

RUBIC MONITORING SYSTEM

VER.14.1

RUBIC UNA
RUBIC MINI UNA

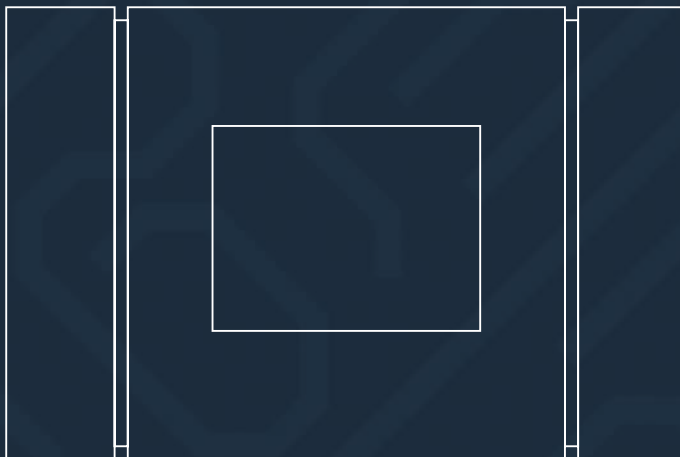


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RUBIC SYSTEM

The RUBIC emergency lighting monitoring system was conceived as a modular system. Its basic goal is the monitoring of individual light fixtures, meaning, it is a system that ensures full functionality and the most advantageous cost-effectiveness. As the system's manufacturer, we have equipped it with a variety of additional functions that broaden its universal usability.

Requirements of economy as well as building details allow one to choose the most optimum system configuration. Each system has the following abilities:

- execution of periodic automatic and manual tests
- event log registration in non-volatile memory
- storage of the event log on an external SD card
- emergency operation mode lock
- night operation mode
- subdivision of the system into fixture groups

The multifunctionality of the system is based on the ability of monitoring both fixtures with fluorescent (fluorescent lamps, CFLs) and LED light sources. The offer of Garrabridge includes both a full range of emergency evacuation fixtures and exit signs as well as ready-to-install emergency conversion kits for other light fixtures available on the market.

An additional solution which makes the work more comfortable is the SmartVISO application, with an extensive visualisation module simplifying system control and determination of failure type and location. The application allows, among others:

- full system configuration
- full visualisation of the condition of emergency lighting
- the ability to load building plans

All Garrabridge-manufactured systems have been produced in accordance with current European regulations and standards.

Each system has the option of connection to a building management system (a BMS).



RUBIC UNA



RUBIC MINI UNA

RUBIC UNA

The RUBIC UNA system is the current and most advanced version of the independent emergency and evacuation fixtures monitoring systems. Each central unit has the ability of controlling up to 4000 fixtures through the use of MP UNA submodules. Submodules communicate with the RUBIC UNA central unit through LAN. Due to the use of LAN communications, there is an option of using a Wi-Fi connection between the submodules.

RUBIC UNA has a touch panel and an intuitive, graphic interface. This allows easy and simple configuration without the use of the SmartVISIO application.

Due to the used technical solutions, there was eliminated the meaning of polarity of connection of the communication bus directly to:

- the RUBIC UNA central unit
- MP UNA submodules
- RS address conversion kits

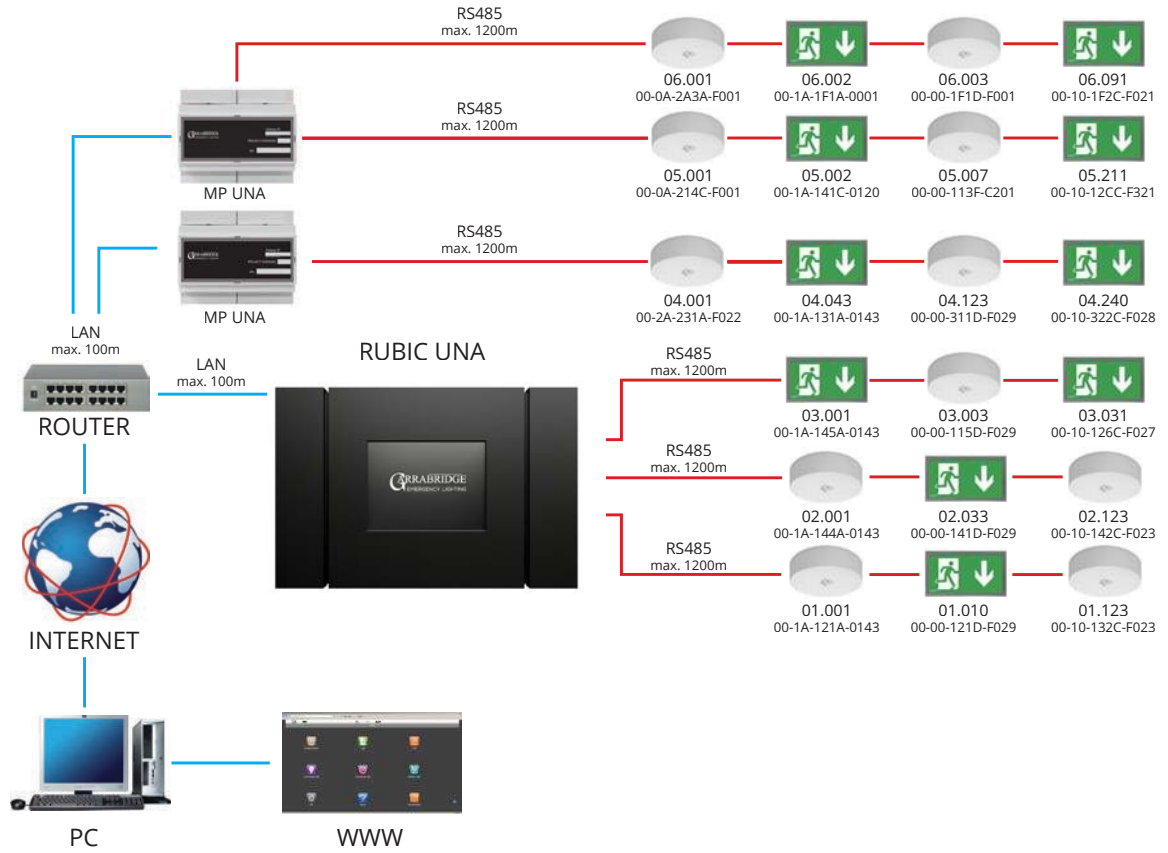
Each RS address module has its own individual number/address. Addresses are assigned in the production stage, so that no additional equipment, such as an address assignment unit, is required.

THE MOST IMPORTANT PARAMETERS:

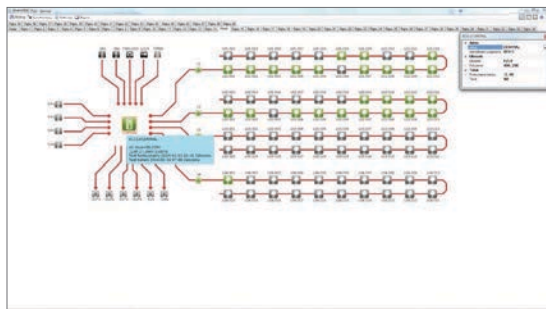
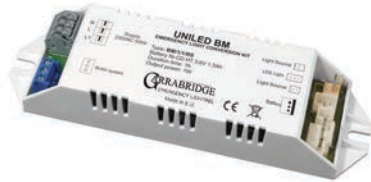
- touch panel
- unique addresses - assigned during manufacture
- no address programmer required
- correct polarity of communication bus not required
- intuitive graphical interface
- four potential-free inputs
- four potential-free outputs
- option of remote control via Ethernet and a website
- control of up to 750 fixtures - three logic buses (01, 02, 03), each with two physical channels
- option of connection of up to 4000 fixtures thanks to the use of MP UNA submodules
- system condition indication
- option of connection both fluorescent as well as LED light sources
- internal battery
- automatic test execution
- event log registration
- option to group the fixtures
- night operation mode for selected fixtures/groups
- option of working together with a maintenance application
- BAC net system, ensuring compatibility of the RUBIC UNA with a BMS



RUBIC UNA



COMPONENTS OF THE SYSTEM



MP UNA submodule

Properties:

- installation on a DIN rail
- monitoring of up to 250 fixtures
- connection to Ethernet - LAN-based communications
- service pin and reset buttons
- IP address choice option
- built-in UPS
- diode indicating charging of built-in battery

Address conversion kit

Properties:

- cooperation with LED and fluorescent light sources
- switching to emergency mode
- Ni-Cd or Ni-MH battery
- battery charge indicator
- power range up to 80 W

Smart Visio application

Properties:

- system condition supervision
- system configuration
- event log readout
- testing functions
- layout plan loading options

RUBIC MINI UNA

The RUBIC MINI UNA system is a modern, compact solution dedicated to monitor emergency light fixtures having unique addresses, in small buildings. The system is dedicated to monitor up to 500 both fluorescent and LED emergency fixtures using RS power sources.

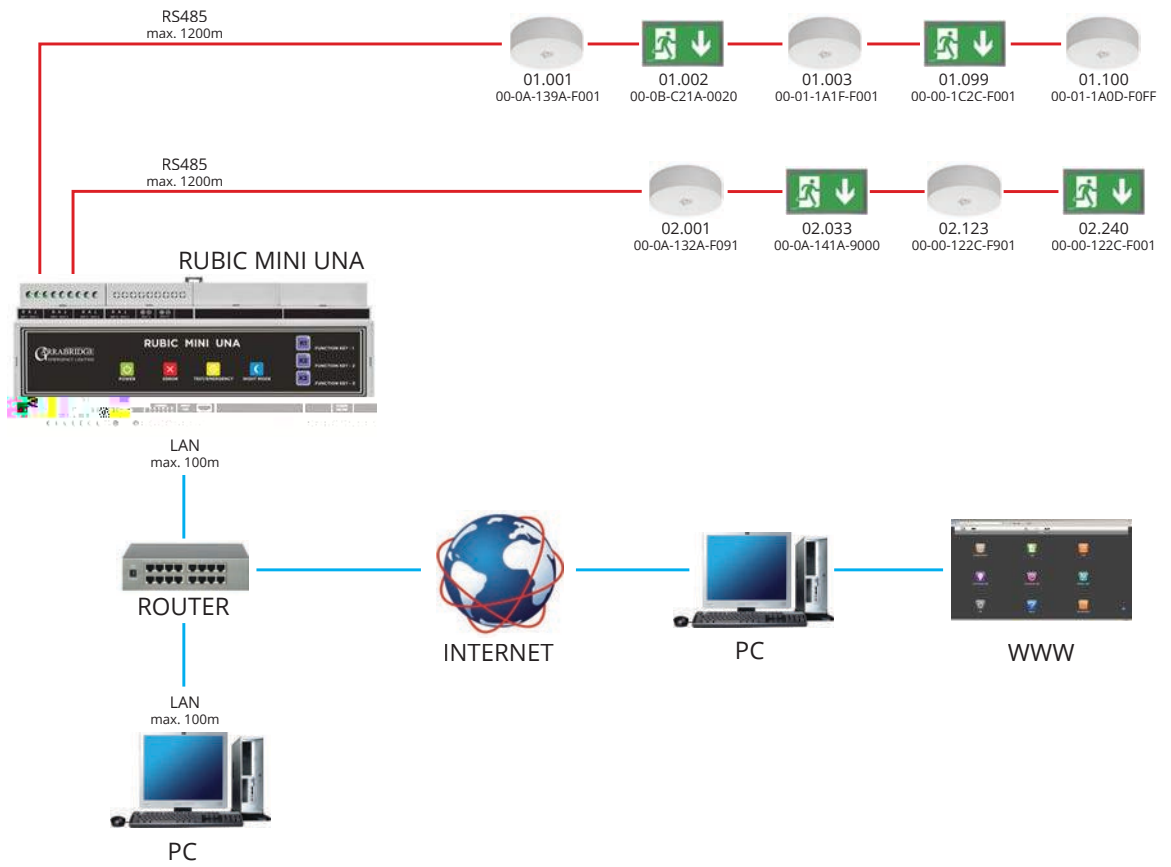
The basic advantage of the central unit are its small dimensions and the ability of direct installation on a TH-35 (DIN-3) rail. The system was simplified as much as possible, leaving in place the most important user functions, however. Each central unit is equipped with RS communications inputs, an RJ45 connector, four diodes indicating the system status and three user-programmable function buttons. There is also the reset button and the service pin for assignment of new unique IP addresses. In addition, the central unit has two potential-free inputs and two powered outputs, i. e. an open collector. Communication with RS fixtures is established through a communication bus operating in the RS485 standard. The linear length of the individual bus amounts to 1200 m. Communication with the fixtures is continuous.

THE MOST IMPORTANT PARAMETERS:

- supervision of up to 500 emergency fixtures
- maximum length of an individual bus 1200 m
- system condition indication diodes
- three function buttons
- two potential-free inputs (current loops)
- two powered outputs (for external sensor control)
- internal memory storage for emergency lighting system control reports in line with EN 50172
- supervised lighting mode (night operation)
- option of tests of individual fixtures or fixture groups
- internal battery supplying central unit power
- RJ45 connector for direct communication with any computer via Ethernet
- individual IP address
- system condition checking through any web browser
- constant communication with fixtures in the system
- system management and visual representation through dedicated Smart Visio software



RUBIC MINI UNA

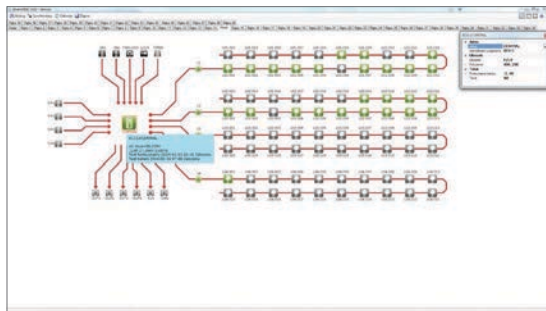


COMPONENTS OF THE SYSTEM



Address conversion kit Properties:

- cooperation with LED and fluorescent light sources
- switching to emergency mode
- Ni-Cd or Ni-MH battery
- battery charge indicator
- power range up to 80 W



Smart Visio application Properties:

- system condition supervision
- system configuration
- event log readout
- testing functions
- option to load building layout plan

THE SMART VISIO APPLICATION

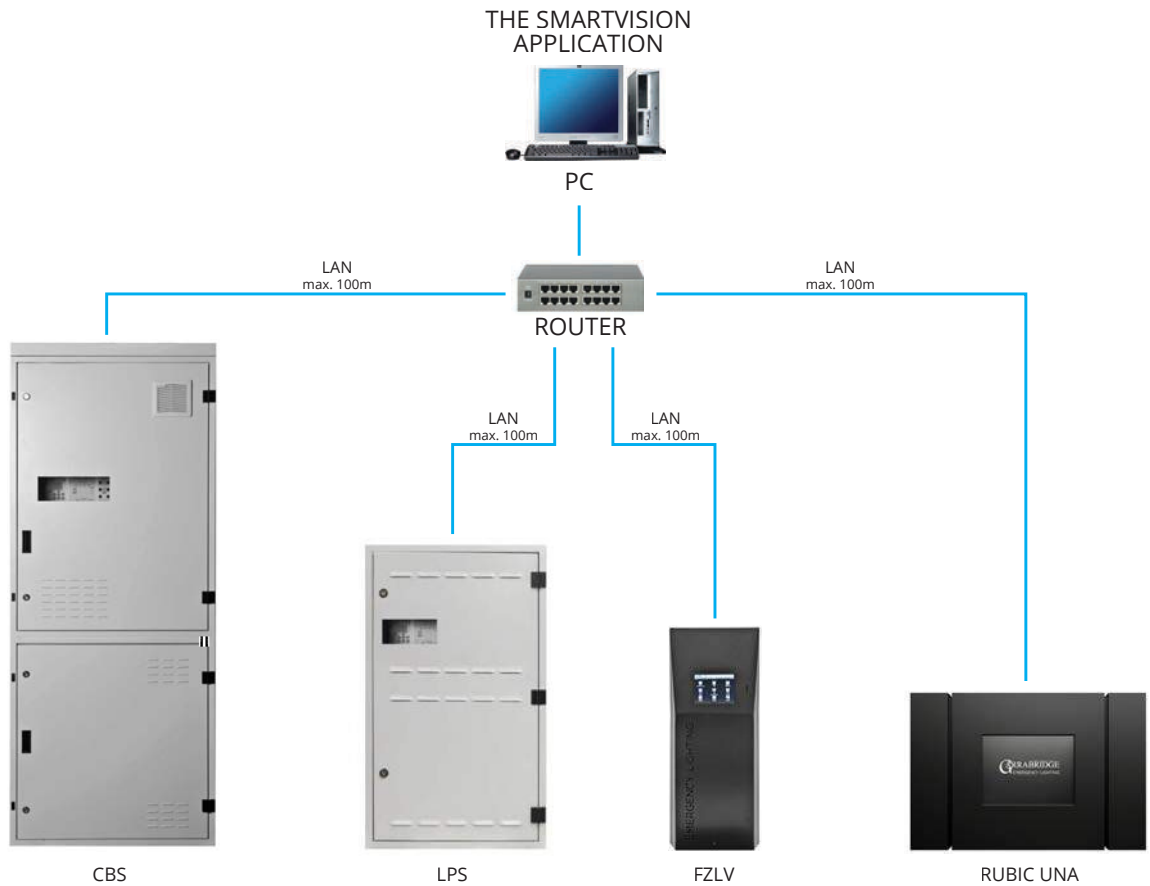
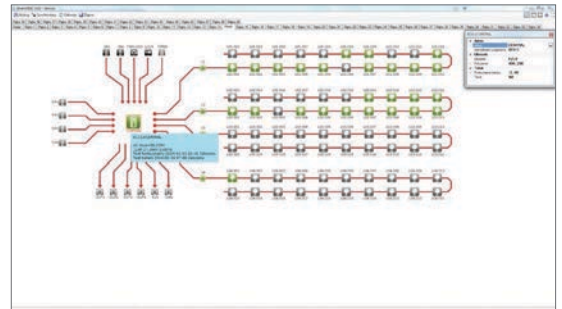
The Smart Visio application was created as a emergency lighting system management platform by Garrabridge. Thus, a single application allows us to control at the same time:

- the RUBIC UNA fixture monitoring system
- the FZLV low-voltage system
- the CBS central battery system



Properties:

- works with other emergency lighting systems by Garrabridge
- intuitive interface
- option to load building layout plan
- system condition supervision
- system configuration
- event log readout
- testing functions



ACCESSORIES

MP UNA

Name	RUBIC UNA system submodule
Max. quantity of the fixtures	250
Communications	with RUBIC UNA central unit - LAN / with fixtures - RJ45
Mounting	DIN rail (TH30)
Power supply voltage	12 V DC
Dimensions	105 x 90 x 58



MZMP

Name	uninterruptible power supply for the MP UNA submodule and router
Module count	1
Supply voltage	230 V AC 50/60 Hz
Output voltage	12 V DC
Mounting	DIN rail (TH30)
Dimensions	105 x 90 x 58



ROUTER


Name	Network router
Q-ty of the channels	5 or 8
Supply voltage	12 V DC
Output voltage	12 V DC
Mounting	DIN rail (TH30)
Dimensions	33 x 78 x 107



EMERGENCY EVACUATION FIXTURES

AXN series


Fixture type:	ceiling surface-mounted with O or C optics
Light source:	PowerLED 1W, 3W or 6W
IP level:	IP42 or IP65

Fixture type: AXN					
CE		220-240V AC 50-60Hz	LED	IP42	IP65



AXP series

Fixture type:	recessed with O or C optics
Light source:	PowerLED 1W, 3W or 6W
IP level:	IP20 or IP65/20

Fixture type: AXP					
CE		220-240V AC 50-60Hz	LED	IP20	



LOVATO N series


Fixture type:	ceiling surface-mounted with O or C optics
Light source:	PowerLED 1W, 3W
IP level:	IP41

Fixture type: LVNC, LVNO					
CE		220-240V AC 50-60Hz	LED	IP41	



LOVATO P series


Fixture type:	recessed with O or C optics
Light source:	PowerLED 1W, 3W
IP level:	IP20

Fixture type: LVPC, LVPO					
CE		220-240V AC 50-60Hz	LED	IP20	



EYE LED series


Fixture type:	recessed with O or C optics
Light source:	PowerLED 1W, 3W
IP level:	IP20

Fixture type: EY/EYK					
CE		220-240V AC 50-60Hz	LED	IP20	



SPY series


Fixture type:	assembling inside light fitting
Light source:	LED 1W, 3W
IP level:	IP20

Fixture type: SP					
CE		220-240V AC 50-60Hz	LED	IP20	



HELIOS series


Fixture type:	surface-mounted
Light source:	LED, T5, TC-SEL or TC-L
IP level:	IP42/IP65

Fixture type: H/HL/HSP/HW					
CE		220-240V AC 50-60Hz	LED T5 TC-SEL TC-L	IP42	IP65



TIGER series


Fixture type:	surface-mounted
Light source:	LED or T5
IP level:	IP22

Fixture type: TG/TL					
CE		220-240V AC 50-60Hz	LED T5	IP22	



EMX series


Fixture type:	surface-mounted
Light source:	T5, TC-L or TC-F
IP level:	IP65

Fixture type: EM					
CE		220-240V AC 50-60Hz	T5 TC-L	IP65	



SQUARE series


Fixture type:	surface-mounted
Light source:	TC-SEL or TC-L
IP level:	IP54

Fixture type: SD					
CE		220-240V AC 50-60Hz	TC-SEL TC-L	IP54	



TWISTER series


Fixture type:	surface-mounted
Light source:	TC-SEL or TC-L
IP level:	IP54

Fixture type: TD					
CE		220-240V AC 50-60Hz	TC-SEL TC-L	IP54	



HERMETICA series

Fixture type:	surface-mounted
Light source:	T5, T8
IP level:	IP65

Fixture type: HR					
CE		220-240V AC 50-60Hz	T8 G13	IP65	



EMERGENCY EVACUATION FIXTURES

SK-8 series

Fixture type:	surface-mounted
Light source:	LED 1,2W
IP level:	IP44

Fixture type: SK-8					
CE		220-240V AC 50-60Hz	LED	IP44	



INFINITY A series

Fixture type:	ceiling-mounted or recessed
Light source:	LED 1,2W, 3,2W
IP level:	IP44

Fixture type: IFAC/IFAR/IFAS					
CE		220-240V AC 50-60Hz	LED	IP44	



INFINITY B series

Fixture type:	wall-mounted
Light source:	LED 1,2W, 3,2W
IP level:	IP44

Fixture type: IFB					
CE		220-240V AC 50-60Hz	LED	IP44	



TWINS series

Fixture type:	wall-mounted or ceiling-mounted
Light source:	LED 1,2W, 3,2W or T5 8W
IP level:	IP41

Fixture type: TW					
CE		220-240V AC 50-60Hz	LED T5	IP41	



PLEXI LED series

Fixture type:	recessed
Light source:	LED 1,2W, 3,2W or T5 8W
IP level:	IP20

Fixture type: PL					
CE		220-240V AC 50-60Hz	LED T5	IP20	



ESCAPE series

Fixture type:	ceiling-mounted
Light source:	LED 1,2W, 3,2W or T5 8W
IP level:	IP20

Fixture type: E					
CE		220-240V AC 50-60Hz	LED T5	IP20	



TIGER series

Fixture type:	surface-mounted or recessed
Light source:	LED 1,2W, 3,2W or T5 8W
IP level:	IP22

Fixture type: TG/TL/TGS/TSL/TP/TPL					
CE		220-240V AC 50-60Hz	LED T5	IP22	



HELIOS series

Fixture type:	surface-mounted
Light source:	LED 1,2W, 3,2W, T5 8W, TC-SEL
IP level:	IP42/IP65

Fixture type: H/HL/HD/HDL/HP/HPL					
CE		220-240V AC 50-60Hz	LED T5 TC-SEL	IP42	IP65



QUADRO series

Fixture type:	ceiling-mounted
Light source:	TC-SEL 11W
IP level:	IP41

Fixture type: Q					
CE		220-240V AC 50-60Hz	TC-SEL	IP41	



SCREEN series

Fixture type:	ceiling-mounted
Light source:	LED 3x1W, 3,2W, 2x3,2W
IP level:	IP40

Fixture type: SC, SCS					
CE		220-240V AC 50-60Hz	LED	IP40	



EMERGENCY CONVERSION KITS

UNILED BM RS

MATERIALS:

Polycarbonate body

MOUNTING:

In the fixture

POWER SUPPLY:

220÷240VAC/50÷60Hz

LIGHT SOURCE:

1W, 3W, 6W* LED

CHARGING:

Maximum 12h; electronic energy-saving impulse charger

AUTONOMY & BATTERIES:

1h, 2h or 3h; Ni-MH battery (optionally Ni-Cd battery)

INSULATION CLASS:

II

IP RATING:

IP20

AMBIENT TEMPERATURE:

t_a : 0°C÷40°C

ADDITIONAL INFORMATION:

LED indicator for battery charge, status of the test and presence of the voltage

Deep discharge protection

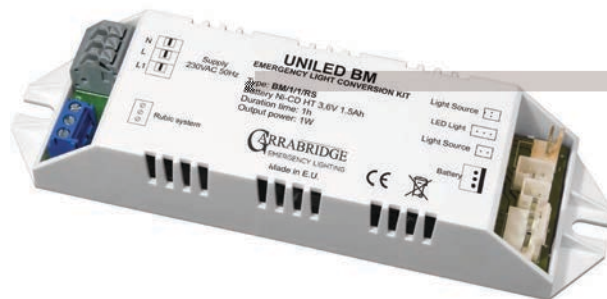
Optional adaptation of the conversion kit for low temperatures up to -25°C

Power consumption lower up to six times

Automatic detection of battery capacity and setting test parameters

Output voltage: 3.3 VDC

* 6W - power source in emergency mode



Uniled BM RS - ORDER CODES

		1	
	1	3	
		8	
		1	
	3	3	
		1	
	6		
		3	

LED indicator

LED color	Signal	Symbolizing
○ ○	diode off	no power/test/emergency mode
● ○	green shining	conversion kit powerd /battery charging
○ ●	red shining	no communication with central unit
● ●	green/red shining	conversion kit powerd, fixture failure
○ ●	red flashing	no power/test, fixture failure

EMERGENCY CONVERSION KITS

LIDER PLUS RS

MATERIALS:

Polycarbonate body

MOUNTING:

In the fixture

POWER SUPPLY:

220÷240VAC/50÷60Hz

LIGHT SOURCE:

Linear and compact fluorescent

CHARGING:

Maximum 12h; electronic energy-saving impulse charger

AUTONOMY & BATTERIES:

1h, 2h or 3h; Ni-Cd or Ni-MH battery

INSULATION CLASS:

II

IP RATING:

IP20

AMBIENT TEMPERATURE:

t_a : 0°C÷55°C

ADDITIONAL INFORMATION:

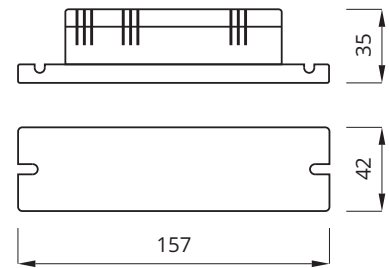
LED indicator signalizes mains power supply and battery charge

Deep discharge protection

Cooperation with magnetic and electronic ballasts

Optional adaptation of the conversion kit for low temperatures up to -25°C

Power consumption lower up to six times



LIDER PLUS RS - ORDER CODES

CODE	POWER [W]	AUTONOMY [h]	BATTERY
LEP/36/1/RS	6 - 36	1	Ni-Cd 3,6V 2,5Ah
LEP/36/2/RS	6 - 36	2	Ni-Cd 3,6V 4,0Ah
LEP/36/3/RS	6 - 36	3	Ni-Cd 3,6V 4,0Ah
LEP/58/1/RS	6 - 58	1	Ni-Cd 4,8V 2,5Ah
LEP/58/2/RS	6 - 58	2	Ni-Cd 4,8V 4,0Ah
LEP/58/3/RS	6 - 58	3	Ni-Cd 4,8V 4,0Ah

LED indicator

LED color	Signal	Symbolizing
○ ○	diode off	no power/test/emergency mode
● ○	green shining	conversion kit powerd /battery charging
○ ●	red shining	no communication with central unit
● ●	green/red shining	conversion kit powerd, fixture failure
○ ●	red flashing	no power/test, fixture failure

EMERGENCY CONVERSION KITS

LINEX RS

MATERIALS:

Polycarbonate body

MOUNTING:

In the fixture

POWER SUPPLY:

220÷240VAC/50÷60Hz

LIGHT SOURCE:

Linear fluorescent T5

CHARGING:

Maximum 12h; electronic energy-saving impulse charger

AUTONOMY & BATTERIES:

1h, 2h or 3h; Ni-MH battery (optionally Ni-Cd battery)

INSULATION CLASS:

II

IP RATING:

IP20

AMBIENT TEMPERATURE:

t_a : 0°C÷55°C

ADDITIONAL INFORMATION:

LED indicator signalizes mains power supply and battery charge

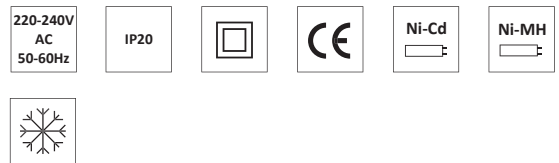
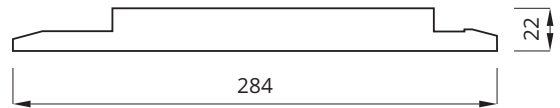
Deep discharge protection

Cooperation with magnetic and electronic ballasts

Optional adaptation of conversion kit for low temperatures up to -25°C

Long life of the LF lamp due to the function of the preheating of electrodes

Stabilization of light stream



LIDER PLUS RS - ORDER CODES

CODE	POWER [W]	AUTONOMY [h]	BATTERY
LX/21/1/RS	8, 14, 21	1	Ni-MH 3,6V 1,5Ah
LX/21/2/RS	8, 14, 21	2	Ni-MH 3,6V 2,5Ah
LX/21/3/RS	8, 14, 21	3	Ni-MH 3,6V 4,0Ah
LX/39/1/RS	24, 39	1	Ni-MH 4,8V 1,5Ah
LX/39/2/RS	24, 39	2	Ni-MH 4,8V 2,5Ah
LX/39/3/RS	24, 39	3	Ni-MH 4,8V 4,0Ah
LX/49/1/RS	28, 35, 49	1	Ni-MH 6,0V 1,5Ah
LX/49/2/RS	28, 35, 49	2	Ni-MH 6,0V 2,5Ah
LX/49/3/RS	28, 35, 49	3	Ni-MH 6,0V 4,0Ah
LX/80/1/RS	54, 80	1	Ni-MH 6,0V 1,5Ah
LX/80/2/RS	54, 80	2	Ni-MH 6,0V 2,5Ah
LX/80/3/RS	54, 80	3	Ni-MH 6,0V 4,0Ah

LED indicator

LED color	Signal	Symbolizing
○ ○	diode off	no power/test/emergency mode
● ○	green shining	conversion kit powerd /battery charging
○ ●	red shining	no communication with central unit
● ●	green/red shining	conversion kit powerd, fixture failure
○ ●	red flashing	no power/test, fixture failure

SUMMARY

CENTRAL UNIT



	RUBIC UNA	RUBIC MINI UNA
Wall-mounted	YES	-
DIN rail-mounted	-	YES
Power supply	220-230 V AC 50/60 Hz	
Max. q-ty of the fixtures/central unit	750	500
Max. q-ty of the fixtures/system	4000	500
USB connection	YES	-
LAN connection	YES****	YES****
Potential-free outputs	YES (6)*	YES (2)*****
Control inputs	YES (2)***	YES (2)***
Service/user application	YES	YES
Dimensions	300 x 200 x 41	210 x 90 x 60

* option, INPUT/OUTPUT module installed in central unit

*** two 230 V AC control inputs, possibility to assign functions

**** default IP address: 192.168.0.1, applies both to central units as well as submodules

***** central unit has four removable communication cards, each card may host up to 250 fixtures

***** powered output for relay connection

COMMUNICATION BUS

LINE TYPE*	twisted pair shielded cable
CABLE TYPE	wire
CROSS-SECTION	recommended 0,8 mm ²
MAXIMUM LENGTH	1200 m
LINE EXTENSION	NO
TOPOLOGY	LINEAR TOPOLOGY RECOMMENDED***

* required line type, FTP type or JYsTYekw or any other compliant type possible

*** all divergences from recommended topology and dedicated cable type may lead to transmission errors and fixture failures

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