



SAFE ELECTRIC Newsletter

New CER Licence



A Major change has taken place in the electrical contracting industry. The CER announced in November 2015, following an open public procurement process, the appointment of a single Electrical Safety Supervisory Body to regulate electrical contractors in respect of safety in Ireland. From January 2016, the Register of Electrical Contractors of Ireland, or RECI, will be the only Safety Supervisory Body (SSB) in Ireland and will operate under the Safe Electric brand. These arrangements will benefit both

consumers and RECs and will remain in place until the end of 2022, giving customers peace of mind that RECs who carry out work in their home do so safely, thereby protecting lives and property. There are almost 4,000 RECs in Ireland, all of which will be supervised by the Electrical SSB so that consumers can be assured that contractors working in their homes are competent, audited and inspected by RECI and are insured. Under the scheme, contractors must also provide a completion certificate to

consumers on completion of their work certifying that their work is carried out to specified standards. It is an offence to carry out certain electrical works, to describe oneself as a REC or to act in a manner likely to suggest that one is a REC while not being registered. The CER carries out prosecutions on non-registered individuals who violate these laws and act illegally. The scheme will have one Electrical SSB, allowing for a more focused and efficient scheme.



All RECs will be required to display the Safe Electric logo on any vehicle that identifies them as an electrical contractor from 2016. From January 2016 the brand name 'RECI' will no longer be used. The

CER require the use only of the 'Safe Electric' brand. This will enable the general public to more easily identify the scheme and access a Registered Electrical Contractor (REC). Please ensure all of your future documentation web sites etc. carries the 'Safe Electric' logo.



New General Manager



Pierce Martin, RECI General Manager

The Board of RECI, through its chairman, Mattie Ryan, welcomes the appointment of incoming General Manager Pierce Martin to the organisation.

Pierce will be responsible for the day to day management and strategic planning of RECI in its new CER appointment from January 2016 as the single Electrical Safety Supervisory Body in Ireland for registration of electrical contractors and operating the Safe Electric scheme. Pierce

previously held senior management roles in the energy industry, professional services and international consultancy and has many years' experience in managing national safety programmes and implementing best practice safety management systems. He looks forward to building on the solid foundations, good stake-holder relations and staff teamwork established by retiring General Manager Paul Waldron.

Pierce will be working closely with the RECI Board, its committed staff and CER, to ensure that the Safe Electric scheme continues to improve and grow in effectiveness to deliver a professional service to both Registered Electrical Contractors and electricity customers. The Board would like to thank Paul for his loyal service and wish him many happy years of a well-earned retirement.

Welcome! to all our New Members

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Six Month Prison Sentence for Man Undertaking Dangerous and Illegal Electrical Works



The Commission for Energy Regulation (CER), Ireland's independent energy regulator has successfully secured a prosecution against Mr. Michael O'Connell from County Wicklow for illegally carrying out restricted electrical works and portraying himself as a Registered Electrical Contractor. The case was heard Friday 12 February 2016 in Naas District Court under presiding Judge Zaidan, who, due to the severity of the case and the poor standard of the work, imposed a six month custodial sentence. The sentence included three months for carrying out of the electrical work whilst unregistered and three months for portraying himself as a Registered Electrical Contractor. No portion of the sentence is to be suspended. The works undertaken at the time consisted of an attic conversion of a domestic home into a bedroom. During the CER's investigation, it was established that the electrical works carried out by Mr. O'Connell were wholly unsafe and constituted a real danger to the occupants of the house, which included two adults and three young children. At the time, Mr O'Connell was not a Registered Electrical Contractor with the recognised safety supervisory body, and therefore committed an offence under the Electricity Regulation Act, 1999. Judge Zaidan heard evidence from Sean Ward, Electrical Safety Officer with the CER that

the works carried out created a serious safety hazard for the occupants and the works were bad workmanship. Members of the public who wish to report an unregistered individual who has undertaken Restricted Electrical Works or has portrayed themselves as a Registered Electrical Contractor should visit www.safeelectric.ie. Since October 2013, it has been a legal requirement for anyone who carries out restricted electrical works to be a Registered Electrical Contractor. Only Registered Electrical Contractors give confidence to consumers that they are using a contractor who is competent, insured and subject to inspection to ensure their work is undertaken to the required standards. The CER's Commissioner for Energy Safety, Dr. Paul McGowan, said: "The fact that the Court felt a custodial sentence was required reflects the seriousness of this case and the clear danger to human life it represented. This sends a clear message to anybody engaging an individual or company to carry out electrical work in a house that they must be suitably qualified and a Registered Electrical Contractor. The CER is committed to using its resources to investigate and prosecute unregistered individuals who carry out restricted electrical works or portray themselves as Registered Electrical Contractors. Registration is required to protect the safety of the public."

Please ensure that you are fully compliant and that your membership is paid before you undertake any 'Restricted Works' (Domestic)

Frequently Asked Questions

Q1 - I have been asked to replace a distribution board in an existing installation, do I need to lower it to the new height?

A. No if it is a replacement like for like it can be left at the existing height (see rule 530.5.3 note 2), but the tails may need to be up-graded (see annex 63B). We would recommend if practical i.e. tails and outgoing circuits are long enough to lower the board.

Q2 - What can I use a 4 core NYMJ cable for, when it has brown, black, grey, and green/yellow conductors?

A. The use of this cable is very limited as it has no neutral conductor (blue core). It can be used for 3 phase or for 3 lives/switchwires. The better option sometimes can be to use a 5 core to ensure that you comply with rule 514.3

Q3 - I have been asked to install a shower in an existing installation do I need to be aware of anything?

A. Your installation should comply with annex 63B ensuring that you verify the mains tails, the main bonding are adequately sized. Also ensure that there is not already another shower already fitted if so a priority unit may be required. Verify Neutralising and earth loop impedance before work commences.

Q4 - Where pipework in a bathroom is plastic, do I need to supplementary bond the bath/radiator, etc?

A. No, if the pipework is substantially plastic with only short metal/copper stubs connecting the taps/radiators, etc. these can be treated as isolated pieces of metalwork and do not need to be bonded.

Q5 - I have been asked to re-certify an installation that has been disconnected from the ESB for more than 6 months what do I test?

A. The entire installation will need to be fully tested and inspected, a 'Test Record Sheet' will need to be completed and 'Test Only' box ticked on the completion cert.

New 2016 Test Record Sheet

TEST RECORD SHEET

Sheet ... of ...

Customer Name: _____

Installation Address: _____

Distribution Board Ref: _____

Category: _____ Type of Installation: New Rewrite Existing Addition Temp Supply Other (Specify) _____

Comments: _____

MAX R_p/R_e (if applicable) _____ OHMS

MAX RES./PROT.COND (R_e) _____ OHMS

TEST INSTRUMENTS USED		Serial No.	Calibration Expiry Date
Insulation Resistance/Continuity			
Earth Loop Impedance			
RCD			
Multifunction			

CIRCUIT DETAILS		PRE CONNECTION		POST CONNECTION		Other Comments
Circuit Designation	Cable	Max Circuit Continuity (Ohms)	MIN REGULATION (MEG OHMS)	Max. Fault Loop Imp. (s)	Max. Fault Loop Imp. (V)	
x Supply Cable						

Pre Connection Tested By: _____ SIGNATURE _____ QC No. _____ Reg No. _____ DATE _____

Post Connection Tested By: _____ SIGNATURE _____ QC No. _____ Reg No. _____ DATE _____

electronic system. 3 - The 3rd copy is retained in the book for your own records and be available for your routine inspection. Also for larger installations continuation sheets are available again in triplicate format.

Please ensure that the 'Test Record Sheet' (s) is/are completed correctly with all sections and relevant boxes filled. The new 'Test Record Sheet' is now available from RECI's office. *For your information we have filled in a sample test record sheet on the next page.*

TEST RECORD SHEET (Continuation)

Sheet ... of ...

Customer Name: _____

Installation Address: _____

Distribution Board Ref: _____

Category: _____ Type of Installation: New Rewrite Existing Addition Temp Supply Other (Specify) _____

Comments: _____

MAX R_p/R_e (if applicable) _____ OHMS

MAX RES./PROT.COND (R_e) _____ OHMS

CIRCUIT DETAILS		PRE CONNECTION		POST CONNECTION		Other Comments
Circuit Designation	Cable	Max Circuit Continuity (Ohms)	MIN REGULATION (MEG OHMS)	Max. Fault Loop Imp. (s)	Max. Fault Loop Imp. (V)	

Pre Connection Tested By: _____ SIGNATURE _____ QC No. _____ Reg No. _____ DATE _____

Post Connection Tested By: _____ SIGNATURE _____ QC No. _____ Reg No. _____ DATE _____

A 'Test Record Sheet' must be completed for all controlled works installations. The 2016 'Test Record Sheet' is in a triplicate format. 1 - Top copy is to be issued to the customer when the Completion

Certificate is issued. 2 - Middle copy is to be returned to Safe Electric's office (RECI) when the Completion Certificate is returned or when the Post Connection test's are logged, if you are using the

PLEASE ENSURE THAT ALL POST CONNECTION TEST CERTIFICATES ARE RETURNED/ELECTRONIC SYSTEM UPDATED

We appreciate that there will be some installations for which a Post Connection Results can never be obtained, for various reasons. If this is the case we need to be informed, in writing with an explanation.

Please **DO NOT** ignore the Post Connection Cert requests, this will result in a block being placed on the processing of any further certs

Notice of Potential Hazard (N.O.H)

A new document will shortly be available to assist RECs. Situations may arise when you are carrying out installation works and you observe a potential hazard that may not be associated with your contract. You would be expected as a care of duty to inform the electricity consumer of any immediate or potential hazard. Then hopefully if they agree, you undertake the rectification works. If they or you are not in a position to rectify the hazard then we recommend that you issue a 'Notice of Potential Hazard'.

The 'Notice of Potential Hazard' **must** specify the ETCI rule breach number (s) associated with the Notice being issued, and a brief description of the hazard.

The **White Copy** of the N.O.H is to be given to the person responsible for the Electrical Installation.

The **Yellow Copy** of the N.O.H should be posted to the Safe Electric office immediately or no later than two working days from the date of issue.

Once received in our office. We will send the customer a registered letter advising them of the hazards and recommending the course of action to be taken. Once the yellow copy has been received in our office, we will send a letter to the electricity consumer/ person responsible for the electrical installation quoting the N.O.H number and date of issue, this letter which will include a copy of the N.O.H, and will inform the person responsible that the N.O.H has been issued in the interests of safety of persons, property and livestock (if applicable). Where deemed necessary, Safe Electric will send a copy of the N.O.H. to the HSA.

The **Blue Copy** of the N.O.H is retained by the Registered Electrical Contractor. We will let you know when the N.O.H. becomes available.

Electrical Installation Notice of Potential Hazard Form N55 V2

Issued by: Safe Electric Inspector REC or their representative Both

BLOCK CAPITALS ONLY

MPRN: _____ Inspector (BLOCK CAPITALS ONLY) Name: _____

Address: _____ Inspector (BLOCK CAPITALS ONLY) Registration (ENR): _____

Occupier: _____ Name of REC: _____

Phone: _____ Name of Representative: _____

Installation Type: Domestic Non-Domestic Mobile Tel: _____

ETCI Rule No Breached: _____ Description of Potential Hazard: _____

Comments: _____

I HAVE RECEIVED THIS NOTICE ADVISING ME OF A POTENTIAL HAZARD IN THIS ELECTRICAL INSTALLATION, WHICH MIGHT BE AT THE SAFETY OF PERSONS, PROPERTY AND LIVESTOCK (IF APPLICABLE)

Inspector or REC or their Representative: _____ Signature _____ Date: _____

Emergency Works Notice Issued: YES NO N/A Please note this notice may be sent to the HSA if deemed necessary

CUSTOMER INFORMATION

This notification of a potential hazard has been issued in the interests of the safety of persons, property and livestock (if applicable). It has been issued by Safe Electric Inspector or REC or their representative as you (the customer) have found your installation various issues relating to a breach or breaches of the ETCI National Wiring Rules - Current Edition.

Note the following:

- You should contact a Registered Electrical Contractor as soon as possible in order to ensure that the necessary remedial actions are undertaken.
- For a Registered Electrical Contractor (REC) visit www.safeelectric.ie
- You should obtain a Certificate from the Registered Electrical Contractor on completion of the repair.

The Notice of Potential Hazard is based on the findings of a party and is not a guarantee and party/condition sample tests have been deemed appropriate if electrical safety is the main concern of the work undertaken or completed.

Notifiable can be notified to the HSA, the REC or the Representative using their contact details on each inspection, testing or completion of the notice.

WHITE - Customer YELLOW - Safe Electric BLUE - REC

Sample 'Test Record Sheet'



Sheet 1 of 1

TEST RECORD SHEET

CUSTOMER NAME: Mr & Mrs John Smyth
 INSTALLATION ADDRESS: No 42 Park Green, Ballinasloe, Co Galway
 DISTRIBUTION BOARD REF: L P 1

CATEGORY: Domestic
 (Domestic, Commercial, Industrial etc.)

Comments: Excludes wiring of out building - supply to shed D/B only

MAIN BONDING VERIFIED FOR: GAS - YES N/A
 WATER - YES N/A
 SUPPLEMENTRY BONDING VERIFIED - YES N/A
 ELECTRODE EARTHING CONDUCTOR - YES N/A
 OTHER - YES N/A

TYPE OF INSTALLATION: New Existing Rewire Addition Temp Supply Other (Specify)

Test Record Sheet No TS000000 Seal No A 1543
 MPRN No 1 0 4 5 5 7 8 2 4 7 0
 Cert No ARE 245674

MAX Rp+Re (if applicable) **Cl** 0.47 OHMS MAX RES.PROT.COND (Re) **C2** 0.29 OHMS

TEST INSTRUMENTS USED	Serial No	Calibration Expiry Date
Insulation Resistance/Continuity	1234743/017	26/01/2017
Earth Loop Impedance	1234789/042	26/01/2017
RCD	1234762/053	26/01/2017
Multifunction		

CIRCUIT DETAILS

Circuit Number	Circuit Designation	Cable		Overcurrent Protection	
		Type	Sq mm	Device †	Amps
X	Supply Cable	PVC/PVC	16	1	MCB B 63
1	1st Floor Bed 1&2 Sockets	PVC/PVC	2.5	5	MCB B 20
2	1st Floor Bed 3&4 Sockets	PVC/PVC	2.5	7	MCB B 20
3	Ground Floor Sockets (Ring)	PVC/PVC	6.0	13	MCB B 32
4	Kitchen Sockets (R.H.S)	PVC/PVC	2.5	4	MCB B 20
5	Kitchen Sockets (L.H.S)	PVC/PVC	2.5	3	MCB B 20
6	Central Heating	PVC/PVC	1.5	1	MCB B 10
7	Electric Shower	PVC/PVC	10.0	1	RCBO B 40
8	Cooker	PVC/PVC	6.0	1	MCB B 32
9	Bedroom lighting	PVC/PVC	1.5	8	RCBO B 10
10	1st Floor Lights	PVC/PVC	1.5	7	MCB B 10
11	Ground Floor Lights	PVC/PVC	1.5	9	MCB B 10
12	Shed	SWA	6.0	1	MCB B 32

PRE CONNECTION

All Circuits (At least one column to be completed)	Max Circuit Continuity (Ohms)			MIN. INSULATION RES (MEG OHMS)			Erroneous Test Carried out (✓)			Polarity Correct (✓)
	Ring Circuit End to End	L-L	N-N	E-E	Phase & Neutral to Earth (MΩ)	Phase to Neutral (MΩ)	Phase to Phase (MΩ)	Carried out (✓)		
	Re**	Re**	Re**	Re**	Phase to 3 Phase (MΩ)	Phase to Earth (MΩ)	Phase to Phase (MΩ)			
	L-L	N-N	E-E	Phase & Neutral to Earth (MΩ)	Phase to Neutral (MΩ)	Phase to Phase (MΩ)				
0.04	N/A	N/A	N/A	>500	>500	>500	✓	✓	✓	
0.38	0.36	0.52	0.53	0.86	68	93	68	93	93	
0.47					68	93	68	93		
					68	93	68	93		
					68	93	68	93		
					68	93	68	93		
					68	93	68	93		
					68	93	68	93		
					68	93	68	93		

POST CONNECTION

L-E Loop Imp (Ohms)	Max RCD Operating times (ms)			RCD Test Button Verified (✓)	Other Comments
	12x Ln	1x Ln	5 x Ln		
	(✓)	(✓)	(✓)		
0.32	1	2	3	4	5
0.70	0.79	0.68	0.64	0.51	0.63
0.73	0.40	0.45	0.71	0.77	0.73
0.51	0.45	0.45	0.45	0.45	0.45
0.40	0.45	0.45	0.45	0.45	0.45
0.45	0.71	0.77	0.71	0.77	0.73
0.73	0.73	0.73	0.73	0.73	0.73
0.51	0.51	0.51	0.51	0.51	0.51

External Loop Impedance (Z_e)
 Total Loop Impedance (Z_s)
 Excludes final connection
 2 wall lights not fitted
 Supply to D/B only

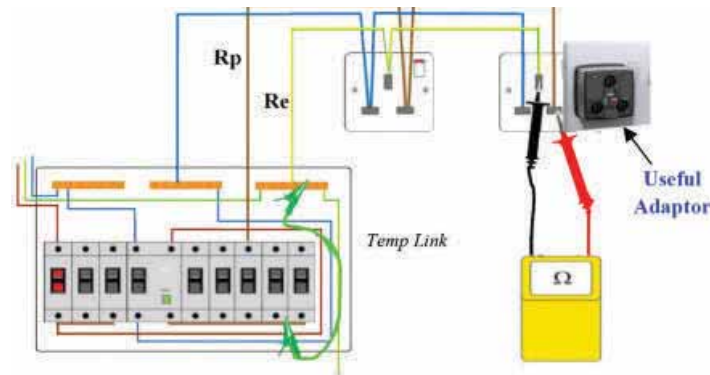
Pre Connection Tested By: A. Spark SIGNATURE A. Spark A. Spark DATE 04/01/2016

Post Connection Tested By: A. Spark SIGNATURE A. Spark A. Spark DATE 29/01/2016

Sample 'Test Record Sheet' explained

GENERAL DETAILS	A	Seal Number	All new installations (New MPRN) require the meter to be sealed and the seal number to be recorded.
	B	Bonding	A continuity test shall be made in order to verify that protective conductors and bonding conductors are electrically sound and correctly connected. (Rule 613.2.1) In addition supplementary bonding needs to be confirmed (i.e. metal sinks/copper pipes in bathrooms if applicable) Once confirmed tick appropriate boxes.
	C	Max resistance's	These readings are obtained from columns 1 or 2 on the pre connection tests. If column 1 has been filled in (preferred option) then just record the highest reading in the 'C1' heading. Then divide this reading by 2 if Rp and Re are the same size csa. (In the case of T&E multiply the reading by 0.625) then record the reading in heading C2 (as in the case of the sample test record sheet). This reading will then be transferred onto the associated certificate.
	D	Test Instruments used	List the serial number and the calibration expiry date of all instruments used for testing.
	E	Comments	This space allows the contractor to give additional information and to comment on the installation, extent of work etc. This box must not be used for disclaiming responsibility for part/parts of the installation.
	F	Supply Cable	Please ensure all relevant test are carried out on the distribution board supply cable. (the 16.0mm PVC/PVC tails in the case of a standard domestic installation)
	G	Sign off	There is an option to have 2 different certifiers on the test sheet 1 for pre connection and 1 for post connection if required. All certifiers must have a valid QC number.
CIRCUIT DETAILS	1	Circuit Number	The number that you have allocated to the circuit to match with the circuit chart.
	2	Circuit Designation	Brief circuit explanation and location
	3	Cable Type	PVC - NYMJ - PVC/PVC - SWA - MICC etc.
	4	Cable Sq. mm	The size of the phase conductor 1.5mm ² - 2.5mm ² - 4mm ² - 6.0mm ² etc.
	5	No. of Points	The number of socket outlets, lights, fixed appliances on the circuit (switches and controls are excluded)
	6	Overcurrent Protection Device	The type of overcurrent device - MCB - Fuse - RCBO etc.
	7	Overcurrent Protection Type	Generally this would be the characteristics of the device for MCBs - 'B' 'C' or 'D' being the most common.
	8	Overcurrent Protection Amps	The rating of the overcurrent device, i.e. 6A - 10A - 16A - 20A etc.
PRE CONNECTION	1	Max Circuit Continuity Rp + Re	A continuity test shall be made in order to verify that protective conductors and bonding conductors are electrically sound and correctly connected. (Rule 613.2.1) Only ONE column needs to be filled in depending on your preferred method of verification. The highest reading is then recorded in section 'C' of the Test Sheet. <i>See overleaf for test method procedure..</i>
	2	Max Circuit Continuity Re	
	3	Ring Circuit L-L	A continuity test shall be made in order to verify the continuity of all conductors, including the protective conductor, of final ring circuits in the installation, in order to verify that they are electrically sound and correctly connected. (Rule 613.2.2). All three columns need to be filled in. The readings should be within approximately $\pm 0.05\Omega$ of each other if the same size cable is used. If T&E is used the E-E will be approximately 1.67 time higher than the L-L ($\pm 0.05\Omega$) Readings outside this parameter indicate a loose connection on the higher reading or cables are not associated with the corresponding circuit.
	4	Ring Circuit N-N	
	5	Ring Circuit E-E	
	6	MIN I.R P & N to Earth	The insulation resistance between each live conductor and the protective conductor or earth or PEN conductor shall not be less than those specified in Table 61A (1M Ω for 230v Installation) (Rule 613.3.1) For this measurement, all line and neutral conductors shall be connected together (613.3.2). Take care when applying 500V DC for tests 7 & 8 as loads will need to be bypassed or removed. For 3 phase, record the min reading when checking between phases L1 - L2, L1 - L3 & L2 - L3
	7	MIN I.R P to N	
	8	MIN I.R 3 Phase	
	9	Erroneous Test	For each circuit, its protective device shall be switched off and all loads disconnected. An insulation test shall be applied between line/phase conductors of the disconnected circuit and all other line/phase conductors. This is to ensure that there is no short between phase conductors. A satisfactory erroneous test shall be indicated by a tick (✓).
	10	Polarity Correct	This is to verify that wiring is correctly connected to socket-outlets, lights and similar accessories. (Rule 613.8) A satisfactory polarity test shall be indicated by a tick (✓).
POST CONNECTION	1	L-E Max Fault Loop Imp	(Z _e) Rule 613.13. This will be determined by direct measurement at the furthest point of each circuit and readings can be verified by adding the external loop impedance (Z _e) to column 1 of the Pre -Connection test (Rp+Re). The reading should be approximately the same as the measured reading depending on parallel paths (SWA, steel conduit etc.). The highest reading in this column shall be transferred to the Completion Certificate. Results shall be not greater than the values on Table A61C-1 & 2 (also shown on back page of this newsletter).
	2	Max RCD times 1/2 x I n	Test is carried out on both sides of the wave sine and must not trip, a satisfactory test shall be indicated by a tick (✓). (Rule 613.14)
	3	Max RCD times 1 x I n	Test is carried out on both sides of the wave sine and must trip within 300mS - Highest reading is recorded. (Rule 613.14)
	4	Max RCD times 5 x I n	Test is carried out on both sides of the wave sine and must trip within 40mS - Highest reading is recorded. (Rule 613.14)
	5	RCD Test Button Verified	The effectiveness of the test button must be confirmed. Push test button, a satisfactory test shall be indicated by a tick (✓). Please ensure that an operation advisory label is fitted on the outside of the distribution board. (Rule 531.2.2.2)

Verification of Protective Conductor



This is the preferred method for verifying protective conductors. You would fill in the Rp+Re column on the test sheet.

Top 10 Rule Breaches found in 2015

Rule Breach	ETCI RULE
<p>1. Incorrect or incorrectly installed Main Over-current Device. <i>See Fig 4</i></p>	<p>533.3.5 The main overcurrent protective device shall comply with 430.4. A circuit-breaker provided as a main overcurrent protective device shall be selected on the basis of its rated service short-circuit breaking capacity, i.e. it shall be capable of multiple operations under short-circuit conditions. A main overcurrent protective device may be located with in a standard meter cabinet, in which case it shall comply with the following requirements: a) The protective device shall be an MCB. b) In the case of installations having a maximum import capacity (MIC) less than 50kA, the MCB shall have a rated short-circuit breaking capacity of at least 6kA. c) The MCB shall be located in a weatherproof enclosure having a degree of protection IP55 and made of non conducting self-extinguishing material (750°C). d) A hinged transparent cover shall provide access for operating the MCB. Access to live terminals shall be only by means of a tool or key. e) The enclosure shall be mounted only at the bottom right-hand side of the meter cabinet, and sufficient space shall be allowed for mounting additional equipment by the DSO as the need may arise.</p>
<p>2. Metal sink draining boards not bonded.</p>	<p>544.2.8 In kitchens and utility rooms extraneous conductive parts shall be connected by supplementary bonding to a local protective conductor. Metal sink draining boards may be bonded either: - directly by a connection to a lug or fixing on the sink or draining board, or at connected pipe-work where adequate conductivity exists.</p>
<p>3. Incorrect light switch height. <i>See Fig 3</i></p>	<p>530.6 Position of control devices. Wall-mounted switches and control devices shall be mounted at a height as follows: i) switches for permanently-connected appliances: Between 400mm and 1200mm above floor level; ii) switches for lighting equipment: - in dwellings, between 400mm and 1200mm above floor level, - in public and similar buildings, between 900mm and 1200mm above floor level. In such cases, switches shall be capable of being operated easily and without effort.</p>
<p>4. Incorrect distribution board height. <i>See Fig 3</i></p>	<p>530.5.3 A distribution board shall be located in a location where it is readily accessible. A distribution board located in a switch room shall comply with 539. A wall-mounted distribution board shall be mounted at a height not greater than 2.25m measured from the floor to the top surface of the board. In addition, where a wall-mounted distribution board is mounted at a height less than 1.4m measured from the floor to the bottom surface of the distribution board, it shall be accessible only by authorized persons.</p>
<p>5. No RCD protection on water heating system.</p>	<p>555.3.2 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. This requirement does not apply to equipment used for industrial and similar purposes.</p>
<p>6. No dedicated RCD for circuits in bathroom zones.</p>	<p>701.416.1 Additional basic protection by RCDs In all zones of a room containing a bath or shower, every circuit shall be protected by a dedicated RCD having a rated residual operating current not exceeding 30mA, except circuits protected by SELV.</p>
<p>7. No isolation for inaccessible sockets.</p>	<p>554.3.5 A socket-outlet that is not readily accessible, e.g. under or behind an appliance or a kitchen unit, shall be provided with a readily accessible means of isolation, e.g. an isolating switch mounted nearby and suitably labelled.</p>
<p>8. Incorrect cable colours used.</p>	<p>514.3.6 Identification of conductors in multi-core cables for a.c. circuits Multi-core fixed cables, flexible cables and cords having from two-to- five conductors used for a.c. circuits shall comply with the following: a) Line/phase conductors shall be identified throughout their length by the colours brown, black or grey. b) A conductor identified by the colour blue shall be used only as a neutral or mid- point conductor [SNC] c) A conductor identified by the bi-colour green-and-yellow shall be used only as a protective conductor.</p>
<p>9. RCD Label test notice not fitted.</p>	<p>531.2.2.2 RCDs shall be installed so that the test-device is easily accessible. In addition to any marking on the RCD, a notice to the effect that the test-device should be operated regularly by the user shall be given on a label, and placed on the RCD or in the vicinity of the RCD. This notice shall be clearly visible to the user.</p>
<p>10. No RCD protection on lighting in agricultural premises</p>	<p>705.411.3.01 For circuits, whatever the type of system earthing, the following protective devices shall be provided: - in final circuits supplying socket-outlets with rated current not exceeding 32 A, RCDs with a rated residual operating current not exceeding 30mA, - in final circuits supplying socket-outlets with rated current more than 32A, RCDs with a rated residual operating current not exceeding 100mA, - in all other circuits, RCDs with a rated residual operating not exceeding 300mA.</p>

Avoiding Inspections

If you persistently avoid or cancel inspections with no genuine reason, you may face a penalty charge. Inspectors have a busy schedule and logistically planning a week of inspections can end in turmoil when RECs continually break appointments. Under the CER criteria you must be inspected at least once in each calendar year otherwise your right to self certification maybe withdrawn.

ETCI announces Amendment No. 2.3

63.4 CERTIFICATION PROCEDURES FOR ELECTRICAL INSTALLATIONS

Addition: Cert. No. 3: for Existing Installations for new work including alterations and /or extension. Addition: Controlled works are **Major Electrical**

Installation Works that include the installation, inspection, testing and commissioning of a new electrical installation requiring connection to the

electricity network, and alterations to existing installations including additions and extensions within the scope of these Rules.

63.4.4 PROCEDURES FOR COMPLETION CERTIFICATE FOR EXISTING ELECTRICAL INSTALLATIONS (CERTIFICATE 3) SCOPE

Cert No. 3 covers alterations (including additions and extensions) to existing installations and cannot be used to obtain a connection or a re-connection of the electrical supply from the DSO. Cert. No. 3 is to be used in accordance with CER requirements which includes specific controlled works 2, 3, 4 or 5, new work to existing installation, alteration, replacement of accessories, Minor Works and Sub-systems. (Note: Controlled Works No. 1 is **not included** in Cert. No. 3).

Such works include the following:

2. the modification, installation or replacement of a Distribution Board including customer tails on either side of the Main Protective Device, or new installation in special locations as defined in Part 7 of the **National Wiring Rules ET101 and ET105*;

3. *the installation or replacement of one or more extra circuits in an existing installation, including the installation of one or more additional protective devices for such circuits on a distribution board;*

4. *Subsystems installed in Commercial, Industrial and Domestic installations where they fall within the remit of the *National Wiring Rules;*

5. *the inspection, testing and certification of existing electrical installations in accordance with Chapters 62 of the *Wiring Rules (ET 101 – Fourth Edition 2008 and to conform Regulations 89 of S. I. No 732 of 2007).*

**Note: Reference to the National Wiring Rules or to the Wiring Rules in this amendment means the National Rules for*

Electrical Installations – ET101. Registered Electrical Contractors (RECs) are required to certify the alterations, installation or replacement of electrical installations, using this Completion Certificate for Existing Installations (Certificate 3).

The Completion Certificate for Existing Installations (Certificate 3) can be used for the following purposes; Specific controlled works 2, 3, 4 or 5, new work to existing installation, alteration, replacement of accessories, Minor Works and Sub-systems.

Note: This certificate cannot be used to obtain a connection or a re-connection of the electrical supply from the DSO.

63.4.4.1 CERTIFICATION PROCEDURE FOR ELECTRICAL INSTALLATIONS (CERTIFICATE 3)

All the boxes must be filled in either with a tick or a value or marked not applicable (N/A) as instructed on the certificate. Completed Test Record Sheets are required for all installation work.

1. Description of the premises

This describes the type of premises involved.

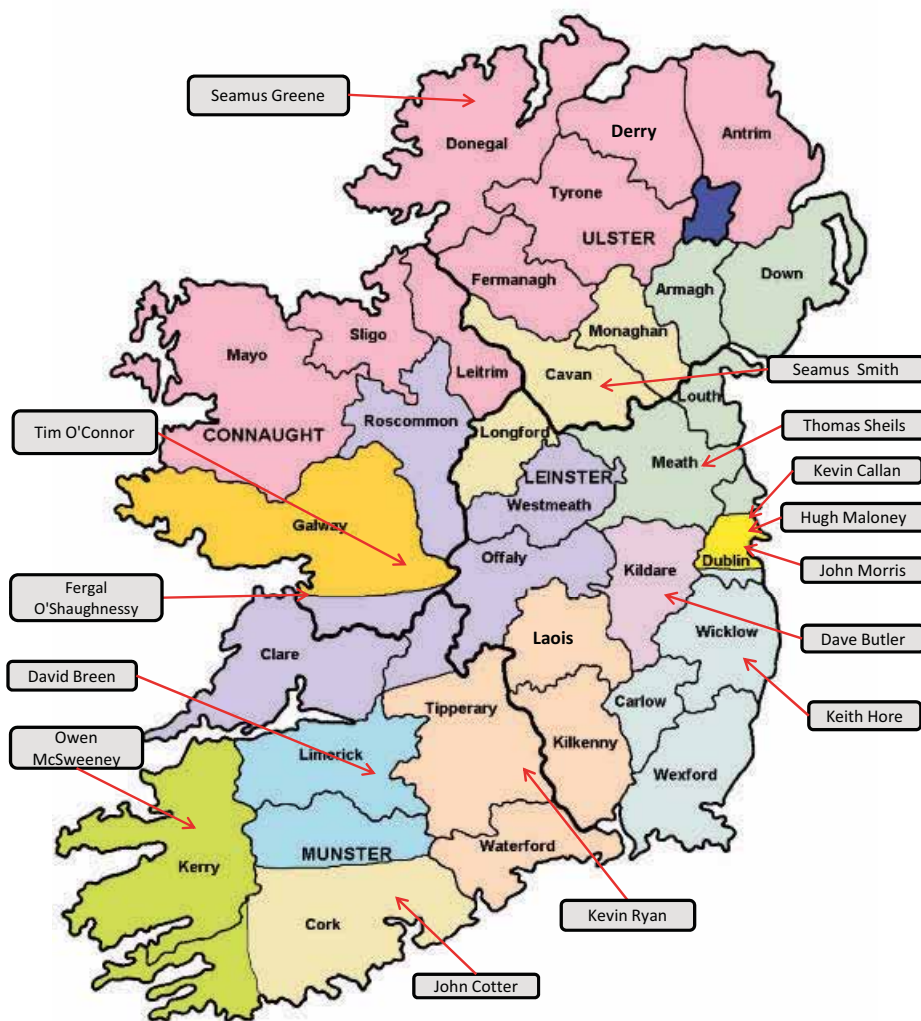
2. **Details of what the certificate covers** Specify Controlled Works Number either 2, 3, 4 or 5. New work to existing installations, alteration, replacement of accessories, Minor Works and Sub-systems.

3. Tests and Test Record Sheets

Tests must be made with suitable testing equipment. Methods of measurement are provided in Chapter 61 of the National Rules for Electrical Installations ET101. The test results must be inserted in the appropriate Test Record Sheets (TRS) and a copy of the results on the TRS to be submitted with the Certificate for Existing Installations (Certificate 3) to the ESSB.

This is just an extract from ET101 Amendment 2.3 Feb 2016. The full amendment can be viewed/downloaded from the ETCI website

Safe Electric Inspector Areas



Seamus Greene	087 130 8304
Owen McSweeney	087 230 1270
Dave Butler	087 771 2113
Thomas Sheils	087 694 3643
Tim O'Connor	087 265 6694
John Cotter	087 926 2988
John Morris	087 250 5104
Seamus Smith	087 230 1275
Fergal O'Shaughnessy	087 148 4828
Kevin Ryan	087 090 8434
Hugh Maloney	087 241 7893
David Breen	087 230 1271
Keith Hore	087 090 8496
Kevin Callan	087 142 3895

Unsafe Products Found on the EU Market: Electric shock Hazzard

Source: The EU Rapid Alert System for Non-Food Products (RAPEX) Weekly overview Report of RAPEX Notifications

There is nothing to prevent the screw holding the earth wire in place from loosening. If the earth wire became detached, the product would not be earthed. The product does not comply with the requirements of the Low Voltage Directive.



Category: Electrical appliances and equipment

Product: LED floodlight

Brand: RIBITECH

Name: Projecteur à LED 10 W (10W LED floodlight)

Type/number of model: PRSPOT10M – high power 10W

Batch number/Barcode: R14090150 – 3700194411800 – year 2014

OECD Portal Category: 78000000 – Electrical Supplies

Description: High power 10W LED aluminium floodlight suitable for outdoor use, sold in a cardboard packaging

Country of origin: China

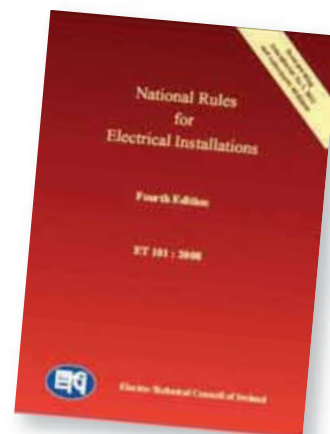
ATEX 2 day Courses now available for booking

ETCI in conjunction with EX Consulting Ltd are running intensive 2 day Foundation courses in hazardous areas on May 16th & 17th in the ETCI Offices, Unit H12 Centrepoint Business Park, Oak Road, Dublin 12 and on May 18th and 19th in the Clayton Silversprings Hotel, Tivoli, Cork. Bookings are now being taken.

Please refer to <http://www.etc1.ie/>

CER Requirement

Please ensure that you comply with the conditions laid down in the CER Criteria Document regarding test equipment and Reference Documents. This requirement is covered in Section 'C' rules 1.2.19 – 1.2.22. The requirement is that each REC shall possess the latest version of the Technical Rules and appropriate calibrated test equipment. **Sharing of 'Test equipment' and Rule Book is not permitted.** We will record the serial number of your test equipment on our routine inspections and these will then be logged into our data base. You will also be required to record your Name & Registration Number on the inside cover of the ET101 rule book.



Safe Electric Roadshows

The following venues and dates have been planned for the Safe Electric roadshows:



Date	Venue	Time
Wednesday 4th May	The Brehon Hotel, Killarney, Co Kerry	6.30 pm
Thursday 5th May	Rochestown Park Hotel, Douglas, Co Cork	6.30 pm
Wednesday 11th May	The Tower Hotel, The Mall, Waterford	6.30 pm
Thursday 12th May	The Killeshin Hotel, Portlaoise, Co Laois	6.30 pm
Tuesday 17th May	The Shearwater Hotel, Ballinasloe, Co Galway	6.30 pm
Wednesday 18th May	The Harlequin Hotel, Castlebar, Co Mayo	6.30 pm
Thursday 19th May	Green Isle Hotel, Newlands Cross, Dublin 22	6.30 pm
Tuesday 24th May	Central Hotel, The Diamond, Donegal Town	6.30 pm
Wednesday 25th May	Hotel Kilmore, Dublin Road, Cavan	6.30 pm

Roadshow Topics

- Certificate Number Three (Explain how a certificate is completed);
- New Test Record Sheet (Explain how this TRS should be completed);
- Notice of Potential Hazard (Explain when a NOH should be issued, and show how the form is completed);
- Criteria Document – Section C;
- Controlled Works – latest decision and examples;
- Change of Contractor and Certification Procedures;
- Audit and Inspection (What is Required, Audit non-conformances, Installation non-conformances, etc);
- Most Common Breaches of the ET101 National Wiring Rules (Current Edition);
- Newsletter (Hand out copies and briefly talk about same);
- Question and Answer session (Based only on the above topics, we are not taking questions on the new Licence).

Clarification of Rules

530.5.3 A distribution board shall be located in a location where it is readily accessible. A distribution board located in a switch room shall comply with 539. A wall-mounted distribution board shall be mounted at a height not greater than 2.25m measured from the floor to the top surface of the board. In addition, where a wall-mounted distribution board is mounted at a height less than 1.4m measured from the floor to the bottom surface of the distribution board, it shall be accessible only by authorized persons.

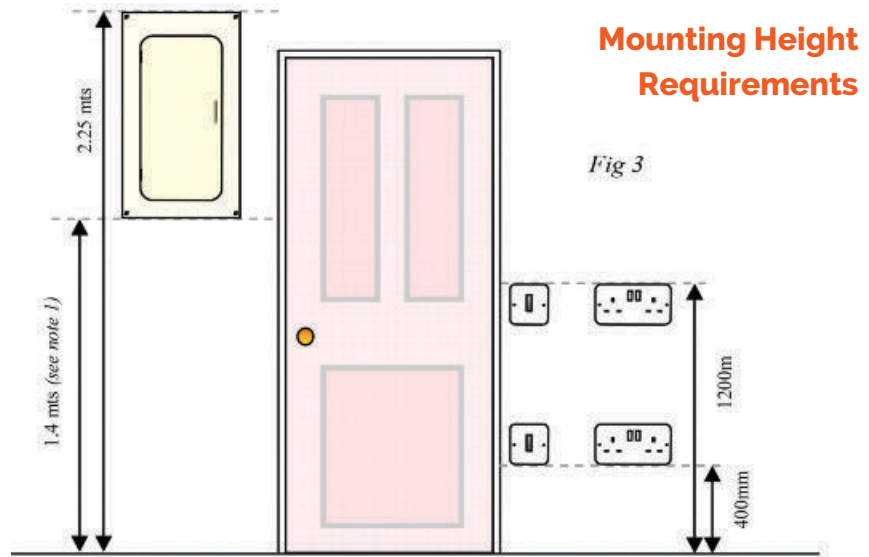
Note 1: The intention of the third paragraph is to prevent ready access by young children (i.e. in areas with External Influence Classification SA2 in accordance with Annex 51 D).

Note 2: This sub-clause does not apply in situations where an alteration consists of the replacement of an existing distribution board without alterations to associated wiring.

530.6 Position of control devices. Wall-mounted switches and control devices shall be mounted at a height as follows: i) switches for permanently-connected

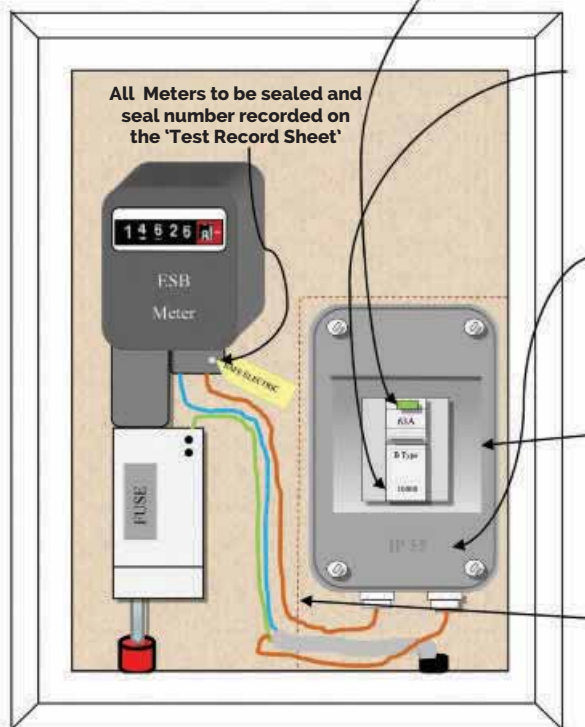
appliances: Between 400mm and 1200mm above floor level; ii) switches for lighting equipment: - in dwellings, between 400mm and 1200mm above floor level, - in public and similar buildings, between 900mm and 1200mm above floor level. In such cases, switches shall be capable of being operated easily and without effort. (See rule book for full clarification)

554.1.1 A socket-outlet shall be so installed that it will not be subjected to undue mechanical stress or to damage in normal service, and that a plug can easily be inserted and withdrawn without damage to the flexible cable or cord. Socket-outlets for **general purposes** shall be mounted at a height not lower than 400mm and not higher than 1200mm above floor-level. (See rule book for full clarification)



What is IP55? (5) Protected against dust (5) Protected against jets of water from all directions

Domestic Meter Cabinet Requirements (rule: 533.3.5)



- The protective device shall be an MCB.
Please ensure that an MCB is fitted we sometimes find that fuses or isolators are fitted.
- In the case of installations having a maximum import capacity (MIC) less than 50kA, the MCB shall have a rated short-circuit breaking capacity of at least 9kA.
Please ensure that the MCB is at least 9kA standard manufacture's rating is 10kA - we sometimes find that 6kA have been fitted.
- The MCB shall be located in a weatherproof enclosure having a degree of protection IP55 and made of non conducting self-extinguishing material (750°C).
Please ensure that the IP55 rating is maintained i.e. cables are terminated with min IP55 glands.
- A hinged transparent cover shall provide access for operating the MCB. Access to live terminals shall be only by means of a tool or key.
Please ensure that the IP55 rating is maintained by ensuring that the hinged cover is closed when works are complete.
- The enclosure shall be mounted only at the bottom right-hand side of the meter cabinet, and sufficient space shall be allowed for mounting additional equipment by the DSO as the need may arise.
Please ensure that the enclosure is mounted as close as practical to the bottom right hand corner.

What to do if I am asked to certify an installation I did not wire?

DO NOT certify an installation that you did not wire unless you follow this 'Change of Contractor' Procedure.

The objective of this procedure is to enable a REC to be authorised to carry out Controlled Works, where the original contractor is unable to do so, thus ensuring that the Customer will receive a Certificate and can be connected / reconnected to the electricity distribution system if required.

Only electrical contractors who are registered with Safe Electric (i.e. RECs) have the right to issue a Certificate. Furthermore, a REC may only issue a Certificate for Controlled Works they have carried out and /or for which they have been responsible.

This 'Change of Contractor' procedure is to facilitate the situation where a Customer requires a change of contractor to complete and/or certify Controlled

Works, which was partially or totally carried out by a different contractor. The situation can arise for various reasons:

- Workload pressure on the first contractor, business difficulties, loss of staff, illness, etc.
- A dispute where the electrical contractor refuses to complete the work or issue a Certificate.
- Bank sells house that has not been completed or energised.

DO NOT commence work on site until you have received approval in writing from Safe Electric confirming you as the new contractor.

It is the responsibility of the customer to apply to Safe Electric and complete the 'Change of Contractor' form (ref F002), this is also available on-line. Once approved the customer will be liable for a minimum charge of €350 (inc VAT). This charge is to cover the cost of a local inspector carrying out an inspection



prior to you issuing a Completion Certificate.

Please ensure that you follow this procedure as laid down by the CER Criteria document Common Procedure No 3.

Once the customer has completed the 'Change of Contractor' form, and returned it to Safe Electric it may take up to 14 days before approval is granted. Please follow the above procedure in order to avoid being disciplined and putting your membership at risk.

Certification requirements for all Controlled Works



As required within the CERs Scope of Controlled Works (CER/09/009) please ensure that all controlled works are certified. This includes the replacement of a distribution board and the installation of one or more new circuits. Full details can be found in the above document (via RECI website).

The CER's requirement is that a certificate is issued to the customer with a copy returned to Safe Electric's office (RECI).

As with all certificates, please ensure that all of the boxes and entries are correctly completed. This will avoid delays as incorrectly filled certificate will be returned.

Accredited Verification & Certification Course Providers

Listed below are course providers you can contact to obtain a QC number

METAC Ltd, Mountrath Enterprise Park, Portlaoise Road, Mountrath, Co. Laois.
Tel: 057 8756540 **Email:** info@metac.ie

iSkill Training, 12A & B Bluebell B/Park, Old Naas Road, Dublin 12. **Tel:** 01 4242440 **Email:** info@iskill.ie

Solas (Fas), Baldoye Industrial Estate, Baldoye, Dublin 13. **Tel:** 01 8167400 **Email:** info@solas.ie

ECSSA, Coolmore House, Park Road, Killarney, Co. Kerry. **Tel:** 064 6637266 **Email:** info@ecssa.ie

Future Skills Ireland Ltd, 47B Keeper Road, Drimnagh, Dublin 12. **Tel:** 01 5324058 **Email:** info@futureskillsireland.ie

MAX LOOP IMPEDANCE FOR MCBs & RCBS A6IC-1 / 2												
Type	6A	10A	16A	20A	25A	32A	40A	50A	63A	80A	100A	125A
B	7.67Ω	4.6Ω	2.87Ω	2.3Ω	1.84Ω	1.44Ω	1.15Ω	0.92Ω	0.73Ω	0.57Ω	0.46Ω	0.37Ω
C	3.83Ω	2.3Ω	1.44Ω	1.15Ω	0.92Ω	0.72Ω	0.57Ω	0.46Ω	0.36Ω	0.29Ω	0.23Ω	0.18Ω
D	1.92Ω	1.15Ω	0.72Ω	0.57Ω	0.46Ω	0.36Ω	0.29Ω	0.23Ω	0.18Ω	0.14Ω	0.11Ω	0.09Ω

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