

skill**ELECTRIC**

Electrical Installation
Skills Competition



Task Information Heats **2023**



SkillELECTRIC is the electrical industry's premier, annual skills competition to search for the UK's best young electrician



SkilleLECTRIC Task Information Heats 2023

You have successfully completed the Passive task for the SkilleLECTRIC 2023 competition. This document contains important information you need to read and understand before attending your accepted National Qualifier venue.



General Information

The SkilleLECTRIC National Qualifier competition is a one-day event across a series of venues where competitors will have a set time by which to complete the task. All materials to complete the competition piece will be provided by the sponsors and will be placed in your work area. Work areas will be randomly allocated to each competitor in advance of the competition.

On the day of the competition, a clear brief will be provided to you along with the technical drawing which will include the measurements. Past examples of technical drawings and task information can be found on the [SkilleLECTRIC website](#).

Tasks are designed to test a competitor's ability to:

- Work to the specification and dimensions as detailed on the wiring plan with a tolerance of +/- 2mm
- Install the competition piece safely to industry recognised standards
- Complete the competition piece with the materials provided
- Determine all necessary wiring methods for the correct installation and operation of equipment as described in the specification
- Comply with all health and safety legislation and requirements of the competition
- Carry out basic electrical tests to the standard as per the specification to demonstrate to the judges that the installation is safe to energise. Only judges or appointed persons are authorised to energise an installation and their decision is final.

Tool List

Competitors are asked to bring and use their own tools, equipment and consumable items as per the tool list below. Please be prepared and double check your tool box as the competition venue may not be able to provide any spare tools or consumable items.

The following items are restricted and **not allowed**:

- 'Stanley' type craft knives (an electrician's knife is recommended)
- 230v/110v power tools.

Battery operated screw drivers and chargers are allowed

Please note that any live connection and test only carried out by the judging team only and no mains powered tools or Stanley knives will be allowed on site.

Permitted tools list	
Tool box	Drill bits various sizes
Full set of insulated screwdrivers flat and cross head	20mm hole cutter
Medium sized claw hammer	Continuity and insulation resistance tester
Bradawl	20mm heavy duty bending spring
Insulated pliers long and short	Battery drill and spare battery and charger
Side cutters	Large spirit level
Junior hacksaw, complete with spare blades	Protractor (large)/ adjustable angle
Large hacksaw, complete with spare blades	Mitre box/ saw
PVC conduit cutters	Pencils
Crimping tool	File medium cut
Cable strippers/ electrician knife	Tape measure or fixed rule
Cable cutters	Personal Protective Equipment (PPE)
Cable draw tape	Goggles/ safety glasses
Adjustable spanner x 2	Gloves
Bush spanner	Work-wear trousers or overalls
Face mask	Safety boots/ shoes

Practice and Preparation

To support competitors to achieve their full potential and be competition ready please refer to the SkilleLECTRIC Training to Succeed document. This guide is for SkilleLECTRIC competitors to be used in conjunction with the competition training and development they are receiving from their supporting provider and / or employer for all stages of the competition. It contains technical tips and advice to enable competitors to perform to the best of their ability.

There is also the [Preparing for the Qualifying Heats](#) document that you can use.

Safe Working

At all times we will ask competitors:

- To work safely always and take appropriate precautions when working with any tools that have a potential safety hazard
- To wear appropriate Personal Protective Equipment (PPE) to the task
- Live working / testing is prohibited for competitors
- Not to use power tools except a battery-operated drill (preferably not impact)
- To comply with additional competition rules for safety
- There may be specific Covid guidance at each host venue, which we will provide in advance of you attending your competition

Please note that only SkilleLECTRIC judges or appointed persons are authorised to energise a competitors installation and will only do so if they deem it safe.

Competition Rules and Code of Conduct

As the Competition Organising Partner, NET is responsible for you having a safe and enjoyable competition experience. To support us we will share with you in a separate email the competition rules and code of conduct. When you receive this please ensure you read and fully understand it. We expect all competitors to use this as a guide for how to best behave during the competition at all times.

Please remember there may be a number of industry representatives attending your competition and it would be in your best interest to positively represent yourself and your organisation at all times. For competitors who choose to behave outside of the guidance provided, NET cannot be accountable for your actions and this may result in disqualification of your place in the competition.

Competition Tasks

On the morning of the competition you will receive a verbal briefing and the technical drawing which will include the measurements you are expected to install your competition piece to within tolerances of +/- 2mm.

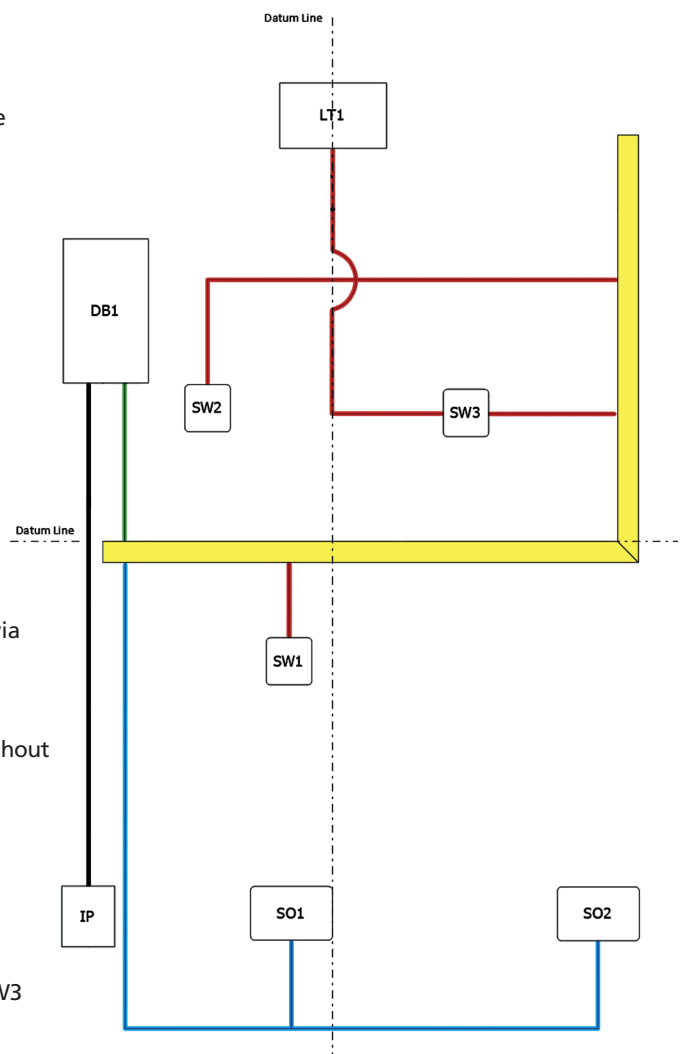
—	20mm PVC Conduit
—	25mm PVC Conduit
—	2.5mm ² 6242Y Twin & Earth Cable
—	3 Core PVC SWA XLPE Armoured Cable

Key to the drawing:

DB1	distribution board/ consumer unit
L1	bulkhead fitting
SW1	2 gang 2-way switch
SW2	1 gang 2-way switch
SW3	1 gang intermediate switch
SO1	2 gang socket outlet
SO2	2 gang socket outlet
IP	appliance inlet (for mains power up)

Installation Notes:

- PVC Cables from the bottom of Trunking to SO1 & SO2 done via 25mm stuffing gland
- Measurements are to the centre of cable/ conduit as shown
- Bubble set in PVC Conduit to have a clearance of 20-25mm
- Cables and containment should be adequately supported throughout
- Tolerance allowance of +/- 2mm
- Centre of SW1 & SO1 to be vertically aligned
- Right-Hand edges of SO2 and vertical trunking piece to be vertically aligned
- SO1 & SO2 to be horizontally aligned
- Top of IP and top of SO1 & SO2 to be horizontally aligned
- SO1 & SO2 to be wired in the form of a ring final circuit
- LT1 is switched 2 way and intermediate from SW1, SW2 and SW3 with an override also at SW1



Marking

SkilleLECTRIC is judged by industry professionals who will observe work practices throughout the duration of the competition. The judges are briefed on assessment procedures prior to the competition and the results are quality assured before results are announced.

The marking scheme objectively assesses a competitor's test piece, however, judges will also take into account soft skills such as, planning, working under pressure and time management.

The following table is an example criteria from which competitors work will be marked against. The range of marks will vary depending on the task that is set:

Assessment criteria	Maximum marks available as a %
Function	11
Wiring and Termination	29
Inspection and Testing	12
Installation Quality	19
Measurement	23
Effective health and safety	6
Total	100

Material usage, design and presentation of work is included within the overall marking and the testing of circuits will include continuity of protective / ring final circuit conductors, insulation resistance and polarity testing. A schedule of circuit details and test results will be provided.'

The following standards will be used to assess the competition:

- All measurements must be within +/-2mm tolerance and taken from datum line
- All bends and sets to be formed evenly, uniformly and without distortion
- All conductors should be securely terminated with no bare conductor showing when viewed at 90 degrees, no insulation trapped in connection no reduction in the c.s.a of the conductor and insulation undamaged
- All circuits should function as design specification
- There should be no more than 1 mm gap on any encasement containment systems.
- All encasement wiring systems, accessories and components should be vertical and horizontal and installed as per drawing provided which is not to scale.

I hope that this document supports you to be as prepared as you can be for your competition performance. If you have any further queries relating to the competition please do not hesitate to contact me.

Kind regards,

Jennie Phung

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