

7743L LIFELIGHTS EMERGENCY EVACUATION LIGHTING

Masterspec sections must be customised to suit the project being specified, by removing irrelevant information and adding project-specific information and selections.

1. GENERAL

This section relates to the supply, fixing and testing of **KTL Technologies Ltd - Lifelights** emergency evacuation lighting systems, as shown on the drawings, or otherwise specified or scheduled.

Modify or extend the above description to suit the project being specified. Illuminated EXIT signs are to be used whenever there is less than 50lux on the sign face in the event of a power failure. It is recommended that manufactured signs are used unless non-manufactured specifically required.

This section must be used in conjunction with one of the electrical sections, the options are:

ELECTRICAL BASIC - a single integrated electrical section

ELECTRICAL STANDARD – a single integrated electrical section

ELECTRICAL GENERAL – set, which comprises one general and 5 work

sections which collectively comprise electrical works. Refer to ELECTRICAL GENERAL for details.

This group of sections is intended for relatively uncomplicated developments such as single and multiple residential buildings and small to medium commercial projects. They are not intended for technically complex projects, small or large.

The services of a fire engineer and/or an electrical engineer should be retained for larger projects and any projects containing technically complex elements. Elements such as cable selection, switchboard design and lighting layouts can also justify specialist assistance. These can either be designed by a specialist consultant or specified as design/build items.

Some technically complex elements have been excluded from these sections. These include bulk power factor correction, standby power generation and high voltage work and DALI monitored systems.

Related work

1.1 RELATED SECTIONS

Refer to ~ for ~.

Include cross references to other sections where these contain related work.

Consider:

ELECTRICAL BASIC for electrical

ELECTRICAL STANDARD for electrical

ELECTRICAL GENERAL for electrical (and related sections)

CORADA SIGNS for architectural and environmental signage

Documents

1.2 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:

Brochure: Lifelights X2-E

Brochure: Lifelights X2-T

Copies of the above literature are available in PDF form or hard copy from:

Web: www.lifelights.co.nz

Email: sales@ktl-tech.com

Telephone: 04 233 1135

Facsimile: 04 233 1535

It is important to ensure that all personnel on site have access to accurate, up to date technical information on the many products, materials and equipment used on a project. In most cases individual products are not used in isolation, but form part of a building process. Also a particular manufacturer's and/or supplier's requirements for handling, storage, preparation, installation, finishing and protection of their product can vary from what might be considered the norm. Access to technical information can help overcome this potential problem.

Requirements

1.3 NO SUBSTITUTIONS

Substitutions are not permitted to any specified **Lifelights** or **KTL** brand products, components or accessories.

- 1.4 TEST CERTIFICATION
Ensure products have test certification to prove compliance with NZBC F8/AS1.
Note: There are no Verification Methods to show Alternative Solutions.
- 1.5 QUALIFICATIONS
Work to be carried out by registered electrical tradesmen experienced, competent and familiar with the materials and techniques specified.
- 1.6 SHOP DRAWINGS
Provide shop drawings and installation details. Refer to the general section DOCUMENTATION for timing and review requirements.

Warranties

- 1.7 WARRANTY - INSTALLER/APPLICATOR
Provide an installer/appliator warranty:
2 years: For electrical wiring and installation works
- Provide this warranty in the installer/appliator standard form.
 - Commence the warranty from the date normally applicable for this part of the work.

Refer to the general section WARRANTIES for additional requirements.
Modify or expand the clause to suit project requirements.

- 1.8 WARRANTY - MANUFACTURER/SUPPLIER
Provide a material manufacturer/supplier warranty:
2 years: For failure of any component
- Provide this warranty on the manufacturer's standard form.
 - Provide to warranty to main contractor in name of Principal
 - Commence the warranty from the date normally applicable for this part of the work.

Refer to the general section WARRANTIES for additional requirements.
Note: all batteries have a specific life and must be replaced as specified in AS 2293.1.
Modify or expand the clause to suit project requirements.

Performance

- 1.9 TEST FACILITIES
Carry out tests to demonstrate the emergency and evacuation systems performance to AS 2293.1 and the New Zealand Building Code.
- 1.10 COMMISSIONING TEST
On completion of the installation carry out a discharge check to the procedure in AS/NZS 2293.2 to meet the requirements of the New Zealand Building Code.
- 1.11 CERTIFICATE OF COMPLIANCE
Provide a certificate of compliance to the requirements of the Electricity Regulations 1997. Provide a log book to AS 2293.
- 1.12 DESIGN
Design the emergency and exit lighting system to the project fire report, the New Zealand Building Code and AS 2293.
- 1.13 DURATION OF OPERATION
Design the emergency lighting fittings and units to supply in-service duration for the various purpose groups to NZBC F6/AS1: Visibility in escape routes, or as otherwise defined by the project fire report.

2. PRODUCTS

Materials

- 2.1 **SELF CONTAINED AND NON MAINTAINED OR MAINTAINED EXIT SIGN**
Lifelights X2-T, single fitting with LED lamp, long life high temperature NiMH batteries and charger to AS 2293.3 with lamp either fully maintained or non-maintained (i.e. only energised when under test or power fail condition.) Refer to SELECTIONS for options.
Lifelights X2-T, ultra thin emergency luminaire, using LED technology, 3 watt stand above unit or DALI controlled.
- 2.2 **FACE GRAPHICS AND SIGN TYPE**
Exit signs single/double sided, ceiling/wall mounted with arrows as indicated on the drawings. Graphics and sign size to NZBC F8/AS1. Auditorium faces available on specification.
Modify the above clause to suit project requirements. Note: Graphics and sign size to NZBC F8/AS1 varies from AS 2293.
- 2.3 **SELF CONTAINED AND NON MAINTAINED EMERGENCY DOWNLIGHT**
Lifelights X2-E to AS/NZS 2293.2 and AS 2293.3, with long life high temperature NiMH batteries and lamp only energised when under test or power fail condition. Stand alone units or Dali controls and monitoring on specification by electrical or fire engineer. Lay out to suit NZBC F6/AS1 illumination requirements. Contact KTL Technologies Ltd for IES files and AS 2293 illumination.
Lifelights X2-E, led powered emergency downlight, 3W unit with battery backup mains or UPS supply, stand alone units or Dali controls.
- 2.4 **MOUNTING BRACKETS - EXIT SIGN**
Lifelights X2-T mounting brackets to suit wall, ceiling, recessed, suspended or other situations.
- 2.5 **MOUNTING BRACKETS - EMERGENCY DOWNLIGHT**
Lifelights X2-E fittings are supplied to fit MR16 recessed ceiling fittings with optional surface mount units available on request.
Modify to suit project specified.
- 2.6 **ADDITIONAL PRODUCT/S**
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The following additional products are available, delete clause when not specified. Refer to www.lifelights.co.nz, for specific advice and information.
Options:
- *In-shelf mounting; Lifelights Macron, super-bright light on the work-plane with no glare and totally concealed.*
- *Task lighting; Lifelights Platen, for direct light on the work plane, glare free, no ultra-violet emission.*
- *Led luminaire; Lifelights A-ten, led luminaire for bright UV free light.*
- 3. EXECUTION**
- Conditions**
- 3.1 **INSTALLATION - EMERGENCY ESCAPE LIGHTING AND SIGNAGE**
Install to AS 2293, AS/NZS CISPR 15, NZBC F6/AS1 and NZBC F8/AS1. Ensure work is electrically safe. Verify installation to NZBC G9/VM1: Electricity, AS/NZS 3000 and the relevant Electrical Codes of Practice.
Modify to suit requirements. Note differing requirements for Auditorium signage. (black face and green font).
- 3.2 **POWER SUPPLY**
Provide the power supply requirements and any other services that are necessary to the functioning of the system which are being supplied by others. Include the form, sizes and location relative to the elements and units in this installation. Ensure that circuitry to all emergency fittings is identified at switchboard, clearly labelled and wired to ensure isolation separate from other circuitry.
Clarify "provide by others" requirements in other sections as necessary.

3.3 MATERIALS, FITTINGS AND EQUIPMENT
Accept new and undamaged, of the required standard and complying with the relevant Standards, Codes and Regulations. All **X2-T** fittings to be supplied with **Lifelights** mounting brackets to suit wall, ceiling, recessed, suspended or other situations. Inform supplier of mounting and maintained or non-maintained requirements. All **X2-E** fittings to be supplied suitable for mounting within fixed 50 mm MR16 recessed ceiling fitting. Inform supplier of non-standard mounting and surface application.
Modify to suit project requirements.

3.4 OUTLET AND EQUIPMENT LOCATIONS
Outlet and equipment locations shown on the drawings are their actual location, but subject to verification for final height and position. Clarify the location of all elements and units relative to surrounding materials and finishes. Confirm final positioning. Allow for up to 2 metres of horizontal movement prior to installation.
Where required add additional requirements regarding final positioning.

Application

3.5 CABLE
Run mains cabling concealed, using conduit, chases and penetrations located and provided previously and to AS 2293.1 and the Electricity Regulations 1997.

3.6 FIRE PROTECTION
If necessary, protect against exposure to fire elements of the electrical distribution system, to AS 2293.1 and NZBC G9/VM1. Note: For self-contained systems no protection is necessary to mains supply.

3.7 LOCATE LIGHT FITTINGS
Locate to the requirements of AS 2293.1, the NZBC and fix to **Lifelights** requirements. Connect fittings to an unswitched 230 volt ac supply clearly labelled at switchboard. If the premises are to be un-occupied for periods of time greater than 13 hours, wire switchboard to ensure that the emergency lighting mains supply is left active at all times.

Completion

3.8 REPLACE DAMAGED WORK
Replace damaged, cracked or marked elements.

3.9 LEAVE CLEAN
Leave units and fittings clean and in full working order, wiring concealed and fire protected as required and with adjacent surface finishes unmarked. Leave work to the standard required by following procedures.

3.10 ENSURE CORRECT OPERATION
Ensure work is operating correctly, with equipment clean and lights and test circuitry operational.

3.11 ON-GOING MAINTENANCE
All emergency equipment to be regularly inspected and tested under the New Zealand Building Code. Batteries are to be replaced to schedule and returned to **KTL** for disposal. All other components are Return-to-base for any damage.

4. SELECTIONS

4.1 SELF CONTAINED AND NON MAINTAINED OR MAINTAINED EXIT SIGN

Brand: **Lifelights**
Product: X2-T~
Mounting: X2-T mounting bracket

Add face graphic options:

Specify single or double sided by adding D for double sided, i.e. X2-TD

Specify sign with no arrow as above or add X2-TR for arrow on right, X2-TL for arrow on left, and X2-TLR for arrow on left and right.

4.2 SELF CONTAINED AND NON MAINTAINED EMERGENCY DOWNLIGHT

Manufacturer: **Lifelights**

Product: X2-E

Mounting: to fit MR16 recessed ceiling fittings

X2-E units are provided to fit into recessed MR16 downlight fittings to requirements of specifier elsewhere but can be supplied complete with custom housings or mountings on request.

4.3 ADDITIONAL PRODUCT/S

Brand: **Lifelights**

Product: ~

Description: ~

Options; refer to www.lifelights.co.nz:

Brand: Lifelights

Product: Macron

Description: In-shelf mounting

Brand: Lifelights

Product: Platen

Description: Task lighting

Brand: Lifelights

Product: A-ten

Description: Led luminaire