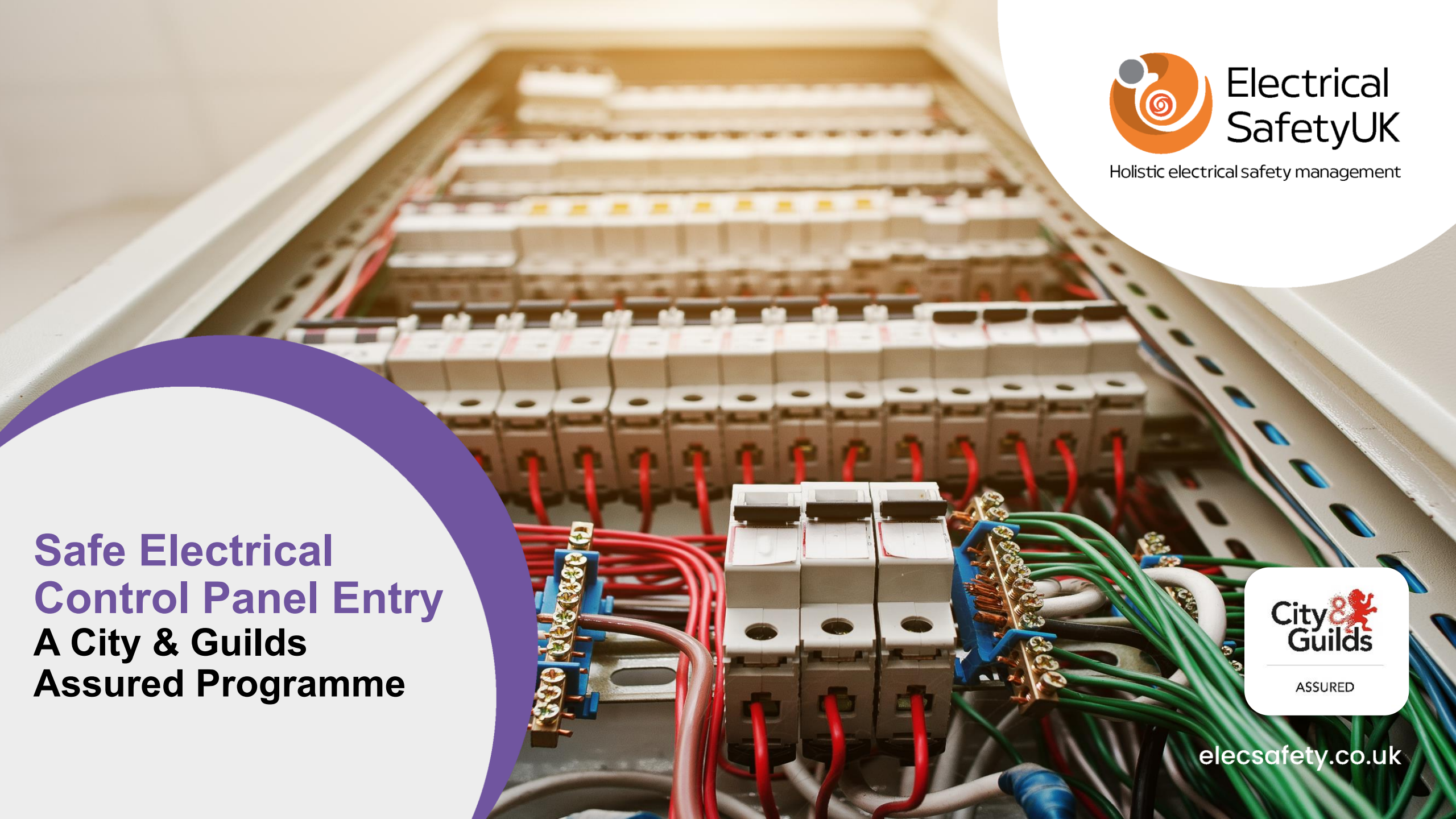


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# Safe Electrical Control Panel Entry

## A City & Guilds Assured Programme

City & Guilds ASSURED

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# Content

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**Section 1** The Dangers Associated with Electricity
**Section 2** Risk Assessment & Hierarchy of Control
**Section 3** Legal Requirements & Precautions
**Section 4** Basic Protection
**Section 5** Fault Protection
**Section 6** Permitted Tasks
**Section 7** Safe Isolation
**Section 8** Issues & Escalation
Conclusion


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# Causes of Electrical Accidents 1

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Most electrical accidents occur because people are working on or near equipment that is:

- thought to be dead but which is live;
- known to be live but those involved do not have adequate training or appropriate equipment to prevent injury, or they have not taken adequate precautions.



*HSG 85 Electricity at Work; Safe Working Practices*

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# Practical Control Measures Put in Place by Your Employer

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- Means of isolation
- Isolator door interlock
- Barriers and guards over live terminals or terminals recessed
- Integral lighting in panels
- Adequate working space
- Information, instruction, training and supervision.

Your employer provides a means of isolation so that you can switch off the supply of electricity.

# Entry into Control Panels

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## 6.1.4 Information

Get all the information you can before gaining entry

- What has happened?
- What happened before that?
- Who was where when it happened?
- What were they doing when it happened?
- Has it happened before?
- Is there any damage?

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# Entry into Control Panels

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## Types of Components





















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# Resetting Circuit Breakers & Overloads

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Fuses and circuit breakers operate due to overcurrent (excess current). This could be due to:

- Overloads
- Short-circuits
- Earth-faults

Overload devices operate due to:

- Overloads

RCDs operate due to:

- Earth-faults

In control panels:

- fuses and circuit breakers are usually provided to afford short-circuit and earth fault protection
- overload devices usually provide overload protection

However, sometimes, fuses and circuit breakers could operate due to an overload, and overload devices could operate due to a short-circuit or earth fault.

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# Securing the Isolation & Fitting a Caution Notice

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- Each person fits their own safety lock
- Retain key to safety lock
- Use lock adaptors and safety hasps
- Place Caution Notice at each point of isolation.







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# Proving Dead

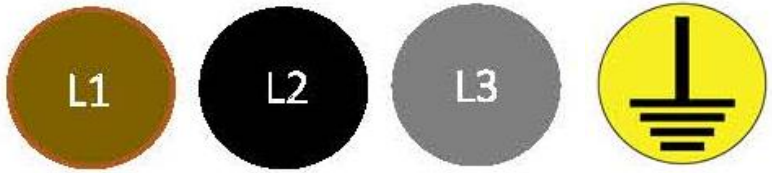
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A test shall be carried out between all live conductors within the enclosure and between each live conductors and earth. **(Prove-Test-Prove)**




(3 tests)

**L-N, L-E and N-E**




(6 tests)

**L1-L2, L1-L3, L2-L3. L1-E, L2-E and L3-E**




(? tests)

**L1-L2, L1-L3, L2-L3. L1-N, L2-N and L3-N**
**L1-E, L2-E, L3-E and N-E**

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# End of Presentation

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