and duration tests every 6 months. A multicolour LED signals the operation mode (mains or battery mode, charging, switching to battery mode blocked or test triggering blocked) or irregularities (lamp, battery or charging fault).

Central test

In the central test mode, monitoring and control of the emergency lighting installation is centralised. For this purpose, exit sign, emergency luminaries, or power packs are connected either to a LOGICA-S monitoring and control station or to an INIBIT control module. Data or telecommunication networks enable to implement a monitoring and control system for emergency lighting systems from several buildings. Communications between the exit sign, emergency luminaries, or power packs and the LOGICA-S monitoring and control station is based on a DALI-compatible bus. This can also be used to control the luminaires of the general lighting installation featuring a DALI interface. The connection to LOGICA-S monitoring and control station is via a double-wire cable or by radio.

As a maximum, 127 exit sign, emergency luminaries, or power packs with a LOGICA interface can be connected to a single LOGICA-S monitoring and control station or to a single INIBIT control module. For details please contact your local sales office. The LOGICA-S control station can be connected to a PC by using the RS232/RS485 interface. The LOGICA-S module can also control general lighting luminaires with the DALI interface. For centralised monitoring and control in large-scale objects, it is possible to connect up to 32 LOGICA-S units with a LOGICA-Z central monitoring and control station. The LOGICA-Z central monitoring and control station can also be connected directly to a monitoring PC. For the PC, the LOGICA-Monitoring software is available. Moreover, a link to LON or Ethernet or integration into a building management system is possible.

All exit sign, emergency luminaries, or power packs with the LOGICA interface have a unique identification number. It is no longer needed to manually set the address at the luminaire or device. LOGICA-S monitoring and control modules detect this unique identification number and automatically register the address. Supplied labels with the identification number (figure and bar code) enable to link the luminaires address with the identification number for the documentation.

LOGICA-S and LOGICA-Z monitoring and control modules

Monitoring and control parameters

- Program the duration (1h or 3h) individually for each luminaire/device.
- Program the specification (maintained or non-maintained mode) individually for each luminaire/device.
- Automatically allocate all exit sign, emergency luminaries, or power packs featuring a LOGICA interface to the control group ALL and LOGICA.
- Exit sign, emergency luminaries, or power packs featuring a LOGICA interface to any of the control groups from 1 to 16.
- Allocate exit sign, emergency luminaries, or power packs featuring a LOGICA interface to the LOGICA monitoring group.
- Allocate exit sign and emergency luminaires or power packs featuring a LOGICA interface to the monitoring groups 1 or 2.
- Automatically allocate all general lighting luminaires featuring a DALI interface to the control groups ALL and DALI.
- Allocate general lighting luminaires featuring a DALI interface to any of the control groups from 1 to 16.
- Programme up to 16 different lighting scenarios with different switch and dim functions.
- Allocate control groups to lighting scenarios.
- Manually activate scenarios at the LOGICA central unit or via four control circuits.

Monitoring functions

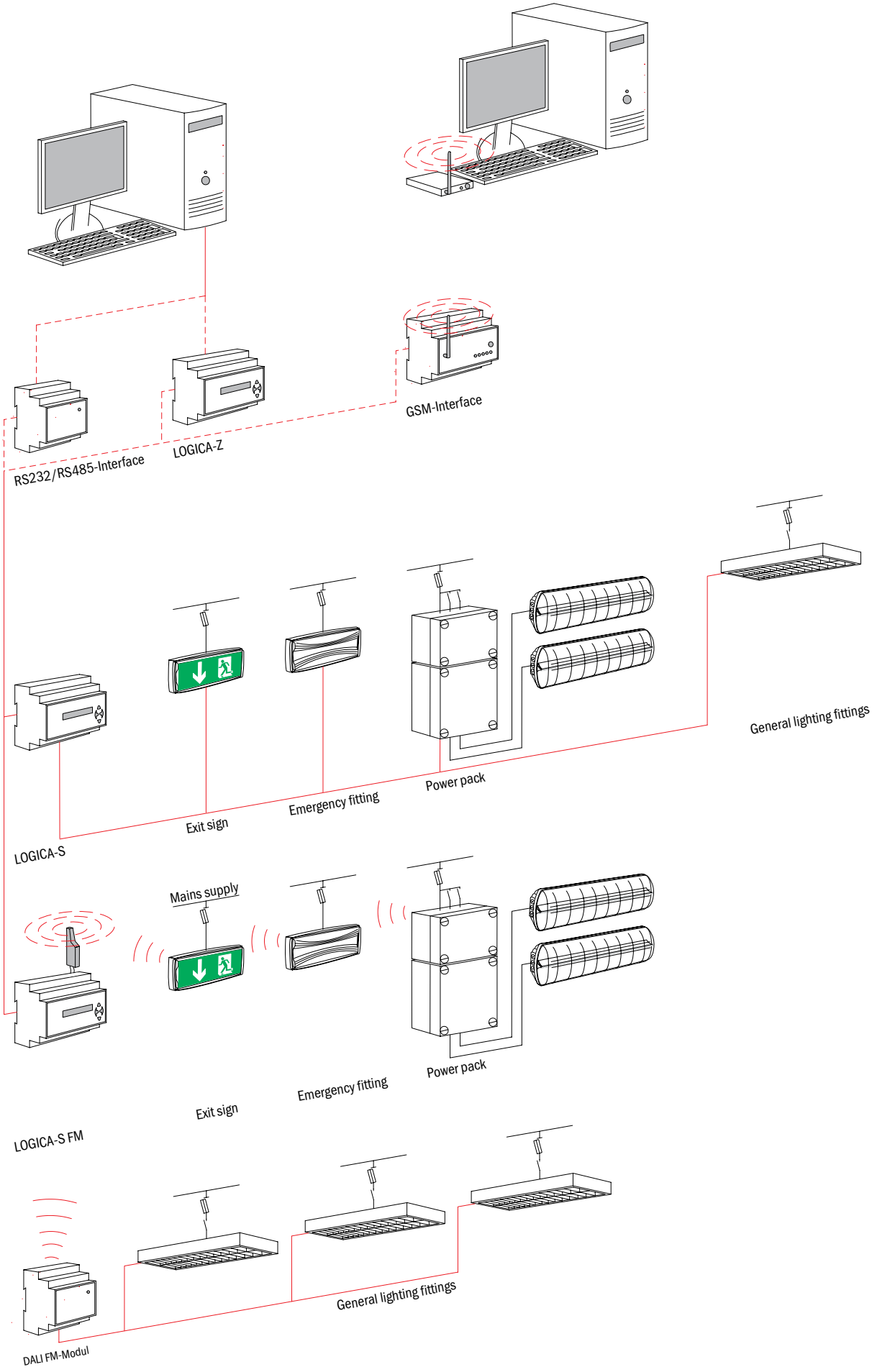
- Parameters for function and duration tests.
- Automatic triggering of function and duration tests: simultaneously for the LOGICA monitoring group or time-staggered for the monitoring groups 1 and 2.
- Manual triggering of function and duration tests separately for each exit sign, emergency luminaire or power pack, or for the monitoring groups LOGICA, 1 or 2.
- Manual control of the emergency mode suppression.

Control functions

- Manual control of emergency and general lighting in mains mode, individually or within the control groups ALL, LOGICA, DALI and 1 to 16.
- Manual dimming of the emergency and general lighting in mains mode, individually or within the control groups ALL, LOGICA, DALI and 1 to 16.

Signalling functions

- Operating conditions of the emergency lighting
- Irregularities of the emergency lighting system
- Tests of the emergency lighting system
- Storage of test results for 2 years (LOGICA-Z)


RS232/RS485-Interface
LOGICA-Z
GSM-Interface
LOGICA-S
Exit sign
Emergency fitting
Power pack
General lighting fittings
LOGICA-S FM
Mains supply
Exit sign
Emergency fitting
Power pack
DALI FM-Modul
General lighting fittings

LOGICA-S monitoring and control station

Module for monitoring and control of a maximum of 127 exit, emergency luminaries, or power packs featuring a LOGICA interface, or general lighting luminaires with DALI interface.
Connection via double-wire cable (LOGICA-S) or via radio (LOGICA-S FM).
Parameter input and indication via front panel with 2x16 character display and 4 control buttons.
Control inputs: 4 switching inputs, isolated.
Interface RS485:
Direct connection of LOGICA-PRINTER or LOGICA-Z module.
Connection to a PC via interface RS232/ RS485.

Technical data
Mounting: DIN rail
Body: Plastic
Dimensions (H x W x D): 90 x 160 x 75 mm
Degree of protection: IP 20
Electrical class: I

Type: LOGICA-S
Order no. **FB16300**

Type: LOGICA-S-FM
Order no.: **FB16303**

LOGICA-Z central monitoring and control station

Module for central monitoring and control of max. 32 LOGICA-S monitoring and control modules. Connection via a 3-wire cable.
Parameter input and indication via front panel with 2x16 character display and 4 control buttons.
Interface: RS232 interface for PC connection.

Technical data
Mounting: DIN rail
Body: Plastic
Dimensions (HxWxD): 90x160x75 mm
Degree of protection: IP 20
Electrical class: I

Type: LOGICA-Z
Order no.: **FB16305**

FM module

Module for wireless communication between exit sign, emergency luminaries, or power packs, and a LOGICA-S-FM monitoring and control station. Accommodated within the luminaires / devices (for luminaires/devices with plastic body) or attached to the luminaires/ devices (for luminaires/devices with metallic body). Connection to luminaires/ devices via cable with plug-type connector (cable length: 250 mm).

Technical data
Mounting: Built-in/attached
Body: Plastic
Dimensions (HxWxD): 40x70x40 mm
Degree of protection: IP 20

Type: LOGICA-FM
Order no.: **FB16304**

Extension cable 2500 mm
Order no.: **EB09425**

DALI FM module

Module for wireless communication between general lighting luminaires with DALI interface and a LOGICA-S-FM monitoring and control station. Connection between the FM module and luminaires via cable with plug-type connector.

Technical data
Mounting: DIN rail
Body: Plastic
Dimensions (HxWxD): 90x105x75 mm
Degree of protection: IP 20
Electrical class: I

Type: LOGICA-DALI-FM
Order no. **FB16307**

RS232/RS485 interface

Interface for communication between LOGICA-S monitoring and control station and a PC running the LOGICA Monitoring software. Connection between interface and PC via 9-pole line with SUB-D male connector.

Technical data
Mounting: DIN rail
Body: Plastic
Dimensions (HxWxD): 90x160x75 mm
Degree of protection: IP 20
Electrical class: I

Type: LOGICA-RS232/RS485
Order no.: **FB16308**

GSM interface

Module for communication between LOGICA-Z or LOGICA-S monitoring and control modules and a PC running the LOGICA Monitoring software. Connection via the GSM network.

Technical data:
Mounting: DIN rail
Body: Plastic
Dimensions (HxWxD): 90x105x75 mm
Degree of protection: IP 20
Electrical class: I

Type: LOGICA-GSM
Order no. **FB16306**

Printer module

Module which connects with LOGICA-S monitoring and control station or with LOGICA-Z central monitoring and control station to print:

- Irregularity reports
- Results of function tests
- Results of duration tests

Technical data:
Paper type: Thermal paper
Paper width: 58 mm

Mounting: DIN rail
Body: Plastic
Dimensions (HxWxD): 85x85x53 mm
Degree of protection: IP 20
Electrical class: I

Type: LOGICA-PRINTER
Order no. **FB16302**

LOGICA Monitoring visualisation software

The LOGICA Monitoring software enables centralised monitoring and control of complex emergency lighting systems, e.g. for large buildings or enterprises with many buildings at a single or several sites. Communication to a PC running the LOGICA Monitoring software can be realised by:

- LOGICA-S plus interface RS232/RS485 or
- LOGICA-S plus LOGICA-Z
- or wireless by connecting a GSM- Interface to LOGICA-S or LOGICA-Z

Input and output of monitoring and control parameters

- Numerically and graphically allocation of exit sign, emergency luminaries, or power packs to locations on building plans and luminaire/device lists.
- Import of building plans as dxf or dwg format files.
- Program the duration (1h or 3h) separately for each luminaire/device.
- Program the specification (maintained or non-maintained mode) separately for each luminaire/device.
- Program the parameters for function and duration tests.
- Allocation of exit sign, emergency luminaries, or power packs featuring a LOGICA interface to the control groups 1 to 16 without.
- Allocation of exit sign and emergency luminaires or power packs featuring a LOGICA interface to monitoring groups 1 or 2.
- Allocation of general lighting luminaires featuring a DALI interface to the control groups 1 to 16.
- Program up to 16 different lighting scenarios with different switch and dim control functions.
- Allocation of control groups to lighting scenarios.

Monitoring functions

- Manual triggering of function and duration tests separately for each exit sign, emergency luminaire or power pack, or for the monitoring groups LOGICA, 1 or 2.
- Manual control of the emergency mode suppression.

Control functions

- Manual control of emergency and general lighting in mains mode, individually or within the control groups ALL, LOGICA, DALI and 1 to 16.
- Manual dimming of the emergency and general lighting in mains mode, individually or within the control groups ALL, LOGICA, DALI and 1 to 16.
- Manually activate scenarios at the module or via four control inputs.

Visualisation functions:

- Numerically and graphically indicate operational conditions and irregularities of exit sign and emergency luminaires/power packs:
- Luminaire/device configurations
- Operating mode (mains/battery mode)
- Emergency mode suppression (on/off)
- Maintained mode (on/off)
- Dimming (%)
- Irregularities (charging/battery/lamp)
- Tests
- Indicate operational conditions and irregularities in on-line mode

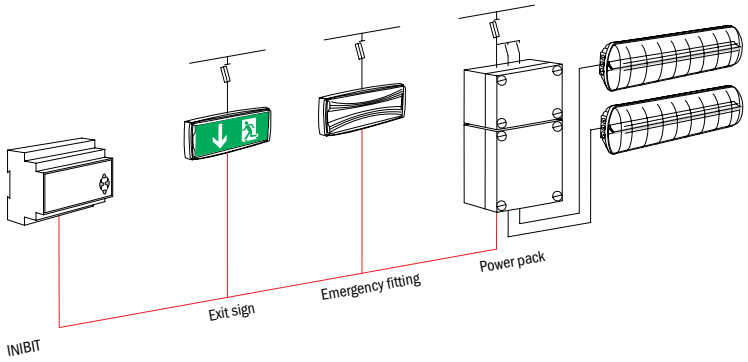
Hardware requirements:
IBM-compatible PC, Pentium II processor recommended, 166 MHz, 100 MB free hard disk capacity

Software requirements:
Operating system Windows 98, Windows 2000, Windows XP or Windows NT

Type: LOGICA-Monitoring
Order no.: **SWB16310**

Control module INIBIT

- Switch the emergency mode suppression for all luminaires/devices.
- Synchronise the test time for all luminaires/devices.
- Clear irregularity indication at luminaires/devices.



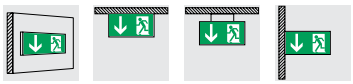
Control module INIBIT

Module to control a maximum of 127 exit sign and emergency luminaires/power packs featuring a LOGICA interface. Connection via a double-wire cable.

Technical data:
Mounting: DIN rail
Body: Plastic
Dimensions (HxWxD): 90x160x75 mm
Degree of protection: IP 20
Electrical class: I

Type: INIBIT
Order no.: FB16301

Exit sign luminaire ARCUS-V

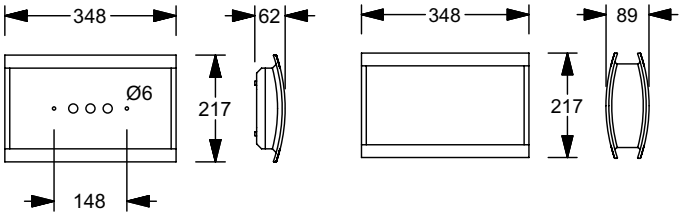


[LOGICA] T16-Lp IP40

Description Exit sign luminaire in an elegant design with a convex luminaire body. Visible surface as a pane, projecting on all sides. Choice of single sided (wall mounting) or double sided (ceiling, pendant suspended and bracket mounting) exit sign.
Luminaires supplied without exit sign panes and accessories.

Special features Architectural look, sleek design, long distance visibility, also available as emergency luminaire.

Technical data
Mounting: Wall, ceiling, pendant suspended or bracket mounting
Body: Extruded/die cast aluminium, anthracite-metallic (DB703)
Mains supply: 198 V - 254 V/50 Hz
Ambient temperature (non-maintained mode): 0 to + 40 °C
Ambient temperature (maintained mode): -5 to + 35 °C
Specification: Maintained or non-maintained mode

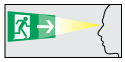


Order number	Lamp	Duration	Battery type:	Battery voltage	Battery capacity	Ballast lumen factor (BLF)	Stan-dard	Auto-test	Central test
Version for single sided exit sign									
NB90270	T16-Lp 8 W	1 h	NiCd battery	4.8 V	1.2 Ah	43%	x		
NB90271	T16-Lp 8 W	3 h	NiCd battery	4.8 V	2.2 Ah	33%	x		
N90270L	T16-Lp 8 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	91% (1h) / 38% (3h)		x	x
Version for double sided exit sign									
NB90278	T16-Lp 8 W	1 h	NiCd battery	4.8 V	1.2 Ah	43%	x		
NB90279L	T16-Lp 8 W	3 h	NiCd battery	4.8 V	2.2 Ah	33%	x		
N90278L	T16-Lp 8 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	91% (1h) / 38% (3h)		x	x

Accessories

Films / panes

Exit sign panes (please order separately)



33 m

E16282N

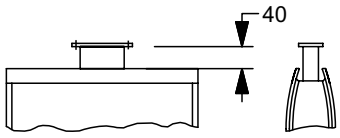
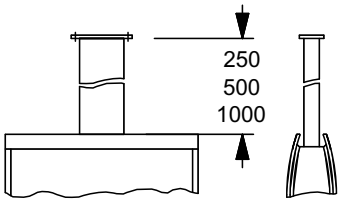
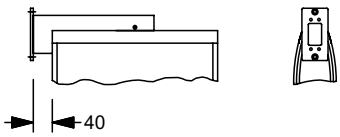
E16283N

E16284N

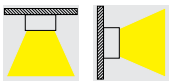
E16302 (opal pane)

E16285 (pane in body colour)

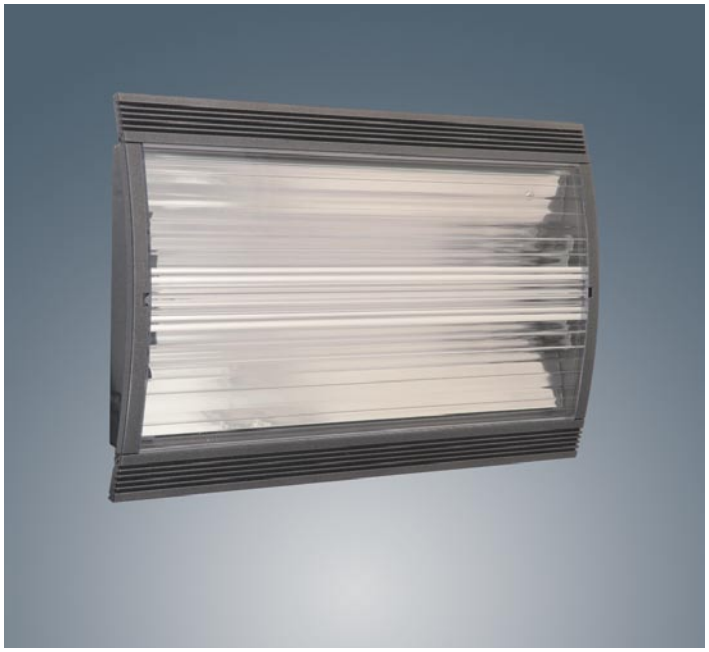
Mounting accessories

	**Adapter for ceiling mounting**	F95104
	**Pendant** 250 mm 500 mm 1000 mm	 F95083 F95084 F95085
	**Bracket**	F95064

Emergency luminaire ARCUS-V



[LOGICA] T16-Lp IP40

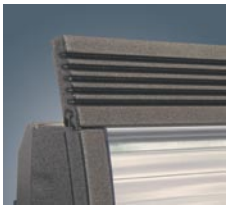


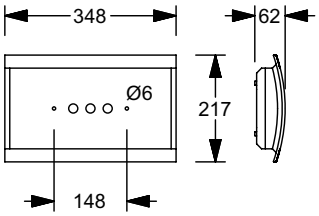
Description Emergency luminaire in an elegant design with convex luminaire body. Front surface as a pane, projecting on all sides. Light distribution by mirror reflector and transparent cover with longitudinal prisms.

Special features Architectural look, sleek design, wide beam light distribution, high light output ratio, also available as exit sign luminaire.

Technical data

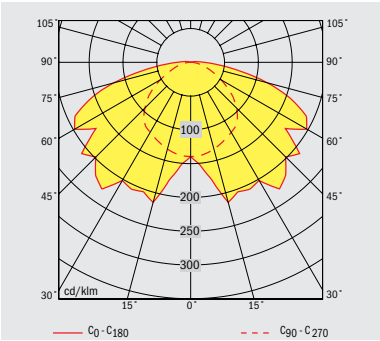
Mounting: Wall or ceiling mounted
Body: Extruded/die cast aluminium, anthracite-metallic (DB703)
Cover: Clear polycarbonate
Reflector: Specular aluminium
Mains supply: 198 V - 254 V/50 Hz
Ambient temperature (non-maintained mode): 0 to + 40 °C
Ambient temperature (maintained mode): -5 to + 35 °C
Specification: Maintained or non-maintained mode





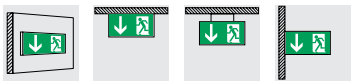
Order number	Lamp	Duration	Battery type:	Battery voltage	Battery capacity	Ballast lumen factor (BLF)	Stan-dard	Auto-test	Central test
NB90287	T16-Lp 8 W	1 h	NiCd battery	4.8 V	1.2 Ah	43%	x		
NB90288	T16-Lp 8 W	3 h	NiCd battery	4.8 V	2.2 Ah	33%	x		
N90287L	T16-Lp 8 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	91% (1h) / 38% (3h)		x	x

Lighting data



Mounting height (m)	Luminaire distance (m) for E = 1.25 lx or *E = 0.625 lx* (L1 / L2 / L3 / L4)			
ARCUS (1h)				
2,5	3,2 / *4,7*	9,1 / *1,2*	2,3 / *3,3*	5,9 / *7,5*
3,0	3,4 / *4,4*	8,4 / *12,0*	2,2 / *3,2*	5,7 / *7,7*
4,0	3,1 / *4,9*	8,9 / *12,0*	1,4 / *3,2*	5,7 / *8,0*
5,0	- / *4,6*	- / *11,6*	- / *2,7*	- / *8,2*
6,0	- / *4,4*	- / *13,3*	- / *1,7*	- / *8,3*
7,0	- / -	- / -	- / -	- / -
7,5	- / -	- / -	- / -	- / -
ARCUS (3h)				
2,5	3,0 / *4,1*	7,6 / *10,1*	2,0 / *2,7*	5,0 / *6,5*
3,0	2,8 / *4,0*	7,5 / *11,1*	1,7 / *2,8*	5,5 / *7,1*
4,0	- / *4,0*	7,3 / *10,4*	- / *2,6*	- / *7,6*
5,0	- / *4,0*	- / *11,2*	- / *1,8*	- / *7,2*
6,0	- / -	- / -	- / -	- / -
7,0	- / -	- / -	- / -	- / -
7,5	- / -	- / -	- / -	- / -
ARCUS 1h/3h (1h)				
2,5	4,7 /*6,0*	11,9 / *14,3*	3,1 / *3,8*	7,4 / *9,0*
3,0	4,5 / *6,4*	12,4 / *15,8*	3,2 / *4,1*	7,7 / *9,7*
4,0	4,9 / *6,9*	13,3 / *16,1*	3,3 / *4,5*	8,8 / *10,6*
5,0	4,6 / *6,6*	12,0 / *18,5*	2,8 / *4,7*	7,9 / *11,9*
6,0	4,6 / *7,1*	13,0 / *16,8*	1,9 / *4,6*	8,8 / *12,3*
7,0	- / *6,6*	- / *16,8*	- / *4,1*	- / *12,3*
7,5	- / *6,7*	- / *17,9*	- / *3,7*	- / *11,7*
ARCUS 1h/3h (3h)				
2,5	3,2 /*4,4*	8,2 / *11,1*	2,1 / *2,9*	5,3 / *7,2*
3,0	3,0 / *4,2*	7,8 / *10,4*	2,0 / *3,0*	5,7 / *7,4*
4,0	2,9 / *4,6*	8,8 / *1,4*	1,0 / *2,9*	4,8 / *7,7*
5,0	- / *4,3*	- / *12,2*	- / *2,3*	- / *7,4*
6,0	- / *3,3*	- / *11,3*	- / *0,8*	- / *6,0*
7,0	- / -	- / -	- / -	- / -
7,5	- / -	- / -	- / -	- / -

Exit sign luminaire DESIGN



[LOGICA] T16-Lp IP40

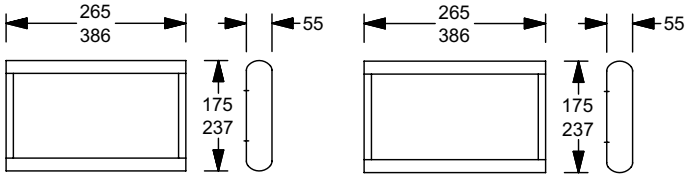
Description Exit sign luminaire in functional style, consisting of semi-circular sections and flat endcaps. Choice of single sided (wall mounting) or double sided (ceiling, pendant suspended and bracket mounting) exit sign. Luminaires without exit sign panes, adapter for ceiling mounting, pendant or bracket.

Special features Architectural look, extremely sleek design, choice of 2 visibility distances also available as emergency luminaire.

Technical data

Mounting: Wall, ceiling, pendant suspended or bracket mounting
Body: Steel sheet, white (RAL 9016)[1)]
Mains supply: 198 V - 254 V/50 Hz
Ambient temperature (non-maintained mode): 0 to + 40 °C
Ambient temperature (maintained mode): -5 to + 35 °C
Specification: Maintained or non-maintained mode

1) Design with aluminium body available on request.

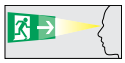


Order number	Lamp	Duration	Battery type:	Battery voltage	Battery capacity	Ballast lumen factor (BLF)	Stan-dard	Auto-test	Central test
Version for single sided exit sign									
NM90544	T16-Lp 6 W	1 h	NiCd battery	4.8 V	1.2 Ah	58%	x		
NM90545	T16-Lp 6 W	3 h	NiCd battery	4.8 V	2.2 Ah	44%	x		
NM90544L	T16-Lp 6 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	100 % (1h) / 51 % (3h)		x	x
NM90540	T16-Lp 8 W	1 h	NiCd battery	4.8 V	1.2 Ah	43%	x		
NM90541	T16-Lp 8 W	3 h	NiCd battery	4.8 V	2.2 Ah	33%	x		
NM90540L	T16-Lp 8 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	91% (1h) / 38% (3h)		x	x
Version for double sided exit sign									
NM90546	T16-Lp 6 W	1 h	NiCd battery	4.8 V	1.2 Ah	58%	x		
NM90547	T16-Lp 6 W	3 h	NiCd battery	4.8 V	2.2 Ah	44%	x		
NM90546L	T16-Lp 6 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	100 % (1h) / 51 % (3h)		x	x
NM90542	T16-Lp 8 W	1 h	NiCd battery	4.8 V	1.2 Ah	43%	x		
NM90543	T16-Lp 8 W	3 h	NiCd battery	4.8 V	2.2 Ah	33%	x		
NM90542L	T16-Lp 8 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	91% (1h) / 38% (3h)		x	x

Accessories

Films / panes

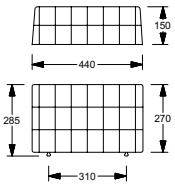
Exit sign panes (please order separately)

	Luminaire 6 W	Luminaire 8 W
	23 m	35 m
	E16604N	E16608N
	E16605N	E16609N
	E16606N	E16610N
Opal pane		
	E16607	E16611
Pane in body colour		
	E16242	E16241

Note: Exit sign panes "EXIT straight ahead", "EXIT to the right" and "EXIT to the left" available upon request.

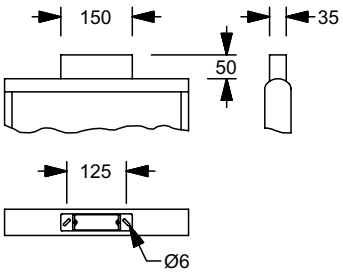
General accessories

Protective grill (wall mounting)

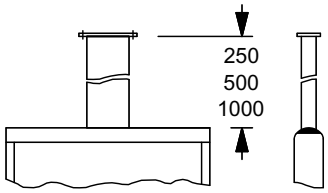


	Order no.
Luminaire with T16-Lp 8 W	F95032

Mounting accessories

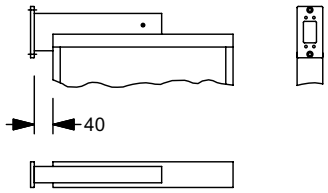


Adapter for ceiling mounting F95057



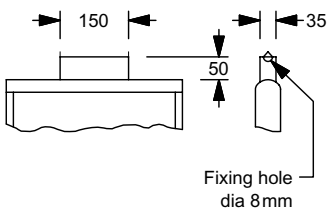
Pendant

250 mm	F95100
500 mm	F95101
1000 mm	F95102



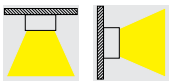
Bracket

Luminaire with T16-Lp 6 W	F95022
Luminaire with T16-Lp 8 W	F95035



Adapter for wire suspended mounting F95067

Emergency luminaire DESIGN



LOGICA | T16-Lp | IP40

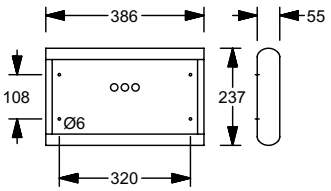
Description Emergency luminaire in functional style, consisting of semi-circular sections and flat endcaps. Light distribution by mirror reflector and transparent cover with longitudinal prisms.

Special features Functional look, extremely sleek design, wide beam light distribution, high light output ratio, also available as an exit sign luminaire

Technical data

Mounting: Wall or ceiling mounted
Body: Steel sheet, white (RAL 9016)[1)]
Cover: Prismatic structured plastic
Reflector: Specular aluminium
Mains supply: 198 V - 254 V/50 Hz
Ambient temperature (non-maintained mode): 0 to + 40 °C
Ambient temperature (maintained mode): -5 to + 35 °C
Specification: Maintained or non-maintained mode

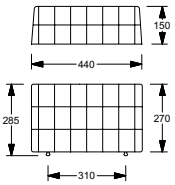
1) Design with aluminium body available on request.



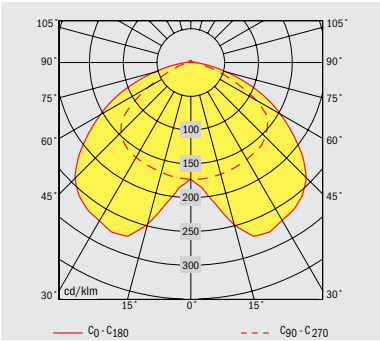
Order number	Lamp	Duration	Battery type:	Battery voltage	Battery capacity	Ballast lumen factor (BLF)	Stan-dard	Auto-test	Central test
NM90548	T16-Lp 8 W	1 h	NiCd battery	4.8 V	1.2 Ah	43%	x		
NM90549	T16-Lp 8 W	3 h	NiCd battery	4.8 V	2.2 Ah	33%	x		
NM90548L	T16-Lp 8 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	91% (1h) / 38% (3h)		x	x

Accessories

Protective grill (wall mounting) — Order no. F95032



Lighting data



Mounting height (m)	Luminaire distance (m) for E = 1.25 lx or *E = 0.625 lx*			
	L1	L2	L3	L4
DESIGN (1h)				
2,5	3,3 / *4,2*	7,7 / *9,6*	2,9 / *3,8*	7,0 / *8,5*
3,0	3,5 / *4,5*	8,6 / *10,8*	2,8 / *4,0*	7,3 / *9,5*
4,0	3,5 / *4,9*	8,7 / *11,6*	2,3 / *4,1*	6,9 / *10,7*
5,0	3,0 / *5,1*	10,0 / *12,2*	0,7 / *3,8*	6,7 / *10,1*
6,0	- / *4,9*	- / *13,1*	- / *3,0*	- / *10,1*
7,0	- / *4,4*	- / *12,7*	- / *1,5*	- / *9,1*
7,5	- / -	- / -	- / -	- / -
DESIGN (3h)				
2,5	3,0 / *3,9*	7,2 / *9,0*	2,5 / *3,5*	6,6 / *7,9*
3,0	3,1 / *4,1*	7,8 / *10,2*	2,4 / *3,6*	6,8 / *8,6*
4,0	2,9 / *4,4*	8,6 / *11,0*	1,5 / *3,5*	6,6 / *9,6*
5,0	- / *4,4*	- / *10,8*	- / *2,9*	- / *8,6*
6,0	- / *4,0*	- / *10,9*	- / *1,6*	- / *7,3*
7,0	- / -	- / -	- / -	- / -
7,5	- / -	- / -	- / -	- / -
DESIGN 1h/3h (1h)				
2,5	4,3 / *5,2*	10,4 / *12,5*	3,9 / *4,7*	8,5 / *10,0*
3,0	4,5 / *5,7*	10,7 / *13,1*	4,1 / *5,2*	9,6 / *1,3*
4,0	5,0 / *6,3*	11,4 / *15,0*	4,2 / *5,8*	10,8 / *12,7*
5,0	5,2 / *6,8*	13,3 / *17,1*	3,9 / *6,0*	11,4 / *14,4*
6,0	5,0 / *7,2*	12,8 / *17,2*	3,2 / *5,9*	11,3 / *14,6*
7,0	4,6 / *7,4*	12,7 / *18,9*	1,8 / *5,6*	10,8 / *16,0*
7,5	- / *7,4*	- / *17,9*	- / *5,4*	- / *15,0*
DESIGN 1h/3h (3h)				
2,5	3,2 / *4,0*	7,5 / *9,5*	2,7 / *3,7*	6,8 / *8,4*
3,0	3,2 / *4,3*	8,3 / *10,5*	2,6 / *3,8*	7,0 / *8,7*
4,0	3,2 / *4,7*	8,7 / *11,5*	1,9 / *3,8*	7,3 / *9,8*
5,0	- / *4,7*	- / *12,7*	- / *3,4*	- / *9,9*
6,0	- / *4,5*	- / *12,6*	- / *2,4*	- / *9,2*
7,0	- / -	- / -	- / -	- / -
7,5	- / -	- / -	- / -	- / -

Exit sign luminaire DISPOS

[LOGICA] T16-Lp IP20

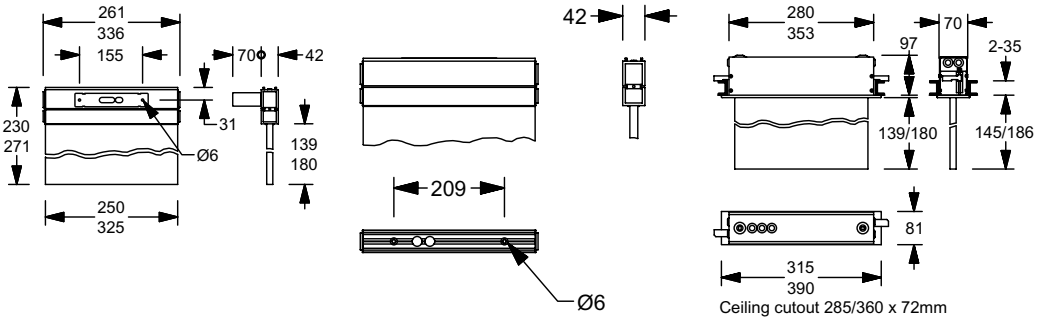
Description Exit sign luminaire in functional design, consisting of segmented sections (surface-mounted design). Choice of single sided (wall mounting) or double sided (recessed ceiling, ceiling, pendant suspended and bracket mounting) exit sign.
Luminaires supplied without exit sign panes and accessories.

Special features Functional look, display technology, two different visibilities, also available with LED light sources.

Technical data

Mounting: Recessed, ceiling, wall, pendant suspended or bracket mounting
Body: Zinc coated sheet steel/aluminium, white (RAL 9016)
Cover: Steel sheet, white (RAL 9016)[1)]
Mains supply: 198 V - 254 V/50 Hz
Ambient temperature (non-maintained mode): 0 to + 40 °C
Ambient temperature (maintained mode): -5 to + 35 °C
Specification: Maintained or non-maintained mode

1) Design with aluminium body available on request



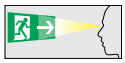
Ceiling cutout 285/360 x 72mm

Order number	Lamp	Duration	Battery type:	Battery voltage	Battery capacity	Ballast lumen factor (BLF)	Stan-dard	Auto-test	Central test
Version for recessed ceiling mounting and double sided exit route sign									
NM90135	T16-Lp 6 W	1 h	NiCd battery	4.8 V	1.2 Ah	58%	x		
NM90136	T16-Lp 6 W	3 h	NiCd battery	4.8 V	2.2 Ah	44%	x		
NM90135L	T16-Lp 6W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	100 % (1h) / 51 % (3h)		x	x
NM90100	T16-Lp 8 W	1 h	NiCd battery	4.8 V	1.2 Ah	43%	x		
NM90101	T16-Lp 8 W	3 h	NiCd battery	4.8 V	2.2 Ah	33%	x		
NM90100L	T16-Lp 8 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	91% (1h) / 38% (3h)		x	x
Version for wall mounting and single sided exit route sign									
NM90111	T16-Lp 6 W	1 h	NiCd battery	4.8 V	1.2 Ah	58%	x		
NM90112	T16-Lp 6 W	3 h	NiCd battery	4.8 V	2.2 Ah	44%	x		
N90111L	T16-Lp 6W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	100 % (1h) / 51 % (3h)		x	x
NM90105	T16-Lp 8 W	1 h	NiCd battery	4.8 V	1.2 Ah	43%	x		
NM90106	T16-Lp 8 W	3 h	NiCd battery	4.8 V	2.2 Ah	33%	x		
N90105L	T16-Lp 8 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	91% (1h) / 38% (3h)		x	x
Version for pendant suspended mounting and double sided exit route sign									
NM90116	T16-Lp 6 W	1 h	NiCd battery	4.8 V	1.2 Ah	58%	x		
NM90117	T16-Lp 6 W	3 h	NiCd battery	4.8 V	2.2 Ah	44%	x		
N90116L	T16-Lp 6W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	100 % (1h) / 51 % (3h)		x	x
NM90107	T16-Lp 8 W	1 h	NiCd battery	4.8 V	1.2 Ah	43%	x		
NM90108	T16-Lp 8 W	3 h	NiCd battery	4.8 V	2.2 Ah	33%	x		
N90107L	T16-Lp 8 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	91% (1h) / 38% (3h)		x	x

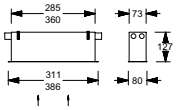
Accessories

Films / panes

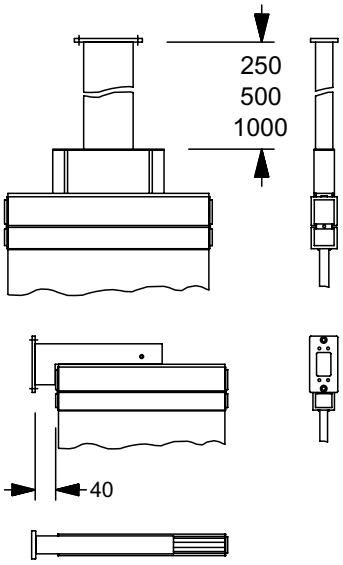
Exit sign panes (please order separately)

	Luminaire 6 W	Luminaire 8 W
	22 m	29 m
	E16260N	E16128N
	E16261N	E16129N
	E16262N	E16130N

General accessories

Concrete box (recessed ceiling mounting)	Order no.
	Luminaire with T16-Lp 6 W F95220 Luminaire with T16-Lp 8 W F95221

Mounting accessories



Pendant	
250 mm	F95600
500 mm	F95601
1000 mm	F95602
Adapter for pendant suspended mounting	
Luminaire with T16-Lp 6 W	F95209
Luminaire with T16-Lp 8 W	F95209
Bracket	
Luminaire with T16-Lp 6 W	F95211
Luminaire with T16-Lp 8 W	F95211

Exit sign luminaire DISPOS-LED

[LOGICA] LED IP20

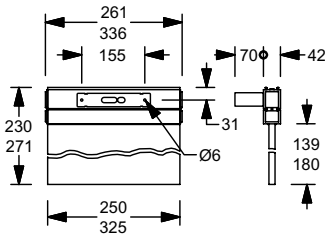
Description Exit sign luminaire in functional design, consisting of segmented sections (surface-mounted design). Choice of single sided (wall mounting) or double sided (recessed ceiling, pendant suspended and bracket mounting) exit route sign.
Luminaires supplied without exit sign panes and accessories.

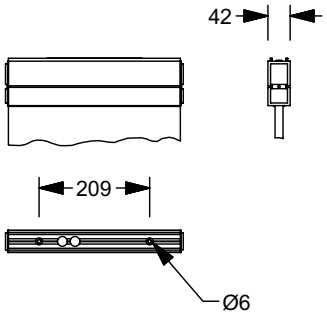
Special features Functional look, display technology, two different visibilities, also available as emergency luminaire with T16-Lp 6 W and 8 W.

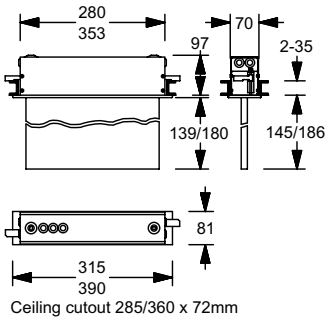
Technical data

Mounting: Recessed, wall, ceiling, pendant suspended or bracket mounting
Body: Zinc coated sheet steel/aluminium, white (RAL 9016)
Cover: Steel sheet, white (RAL 9016)[1)]
Mains supply: 198 V - 254 V/50 Hz
Ambient temperature (non-maintained mode): 0 to + 40 °C
Ambient temperature (maintained mode): -5 to + 35 °C
Specification: Maintained or non-maintained mode

1) Design with aluminium body available on request







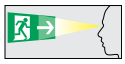
Ceiling cutout 285/360 x 72mm

Order number	Lamp	Duration	Battery type:	Battery voltage	Battery capacity	Ballast lumen factor (BLF)	Stan-dard	Auto-test	Central test
Version for recessed ceiling mounting and double sided exit sign									
NM90215	LED module 3 W	1 h	NiCd battery	4.8 V	1.2 Ah		x		
NM90216	LED module 3 W	3 h	NiCd battery	4.8 V	2.2 Ah		x		
NM90215L	LED module 3 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	100 %		x	x
NM90180	LED module 5 W	1 h	NiCd battery	4.8 V	1.2 Ah		x		
NM90181	LED module 5 W	3 h	NiCd battery	4.8 V	2.2 Ah		x		
NM90180L	LED module 5 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	100 %		x	x
Version for wall mounting and single sided exit sign									
NM90191	LED module 3 W	1 h	NiCd battery	4.8 V	1.2 Ah		x		
NM90192	LED module 3 W	3 h	NiCd battery	4.8 V	2.2 Ah		x		
N90191L	LED module 3 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	100 %		x	x
NM90185	LED module 5 W	1 h	NiCd battery	4.8 V	1.2 Ah		x		
NM90186	LED module 5 W	3 h	NiCd battery	4.8 V	2.2 Ah		x		
N90185L	LED module 5 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	100 %		x	x
Version for pendant suspended mounting and double sided exit sign									
NM90196	LED module 3 W	1 h	NiCd battery	4.8 V	1.2 Ah		x		
NM90197	LED module 3 W	3 h	NiCd battery	4.8 V	2.2 Ah		x		
N90196L	LED module 3 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	100 %		x	x
NM90187	LED module 5 W	1 h	NiCd battery	4.8 V	1.2 Ah		x		
NM90188	LED module 5 W	3 h	NiCd battery	4.8 V	2.2 Ah		x		
N90187L	LED module 5 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	100 %		x	x

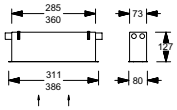
Accessories

Films / panes

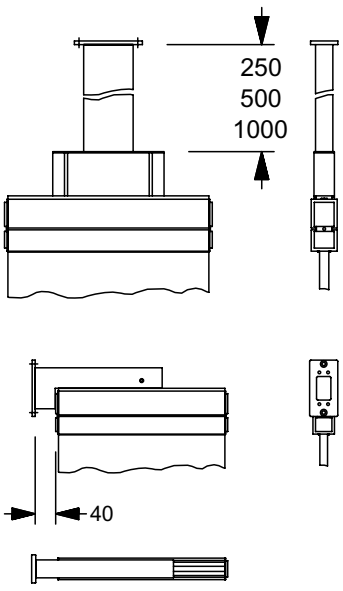
Exit sign panes (please order separately)

	Luminaire with LED module 3 W	Luminaire with LED module 5 W
	22 m	29 m
	E16260N	E16128N
	E16261N	E16129N
	E16262N	E16130N

General accessories

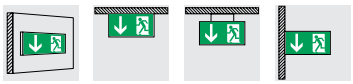
Concrete box (recessed ceiling mounting)	Order no.
	Luminaire with LED module 3 W F95220 Luminaire with LED module 5 W F95221

Mounting accessories



Pendant	
250 mm	F95600
500 mm	F95601
1000 mm	F95602
Adapter for pendant suspended mounting	
Luminaire with LED module 3 W	F95209
Luminaire with LED module 5 W	F95209
Bracket	
Luminaire with LED module 3 W	F95211
Luminaire with LED module 5 W	F95211

Exit sign luminaire KUBUS



[LOGICA] T16-Lp IP40

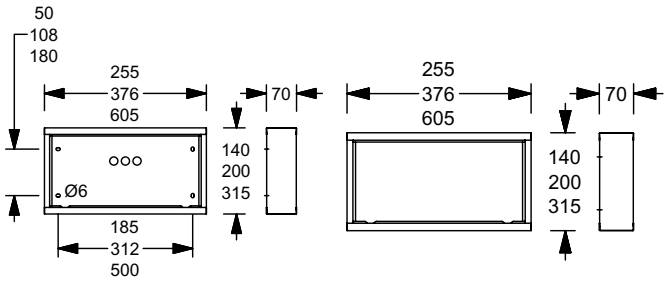
Description Exit sign luminaire, consisting of flat sections with folded corners. Choice of single sided (wall mounting) or double sided (ceiling, pendant suspended and bracket mounting) exit sign.
Luminaires supplied without exit sign panes and accessories.

Special features Functional look, choice of 3 visibility distances, also available as emergency luminaire.

Technical data

Mounting: Wall, ceiling, pendant suspended, suspension, or bracket mounting
Body: Steel sheet, white (RAL 9016)[1)]
Mains supply: 198 V - 254 V/50 Hz
Ambient temperature (non-maintained mode): 0 to + 40 °C
Ambient temperature (maintained mode): -5 to + 35 °C
Specification: Maintained or non-maintained mode

1) Design with aluminium body available on request.

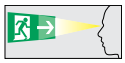


Order number	Lamp	Duration	Battery type:	Battery voltage	Battery capacity	Ballast lumen factor (BLF)	Stan-dard	Auto-test	Central test
Version for single sided exit sign									
NM90612	T16-Lp 6 W	1 h	NiCd battery	4.8 V	1.2 Ah	58%	x		
NM90613	T16-Lp 6 W	3 h	NiCd battery	4.8 V	2.2 Ah	44%	x		
NM90612L	T16-Lp 6 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	100 % (1h) / 51 % (3h)		x	x
NM90614	T16-Lp 8 W	1 h	NiCd battery	4.8 V	1.2 Ah	43%	x		
NM90615	T16-Lp 8 W	3 h	NiCd battery	4.8 V	2.2 Ah	33%		x	x
NM90614L	T16-Lp 8 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	91% (1h) / 38% (3h)		x	x
NM90680	T16-Lp 13 W	1 h	NiCd battery	4.8 V	1.2 Ah	27%	x		
NM90681	T16-Lp 13 W	3 h	NiCd battery	4.8 V	2.2 Ah	20%	x		
NM90680L	T16-Lp 13 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	56 % (1h) / 24 % (3h)		x	x
Version for double sided exit sign									
NM90624	T16-Lp 6 W	1 h	NiCd battery	4.8 V	1.2 Ah	58%	x		
NM90625	T16-Lp 6 W	3 h	NiCd battery	4.8 V	2.2 Ah	44%	x		
NM90624L	T16-Lp 6 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	100 % (1h) / 51 % (3h)		x	x
NM90626	T16-Lp 8 W	1 h	NiCd battery	4.8 V	1.2 Ah	43%	x		
NM90627	T16-Lp 8 W	3 h	NiCd battery	4.8 V	2.2 Ah	33%	x		
NM90626L	T16-Lp 8 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	91% (1h) / 38% (3h)		x	x
NM90682	T16-Lp 13 W	1 h	NiCd battery	4.8 V	1.2 Ah	27%	x		
NM90683	T16-Lp 13 W	3 h	NiCd battery	4.8 V	2.2 Ah	20%	x		
NM90682L	T16-Lp 13 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	56 % (1h) / 24 % (3h)		x	x

Accessories

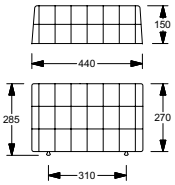
Films / panes

Exit sign panes (please order separately)

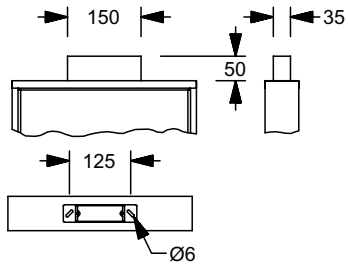
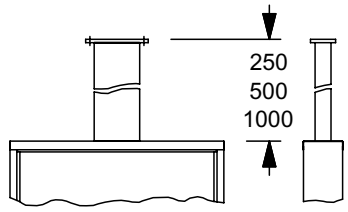
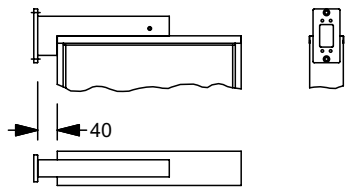
Luminaire with	T16-Lp 6 W	T16-Lp 8 W	T16-Lp 13 W
	23 m	35 m	60 m
	E16604N	E16608N	E16134N
	E16605N	E16609N	E16135N
	E16606N	E16610N	E16136N
Opal pane			
	E16607	E16611	E16324
Pane in body colour			
	E16242	E16241	E16251

Note: Exit sign panes "EXIT straight ahead", "EXIT to the right" and "EXIT to the left" available upon request.

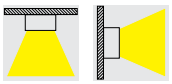
General accessories

Protective grill (wall mounting)	Order no.
	Luminaire with T16-Lp 8 W F95032

Mounting accessories

	**Adapter for ceiling mounting**	F95057
	**Pendant** 250 mm 500 mm 1000 mm	 F95600 F95601 F95602
	**Bracket** Luminaire with T16-Lp 6 W Luminaire with T16-Lp 8 W Luminaire with T16-Lp 13 W	 F95055 F95056 F95070

Emergency luminaire KUBUS



LOGICA | T16-Lp | IP40

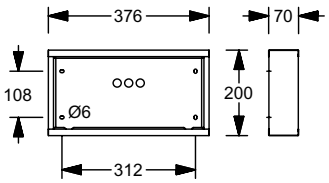
Description Emergency luminaire, consisting of flat sections with folded corners. Light distribution by mirror reflector and cover with longitudinal prisms.

Special features Functional look, also available as exit sign luminaire.

Technical data

Mounting: Wall or ceiling mounted
Body: Steel sheet, white (RAL 9016)[1)]
Cover: Prismatic structured plastic
Reflector: Specular aluminium
Mains supply: 198 V - 254 V/50 Hz
Ambient temperature (non-maintained mode): 0 to + 40 °C
Ambient temperature (maintained mode): -5 to + 35 °C
Specification: Maintained or non-maintained mode

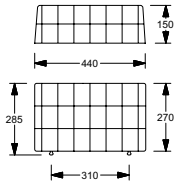
1) Design with aluminium body available on request



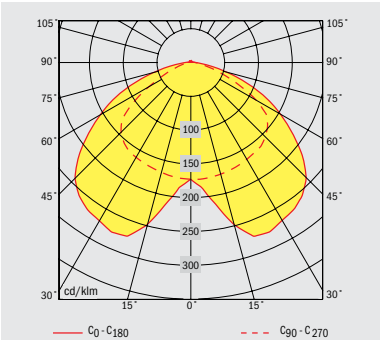
Order number	Lamp	Duration	Battery type:	Battery voltage	Battery capacity	Ballast lumen factor (BLF)	Stan-dard	Auto-test	Central test
NM90678	T16-Lp 8 W	1 h	NiCd battery	4.8 V	1.2 Ah	43%	x		
NM90679	T16-Lp 8 W	3 h	NiCd battery	4.8 V	2.2 Ah	33%	x		
NM90678L	T16-Lp 8 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	91% (1h) / 38% (3h)		x	x

Accessories

Protective grill (wall mounting) — Order no. F95032

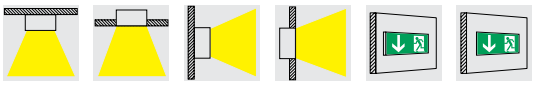


Lighting data



Mounting height (m)	Luminaire distance (m) for E = 1.25 lx or *E = 0.625 lx*			
	L1	L2	L3	L4
KUBUS (1h)				
2,5	3,3 / *4,2*	7,7 / *9,6*	2,9 / *3,8*	7,0 / *8,5*
3,0	3,5 / *4,5*	8,6 / *10,8*	2,8 / *4,0*	7,3 / *9,5*
4,0	3,5 / *4,9*	8,7 / *11,6*	2,3 / *4,1*	6,9 / *10,7*
5,0	3,0 / *5,1*	10,0 / *12,2*	0,7 / *3,8*	6,7 / *10,1*
6,0	- / *4,9*	- / *13,1*	- / *3,0*	- / *10,1*
7,0	- / *4,4*	- / *12,7*	- / *1,5*	- / *9,1*
7,5	- / -	- / -	- / -	- / -
KUBUS (3h)				
2,5	3,0 / *3,9*	7,2 / *9,0*	2,5 / *3,5*	6,6 / *7,9*
3,0	3,1 / *4,1*	7,8 / *10,2*	2,4 / *3,6*	6,8 / *8,6*
4,0	2,9 / *4,4*	8,6 / *11,0*	1,5 / *3,5*	6,6 / *9,6*
5,0	- / *4,4*	- / *10,8*	- / *2,9*	- / *8,6*
6,0	- / *4,0*	- / *10,9*	- / *1,6*	- / *7,3*
7,0	- / -	- / -	- / -	- / -
7,5	- / -	- / -	- / -	- / -
KUBUS 1h/3h (1h)				
2,5	4,3 / *5,2*	10,4 / *12,5*	3,9 / *4,7*	8,5 / *10,0*
3,0	4,5 / *5,7*	10,7 / *13,1*	4,1 / *5,2*	9,6 / *1,3*
4,0	5,0 / *6,3*	11,4 / *15,0*	4,2 / *5,8*	10,8 / *12,7*
5,0	5,2 / *6,8*	13,3 / *17,1*	3,9 / *6,0*	11,4 / *14,4*
6,0	5,0 / *7,2*	12,8 / *17,2*	3,2 / *5,9*	11,3 / *14,6*
7,0	4,6 / *7,4*	12,7 / *18,9*	1,8 / *5,6*	10,8 / *16,0*
7,5	- / *7,4*	- / *17,9*	- / *5,4*	- / *15,0*
KUBUS 1h/3h (3h)				
2,5	3,2 / *4,0*	7,5 / *9,5*	2,7 / *3,7*	6,8 / *8,4*
3,0	3,2 / *4,3*	8,3 / *10,5*	2,6 / *3,8*	7,0 / *8,7*
4,0	3,2 / *4,7*	8,7 / *11,5*	1,9 / *3,8*	7,3 / *9,8*
5,0	- / *4,7*	- / *12,7*	- / *3,4*	- / *9,9*
6,0	- / *4,5*	- / *12,6*	- / *2,4*	- / *9,2*
7,0	- / -	- / -	- / -	- / -
7,5	- / -	- / -	- / -	- / -

Exit sign and emergency luminaire LOGICA



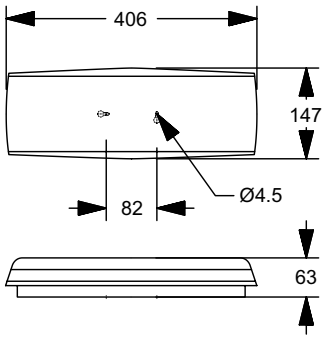
[LOGICA] T16-Lp IP65

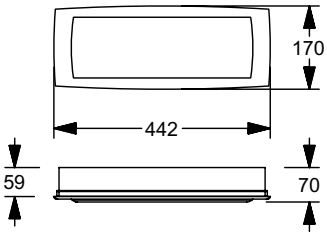
Description Exit sign and emergency luminaire in a functional style, consisting of a body with convex contours and a flat transparent cover. Light distribution by mirror reflector from aluminised plastic with complex shape. Single sided exit route sign (recessed wall and wall mounting). Luminaires supplied with three exit sign films and recess box.

Special features Functional look, wide beam light distribution, high light output ratio, suited for an exit route signalling or exit route lighting, choice of surface or recessed mounting, surface mounting via quickfix adapter with integrated bubble level

Technical data

Mounting: Recessed wall and wall mounting, recessed ceiling and ceiling mounting
Body, cover, reflector: Polycarbonate
Mains supply: 198 V - 254 V/50 Hz
Ambient temperature (non-maintained mode): 0 to + 40 °C
Ambient temperature (maintained mode): -5 to + 35 °C
Specification: Maintained or non-maintained mode



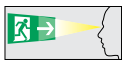


Order number	Lamp	Duration	Battery type:	Battery voltage	Battery capacity	Ballast lumen factor (BLF)	Stan-dard	Auto-test	Central test
NB16311	T16-Lp 8 W	1 h / 3 h	NiCd battery	7.2 V	2.2 Ah	91% (1h) / 38% (3h)		x	x

Accessories

Films / panes

Exit sign films (included)



24 m

FB16909
(set with all 3 films)

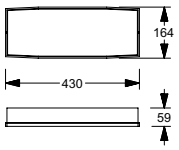
General accessories

Recess box

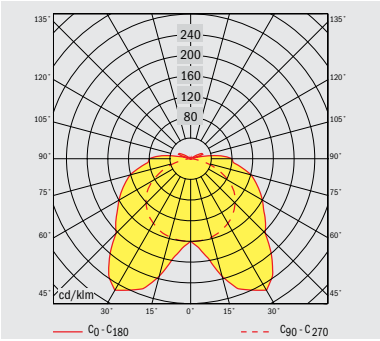
(Included in delivery).

Order no.

FB12198

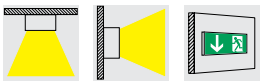


Lighting data



Mounting height (m)	Luminaire distance (m) for E = 1.25 lx or *E = 0.625 lx*			
	L1	L2	L3	L4
LOGICA (1h)				
2,5	3,2 / *4,3*	8,1 / *10,6*	2,5 / *3,4*	6,4 / *8,5*
3,0	3,2 / *4,4*	8,6 / *10,7*	2,5 / *3,6*	6,5 / *8,7*
4,0	3,4 / *4,6*	8,9 / *12,1*	1,9 / *3,6*	6,5 / *9,4*
5,0	- / *4,7*	- / *12,2*	- / *3,2*	- / *9,4*
6,0	- / *4,8*	- / *12,2*	- / *2,5*	- / *9,9*
7,0	- / -	- / -	- / -	- / *9,4*
7,5	- / -	- / -	- / -	- / -
LOGICA (3h)				
2,5	2,8 / *3,8*	7,5 / *9,1*	2,2 / *3,1*	5,8 / *7,5*
3,0	2,9 / *4,0*	7,8 / *10,4*	2,0 / *3,1*	5,3 / *8,3*
4,0	2,9 / *4,1*	7,8 / *10,1*	1,1 / *3,0*	5,8 / *7,8*
5,0	- / *4,2*	- / *11,2*	- / *2,4*	- / *8,4*
6,0	- / *4,1*	- / *11,3*	- / *0,8*	- / *7,5*
7,0	- / -	- / -	- / -	- / -
7,5	- / -	- / -	- / -	- / -
LOGICA 1h/3h (1h)				
2,5	4,3 / *5,6*	10,7 / *13,1*	3,5 / *4,4*	8,6 / *10,4*
3,0	4,5 / *5,9*	10,8 / *14,2*	3,6 / *4,7*	8,8 / *11,2*
4,0	4,7 / *6,3*	12,3 / *15,0*	3,6 / *5,1*	9,2 / *12,2*
5,0	4,8 / *6,6*	13,0 / *16,7*	3,4 / *5,2*	8,9 / *13,8*
6,0	4,9 / *6,8*	12,1 / *18,0*	2,7 / *5,2*	9,9 / *13,6*
7,0	4,8 / *6,8*	13,3 / *18,8*	0,9 / *4,9*	7,6 / *14,8*
7,5	- / *6,9*	- / *17,0*	- / *4,6*	- / *13,5*
LOGICA 1h/3h (3h)				
2,5	3,0 / *4,1*	7,7 / *9,4*	2,4 / *3,3*	5,7 / *7,7*
3,0	3,0 / *4,2*	8,3 / *10,4*	2,3 / *3,4*	6,6 / *8,4*
4,0	3,2 / *4,3*	8,0 / *11,2*	2,0 / *3,3*	5,5 / *8,7*
5,0	- / *4,5*	- / *11,6*	- / *2,9*	- / *9,1*
6,0	- / *4,5*	- / *12,1*	- / *1,9*	- / *8,6*
7,0	- / -	- / *11,7*	- / -	- / -
7,5	- / -	- / -	- / -	- / -

Exit sign and emergency luminaire PRATICA TUTTOVETRO

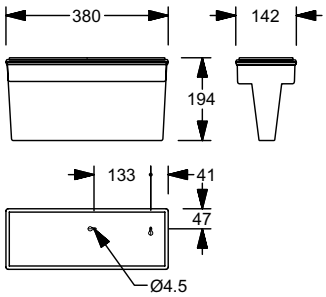


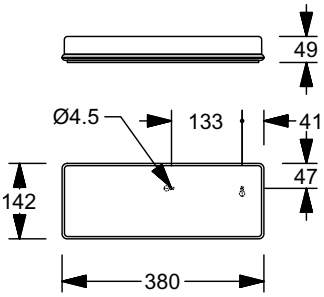
LOGICA | T16-Lp | IP40 | IP65

Description Exit sign and emergency luminaire in an industrial style, consisting of a flat body and a rectangular transparent cover. Light distribution by white reflector. Single sided exit route sign (wall mounting). Luminaire supplied with three exit sign films.

Special features Industrial look, improved degree of protection to IP65 by auxiliary box. Suited for exit route signalling or exit route lighting. Quick fix adapter for IP40 version.

Technical data
Mounting: Wall or ceiling mounted
Body: ABS plastic
Cover: Polycarbonate
Reflector: Polycarbonate
Mains supply: 198 V - 254 V/50 Hz
Ambient temperature (non-maintained mode): 0 to + 40 °C
Ambient temperature (maintained mode): -5 to + 35 °C
Specification: Maintained or non-maintained mode



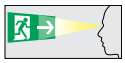


Order number	Lamp	Duration	Battery type:	Battery voltage	Battery capacity	Ballast lumen factor (BLF)	Stan-dard	Auto-test	Central test
NB16100	T16-Lp 8 W	1 h	NiCd battery	6.0 V	0.8 Ah	36%	x		
NB16101	T16-Lp 8 W	3 h	NiCd battery	6.0 V	1.8 Ah	34%	x		
NB16312	T16-Lp 8 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	91% (1h) / 38% (3h)		x	x

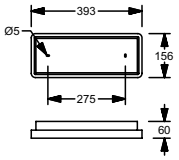
Accessories

Films / panes

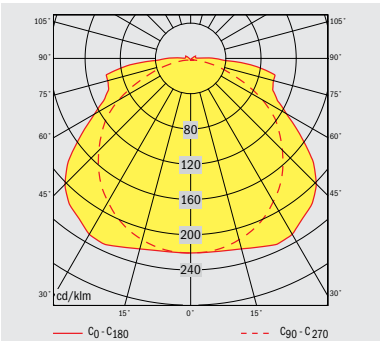
Exit sign films (included)

	Version with T16-Lp 8 W
	24 m
	FB16901 (set with all 3 films)
	
	

General accessories

IP65 auxiliary box	Order no.
	Luminaire with T16-Lp 8 W FB2734

Lighting data



Mounting height (m)	Luminaire distance (m) for E = 1.25 lx or *E = 0.625 lx*			
	L1	L2	L3	L4
PRATICA TUTTOVETRO 8W (3h)				
2,5	3,1 / *4,0*	7,1 / *9,6*	2,7 / *3,6*	6,9 / *8,7*
3,0	3,2 / *4,2*	7,9 / *10,5*	2,8 / *3,8*	6,8 / *9,0*
4,0	3,1 / *4,6*	8,3 / *11,0*	2,6 / *4,0*	6,7 / *10,5*
5,0	2,4 / *4,6*	7,9 / *12,5*	1,9 / *3,9*	6,2 / *11,0*
6,0	- / *4,3*	- / *12,3*	- / *3,5*	- / *10,4*
7,0	- / *3,6*	- / *12,0*	- / *2,8*	- / *9,4*
7,5	- / *2,9*	- / *11,2*	- / *2,2*	- / *10,3*
PRATICA TUTTOVETRO 8W (1h)				
2,5	2,8 / *3,6*	6,8 / *9,0*	2,4 / *3,3*	6,5 / *7,9*
3,0	2,8 / *3,9*	7,6 / *9,6*	2,4 / *3,4*	6,7 / *8,5*
4,0	2,5 / *4,1*	7,7 / *10,4*	2,0 / *3,5*	6,6 / *8,8*
5,0	0,4 / *3,7*	6,1 / *10,3*	0,3 / *3,2*	5,6 / *8,4*
6,0	- / *3,3*	- / *10,3*	- / *2,6*	- / *9,6*
7,0	- / *1,2*	- / *9,4*	- / *1,1*	- / *7,2*
7,5	- / -	- / -	- / -	- / -
PRATICA TUTTOVETRO 8W 1h/3h (1h)				
2,5	4,0 / *5,0*	9,6 / *12,0*	4,7 / *4,6*	8,8 / *10,7*
3,0	4,3 / *5,4*	10,5 / *12,7*	3,9 / *5,0*	9,8 / *11,7*
4,0	4,6 / *6,0*	11,1 / *14,5*	4,0 / *5,4*	10,6 / *12,6*
5,0	4,7 / *6,4*	12,7 / *16,1*	4,0 / *5,7*	11,2 / *14,1*
6,0	4,4 / *7,0*	11,2 / *16,4*	3,7 / *5,8*	10,5 / *15,6*
7,0	3,8 / *6,7*	12,1 / *17,9*	3,0 / *5,7*	11,2 / *15,5*
7,5	3,2 / *6,7*	12,5 / *18,0*	2,5 / *5,6*	9,7 / *15,0*
PRATICA TUTTOVETRO 8W 1h/3h (3h)				
2,5	3,0 / *3,8*	7,0 / *9,1*	2,6 / *3,5*	6,6 / *8,5*
3,0	3,0 / *4,0*	7,8 / *9,8*	2,6 / *3,6*	6,6 / *8,6*
4,0	2,8 / *4,3*	8,1 / *10,8*	2,3 / *3,7*	7,0 / *9,1*
5,0	1,7 / *4,3*	7,8 / *10,9*	1,4 / *3,6*	6,5 / *10,4*
6,0	- / *3,8*	- / *10,9*	- / *3,1*	- / *10,0*
7,0	- / *2,8*	- / *10,5*	- / *2,1*	- / *8,2*
7,5	- / *1,3*	- / *10,2*	- / *1,1*	- / *7,7*

Exit sign luminaire TUTTOVETRO BANDIERA

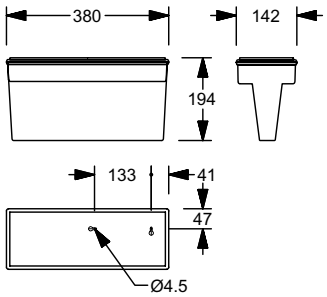
LOGICA | T16-Lp | IP40 | IP65

Description Exit sign luminaire in industrial style, consisting of a flat body and a tapered opal cover. Double sided exit route sign (ceiling, wire suspended and bracket mounting). Luminaire supplied with three exit sign films, adapter for wire suspended mounting and bracket, as well as an IP65 auxiliary box.

Special features Industrial look, improved degree of protection to IP65 by auxiliary box. Quick fix adapter for IP40 version.

Technical data

Mounting: Ceiling, pendant suspended or bracket mounting
Body: ABS-plastic
Cover: White acrylate
Reflector: Polycarbonate
Mains supply: 198 V - 254 V/50 Hz
Ambient temperature (non-maintained mode): 0 to + 40 °C
Ambient temperature (maintained mode): -5 to + 35 °C
Specification: Maintained or non-maintained mode

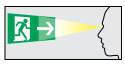


Order number	Lamp	Duration	Battery type:	Battery voltage	Battery capacity	Ballast lumen factor (BLF)	Stan-dard	Auto-test	Central test
NB16102	T16-Lp 8 W	1 h	NiCd battery	6.0 V	0.8 Ah	36%	x		
NB16103	T16-Lp 8 W	3 h	NiCd battery	6.0 V	1.8 Ah	34%	x		
NB16313	T16-Lp 8 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	91% (1h) / 38% (3h)		x	x

Accessories

Films / panes

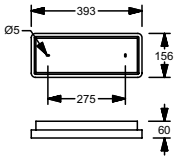
Exit sign films (included)



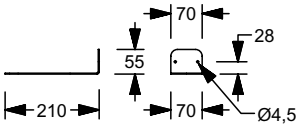
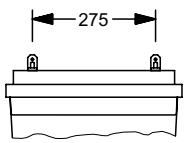
24 m

FB16902
(set with all 3 films)

General accessories

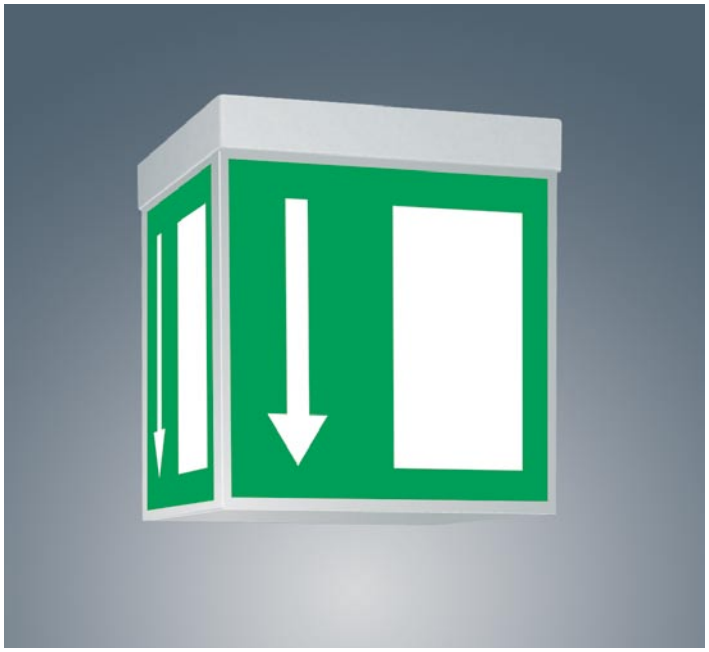
IP-65 auxiliary box (Included in delivery).	Order no.
	FB2734

Mounting accessories

	**Bracket**	FB3722 (included in delivery)
	Adapter for wire suspended mounting	FB3723 (included in delivery)

Exit sign luminaire QUADER

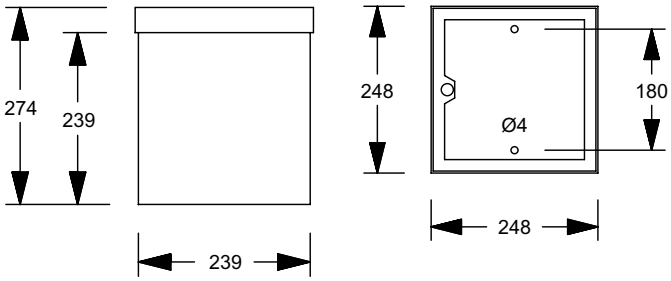
LOGICA | TC-SEL-Lp | IP42



Description Exit sign luminaire consisting of a square base and a cuboid transparent diffuser. Three sided exit route sign (ceiling mounting). Luminaire supplied with three exit sign films.

Special features Three sided exit route sign for large sized areas.

Technical data
Mounting: Ceiling or pendant suspended mounting
Body: Polypropylene
Cover: Opal acrylate
Mains supply: 198 V - 254 V/50 Hz
Ambient temperature (non-maintained mode): 0 to + 40 °C
Ambient temperature (maintained mode): -5 to + 35 °C
Specification: Maintained or non-maintained mode

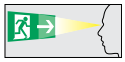


Order number	Lamp	Duration	Battery type:	Battery voltage	Battery capacity	Ballast lumen factor (BLF)	Stan-dard	Auto-test	Central test
NB90480	TC-SEL-Lp 9 W	1 h	NiCd battery	4.8 V	1.2 Ah	38%	x		
NB90481	TC-SEL-Lp 9 W	3 h	NiCd battery	4.8 V	2.2 Ah	29%	x		
N90480L	TC-SEL-Lp 9 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	82% (1h) / 34% (3h)		x	x

Accessories

Films / panes

Exit sign films (included)



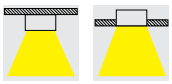
44 m

F15330

F15331

F15332

Emergency luminaire CRATER



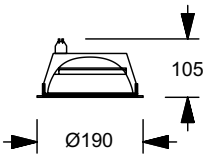
[LOGICA] TC-DEL-LP IP20

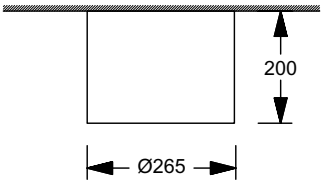
Description Emergency luminaire in functional style, consisting of a round recessed or surface mounted box and specular aluminium reflector. Horizontal lamp orientation.

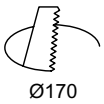
Special features Functional look, emergency luminaires also available as general lighting luminaires.

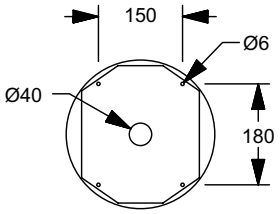
Technical data

Mounting: Recessed or ceiling mounting
Body: Steel sheet, white (RAL 9003)
Reflector: Specular aluminium
Mains supply: 198 V - 254 V/50 Hz
Ambient temperature (non-maintained mode): 0 to + 40 °C
Ambient temperature (maintained mode): -5 to + 35 °C
Specification: Maintained or non-maintained mode



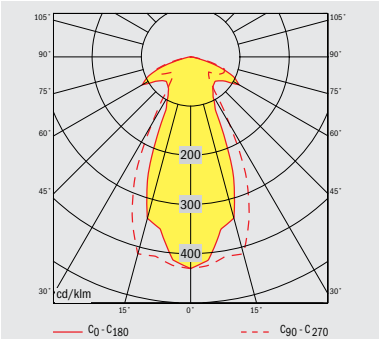


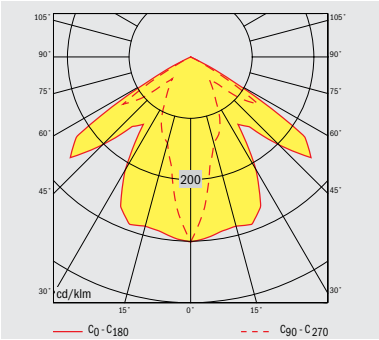




Order number	Lamp	Duration	Battery type:	Battery voltage	Battery capacity	Ballast lumen factor (BLF)	Stan-dard	Auto-test	Central test
Version for recessed mounting									
N90060	TC-DEL-Lp 13 W	1 h	NiCd battery	4.8 V	1.2 Ah	27%	x		
N90061	TC-DEL-Lp 13 W	3 h	NiCd battery	4.8 V	2.2 Ah	20%	x		
N90060L	TC-DEL-Lp 13 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	56% (1h) / 24% (3h)		x	x
Version for surface mounting									
N90062	TC-DEL-Lp 13 W	1 h	NiCd battery	4.8 V	1.2 Ah	27%	x		
N90063	TC-DEL-Lp 13 W	3 h	NiCd battery	4.8 V	2.2 Ah	20%	x		
N90062L	TC-DEL-Lp 13 W	1 h / 3 h	NiCd battery	7.2 V	1.7 Ah	56% (1h) / 24% (3h)		x	x

Lighting data





Mounting height (m)	Luminaire distance (m) for E = 1.25 lx or *E = 0.625 lx*			
	L1	L2	L3	L4
CRATER - recessed mounting (1h)				
2,5	2,0 / *3,6*	7,0 / *9,6*	1,9 / *2,6*	4,8 / *8,9*
3,0	1,9 / *3,1*	5,9 / *8,7*	2,0 / *2,6*	4,7 / *7,3*
4,0	1,9 / *2,8*	4,9 / *7,8*	2,4 / *2,8*	5,5 / *7,2*
5,0	2,1 / *2,5*	4,8 / *7,8*	2,6 / *3,2*	5,9 / *7,4*
6,0	2,3 / *2,7*	5,2 / *7,2*	2,8 / *3,5*	6,9 / *8,1*
7,0	2,2 / *2,9*	5,6 / *7,4*	2,7 / *3,7*	7,3 / *8,6*
7,5	2,0 / *3,1*	6,0 / *7,1*	2,6 / *3,9*	7,1 / *8,8*
CRATER - recessed mounting (3h)				
2,5	1,7 / *2,7*	5,2 / *9,1*	1,7 / *2,2*	4,1 / *7,0*
3,0	1,5 / *2,0*	4,6 / *7,4*	1,9 / *2,3*	4,5 / *6,0*
4,0	1,7 / *2,3*	4,3 / *7,2*	2,2 / *2,6*	4,9 / *6,4*
5,0	1,9 / *2,3*	4,5 / *6,4*	2,4 / *3,0*	5,8 / *6,8*
6,0	1,9 / *2,5*	4,9 / *6,3*	2,4 / *3,2*	6,3 / *7,5*
7,0	1,1 / *2,7*	4,2 / *6,4*	2,1 / *3,4*	6,4 / *8,2*
7,5	0,7 / *2,8*	5,0 / *6,5*	1,0 / *3,5*	5,6 / *7,9*
CRATER - recessed mounting 1h/3h (1h)				
2,5	3,7 / *5,2*	10,0 / *12,2*	2,6 / *4,6*	8,9 / *11,9*
3,0	3,1 / *5,6*	10,7 / *13,6*	2,6 / *4,2*	7,3 / *11,3*
4,0	2,9 / *4,7*	9,1 / *15,3*	2,8 / *3,8*	7,1 / *1,8*
5,0	2,6 / *4,3*	7,6 / *12,3*	3,2 / *3,9*	7,5 / *10,4*
6,0	2,7 / *4,0*	7,7 / *12,0*	3,5 / *4,2*	8,2 / *10,1*
7,0	2,9 / *4,0*	7,5 / *11,7*	3,8 / *4,5*	8,9 / *10,7*
7,5	3,1 / *3,7*	7,1 / *10,0*	3,9 / *4,7*	8,8 / *10,5*
CRATER - recessed mounting 1h/3h (3h)				
2,5	1,9 / *3,2*	6,0 / *8,8*	1,8 / *2,5*	4,7 / *7,7*
3,0	1,8 / *2,9*	5,3 / *9,2*	2,0 / *2,5*	4,9 / *6,6*
4,0	1,8 / *2,6*	5,0 / *7,9*	2,3 / *2,7*	5,4 / *6,4*
5,0	2,0 / *2,4*	4,7 / *7,2*	2,6 / *3,1*	6,1 / *6,8*
6,0	2,1 / *2,6*	5,0 / *7,0*	2,7 / *3,4*	6,3 / *7,8*
7,0	2,0 / *2,9*	5,6 / *6,6*	2,5 / *3,6*	6,7 / *8,3*
7,5	1,3 / *3,0*	5,3 / *7,0*	2,3 / *3,7*	6,9 / *8,8*
CRATER - surface mounting (1h)				
2,5	3,7 / *4,0*	7,8 / *8,4*	1,7 / *3,8*	5,8 / *7,8*
3,0	4,1 / *4,6*	9,1 / *9,8*	1,8 / *2,3*	6,4 / *7,7*
4,0	2,6 / *5,7*	9,2 / *12,2*	1,8 / *2,5*	4,7 / *8,9*
5,0	2,9 / *6,0*	9,3 / *14,7*	1,3 / *2,6*	4,9 / *6,2*
6,0	2,9 / *3,8*	7,0 / *13,3*	0,9 / *2,6*	4,8 / *6,9*
7,0	1,8 / *4,1*	6,6 / *13,7*	0,5 / *1,9*	3,2 / *7,0*
7,5	0,3 / *4,2*	5,5 / *9,3*	- / *1,7*	- / *7,1*
CRATER - surface mounting (3h)				
2,5	3,4 / *3,8*	7,5 / *8,2*	1,5 / *2,0*	5,4 / *6,7*
3,0	3,6 / *4,5*	8,2 / *9,5*	1,6 / *2,1*	3,7 / *7,1*
4,0	2,4 / *5,2*	8,3 / *11,7*	1,4 / *2,2*	4,3 / *5,1*
5,0	2,5 / *3,2*	5,8 / *11,2*	0,8 / *2,2*	3,9 / *5,8*
6,0	1,6 / *3,5*	5,7 / *11,8*	0,4 / *1,7*	2,4 / *6,0*
7,0	- / *3,6*	- / *8,4*	- / *1,2*	- / *5,6*
7,5	- / *3,5*	- / *8,7*	- / *1,0*	- / *5,3*
CRATER - surface mounting 1h/3h (1h)				
2,5	4,0 / *4,3*	8,4 / *8,9*	3,8 / *4,0*	7,9 / *8,4*
3,0	4,6 / *5,0*	9,8 / *10,5*	2,3 / *4,6*	7,8 / *9,7*
4,0	5,7 / *6,2*	12,3 / *13,4*	2,6 / *6,0*	8,9 / *12,3*
5,0	6,1 / *7,5*	13,9 / *16,0*	2,6 / *3,6*	6,2 / *11,8*
6,0	3,8 / *8,4*	13,4 / *18,3*	2,6 / *3,7*	6,9 / *13,1*
7,0	4,2 / *8,7*	14,0 / *20,1*	2,0 / *3,7*	7,0 / *8,8*
7,5	4,2 / *5,3*	9,4 / *19,1*	1,7 / *3,8*	7,1 / *9,2*
CRATER - surface mounting 1h/3h (3h)				
2,5	3,6 / *3,9*	7,6 / *8,9*	1,7 / *4,0*	5,6 / *7,8*
3,0	4,0 / *4,6*	8,9 / *10,5*	1,7 / *4,6*	3,8 / *7,3*
4,0	2,5 / *5,5*	8,8 / *13,4*	1,7 / *6,0*	4,5 / *8,6*
5,0	2,8 / *3,5*	6,2 / *16,0*	1,1 / *3,6*	4,7 / *6,1*
6,0	2,6 / *3,8*	6,7 / *18,3*	0,8 / *3,7*	4,0 / *6,6*
7,0	0,6 / *3,9*	5,5 / *20,1*	0,1 / *3,7*	1,9 / *6,6*
7,5	- / *3,9*	- / *19,1*	- / *3,8*	- / *6,8*

Emergency luminaire LEADER

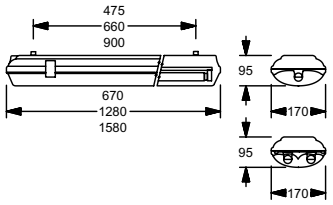
[LOGICA] T26-Lp IP66

Description Emergency luminaire in industrial style, consisting of an oval body and cover. Cover transparent with longitudinal and lateral prisms. Light distribution by specular reflector from aluminised plastic with complex shape.

Special features Industrial look, optimal light distribution, high light output ratio, emergency luminaires also available for general lighting. Twin lamp fittings with one lamp operating in emergency mode are available on request.

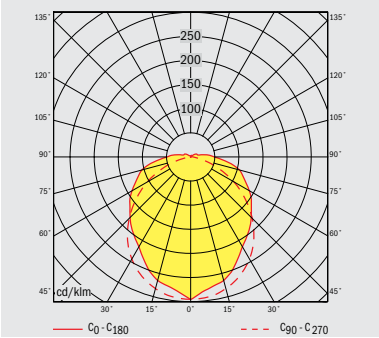
Technical data

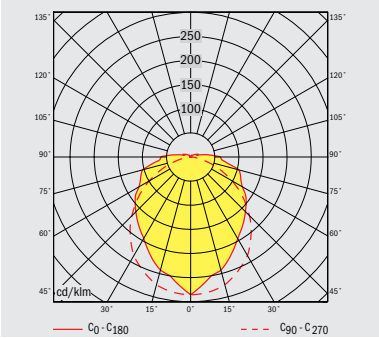
Mounting: To be fixed on suitable structur beams
Body: Polycarbonate
Cover: Polycarbonate
Reflector: Polycarbonate
Mains supply: 198 V - 254 V/50 Hz
Ambient temperature (non-maintained mode): 0 to + 40 °C
Ambient temperature (maintained mode): -5 to + 35 °C
Specification: Maintained or non-maintained mode

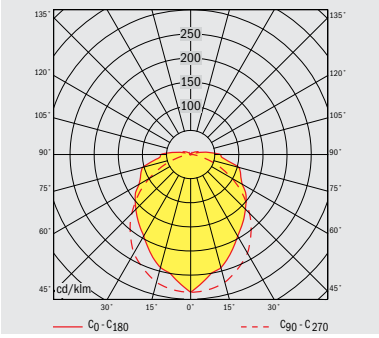


Order number	Lamp	Duration	Battery type:	Battery voltage	Battery capacity	Ballast lumen factor (BLF)	Stan-dard	Auto-test	Central test
N90090	T26-Lp 18 W	1 h	NiCd battery	6.0 V	4.0 Ah	30%	x		
N90091	T26-Lp 18 W	3 h	NiCd battery	6.0 V	4.0 Ah	16%	x		
N90090L	T26-Lp 18 W	1 h / 3 h	NiCd battery	7.2 V	2.2 Ah	56% / 19 %		x	x
N90092	T26-Lp 36 W	1 h	NiCd battery	6.0 V	4.0 Ah	25%	x		
N90093	T26-Lp 36 W	3 h	NiCd battery	6.0 V	4.0 Ah	12%	x		
N90092L	T26-Lp 36 W	1 h / 3 h	NiCd battery	7.2 V	2.2 Ah	28% / 9 %		x	x
N90094	T26-Lp 58 W	1 h	NiCd battery	6.0 V	4.0 Ah	17%	x		
N90095	T26-Lp 58 W	3 h	NiCd battery	6.0 V	4.0 Ah	9%	x		
N90094L	T26-Lp 58 W	1 h / 3 h	NiCd battery	7.2 V	2.2 Ah	18% / 6 %		x	x

Lighting data







Mounting height (m)	Luminaire distance (m) for E = 1.25 lx or *E = 0.625 lx*			
	L1	L2	L3	L4
LEADER 18W 1h/3h (1h)				
2,5	5,1 / *6,5*	12,3 / *16,1*	4,5 / *5,4*	10,7 / *1,6*
3,0	5,4 / *6,9*	13,6 / *17,4*	4,9 / *5,9*	11,0 / *13,5*
4,0	5,8 / *7,6*	13,8 / *18,3*	5,4 / *6,8*	13,0 / *16,2*
5,0	6,0 / *8,0*	15,3 / *20,6*	5,8 / *7,4*	14,6 / *17,3*
6,0	6,0 / *8,4*	16,2 / *20,6*	6,0 / *7,9*	15,4 / *19,1*
7,0	5,9 / *8,5*	15,7 / *21,7*	6,1 / *8,3*	14,5 / *20,6*
7,5	5,8 / *8,6*	16,3 / *22,6*	6,1 / *8,4*	16,7 / *19,6*
10,0	4,7 / *8,5*	14,9 / *22,4*	5,3 / *8,7*	15,9 / *20,8*
LEADER 18W 1h/3h (3h)				
2,5	3,4 / *4,5*	8,5 / *11,3*	3,2 / *4,1*	7,8 / *9,2*
3,0	3,5 / *4,7*	9,1 / *10,9*	3,4 / *4,4*	8,6 / *10,7*
4,0	3,5 / *5,0*	9,0 / *12,8*	3,6 / *4,8*	9,5 / *11,8*
5,0	3,1 / *5,0*	8,9 / *13,5*	3,4 / *5,0*	9,6 / *12,8*
6,0	2,6 / *4,9*	8,7 / *13,5*	3,0 / *5,1*	9,4 / *13,0*
7,0	1,6 / *4,5*	6,7 / *13,0*	2,0 / *5,0*	8,3 / *13,5*
7,5	0,4 / *4,3*	7,3 / *14,1*	1,0 / *4,8*	8,0 / *13,2*
10,0	- / *2,3*	- / *10,2*	- / *2,9*	- / *11,6*
LEADER 36W 1h/3h (1h)				
2,5	5,3 / *6,9*	13,5 / *17,3*	4,7 / *5,7*	11,1 / *13,2*
3,0	5,6 / *7,3*	129,0 / *17,8*	5,1 / *6,2*	12,3 / *14,7*
4,0	6,1 / *7,8*	14,6 / *19,6*	5,8 / *7,1*	13,5 / *16,8*
5,0	6,3 / *8,3*	16,2 / *20,1*	6,2 / *7,8*	14,4 / *18,1*
6,0	6,4 / *8,8*	15,2 / *20,2*	6,5 / *8,4*	15,8 / *20,0*
7,0	6,3 / *9,0*	17,8 / *22,9*	6,6 / *8,8*	17,2 / *21,7*
7,5	6,2 / *9,1*	16,0 / *22,1*	6,7 / *9,0*	17,8 / *22,5*
10,0	5,3 / *9,0*	16,2 / *25,5*	6,3 / *9,5*	18,0 / *25,5*
LEADER 36W 1h/3h (3h)				
2,5	3,5 / *4,5*	8,7 / *10,7*	3,4 / *4,2*	8,1 / *10,1*
3,0	4,0 / *4,8*	8,7 / *11,2*	3,6 / *4,5*	8,9 / *10,5*
4,0	3,6 / *5,1*	8,6 / *13,0*	3,8 / *5,0*	9,7 / *12,3*
5,0	3,3 / *5,2*	9,9 / *12,6*	3,7 / *5,3*	10,1 / *12,9*
6,0	2,8 / *5,1*	9,3 / *12,8*	3,4 / *5,4*	10,4 / *14,3*
7,0	2,1 / *4,8*	9,4 / *14,0*	2,7 / *5,3*	10,5 / *14,0*
7,5	1,2 / *4,6*	7,7 / *12,7*	2,1 / *5,2*	8,9 / *14,1*
10,0	- / *3,0*	- / *10,1*	- / *3,8*	- / *14,0*
LEADER 58W 1h/3h (1h)				
2,5	5,3 / *6,8*	12,4 / *16,6*	4,5 / *5,5*	10,9 / *12,7*
3,0	5,5 / *7,2*	13,9 / *17,8*	4,9 / *6,0*	11,9 / *13,8*
4,0	5,9 / *7,8*	14,6 / *19,0*	5,5 / *6,8*	13,2 / *16,2*
5,0	6,1 / *8,2*	15,9 / *19,8*	5,9 / *7,5*	13,8 / *18,1*
6,0	6,2 / *8,5*	16,8 / *21,9*	6,1 / *8,0*	15,1 / *19,5*
7,0	6,1 / *8,7*	16,1 / *22,7*	6,2 / *8,3*	16,4 / *19,5*
7,5	6,0 / *8,7*	16,1 / *22,0*	6,1 / *8,5*	15,0 / *20,3*
10,0	5,0 / *8,7*	14,3 / *23,0*	5,4 / *8,8*	15,2 / *23,5*
LEADER 58W 1h/3h (3h)				
2,5	3,4 / *4,6*	8,3 / *11,5*	3,2 / *4,1*	8,0 / *9,9*
3,0	3,5 / *4,7*	9,3 / *12,2*	3,4 / *4,4*	8,1 / *10,3*
4,0	3,5 / *5,0*	9,2 / *12,8*	3,5 / *4,8*	9,2 / *12,0*
5,0	3,3 / *5,1*	8,5 / *13,9*	3,4 / *5,0*	9,4 / *12,5*
6,0	2,8 / *5,0*	9,4 / *13,7*	3,0 / *5,1*	9,1 / *13,8*
7,0	1,7 / *4,8*	7,5 / *13,5*	2,0 / *4,9*	8,5 / *13,2*
7,5	0,4 / *4,5*	8,0 / *14,0*	1,0 / *4,8*	7,2 / *12,6*
10,0	- / *2,4*	- / *12,9*	- / *2,9*	- / *11,6*

Emergency luminaire STRAHLER

QT-Lp

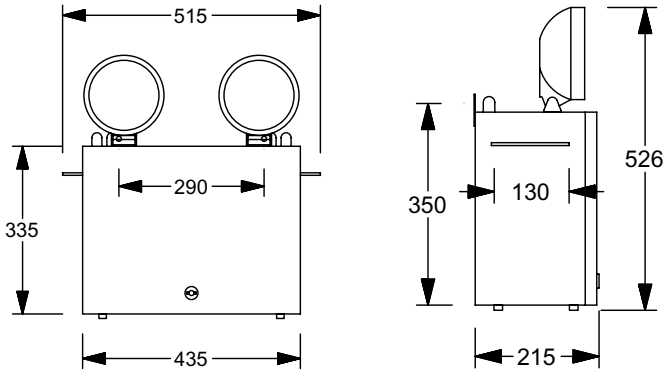
IP54

Description Emergency luminaire comprising a power pack box and 2 adjustable spotlights.

Special features Optimal exit route lighting in warehouses and temporary structures.

Technical data

Mounting: To be installed on structure beams
Body: Steel sheet, grey (RAL 7032)
Mains supply: 198 V - 254 V/50 Hz
Ambient temperature (non-maintained mode): 0 to + 40 °C
Specification: Non-maintained mode



Order number	Lamp	Duration	Battery type:	Battery voltage	Battery capacity	Luminuous flux
N90447	2xQT-Lp 20 W	1 h	Lead acid battery	12.0 V	6.5 Ah	2x210 lm
N90448	2xQT-Lp 20 W	3 h	Lead acid battery	12.0 V	24.0 Ah	2x210 lm
N90449	2xQT-Lp 55 W	1 h	Lead acid battery	12.0 V	24.0 Ah	2x1100 lm
N90450	2xQT-Lp 55 W	3 h	Lead acid battery	12.0 V	48.0 Ah	2x1100 lm

QT-Lp | CO-Lp | IP40

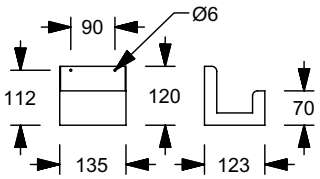
Description Emergency luminaire as a mobile spot with adjustable lamp housing. Lamp housing with one main and one auxiliary lamp, switchable.

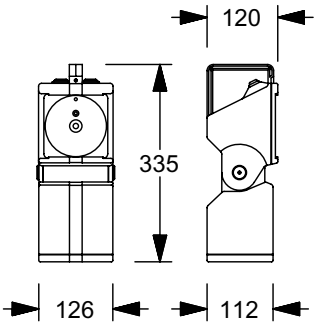
Special features Optimal portable light source.

Technical data
Body: Polycarbonate
Mains supply: 198 V - 254 V/50 Hz
Ambient temperature (non-maintained mode): 0 to + 40 °C
Specification: Non-maintained mode

General accessories

Wall bracket — Order no. F97230





Order number	Lamp	Duration	Battery type	Battery voltage	Battery capacity	Luminuous flux
N97230	QT-Lp 10W / CO-Lp 1.2 W	4 h / 38 h	NiCd battery	6.0 V	7.0 Ah	120 lm / 5 lm

Power pack NVG

[LOGICA] | T16-Lp | T26-Lp | TC-SEL-Lp | TC-DEL-LP | TC-TEL-Lp | TC-L-Lp | TC-F-Lp | TC-DSE-Lp | TC-TSE-Lp | A-Lp | QT-Lp | IP65 Elektronik | IP32 Batterie

Description Power pack to operate 1 or 2 luminaires with incandescent lamp, electronic/magnetic transformer or electronic/magnetic ballast. Design with separate electronics and battery compartment. Installation remote from luminaire(s). Max. distance between power pack and luminaire = 500 m.

Special features Use of general lighting luminaires as emergency luminaires. Emergency luminaires switchable from non-maintained to maintained mode via mains switches of the general lighting installation.

Note:

Electronic gear must be sutable for DC and AC operation and for use in emergency lighting installations. Luminaires with magnetic gear must have low power factor circuits.

Technical data

Mounting: Wall mounting

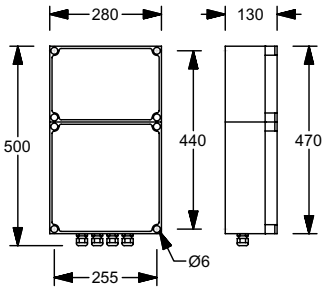
Body: ABS plastic

Mains supply: 198 V - 254 V/50 Hz

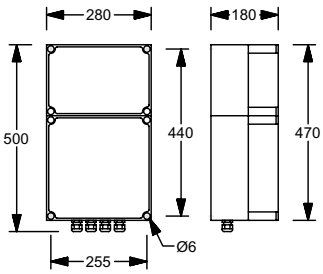
Ambient temperature (non-maintained mode): 0 to + 40 °C

Output: 230V AC or DC

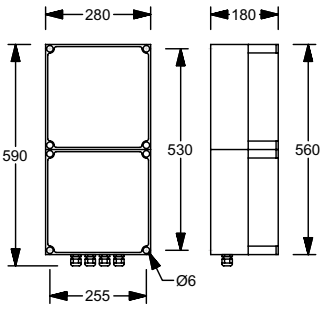
Specification: Maintained or non-maintained mode



V90800L
V90801L



V90802L



V90803L

Order number	Lamp	Duration	Battery type:	Battery voltage	Battery capacity	Ballast lumen factor[1)]	Standard	Autotest	Central test
V90800L	See table.	1 h / 3 h	Lead acid battery	12.0 V	6.5 Ah	100 % / 75 %	x	x	x
V90801L	See table.	1 h / 3 h	Lead acid battery	12.0 V	13.0 Ah	100 % / 75 %	x	x	x
V90802L	See table.	1 h / 3 h	Lead acid battery	12.0 V	24.0 Ah	100 % / 75 %	x	x	x
V90803L	See table.	1 h / 3 h	Lead acid battery	12.0 V	40.0 Ah	100 % / 75 %	x	x	x

[1)] 100% for luminaires with electronic gear / 75% for luminaires with magnetic gear

Power pack with DALI control input

V90800L-DALI									
V90801L-DALI									
V90802L-DALI									
V90803L-DALI									

Note: This design permits to adjust to 25%, 50%, 75%, or 100% in battery mode.

PRÄZISA GRUPPO BEGHELLI

[LOGICA] | T26-Lp | TC-L-Lp | TC-F-Lp | QT-Lp | IP65 Elektronik | IP32 Batterie

Order number	Lamp	Duration	Ballast lumen factor
V90800L	1 x T16-Lp 6 W - 14 W	1h / 3h	100% / -
	1 x TC-SEL-Lp 5 W - 11 W		100% / -
	1 x TC-SE-Lp 5 W - 11 W		100% / -
	1 x TC-DEL-Lp 10 W - 13 W		100% / -
	1 x TC-DSE-Lp 5 W - 11 W		100% / -
	1 x TC-TEL-Lp 13 W		100% / -
	1 x TC-TSE-Lp 13 W		100% / -
	2 x T16-Lp 6 W		100% / -
	2 x TC-SEL-Lp 5 W - 7 W		100% / -
	2 x TC-SE-Lp 5 W - 7 W		100% / -
	2 x TC-DSE-Lp 5 W - 7 W		100% / -
V90801L	1 x A-Lp 15 W - 25 W	1 h / 3 h	100% / -
	1 x T16-Lp 21 W - 28 W		100% / -
	1 x T26-Lp 18 W		100 % / 75 %
	1 x TC-DEL-Lp 18 W - 26 W		100% / -
	1 x TC-DSE-Lp 15 W - 23 W		100% / -
	1 x TC-TEL-Lp 18 W - 26 W		100% / -
	1 x TC-TSE-Lp 15 W - 24 W		100% / -
	1 x TC-L-Lp 18 W - 24 W		100 % / 75 %
	1 x TC-F-Lp 18 W - 24 W		100 % / 75 %
	2 x T16-Lp 8 W - 14 W		100% / -
	2 x TC-SEL-Lp 9 W - 11 W		100% / -
	2 x TC-SE-Lp 11 W		100% / -
	2 x TC-DSE-Lp 11 W		100% / -
V90802L	1 x A-Lp 40 W	1 h / 3 h	100% / -
	1 x T16-Lp 35 W - 54 W		100% / -
	1 x T26-Lp 36 W		100 % / 75 %
	1 x TC-DSE-Lp 30 W		100% / -
	1 x TC-TEL-Lp 32 W - 42 W		100% / -
	1 x TC-TSE-Lp 30 W		100% / -
	1 x TC-L-Lp 36 W - 40 W		100 % / 75 %
	1 x TC-F-Lp 36 W		100 % / 75 %
	2 x A-Lp 15 W - 25 W		100% / -
	2 x T16-Lp 21 W - 24 W		100% / -
	2 x T26-Lp 18 W		100 % / 75 %
	2 x TC-DSE-Lp 15 W - 23 W		100% / -
	2 x TC-TEL-Lp 18 W - 26 W		100% / -
	2 x TC-TSE-Lp 15 W - 24 W		100% / -
	2 x TC-L-Lp 18 W - 24 W		100 % / 75 %
	2 x TC-F-Lp 18 W - 24 W		100 % / 75 %

Order number	Lamp	Duration	Ballast lumen factor
V90803L	1 x A-Lp 60 W - 100 W	1 h / 3 h	100% / -
	1 x T16-Lp 80 W		100% / -
	1 x T26-Lp 58 W		100 % / 75 %
	1 x TC-L-Lp 55 W		100 % / 75 %
	2 x A-Lp 25 W - 60 W		100% / -
	2 x T16-Lp 35 W - 54 W		100% / -
	2 x T26-Lp 36 W - 58 W		100 % / 75 %
	2 x TC-DSE-Lp 30 W		100% / -
	2 x TC-TEL-Lp 32 W - 42 W		100% / -
	2 x TC-TSE-Lp 30 W		100% / -
	2 x TC-L-Lp 36 W - 55 W		100 % / 75 %
	2 x TC-F-Lp 36 W		100 % / 75 %

Allocation of lamp, duration, and ballast lumen factor

Conversion kit INVERTER

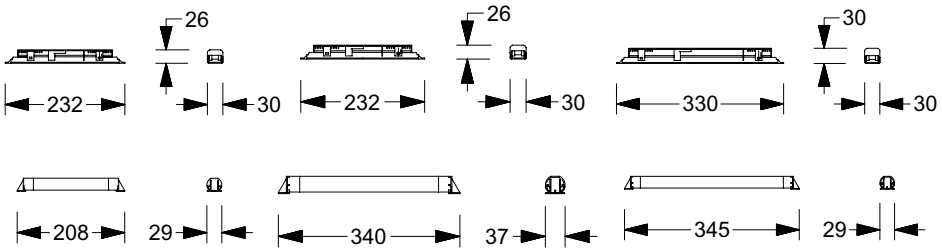
[LOGICA] T16-Lp T26-Lp TC-L-Lp IP20

Description Conversion kit for the operation of 1 luminaire with 1 fluorescent tube and electronic/magnetic ballast. Separate electronic and battery component fitted within a luminaire.

Special features Use of general lighting luminaires as emergency luminaires. Emergency luminaires switchable from non-maintained to maintained mode via mains switches of the general lighting installation.

Technical data

Mounting: To be installed in luminaires
Body: Plastic
Mains supply: 198 V - 254 V/50 Hz
Ambient temperature (non-maintained mode): - 5 to + 40 °C
Ambient temperature: -10 to + 30 °C
Specification: Maintained or non-maintained mode



VB12488

VB12490
VB12480
VB12482

VB16309

Order number	Lamp	Duration	Battery type:	Battery voltage	Battery capacity	Ballast lumen factor	Standard	Auto-test	Central test
VB12488	T16-Lp 14 W-24 W	1 h	NiCd battery	4.8 V	1.7 Ah	See table.	x		
VB12490	T16-Lp 14 W-24 W	3 h	NiCd battery	6.0 V	4.0 Ah	See table.	x		
VB12480	T26-Lp 18 W-58 W	1 h	NiCd battery	6.0 V	4.0 Ah	See table.	x		
VB12482	T26-Lp 18 W-58 W	3 h	NiCd battery	6.0 V	4.0 Ah	See table.	x		
	T16-Lp 14 W-80 W					See table.			
VB16309	T26-Lp 18 W-58 W TC-L-Lp 24 W-55 W	1 h / 3 h	NiCd battery	7.2 V	2.2 Ah			x	x

Order number	Lamp	Duration	Ballast lumen factor
	T16-Lp 14 W		30%
VB12488	T16-Lp 21 W	1 h	24%
	T16-Lp 24 W		20%
	T16-Lp 14 W		30%
VB12490	T16-Lp 21 W	3 h	24%
	T16-Lp 24 W		20%
	T26-Lp 18 W		30%
VB12480	T26-Lp 36 W	1 h	25%
	T26-Lp 58 W		17%
	T26-Lp18 W		16%
VB12482	T26-Lp 38 W	3 h	12%
	T26-Lp 58 W		9%

Order number	Lamp	Duration	Ballast lumen factor
	T16-LP 21W		42%
	T16-Lp 24 W		28%
	T16-Lp 28 W		22%
	T16-Lp 35 W	1h	26%
	T16-Lp 39 W		22%
	T16-Lp 49 W		17%
	T16-Lp 54 W		18%
	T16-Lp 80 W		11%
	T16-LP 21 W		14%
	T16-Lp 24 W		12%
	T16-Lp 28 W		11%
	T16-Lp 35 W	3h	9%
	T16-Lp 39 W		8%
	T16-Lp 49 W		6%
	T16-Lp 54 W		6%
	T16-Lp 80 W		4%
VB16309			
	T26-Lp 18 W		56%
	T26-Lp 36 W	1 h	28%
	T26-Lp 58 W		18%
	T26-Lp 18 W		19%
	T26-Lp 36 W	3 h	9%
	T26-Lp 58 W		6%
	TC-L-Lp 24 W		41%
	TC-L-Lp 36 W	1h	28%
	TC-L-Lp 40 W		22%
	TC-L-Lp 55 W		16%
	TC-L-Lp 24 W		14%
	TC-L-Lp 36 W	3h	9%
	TC-L-Lp 40 W		8%
	TC-L-Lp 55 W		12%

Allocation of lamp, duration, and ballast lumen factor

*Super*LOGICA monitoring and control system

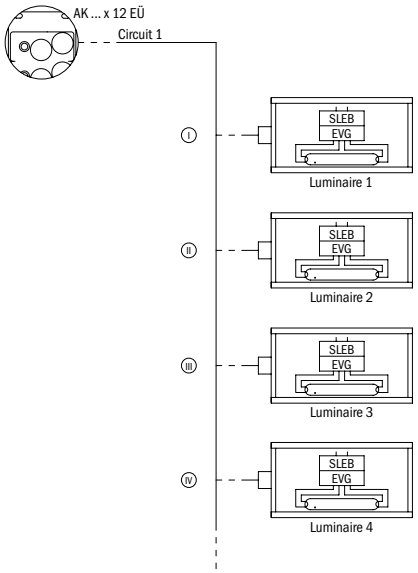
The *Super*LOGICA system operates luminaires in NGBVA, NGBVE, NZBVA, and NZBVE systems with different switching mode or control functions within a single circuit:

- Maintained mode
- Non-maintained mode
- Switch selectively from non-maintained to maintained mode depending on the status of the general lighting.
  - Control via the *Super*LOGICA module within the luminaire.
  - Control via an LSSA module within the system.
- In case of partial incidents/failures of mains supply all or individual non-maintained luminaires will be switched on automatically.
  - Control via the *Super*LOGICA module within the luminaire.
  - Control via an LSSA module within the system.
- On recovery of mains supply all or individual non-maintained luminaires will be switched off automatically.
  - Immediately
  - With 15 seconds delay
- On recovery of mains supply all or individual non-maintained luminaires may be switched off manually.
  - Control via the *Super*LOGICA module within the luminaire.
  - Control via an LSSA module within the system.
- Switch on/off manually or time controlled luminaires in maintained mode.
- Allocation of operational modes to circuits and luminaires without limitations.
- Allocation of control input commands to circuits and luminaires without limitations.
- No need to manually address the luminaire number at the module within the luminaire.
- No need to manually code the control input at the module within the luminaire.

Advantages:

- Reduce the number of cables.
- Reduce the number of circuits.
- Minimise the fire load.
- Reduce costs for mounting and installing.
- Easier and flexible design of the wiring layout.
- Flexibility during installation phase.
- Flexibility in case of changes or extensions of the installation.

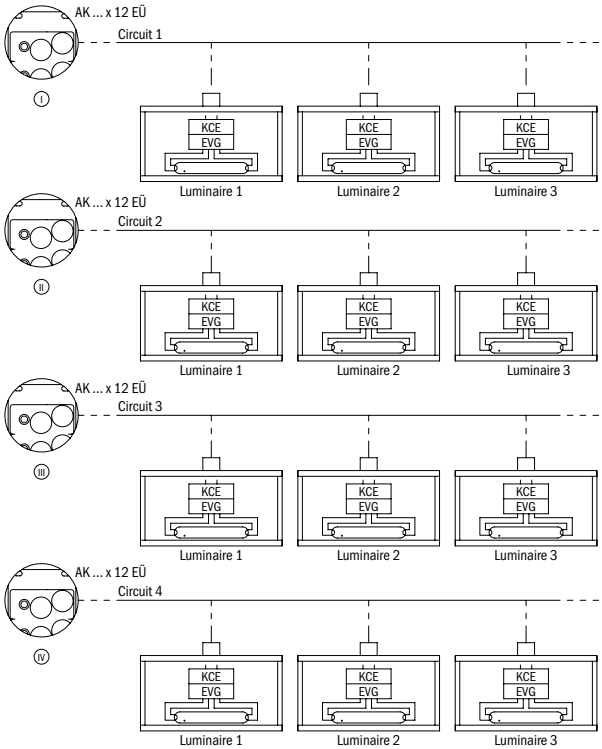
The *Super*LOGICA system controls the operational mode and monitors the functions of the luminaires from a single location at the central cabinet. The luminaires have to be equipped with either with the control and monitoring module SLEB or with the combined control, monitoring and lamp operating electronic ballast ECSL.



System with *Super*Logica system

1 intelligent circuit replaces 4 conventional circuits!

System without *Super*Logica system



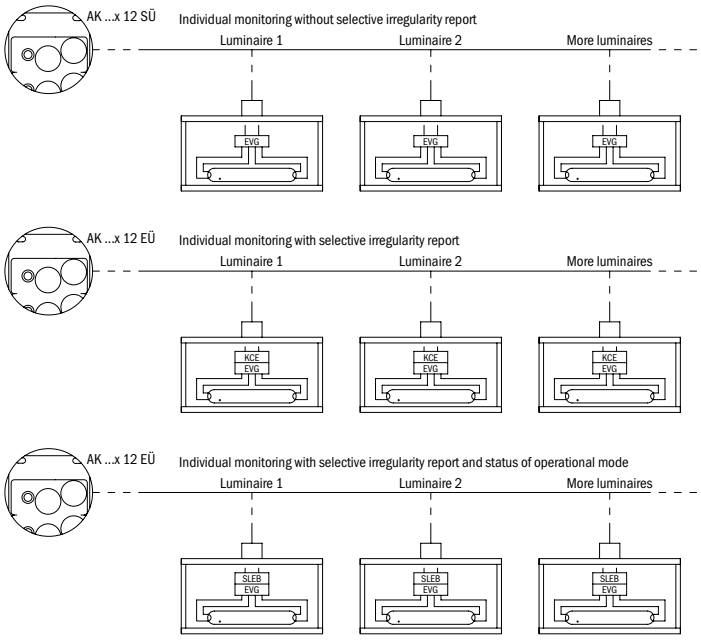
Ⅰ Maintained mode
Ⅱ Non-maintained mode
Ⅲ Non-maintained mode, selectively switched to maintained mode by external mains switches
Ⅳ Non-maintained mode, selectively switched on in case of partial incidents or failures of the general lighting system

Luminaire monitoring

In connection with the automatic test functionality of the NGBVA, NGBVE, NZBVA, and NZBVE systems, it is also possible to individually monitor exit sign and emergency luminaires. Two options are available:

- Individual monitoring with selective irregularity report, i.e. the defective luminaire can be directly localised. During the function tests, a SLEB switching and monitoring module or KCE monitoring module within the luminaire checks lamp and ballast, and reports the result to the group or central battery system. Then, an irregularity report indicating the circuit and luminaire number is displayed and printed immediately. Both modules are available either as discrete module only, or combined with an electronic ballast. This function requires operation and monitoring modules of the range AK... EÜ.

- Individual monitoring without selective irregularity report, i.e. the defective luminaire cannot be directly localised. During each function test, the actual power from all luminaires per circuit is measured and compared with the rated power. Then, an irregularity report will indicate and print the number of the circuit only. This function requires operation and monitoring modules of the range AK... SÜ.



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.

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

Battery voltage electronically transformed to 230V AC or DC according to the modules used.

Special features:

- Control and monitoring by the *Super*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 12 (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 or magnetic ballast
  - HID lamps with electronic or magnetic ballast

Series NGBVA

Series NGBVE

The NZBVA and NZBVE 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: Control cabinets with a large inspection pane and detachable frame to accommodate 19" rack inserts.
- NZBVE: 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.

Special features:

- Control and monitoring by the *Super*LOGICA 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/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 12 (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 or magnetic ballast
  - HID lamps with electronic or magnetic ballast

Series NZBVA

Series NZBVE

Group battery unit NGBVA

NGBVA group battery system acc. to EN 50171 including:

- 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.

Dimensions see page 69

Technical data

Mains supply:	Single phase 50/60 Hz
	U : 230 V (+6%/-10)
	Three phase 50/60 Hz
	U : 400 V (+6%/-10)
Fuse:	25 A, 3-pole
Terminals:	6 mm²
Battery supply:	U= 24 V
Fuse:	max. 80 A, 2-pole
Terminals:	25 mm²
Cable entry:	from top
Body:	Steel sheet, grey
Mounting:	Wall mounting
Degree of protection:	IP54/IP32
Electrical class:	I
Rated ambient temperature:	20°C

Group battery unit NGBVE

NGBVE group battery system acc. to EN 50171 including:
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.

Dimensions see page 69

Technical data

Mains supply:	Single phase 50/60 Hz
	U : 230 V (+6%/-10)
	Three phase 50/60 Hz
	U : 400 V (+6%/-10)
Fuse:	25 A, 3-pole
Terminals:	6 mm²
Battery supply:	U= 24 V
Fuse:	max. 80 A, 2-pole
Terminals:	25 mm²
Cable entry:	from top
Body:	Steel sheet, grey
Mounting:	Wall mounting
Degree of protection:	IP5 4/IP32
Electrical class:	I
Rated ambient temperature:	20°C

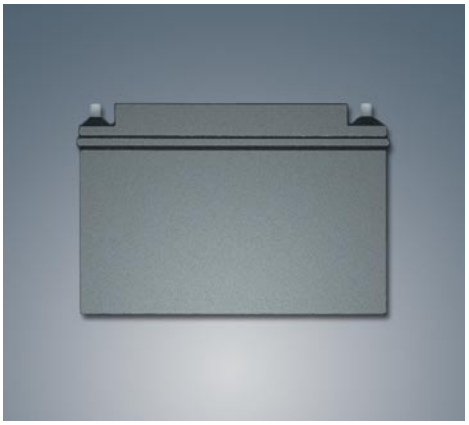
Charging unit for NGBVA and NGBVE

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:	27 V
Charge current:	6 A
Design:	19" rack insert (1 rack compartment)
Type:	L24/6
Order no.:	G32547



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:	400 W
Design:	19" rack insert (1 rack compartment)
Type:	WLG 400
Order no.:	G32812
Power:	750 W
Design:	19" rack insert (2 rack compartments)
Type:	WLG 750
Order no.:	G32811

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

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 L230/1,8
- 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.

Dimensions see page 70

Technical data

Mains supply:	Single phase 50/60 Hz U : 230 V (+6%/-10) Three phase 50/60 Hz U : 400 V (+6%/-10)
Fuse:	max. 100A, 3-pole fitted with 25A
Terminals:	35mm²
Battery supply:	U= 216 V
Fuse:	max. 100A, 2-pole fitted with 25A
Terminals:	35 mm²
Cable entry:	from bottom
Cabinet:	Steel sheet, grey
Mounting:	Floor standing
Degree of protection:	IP54
Electrical class:	I

Rated ambient temperature: -5°C to +35°C

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 L230/1,8
- 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.

Dimensions see page 70

Technical data

Mains supply:	Single phase 50/60 Hz U : 230 V (+6%/-10) Three phase50/60 Hz U : 400 V (+6%/-10)
Fuse:	max. 100A, 3-pole fitted with 25A
Terminals:	35mm²
Battery supply:	U= 216 V
Fuse:	max. 100A, 2-pole fitted with 25A
Terminals:	35 mm²
Cable entry:	from bottom or top
Cabinet:	Steel sheet, grey
Mounting:	Floor standing
Degree of protection:	IP21
Electrical class:	I

Rated ambient temperature: -5°C to +35°C (Control cabinet only)

20°C Combined control and battery cabinet

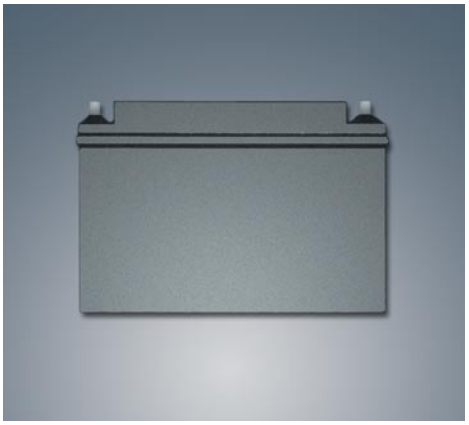
Charging unit for NZBVA and NZBVE

Charging unit L230/1.8

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:	1.8 A
Design:	19" rack insert (1 rack compartment)
Type:	L230/1.8
Order no.:	G32893



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.

Technical data:

Battery capacity (Ah)		33	40	55	65	78	90	100	120	150	200
Battery voltage (V)		216									
Battery current (A)	1 h	19	23,7	32,8	37,4	44,8	51,7	59,3	71,2	88,9	110
Maximum load (W)		4104	5119	7085	8078	9677	11167	12809	15379	19202	23760
Battery current (A)	3 h	8,3	10	14,2	16,2	19,5	22,5	25,5	29,9	38,2	50
Maximum load (W)		1782	2160	3067	3499	4212	4860	5508	6458	8251	10800
Battery current (A)	8 h	2,7	3,7	4,9	6,5	7,6	9,3	10,8	11,3	13,5	19,9
Maximum load (W)		583	799	1058	1404	1642	2009	2333	2441	2916	4298
Number of battery cabinets (NZBVA)		1	1	1	1	1	1	1	2	2	2
Number of battery cabinets (NZBVE - combined cabinet)		1	1	1	1	1	-	-	-	-	-
Number of battery cabinets (NZBVE - floor standing cabinet)		1	1	1	1	1	1	1	2	2	2
Battery capacity and maximum permissible load											

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.

Dimensions see page 71

Technical data

Terminals:	
- Mains:	35mm² for through wiring
- Battery:	35mm² for through wiring
Cable entry:	from bottom
Body:	Steel sheet, grey
Mounting:	Floor standing
Degree of protection:	IP54
Electrical class:	I
Rated ambient temperature:	-5°C to +35°C

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.

Dimensions see page 71

Technical data

Terminals:	
- Mains:	35mm² for through wiring
- Battery:	35mm² for through wiring
Cable entry:	from bottom
Body:	Steel sheet, grey
Mounting:	Floor standing
Degree of protection:	IP54
Electrical class:	I
Rated ambient temperature:	-5°C to +35°C

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

Dimensions see page 71

Technical data

Terminals:	
- Mains:	35mm² for through wiring
- Battery:	35mm² for through wiring
Cable entry:	from top
Body:	Steel sheet, grey
Mounting:	Wall mounting
Degree of protection:	IP54
Electrical class:	I
Rated ambient temperature:	-5°C to +35°C

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.

Dimensions see page 71

1) Cable duct or sealing of cable entry provided by others.

Technical data

Terminals:	
- Mains:	35mm² for through wiring
- Battery:	35mm² for through wiring

Cable entry: From top via a fitted cable entry to which a fire protected cable duct can be tightly connected.[1)]

Body:	Highly compressed fire protection panels
Surface coating:	Sprela, grey (similar to RAL 7035)
Mounting:	Wall mounting
Degree of protection:	IP54
Electrical class:	I
Rated ambient temperature:	-5°C to +35°C

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

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 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 – immediatly 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

Built-in printer for NGBVA, NGBVE, NZBVA and NZBVE

Built-in printer ED

Prints:

- Irregularity reports
- Results of function tests
- Results of duration tests
- Mains failures/incidents

Technical data:

Paper type:	Thermal paper
Paper width:	80 mm
Design:	19" rack insert
Type:	ED
Order no.:	M10053A

Printer paper
Order no.: H14146

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
Body:	Plastic
Type:	LON-NGZ
Order no.:	G31206

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

Signalling and switching module MSM

Display of:

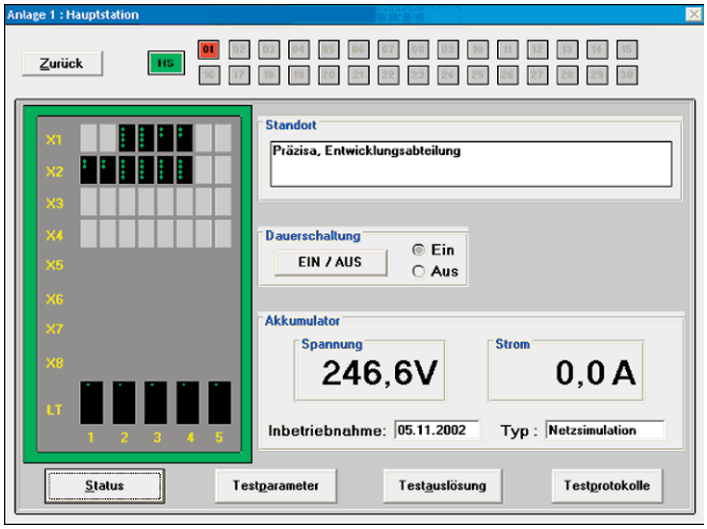
- Emergency mode suppression
- Operating mode
- Group fault

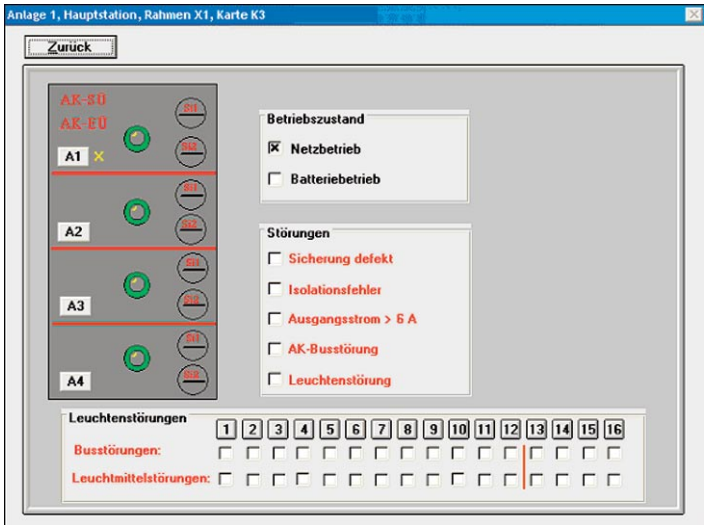
Control of:

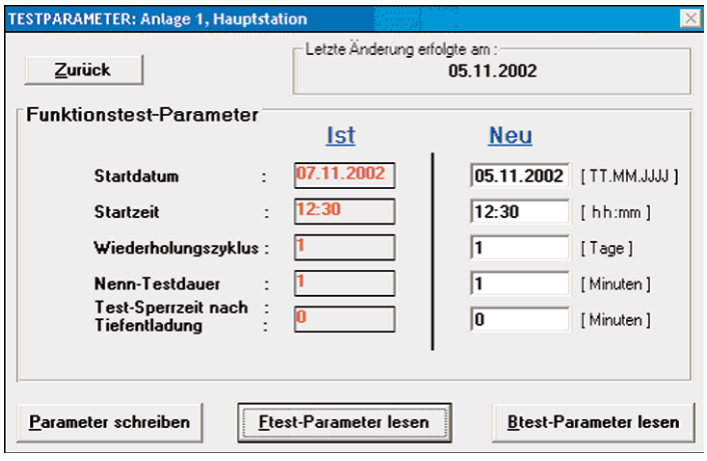
- Maintained mode ON/OFF

Technical data:

Mounting:	Wall mounting
Body:	Plastic
Dimensions (HxWxD):	160 x 80 x 60 mm
Degree of protection:	IP 32
Electrical class:	II
Type:	MSM
Order no.:	G31015







Monitoring software for NGBVA, NGBVE, NZBVA and NZBVE

Monitoring software MULTI-CONTROL

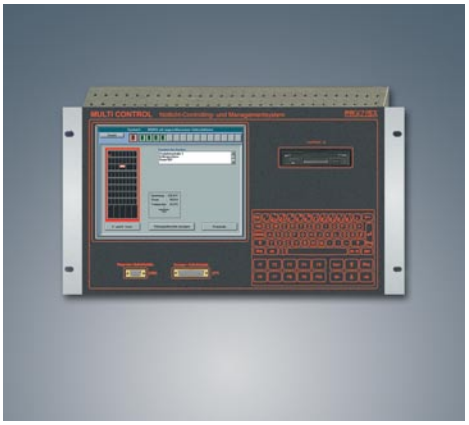
The MULTI CONTROL monitoring software permits a centralised monitoring and control of complex emergency lighting systems, e.g. for large buildings or enterprises with many buildings at a single or several sites. Communications between a maximum of 32 group or central battery systems and the computer running the MULTI-CONTROL monitoring software may be either by direct connection, via Ethernet or via the telephone landline. There is a choice of RS232 interface, Ethernet interface or remote data transmission interface. For NZBVA and NZBVE central battery systems the computer running the MULTI-CONTROL monitoring software can also be integrated in the central station.

The monitoring computer permanently holds all data and parameters as well as the current status of each group and central battery system, of each luminaire circuit and each luminaire at any time:

- Indicate all group and central battery systems as well as exit sign and emergency luminaires on facility plans.
- Allocate luminaire circuits, exit sign and emergency luminaires and mounting/installation locations into records.
- Visualise:
  - System configuration (central and sub-stations/luminaire circuits/data, e.g. battery voltage and current, parameters, e.g. for function and duration tests)
  - Luminaire circuit configuration (number of circuits and luminaires)
  - System status
    - Mains mode
    - Battery mode (mains failure/function test/duration test)
    - Group fault
      - Mains supply incidents (mains failure main distribution board - phase 1, phase 2, phase 3/mains failure sub distribution board)
      - Battery fault
      - Charge fault
      - Circuit fault (defective fuse/overload/insulation fault)
      - Luminaire fault (lamp defective)
      - Bus fault
      - Deep discharge
      - Insulation fault
      - Ventilation fault
- Control of maintained mode (on/off)
- Test triggering (function tests/duration tests)

Hardware requirements: IBM-compatible PC, Pentium II processor recommended, 166 MHz, 100 MB or more of free hard disk capacity
Software requirements: Operating system Windows 98, Windows 2000, Windows XP or Windows NT

Type:	MULTI-CONTROL
Order no.:	SW0030



Monitoring system for NZBVA and NZBVE

Monitoring system MULTI-CONTROL-I
IBM-compatible PC with 10GB hard disk, 1.44MB floppy disk, VGA graphics board, 7" colour monitor and keyboard including MULTI CONTROL monitoring software

Technical data:

Design:	19" rack insert
Type:	MULTI CONTROL-I
Order no.:	F90210

Interface module for MULTI-CONTROL

USB 2.0/RS485 interface USB 2.0/RS485-NGZ
Module used to interface a group or central battery system with a PC running the MULTI-CONTROL monitoring software.

Technical data:

Mounting:	Module for DIN rail
Body:	Plastic
Type:	USB 2.0/RS485-NGZ
Order no.:	G31208

Remote data transmission interface DFÜ-NGZ
Module used to interface a group or central battery system with a PC running the MULTI-CONTROL monitoring software via the telephone landline.

Technical data:

Mounting:	Module for DIN rail
Body:	Plastic
Type:	DFÜ-NGZ
Order no.:	F90223

TCP/IP interface TCP/IP-NGZ
Module used to interface a group or central battery system with a PC running the MULTI-CONTROL monitoring software via Ethernet.

Technical data:

Mounting:	Module for DIN rail
Body:	Plastic
Type:	TCP/IP-NGZ
Order no.:	G31209

Mains monitoring module for NGBVA, NGBVE, NZBVA and NZBVE

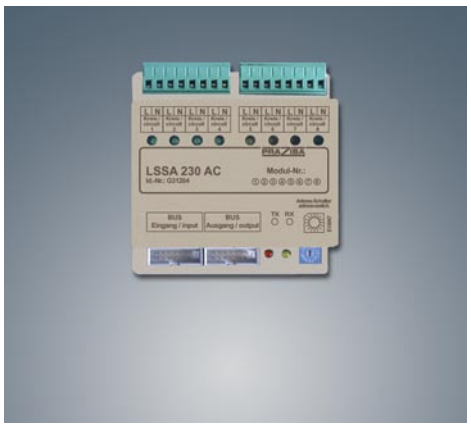
Mains monitoring module DS 3 UV

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
Body:	Plastic
Dimensions (H x W x D):	95 x 48 x 42 mm
Protection:	IP 20
Electrical class:	I
Type:	DS 3 UV
Order no.:	G31020A



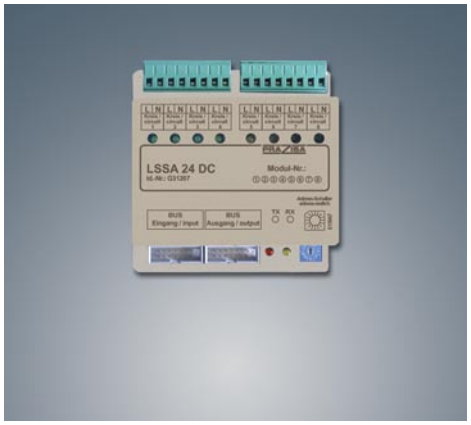
Switching modules for NGBVA, NGBVE, NZBVA and NZBVE

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
Control:	230 V AC or DC
Mounting:	DIN rail
Body:	Plastic
Type:	LSSA 230
Order no.:	G31204

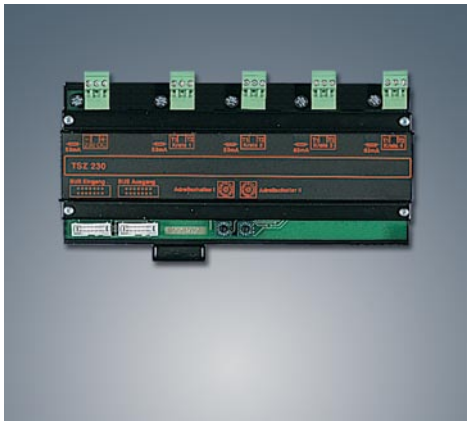


Mains switch/contactor dependent control module LSSA 24

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
Control:	switching contact, isolated
Mounting:	DIN rail
Body:	Plastic
Type:	LSSA 24
Order no.:	G31207



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
Control:	Push button
Mounting:	DIN rail
Body:	Steel sheet
Type:	TSZ 230
Order no.:	G31198

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

Operation and monitoring module
AK 1 x 12 EÜ

Modules for one luminaire circuit to operate 1 x 12 (20) 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 1380 W
Inrush current load:	1 x 42 500 W [1)]
Output:	DC
Design:	19" rack insert (1 rack compartment)
Type:	AK 1 x 12 EÜ
Order no.:	G32754

Operation and monitoring module
AK 2 x 12 EÜ

Modules for 2 luminaire circuits to operate 2 x 12 (20) 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 690 W
Inrush current load:	2 x 35,000 W [1)]
Output:	DC
Design:	19" rack insert (1 rack compartment)
Type:	AK 2 x 12 EÜ
Order no.:	G32818

Operation and monitoring module
AK 4 x 12 EÜ

Modules for 4 luminaire circuits to operate 4 x 12 (20) 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 345 W
Inrush current load:	4 x 27,500 W [1)]
Output:	DC
Design:	19" rack insert (1 rack compartment)
Type:	AK 4 x 12 EÜ
Order no.:	G32824

1) Max. power for 1 ms.

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

Operation and monitoring module AK 1 x 12 SÜ

Modules for one luminaire circuit to operate 1 x 12 (20) 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 1380 W
Inrush current load:	1 x 42 500 W [1)]
Output:	DC
Design:	19" rack insert (1 rack compartment)
Type:	AK 1 x 12 SÜ
Order no.:	G32797

Operation and monitoring module AK 2 x 12 SÜ

Modules for 2 luminaire circuits to operate 2 x 12 (20) 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 690 W
Inrush current load:	2 x 35 000 W [1)]
Output:	DC
Design:	19" rack insert (1 rack compartment)
Type:	AK 2 x 12 SÜ
Order no.:	G32815

Operation and monitoring module AK 4 x 12 SÜ

Modules for 4 luminaire circuits to operate 4 x 12 (20) 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 345 W
Inrush current load:	4 x 27,500 W [1)]
Output:	DC
Design:	19" rack insert (1 rack compartment)
Type:	AK 4 x 12 SÜ
Order no.:	G32820

1) Max. power for 1 ms.

Operation and monitoring modules for (NGBVA), (NGBVE), NZBVA and NZBVE

Operation and monitoring module AK 12 SÜ-AC

Modules for one luminaire circuit to operate 1 x 12 (20) 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
Rated frequency:	50 Hz (square wave)
Design:	19" rack insert (1 rack compartment)
Type:	AK 12 SÜ-AC
Order no.:	G32857

Operation and monitoring module AK 12 SÜ-DC HL

Modules for 1 luminaire circuit to operate 1 or 2 luminaires with:

- HID lamps + electronic ballast

Instant switching from mains to battery mode.

Monitoring:

- Individual monitoring without selective irregularity report

Technical data:

Maximum load:	1 x 400 W or 1 x 250 W
Output:	DC
Design:	19" rack insert (1 rack compartment)
Note: Luminaires in maintained mode	
Type:	AK 12 SÜ-DC HL
Order no.:	G32813

Operation and monitoring module AK 12 SÜ-AC HL – for NZBVA only

Modules for 1 luminaire circuit to operate 1, 2, 3, or 4 luminaires with:

- HID lamps + magnetic ballast (ind. circuit, non-compensated)

Instant switching from mains to battery mode

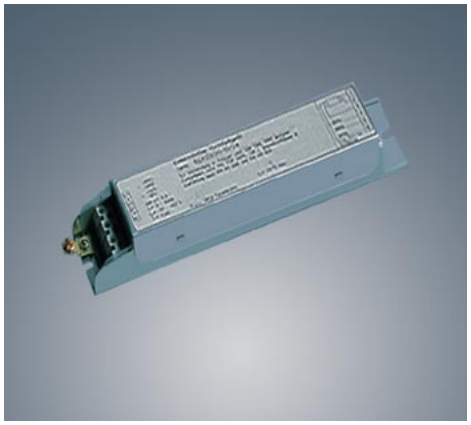
Monitoring:

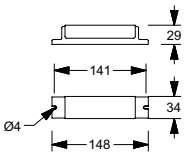
- Individual monitoring without selective irregularity report

Technical data:

Maximum load:	1 x 250 W, 2 x 150 W, 3 x 100 W or 4 x 70 W
Rated frequency:	50 Hz (square wave)
Design:	19" rack insert (2 rack compartments)[1)]
Note: For NZBVA only Luminaires in maintained mode	
Type:	AK 12 SÜ-AC HL
Order no.:	G32898

1) 1 module = 2 rack compartments/2 modules = 3 rack compartments





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

Monitoring and switching module SLEB

Module in *Super*LOGICA 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

Technical data:

Lamp or system power:	5 W to 120W
Mains voltage:	198 V to 254 V
Mains frequency:	50 Hz
Battery voltage:	176 V to 254 V
Fuse:	0,63 A, integrated
Ambient temperature:	- 10°C to + 50°C
Mounting:	to be installed in luminaires
Body:	Metallic
Degree of protection:	IP 20
Electrical class:	I
Type:	SLEB
Order no.:	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.

Type:	SLEB-DALI
Order no.:	G31372

Electronic ballast with integrated monitoring and switching module for NGBVA, NGBVE, NZBVA and NZBVE

Electronic ballast with integrated monitoring and switching module ECSL

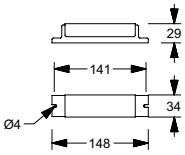
Module consisting of electronic ballast EC and monitoring and switching module SLEB.

- Electronic ballast with configurable ballast lumen factor of 25% to 100% in battery mode

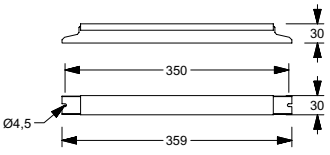
Technical data:

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

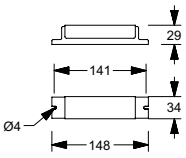
Order number	Lamp	Ballast lumen factor
G31373	T16-Lp 6 - 13 W	75%
	TC-SEL-Lp 5 - 11 W	75%
	TC-DEL-Lp 10 - 13 W	75%
G31374	T16-Lp 14 - 80 W	25% - 100%
	T26-Lp 18 - 58 W	25% - 100%
	TC-DEL-Lp 18 - 26 W	25% - 100%
	TC-TEL-Lp 18 - 26 W	25% - 100%
	TC-L-Lp 18 - 55 W	25% - 100%
	TC-F-Lp 18 - 36 W	25% - 100%



G31373



G31374



Monitoring module for NGBVA, NGBVE, NZBVA and NZBVE

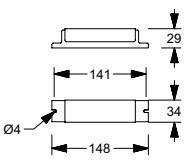
Monitoring module KCE

Module with following functions:

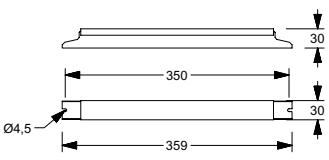
- Luminaire monitoring (lamp + gear) with selective irregularity report
- No need to manually encode the luminaire address at the module

Technical data:

Lamp or system power:	5 W to 120W
Mains voltage:	198 V to 254 V
Battery voltage:	176 V to 254 V
Rated frequency:	50 Hz
Fuse:	0,63 A, integrated
Ambient temperature:	- 10°C to + 50°C
Mounting:	to be installed in luminaires
Body:	Metallic
Degree of protection:	IP 20
Electrical class:	I
Type:	KCE
Order no.:	G31017



G31375



G31376

Electronic ballast with integrated monitoring module for NGBVA, NGBVE, NZBVA and NZBVE

Electronic ballast with integrated monitoring module ECKC

Module consisting of electronic ballast EC + monitoring module KCE

- Electronic ballast with fixed or configurable ballast lumen factor of 25% to 100% in battery mode

Technical data:

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

Order number	Lamp	Ballast lumen factor
G31375	T16-Lp 6 - 13 W	75%
	TC-SEL-Lp 5 - 11 W	75%
	TC-DEL-Lp 10 - 13 W	75%
G31376	T16-Lp 14 - 80 W	25% - 100%
	T26-Lp 18 - 58 W	25% - 100%
	TC-DEL-Lp 18 - 26 W	25% - 100%
	TC-TEL-Lp 18 - 26 W	25% - 100%
	TC-L-Lp 18 - 55 W	25% - 100%
	TC-F-Lp 18 - 36 W	25% - 100%

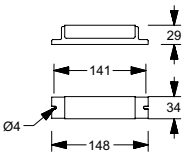
Electronic ballast for NGBVA, NGBVE, NZBVA and NZBVE

Electronic ballast EC

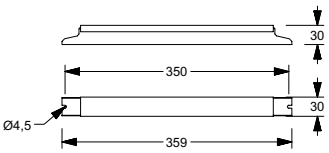
Electronic ballast, choice of fixed or configurable ballast lumen factor of 25%, 50%, 75% or 100% in battery mode.

Technical data:

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

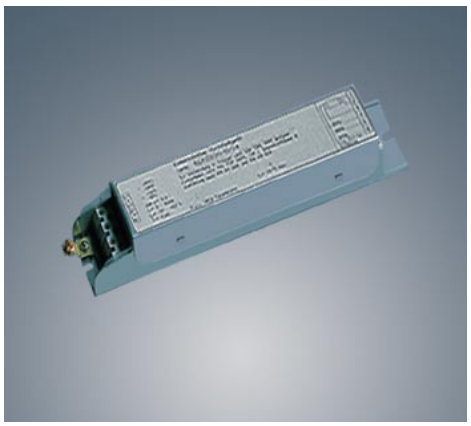


G31377



G31378

Order number	Lamp	Ballast lumen factor
G31377	T16-Lp 6 - 13 W	75%
	TC-SEL-Lp 5 - 11 W	75%
	TC-DEL-Lp 10 - 13 W	75%
G31378	T16-Lp 14 - 80 W	25%, 50%, 75%, 100%
	T26-Lp 18 - 58 W	25%, 50%, 75%, 100%
	TC-DEL-Lp 18 - 26 W	25%, 50%, 75%, 100%
	TC-TEL-Lp 18 - 26 W	25%, 50%, 75%, 100%
	TC-L-Lp 18 - 55 W	25%, 50%, 75%, 100%
	TC-F-Lp 18 - 36 W	25%, 50%, 75%, 100%



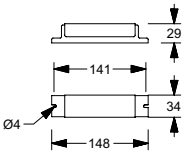
Switching module for NGBVA, NGBVE, NZBVA and NZBVE

Switching module/Changeover relay EUV

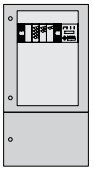
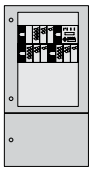
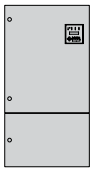
Module for selective switching from non-maintained to maintained mode via internal LSSA control input.
Also to be used as changeover relay from mains to emergency operation.

Technical data:

Lamp or system power:	5W to 100W
Mains voltage:	198 V to 254 V
Mains frequency:	50 Hz
Battery voltage:	176 V to 254 V
Ambient temperature:	- 10°C to + 50°C
Mounting:	to be installed in luminaires
Body:	Metallic
Degree of protection:	IP 20
Electrical class:	I
Type:	EUV
Order no.:	G31037

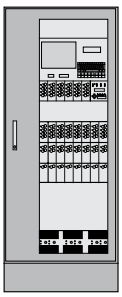
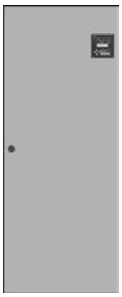
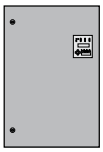


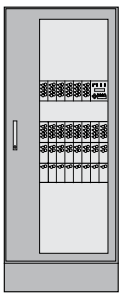
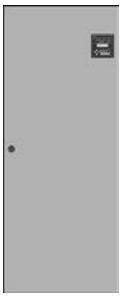
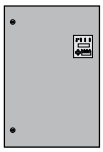
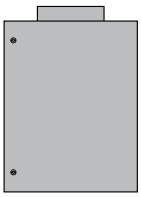
System spreadsheet NGBVA and NGBVE


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	10 Ah to 115 Ah	10 Ah to 115 Ah	10 Ah to 115 Ah	10 Ah to 115 Ah
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 LON-BUS-NGZ	optional	optional	optional	optional
Monitoring system MULTI CONTROL-I	No	No	No	No
RS232 interface RS232-NGZ	optional (max. 1)	optional (max. 1)	optional (max. 1)	optional (max. 1)
TCP/IP interface TCP/IP-NGZ				
Remote data transmission interface DFÜ-NGZ				
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 12 EÜ AK 2 x 12 EÜ AK 4 x 12 EÜ	Rack compartments (max. 3)	Rack compartments (max. 9)	Rack compartments (max. 3)	Rack compartments (max. 9)
Operation and monitoring modules AK 1 x 12 SÜ AK 2 x 12 SÜ AK 4 x 12 SÜ				
Operation and monitoring module AK 12-SÜ-AC				
Operation and monitoring module AK 12 SÜ-DC HL	No	No	No	No
Operation and monitoring module AK 12 SÜ-AC HL	No	No	No	No
Design	Wall-mounted combined cabinet (electronics and battery)	Wall-mounted combined cabinet (electronics and battery)	Wall-mounted combined cabinet (electronics and battery)	Wall-mounted combined cabinet (electronics and battery)
Dimensions (HxWxD)	1140 x 600 x 350 mm	1140 x 600 x 350 mm	1140 x 600 x 350 mm	1140 x 600 x 350 mm

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 L230/1.8	6 max.	6 max.	6 max.	6 max.
Batteries with a lifetime expectation of 10 years	33 Ah to 200 Ah	33 Ah to 200 Ah	33 Ah to 200 Ah	33 Ah to 78 Ah
Control and monitoring unit KOMBI CONTROL	integrated	integrated	integrated	integrated
Built-in printer ED	optional	optional	optional	optional
LON-BUS interface LON-BUS-NGZ	optional	optional	optional	optional
Monitoring system MULTI-CONTROL-I	Yes	Yes	No	No
RS232 interface RS232-NGZ	optional (1 max.)	optional (1 max.)	optional (1 max.)	optional (1 max.)
TCP/IP interface TCP/IP-NGZ				
Remote data transmission interface DFÜ-NGZ				
Mains switch/contactor dependent control module LSSA 230	optional (4 max.) (4 max.) (4 max.) (4 max.)	optional (4 max.) (4 max.) (4 max.) (4 max.)	optional (1 max.) (2 max.)	optional (1 max.) (2 max.)
Operation and monitoring modules AK 1 x 12 EÜ AK 2 x 12 EÜ AK 4 x 12 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 12 SÜ AK 2 x 12 SÜ AK 4 x 12 SÜ				
Operation and monitoring module AK 12-SÜ-AC				
Operation and monitoring module AK 12 SÜ-DC HL				
Operation and monitoring module AK 12 SÜ-AC HL	yes	no	no	no
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 + 2000 x 800 x 600 mm 2000 x 800 x 600 + 2000 x 800 x 600 mm 2000 x 800 x 600 + 2000 x 800 x 600 mm 2000 x 800 x 600 + 2000 x 800 x 600 mm	2000 x 800 x 400 + 2000 x 800 x 600 mm 2000 x 800 x 400 + 2000 x 800 x 600 mm 2000 x 800 x 400 + 2000 x 800 x 600 mm 2000 x 800 x 400 + 2000 x 800 x 600 mm	890 x 800 x 400 + 2000 x 800 x 600 mm 890 x 800 x 400 + 2000 x 800 x 600 m	2000 x 800 x 600 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 L230/1.8	-	-	-	-
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 LON-BUS-NGZ	-	-	-	-
Monitoring system MULTI-CONTROL-I	No	No	No	No
RS232 interface RS232-NGZ TCP/IP interface TCP/IP-NG Remote data transmission interface DFÜ-NGZ	-	-	-	-
Mains switch/contactor dependent control module LSSA 230	optional (4 max.) (4 max.) (4 max.) (4 max.)	optional (4 max.) (4 max.) (4 max.) (4 max.)	optional (1 max.) (2 max.)	optional (1 max.) (2 max.)
Operation and monitoring modules AK 1 x 12 EÜ AK 2 x 12 EÜ AK 4 x 12 EÜ Operation and monitoring modules AK 1 x 12 SÜ AK 2 x 12 SÜ AK 4 x 12 SÜ Operation and monitoring module AK 12-SÜ-AC Operation and monitoring module AK 12 SÜ-DC HL	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 module AK 12 SÜ-AC HL	yes	no	no	no
Design	Floor standing cabinet	Floor standing cabinet	Wall-mounted cabinet	Wall-mounted cabinet
Dimensions (H x W x D)	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 1149 x 608 x 324 mm

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 (table 1)
4. Battery (table 1)
5. Transformer(s) (system spreadsheet)
6. Operation and monitoring module (system spreadsheet)
7. Options (system spreadsheet)

Type: Defining the group battery system:

NGBVA
NGBVE 24/6/___/_/__/_/

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)

Battery capacity (Ah)		24	40	65	85	115
Rated voltage (V)		24				
Charging current (A)	1 h	6	6	6	6	6
Maximum load (W)		355	568	852	1207	1500
Charging unit		1xL24/6	1xL24/6	1xL24/6	1xL24/6	1xL24/6
Charging current (A)	3 h	6	6	6	6	6
Maximum load (W)		136	218	327	468	500
Charging unit		1xL24/6	1xL24/6	1xL24/6	1xL24/6	1xL24/6

Table 1: Charging unit and battery
Note: When using modules from the SLEB and KCE range consider a power consumption of 1W per module.
Consider a power consumption of 10W for every transformer or ballast.

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

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 (table 1)
4. Battery (table 1)
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 (table 3)
8. Central station (system spreadsheet)

Type: Identification of the central station:

NZBVA-Z
NZBVE-Z 230/__/___/__/_/_

- Rack compartment MULTI CONTROL-I (0= no, 1= yes)
- Duration (h) (1=1 h/3=3 h/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-mounted)

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

Battery capacity (Ah)		33	40	55	65	78	90	100	120	150	200
Rated voltage (V)		216									
Charging current (A)	1h	1,8	1,8	3,6	3,6	3,6	5,4	5,4	5,4	7,2	9
Maximum load (W)		4104	5119	7085	8078	9677	11167	12809	15379	19202	23760
Charging current (A)	3h	1,8	3,6	3,6	3,6	5,4	5,4	5,4	7,2	9	10,8
Maximum load (W)		1782	2160	3067	3499	4212	4860	5508	6458	8251	10800
Charging current (A)	8h	3,6	3,6	5,4	5,4	5,4	7,2	7,2	9	10,8	14,4
Charging unit		583	799	1058	1404	1642	2009	2333	2441	2916	4298

Table 1: Charging unit and battery

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

Mains input									
Power (W)	3450	4830	6900	8694	11040	13800	17250	22080	27600
Fuse (type)	NH00 25 A	NH00 35 A	NH00 50 A	NH00 63 A	NH00 80 A	NH00 100 A	NH00 125 A	NH00 160 A	NH1 200 A
Sub-station(s)- Output									
Power (W)	3450	4830	6900	8694	11040	13800	17250	22080	27600
Fuse (type)	NH00 25 A	NH00 35 A	NH00 50 A	NH00 63 A	NH00 80 A	NH00 100 A	NH00 125 A	NH00 160 A	NH1 200 A

Table 2: Mains input and sub-station(s) output

Exit sign and emergency luminaires for external power supply

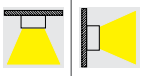
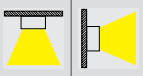
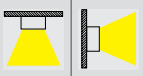
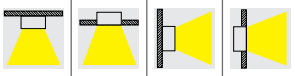
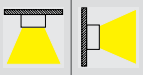
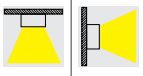
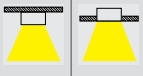
Exit sign and emergency luminaires to be supplied by group battery systems NGBVA and NGBVE, central battery systems NZBVA and NZBVE and other power supply systems:

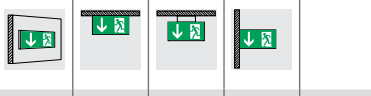
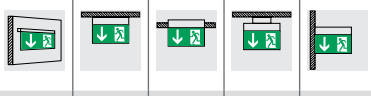
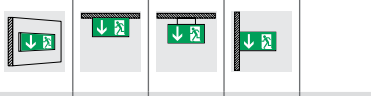
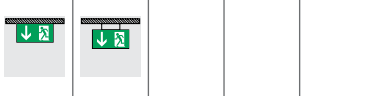
Concept:

- Luminaires with electronic ballast and integrated monitoring and switching module (range ECSL)
- Luminaires with electronic ballast and integrated monitoring module (range ECKC)
- Luminaires with electronic ballast (range EC)

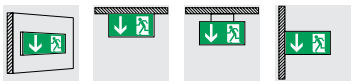
Special features:

- Flexible mode control by *Super*LOGICA system
- Individual monitoring with or without monitoring module
- No need to address the luminaire code manually
- Choice of exit sign and emergency luminaires in elegant, conventional and industrial design
- Exit sign and emergency luminaires in sleek design
- Emergency luminaires with optimised reflectors

	Range	Page	Mounting of of exit sign luminaires
	Exit sign luminaire ARCUS-V	76	
	Emergency luminaire ARCUS-V	78	
	Exit sign luminaire CONVEX	80	
	Exit sign luminaire DESIGN	82	
	Emergency luminaire DESIGN	84	
	Exit sign luminaire DISPOS	86	
	Exit sign luminaire DISPOS-LED	88	
	Exit sign luminaire KUBUS	90	
	Emergency luminaire KUBUS	92	
	Exit sign and emergency luminaire LOGICA	94	
	Exit sign and emergency luminaire AESTETICA	96	
	Exit sign and Emergency luminaire PRATICA TUTTOVETRO	98	
	Exit sign luminaire TUTTOVETRO BANDIERA	100	
	Exit sign luminaire QUADER	102	
	Emergency luminaire STUFEN	103	
	Emergency luminaire PYLON	104	
	Emergency luminaire CRATER	106	
	Emergency luminaire LEADER	108	

Mounting of emergency luminaires	T16-Lp	T26-Lp	TC-SEL-Lp	TC-DEL-LP	LED	Protection	Electrical class	EVG	EVG + KCE	EVG + SLEB	
	8 W					IP 40	I	x	x	x	33 m
	8 W					IP 40	I	x	x	x	
	6 W					IP 40	I	x	x	x	23 m
	6 W 8 W					IP 40	I	x	x	x	23 m 35 m
	8 W					IP 40	I	x	x	x	
	6 W 8 W					IP 20	I	x	x	x	23 m 29 m
					x	IP 20	I	x	x	x	23 m 29 m
	6 W 8 W 13 W					IP 40	I	x	x	x	23 m 35 m 60 m
	8 W					IP 40	I	x	x	x	
	8 W					IP 65	II	x	x	x	23 m
	8 W					IP 40	II	x	x	x	23 m
	6 W 8 W					IP 40 IP 65	II	x	x	x	24 m
	8 W					IP 40 IP 65	II	x	x	x	24 m
			9 W			IP 43	I	x	x	x	44 m
	4 W					IP 54	I	x	x	x	
				10 W 13 W		IP 20	I	x	x	x	
				13 W		IP 20	I	x	x	x	
		18 W 36 W 58 W				IP 66	I	x	x	x	

Exit sign luminaire ARCUS-V



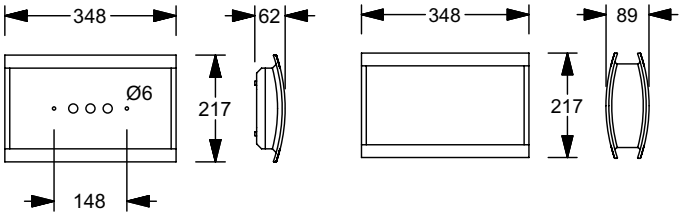
T16-Lp

IP40

Description Exit sign luminaire in an elegant design with a convex luminaire body. Visible surface as a pane, projecting on all sides. Choice of single sided (wall mounting) or double sided (ceiling, pendant suspended and bracket mounting) exit sign.
Luminaires supplied without exit sign panes and accessories.

Special features Architectural look, sleek design, long distance visibility, also available as emergency luminaire.

Technical data
Mounting: Wall, ceiling, pendant suspended or bracket mounting
Body: Extruded/die cast aluminium, anthracite-metallic (DB703)
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C



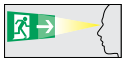
Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
Version for single sided exit sign					
T92304_*	T16-Lp 8 W	75%	x	x	x
Version for double sided exit sign					
T92305_*	T16-Lp 8 W	75%	x	x	x

* Order no. with suffix E: E. g. TnnnnE = variant with electronic ballast
Order no. with suffix Ü: E. g. TnnnnÜ = variant with electronic ballast + integrated monitoring module
Order no. with suffix S: E. g. TnnnnS = variant with electronic ballast + integrated monitoring and switching module

Accessories

Films/panes

Exit sign panes (please order separately)



33 m

E16282N

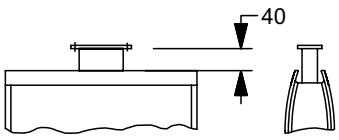
E16283N

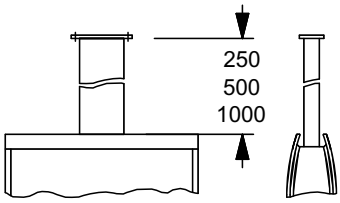
E16284N

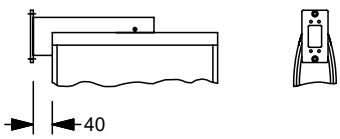
E16302 (opal pane)

E16285 (pane in body colour)

Mounting accessories

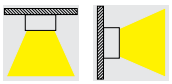




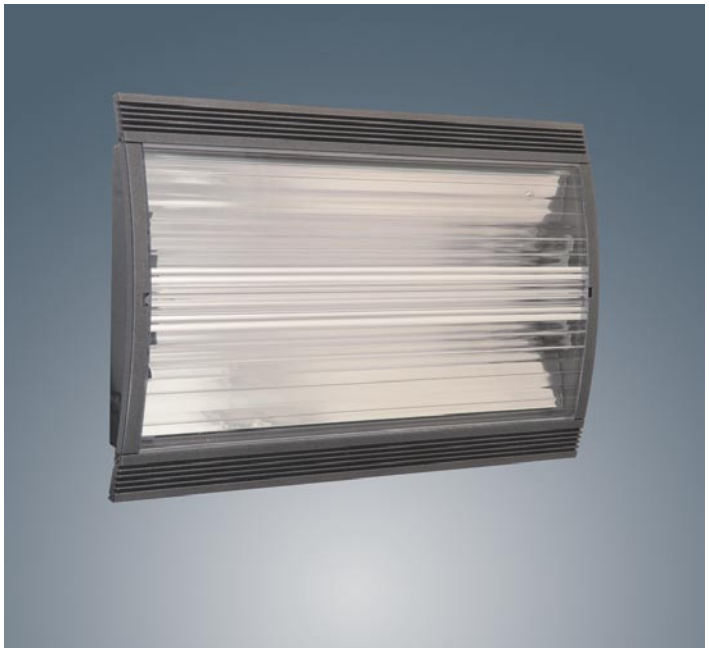


Adapter for ceiling mounting	F95104
Pendant	
250 mm	F95083
500 mm	F95084
1000 mm	F95085
Bracket	F95064

Emergency luminaire ARCUS-V



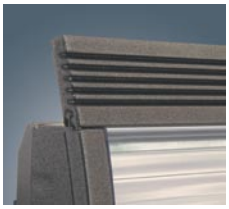
T16-Lp IP40

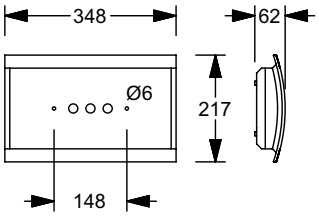


Description Emergency luminaire in an elegant design with convex luminaire body. Front surface as a pane, projecting on all sides. Light distribution by mirror reflector and transparent cover with longitudinal prisms.

Special features Architectural look, sleek design, wide beam light distribution, high light output ratio, also available as exit sign luminaire.

Technical data
Mounting: Wall or ceiling mounted
Body: Extruded/die cast aluminium, anthracite-metallic (DB703)
Cover: Clear polycarbonate
Reflector: Specular aluminium
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C

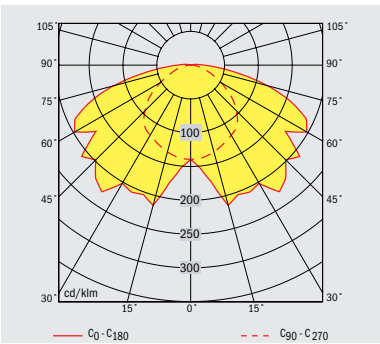




Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
T92316_*	T16-Lp 8 W	75%	x	x	x

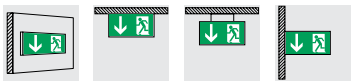
* Order no. with suffix E: E. g. TnnnnE = variant with electronic ballast
Order no. with suffix Ü: E. g. TnnnnÜ = variant with electronic ballast + integrated monitoring module
Order no. with suffix S: E. g. TnnnnS = variant with electronic ballast + integrated monitoring and switching module

Lighting data



Mounting height (m)	Luminaire distance (m) for E = 1.25 lx or *E = 0.625 lx*			
	L1	L2	L3	L4
ARCUS				
2,5	4,4 / *5,6*	11,0 / *13,2*	2,9 / *3,6*	*7,2 / 8,3*
3,0	4,1 / *6,0*	10,9 / *13,6*	2,9 / *3,9*	*7,3 / 9,2*
4,0	4,5 / *5,8*	10,9 / *14,9*	2,9 / *4,1*	*7,7 / 10,7*
5,0	4,2 / *6,2*	12,1 / *16,7*	2,2 / *4,2*	*7,5 / 11,3*
6,0	3,1 / *6,0*	1,4 / *15,6*	0,4 / *3,9*	*7,6 / 11,5*
7,0	- / *6,0*	- / *17,0*	- / *3,2*	- / *10,8*
7,5	- / *5,9*	- / *16,4*	- / *2,6*	- / *11,7*

Exit sign luminaire CONVEX



T16-Lp

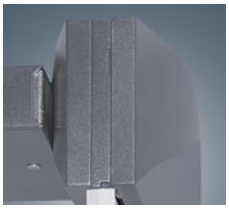
IP40

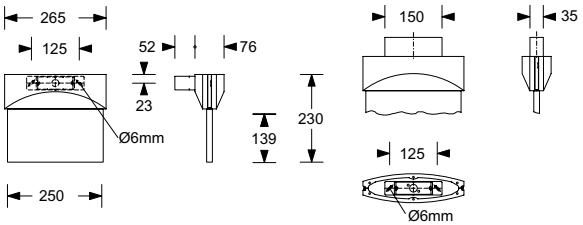
Description Exit sign luminaire in architectural style, consisting of double sided convex luminaire body with concave taper. Vertical joints at both ends. Choice of single sided (wall mounting) or double sided (ceiling, pendant suspended and bracket mounting) exit sign. Luminaire without exit sign panes, pendant or bracket.

Special features Stylish look, minimal dimensions

Technical data

Mounting: Wall, ceiling, pendant suspended or bracket mounting
Body: Die cast aluminium, anthracite-metallic
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C





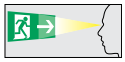
Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
Version for single sided exit sign					
T92708_*	T16-Lp 6 W	75%	x	x	x
Version for double sided exit sign					
T92709_* (ceiling-mounted)	T16-Lp 6 W	75%	x	x	x
T92710_* (for pendant suspended or bracket mounting)	T16-Lp 6 W	75%	x	x	x

* Order no. with suffix E: E. g. TnnnnE = variant with electronic ballast
Order no. with suffix Ü: E. g. TnnnnÜ = variant with electronic ballast + integrated monitoring module
Order no. with suffix S: E. g. TnnnnS = variant with electronic ballast + integrated monitoring and switching module

Accessories

Films/panes

Exit sign panes (please order separately)



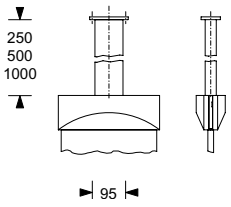
23 m

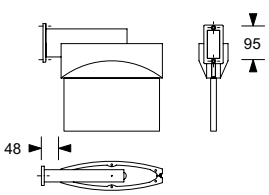
E16260N

E16261N

E16262N

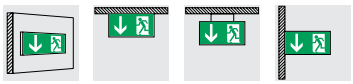
Mounting accessories





Pendant	
250 mm	F95106
500 mm	F95107
1000 mm	F95108
Bracket	F95014

Exit sign luminaire DESIGN



T16-Lp

IP40

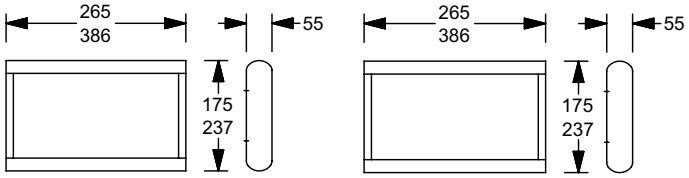
Description Exit sign luminaire in functional style, consisting of semi-circular sections and flat endcaps. Choice of single sided (wall mounting) or double sided (ceiling, pendant suspended and bracket mounting) exit sign. Luminaires without exit sign panes, adapter for ceiling mounting, pendant or bracket.

Special features Architectural look, extremely sleek design, choice of 2 visibility distances also available as emergency luminaire.

Technical data

Mounting: Wall, ceiling, pendant suspended or bracket mounting
Body: Steel sheet, white (RAL 9016)[1)]
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C

1) Design with aluminium body available on request.



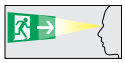
Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
Version for single sided exit sign					
TM92544_*	T16-Lp 6 W	75%	x	x	x
TM92540_*	T16-Lp 8 W	75%	x	x	x
Version for double sided exit sign					
TM92546_*	T16-Lp 6 W	75%	x	x	x
TM92542_*	T16-Lp 8 W	75%	x	x	x

* Order no. with suffix E: E. g. TnnnnE = variant with electronic ballast
Order no. with suffix Ü: E. g. TnnnnÜ = variant with electronic ballast + integrated monitoring module
Order no. with suffix S: E. g. TnnnnS = variant with electronic ballast + integrated monitoring and switching module

Accessories

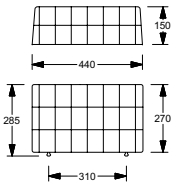
Films/panes

Exit sign panes (please order separately)

	Luminaire T16-Lp 6 W	Luminaire T16-Lp 8 W
	23 m	35 m
	E16604N	E16608N
	E16605N	E16609N
	E16606N	E16610N
Opal pane		
	E16607	E16611
Pane in body colour		
	E16242	E16241

General accessories

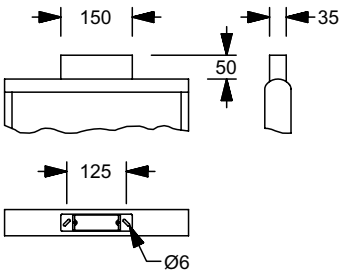
Protective grill (wall mounting)



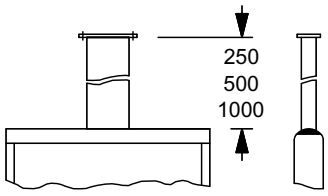
Order no.
Luminaire with T26-Lp 8 W
F95032

Note: Exit sign panes "EXIT straight ahead", "EXIT to the right" and "EXIT to the left" available upon request.

Mounting accessories

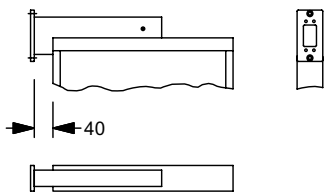


Adapter for ceiling mounting F95057



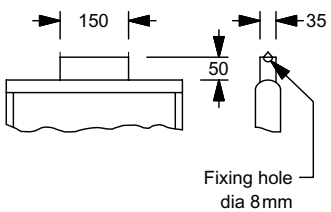
Pendant

250 mm	F95100
500 mm	F95101
1000 mm	F95102



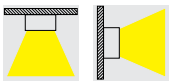
Bracket

Luminaire with T16-Lp 6 W	F95022
Luminaire with T16-Lp 8 W	F95035



Adapter for wire suspended mounting F95067

Emergency luminaire DESIGN



T16-Lp IP40

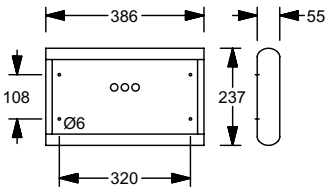
Description Emergency luminaire in functional style, consisting of semi-circular sections and flat endcaps. Light distribution by mirror reflector and transparent cover with longitudinal prisms.

Special features Functional look, extremely sleek design, wide beam light distribution, high light output ratio, also available as an exit sign luminaire

Technical data

Mounting: Wall or ceiling mounted
Body: Steel sheet, white (RAL 9016)[1)]
Cover: Prismatic structured plastic
Reflector: Specular aluminium
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C

1) Design with aluminium body available on request.

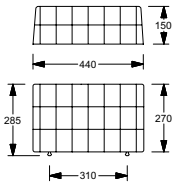


Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
TM92548_*	T16-Lp 8 W	75%	x	x	x

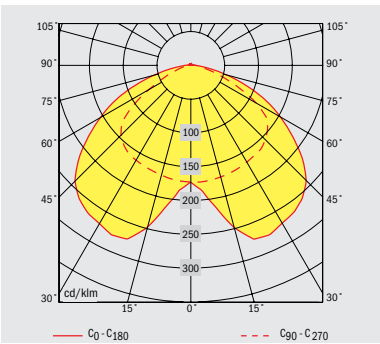
* Order no. with suffix E: E. g. TnnnnE = variant with electronic ballast
Order no. with suffix Ü: E. g. TnnnnÜ = variant with electronic ballast + integrated monitoring module
Order no. with suffix S: E. g. TnnnnS = variant with electronic ballast + integrated monitoring and switching module

Accessories

Protective grill (wall mounting) — Order no. F95032



Lighting data



Mounting height (m)	Luminaire distance (m) for E = 1.25 lx or *E = 0.625 lx*			
	L1	L2	L3	L4
DESIGN				
2,5	4,0 / *5,0*	9,6 / *11,7*	3,6 / *4,5*	8,4 / *9,6*
3,0	4,3 / *5,4*	10,0 / *12,8*	3,8 / *4,9*	8,8 / *10,1*
4,0	4,6 / *6,0*	11,4 / *14,3*	3,7 / *5,4*	9,1 / *11,8*
5,0	4,7 / *6,4*	11,3 / *15,0*	3,3 / *5,4*	9,4 / *13,7*
6,0	4,4 / *6,6*	11,7 / *16,6*	2,3 / *5,3*	10,0 / *14,1*
7,0	- / *6,7*	- / *17,8*	- / *4,7*	- / *13,9*
7,5	- / *6,6*	- / *16,2*	- / *4,4*	- / *12,9*

Exit sign luminaire DISPOS

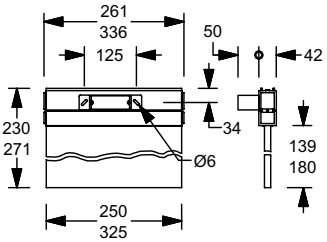
T16-Lp IP20

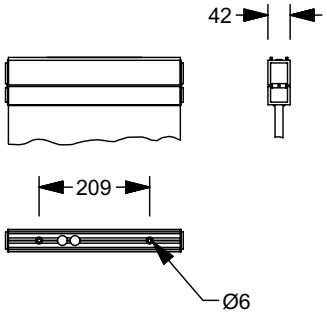
Description Exit sign luminaire in functional design, consisting of segmented sections (surface-mounted design). Choice of single sided (wall mounting) or double sided (recessed ceiling, ceiling, pendant suspended and bracket mounting) exit sign.
Luminaires supplied without exit sign panes and accessories.

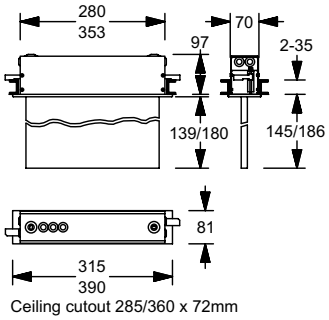
Special features Functional look, display technology, two different visibilities, also available with LED light sources.

Technical data

Mounting: Recessed, ceiling, wall, pendant suspended or bracket mounting
Body: Zinc coated sheet steel/aluminium, white (RAL 9016)
Cover: Steel sheet, white (RAL 9016)
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C







Ceiling cutout 285/360 x 72mm

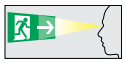
Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
Version for recessed ceiling mounting and double sided exit route sign					
TM92101_*	T16-Lp 6 W	75%	x	x	x
TM92100_*	T16-Lp 8 W	75%	x	x	x
Version for wall mounting and single sided exit route sign					
T92108_*	T16-Lp 6 W	75%	x	x	x
T92110_*	T16-Lp 8 W	75%	x	x	x
Version for recessed ceiling mounting and double sided exit route sign					
T92120_*	T16-Lp 6 W	75%	x	x	x
T92121_*	T16-Lp 8 W	75%	x	x	x
Version for pendant suspended or bracket mounting and double sided exit route sign					
T92109_*	T16-Lp 6 W	75%	x	x	x
T92111_*	T16-Lp 8 W	75%	x	x	x

* Order no. with suffix E: E. g. TnnnnE = variant with electronic ballast
Order no. with suffix Ü: E. g. TnnnnÜ = variant with electronic ballast + integrated monitoring module
Order no. with suffix S: E. g. TnnnnS = variant with electronic ballast + integrated monitoring and switching module

Accessories

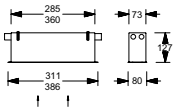
Films/panes

Exit sign panes (please order separately)

	Luminaire T16-Lp 6 W	Luminaire T16-Lp 8 W
	23 m	29 m
	E16260N	E16128N
	E16261N	E16129N
	E16262N	E16130N

General accessories

Concrete box (recessed ceiling mounting)

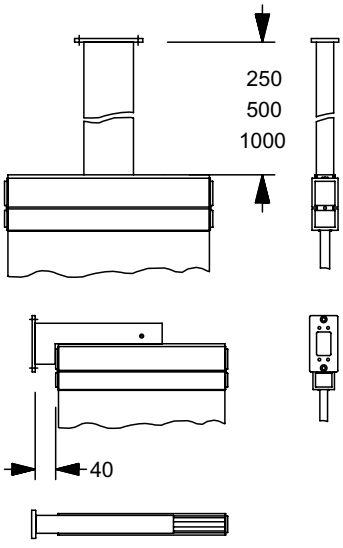


Order no.

Luminaire with T16-Lp 6 W
F95220

Luminaire with T16-Lp 8 W
F95221

Mounting accessories



Pendant	
250 mm	F95600
500 mm	F95601
1000 mm	F95602
Bracket	
Luminaire with T16-Lp 6 W	F95207
Luminaire with T16-Lp 8 W	F95208

Exit sign luminaire DISPOS-LED

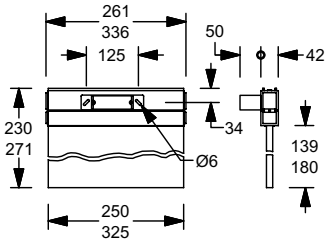
LED IP20

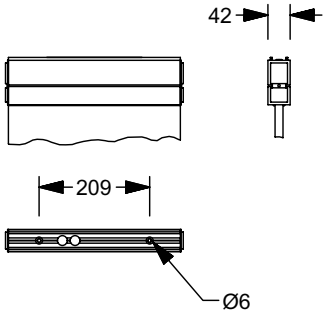
Description Exit sign luminaire in functional design, consisting of segmented sections (surface-mounted design). Choice of single sided (wall mounting) or double sided (recessed ceiling, pendant suspended and bracket mounting) exit route sign.
Luminaires supplied without exit sign panes and accessories.

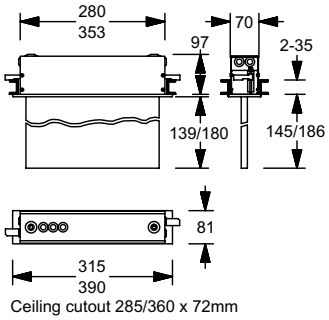
Special features Functional look, display technology, two different visibilities, also available as emergency luminaire with T16-Lp 6 W and 8 W.

Technical data

Mounting: Recessed, wall, ceiling, pendant suspended or bracket mounting
Body: Zinc coated sheet steel/aluminium, white (RAL 9016)
Cover: Steel sheet, white (RAL 9016)
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C







Ceiling cutout 285/360 x 72mm

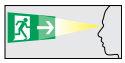
Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
Version for recessed ceiling mounting and double sided exit route sign					
TM92181_*	LED module 3 W	100%	x	x	x
TM92180_*	LED module 5 W	100%	x	x	x
Version for wall mounting and single sided exit route sign					
T92188_*	LED module 3 W	100%	x	x	x
T92190_*	LED module 5 W	100%	x	x	x
Version for recessed ceiling mounting and double sided exit route sign					
T92200_*	LED module 3 W	100%	x	x	x
T92201_*	LED module 5 W	100%	x	x	x
Version for pendant suspended or bracket mounting and double sided exit route sign					
T92189_*	LED module 3 W	100%	x	x	x
T92191_*	LED module 5 W	100%	x	x	x

* Order no. with suffix E: E. g. TnnnnE = variant with electronic ballast
Order no. with suffix Ü: E. g. TnnnnÜ = variant with electronic ballast + integrated monitoring module
Order no. with suffix S: E. g. TnnnnS = variant with electronic ballast + integrated monitoring and switching module

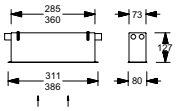
Accessories

Films/panes

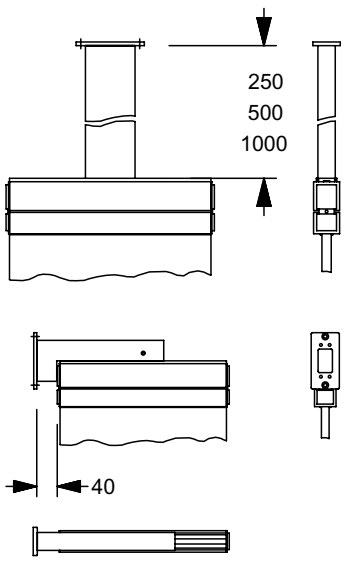
Exit sign panes (please order separately)

	Luminaire with LED module 3 W	Luminaire with LED module 5 W
	23 m	29 m
	E16260N	E16128N
	E16261N	E16129N
	E16262N	E16120N

General accessories

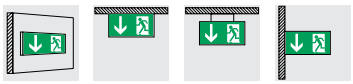
Concrete box (recessed ceiling mounting)	Order no.
	Luminaire with LED module 3 W F95220 Luminaire with LED module 5 W F95221

Mounting accessories



Pendant	
250 mm	F95600
500 mm	F95601
1000 mm	F95602
Bracket	
Luminaire with LED module 3 W	F95207
Luminaire with LED module 5 W	F95208

Exit sign luminaire KUBUS



T16-Lp

IP40

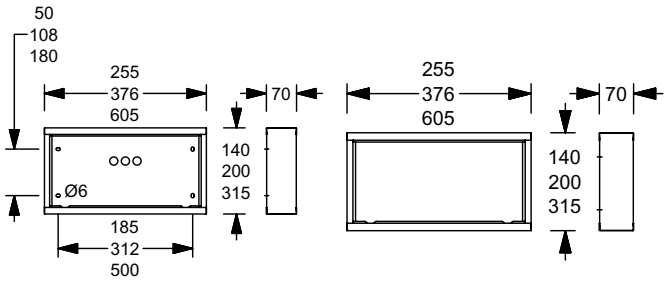
Description Exit sign luminaire, consisting of flat sections with folded corners. Choice of single sided (wall mounting) or double sided (ceiling, pendant suspended and bracket mounting) exit sign.
Luminaires supplied without exit sign panes and accessories.

Special features Functional look, choice of 3 visibility distances, also available as emergency luminaire.

Technical data

Mounting: Wall, ceiling, pendant suspended, suspension, or bracket mounting
Body: Steel sheet, white (RAL 9016)[1)]
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C

1) Design with aluminium body available on request.



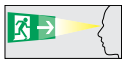
Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
Version for single sided exit sign					
TM92630_*	T16-Lp 6 W	75%	x	x	x
TM92631_*	T16-Lp 8 W	75%	x	x	x
TM92616_*	T16-Lp 13 W	75%	x	x	x
Version for double sided exit sign					
TM92624_*	T16-Lp 6 W	75%	x	x	x
TM92625_*	T16-Lp 8 W	75%	x	x	x
TM92615_*	T16-Lp 13 W	75%	x	x	x

* Order no. with suffix E: E. g. TnnnnE = variant with electronic ballast
Order no. with suffix Ü: E. g. TnnnnÜ = variant with electronic ballast + integrated monitoring module
Order no. with suffix S: E. g. TnnnnS = variant with electronic ballast + integrated monitoring and switching module

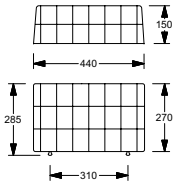
Accessories

Films/panes

Exit sign panes (please order separately)

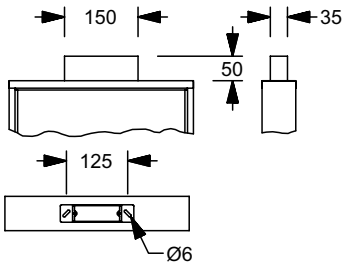
Luminaire with	T16-Lp 6 W	T16-Lp 8 W	T16-Lp 13 W
	23 m	35 m	60 m
	E16604N	E16608N	E16134N
	E16605N	E16609N	E16135N
	E16606N	E16610N	E16136N
Opal pane			
	E16607	E16611	E16234
Pane in body colour			
	E16242	E16241	E16251

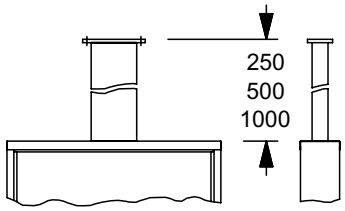
General accessories

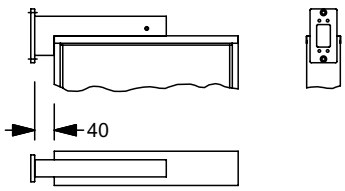
Protective grill (wall mounting)	Order no.
	Luminaire with T26-Lp 8 W
	F95032

Note: Exit sign panes "EXIT straight ahead", "EXIT to the right" and "EXIT to the left" available upon request.

Mounting accessories

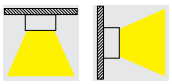






Adapter for ceiling mounting	F95057
Pendant	
250 mm	F95600
500 mm	F95601
1000 mm	F95602
Bracket	
Luminaire with T16-Lp 6 W	F95055
Luminaire with T16-Lp 8 W	F95056
Luminaire with T16-Lp 13 W	F95070

Emergency luminaire KUBUS



T16-Lp IP40

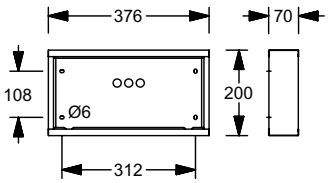
Description Emergency luminaire, consisting of flat sections with folded edges. Light distribution by mirror reflector and cover with longitudinal prisms.

Special features Functional look, also available as exit sign luminaire.

Technical data

Mounting: Wall or ceiling mounted
Body: Steel sheet, white (RAL 9016)[1)]
Cover: Prismatic structured plastic
Reflector: Specular aluminium
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C v

1) Design with aluminium body available on request.

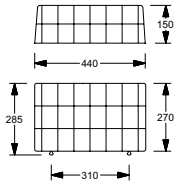


Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
TM92678_*	T16-Lp 8 W	75%	x	x	x

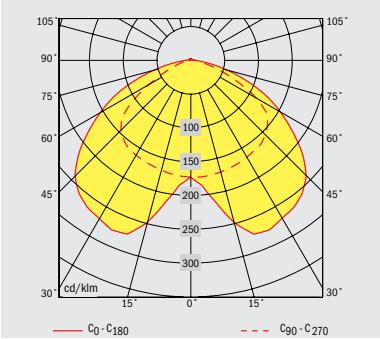
* Order no. with suffix E: E. g. TnnnnE = variant with electronic ballast
Order no. with suffix Ü: E. g. TnnnnÜ = variant with electronic ballast + integrated monitoring module
Order no. with suffix S: E. g. TnnnnS = variant with electronic ballast + integrated monitoring and switching module

Accessories

Protective grill (wall mounting) — Order no. F95032

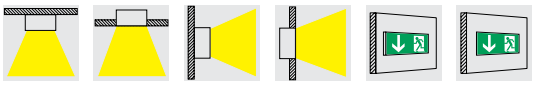


Lighting data



Mounting height (m)	Luminaire distance (m) for E = 1.25 lx or *E = 0.625 lx*			
	L1	L2	L3	L4
KUBUS				
2,5	4,0 / *5,0*	9,6 / *11,7*	3,6 / *4,5*	8,4 / *9,6*
3,0	4,3 / *5,4*	10,0 / *12,8*	3,8 / *4,9*	8,8 / *10,1*
4,0	4,6 / *6,0*	11,4 / *14,3*	3,7 / *5,4*	9,1 / *11,8*
5,0	4,7 / *6,4*	11,3 / *15,0*	3,3 / *5,4*	9,4 / *13,7*
6,0	4,4 / *6,6*	11,7 / *16,6*	2,3 / *5,3*	10,0 / *14,1*
7,0	- / *6,7*	- / *17,8*	- / *4,7*	- / *13,9*
7,5	- / *6,6*	- / *16,2*	- / *4,4*	- / *12,9*

Exit sign and emergency luminaire LOGICA



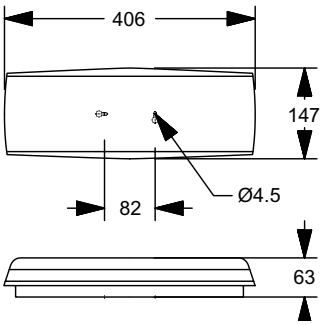
T16-Lp IP65

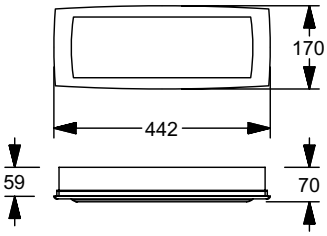
Description Exit sign and emergency luminaire in a functional style, consisting of a body with convex contours and a flat transparent cover. Light distribution by mirror reflector from aluminised plastic with complex shape. Single sided exit route sign (recessed wall and wall mounting). Luminaires supplied with three exit sign films and recess box.

Special features Functional look, wide beam light distribution, high light output ratio, suited for an exit route signalling or exit route lighting, choice of surface or recessed mounting, surface mounting via quickfix adapter with integrated bubble level

Technical data

Mounting: Recessed wall and wall mounting, recessed ceiling and ceiling mounting
Body, cover, reflector: Polycarbonate
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C



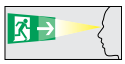


Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
TB16400	T16-Lp 8 W	75%	x		
TB16402	T16-Lp 8 W	75%		x	
TB16401	T16-Lp 8 W	75%			x

Accessories

Films/panes

Exit sign panes (included)



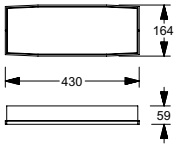
24 m

FB16909
(set with all 3 films)

General accessories

Recess box

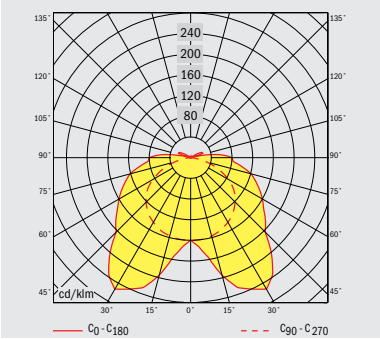
(Included in delivery).



Order no.

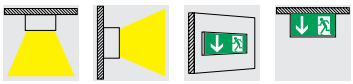
FB12198

Lighting data



Mounting height (m)	Luminaire distance (m) for E = 1.25 lx or *E = 0.625 lx*			
	L1	L2	L3	L4
LOGICA				
2,5	4,0 / *5,2*	9,4 / *12,5*	3,2 / *4,1*	7,6 / *9,5*
3,0	4,1 / *5,5*	10,2 / *13,8*	3,3 / *4,4*	8,4 / *11,0*
4,0	4,3 / *5,9*	10,3 / *15,1*	3,2 / *4,7*	8,7/ *11,6*
5,0	4,4 / *6,1*	11,1 / *14,8*	2,8 / *4,7*	8,8 / *11,5*
6,0	4,4 / *6,1*	11,7 / *16,7*	1,7/ *4,5*	6,7 / *11,8*
7,0	- / *6,3*	- / *15,0*	- /4,1	- / *12,7*
7,5	- / *6,4*	- / *17,0*	- / *3,7*	- / *12,0*

Exit sign and emergency luminaire AESTETICA



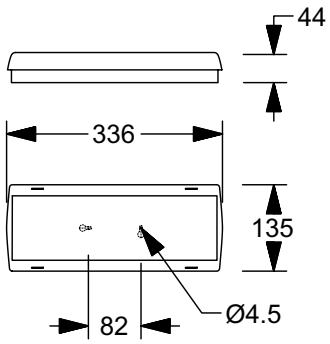
T16-Lp IP40

Description Exit sign and emergency luminaire in stylish style, consisting of a concave body with formally integrated oval diffuser. Light distribution by reflector with optimised shape. Single sided exit route sign (wall-mounted). Luminaire supplied with three exit sign films.

Special features Architectural appearance, extremely sleek design, high light output ratio, suited for exit route signalling or exit route lighting.

Technical data

Mounting: Wall or ceiling mounted
Body: Light grey polycarbonate
Cover: Transparent polycarbonate
Reflector: White polycarbonate
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C

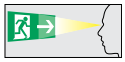


Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
TB16203	T16-Lp 8 W	75%	x		
TB16205	T16-Lp 8 W	75%		x	
TB16204	T16-Lp 8 W	75%			x

Accessories

Films/panes

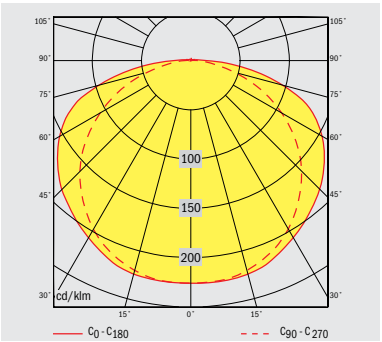
Exit sign panes (included)



23 m

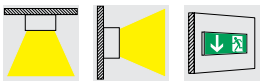
FB16906
(set with all 3 films)

Lighting data



Mounting height (m)	Luminaire distance (m) for E = 1.25 lx or *E = 0.625 lx*			
	L1	L2	L3	L4
AESTETICA				
2,5	4,0/ *5,1*	9,4 / *12,9*	3,5 / *4,5*	8,7 / *10,7*
3,0	4,1 / *5,4*	10,4 / *12,8*	3,7 / *4,8*	9,1 / *11,4*
4,0	4,1 / *5,8*	10,4 / *15,1*	3,8 / *5,2*	9,1 / *12,3*
5,0	3,9 / *5,9*	11,6 / *14,9*	3,6 / *5,4*	10 / *13,9*
6,0	3,3 / *5,8*	10,7 / *15,5*	3,2 / *5,4*	10,1 / *14,9*
7,0	2,3 / *5,6*	10,6 / *16,4*	*2,2 / 5,2*	8,6 / *14,2*
7,5	1,2 / *5,4*	10,2 / *15,2*	1,1 / *5,1*	9,9 / *15,1*

Exit sign and emergency luminaire PRATICA TUTTOVETRO

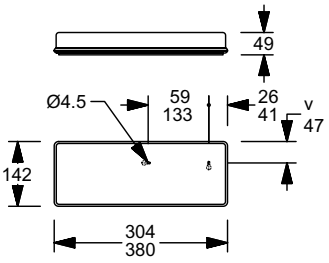


T16-Lp IP40 IP65

Description Exit sign and emergency luminaire in an industrial style, consisting of a flat body and a rectangular transparent cover. Light distribution by white reflector. Single sided exit route sign (wall mounting). Luminaire supplied with three exit sign films.

Special features Industrial look, improved degree of protection to IP65 by auxiliary box. Suited for exit route signalling or exit route lighting. Quick fix adapter for IP40 version.

Technical data
Mounting: Wall or ceiling mounted
Body: ABS-plastic
Cover: Polycarbonate
Reflector: Polycarbonate
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C

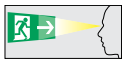


Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
TB16000	T16-Lp 6 W	75%	x		
TB16002	T16-Lp 6 W	75%		x	
TB16001	T16-Lp 6 W	75%			x
TB16003	T16-Lp 8 W	75%	x		
TB16005	T16-Lp 8 W	75%		x	
TB16004	T16-Lp 8 W	75%			x

Accessories

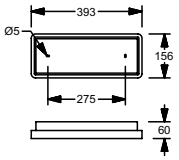
Films/panes

Exit sign panes (please order separately)

	Luminaire T16-Lp 6 W	Luminaire T16-Lp 8 W
	24 m	24 m
	FB16900 (set with all 3 films)	FB16901 (set with all 3 films)
		
		

General accessories

IP-65 auxiliary box



Order no.

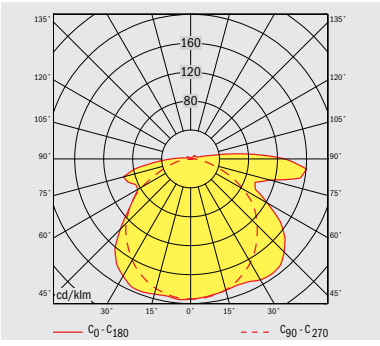
Luminaire with T16-Lp 6 W

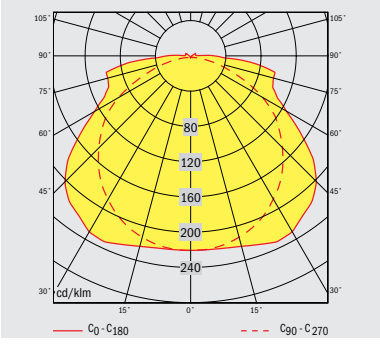
FB2733

Luminaire with T16-Lp 8 W

FB2734

Lighting data





Mounting height (m)	Luminaire distance (m) for E = 1.25 lx or *E = 0.625 lx*			
	L1	L2	L3	L4
PRATICA TUTTOVETRO 6W				
2,5	3,1 / *4,0*	7,3 / *8,5*	2,6/ *3,5*	6,4 / *8,3*
3,0	3,2 / *4,3*	7,2 / *9,4*	2,7 / *3,7*	6,4 / *8,5*
4,0	2,9 / *4,5*	7,6/ *10,0*	2,4 / *3,8*	6,4 / *10,0*
5,0	1,6 / *4,4*	7,5 / *11,4*	1,6 / *3,7*	6,7 / *10,4*
6,0	- / *3,9*	- / *10,8*	- / *3,3*	- / *10,6*
7,0	- / *2,5*	- / *10,7*	- / *2,4*	- / *9,1*
7,5	- / *1,6*	- / *11,5*	- / *1,6*	- / *9,3*
PRATICA TUTTOVETRO 8W				
2,5	3,8 / *4,7*	9,1 / *11,5*	3,4 / *4,3*	8,6 / *10,5*
3,0	4,0 / *5,1*	9,8 / *12,00*	3,6 / *4,7*	8,5 / *10,7*
4,0	4,3 / *5,6*	10,6 / *13,9*	3,7 / *5,0*	9,3 / *12,0*
5,0	4,2 / *6,0*	11,1 / *14,1*	3,5 / *5,2*	9,3 / *13,4*
6,0	3,7 / *6,1*	11,6 / *15,7*	3,0 / *5,2*	9,9 / *13,3*
7,0	2,5 / *6,0*	11,1 / *15,3*	2,0 / *5,0*	9,3 / *14,6*
7,5	0,8 / *5,8*	10,5 / *15,6*	0,7 / *4,9*	9,5 / *12,6*

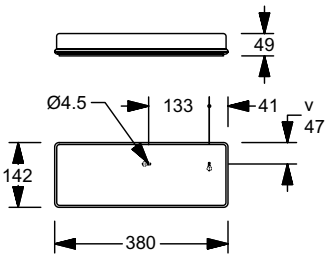
Exit sign luminaire TUTTOVETRO BANDIERA

T16-Lp IP40 IP65

Description Exit sign luminaire in industrial style, consisting of a flat body and a tapered opal cover. Double sided exit route sign (ceiling, wire suspended and bracket mounting). Luminaire supplied with three exit sign films, adapter for wire suspended mounting and bracket, as well as an IP65 auxiliary box.

Special features Industrial look, improved degree of protection to IP65 by auxiliary box. Quick fix adapter for IP40 version.

Technical data
Mounting: Ceiling, pendant suspended or bracket mounting
Body: ABS-plastic
Cover: White acrylic
Reflector: Polycarbonate
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C

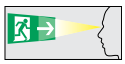


Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
TB16006	T16-Lp 8 W	75%	x		
TB16008	T16-Lp 8 W	75%		x	
TB16007	T16-Lp 8 W	75%			x

Accessories

Films/panes

Exit sign films (included)



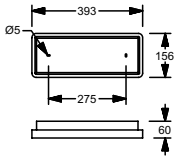
24 m

FB16902
(set with all 3 films)

General accessories

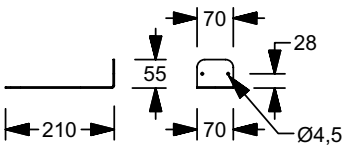
IP-65 auxiliary box
(Included in delivery).

Order no.



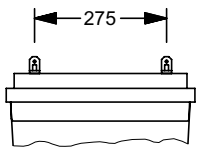
FB2734

Mounting accessories



Bracket

FB3722 (included in delivery)



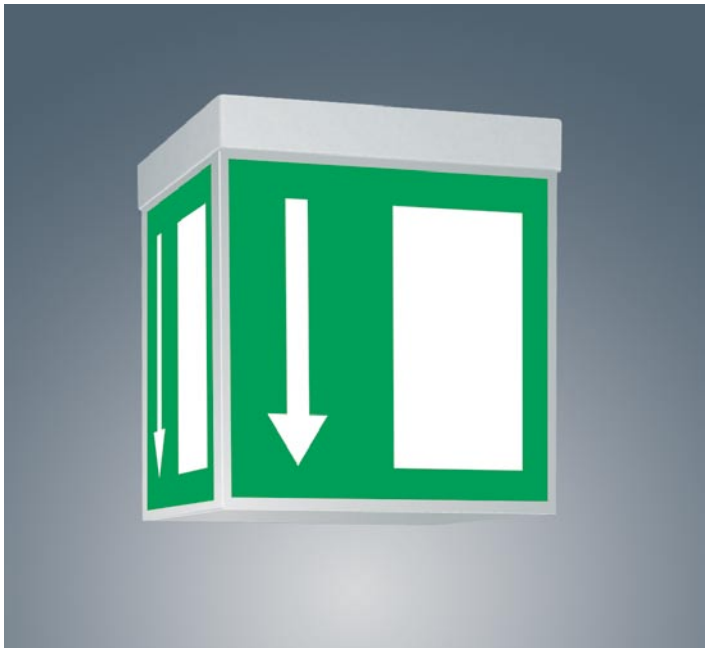
Adapter for wire suspended mounting

FB3723 (included in delivery)

Exit sign luminaire QUADER

TC-SEL-Lp

IP42

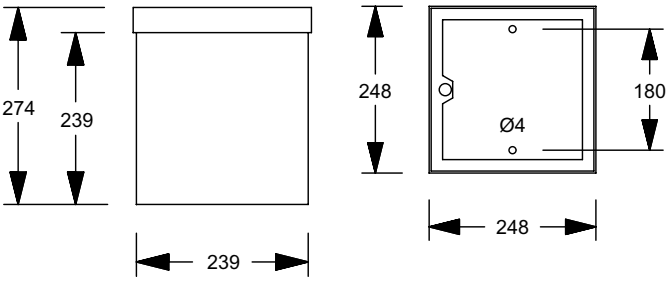


Description Exit sign luminaire consisting of a square base and a cuboid transparent diffuser. Three sided exit route sign (ceiling-mounted). Luminaire supplied with three exit sign films.

Special features three sided exit route sign for large sized areas

Technical data

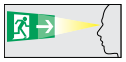
Mounting: Ceiling or pendant suspended mounting
Body: Polypropylene
Cover: Opal acrylate
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C



Accessories

Films/panes

Exit sign films (included)


44 m


F15330


F15331


F15332

Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
T92480_*	TC-SEL-Lp 9 W	75%	x	x	x

* Order no. with suffix E: E. g. TnnnnE = variant with electronic ballast
Order no. with suffix Ü: E. g. TnnnnÜ = variant with electronic ballast + integrated monitoring module
Order no. with suffix S: E. g. TnnnnS = variant with electronic ballast + integrated monitoring and switching module

T16-Lp

IP54

Description Emergency luminaire, consisting of recess box and cover with asymmetric shutter blade apertures.

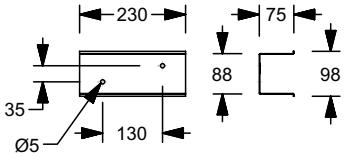
Special features Staircase lighting.

Technical data

Mounting: Recessed wall mounting
Body: Die cast aluminium, white
Cover: Die cast aluminium, black
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C

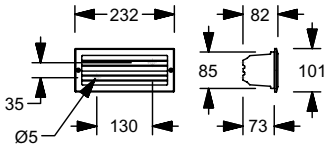
General accessories

Recess box (recessed wall mounting) Order no.



E25582

Cutout dimensions: 230 x 90mm



Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
T92003_*	T16-Lp 4 W	75%	x	x	x

* Order no. with suffix E: E. g. TnnnnE = variant with electronic ballast
Order no. with suffix Ü: E. g. TnnnnÜ = variant with electronic ballast + integrated monitoring module
Order no. with suffix S: E. g. TnnnnS = variant with electronic ballast + integrated monitoring and switching module

Emergency luminaire PYLON

TC-DEL-LP

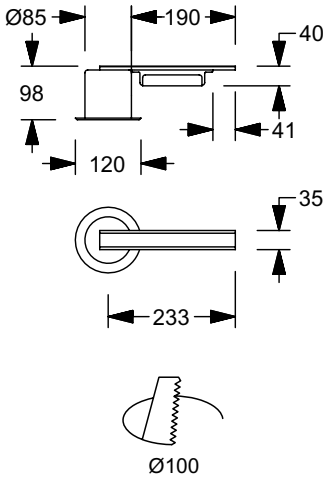
IP20

Description Emergency luminaire, consisting of recess box and flat round cover. Bare lamp with white reflector.

Special features Omni-directional exit route lighting

Technical data

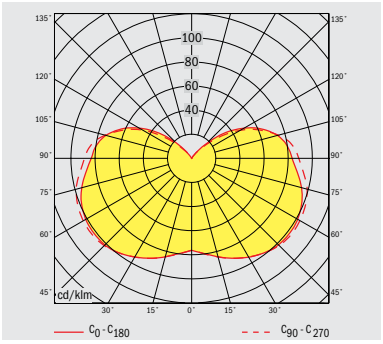
Mounting: Recessed ceiling mounting
Body: Steel sheet
Cover: Die cast aluminium, white
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C

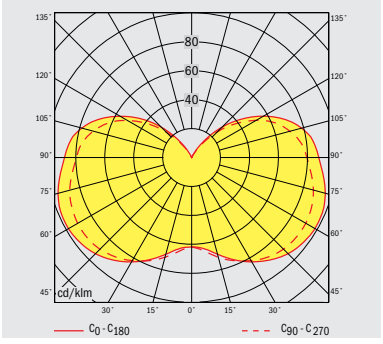


Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
T92141_*	TC-DEL-Lp 10 W or 13 W	75%	x	x	x

* Order no. with suffix E: E. g. TnnnnE = variant with electronic ballast
Order no. with suffix Ü: E. g. TnnnnÜ = variant with electronic ballast + integrated monitoring module
Order no. with suffix S: E. g. TnnnnS = variant with electronic ballast + integrated monitoring and switching module

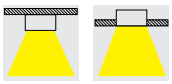
Lighting data





Mounting height (m)	Luminaire distance (m) for E = 1.25 lx or *E = 0.625 lx*			
	L1	L2	L3	L4
PYLON 10W				
2,5	3,7/ *5,0*	9,3 / *12,4*	3,7/ *5,0*	9,7 / *12,0*
3,0	3,7 / *5,1*	9,8 / *12,7*	3,7 / *5,2*	9,9 / *12,5*
4,0	3,3 / *5,3*	10,2 / *14,2*	3,3 / *5,3*	10,4 / *14,4*
5,0	2,0 / *5,0*	9,7 / *14,5*	2,0 / *5,1*	9,1 / *14,8*
6,0	- / *4,5*	- / *14,4*	- / *4,5*	- / *14,3*
7,0	- / *3,1*	- / *12,9*	- / *3,2*	- / *12,9*
7,5	- / -	- / -	- / -	- / -
PYLON 13W				
2,5	4,3 / *5,8*	10,8 / *13,8*	4,2/ *5,6*	10,2 / *13,5*
3,0	4,4 / *6,0*	11,7 / *15,2*	4,3/ *5,8*	11,3 / *14,7*
4,0	4,2 / *6,3*	12,1 / *16,3*	4,1 / *6,0*	11,7 / *15,8*
5,0	3,5 / *6,2*	11,1 / *15,5*	3,4/ *6,0*	11,8 / *15,1*
6,0	- / *5,9*	- / *17,7*	- / *5,7*	- / *15,0*
7,0	- / *5,2*	- / *17,4*	- / *5,0*	- / *16,6*
7,5	- / *4,5*	- / *16,7*	- / *4,4*	-/ *15,0*

Emergency luminaire CRATER



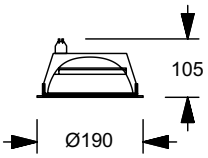
TC-DEL-LP IP20

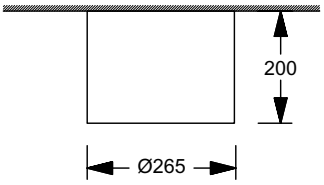
Description Emergency luminaire in functional style, consisting of a round recessed or surface mounted box and specular aluminium reflector. Horizontal lamp orientation.

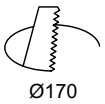
Special features Functional look, emergency luminaires also available as general lighting luminaires.

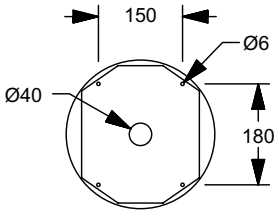
Technical data

Mounting: Recessed ceiling or ceiling mounting
Body: Steel sheet, white (RAL 9003)
Reflector: Specular aluminium
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C





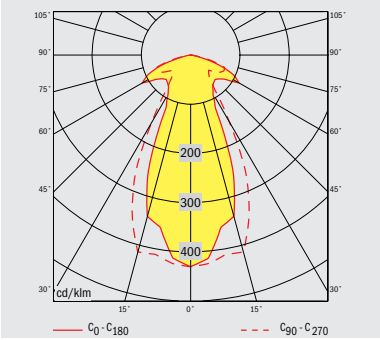




Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
Version for recessed mounting					
T92078_	TC-DEL-Lp 13 W	75%	x	x	x
Version for surface mounting					
T92079_	TC-DEL-Lp 13 W	75%	x	x	x

* Order no. with suffix E: E. g. TnnnnE = variant with electronic ballast
Order no. with suffix Ü: E. g. TnnnnÜ = variant with electronic ballast + integrated monitoring module
Order no. with suffix S: E. g. TnnnnS = variant with electronic ballast + integrated monitoring and switching module

Lighting data



Mounting height (m)	Luminaire distance (m) for E = 1.25 lx or *E = 0.625 lx*			
	L1	L2	L3	L4
CRATER DE				
2,5	4,6/ *5,6*	10,5 / *12,7*	3,3/ *5,2*	10,1 / *13,4*
3,0	4,0 / *6,1*	12,0 / *14,5*	3,0 / *5,3*	9,7 / *14,2*
4,0	3,5 / *6,7*	11,7 / *16,3*	3,2 / *4,3*	8,1 / *12,0*
5,0	3,2 / *5,2*	8,7 / *16,5*	3,4 / *4,4*	8,2 / *12,1*
6,0	3,0 / *4,9*	9,7 / *14,8*	3,8 / *4,5*	8,4 / *11,4*
7,0	3,2 / *4,7*	8,4 / *14,0*	4,1 / *4,9*	9,5 / *12,0*
7,5	3,3 / *4,6*	8,7 / *13,5*	4,2 / *5,0*	9,5 / *12,4*
CRATER DA				
2,5	4,3 / *5,8*	10,8 / *13,8*	4,2/ *5,6*	10,2 / *13,5*
3,0	4,4 / *6,0*	11,7 / *15,2*	4,3/ *5,8*	11,3 / *14,7*
4,0	4,2 / *6,3*	12,1 / *16,3*	4,1 / *6,0*	11,7 / *15,8*
5,0	3,5 / *6,2*	11,1 / *15,5*	3,4/ *6,0*	11,8 / *15,1*
6,0	- / *5,9*	- / *17,7*	- / *5,7*	- / *15,0*
7,0	- / *5,2*	- / *17,4*	- / *5,0*	- / *16,6*
7,5	- / *4,5*	- / *16,7*	- / *4,4*	-/ *15,0*

Emergency luminaire LEADER

T26-Lp

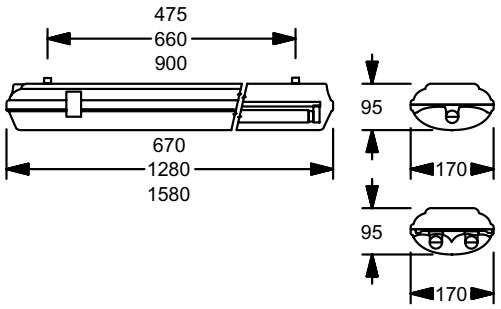
IP66

Description Emergency luminaire in industrial style, consisting of an oval body and cover. Cover transparent with longitudinal and lateral prisms. Light distribution by specular reflector from aluminised plastic with complex shape.

Special features Industrial look, optimal light distribution, high light output ratio, emergency luminaires also available for general lighting. Twin lamp fittings with one lamp operating in emergency mode are available on request.

Technical data

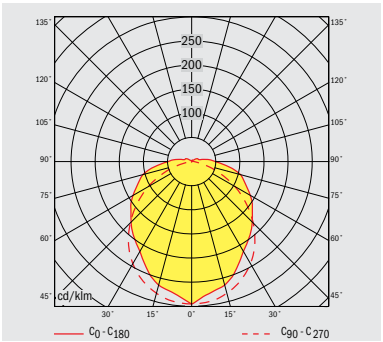
Mounting: Ceiling mounting
Body: Polycarbonate
Cover: Polycarbonate
Reflector: Polycarbonate
Mains supply: 198 V - 254 V/50 Hz
Battery supply: 176 V - 254 V
Ambient temperature: -10 to +40°C

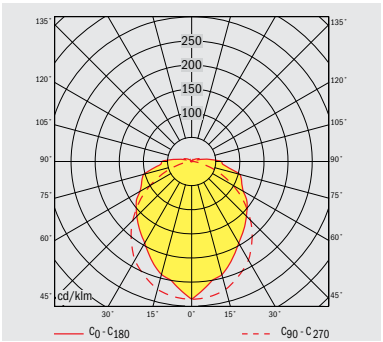


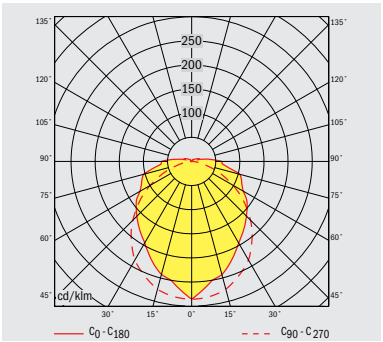
Order no.	Lamp	Ballast lumen factor (BLF)	EVG	EVG+KCE	EVG+SLEB
T92071_	T16-Lp 18 W	100%	x	x	x
T92072_	T16-Lp 36 W	100%	x	x	x
T92073_	T16-Lp 58 W	100%	x	x	x

* Order no. with suffix E: E. g. TnnnnE = variant with electronic ballast
Order no. with suffix Ü: E. g. TnnnnÜ = variant with electronic ballast + integrated monitoring module
Order no. with suffix S: E. g. TnnnnS = variant with electronic ballast + integrated monitoring and switching module

Lighting data







Mounting height (m)	Luminaire distance (m) for E = 1.25 lx or *E = 0.625 lx*			
	L1	L2	L3	L4
LEADER 18W				
2,5	6,2 / *7,9*	15,5 / *19,7*	5,2 / *6,2*	12,3 / *14,3*
3,0	6,6 / *8,4*	15,6 / *20,9*	5,7 / *6,8*	13,2 / *15,8*
4,0	7,2 / *9,2*	18,2 / *23,2*	6,5 / *7,9*	14,8 / *18,1*
5,0	7,7 / *9,9*	19,3 / *23,7*	7,1 / *8,8*	16,7 / *20,1*
6,0	7,9 / *10,5*	20,0 / *24,3*	7,6 / *9,6*	18,5 / *21,8*
7,0	8,0 / *10,9*	21,2 / *25,3*	7,9 / *10,1*	18,3 / *23,5*
7,5	8,0 / *11,1*	21,7 / *26,0*	8,0 / *10,4*	19,2 / *24,6*
10,0	7,8 / *11,4*	21,8 / *30,3*	8,1 / *11,3*	22,3 / *26,2*
LEADER 36W				
2,5	8,4 / *10,4*	19,7 / *25,1*	6,5 / *7,7*	14,8 / *17,9*
3,0	8,9 / *11,3*	21,5 / *25,9*	7,2 / *8,5*	16,3 / *18,9*
4,0	9,6 / *12,4*	23,7 / *30,4*	8,3 / *9,9*	19,6 / *22,8*
5,0	10,2 / *13,3*	25,8 / *31,8*	9,2 / *11,1*	20,5 / *25,8*
6,0	10,7 / *14,0*	26,4 / *33,3*	10,0 / *12,1*	22,5 / *28,9*
7,0	11,2 / *14,5*	26,2 / *36,3*	10,6 / *13,0*	24,7 / *30,9*
7,5	11,4 / *14,8*	27,6 / *37,0*	10,9 / *13,5*	25,5 / *30,9*
10,0	12,0 / *16,0*	28,2 / *37,5*	11,9 / *15,2*	29,8 / *35,4*
LEADER 58W				
2,5	9,2 / *11,2*	20,8 / *27,6*	7,0 / *8,2*	15,4 / *18,9*
3,0	9,9 / *12,2*	23,2 / *28,0*	7,7 / *9,1*	17,4 / *21,0*
4,0	11,1 / *13,8*	27,0 / *32,0*	9,0 / *10,7*	20,6 / *23,8*
5,0	12,0 / *15,1*	30,0 / *35,7*	10,0 / *12,0*	23,0 / *27,6*
6,0	12,6 / *16,2*	30,0 / *39,7*	10,8 / *13,2*	25,1 / *30,5*
7,0	13,0 / *17,0*	32,7 / *42,0*	11,6 / *14,2*	28,2 / *33,7*
7,5	13,2 / *17,3*	33,5 / *46,3*	11,9 / *14,6*	27,6 / *34,0*
10,0	14,0 / *18,6*	36,0 / *46,8*	13,2 / *16,5*	32,7 / *40,3*

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 *Super*LOGICA 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 12 (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

NGBVE-K 24/3/_/1

NGBVE-K 24/3/_/2

Compact emergency lighting system NGBVE-K

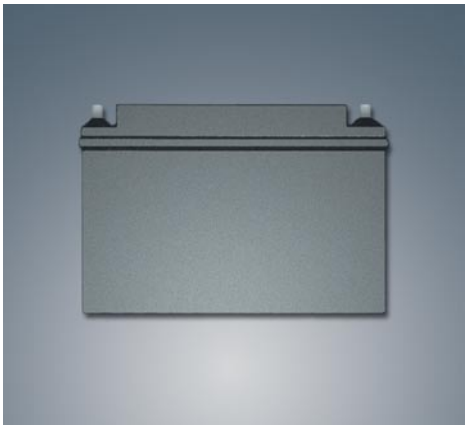
Compact emergency lighting system NGBVE-K acc. to EN 50171 with:

- 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

Dimensions see page 113
KOMBI CONTROL monitoring and control unit:
Details see page 58

Technical data

Mains supply:	Single phase 50 / 60 Hz
	U : 230 V (+6% / -10)
	Three phase 50 / 60 Hz
	U : 400 V (+6% / -10)
Fuse:	20 A, 3-pole
Terminals:	6 mm²
Battery supply:	U= 24 V
Fuse:	max. 50 A, 2-pole
Cable entry:	from top
Cabinet:	Steel sheet, grey
Mounting:	Wall mounting
Degree of protection:	IP54 / IP32
Electrical class:	I
Rated ambient temperature:	
Electronics	-5°C to +35°C
Battery	20°C



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

Operation and monitoring modules for NGBVE-K

Operation and monitoring module AK 4 x 12 EÜ

Modules for 4 luminaire circuits to operate 4 x 12 (20) 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 345 W
Inrush current load:	4 x 27,500 W [1]
Design:	19" rack insert (1 rack compartment)
Type:	AK 4 x 12 EÜ
Order no.:	G32824

Operation and monitoring module AK 4 x 12 SÜ

Modules for 4 luminaire circuits to operate 4 x 12 (20) 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 345 W
Inrush current load:	4 x 27,500 W [1]
Design:	19" rack insert (1 rack compartment)
Type:	AK 4 x 12 SÜ
Order no.:	G32820

1) Max. power for 1 ms

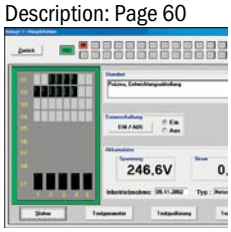
Components for NGBVE-K

For specifiation details of the components see pages indicated.

Description: Page 59

Signalling and switching module MSM
Order no.: G31015

Description: Page 60



Monitoring software MULTI CONTROL
Order no.: SW0030

Description: Page 61

RS232 interface RS232-NGZ
Order no.: G31208

Remote data transmission interface DFÜ-NGZ
Order no.: F90223

TCP/IP interface TCP/IP-NGZ
Order no.: G31209

Description: Page 62

Mains monitoring module DS 3 UV
Order no.: G31020A

Description: Page 66

Monitoring and switching module SLEB
Order no.: G31371

SLEB-DALI
Order no.: G31372

Electronic ballast with integrated monitoring and switching module ECSL
Order no.: G31373

Description: Page 67

Monitoring module KCE
Order no.: G31017

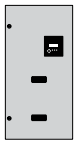
Electronic ballast with integrated monitoring module ECKC
Order no.: G31375

Description: Page 68

Electronic ballast EC
Order no.: G31377

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	max. 24 Ah	max. 24 Ah	max 65 Ah	max 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 MULTI CONTROL	optional	optional	optional	optional
RS232 interface RS232-NGZ	Choice of 1 only	Choice of 1 only	Choice of 1 only	Choice of 1 only
Remote data transmission interface DFÜ-NGZ				
TCP/IP interface TCP/IP-NGZ				
Mains monitoring module DS 3 UV	optional	optional	optional	optional
Mains switch/contactor dependent control module LSSA 230	integrated (4)	integrated (4)	integrated (4)	integrated (4)
Mains switch/contactor dependent 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

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
Operating duration

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 10 W power consumption for every transformer.

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

NEA emergency lighting systems NZBVA-NEA and NZBVE-NEA control and monitor emergency lighting installations with external power supply units (diesel generators or dual mains). All exit sign and emergency luminaires are permanently supplied from another general mains supply or standby mains. In the case of incidents or failures, the NEA switches automatically to the emergency supply. Luminaire testing is executed in the AC mode without additional battery.

Central station NZBVA-NEA

Sub-station

Central station NZBVE-NEA

Sub-station

Special features:

- 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 on in the case of partial mains incidents/failures via external mains monitoring modules
- 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
- Automatic allocation of the required circuits and detection of luminaires
- Individual monitoring of 12 (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
  - Fluorescent tubes with magnetic ballast
    (only for systems without short term battery supply)

Central station for NZBVA-NEA

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

- Control and monitoring system KOMBI CONTROL
- Integrated emergency supply (battery and charging unit) to supply the KOMBI CONTROL unit
- Switching device to non-maintained mode
- Control input for external mains monitoring devices
- 3, 11, 19, or 27 rack compartments for operation and monitoring modules

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

Dimensions see page 122

Technical data

Mains supply:	Single phase 50/60 Hz U : 230 V (+6%/-10) Three phase 50/60 Hz U : 400 V (+6%/-10)
Fuse:	max. 100A, 3-pole fitted with 25A
Terminals:	35mm²
Cable entry:	from bottom
Cabinet:	Steel sheet, grey
Mounting:	Standing
Degree of protection:	IP54
Electrical class:	I
Rated ambient temperature:	-5°C to +35°C

Central station for NZBVE-NEA

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

- Control and monitoring system KOMBI CONTROL
- Integrated emergency supply (battery and charging unit) to supply the KOMBI CONTROL unit
- Switching device to non-maintained mode
- Control input for external mains monitoring devices
- 3 or 11 rack compartments for operation and monitoring modules (wall-mounted)
- 3, 11, 19, or 27 rack compartments for operation and monitoring modules (floor standing)

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

Dimensions see page 122

Technical data

Mains supply:	Single phase 50/60 Hz U : 230 V (+6%/-10) Three phase 50/60 Hz U : 400 V (+6%/-10)
Fuse:	max. 100A, 3-pole fitted with 25A
Terminals:	35mm²
Battery supply:	U= 216 V
Fuse:	max. 100A, 2-pole fitted with 25A
Terminals:	35 mm²
Cable entry:	from bottom (floor standing) or top (wall-mounted)
Cabinet:	Steel sheet, grey
Mounting:	Standing
Degree of protection:	IP21
Electrical class:	I
Rated ambient temperature:	-5°C to +35°C

Sub-station for NZBVA-NEA (floor standing)

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

- Control and monitoring system KOMBI CONTROL
- Integrated emergency supply (battery and charging unit) to supply the KOMBI CONTROL unit
- Switching device to non-maintained mode
- Control input for external mains monitoring devices
- 3, 11, 19, or 27 rack compartments for operation and monitoring modules

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

Dimensions see page 123

Technical data

Terminals:	
- Mains:	35mm² for through wiring
Cable entry:	from bottom
Cabinet:	Steel sheet, grey
Mounting:	Standing
Degree of protection:	IP54
Electrical class:	I
Rated ambient temperature:	-5°C to +35°C

Sub-station for NZBVE-NEA (floor standing)

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

- Control and monitoring system KOMBI CONTROL
- Integrated emergency supply (battery and charging unit) to supply the KOMBI CONTROL unit
- Switching device to non-maintained mode
- Control input for external mains monitoring devices
- 3, 11, 19, or 27 rack compartments for operation and monitoring modules

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

Dimensions see page 123

Technical data

Terminals:	
- Mains:	35mm² for through wiring
Cable entry:	from bottom
Cabinet:	Steel sheet, grey
Mounting:	Standing
Degree of protection:	IP54
Electrical class:	I
Rated ambient temperature:	-5°C to +35°C

Sub-station for NZBVA-NEA and NZBVE-NEA (wall mounting)

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

- Control and monitoring system KOMBI CONTROL
- Integrated emergency supply (battery and charging unit) to supply the KOMBI CONTROL unit
- Switching device to non-maintained mode
- Control input for external mains monitoring devices
- 3 or 11 rack compartments for operation and monitoring modules

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

Dimensions see page 123

Technical data

Terminals:	
- Mains:	35mm² for through wiring
Cable entry:	
from top via cable entry plate	
Body:	Steel sheet, grey
Mounting:	Surface mounting
Degree of protection:	IP54
Electrical class:	I
Rated ambient temperature:	-5°C to +35°C

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

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

- Control and monitoring system KOMBI CONTROL
- Integrated emergency supply (battery and charging unit) to supply the KOMBI CONTROL unit
- Switching device to non-maintained mode
- Control input for external mains monitoring devices
- 3 or 11 rack compartments for operation and monitoring modules

Cabinet with maintaining fire protection of 30 minutes following DIN 4102-12 with lockable door. Modules for 19" rack technology.

Dimensions see page 123

Technical data

Terminals:	
- Mains:	35mm² for through wiring
Cable entry: From top via a fitted cable entry piece to which a fire protected cable duct can be tight connected.[1)]	
Body:	Highly compressed fire protection panels
Surface coating:	Sprela, grey (similar to RAL 7035)
Mounting:	Wall mounting
Degree of protection:	IP54
Electrical class:	I
Rated ambient temperature:	-5°C to +35°C

1) Cable duct or sealing of cable entry provided by others.

Operation and monitoring modules for NZBVA-NEA and NZBVE-NEA

Operation and monitoring module AK 1 x 12 EÜ-NEA

Modules for one luminaire circuit to operate 1 x 12 (20) luminaires with:

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

Monitoring:

- Individual monitoring with selective irregularity report

Technical data:

Maximum load:	1 x 1380 W
Output:	AC
Inrush current load:	1 x 42 500 W [1)]
Design:	19" rack insert (1 rack compartment)
Type:	AK 1 x 12 EÜ-NEA
Order no.:	Y32754

Operation and monitoring module AK 2 x 12 EÜ-NEA

Modules for 2 luminaire circuits to operate 2 x 12 (20) luminaires with:

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

Monitoring:

- Individual monitoring with selective irregularity report

Technical data:

Maximum load:	2 x 690 W
Output:	AC
Inrush current load:	2 x 35,000 W [1)]
Design:	19" rack insert (1 rack compartment)
Type:	AK 2 x 12 EÜ-NEA
Order no.:	Y32818

Operation and monitoring module AK 4 x 12 EÜ-NEA

Modules for 4 luminaire circuits to operate 4 x 12 (20) luminaires with:

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

Monitoring:

- Individual monitoring with selective irregularity report

Technical data:

Maximum load:	4 x 345 W
Output:	AC
Inrush current load:	4 x 27,500 W [1)]
Design:	19" rack insert (1 rack compartment)
Type:	AK 4 x 12 EÜ-NEA
Order no.:	Y32824

1) Max. power for 1 ms.

Operation and monitoring modules for NZBVA-NEA and NZBVE-NEA

Operation and monitoring module AK 1 x 12 SÜ-NEA

Modules for one luminaire circuit to operate 1 x 12 (20) luminaires with:

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

Monitoring:

- Individual monitoring without selective irregularity report

Technical data:

Maximum load:	1 x 1380 W
Output:	AC
Inrush current load:	1 x 42 500 W [1]
Design:	19" rack insert (1 rack compartment)
Type:	AK 1 x 12 SÜ-NEA
Order no.:	Y32797

Operation and monitoring module AK 2 x 12 SÜ-NEA

Modules for 2 luminaire circuits to operate 2 x 12 (20) luminaires with:

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

Monitoring:

- Individual monitoring without selective irregularity report

Technical data:

Maximum load:	2 x 690 W
Output:	AC
Inrush current load:	2 x 35 000 W [1]
Design:	19" rack insert (1 rack compartment)
Type:	AK 2 x 12 SÜ-NEA
Order no.:	Y32815

Operation and monitoring module AK 4 x 12 SÜ-NEA

Modules for 4 luminaire circuits to operate 4 x 12 (20) luminaires with:

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

Monitoring:

- Individual monitoring without selective irregularity report

Technical data:

Maximum load:	4 x 345 W
Output:	AC
Inrush current load:	4 x 27,500 W [1]
Design:	19" rack insert (1 rack compartment)
Type:	AK 4 x 12 SÜ-NEA
Order no.:	Y32820

1) Max. power for 1 ms.

Components for NZBVA-NEA and NZBVE-NEA

For specification details of components see pages indicated.

Built-in printer ED — Order no.: M10053A — Description: Page 59

Signalling and switching module MSM — Order no.: G31015 — Description: Page 59

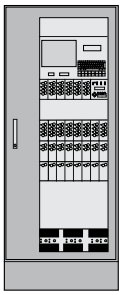
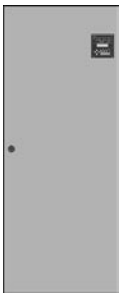
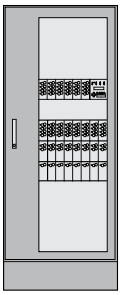
Mains monitoring module DS 3 UV — Order no.: G31020A — Description: Page 62

Mains switch/contactor dependent control module LSSA 230 — Order no.: G31204 — Description: Page 62

Mains switch/contactor dependent control module LSSA 24 — Order no.: G31207 — Description: Page 62

Monitoring module KCE — Order no.: G31017 — Description: Page 67

System spreadsheet NZBVA-NEA and NZBVE-NEA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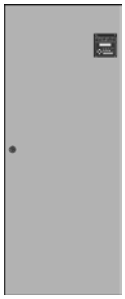
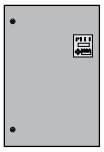
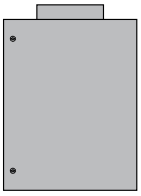
Control and monitoring unit KOMBI CONTROL	integrated	integrated	integrated
Built-in printer ED	optional	optional	-
Mains switch/contactor dependent control module LSSA 230	optional (4 max.) (4 max.) (4 max.) (4 max.)	optional (4 max.) (4 max.) (4 max.) (4 max.)	optional (4 max.) (4 max.) (4 max.) (4 max.)
Mains switch/contactor dependent control module LSSA 24			
Operation and monitoring modules AK 1 x 12 EÜ-NEA AK 2 x 12 EÜ-NEA AK 4 x 12 EÜ-NEA	Rack compartments (3 max.) (11 max.) (19 max.) (27 max.)	Rack compartments (3 max.) (11 max.) (19 max.) (27 max.)	Rack compartments (3 max.) (11 max.) (19 max.) (27 max.)
Operation and monitoring modules AK 1 x 12 SÜ-NEA AK 2 x 12 SÜ-NEA AK 4 x 12 SÜ-NEA			
Design	Floor standing cabinet	Floor standing cabinet	Floor standing 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	2200 x 800 x 400 mm 2200 x 800 x 400 mm 2200 x 800 x 400 mm 2200 x 800 x 400 mm	2000 x 800 x 600 mm 2000 x 800 x 600 mm 2000 x 800 x 600 mm 2000 x 800 x 600 mm

			
Type	**NZBVE-NEA-U/S 3** **NZBVE-NEA-U/S 11** **NZBVE-NEA-U/S 19** **NZBVE-NEA-U/S 27**	**NZBVA-NEA-U/A 3** **NZBVA-NEA-U/A 11** **NZBVE-NEA-U/A 3** **NZBVE-NEA-U/A 11**	**NZBVA-NEA-U/A 3-30** **NZBVA-NEA-U/A 11-30** **NZBVE-NEA-U/A 3-30** **NZBVE-NEA-U/A 11-30**
Control and monitoring unit KOMBI CONTROL	integrated	integrated	integrated
Built-in printer ED	-	-	-
Mains switch/contactor dependent control module LSSA 230	optional (4 max.) (4 max.) (4 max.) (4 max.)	optional (1 max.) (2 max.)	optional (1 max.) (2 max.)
Mains switch/contactor dependent control module LSSA 24			
Operation and monitoring modules AK 1 x 12 EÜ-NEA AK 2 x 12 EÜ-NEA AK 4 x 12 EÜ-NEA	Rack compartments (3 max.) (11 max.) (19 max.) (27 max.)	Rack compartments (3 max.) (11 max.)	Rack compartments (3 max.) (11 max.)
Operation and monitoring modules AK 1 x 12 SÜ-NEA AK 2 x 12 SÜ-NEA AK 4 x 12 SÜ-NEA			
Design	Floor standing cabinet	Wall-mounted cabinet	Wall-mounted cabinet
Dimensions (HxWxD)	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	757 x 616 x 346 mm 1052 x 616 x 346 mm

Design and configuration NZBVA-NEA and NZBVE-NEA

NEA emergency lighting systems NZBVA-NEA and NZBVE-NEA 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 mains mode (lamp and gear data from manufacturers)

3. Operation and monitoring modules for the central station (system spreadsheet)

4. Options for the central station (system spreadsheet)

5. Output(s) to sub-station(s) if required (table 1)

6. Central station (system spreadsheet)
   Type: NZBVA-NEA-Z __
   Type: NZBVE-NEA-Z __
   Rack compartments for luminaire circuits

7. Operation and monitoring modules for the sub-station(s) (system spreadsheet)

8. Options for the sub-station(s) (system spreadsheet

9. Sub-station(s) (system spreadsheet)
   Type: NZBVA-NEA-U/_ __
   Type: NZBVE-NEA-U/_ __
   Design
   Rack compartments for luminaire circuits

Mains input									
Power (W)	3450	4830	6900	8694	11040	13800	17250	22080	27600
Fuse (type)	NH00 25 A	NH00 35 A	NH00 50 A	NH00 63 A	NH00 80 A	NH00 100 A	NH00 125 A	NH00 160 A	NH1 200 A
Sub-station(s)- Output									
Power (W)	3450	4830	6900	8694	11040	13800	17250	22080	27600
Fuse (type)	NH00 25 A	NH00 35 A	NH00 50 A	NH00 63 A	NH00 80 A	NH00 100 A	NH00 125 A	NH00 160 A	NH1 200 A

Table 1: Mains input and sub-station(s) output

Conformity marks/signs

ENEC conformity mark

The ENEC conformity mark (ENEC = European Norms Electrical Certification) is a European conformity mark which is being awarded by all accredited testing laboratories in compliance with the norm EN 60598. With the ENEC mark, the testing laboratory confirms that the luminaires are state of the art regarding the criteria of electric, mechanical and thermal safety. The ENEC mark addresses the end-user.

CE sign

The CE sign (CE = Certified Europe) is a European conformity mark which has to be verified by the manufacturer according to the European Directive 93/68/EEC. With the CE sign, the manufacturer declares that his products brought to sale on the European market satisfy all European Directives applicable to such products. The CE sign is designed to address responsible surveillance authorities.

Protection of inflammable surfaces

Electrical equipment have to be installed and wired to avoid any risk of fire under normal and abnormal (fault) conditions. For this reason, when planning and installing lighting systems or selecting luminaires, the resistance against fire of mounting surfaces, thermally influenced surfaces and the distance to combustible materials have to be considered.

Protection against dust, moisture and electrical shock

The ingress protection (IP) code denotes the protection against dust and solid objects (first digit) and against moisture (second digit).

Code	Symbol	Description
IP0X	-	Unprotected
IP1X	-	Protection against solid objects >50mm
IP2X	-	Protection against solid objects >12 mm
IP3X	-	Protection against solid objects >2.5 mm
IP4X	-	Protection against solid objects >1 mm
IP5X		Protection against dust
IP6X		Dust-tight

Protection against solid objects

IPX0	-	Unprotected
IPX1		Protection against dripping water
IPX2	-	Protection against dripping water under 15°
IPX3		Protection against rain under 60°
IPX4		Protection against splash water
IPX5		Protection against water jets
IPX6	-	Protection against flooding
IPX7		Protection against temporary immersion
IPX8	-- m	Protection against submersion to declared depth

Protection against moisture

Electrical classes

According to EN 60598, luminaires must be protected against electric shock.

Electrical class	Symbol	Description
I		All parts of a luminaire that may be touched and are electrically conductive in the case of a fault must be connected to the earth terminal. The earth terminal must be connected to the protective earth conductor.
II		The safety of the luminaire is achieved by insulation of all parts which may be touched and are electrically conductive in the case of a fault. Such luminaires must not be connected to the mains protective earth conductor.
III		The safety of the luminaire is achieved by the use of safety extra-low voltage.

Description of the light distribution symbols:

Symbol	
	Emergency luminaire for ceiling mounting
	Emergency luminaire for ceiling mounting, asymmetric distribution
	Emergency luminaire for recessed ceiling mounting
	Emergency luminaire for recessed ceiling mounting, asymmetric distribution
	Emergency luminaire for wall mounting
	Emergency luminaire for wall mounting, asymmetric distribution
	Emergency luminaire for recessed wall mounting
	Emergency luminaire for recessed wall mounting, asymmetric distribution
	Exit sign luminaire for wall mounting
	Exit sign luminaire for recessed wall mounting
	Exit sign luminaire for ceiling mounting
	Exit sign luminaire for pendant suspended mounting
	Exit sign luminaire for bracket mounting
	Exit sign luminaire with display pane for wall mounting
	Exit sign luminaire with display pane for ceiling mounting
	Exit sign luminaire with display pane for recessed ceiling mounting
	Exit sign luminaire with display pane for pendant suspended mounting
	Exit sign luminaire with display pane for bracket mounting

Publication date: April 2006

Notes

Conformity marks/signs

ENEC conformity mark

The ENEC conformity mark (ENEC = European Norms Electrical Certification) is a European conformity mark which can be obtained from all accredited testing laboratories in compliance with the norm DIN EN 60598. With the ENEC mark, the testing laboratory confirms that the luinaires are state of the art regarding the criteria of electric, mechanical and thermal safety. The ENEC mark is consumer-oriented.

CE sign

The CE sign (CE = Certified Europe) is a European conformity mark which has to be verified by the manufacturer according to the European Directive 93/68/EEC. With the CE sign, the manufacturer declares that his products brought to sale on the European market satisfy all European Directives applicable to such products. The CE sign is designed for responsible surveillance authorities and is not consumer-oriented.

Fire protection identification

Electrical equipment must be mounted and installed so that there is no risk of fire under normal and abnormal (fault) conditions. For this reason, when planning and installing lighting systems or selecting luminaires, the behaviour in fire of material, mounting surfaces and thermally influenced surfaces and also the distance to combustible materials have to be considered.

Code	Symbol	Description
– acc. to	Luminaire acc. to DIN EN 60598	Structure components fron non-combustible material DIN 4102, Part 1
	Luminaire allround covered by insulating material having a caloric conductibility of λ = 0,04 W / m * k and a thickness of 100 mm.	Structure components from hardly or normally inflammable materials acc. to DIN 4102, Part 1 with additional Insulating material
	Limit values acc. to DIN EN 60598 at the mounting surface: < 130 °C at abnormal operation < 180 °C at ballast fault	Structure components from hardly or normally inflammable materials acc. to DIN 4102, Part 1
 to DIN 4102, Part 1	Limit values acc. to DIN VDE 0710, horizontal / vertical: < 90°C / < 150°C at normal operation; < 90°C / < 150°C at abnormal operation; < 115 °C / < 150°C in case of ballast fault	electrical operating areas with increased fire risk acc. Part 5 at the luminaire surfaces:

Building material classes

Building materials are classified by their behaviour in fire in building material classes acc. to DIN 4102, Part 1.

Building material classes	Description
A1	Non-combustible building materials
A2	
B1	Hardly inflammable building materials
B2	Normally inflammable building materials
B3	Easily inflammable building materials

Operating areas with increased risk of fire

Operating areas with increased risk of fire are enclosed rooms or areas or outdoor areas where easily inflammable substances acc. to DIN VDE 0100, Part 720 close to electrical equipment, such as luminaires, may cause a fire. Luminaires for operating areas with increased risk of fire must be -marked and have the following degree of protection:

- at fire risk due to dust and/or fibres: min. IP 50
- at fire risk due to other substances: min. IP 40

Degrees of protection

Degrees of protection

According to DIN EN 60529 - Degrees of protection by enclosures - the behaviour of electrical equipment against the penetration of foreign bodies and moisture is identified by code characters (IP) and code numbers (0 to 8). The first number describes the protection against foreign body penetration and the second the protection against moisture penetration. They always apply to the intended use of the products.

Code	Symbol	Description
IP0X	-	Unprotected
IP1X	-	Protection against foreign bodies >50mm
IP2X	-	Protection against foreign bodies >12 mm
IP3X	-	Protection against foreign bodies >2.5 mm
IP4X	-	Protection against foreign bodies >1 mm
IP5X		Protection against dust
IP6X		Dust-tight
Protection against foreign bodies		
IPX0	-	Unprotected
IPX1		Protection against dripping water
IPX2	-	Protection against dripping water under 15°
IPX3		Protection against water spray under 60°
IPX4		Protection against splash water
IPX5		Protection against water jets
IPX6	-	Protection against flooding
IPX7		Protection against dipping
IPX8	-- m	Protection against immersion
Protection against moisture		

Protection classes

According to DIN EN 60598, luminaires must be protected against electric shock. Depending on the type of protection, luminaires have to be assigned to one of three classes.

Protection class	Symbol	Description
I connected to the protective earth terminal be connected to the mains	 	All parts of a luminaire that may be touched and are electrically conductive in the case of a fault must be . The protective earth terminal must protective earth conductor.
II of all ductive in the to the		The safety of the luminaire is achieved by insulation parts which may be touched and are electrically con- case of a fault. Such luminaires must not be connected mains protective earth conductor.
III		The safety of the luminaire is achieved by the use of safety extra-low voltage.

Installers and users are responsible for compliance with the degree of protection and protection classes.

Apart from the luminaire components, the catalogue includes following luminaire data for each luminaire or luminaire range:

Symbol	
	Emergency luminaire for ceiling mounting
	Emergency luminaire for ceiling mounting, asymmetrical luminous radiation
	Emergency luminaire for recessed ceiling mounting
	Emergency luminaire for recessed ceiling mounting, asymmetrical luminous radiation
	Emergency luminaire for wall mounting
	Emergency luminaire for wall mounting, asymmetrical luminous radiation
	Emergency luminaire for recessed wall mounting
	Emergency luminaire for recessed wall mounting, asymmetrical luminous radiation
	Exit sign luminaire for wall mounting
	Exit sign luminaire for recessed wall mounting
	Exit sign luminaire for ceiling mounting
	Exit sign luminaire for pendant suspended mounting
	Exit sign luminaire for bracket mounting
	Exit sign luminaire in display technology for wall mounting
	Exit sign luminaire in display technology for ceiling mounting
	Exit sign luminaire in display technology for recessed ceiling mounting
	Exit sign luminaire in display technology for pendant suspended mounting
	Exit sign luminaire in display technology for bracket mounting

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