



NSAI

ANNUAL REPORT 2023

**NSAI TECHNICAL COMMITTEES
(NSAI/ETC/TC 02 - ELECTRICAL
INSTALLATIONS)**

Contents

1	Chairman's Statement	3
2	Introduction	5
3	Scope of TC.....	5
4	Structure and Membership	6
4.1	Structure	6
4.2	Members	6
4.2.1	Members NSAI/ETC/TC 02/WG 01	7
4.2.2	Members NSAI/ETC/TC 02/WG 03	7
4.2.3	Members NSAI/ETC/TC 02/WG Queries	8
5	Summary of 2023 Activities	8
5.1	National	8
5.1.1	Meetings NSAI/ETC/TC 02	8
5.1.2	Meetings NSAI/ETC/TC 02/WG 01	8
5.1.3	Meetings NSAI/ETC/TC 02/WG 03	9
5.1.4	Meetings NSAI/ETC/TC 02/WG Queries	9
5.1.5	National Work	9
5.2	International/Regional	10
5.2.1	Meetings	10
5.2.2	International/Regional Work	10
5.2.3	International/Regional Standards Reviewed	10
5.2.4	International/Regional Voting Results	10
5.3	Regulatory Development/Update	11
6	Irish Publications/Reviews.....	11
6.1	Publications	11
6.2	Reviews	11
7	Work programme for 2024 onwards	12
8	Additional Information	12

1 Chairman's Statement

The year was a productive year and meetings continued online under the professional guidance of NSAI staff.

The NSAI on behalf of NSAI/ETC/TC2 has launched a public consultation for the draft Amendment to I.S. 10101:2020/prA1:202x, Amendment to The National Rules for Electrical Installations. The public consultation period is from Monday 27th of November 2023 until Tuesday 27th of February 2024, inclusive.

The scope of the draft Amendment:

1. Revision of Chapter 7:

i) Part 722 "Supply of electric vehicle"

which specifies the requirements for:

- circuits intended to supply energy to electric vehicles.
- circuits intended for feeding back electricity from electric vehicles.

Circuits covered by this part are terminated at the connecting point.

ii) Part 718 "Communal facilities and workplaces"

which specified the requirements for electrical installations applicable to communal facilities and workplaces.

2. Modifications to various clauses within the document.

3. Modifications to Annex 8A:

Annex 8 A (informative) Energy Efficiency has been modified to Chapter 8 Energy Efficiency.

Chapter 8 consists of two sections.

- 8.1 - Functional aspects - Energy efficiency and,
- 8.82 - Functional aspects - Prosumer's low-voltage electrical installations.

Sales figures for I.S. 10101 exceeded 15,000 Copies by December 2023.

There has been a significant amount of work carried out by the working groups under NSAI/ETC/TC 02 throughout 2023.

Working Group (WG1) = Wiring Rules (I.S. 10101)

WG1 met regularly to review existing rules, and to propose amendments or corrigenda. WG1 also reviews forthcoming IEC and CENELEC documents, which will eventually become harmonized documents in the HD 60364 series and will therefore need in future to be incorporated into I.S. 10101.

Working Group (WG3) = electric vehicles charging

WG3 was established to coordinate suppliers, designers, distributors, contractors and regulatory bodies to review wiring to charging units for electric vehicles. The existing rules in I.S. 10101 emanate from HD 60364 section 722. WG3 carried out a review of the latest HD 60364 section 722 and reviewed current practice in Ireland 2022. They proposed an amendment to the existing rules in I.S. 10101.

Working Group (WG Queries)

This WG was established following on from the NSAI/ETC/TC 02 meeting on 15th April 2021, to prepare proposed responses to open queries in relation to the national wiring rules. The WG prepare proposed responses which are then considered at the next NSAI/ETC/TC 02 meeting. This WG has streamlined the query process and has allowed the NSAI/ETC/TC 02 meetings to focus more on international standardization matters. Incoming technical queries relating to wiring rules have a dedicated email address wiringrules@nsai.ie, and these queries get logged in the queries log.

A number of NSAI/ETC/TC 02 members are attending the new ETC working group on adjacent HV and LV earthing systems (NSAI/ETC/WG 01).

Attendance at NSAI/ETC/TC 02 meetings has been high, despite the effect of the Covid-19 virus and the switch to online meetings. Interest and involvement from the electrical industry has grown significantly. The committee have decided to have 2 face to face meetings in March and October 2024.

An action identified in the strategic business plan for NSAI/ETC/TC 02 was to improve Ireland's attendance at international events, by encouraging membership on IEC and CENELEC committees. There have been improvements in this area throughout the year with a number of members attending international meetings and participating in international committees. The secretary of NSAI/ETC/TC 02 in particular has attended a significant number of meetings throughout the year.

NSAI will host two international meeting in 2024 directly linked with the wiring rules.

- IEC TC 64/MT 12 - Verification of Electrical Installations and
- IEC TC 64/WG 48 Safety aspects of local generation and electrical energy storage

SGS Ltd. were appointed as the new Safety Supervisor Body (SSB) from January 1st 2023. Most RECI staff transferred over to SGS and continuity of representation for Safe Electric on NSAI committees has remained the same.

Finally, I would like to thank NSAI/ETC/TC 02 Secretary Amanda-Jane Gainford for her guidance and professionalism throughout the year, which has made the role of chair much easier.

Paul Dunne

Chair of NSAI/ETC/TC 02.

2 Introduction

NSAI/ETC/TC 02 is responsible for the maintenance and revision of the national standards for electrical installations in residential, commercial and industrial premises up to and including 1kV a.c..

The National Wiring Rules are a national standard. They are recognised in common law as the state of the art and are recognised by the Health and Safety Authority (HSA) as a means of complying with the Electricity Regulations. Similarly, the National Rules for Electrical Installations is cited in the Building Regulations as the electrical installation wiring standards required in order to comply with the statutory requirements. Moreover, National Rules for Electrical Installations has formally been recognised by the Commission for Regulation of Utilities (CRU) as the technical rules to be observed by registered electrical contractors (RECs). In 2020 the National Rules for Electrical Installations was published as I.S. 10101, replacing ET 101.

The National Wiring Rules are prepared in consultation with the regulator, the inspectorate, contractors, designers, and a broad range of electrical industry experts. This collaboration ensures that national consensus exists, which is the most important aspect of the work of NSAI/ETC/TC 02. A major feature of the work is the obligation and privilege to participate with both European and international standards bodies, namely CENELEC and IEC. NSAI/ETC/TC 02 engages with CENELEC TC64 and IEC TC64. TC64 being the expert body for "Electrical installations and protection against electric shock". NSAI/ETC/TC 02 works to ensure that Irish concerns are considered during in the creation and maintenance of rules at IEC and CENELEC level. NSAI/ETC/TC 02 is also responsible for the adaption and adoption of the resultant harmonization documents created at this level into the National Wiring rules for Ireland.

3 Scope of TC

The primary scope of the committee is to mirror the work of the following international committees:

Committee Name	Committee Title
IEC TC64	Electrical installations and protection against electric shock
CLC TC64	Electrical installations and protection against electric shock

NSAI ETC TC2 is responsible for the development, maintenance and revision of a coherent set of national standards and other deliverables for electrical installations in residential, commercial and industrial premises, including the preparation, maintenance and revision of Standards, dealing with electrical installations up to 1000V.

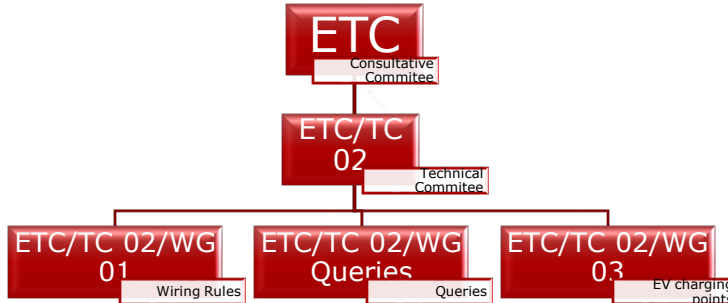
The latest version of the “National Rules for Electrical Installations” I.S. 10101 was published on the 6th of March 2020.

I.S. 10101 specifies the requirements for the design, erection, and verification of low-voltage electrical installations. This Standard is intended to provide for the safety of persons, livestock and property against dangers and damage, which may arise in the reasonable use of electrical installations, and to provide for the proper functioning of those installations.

4 Structure and Membership

4.1 Structure

The Figure below illustrates the structure of the Committee:



4.2 Members

The table below provides the committee members for the year:

Organisation	Role
ACEI Association of Consulting Engineers of Ireland	Committee member
AECI The Association of Electrical Contractors	Committee member
CDETB City of Dublin Education & Training Board	Committee member
CIBSE Chartered Institution of Building Services Engineers	Committee member
CRU Commission for Regulation of Utilities	Committee member
DCC Dublin City Council	Chair
DKIT Dundalk Institute of Technology	Committee member
DSO Distribution Service Operator	Committee member
ECA Electrical Contractors Association in Ireland	Committee member
EMDA Electrical Manufacturers and Distributors Association	Committee member
EIFI Electrical Industries Federation of Ireland	Committee member
EI Engineers Ireland	Committee member
HSA Health & Safety Authority	Committee member
HSE Health Service Executive	Committee member
IET Institution of Engineering & Technology	Committee member
NECI National Electrical Contractors Ireland	Committee member
NSAI National Standards Authority of Ireland	Secretary
OPW Office of Public Works	Committee member
SEAI Sustainable Energy Authority of Ireland	Committee member
Solas Future Education and Training	Committee member
TUD Technical University Dublin	Committee member
Safe Electric	Committee member
Liaison Liaison NSAI/ETC/TC 03	National observer
Liaison Liaison NSAI/ETC/TC 04	National observer
Liaison Liaison NSAI/ETC/TC 06	National observer
Liaison Liaison NSAI/ETC/TC 10	National observer
Liaison Liaison NSAI/ETC/TC 20	National observer
Liaison Liaison NSAI/TC16/WG5	National observer

4.2.1 Members NSAI/ETC/TC 02/WG 01

Organisation	Role
ACEI Association of Consulting Engineers of Ireland	Committee member
CRU Commission for Regulation of Utilities	Committee member
DCC Dublin City Council	Chair
DSO Distribution Network Operator	Committee member
ESBI Electricity Supply Board	Committee member
Engineers Ireland	Committee member
Geoghegan Electrical	Committee member
NeoDyne	Committee member
NSAI National Standards Authority of Ireland	Secretary
TUD Technical University Dublin	Committee member
Safe Electric	Committee member
HSE Health Service Executive	National observer

4.2.2 Members NSAI/ETC/TC 02/WG 03

Organisation	Role
AECI The Association of Electrical Contractors	Committee member
ARUP Leaders in Sustainable Design	Committee member
CRU Commission for Regulation of Utilities	Committee member
DCCAIE Department of the Environment, Climate and Communications	Committee member
DOT Department of Transport	Committee member
DSO Distribution Network Operator	Chair
Eninserv Limited	Committee member
ESBN Electrical Supply Board Networks	Committee member
EV Charging Ireland	Committee member
EVCI Electric Vehicle Charger Installers Association of Ireland	Committee member
EVHAC Electric Vehicle Heat Pump/Air Conditioning	Committee member
HES Harrington Electrical Services	Committee member
HSE Health Service Executive	Committee member
IET Institution of Engineering & Technology	Committee member
NSAI National Standards Authority of Ireland	Secretary
SEAI Sustainable Energy Authority of Ireland	Committee member
TUD Technical University Dublin	Committee member
Safe Electric	Committee member
Liaison Liaison NSAI/ETC/TC 10	Committee member

4.2.3 Members NSAI/ETC/TC 02/WG Queries

Organisation		Role
CRU	Commission for Regulation of Utilities	Committee member
DCC	Dublin City Council	Chair
DKIT	Dundalk Institute of Technology	Committee member
DSO	Distribution Network Operator	Committee member
	Engineers Ireland	Committee member
ESBN	ESB Networks	Committee member
HSE	Health Service Executive	Committee member
NSAI	National Standards Authority of Ireland	Secretary
	Safe Electric	Committee member
TUD	Technical University Dublin	Committee member
	Liaison NSAI/ETC/TC 10	Committee member

5 Summary of 2023 Activities

5.1 National

5.1.1 Meetings NSAI/ETC/TC 02

In 2023, meetings were held virtually, except for one Face to Face meeting of NSAI/ETC/TC 02/WG 1. NSAI/ETC/TC 02 meetings were typically hosted in the mornings. Where issues would benefit from longer consideration, then these were often carried over to working group meetings held later in the day. Committee members attended the following National meetings as follows.

Meeting No.	Date	Minutes Reference
1	19 th January 2023	N2595
2	16 th February 2023	N2613
3	16 th March 2023	N2635
4	20 th April 2023	N2660
5	18 th May 2023	N2680
6	20 th July 2023	N2708
7	21 st September 2023	N2741
8	19 th October 2023	N2772
9	16 th November 2023	N2792

5.1.2 Meetings NSAI/ETC/TC 02/WG 01

Meeting No.	Date	Minutes Reference
1	19 th January 2023	N0132
2	16 th February 2023	N0137
3	16 th March 2023	N0140
4	20 th April 2023	N0144
5	18 th May 2023	N0146
6	20 th July 2023	N0151
7	27 th July 2023	N0154
8	1 st August 2023	N0158
9	31 st August 2023	N2719

10	21 st September 2023	N0168
11	19 th October 2023	N2754
12	1 st November 2023	N2760
13	16 th November 2023	N0174
14	30 th November 2023	N0175

5.1.3 Meetings NSAI/ETC/TC 02/WG 03

Meeting No.	Date	Minutes Reference
1	14 th February 2023	N0215
2	2 nd May 2023	N0219
3	3 rd October 2023	N0227
4	28 th November 2023	N0234

5.1.4 Meetings NSAI/ETC/TC 02/WG Queries

Meeting No.	Date
1	16 th January 2023
2	14 th February 2023
3	13 th March 2023
4	17 th April 2023
5	17 th July 2023
6	18 th September 2023
7	16 th October 2023
8	13 th November 2023

5.1.5 National Work

The key focus for NSAI/ETC/TC 02 in 2023 was promoting the amendment to the New National Rules for Electrical Installations I.S. 10101.

NSAI maintained a [FAQs](#) page for I.S. 10101.

NSAI/ETC/TC 02 meetings include agenda items for liaising with other NSAI committees, including receiving reports/presentations and providing technical replies to queries.

The regular works of considering public queries in relation to I.S. 10101 continued, as well as reviewing forthcoming proposals from CENELEC and IEC for which Ireland has a vote. A dedicated workgroup met regularly throughout the year to review the text of new HD documents clause by clause to ascertain the impact on I.S. 10101.

NSAI/ETC/TC 02 membership has remained strong throughout 2023, with attendances at an all-time high, and enquiries from non-members seeking to get involved.

5.2 International/Regional

5.2.1 Meetings

Committee Members attended international CENELEC (CLC) and IEC meetings as follows:

Meeting No.	Committee Name	Location	Date
1	IEC/TC 64/MT 1	Norway	24/01/2023 - 26/01/2023
2	IEC/TC 64/MT 12	London	28/02/2023 - 02/03/2023
3	SyC SET	Berlin	22/03/2023 - 24/03/2023
4	IEC/TC 64/MT 12	Vienna	14/06/2023 - 17/06/2023
5	CLC/TC 64 Plenary	Vienna	13/06/2023 - 15/06/2023
6	IEC/TC 64/JWG 44	Remote	19/09/2023 - 21/09/2023
7	IEC/TC 64/MT 1	Nice	07/11/2023 - 10/11/2023
8	IEC/TC64 joint MT1, MT3, JWG44, WG48	London	20/11/2023 - 21/11/2023
9	IEC/TC 64/WG 48	London	20/11/2023 - 23/11/2023

Ireland is fortunate to have a seat at CENELEC & IEC and will need to work to hold its high standing in international circles. The meetings demonstrate how the speed and volume of electrical standardisation has grown, and how countries have evolved their organisations to respond to the rapidly changing electrical environment.

5.2.2 International/Regional Work

Members of the committee attended maintenance teams and working group meetings.

5.2.3 International/Regional Standards Reviewed

All draft standards in the 60364-series issued by IEC TC64 and CLC TC64 to national mirror committees are received and considered by NSAI/ETC/TC 02. Consideration includes how the proposed new standards affect the current National Rules for Electrical Installations I.S. 10101:2020.

5.2.4 International/Regional Voting Results

NSAI/ETC/TC 02 monthly meetings propose a vote where required for IEC or CENELEC documents, which NSAI submits to the relevant bodies.

NSAI/ETC/TC 02 vote on all documents at IEC and CENELEC documents using a default voting strategy. The committee have actively voted on 22 documents in 2023 and have submitted 14 sets of comments.

Body	Vote Reference	Comments Submitted	Decision
IEC	64/2572/CDV	Yes	Approve
CLC	prHD 60364-4-42:2022	Yes	Approve
IEC	64/2573/CDV	Yes	Approve
IEC	64/2574/CDV	Yes	Approve

IEC	64/2570/DC	Yes	Approve
CLC	FprHD 60364-7-701:2019/prAA	Yes	Approve
IEC	64/2588/CDV	No	Approve
CLC	HD 60364-5-52:2011/prA1:2023	No	Approve
IEC	64/2586A/CD	Yes	Approve
IEC	64/2591/FDIS	No	Approve
CLC	FprHD 60364-4-43:2023	No	Approve
IEC	64/2625/CD	Yes	Approve
IEC	64/2627/CDV	Yes	Approve
CLC	prHD 60364-1:2023	Yes	Approve
IEC	64/2628/CDV	Yes	Approve
IEC	64/2630/CD	Yes	Approve
IEC	64/2639/DC	No	Abstain
IEC	64/2634/CD	No	Abstain
IEC	64/2632/CDV	No	Approve
CLC	prHD 60364-7-712:2023	Yes	Approve
CLC	prHD 60364-7-711:2023	No	Approve
IEC	64/2648/FDIS	Yes	Approve

5.3 Regulatory Development/Update

The work of NSAI/ETC/TC 02 is influenced by several European Directives including the Alternative Fuels Infrastructure Directive, the Construction Products Directive, the Low Voltage Directive, the Electromagnetic Compatibility Directive to name but a few. The National Rules for Electrical Installations must also align with Ireland's Building Regulations, which requires liaison with the Department of the Environment. Continued pressure to reduce carbon footprint has implications on the wiring rules where new standards are being developed for alternative energies, and NSAI/ETC/TC 02 members liaison with ESB and SEAI to align regulations.

6 Irish Publications/Reviews

6.1 Publications

The committee published for Public Consultation a draft amendment to I.S. 10101:2020, prA1:202x. The document went out for public consultation on the 27th of November 2023 with a closing date for comment of the 27th of February 2024. No new publications were issued in 2023.

6.2 Reviews

NSAI/ETC/TC 02/WG 03 reviewed Part 722 and agreed an amendment was required to this section.

NSAI/ETC/TC 02/WG 01 reviewed Part 722, Part 718, Annex 8 and agreed an amendment was required to this section.

NSAI/ETC/TC 02/WG 01 continue to review the additional HD's which have been published since 2017 which impact I.S. 10101. This work will be ongoing.

7 Work programme for 2024 onwards

Amendment to I.S 10101:

The committee will be very busy in 2024 as they review any comments received during the public consultation to the draft amendment to I.S. 10101. Following the review, the committee will work on publishing the amendment.

The ongoing committee workload is covered by three working groups.

- NSAI/ETC/TC 02/WG 01 "wiring rules"
 - They will work on reviewing the public consultation comments to the amendment to I.S 10101 and plan for the publication of the amendment. Once this work is complete, they will start considering the next edition of I.S. 10101. The focus of this group is also to review HD's which have been published since the cut-off date chosen for I.S. 10101.
- NSAI/ETC/TC 02/WG 03 "EV charging points"
 - This group will review public consultation comments to the amendment in relation to Part 722. The WG plan to meet quarterly as work continues in IEC and CLC and new technologies evolve e.g. Vehicle to Grid (V2G).
- NSAI/ETC/TC 02/WG Queries
 - This group is charged with providing responses to queries received.

The main committee NSAI/ETC/TC 02 continue to review and input into proposed changes to the 60364 series of standards at both IEC 64 & CLC TC64 level.

The committee will continue to review queries from the public on I.S. 10101, and where possible provide guidance.

The committee will work with its assigned liaison officers to encourage greater collaboration between the Electrotechnical sector committees.

The committee would like to get more involved at IEC & CLC level and it is hoped that some members of the committee will join working groups or maintenance teams in 2024.

The committee have updated their business plan and plan to progress actions within the plan over 2024.

8 Additional Information

Two face-to-face meetings will be held in 2024. All other meetings will be held by MS teams in 2024.