

New Conductor Type

General Information

Introduction to CCSX HV Covered Conductor

10 October 2024

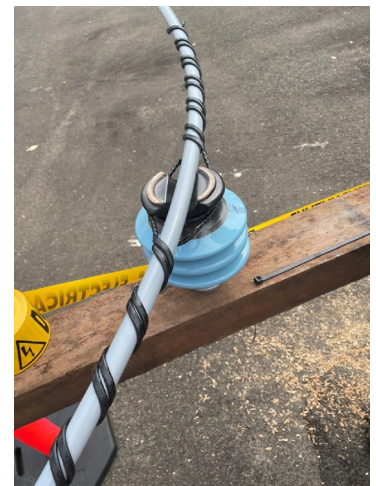
Dear ASPs,

Ausgrid is introducing the new CCSX HV Covered Conductor for 11kV installations. This cable type offers significant advantages over traditional conductors, including:

- **Reduced Installation Costs:** Faster setup and shorter outages during construction and maintenance.
- **Easier to work with:** Thinner covering, approximately 2.4mm vs 3.4mm for CCT, while still maintaining reliability as CCT and reduced bushfire risk compared to bare wires.
- **Ease of Installation:** Less stripping needed and faster connections with Insulation Piercing Connectors (IPCs).

Key Features

- Semi-conducting Conductor Screen
- Inner XLPE and outer HDPE for durability.
- Water blocking, EVA & swellable powder for protection.



Installation Requirements

To ensure proper installation and longevity of the CCSX HV Covered Conductor, follow these practices:

- **Use Appropriate Accessories:** Only use fittings designed for CCSX conductors and ensure correct size fittings for each conductor type. Follow manufacturer's installation instructions that are included with each fitting. Ensure field crews are trained and familiar with installation techniques – see contact information at the end of this document.
- **Prevent Damage During Handling:** Store out of direct sunlight and rain, check and tighten drum bolts after transport, and avoid damaging the covering during pulling and stripping.
- **Safe Work Practices:** Follow Electrical Safety Rules. Use specified personal protective equipment (PPE), including hard hats, protective eyewear, gloves, safety footwear, and high-visibility arc rated clothing.

Practical Application

- **Straining:** Use specified 'comealongs' and tension meters for each conductor size.
- **Termination and Splicing:** CCSX159 and CCSX62 use wedge clamp 'deadends' and auto splices, while CCSX25 requires compression fittings and special tools.

Specifications

Product	Conductor Details	Expected Applications
CCSX 25 ACSC 22kV W	25mm ² ACS:7/2.12 aluminium-coated steel conductor	Rural light roads, replacement of small steel bare wire
CCSX 62 ACSR 22kV W	62mm ² ACSR: 6/1/3.37 aluminium conductor steel-reinforced	Equivalent to Mars AAC or Banana ACSR bare wire
CCSX 159 AAAC 22kV W	159mm ² AAAC: 19/3.26 all aluminium alloy conductor	Equivalent to Neptune AAC bare wire

Accessories

ENSTO produces suitable fittings for CCSX conductors, compatible with all three sizes:

- **Universal IPCs:** Compatible with all CCSX sizes.
- **Specific Termination Clamps, Covers, and Helical Ties:** Required for each CCSX size.



What has changed

- **Amendments to Standards:** NS220 (Design) and NS126 (Construction) have been updated to include CCSX covered conductor.
- **Approved Materials List:** all approved covered conductor & fittings are listed in the AML, filter by "CCSX" etc to see all applicable components.
- **Usage of Existing Stocks:** Ausgrid plans to use up existing CCT stocks and maintain a small amount for repairs/diversions. If CCSX meets expectations, CCT will likely be phased out for new installations within two years.
- **Preferred Conductor:** CCSX is listed as the "preferred" covered conductor in the updated NS220.
- **Drawings:** New suite of construction drawings created to cover CCSX covered conductor.



Contact Information

For more information and training arrangements, please contact:

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