

Advanced
Competence
Assessment

ACA

Information for
Employers and Candidates



Scottish Joint Industry Board



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What is ACA?

The Advanced Competence Assessment (ACA) is taken by electricians who have the necessary site experience and who wish to be graded to Approved electricians. The ACA is a mandatory requirement for Approved Electrician.

The duration of the ACA will be one day.

Throughout this leaflet, the term *Candidate* refers to an Electrician undertaking the assessment.

The Assessment

The ACA comprises of the following sections:

- A Risk Assessment and Assessment of Safe Working Practices
- B Safe Isolation of Supplies
- C Inspection and Testing
- D Fault Finding
- E Supervision (operatives and installation work)
- F Underpinning Knowledge Assessment

These sections must be completed within the specified target times. The work must comply with the requirements of BS 7671 (the current IEE Wiring Regulations) and Health and Safety Regulations.

Candidates will be permitted to refer to the current edition of BS 7671, IEE Guidance Note No.3 Inspection and Testing, the IEE On-Site Guide (OSG), relevant Health & Safety Regulations and Guidance, and the Electricity Safety, Quality and Continuity Regulations 2002 during the assessments.

Candidates will work on a standard assessment unit, using drawings, block and circuit diagrams and written instructions. (Figure A)

The assessment unit consists of three booths, each simulating a particular installation.

Figure B - Main Switch Room, Figure C - Industrial Installation and Figure D - Domestic Installation.

Candidates must present themselves at the SECTT assessment centre dressed in suitable working clothing and sound footwear. The centre is at Cambuslang - Chapel Works, 14 Tabernacle Lane, Cambuslang, G72 8HP.

The ACA can only be taken at the approved assessment centre licensed annually by the Scottish Joint Industry Board (SJIB). The SJIB has delegated the administration of the ACA to the Scottish Electrical Charitable Training Trust (SECTT).

Employer and Candidate Check List

Preparation on the points listed below will be beneficial when taking the ACA.

Employer

- Provide sufficient lead time for the candidate to prepare
- Ensure the candidate is prepared
- Provide the candidate briefing prior to the assessment
- Provide refresher training as necessary
- Encourage the candidate to approach the assessment in a positive and confident manner

Candidate

- Understand what competencies you are required to demonstrate
- Familiarise yourself with the correct procedures for the isolation of supplies
- Familiarise yourself on the fault diagnosis techniques
- Check the inspection and testing procedures as listed in the IEE On-Site Guide
- Be familiar with BS 7671
- Be familiar with the appropriate test instruments and their correct usage
- Be familiar with the Electricity at Work Regulations 1989 – HSR25
- Be familiar with the Electricity at Work – Safe Working Practices – HSG85
- Be familiar with Electrical Test Equipment for use by Electricians – GS 38
- Be familiar with the Electricity Safety, Quality and Continuity Regulations 2002
- Be familiar with the SELECT Technical Guidance for Certifiers of Construction
- Be familiar with the SJIB National Working Rules

Note on the provision of tools

A full set of all tools required to undertake the ACA will be provided by the approved centre. Candidates should not bring their own tools.

A - Risk Assessment and Assessment of Safe Working Practices

Target Time 30 Minutes

Each candidate will be required to provide Risk Assessments and demonstrate Assessments of Safe Working Practices.

B - Safe Isolation of Supplies

Target Time 30 Minutes

Candidates will be required, under observation, to demonstrate how to safely isolate circuits and items of equipment to ensure and verify they are safe to work on. Safe Isolation procedure shown in Figure F.

C - Inspection and Testing

Target Time 2 Hours

On the installations, each candidate will be required to carry out prescribed pre-commissioning inspection and electrical installation tests in accordance with the BS 7671. The candidate will be under direct supervision since some of the tests involve live working.

Each candidate will be supplied with necessary instructions, a copy of the current IEE On-Site Guide, test results sheets and a range of Instruments from which to select and prepare the one appropriate for each test.

D - Fault Finding**Target Time 1 Hour**

Candidates will be required to diagnose faults, introduced by the examiner, selected from a range of common faults. (Figure E for example). Each fault will be introduced individually to the candidates by either the examiner demonstrating the fault symptom or by the use of Job Cards.

E - Supervision (Operatives and Installation Work)**Target Time 30 Minutes**

Candidates will be assessed on their knowledge and ability to supervise a number of operatives on a site. The operatives to include labourers, apprentices and electricians, with the candidate showing an understanding of competence and the level of supervision each operative requires. In addition the candidate will be required to show an understanding of how to supervise electrical installation work on site.

F - Underpinning Knowledge Assessment**Target Time 1 Hour & 30 Minutes**

Candidates will require to undertake a multiple choice assessment paper. The questions will cover the following main areas:

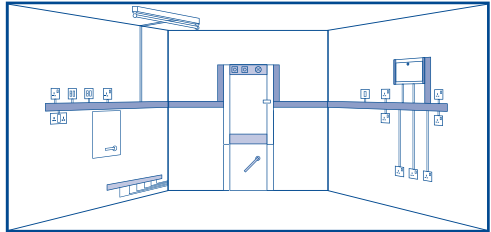
- Electrical Installations
- Scottish Building Regulations
- SJIB National Working Rules
- Inspection & Testing
- Statutory Regulations

Each candidate will be supplied with a copy of:

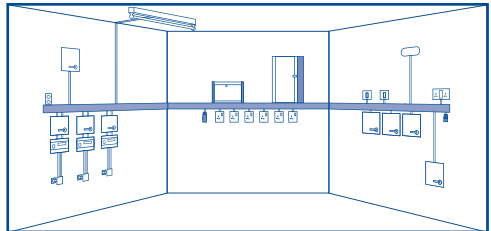
- BS 7671
- IEE On-Site Guide
- Memorandum on the Electricity at Work Regulations 1989 HSR25
- Electricity at Work - Safe Working Practices HSG85
- Electrical Test Equipment for use by Electricians GS 38
- The Electricity Safety, Quality & Continuity Regulations 2002
- The SELECT Technical Guidance for Certifiers of Construction
- The SJIB National Working Rules

Figure A - ACA Assessment Unit

Main Switch Room



Industrial



Domestic

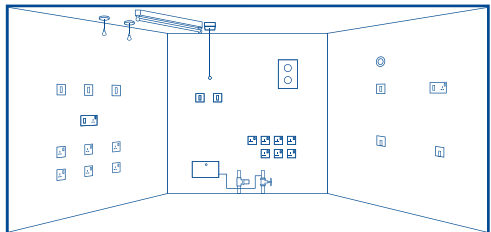


Figure B - Main Switch Room

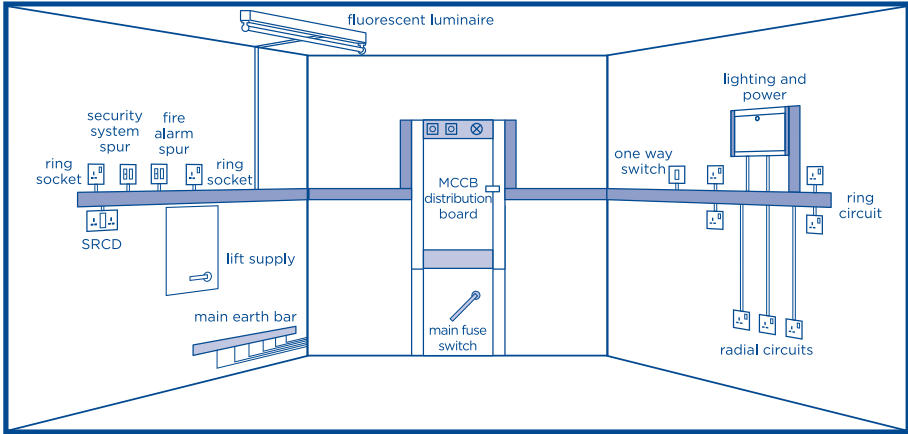


Figure C - Industrial Installation

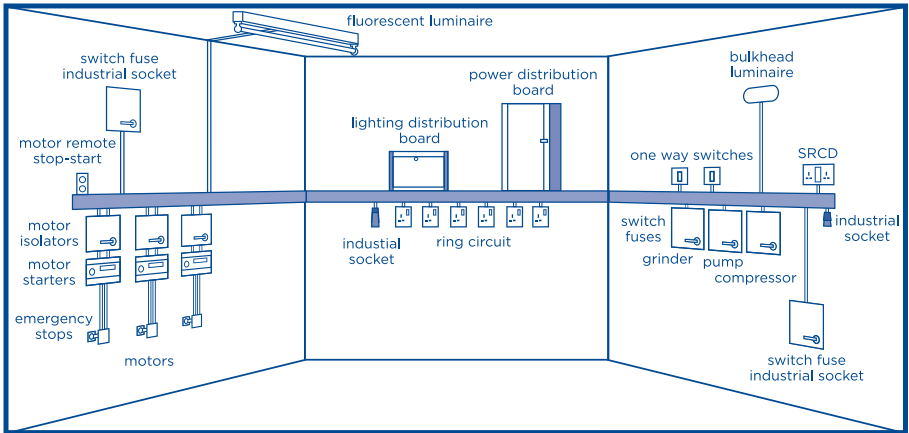


Figure D - Domestic Installation

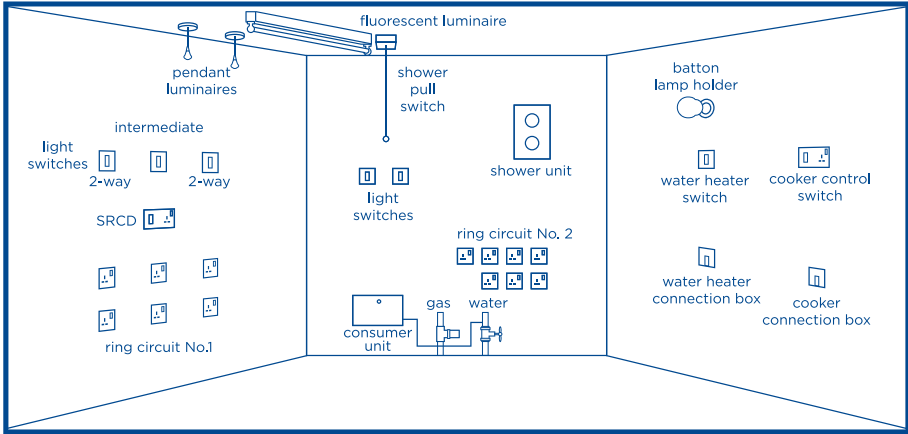


Figure E - Example Job Card

JOB CARD
ACA Section D
Fault Finding
Industrial Installation

Fault 21

3 Phase Industrial Socket

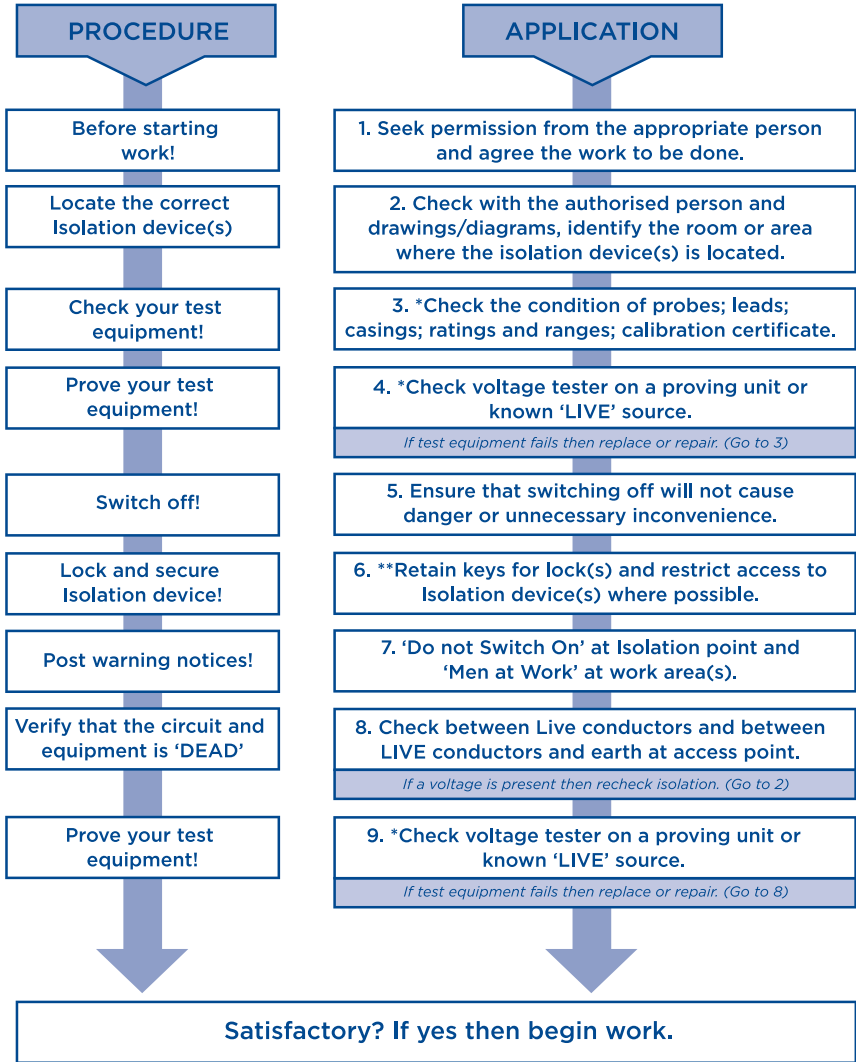
Circuit arrangements

Fed from D/B 2, Circuit 3L1,L2,L3 10amp Type C MCB

Fault Symptoms

The Industrial Socket does not work correctly.

Figure F - Safe Isolation Procedure



Reference should be made to the *Health and Safety Executive's Guidance Note: Electrical Test Equipment for use by Electricians GS38 and ** the current edition of BS 7671 the IEE wiring regulations and the IEE Guidance Note on Isolation and Switching.

Working Live Procedure

Refer to the Memorandum of Guidance on the Electricity at Work Regulations 1989 HSR25, Electricity at Work – Safe Working Practices HSG85 and Electrical Test Equipment for use by Electricians GS38.

Identify the circuit or equipment to be worked on or near and the work to be done

Regulation 4

In advance of any work, physical identification and use of drawings should be accessed.

See Electricity at Work – Safe Working Practices paragraphs 33 & 34

Paragraph 88

Ensure suitable precautions are taken and that suitable protective equipment is used

Regulation 4 (4), 14(c)

Use of suitably insulated tools, insulating screening materials and test equipment.

See Electricity at Work – Safe Working Practices paragraphs 22-29, 62 & 88

Paragraph 89

Ensure adequate working space, access and lighting. Restrict access to area of live work

Regulation 14, 15

See Electricity at Work – Safe Working Practices paragraphs 25 & 89

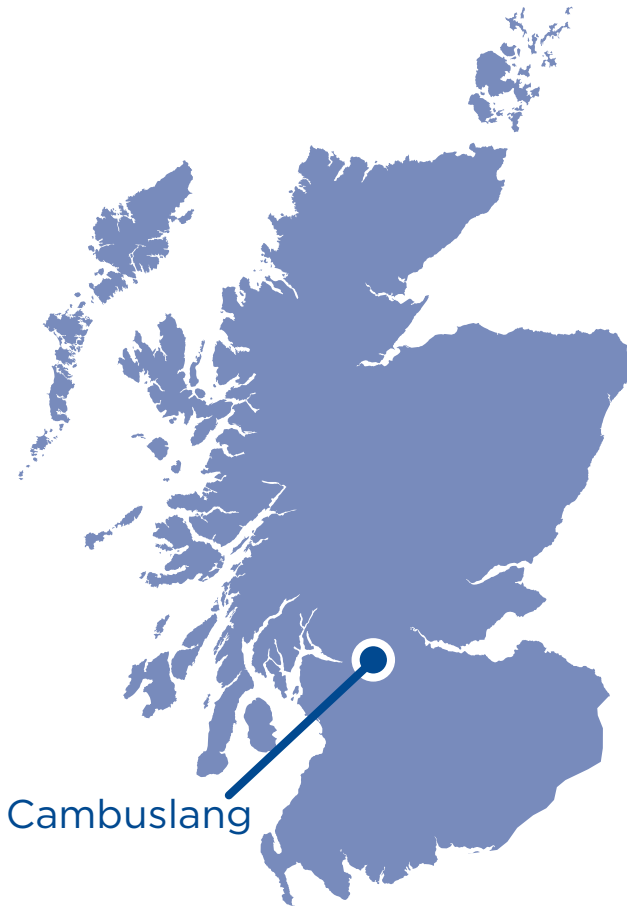
Paragraph 90

Ensure accompaniment is provided if necessary. Accompaniment to be trained to give assistance

Regulation 3, 14, 15

See Electricity at Work – Safe Working Practices paragraph 90

LIVE WORKING, ie INJURY TO BE PREVENTED



SECTT Assessment Centre,
Chapel Works,
14 Tabernacle Lane, Cambuslang,
Glasgow G72 8HP
Tel: 0141 641 3127

Please contact SECTT Head Office at
The Walled Garden to arrange a booking.

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