



2018 Roadshows



The success of the roadshows in 2017 ensures that they will continue in 2018. There will be a <u>new</u> range of topics with a focus on 'Periodic Inspection Reporting' We will also bring a number of 'Test Rigs' to demonstrate hands on pre and post connection tests as this proved to be of great interest at previous shows. The interest shown by RECs regarding testing and comple-

tion of 'Test Record Sheets' was huge.

Due to a turnout of over 200 RECs at the Waterford roadshow in October at the Tower Hotel, we will be returning in the Spring using a larger room and additional 'Test Rigs'.

Venues, details and dates of all events are shown on page 7 of this newsletter.

Please try to attend one of these FREE very informative events.

2018 Annual Subscription

Please ensure that your 2018 registration is paid early in January. If you intend to carry out 'Restricted Works' (domestic) and fail to renew your registration in January, you could leave yourself exposed to prosecution. Effectively if subscriptions are not paid in January, you are no longer registered under the scheme.

Please note this clarification is provided to enable RECs to continue to meet CRU criteria requirements by maintaining timely registration.

IMPORTANT

CHANGES REGARDING 2018 PROCEDURES!
PLEASE READ ALL ARTICLES IN THIS NEWS LETTER!

We would like to take this opportunity to wish all our members a very Merry Christmas and a Happy New Year.

WELCOME



We wish to welcome the 170 new electrical contractors who had their applications approved during the year and who are now operating as Safe Electric Registered Electrical Contractors.



Christmas Holidays

Fri 22nd Dec - Closes at 1pm

Mon 25th Dec - Closed

Tue 26th Dec - Closed

Wed 27th Dec - Closed

Thu 28th Dec - Closed

Friday 29th Dec - Closed

Mon 1st Jan - Closed

Tue 2nd Jan - Re-opens (8:30am)



The last day for guaranteed delivery of post before Christmas will be the 19th December.

MAKE SURE YOU ORDER IN TIME!

Inside this issue:

Controlled Works Certification	2
Frequently Asked Questions	2
Top 10 Rule Breaches	3
Registration Cards for 2019	4
Buried Cables	5
Inspection Charges	6
2018 Roadshows	7
Product Recalls	8
Testing USB socket outlets	8

CLAMPDOWN ON CONTROLLED WORKS CERTIFICATION!

Controlled Electrical Works are works that require certification.

The definition of 'Controlled Electrical Works' can be found in the CRU criteria document, on our website and as detailed in the October 2017 newsletter.

Basically nearly all works undertaken by a registered electrical contractor require certification. <u>This is not optional.</u> Certificate No 3 (shown below) is suitable for new works that do not have any ESBN involvement.

During 2018 this will be promoted and monitored very closely. We will be carrying out spot checks, together with reviewing local planning applications and following up to ensure certificates have been issued.

The intention is to confirm customers (domestic, industrial, commercial etc.) are furnished with a certificate, stating that the electrical works undertaken are in compliance with the current rules and are also fully tested.

Your registration may be withdrawn if you fail to comply!

Please be aware if you undertake a periodic inspection and rectification installation works are carried out, a certificate (cert 3) would also be required.

National Rules for Electrical Installations Completion Cortificate for Existing Installations THIS CHRITTER LEARNER VIOLE OF SOFTEM A CONNECTION PLACE OF THE GOOD.)			
This certificate must be returned to your ESSB and accompanied by a completed Test Record Sheet				
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CUSTOMER NAME (Block Capitals):				
ADDRESS OF INSTALLATION (Block Capitals):				
Installation Type: Centrolled Works Minor Works Test (only) of the existing lay- please tick (*/) as appropriate, see Chapter 63 & Annex 638				
Premises Description (e.g. Commercial, Demestic, Agricultural, etc.)				
Details of what this cert covers White is the same of				
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CESTIFICAT Transit has the Am Sirriors work detailed at the above address his been constructed, and/or pre-exemplation and poor -exemplation have him have been rand out, is accordant to the National Rules for Electrical Installations (current issue at date of contrard) published by the Electro-Technical Council or leading, and his been found to be satisfactory. Additional circuit is not on impair the select or the eximiting installation, the certificate each the set record instead associated with its salts as electrical to the Council or additional circuit is a submitted to the EVENT of the selectrical Council or the selectrical Cou	7.m 1.			
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PRE & POST-ENERGISATION (ESTS REGISTERED ELECTRICAL CONTRACTOR (Brock capitals) Name				
Signed				
Qualification Qualified Certifier's No Tel /				
Date Registration Number				
NOTE: This certificate is issued and signed by the person responsible for the new/additional/modification of electrical work or a person duly authorised.				
This Document is a certificate for the purpose of the Energy Philosolisneous Provision] Act 2006. CIG., the Enteron-Inchmist Council of related or the Requirecty Body are and responsible for the electrical installation or for the occuracy of the information given on this certificates. Execution installations solved be installations about the Installation and Installation and the Installation and Installation and Installation and the Installation and Installation and the Installation and Installa				
certificate. Electrical installations should be inspected periodicals. © ETCI 2016 This document must not be re-produced in any form or manner without the express permission of the Electro-Technical Council of Ireland.				

Returning Non Conformance Notices!

Please ensure that if you are issued with a non conformance notice as an outcome of your inspection, it is returned to the office no later than the date given on the report/s.

The inspection is broken into 2 areas. One is the 'Audit Report' where there is a review of your test meters, rule book, qualified certifier's credentials, test sheets, certs etc. If the 'Audit' is not in compliance, then an 'Audit Non Conformance' will be issued. The second area is the 'Inspection Report' whereby if rule breaches are found on the installation being inspected, an 'Inspection Non Conformance' will be issued. All non conformances identified on reports must be rectified and returned within the required timescale shown on each report. Some RECs that have been issued with both, are only returning **one** non conformance report.

Failure to return reports with <u>all</u> non conformances rectified will lead to self certification rights being withdrawn. Please note if you are issued with a 'Non Conformance' report it can be returned by post or email (info@reci.ie). Most modern phones would allow you to email these documents.

Frequently Asked Questions

- Q1 I am carrying out a rewire of a house. The old light switches are at a height of 1400mm from the floor. Do they need to be lowered?
- **A. Yes,** all new installation work must comply with the current wiring rules, they must be installed between 400mm and 1200mm.
- Q2 I am installing a light fitting in an installation and have observed that the electric shower has no RCD protection whatsoever. Is there any action I need to take?
- **A. Yes,** Obviously advise the customer/user of the potential dangers and if agreed install an RCBO. If you are not in a position to carry out this work or the customer refuses, then you <u>must</u> issue a 'Notice of Potential Hazard'. Also if agreed by the customer isolate the shower until an RCBO is installed.
- Q3 Can I install 'C' type MCBs on standard socket circuits?
- **A. No,** Rule 533.3.4 states final circuit MCBs and RCBOs shall have Type B over current characteristics. (please read the rule)
- Q4 I have been asked to wire some new machines in a factory. When I checked the distribution board I found the existing wiring to be in good order and suitably sized. The problem is that the cables supplying the distribution board are coloured red, yellow and blue for the phase conductors and a black is used for the neutral. Obviously I have to use the current brown, black and grey phase conductors for any cables I install. Can I connect my new cabling to this distribution board?
- A. Yes, Annex 63 B (No 9) states: In such cases, it is necessary for safety reasons that warning notices be provided for the benefit of personnel that may not be familiar with the older systems. Warning notices should be provided in the relevant locations, e.g. distribution boards, with the following wording or its equivalent:
- **'WARNING!** The colours for cables and insulated conductors in this (part of the) installation may not comply with the National Rules for Electrical Installations ET 101: 2008. The core colours and their respective functions should always be **verified by inspection and test.'**
- Q5 Do I need to fill in a test record sheet for every electrical installation I undertake?
- A. Yes, This is a requirement and is requested in various parts of ET101 wiring rules. Every electrical installation <u>must</u> be fully tested before it is put into service. There is little point in writing these test results on scraps of paper or not recording the results. The 'Test Record Sheet' is your proof of the readings taken at various stages of an installation and a record to state that the installation operates correctly and is safe to use.

Top 10 Rule Breaches found in 2017

Listed below is the top 10 rule breaches identified by Safe Electric inspectors in 2017. Please read the current ET101 4th edition wiring rules to ensure that you are in compliance, for future installations. Having a good knowledge of the wiring rules and undertaking installation tests correctly, will ensure minimum rule breaches and avoid follow up inspections. Inspectors are there to assist, please give them a call to clarify a rule if you have any doubts. If your inspector is unavailable, please leave a message or contact another Safe Electric inspector if your requirement is urgent.

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Тор	10 Rule B	reaches found in 2017
1	533.3.5	Main Protective Device incorrectly installed
2	526.5.1	Connection of equipment.
3	555.1.2	Isolation of appliances
4	554.3.5	Isolation of inaccessible sockets
5	544.2.8	No bonding conductor to metal sink.
6	542.3.2	No protective tape on earth electrode connection
7	530.5.12	Distribution boards not identified
8	613	Test records incorrect
9	514.3	Incorrect colour of conductors
10	555.3.2	No RCD protection for water heating system



Please ensure that the Main Protective device is located only in the bottom right hand corner and that the IP55 rating is maintained with the correct device being installed.



Inspectors come across cables that are incorrectly terminated. Smoke detectors and down-lighters are an example where no enclosure is used just connector blocks.



All fixed appliances require Isolation within 2mts.



Inaccessible sockets require isolation 'nearby'. The isolator also needs to be labelled.



Metal sink draining boards require local supplementary bonding.



To avoid the effects of electrolytic action of two dissimilar metals a protective tape is required. Inspectors have come across situations where the cable breaks away from the rod due to corrosion.



It is vital that all outgoing circuits in a distribution board are identified.



Incorrect test results have been recorded or tests have not been carried out. A test record sheet must be completed for every installation.



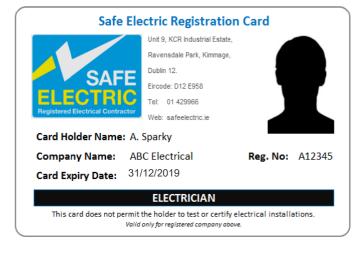
Inspectors come across incorrect cable colours being used, often a black conductor is used as a neutral. This is **not** permissible.



A circuit supplying auxiliary equipment associated with water services and water systems (e.g. pumps) shall be protected by an RCD having a rated residual operating current not exceeding 30mA.

REGISTRATION CARD REQUIREMENTS FOR 2019









January 2019 will see the requirement for a photograph to be inserted on all 'Safe Electric' registration cards. You will be sent the standard registration card in 2018 once your annual subscription is received.

In preparation for 2019 we intend to make the cards with photographs available early next year. In addition to the standard registration card we are considering having various card types available for your employees (as shown in the examples above). There may be a small charge for additional employee cards to cover the cost of printing and post-

age.

The use of additional cards for employees will be op-

Unit 9, KCR Industrial Estate,
Ravensdale Park, Kimmage,
Dublin 12.
Eircode: D12 E958
Tel: 01 429966
Web: safeelectric.ie

Card Holder Name: A. Sparky

Company Name: ABC Electrical Reg. No: A12345

Card Expiry Date: 31/12/2019

PRINCIPLE DUTY HOLDER

This card does not permit the holder to test or certify electrical installations.

Safe Electric Registration Card

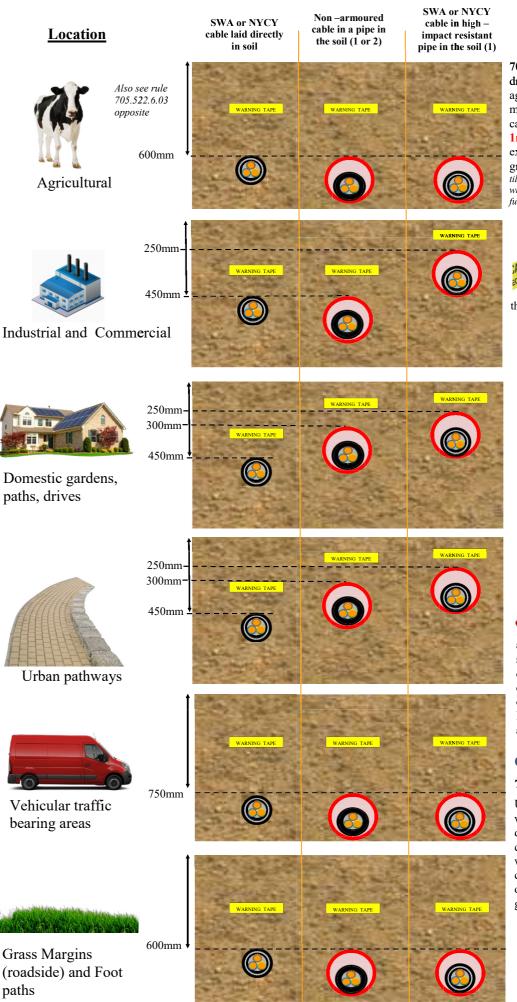
tional. We feel that this will help you to promote the importance of using 'Safe Electric' contractors and be able to portray a quality standard. Cards for employees have been requested by a number of RECs who send employees to installations or site meetings etc.

Please note this is at the planning stage and we will update you early next year regarding the submission of photographs etc.

The samples shown are for illustration purposes only



Minimum Depth of Cables Buried in the Ground









705.522.6.03 In uncultivated ground with drainage, or arable land, and in areas of agricultural premises where vehicles and mobile agricultural machines are operated, cables buried in the ground shall be at least 1m below the surface. Where farm traffic exists, cables shall preferably be laid underground. Additional mechanical protection such as tiles or concrete slabs or metal covers must be provided where there may be a risk of damage to the cable in future excavation work..



522.6.8.2 Suitable indication shall be provided above a buried cable at a distance of approximately 300 mm vertically below the completed surface, or at half

the buried depth, whichever is the lesser.

522.6.8.1 Cables buried in the ground shall be protected, against impact and other mechanical damage.

Where there is a high risk of damage, or where future excavation or similar activity is likely, additional measures shall be taken, such as:

- supplementary mechanical protection consisting of tiles, concrete slabs or metal covers.
- installation at a depth greater than that specified above.



522.6.8.3 Where cables buried in the ground are enclosed in ducting of other than concrete material, this ducting shall be coloured red and shall have a high resistance to impact. For ducts or pipes of material other than concrete, e.g. polythene, the minimum degree of resistance to impact shall be a 750 N load rating for 5 per cent deflection in accordance with I.S.EN 50086·2-4.

Caravan parks & Marinas

708.521.02 & 709.522.02

Underground wiring systems shall comply with 522.6.8, whether in ducting or buried directly in the ground, and shall in any case be at least at depth of 500mm, or, where there is movement of heavy vehicles, 750 mm. Account shall also be taken of possible damage due to tent pegs or ground-anchors.

This table is a guide only, also some changes may occur with Table 52B in the next edition of the wiring rules. Please refer to rule 522.6.8 for current clarifica-

MPORTANT!

Follow up charges to be implemented in 2018

2018 will see the implementation of charges where a 'follow up' inspection is required.

In November of this year the Commission for Regulation of Utilities (CRU) sanctioned the charging for follow inspections.

To date when a Safe Electric inspector has to carry out a return visit to a REC due to the number of defects identified there has been no charge.

How to avoid a 'follow up' inspection

- Ensure the installation complies fully with the current wiring rules.
- Read this and previous 'Newsletters' as nearly all breaches that Safe Electric inspectors observe have been identified.
- Ensure 'Test Record Sheets' are correctly and completely filled in and all the readings recorded are accurate.
- Ensure that the certificate is correctly filled in.
- Ensure your test equipment is calibrated (test results will be void in the absence of calibration).
- Maintain standards of workmanship and installation safety compliance at all times.

Cancelling your inspection!

When you receive your inspection appointment letter please contact your inspector immediately to make arrangements. Please only cancel your appointment if absolutely necessary giving sufficient notice to your inspector. RECs who cancel at very short notice or do not respond to inspection requests more than twice may be removed from the register, have their certification rights withdrawn and a deregistration process will start. Once a REC is deregistered, a new application process will be required in order to rejoin. (Please note the above may be adjusted by the Chief Inspector only in very exceptional justifiable circumstances).



DISCIPLINARY A total of 10 Registered Electrical Con-MATTERS tractors were brought to disciplinary hearings this year. The reasons for

RECs being disciplined ranged from issuing certificates for works carried out by others, poor installation safety compliance, installations left in a dangerous state, and installations left with unsatisfactory testing being carried out. The lack of 'Test Record Sheets' was a major factor for the majority of RECs being disciplined.

A total of 3 RECs were deregistered from 'Safe Electric', 2 RECs had their self certification rights removed with a requirement for them to demonstrate a significant improvement before their situation can be reviewed. The remainder are to have a number of future installations inspected.

In accordance with the Criteria Document, all RECs are required to be inspected annually by a Safe Electric Inspector. In the case where nonconformances with the National Wiring Rules (ET 101) are identified during the inspection, the inspection procedure incorporates a Performance Marking Scheme for determining the appropriate corrective action and the timeframe for its completion. At present, RECs receive 10 points for a major non-conformance with significant implications for the safety performance of the installation (a Code Red breach); 5 points for a serious non-conformance (a Code Amber breach); and 2 points for a less serious non-conformance (a Code Yellow). Where the total number of points for breaches of the National Wiring Rules (ET 101) received by a REC during an inspection are ≥ 10 , then at the discretion of the Safe Electric Chief Inspector the REC will receive a follow-up inspection.

In 2016, 911 RECs received ≥10 points.

At present, the cost of these follow-up inspections is absorbed by the scheme. The CRU has decided to allow Safe Electric to impose direct inspection charges on RECs that require higher levels of monitoring. The cost of the followup inspection will be €180 based on the current actual costs incurred. This charge will be subject to review from time to time. The Safe Electric scheme is operated on a not-for-profit basis and is funded by its registered electrical contractors (RECs). The majority of RECs are found to be compliant with the National Wiring Rules during inspections. The Commission for Regulation of Utilities considers it more equitable that the costs of follow-up inspections are not absorbed by the scheme but rather charged out to RECs that require a higher level of monitoring. At present, the primary deterrent for RECs with a high number of points for breaches of the Wiring Rules is the Disciplinary Process, as set out in Section D of the Criteria Document. The Disciplinary Process includes the requirement for a report and hearing on each case, which can be inefficient and expensive for the high number of RECs involved. Safe Electric has developed a communication plan to inform RECs of this new charge including routine inspection appointment letters, information letters, newsletters, text messages and 2017 Safe Electric roadshows. The communication plan will be implemented over a 10 week period before the introduction of the additional inspection charge. Charges will only apply to followup inspections for points received after RECs have been informed of the introduction of this new charge.

PLEASE NOTE Charges will only apply to follow up inspections for points received after RECs have been informed of this new charge.

Given the requirement for a 10 week communication plan, the charges could be introduced in Quarter 1, 2018, at the earliest. In the future, inspection charges may also apply for spot inspections where a Safe Electric Inspector discovers/ reports an abuse of the certification system by a REC resulting in the requirement for a higher level of monitoring of the REC. RECs would be informed of this charge through a similar communication plan and implementation period.

Full document details can be found at:

https://www.cru.ie/document_group/proposed-decision-on-the-approvalof-charges-by-safe-electric/



SAFE 2018 Spring Roadshows



Venue	Date	•
Tower on the Mall, Waterford City	Thursday	22nd March 2018
Red Cow Moran Hotel Naas Road, Dublin	Tuesday	10th April 2018
CityNorth Hotel, Gormanston, Co. Meath	Thursday	19th April 2018
Travellers Friend Old Westport Road, Castlebar, Co Mayo	Thursday	26th April 2018
Brehon Hotel, Muckross Road, Killarney, Co. Kerry	Thursday	3rd May 2018
Shearwater Hotel, Marina Point, Ballinasloe, Co. Galway,	Thursday	10rd May 2018
		•
Clanree Hotel, Derry Road, Letterkenny, Co. Donegal	Thursday	17th May 2018

THE ROADSHOWS WILL START AT 5:00pm

These Roadshows run by 'SAFE ELECTRIC' are aimed at helping registered electrical contractors get to grips with a range of all new technical topics.

We will have a number of 'Test Rigs' on display. These will be manned by Safe Electric inspectors who will demonstrate 'Hands On' Pre and Post Connection Tests.

KEEP UP TO DATE WITH RULE REQUIREMENTS

Topics covered will include:

Understanding Insulation Resistance Testing
Understanding measurement of Protective Conductors
Understanding Earth Loop Impedance
Completing Test Record Sheets
Completing a Certificate





Completing a 'Periodic Inspection Report' ET101 National Wiring Rule clarification Question and Answer sessions



Complimentary tea, coffee, snacks!



These events will be a mixture of industry talks and demonstrations. There will also be Industry representatives, who will be available to answer any related questions.

Safe Electric will present you with over 3 hours of technical content.

Inspectors will also be on hand to answer any questions you may have.

Each event will also be hosting stands by leading manufacturers and suppliers who you can have a chat with.

2 - MEGGER TEST METERS TO BE WON AT EACH ROADSHOW!

Please try to attend one of these very informative evenings.

Full details will shortly be shown on our website: www.safeelectric.ie

Product Recalls

Products the have been recalled and need to be European Commission returned to suppliers have been released by the European Union's Rapid Alert System:

ELMARK LED floodlight



ELMARK The creepage distances and the clearances between live parts and accessible metal parts are too small. As a result the accessible metal parts could become live. The product does not comply with the requirements of the Low



Voltage Directive and the relevant European standard EN 60598. The Model number is AL-

PHA30 and the batch code is 3800131196743 The European Commission Alert Number is A12/1615/17

LISI 16A 'C' 1P+N MCB

The electrical insulation is inadequate. As a result, accessible parts could become live. The product does not comply with the requirements of the



Low Voltage Directive and the relevant European standard EN 60898



16A 1P+N circuit-breaker The model number is BKP C16A 0612225 98Z and the batch code is R161114 The European Commission Alert Number is A12/1555/17

Further details can be found via web address: https://ec.europa.eu/consumers/consumers safety/safety prod ucts/rapex/alerts/

TESTING USB SOCKETS



The use of socket outlets incorporating USB charging ports is increasing in commercial and domestic installations. While being very useful for charging phones, tablets etc. concerns have been raised on the effects of carrying out Insulation Resistance tests.

Please allow approximately 2-3 days for your certificates to be processed. We strive to process

all certificates on the same day as they arrive at our office but we are highly dependent on the post.





Delivery of orders cannot be guaranteed on the same or following day, it can take up to 3-5 days for you to re-

ceive a delivery. Please ensure that you place orders for certificates, documentation etc. in adequate time.



Electrical Safety Committee

The objective of the *Electrical Safety Committee* is to raise the awareness of risks associated with the use of electricity, and, to promote measures to prevent accidents associated with electricity. The Committee is chaired by the CRU. The CRU welcomes this opportunity to play a key role in the important work of the committee. We would welcome the reporting of any accidents or incidents that REC's encounter. This could be passed on to the committee to aid in updating statistics.

Accredited Verification & Certification Course Providers

Listed below are course providers where you can obtain a QC number

Centre name	Address	Contact
	Coolmore House	064 6637266
ECSSA	Park Road Killarney, Co. Kerry	info@ecssa.ie
Waterford Wexford	Waterford Industrial Estate	051-301500
Training Services	Cork Road Waterford X91 PX02	waeven@wwetb.ie
	Baldoyle Industrial Estate	01 8167400
Solas (FAS)	Baldoyle Dublin 13	info@solas.ie
	12A & B Bluebell Bus Park	01 4242440
iSkill Training	Old Naas Road	info@iskill.ie
	Dublin 12	01 5324058
Future Skills Ireland Ltd	47B Keeper Road Drimnagh Dublin 12	info@futureskillsireland.ie
	Mountrath Enterprise Park	057 8756540
Metac Ltd	Portlaoise Road	info@metac.ie
	Mountrath, Co. Laois	Ÿ

The installation of electrical equipment, such as USB socket-outlets, must take account of manufacturers' instructions (Rule134.1.1)

It is important to read the manufacturer's instructions regarding the testing of sockets containing USB ports and that the instructions are passed on to customers. This information can then, in turn, be conveyed to any RECs carrying out future works in the property.

As most manufacturers state an insulation resistance test voltage of 500V will damage the unit, we recommend that an insulation resistance test on final circuits incorporating socket-outlets with USB charger ports are conducted by bridging out the line and neutral at the distribution board and test to earth at 250V. The Minimum reading shall be at least 1 Megohm. This is in compliance with rule 613.3.4.

Disclaimer: The information contained within this document is intended for information purposes and Safe Electric accept no responsibility for any inaccuracies