



NSAI
Standards

Irish Standard
I.S. 3217:2013+A1:2017

Emergency Lighting and Amendment 1:2017

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I.S. 3217:2013+A1:2017

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I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

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I.S. 3217:2013+A1:2017

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Údarás um Chaighdeáin Náisiúnta na hÉireann

DECLARATION

OF

SPECIFICATION

EMERGENCY LIGHTING AND AMENDMENT 1:2017

AS

THE IRISH STANDARD SPECIFICATION FOR
EMERGENCY LIGHTING AND AMENDMENT 1:2017

NSAI in exercise of the power conferred by section 16 (5) of the National Standards Authority of Ireland Act, 1996 (No. 28 of 1996) and with the consent of the Minister for Jobs, Enterprise and Innovation, hereby declare as follows:

1. This instrument may be cited as the Standard Specification (Emergency Lighting and Amendment 1:2017) Declaration, 2017.
2. (1) The Specification set forth in the Schedule to this declaration is hereby declared to be the Standard Specification for Emergency Lighting and Amendment 1:2017.
(2) The said Standard Specification may be cited as Irish Standard 3217:2013+A1:2017 or as I.S 3217:2013+A1:2017.
3. (1) The Standard Specification (Emergency Lighting) Declaration 2013 is hereby revoked.
(2) Reference in any other Standard Specification to the Instruments hereby revoked and to Irish Standard 3217:2013 thereby prescribed, shall be construed, respectively, as references to this Instrument and to Irish Standard 3217:2013+A1:2017.

Table of Contents

DECLARATION	1
Schedule.....	9
1 Scope	9
2 Normative references	9
3 Terms and definitions	10
4 Transition arrangements from I.S. 3217:1989 and I.S. 3217:2008 to Ⓐ I.S. 3217:2013+A1:2017 Ⓐ	17
5 Description of emergency lighting systems.....	18
5.1 General.....	18
5.2 Self-contained luminaire systems.....	18
5.3 Central power systems (CPS).....	18
5.4 Central generator-powered systems (CGPS).....	19
6 Need for emergency lighting	20
6.1 General.....	20
6.2 Emergency escape lighting	20
6.3 Standby lighting.....	20
7 Emergency escape lighting	21
7.1 General.....	21
7.2 Escape route lighting	21
7.3 Open area (anti-panic) lighting.....	24
7.4 High risk task area lighting	25
7.5 Standby lighting.....	25
8 Emergency lighting design requirements	26
8.1 General.....	26
8.2 System integrity.....	26
8.3 Failure of an emergency lighting luminaire	26
8.4 Mounting height of luminaires.....	27
8.5 Siting of emergency escape lighting luminaires	27
8.6 Emergency exit signs	31
8.7 Emergency lighting luminaires	34
8.8 Central power supply systems	34
8.9 Batteries for self-contained luminaires	35
9 Circuit requirements and test facilities for self-contained luminaire systems.....	36
9.1 General.....	36
9.2 Control equipment.....	36
9.3 Test facility	36
10 Central Power Systems (CPS): Cables, wiring systems, circuit requirements, test facilities and location for central power supply systems	37
10.1 General.....	37
10.2 Cables.....	37
10.3 Wiring.....	38
10.4 Location of central power systems and associated switchgear.....	41
10.5 Testing facility and circuit protection	41
11 Consultation	43
11.2 Supply of plans	43

12	Choice of appropriate emergency lighting systems	44
12.1	Duration of operation	44
12.2	Type of system	44
13	Emergency lighting design	45
13.1	General	45
13.2	Determination of requirements	45
13.3	Design of illuminance.....	45
13.4	Design of system	46
14	Handover documentation and logbook.....	47
14.1	Handover documents	47
14.2	Logbook format and location	47
14.3	Updating and managing the logbook.....	47
15	Managerial responsibilities	49
16	Commissioning, maintenance, inspection and testing.....	50
16.1	General	50
16.2	Routine maintenance, inspections and testing.....	50
	Annex A (informative) Measuring illuminance of emergency lighting	57
	Annex B (normative) Emergency Exit Signs.....	59
	Annex C 1 (normative) Certificates and Reports	61
C.1	General	61
	Annex C 2 (normative) Emergency Lighting System Certificate of Design.....	63
	Annex C 3 (normative) Emergency Lighting System Certificate of Installation	64
	Annex C 4 (normative) Emergency Lighting System Final Certificate of Commissioning	65
	Annex C 5 (normative) Emergency Lighting System Certificate of Handover.....	66
	Annex C 6 (normative) Emergency Lighting System Certificate for Annual Inspection & Testing.....	67
	Annex C 7 (normative) Emergency Lighting System Report for inspection, testing & servicing.....	68
	Annex C 8 (normative) Emergency Lighting System Report following annual inspection & testing	69
	Annex D (normative) Emergency Lighting System Requirements for Certificate of Annual Inspection and Testing	70
	Annex E 1 (informative) Emergency escape lighting for toilet areas – typical arrangements.....	72
	Annex E 2 (informative) Example of areas requiring emergency escape lighting	73
	Annex F (informative) Emergency Lighting System Model schedule for periodic inspections, tests & servicing due dates.....	74
	Annex G (normative) Emergency lighting in different types of building.....	75
G.1	General	75
G.2	Multi-storey dwellings (Purpose Group 1(c), residential, as defined in TGD-B, 2006)	76
G.3	Other residential (Purpose Group 2(b) as defined in TGD-B, 2006)	77
G.4	Other non-residential Buildings (Purpose Groups 3, 4(a), 4(b), 6, 7(a), 7(b) as defined in TGD-B, 2006).....	77
G.5	Places of assembly (Purpose Group 5, assembly & recreation, as defined in TGD-B, 2006)	78





Annex H (informative) Commissioning	80
H.1 General	80
H.2 Emergency lighting commissioning methodology	81
H.3 Classification of ATS Types	85
Annex I (informative) Cable support systems	86
I.1 Commentary on Annex I	86
Annex J (informative) Model Emergency Lighting Register	88
Annex K (informative) Cabling for central power systems (CPS) - Typical arrangements	89

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Foreword

The aim of this Irish Standard is to promote a wider understanding of the different types of emergency lighting systems and modes of operation and to give guidance on their correct application, in accordance with legislation, Building Regulations and European standards, to the varied requirements of different categories of buildings.

The emergency lighting system is an integral part of the overall design of a building.

 Amendments are indicated by the TAGs   


This Standard has been prepared with the assistance of the National Standards Authority of Ireland Fire Safety Standards Committee, representation on which includes the following:

- Association of Consulting Engineers of Ireland;
- Office of Public Works (OPW);
- Institution of Fire Engineers (IFE);
- Electrical Contractors Association;
- Association of Electrical Contractors of Ireland;
- Electrical Manufacturers and Distributors Association of Ireland (EMDA);
- Emergency lighting manufacturers;
- Chief Fire Officers Association (CFOA);
- National Directorate for Fire and Emergency Management (NDFEM);
- Fire Industry Association of Ireland (FIAI);

The requirements and recommendations contained in this Standard are intended to encourage uniformity of application in providing for the safety of persons in the event of failure of the supply to the normal lighting, having due regard to potential hazards and degree of familiarity of occupants with the building. This Standard recognizes that, in addition to ensuring safe unobstructed means of escape, emergency lighting is needed to assist in the immediate location and operation of fire alarm call points, refuge areas and firefighting equipment and to minimize panic. Emergency lighting is also required for areas where normal activities are required to continue substantially unchanged.

For wiring requirements refer to ET 101.

 This document, I.S. 3217:2013+A1:2017 has been prepared by the NSAI FSSC Emergency Lighting Committee.

This document is an amendment to I.S. 3217:2013 – Emergency Lighting

I.S. 3217:2013+A1:2017

There have been a number of revisions made with the main changes being made to Clause 10 *Central Powered Systems* and 8.5.2.2 *Lift cars and lift shafts*.

The final consolidated text, I.S. 3217:2013+A1:2017 will include a number of minor editorial corrections which are not detailed in this document.

The term "C.T.U." has been replaced by "test facility(s)" throughout the document.

IMPORTANT - For transition arrangements from I.S. 3217:1989 & I.S. 3217:2008 to I.S. 3217:2013+A1:2017, see Clause 4

Compliance with an Irish Standard does itself not confer immunity from legal obligations.

On publication this Standard updates and supersedes I.S. 3217:2013. 

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Introduction

Emergency lighting is provided for use when the supply to the normal lighting fails and is therefore powered from a source independent of that supplying the normal lighting.

For the purposes of this Standard, emergency lighting is regarded as a generic term of which there are a number of specific forms, as shown in Figure 1.

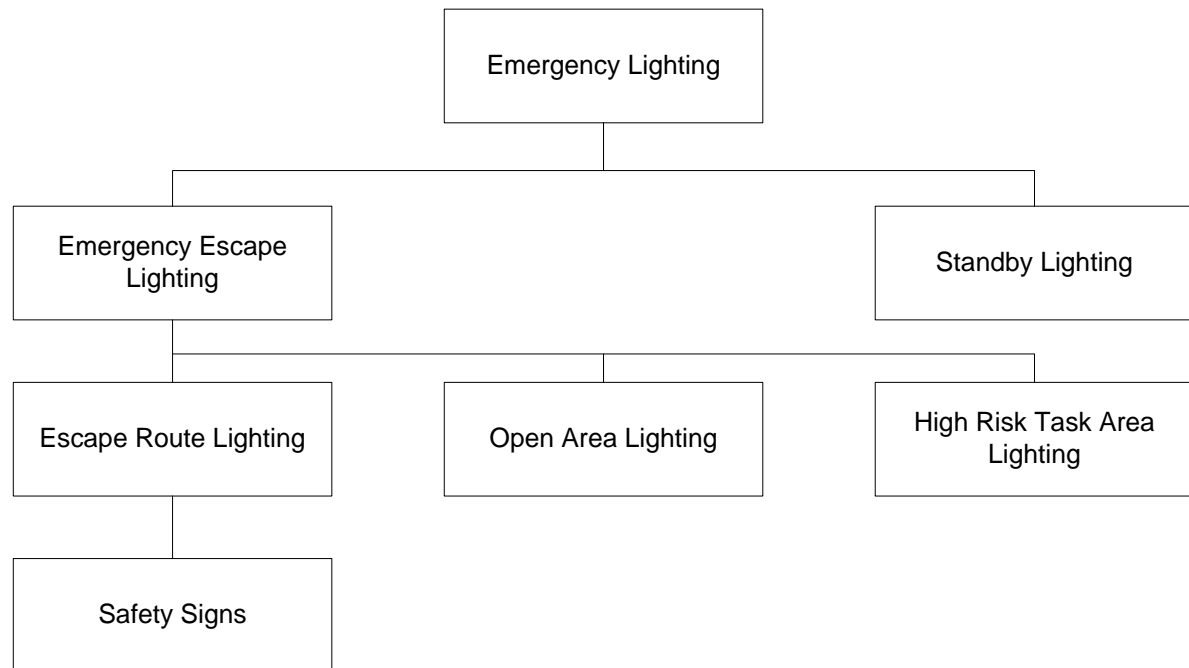


Figure 1 — Specific forms of emergency lighting

The requirements given in this Standard are a minimum for design purposes and calculations should be based on the minimum light-output condition of the luminaire. The flow of light for escape routes and open areas should be downward to the floor and illumination should be provided to any obstruction up to 2 m height above the floor. The contribution from room surface inter-reflections should be ignored.

The overall objective of emergency escape lighting is to enable safe exit from a location in the event of failure of the normal supply.

The objective of escape route lighting is to provide adequate visual conditions and directions for safe passage on escape routes and allow occupants to reach escape routes from open areas. It should allow fire alarm panels, call points, firefighting and safety equipment to be readily identified. It should allow hazards such as stairs, changes of direction, intersections, slopes and obstructions to be identified. It should provide adequate external illumination at final exits. If the immediate area outside the final exit has hazards in darkness then risk assessment should determine if further emergency luminaires are needed until a place of safety can be reached.

A1) In areas or places where a continuous operation is required, during the failure of the supply to the normal lighting, then standby lighting should be installed. A standby lighting system should provide adequate illumination for the visual tasks. If standby lighting is used to provide emergency escape

lighting, the installation shall comply with the provisions of this standard and the appropriate product and wiring standards. ^(A1)

The objective of escape route safety signs (emergency exit signs) is to provide appropriate visual conditions and direction finding to allow escape routes to be readily located and used.

The objective of open area lighting is to reduce the likelihood of panic and to enable safe movement of occupants towards escape routes by providing appropriate visual conditions and direction finding.

The objective of high-risk task area lighting is to contribute to the safety of people involved in a potentially dangerous process or situation and to enable proper shut down procedures to be carried out for the safety of other occupants at the location.

People in work places should have received appropriate induction, be familiar with the layout of a building and its safety provisions and can effect an orderly evacuation in the event of an emergency. In large public places such as hotels, conference, shopping and sports centres there are likely to be large numbers of people who will be unfamiliar with the layout of the building and escape procedures.

Visual acuity varies considerably from person to person with regard to the amount of light required to perceive an object clearly and the time taken to adapt to changes in illuminance. The designer should, through risk assessment, take into account any special circumstances of the users of a building and determine if the level of illumination needs to be higher than the base standard. In general, older people need more light and take a longer time to adapt to low illuminance on a hazard or escape route. Where users have disabilities or visual impairments or where use of alcohol is likely, a higher level of illumination may be required.

There are techniques, including way-guidance systems, which can be applied to escape routes to enhance the effectiveness of a conventional emergency lighting system. These techniques are not included in this Standard.

Much anxiety and confusion can be alleviated by strategically placed signs indicating the way out of a location. It is very important that emergency exits are clearly indicated and visible at all material times.

Schedule

A1 Emergency Lighting and Amendment 1:2017 **A1**

1 Scope

The Standard gives requirements for the clear indication of escape routes, the minimum level of illumination and the minimum duration of operation for emergency escape lighting in the event of failure of supply to the normal lighting.

2 Normative references

This Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references subsequent amendments to or revisions of any of these publications apply to this Irish Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

A1 **A1**

I.S. EN 1838:2013, *Lighting Applications - Emergency Lighting*

A1 I.S. EN 12665, *Light and Lighting - Basic Terms and Criteria for Specifying Lighting Requirements* **A1**

I.S. EN 50091, *Uninterruptible Power Systems (ups) Part 1: General and Safety Requirements*

I.S. EN 13032-3, *Measurement and Presentation of Photometric Data of Lamps and Luminaires - Part 3: Presentation of Data for Emergency Lighting of Work Places*

I.S. EN 50171:2001, *Central Power Supply Systems*

I.S. EN 50172:2004, *Emergency Escape Lighting Systems*

A1 I.S. EN 50200:2015 **A1**, *Method of Test for Resistance to Fire of Unprotected Small Cables for Use in Emergency Circuits*

I.S. EN 50525-3-11, *Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U₀/U) - Part 3-11: Cables with special fire performance - Flexible cables with halogen-free thermoplastic insulation, and low emission of smoke*

I.S. EN 60529, *Degrees of Protection Provided by Enclosures (IP Code)*

A1 I.S. EN 60598 -1:2015, *Luminaires – Part 1: General requirements and tests* **A1**

I.S. EN 60598-2-22, *Luminaires - Part 2-22: Particular Requirements - Luminaires for Emergency Lighting*

I.S. EN 62034:2012, *Automatic Test Systems for Battery Powered Emergency Escape Lighting*

ET 101, *National Rules for Electrical Installations*

ET 105, *National Rules for Electrical Insulations in Potentially Explosive Atmospheres*

ISO 3864-1, *Graphical symbols - Safety colours and safety signs - Part 1: Design principles for safety signs and safety markings*

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