# Underground Low Voltage Distribution Circuit Test Certificate

Version 3 – **220F028G**
Issued Date **1 August 2025**

**Certify** where required that the information written on this Certificate (and its attachments) is a true and correct record of the works undertaken and that the equipment is ready and safe to be commissioned.

**Retain** a copy of this Certificate (plus its attachments) on your files and **send all of the originals to Powerco** as prescribed in *360S014 Electricity As-Built Reporting Standard*.

Complete this form whenever a new underground circuit is built or reconfigured

| | | | |
|---|---|---|---|
| Job Name | | Contractor Name | |
| No / Street / Road | | Between/Vicinity | and |
| | | Town/District | |
| CIWR No. | | Contractor Ref. No | |
| SAP W/O No. | | Date Completed | |

**a) As-Built Information Records have been uploaded to SAP** **Confirmed ✓**

| | |
|---|---|
| *360S014EB As-built Electrical Distribution Record* | |
| *360S014EL As-built Cable Test Report* | |
| All circuits correctly labelled per *393S004 Labelling and Safety Signage Requirements Standard* | |

**b) Insulation Resistance Tests (with all service fuses and loads removed)**

| | Measured Ohms | | | | Acceptable Results | Confirmed ✓ |
|---|---|---|---|---|---|---|
| | Circuit | Circuit | Circuit | Circuit | | |
| R to B+W+N+E | MΩ | MΩ | MΩ | MΩ | New cable - greater than 100 MΩ | |
| W to R+B+N+E | MΩ | MΩ | MΩ | MΩ | Aged cable - greater than 1 MΩ | |
| B to W+R+N+E | MΩ | MΩ | MΩ | MΩ | | |
| Pilot to Earth (where applicable) | MΩ | MΩ | MΩ | MΩ | New cable - greater than 10 MΩ | |
| Streetlight to N + E (as applicable) | MΩ | MΩ | MΩ | MΩ | Aged cable - greater than 1 MΩ | |
| **Sheath Integrity (applicable to neutral screened or armoured cables only)** | | | | | | |
| Screen to Local Earth | MΩ | MΩ | MΩ | MΩ | New cable - greater than 10 MΩ<br>Aged cable - greater than 1 MΩ | |

**Note:** The cable insulation resistance shall be measured with a 500 volts DC Insulation Tester ("Megger" or similar. The reading should be recorded at a time when either the indicating pointer remains stationary or the first digit to the left of the decimal point on a display stabilises.

**c) Phase and Neutral conductor confirmation** **Confirmed ✓**

| | |
|---|---|
| Each phase conductor is securely connected to the correct transformer phase via HRC fuses | |
| Each neutral conductor is securely conductor to the transformer neutral/earth bar | |

**d) End of Line Earth checks**

| | |
|---|---|
| Visual and physical check to confirm that neutral is securely connected to a single driven earth rod | **Confirmed** ✓ |
| Circuit Name: | |
| Circuit Name: | |
| Circuit Name: | |
| Circuit Name: | |

**e) Phase Rotation**

| | **Confirmed** ✓ |
|---|---|
| Phase rotation checked where the new LV circuit is a Tee off and cannot be interconnected to an adjacent circuit | |

**f) Phasing Out Checks Across Parallel Points (at service/link box or underground/overhead connection)**

Where the LV circuit can be connected to a neighbouring network/s circuit/s by means of an existing switch or other device - e.g., Stangers or links, a phasing check, across each paralleling point, must be carried out to ensure that the phasing of the new works is consistent with the neighbouring network/s and is/are safe to parallel.

**After confirming that both circuits are alive, measure across the open paralleling device:**

| **Measured points** | **Measured Volts** | | | | **Acceptable Results** | **Confirmed** ✓ |
|---|---|---|---|---|---|---|
| | **Circuit ____ to Circuit ____** | **Circuit ____ to Circuit ____** | **Circuit ____ to Circuit ____** | **Circuit ____ to Circuit ____** | | |
| R1 to R2 | V | V | V | V | Less than 10 V | |
| W1 to W2 | V | V | V | V | Less than 10 V | |
| B1 to B2 | V | V | V | V | Less than 10 V | |
| Neutrals securely connected (✓) | | | | | | |

**g) Powerco owned Pilot Wire Circuit Checks** (where applicable)

| | **Measured Volts** | | | | | |
|---|---|---|---|---|---|---|
| **Pilot wire - N** | **Circuit 1** | **Circuit 2** | **Circuit 3** | **Circuit 4** | | **Confirmed** ✓ |
| Water Heating - N | V | V | V | V | Acceptable Results shall be between 238 to 244 Volts | |
| Streetlight - N | V | V | V | V | | |

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**h) Loop Impedance Tests: Measured at the end of each circuit or beyond where connections have been altered** *(Refer 220S047 Loop Impedance Testing Standard)* Indicate Test Position e.g.: End of cct., at service pillar 123456 etc.

| | **Circuit 1:** Test Position | | **Circuit 2:** Test Position | | **Circuit 3:** Test Position | | **Circuit 4:** Test Position | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Measured Impedance** | **Voltage** | **Measured Impedance** | **Voltage** | **Measured Impedance** | **Voltage** | **Measured Impedance** | **Voltage** | Acceptable Impedance results shall not exceed maximum values for the size of service fuse connected to the line. Refer to 220S047, Table 1 |
| R to W | Ω | V | Ω | V | Ω | V | Ω | V | |
| R to B | Ω | V | Ω | V | Ω | V | Ω | V | |
| W to B | Ω | V | Ω | V | Ω | V | Ω | V | |
| R to N | Ω | V | Ω | V | Ω | V | Ω | V | |
| W to N | Ω | V | Ω | V | Ω | V | Ω | V | |
| B to N | Ω | V | Ω | V | Ω | V | Ω | V | |

**i) Testing Attestation**

I certify that the work to which this certificate applies has been done lawfully and safely and that the information in this certificate is correct and that the equipment is safe to energise

| | | | |
|---|---|---|---|
| Print Name | | Signed | |
| Date | | ISN ID Number | |

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## Document Control

| Version | Date | Change |
|---|---|---|
| 3 | 1st August 2025 | Authorised by and Document Owner change<br>Removed all references to 360S016 Guide to Recording Electricity Assets (superseded standard) |