

LuxIntelligent Automatic Emergency Lighting Testing Panel - obsolete

The LuxIntelligent addressable emergency lighting control system is designed to provide a simple yet powerful, reliable and cost-effective maintenance solution for testing your emergency lights and maintaining results data for inspection and audit purposes.

Emergency lighting is a requirement for non-domestic buildings and is embodied in British and European legislation. Employers, building owners and occupiers have a legal responsibility to test and maintain their emergency systems to the standards required by the Code of Practice for Emergency Lighting of Premises BS 5266-1 and also EN50172, Emergency Escape Lighting Systems.

It supports both maintained, non-maintained and slave luminaires in either self-contained, central battery or static inverter systems. It supports all of the Advanced LuxIntelligent range of fittings. On top of this, LuxIntelligent modules can be added to almost any luminaires to allow them to fully function on the LuxIntelligent system.

The control panel has a dynamic event log of 1000 events as well as a separate log for recording test results. Records of all automatic (and manual) tests are generated and can be downloaded by connecting to a computer and using the appropriate LuxIntelligent logger tool. The data is then transferred to a database on a PC for subsequent analysis listing and printing. Once the data is there, there is also the opportunity of transferring this information up to the LuxIntelligent cloud using the LuxIntelligent sync tool. Through the LuxIntelligent app it becomes very easy to share and use this information.

The LuxIntelligent addressable emergency lighting control system can work with a huge range of luminaires, from pre-installed retrofit options and ICEL 1004 conversions to self-contained standalone LED luminaires and Dynamic Safety Sign Systems.



Features

- Each panel can support 996 luminaires
- Advanced graphical LCD user interface
- Loop-powered communications
- Dedicated RS232 port supporting various modes of access
- 5 Amp power supply and charger to EN54-4
- Fit and forget panel, using your 'My LuxIntelligent' account to manage your emergency lighting
- 32 characters for zone text and 26 for each luminaire
- Networks can contain up to 200 panels
- 400 individual tests can be spread across up to 50 test groups
- Up to 200 zones available across each panel
- 1000 event and diagnostic log
- 24/7 monitoring, including cloud service and mobile app

Specification

Lx-9400

Display	Backlit 260 by 64 graphical LCD
Controls	Alpha-numeric keypad, navigation keys, mute and reset
Enclosure/colour	Steel IP30/RAL 7035
Dimensions (H*W*D) mm	385 * 450 * 125
Weight	8.6kg
Temperature	-5°C to 40°C
Humidity	95% Max
Cable entries (20mm knockouts)	18 top, 9 top rear, 2 bottom

Mains supply	220-240V, +10%, -15%, 47-63 Hz AC, 1A (Max)
Battery capacity	24V 4Ah (Min), 24V 12Ah (Max) internal
Charging current	2.4A, temperature compensated
Power supply	Separate 24Vdc, 5A universal input, switched mode
Number of loops	1 to 4
Devices per loop (total)	249
Protocols	PuLsE
Auxiliary supply output ¹	24V _{dc} , 500mA
Loop current	500mA
Event log	1000 event & diagnostic
Number of zones	200 maximum, across 4 loops (1000 when networked)
Number of test groups	50
Number of scheduled tests	400
On-board relays	2 * 1A 30V AC/DC (fault)
Serial port	1 * RS232 on board for PC/modem/printer
Integral modem (optional)	For connection to logging PC

Order Codes and Options

Lx-9401:	LuxIntelligent Lx-9400 panel with single loop driver fitted
Lx-9402:	LuxIntelligent Lx-9400 panel with two loop drivers fitted
Lx-9403:	LuxIntelligent Lx-9400 panel with three loop drivers fitted
Lx-9404:	LuxIntelligent Lx-9400 panel with four loop drivers fitted

Serial to Ethernet Converter - obsolete

The UP-017 serial to ethernet converter permits remote interaction and monitoring of the LuxIntelligent emergency lighting test panel. It is an economical and easy way to monitor panels from anywhere across the installation, using its local area network. It means there is no need to network panels across an installation, just simply tag each one on to the sites internal network. By simply connecting to a local network hub, it does away with the need to network groups of panels and allows any number of computers on the network to download test data. In turn, this facilitates access to the full LuxIntelligent Cloud and the associated mobile and desktop apps.

The device can be easily installed into any panel, running from the internal auxiliary power supply. The device is supplied with the serial interface lead for connecting to the panel, all that is required is a data connection to the closest local network hub. The device is easily configured using a standard Windows™ tool, simply allocating it an IP address and associated gateway information. The serial communications are then set up to match those of the panel and full access to the panel is available on the network. Controls can be configured so that only known IP addresses can access the device and password protection can be set.

The device comes complete with the software tool for programming it and is compatible with Windows™ 95/98/ME/NT/2000/XP/2003/Vista/2008/7/8/8.1. The UP-017 works with the LuxIntelligent logging and configuration tools.



Features

- Small size for ease of installation
- Economic device for remote monitoring
- Inexpensive installation cost
- Allows full use of all LuxIntelligent monitoring features

Specification

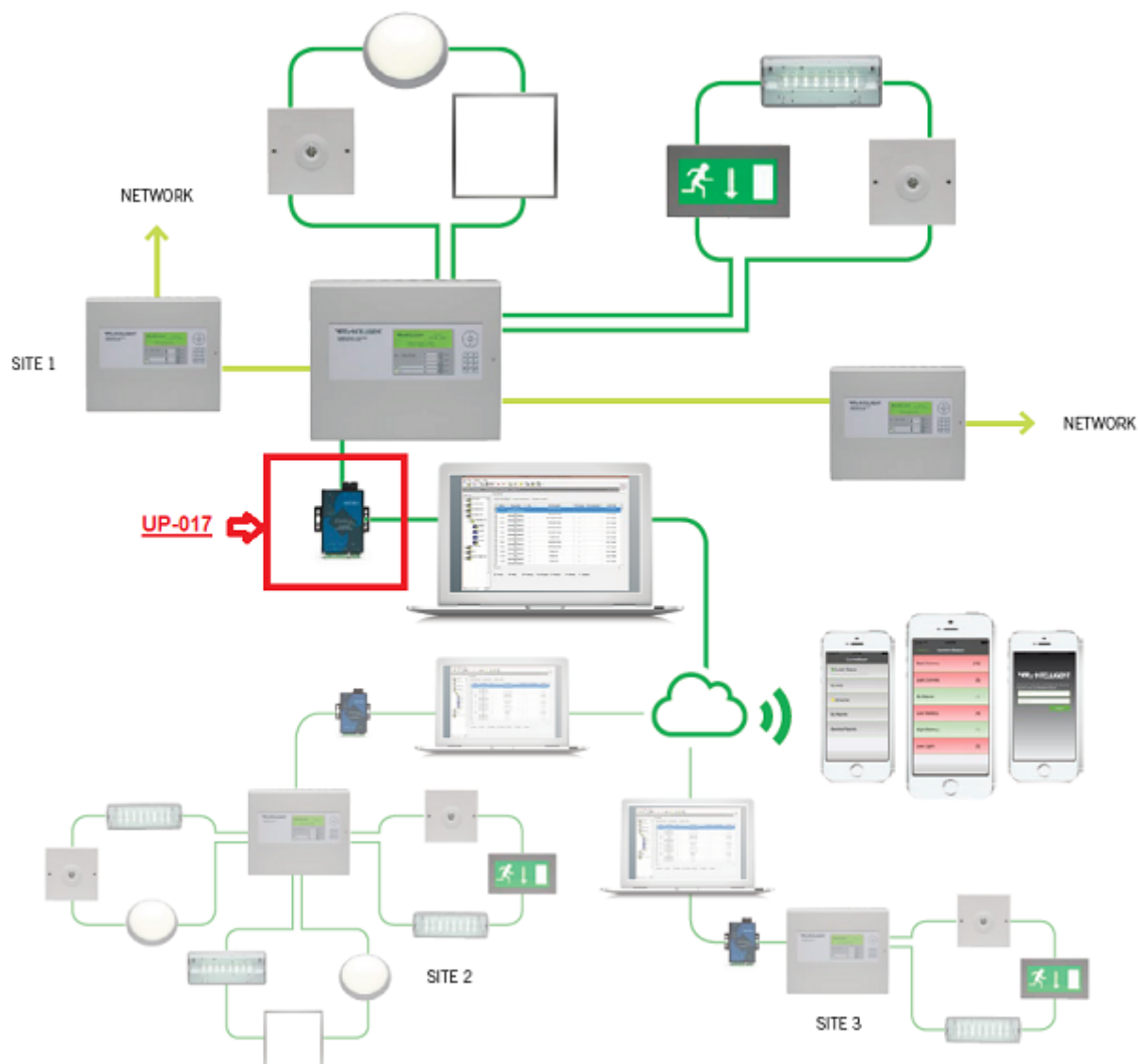
Supply voltage	12-48V _{DC}
Supply current	106mA @ 24V
Serial data	38.4 Baud
Connector	DB9 (male)
Ethernet	10/100Mbps
Connector	RJ45 (8 pin)
Temperature	0 to 55°C
Housing	Metal
Dimensions (box)	52*80*22 (mm)
Weight	340g

Order Codes and Options

UP-017:	Serial to ethernet converter (Moxa-5150) with appropriate connection leads
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More Information

Typical UP-017 Application



Request For Information

To allow the UP-017 to exist on a local area network, the following information is required from the network administrator:

UP-017 Setting	Description	Value
IP Address	IP Address to be allocated to the UP-017 on the LAN.	____.____.____.____
Subnet Mask	Subnet Mask that the UP-017 will be connected to on the LAN	____.____.____.____
Gateway	The Default Gateway for the LAN that the UP-017 will need to be connected to	____.____.____.____
Server Name	The user name for the UP-017 will use for SMTP authentication (1 to 39 characters). This is optional	
Location	Textual description of the location of the device (1 to 39 characters). This is optional.	
Password	Optional password protection for authentication for configuration changes	

Pulse Light Modules - obsolete

The Pulse light units are a range of addressable modules designed for use with the LuxIntelligent emergency lighting test panel. The modules provide the ability to make a standard emergency luminaire into an addressable luminaire that can be automatically tested and monitored by the LuxIntelligent panel twenty-four hours a day and three hundred and sixty-five days a year.

All the modules are loop powered, which means even if the local power fails where the luminaires or devices are installed, the panel will still be able to monitor their condition. They do not use any power from any batteries installed with the luminaires.

The LXP-302 modules provide control and monitoring of the luminaire AC mains power, battery condition and lamp status, giving actual battery voltage and light level measurements at the control panel. This device may be used central battery and static inverter installations. The LXP-302 module can be configured to monitor a luminaire operating as either a maintained or non-maintained luminaire.

The LXP-110 module provides control of a central battery unit, whilst also being able to monitor fault conditions via a dry contact input. It can also be used as an addressable relay to trigger specific groups of lights. By combining the LXP-110 with a third-party 240V Relay which is connected to a local lighting circuit, the LXP-110 can be used to trigger our low-voltage range of luminaires called EasySafe.

Installation

Typical wiring configurations are shown on the second page of this datasheet.



Features

- Allows standard emergency luminaire to be used as an addressable luminaire
- Allows the monitoring of critical parameters
- Enables the automatic testing of emergency luminaires
- Fully supports all the features of the LuxIntelligent panels

Specification

Part Number	LXP-302	LXP-110
Dimensions (H*W*D)	130*42*20	130*42*20
Fixing centres	118mm	118mm
Temperature	65°C	65°C
Terminal size	0.35-2.5mm ²	0.35-2.5mm ²
Addresses	1-249	1-249
Battery range	1.2-12.0V $\pm$ 2%	N/A
Relay output	250V _{ac} (125VA)	N/A
Loop voltage	15-32V DC	15-32V DC
Current	1.7mA	1.7mA
Current (energised)	1.7mA	4.0mA
Current (on)	N/A	2.7mA
Input load	N/A	N/A

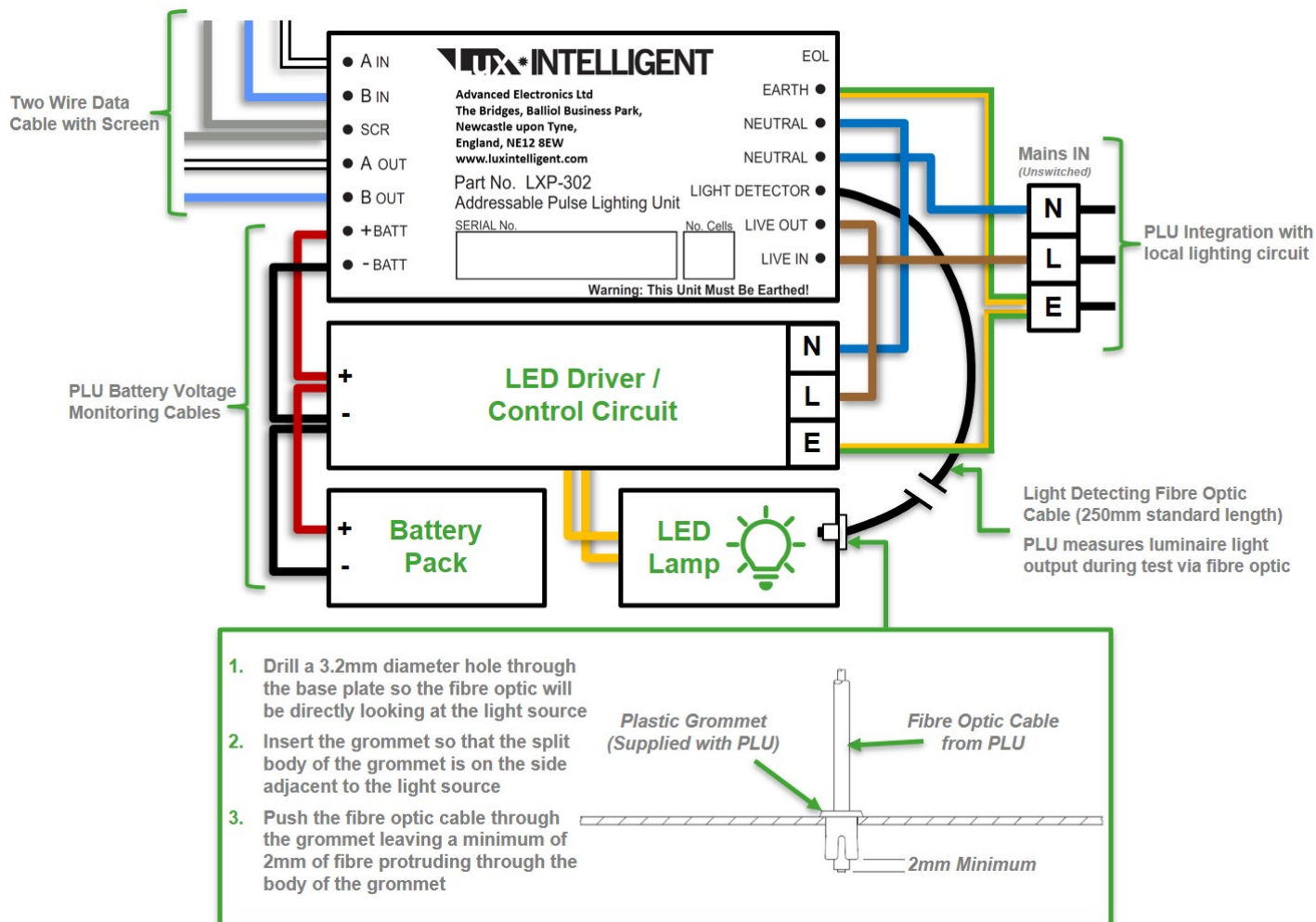
Order Codes and Options

LXP-302:	Standard PLU with 250mm fibre optic
LXP-302L:	Standard PLU with 1000mm fibre optic
LXP-110:	Input/Output Module

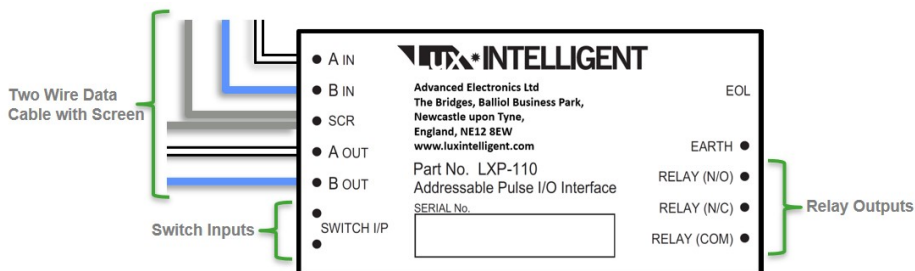
More Information

All pulse light modules communicate over a two-wire communication link. They all have two pairs of terminal chambers to allow loop in and loop out cabling. The LXP-302 module is supplied with the necessary grommets for mounting of the fibre optics.

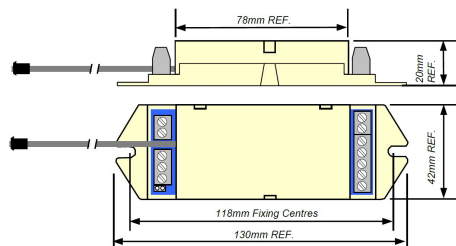
Typical LXP-302 Wiring Installation



LXP-110 Input/Output Unit



PLU and I/O Unit Dimensions



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As our policy is one of constant product improvement the right is therefore reserved to modify product specifications without prior notice.

EL/RL/240 Hold-Off Relay - obsolete

On some installations, it can sometimes be more advantageous to provide the emergency lighting from static inverter or central battery system. On systems using static inverters, it is sometimes necessary for the normal supply and static inverter supply to be selected automatically by a switching device either within or external to the luminaire.

The EL/RL/240 hold off relay provides a simple solution to this requirement. When a site uses a static inverter, it is not always tied to the grid frequency and could even be antiphase with the normal supply. When a relay tries to switch between these supplies there is a tendency for the relay to suffer from arcing between the normally open and normally closed contacts resulting in temporary short circuit between the two out of phase supplies. This will cause external circuit protection to operate.

Because the device uses two interposing relays for the two supplies and introduces a time delay of approximately 500mS between breaking the normal supply and connecting the static inverter supply, the device removes any risk of arcing across contacts due to phase differences between the two supplies. This is also reversed when the static inverter supply is removed and a similar delay is introduced prior to reconnection to the normal lighting supply.

A dimming isolation facility is incorporated as standard for use with dimming ballasts to enable full light output to be achieved in the emergency condition.



Features

- Enhanced change-over relay for static inverter supplied luminaires
- Automatic time delay to avoid arcing during change-over
- Built in dimming isolation feature

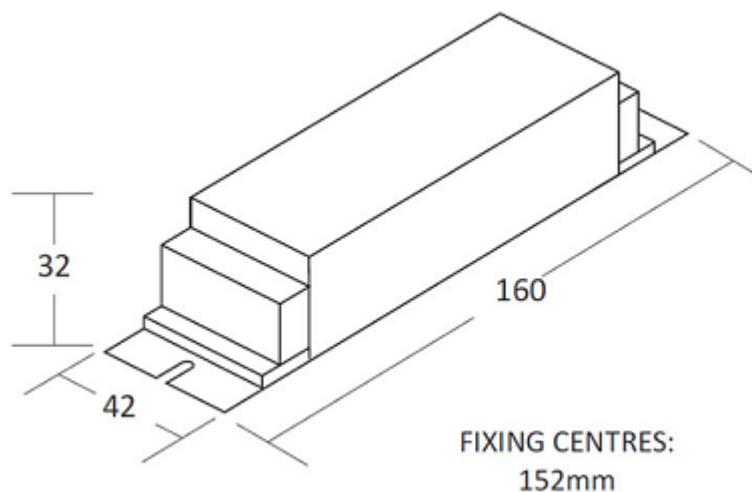
Specification

Supply Voltage	230Volt (220-240V) at 50Hz
Supply Current	18mA
Temperature Range	0 to 70°C
Relays	2 * DPCO and 1 * SPCO
Time Delay on change-over	500mS (approx.)
Relay Rated Voltage	240V AC
Relay Rated Current	4A (Maximum)
Dimensions (H*W*L)	32 * 42 * 160 (mm)
Fixing centres (mm)	152

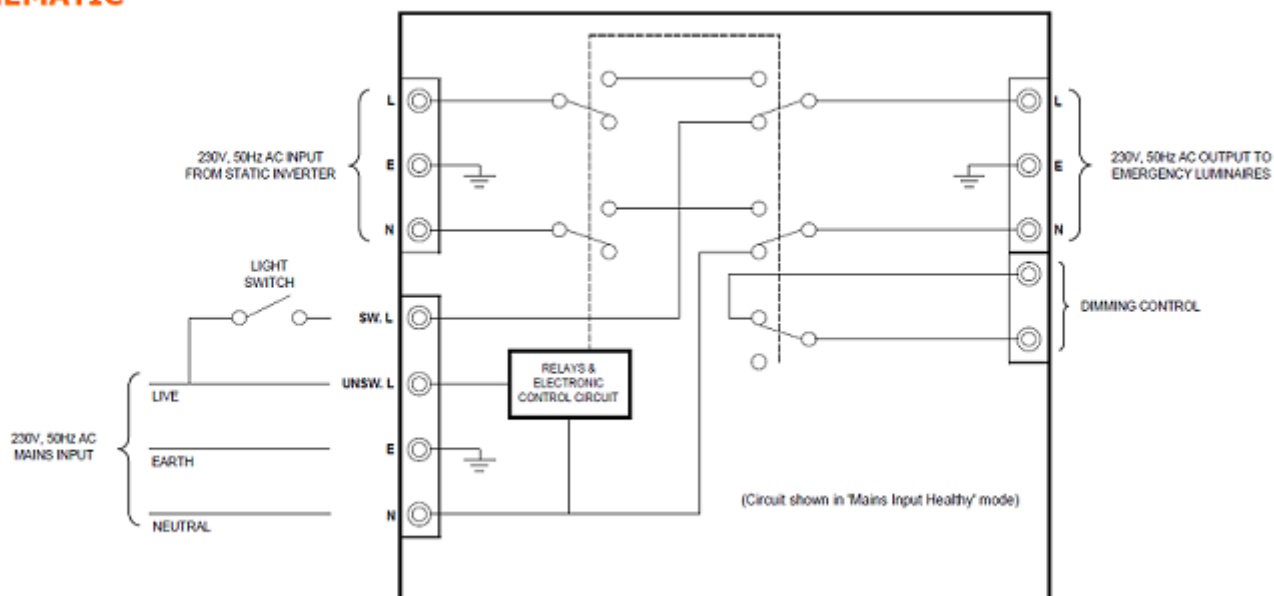
Order Codes and Options

EL/RL/240:	Enclosed hold-off relay with built-in delay
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Dimensions



SCHEMATIC



LuxIntelligent Panel with EasySafe - obsolete

The LuxIntelligent addressable emergency lighting control system is designed provide a simple yet powerful, reliable and cost effective maintenance solution for testing your emergency lights and maintaining results data for inspection and audit purposes.

The provision for emergency lighting is a requirement for non-domestic buildings and is embodied in British and European legislation. Employers, building owners and occupiers have a legal responsibility to test and maintain their emergency systems to the standards required by the Code of Practice for Emergency Lighting of Premises BS 5266-1 and also EN50172, Emergency Escape Lighting Systems.

It supports both maintained, non-maintained and slave luminaires in either self-contained, central battery or static inverter systems. It supports all of the LuxIntelligent range of fittings. On top of this, LuxIntelligent modules can be added to almost any luminaires to allow them to fully function on the LuxIntelligent system.

The control panel has a dynamic event log of 1000 events as well as a separate log for recording of test results. Records of all automatic (and manual) tests are generated and can be downloaded by connecting to a computer and using the appropriate LuxIntelligent Logger tool. The data is then transferred to a database on a PC for subsequent analysis listing and printing. Once the data is there, there is also the opportunity of transferring this information up to the LuxIntelligent cloud using the LuxIntelligent sync tool. Through the LuxIntelligent app it becomes very easy to share and use this information.



Features

- Each panel can support 996 luminaires
- Advanced graphical LCD user interface
- Loop powered communications
- Dedicated RS232 port supporting various modes of access
- 5 Amp power supply and charger to EN54-4
- Fit and forget panel, using your 'My LuxIntelligent' account to manage your emergency lighting
- 32 characters for zone text and 26 for each luminaire
- Networks can contain up to 200 panels
- 400 individual tests can be spread across up to 50 test groups
- Up to 200 zones available across each panel
- 1000 event and diagnostic log
- 24/7 monitoring, including cloud service and mobile app

Specification

	Lx-9400	Lx-9800
Display	Backlit 260 by 64 graphical LCD	Backlit 260 by 64 graphical LCD
Controls	Alpha-numeric keypad, navigation keys, mute and reset	Alpha-numeric keypad, navigation keys, mute and reset
Enclosure/colour	Steel IP30/RAL 7035	Steel IP30/RAL 7035
Dimensions (H*W*D) mm	385 * 450 * 125	950 * 450 * 188
Weight	8.6kg	25kg
Temperature	-5°C to 40°C	-5°C to 40°C
Humidity	95% max	95% Max

Cable entries (20mm knockouts)	18 top, 9 top rear, 2 bottom	18 Top, 9 Top Rear, 2 Bottom
Mains supply	220-240V, +10%, -15%, 47-63 Hz AC, 1A (Max)	220-240V, +10%, -15%, 47-63 Hz AC, 1A (Max)
Battery capacity	24V 4Ah (Min), 24V 12Ah (Max) Internal	4 x 12V 4Ah (Min), 4 x 12V 38Ah (Max) Internal
Charging current	2.4A, temperature compensated	2.4A, temperature compensated (*2)
Power supply	Separate 24Vdc, 5A universal input, switched mode	Separate 24Vdc, 5A universal input, switched mode (*2)
Number of loops	1 to 4	2 to 8
Devices per loop (total)	249 (up to 50 EasySafe luminaires per loop)	249 (Up to 50 EasySafe luminaires per loop)
Protocols	PuLsE	PuLsE
Auxiliary supply output ¹	24V _{dc} , 500mA	24V _{dc} , 500mA (*2)
Loop current	500mA	500mA
Event log	1000 event & diagnostic	1000 event & diagnostic
Number of Zones	200 maximum, across 4 loops (1000 when networked)	200 max. across 4 loops (1000 when networked)
Number of test groups	50	50 per panel, 100 across enclosure
Number of scheduled tests	400	400 per panel, 800 across enclosure
On-board relays	2 * 1A 30V AC/DC (fault)	4 * 1A 30V AC/DC (Fault)
Serial port	1 * RS232 on board for PC/modem/printer	2 * RS232 on board for PC/modem/printer
Integral modem (optional)	For connection to logging PC	For connection to logging PC

Order Codes and Options

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Lx-9403:	LuxIntelligent Lx-9400 panel with three loop drivers fitted
Lx-9404:	LuxIntelligent Lx-9400 panel with four loop drivers fitted
Lx-9805:	LuxIntelligent Lx-9800 panel with five loop drivers fitted

Easy*SAFE

EasySafe Luminaires

The LuxIntelligent panel works not only with full range of LuxIntelligent luminaires, but also can support the EasySafe range of loop-powered luminaires. Because the EasySafe range of luminaires (downlighters and exit signs) are powered by the loop, there are limitations in the quantities of such luminaires that can be supported on a loop. This is up to fifty. However, if less are used, there is the possibility mixing more conventional luminaires with the EasySafe style is possible.

As the EasySafe luminaires are loop powered, the panel will be dependant on the use of peripherals such as the Lxp-110 I/O device to sense local distribution board failures and isolations and force the EasySafe luminaires into emergency mode.

LuxIntelligent Ethernet, WiFi or 4G Router - obsolete

The LuxIntelligent Ethernet, WiFi or 4G Router permits remote interaction and monitoring of the LuxIntelligent emergency lighting test panel.

It is an economical and easy way to monitor your emergency lighting system from anywhere across the installation, using its local area network via an ethernet port or WiFi connection; or anywhere in the world via the 4G connectivity option.

There is no need to physically network panels across an installation. Simply tag each panel onto the site's internal network or connect externally via a mobile SIM card. Any number of computers on the network can download test data and access the full LuxIntelligent Cloud.

The Router can be installed next to or near any panel, with various antennas and accessories included to ensure connectivity. It is supplied with the serial interface lead for connecting to the panel. All that is required is a data connection to the closest local network hub or Fixed -IP mobile SIM card.

The device is easily configured using a standard Windows™ tools - simply allocate it an IP address and associated gateway information. The serial communications are then set up to match those of the panel and full access to the panel is available on the network. Controls can be configured so that only known IP addresses can access the device and password protection can be set.

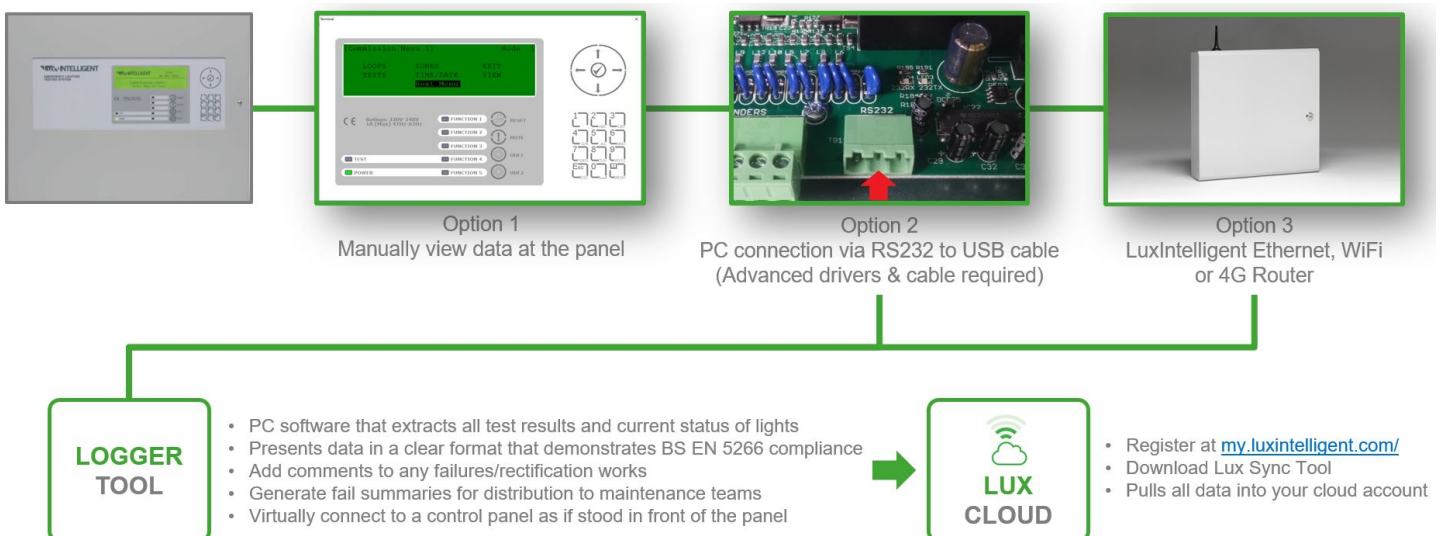
Full technical support is available to help guide users in the setup and connection of your router via our technical support team.



Features

- Allows full use of all LuxIntelligent monitoring features
- Dual Ethernet and choice of RS232 or RS485 port
- Modbus RTU to Modbus TCP Gateway built-in
- Ethernet, Wifi and 4G internet connection options with auto-failover
- Secure, lockable metal enclosure to keep your data connections secure

Connectivity Options



Specification

Cellular Interface

Number of antennas	2 external antenna(MAIN + AUX)
Connector	SMA-K
SIM	1* (3 V & 1.8 V) Standard SIM or eSIM

Ethernet Interface

Number of ports	2 x 10/100 Mbps, 2 x LAN or 1 x LAN + 1 x WAN
Magnet isolation	1.5 KV

WiFi Interface

Number of antennas	1 external antenna
Connector	RP-SMA-K (external antenna)
Standards	802.11b/g/n, supports AP & Client modes
Frequency bands	2.4 GHz
Security	WEP, WPA, WPA2
Encryption	64/128 AES, TKIP
Data speed	2*2 MIMO, 300 Mbps
RF output power (+/-1 dBm)	802.11b (19 dBm)
	802.11g (19 dBm)
	802.11g (19 dBm)
	802.11n (40 MHz / 17 dBm)
Receiving sensitivity (+/-1 dBm)	802.11b (-93 dBm)
	802.11g (-90 dBm)
	802.11n (20 MHz / -88 dBm)
	802.11n (40 MHz / -85 dBm)

Serial Interface

Type	1 x RS-232 or 1 x RS-485 (hardware configuration)
Connector	3-pin 3.5mm female socket
Baud rate	300bps to 115200bps

SDK

Supported programming languages	C, C++, Linux Shell Scripts
Flash available for SDK	4MB
RAM available for SDK	64MB

Other

Reset button	1 RST
LED indicators	1 x RUN, 1 x MDM, 1 x USR, 1 x RSSI, 1 x WLAN

Built-in	Watchdog, Timer
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Software

Network protocols	PPPoE, DHCP, NAT, DNS, NTP, SMTP, Telnet, VLAN, SSH2, DDNS, etc.
VPN tunnel	IPsec, OpenVPN, GRE
Firewall	DMZ, anti-DoS, Filtering (IP/Domain name/MAC address), Port Mapping, Access Control
Management	Web, CLI, SMS

Power Supply and Consumption

Connector	2-pin 3.5 mm female socket
Input voltage	9 to 36V DC
Power consumption	Idle: 100mA @ 12 V

Physical Characteristics

Metal Housing Dimensions	345mm(H) x 345mm(W) x 85mm(D)
Ingress Protection	IP30
Operating Temperature	-25 to +70 °C
Storage Temperature	-40 to +85 °C
Relative Humidity	5 to 95% RH

Approvals

EMI	EN 55032: 2012/AC: 2013 (CE & RE) Class B
EMS	IEC 61000-4-2 (ESD) Contact Level 2;
	IEC 61000-4-3 (RS) Level 2
	IEC 61000-4-4 (EFT) Level 2
	IEC 61000-4-5 (Surge) Level 2
	IEC 61000-4-6 (CS) Level 2



Order code

SP-3665-1	LuxIntelligent Serial to Ethernet, WiFi or 4G Router in Wall-mounted panel
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As our policy is one of constant product improvement the right is therefore reserved to modify product specifications without prior notice.