

Title	Joint live low voltage paper insulated power cables in the electricity supply industry		
Level	4	Credits	10

Purpose	People credited with this unit standard are able to: prepare a work site to joint live LV paper insulated power cables; joint live LV paper insulated power cables; and test cables and record joint as built.
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Classification	Electricity Supply > Electricity Supply - Distribution Networks
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Available grade	Achieved
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Guidance Information

- 1 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable legislative and industry requirements.
- 2 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to:
 - Health and Safety at Work Act 2015;
 - Electricity Act 1992;
 - Electricity (Safety) Regulations 2010;
 - Electricity supply industry codes of practice and documented enterprise procedures, including Safety Manual – Electricity Industry (SM-EI) and relevant EEA guides available from www.eea.co.nz;
 - and any subsequent amendments and replacements.
- 3 Definitions

Asset owner refers to a participant who owns or operates assets used for generating or conveying electricity.

Industry requirements include all asset owner requirements and standards; manufacturers' specifications; and enterprise requirements which cover the documented workplace policies, procedures, specifications, business and quality management requirements relevant to the workplace in which assessment is carried out.

Low voltage (LV) includes voltages up to and including 1000 volts AC and/or 1500 volts DC.
- 4 The observance of special safety requirements associated with this type of live jointing shall be critical to assessment against this unit standard.
- 5 Assessment against this unit standard will be conducted in a simulated environment using 3-Core 11 kV cables, armoured or unarmoured.

Outcomes and performance criteria

Outcome 1

Prepare a work site to joint live LV paper insulated power cables.

Performance criteria

- 1.1 Scope of work is determined.
- Range cable types, condition of cables, energised or de-energised, material and manpower resources.
- 1.2 Safe working zone is established.
- Range physical location, working mats, safe working area delineation, entry and exit positions.
- 1.3 Cables are identified.
- Range electrical, physical, plans.
- 1.4 Cables are checked and tested at the remote ends in preparation for jointing.
- Range phasing, voltage.

Outcome 2

Joint live LV paper insulated power cables.

Performance criteria

- 2.1 Cable is prepared prior to jointing.
- Range selection of materials and equipment, cleaning, stripping including armours earth continuity bond applied, and removal of lead sheath.
- 2.2 Core is prepared prior to jointing.
- Range removal of belt papers, cores are identified and tested, minimum bending radius adhered to.
- 2.3 Conductors are jointed.
- Range compression, mechanical, insulation requirements.
- 2.4 Conductors are re-insulated.
- Range may include but is not limited to – heat shrink, cold applied, tapes, resin.

2.5 Earth continuity is maintained.

Range may include but is not limited to – lead sheaths, screens, steel wire armour, steel tape armour.

2.6 Mechanical integrity is re-established.

Range may include but is not limited to – enclosures, heat shrink, tapes, wiping, compounding.

Outcome 3

Test cables and record joint as built.

Performance criteria

3.1 Cables are tested.

Range includes but is not limited to – phasing, rotation, voltage, polarity.

3.2 Joint is recorded as built.

Range location, cable type, joint type, test results.

Planned review date	31 December 2026
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	22 October 2003	31 December 2019
Rollover and Revision	2	24 August 2007	31 December 2019
Review	3	16 April 2010	31 December 2019
Review	4	17 August 2017	31 December 2023
Review	5	30 September 2021	N/A

Consent and Moderation Requirements (CMR) reference	0120
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Connexis - Infrastructure Industry Training Organisation qualifications@connexis.org.nz if you wish to suggest changes to the content of this unit standard.