

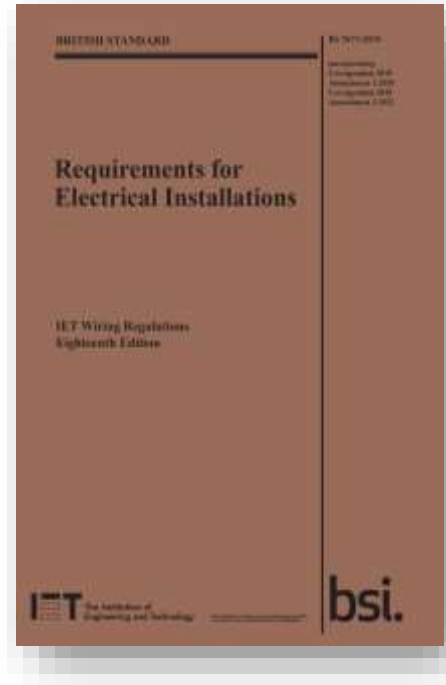


# 18<sup>th</sup> Edition Amendment 2

The major changes that impact your clients businesses

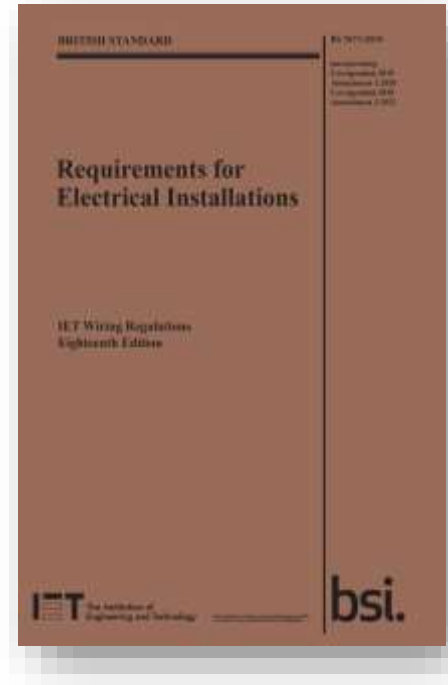
# Introduction

- This is not a technical presentation
- It is designed to give you an overview of the major within BS 7671:2018+A2:2022
- These are by no means all the changes
- This should give you an indication of what to expect your customers to be purchasing



# Contents and agenda

- What is it?
- The top changes
- Training and compliance
- Summary
- Q&A



What is this book and what does it mean for me

## **WHAT IS IT?**

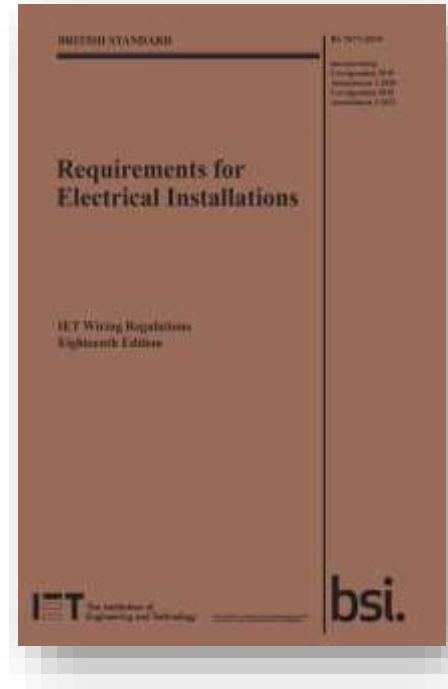


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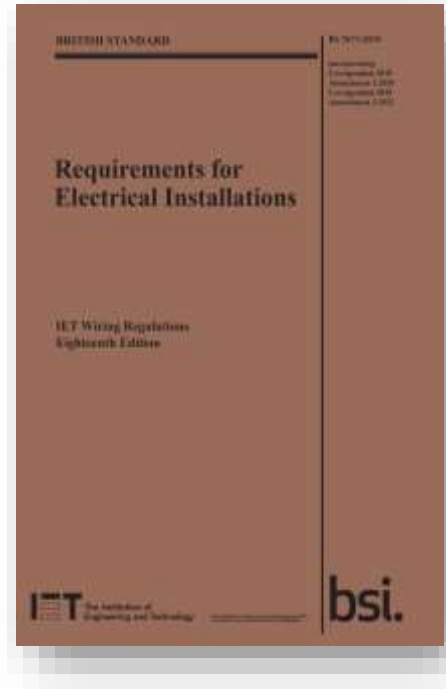
# The Wiring Regulations

- The Wiring Regulations, or BS 7671, is the Standard to which electrical contractors and designers work to
- It sets the minimum requirements for installations and safety
- It does not hold legal status but can be referred to in a Court as good practice and if something is not done to this British Standard, the designer/contractor has to be very confident they can justify a departure



# The Wiring Regulations

- As with any British Standard, things change
- In 2022 a new Amendment was launched to BS 7671
- This will impact ALL electrical contractors in some way and, ultimately, will impact wholesalers too
- The Amendment is out now, but not compulsory until 27 September 2022



The biggest changes to the new Wiring Regulations for 2022

# **THE TOP CHANGES THAT WILL IMPACT YOUR SALES**



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# RCD risk assessments: 411.3.3

- Socket outlets require RCDs. These can be in many guises, RCBOs, RCD sockets etc.
- There is still an option to risk assess out RCDs, but this needs to be done carefully and designers should be mindful of the users of the installation

Code	External influences	Characteristics required for selection and location of equipment	Reference for information only
BA	Capable of persons		
BA1	Ordinary	Unassisted person (House)	Accessibility of electrical equipment Location of suspension of accessories cables
BA2	Children	Locations intended for presence of children e.g. corridors, other rooms, etc. Equipment of degree of protection equal to or greater than IP20X. Insensitivity of equipment with annual surface temperature exceeding 60 °C.	
BA3	Disabled	Persons, use in context of all their physical and/or mechanical abilities (all persons) According to the extent of the disability	
BA4	Instructed	Persons, adequately trained or supervised by skilled persons to enable them to avoid danger which electrical may cause (operating and maintenance work)	
BA5	Skilled	Electricity operating area Equipment not having been previously opened does not contain live parts, electrical safety in locations which are accessible only to duly authorized persons with technical knowledge or sufficient experience to enable them to avoid danger which electrical may cause (operation and maintenance) (Fixed electrical operating area)	

- RCDs shall be provided for socket-outlets not exceeding 32 A for:
  - Use by ordinary persons, children or disabled persons (BA1, BA2, BA3)
  - Use in other locations
  - Use outdoors
- The option to omit RCDs for socket-outlet still remains for (ii) providing a documented risk assessment is completed and attached to the relevant electrical installation certification
- A new note has been added to emphasise that ordinary persons do not become instructed persons (electrically) just by being given a directive



# RCD risk assessments: 411.3.3

- RCDs shall be provided for socket-outlets not exceeding 32 A for:
  - i. Use by ordinary persons, children or disabled persons (BA1, BA2, BA3)
  - ii. Use in other locations
  - iii. Use outdoors
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Code	External influences	Characteristics required for selection and erection of equipment	Reference for information only
BA Capability of person			
BA1	Ordinary	Uninstructed person Household	Accessibility of electrical equipment. Location of inspection of accessible outlets
BA2	Children	Locations intended for presence of children e.g. nurseries, other schools, etc. Equipment of degree of protection equal to or greater than IP20C. Inaccessibility of equipment with external outlets temperature exceeding 60 °C	
BA3	Disabled	Persons not in possession of all their physical and/or intellectual abilities (such persons, old persons) According to the nature of the disability	
BA4	Instructed		
BA5	Skilled	Electrical operating staff Equipment not having basic protection against direct contact with live parts situated solely in locations which are accessible only to duly instructed persons with technical knowledge or sufficient experience to enable them to avoid dangers which otherwise may occur (operating and maintenance staff) Closed electrical operating areas	

# RCD risk assessments: 411.3.3

- Be mindful of the different types of RCDs and what they do
- AC are becoming less useful
- A are becoming the common type
- B and F are increasing in their demand especially around electric vehicles

Code	External influences	Characteristics required for selection and location of equipment	Reference for information only
BA	Capable of persons		
BA1	Ordinary	Uninstructed persons (House?)	Accessibility of electrical equipment Location of suspension of accessories cables
BA2	Children	Locations intended for presence of children e.g. swimming, other leisure, etc. Equipment of degree of protection equal to or greater than IP20: Inaccessibility of equipment with normal surface temperature exceeding 60 °C.	
BA3	Disabled	Persons, not in possession of all their physical and/or mental abilities (all persons)	
BA4	Instructed	Persons, adequately trained or supervised by skilled persons to enable them to avoid danger which electrical may cause (operating and maintenance staff)	
BA5	Skilled	Electric operating staff. Equipment not having been previously opened does not contain live parts, suitable only in locations which are accessible only to duly authorized persons with technical knowledge or sufficient experience to enable them to avoid danger which electrical may cause (operation and maintenance) (Special electrical operating staff)	

- RCDs shall be provided for socket-outlets not exceeding 32 A for:
  - Use by ordinary persons, children or disabled persons (BA1, BA2, BA3)
  - Use in other locations
  - Use outdoors
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- A new note has been added to emphasise that ordinary persons do not become instructed persons (electrically) just by being given a directive

# Additional earth electrode: 411.4.2

- New wording added to the end of this Regulation
  - *It is recommended that an additional connection to Earth, by means of an earth electrode in accordance with Chapter 54, is made to the protective conductors (PE and PEN) where they enter any building. This recommendation does not apply to outbuildings of dwellings served by the installation*
- This is just a **recommendation** and should not be seen as a mandatory foundation earthing, but matts and rods may be used more often



# Arc fault detection devices: 421.1.7

- The use of AFDDs has been clarified:
- *Arc fault detection devices (AFDD) conforming to BS EN 62606 shall be provided for single-phase AC final circuits supplying socket-outlets with a rated current not exceeding 32 A in:*
  - *Higher Risk Residential Buildings (HRRB)*
  - *Houses in Multiple Occupation (HMO)*
  - *Purpose built student accommodation*
  - *Care homes*



# Arc fault detection devices: 421.1.7

- Designers and consultants will require more AFDDs in those locations
- The use of AFDDs in other locations is an option but not mandatory
- Be mindful, they are not the fix all solution:
  - Different sizes
  - Different indicators
  - Limited benefit on XLPE cable
  - Non-updateable
- They do have some benefits, but always worth asking about limitations



# Protected escape routes: 422.1

- There is a major change within this Chapter, the concept of a **protected escape route** is now introduced
- This is a specific part of a building that has an escape route that is designed to be protected against fire for a specified period of time
- Previously BS 7671 referred to escape routes in general. During a fire, anything can will be a route to an escape. However only a protected escape route will be designed to last for a specified period of time
- You may find customers are wanting more and specific containment and cable types in these areas



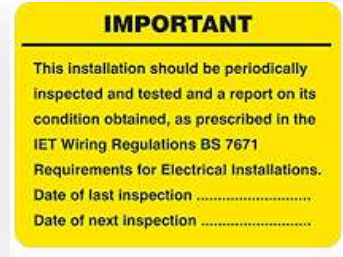
# Surge protection devices: 443.4.1

- The requirements for SPDs have been clarified:
- *Protection against transient overvoltages shall be provided where the consequence caused by the overvoltage could result in:*
  - (i) *serious injury to, or loss of, human life*
  - (ii) *failure of a safety service, as defined in Part 2*
  - (iii) *significant financial or data loss.*
- *For all other cases, protection against transient overvoltages shall be provided unless the owner of the installation declares it is not required due to any loss or damage being tolerable and they accept the risk of damage to equipment and any consequential loss.*



# Labelling: 514

- Greatly reduced requirements in dwellings for labelling and identification
- No more are these required but a handover pack with the information on will be needed
- Labels are still needed in non-dwellings
- Alternate power supply labels are still required





# Solar PV systems: Section 712

- 712 has been extensively re-written with more detail
- This is an established technology and there is an increase in demand
- Likely to see increased sales of PV, invertors and other equipment related to these installations



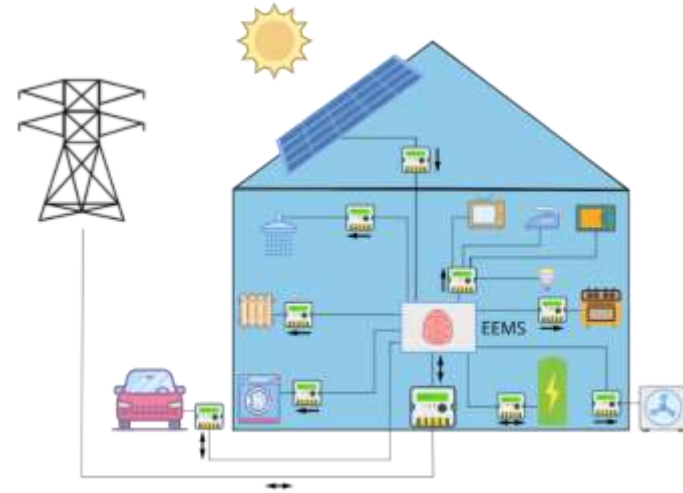
# Electric vehicles: Section 722

- Although no major changes are here it is worth highlighting that this is a huge growth area
- ECA are seeing more Members undertake this work
- If you are not supplying EV charging equipment, maybe this you should



# Prosumers electrical installations: Part 8, Chapter 8-2

- Brand new Part and Chapter
- New concept and terms:
  - Energy prosumer
  - Prosumers Electrical Installation (P.E.I.)
- Interaction of generation, storage, load control, energy efficiency and the grid
- More smart technology is coming and demand is increasing



# Safe isolation

- Not a change to BS 7671 Amendment 2 but a change to industry in general
- The way Competent Person Schemes assess contractors is changing and developing
- One area to look out for is safe isolation
- You will likely see a greater demand for isolation and lock of kits



Do your clients need to re-train?

## **TRAINING AND COMPLIANCE**



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# Qualifications and competence

- There is no mandatory requirement to upgrade a qualification from any previous 18<sup>th</sup> edition to Amendment 2
- There is a requirement to be competent and understand the new requirements
- ECA offers events to Members to show the major changes that impact them



Putting this all together

# SUMMARY



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# Summary

- The requirements of Amendment 2 are live now, but come into effect in September 2022
- They are far reaching
- There is more than can be covered today
- Additional training is advised but new qualifications are not needed
- It is recommended that all individuals ensure they are aware of the updates
- Your business should be ready for these changes and the products clients will be asking for
- Not sure? Just ask!





# Questions?

