



PCJ CABLE JOINTS

PCJ™ Power Cable Joints utilize permanently crimped connectors. PCJ Housings are fully insulated, shielded and sealed for direct buried, vault, submersible and other severe service applications. Units have been designed and tested per IEEE Standard 404 to assure system matched performance and ratings equal to the cable to which the splice will be installed.

PCJ Power Cable Joints are available in 2 styles:

Style 1 uses a single piece housing that is sized to accommodate a specific range of cable. Style 1 units are ideally suited for straight splicing of the same or similar cable.

Style 2 designs incorporate a universal housing with separate cable adapters to allow transition splices of different types and sizes of cable.



ELECTRICAL RATINGS SUMMARY

The follow ratings summary is based on **IEEE Std. 404** and applies to all Elastimold PCJ Power Cable Joints.

VOLTAGE

- A.** 15kV Class (8.7kV Phase-to-Ground)
- B.** 25kV Class (14.4kV Phase-to-Ground)
- C.** 35kV Class (20.2kV Phase-to-Ground)

- **Impulse Withstand:** A = 110kV, B = 150kV, C = 200kV BIL, 1.2 x 50 microsecond wave.
- **Corona Extinction Voltage:** A = 13kV, B = 22kV, C = 31kV minimum, 3pC sensitivity.
- **DC Withstand:** During installation: A = 56kV, B = 80kV, C = 100kV (Reference AEIC CS5 and CS6, Section L.1.)
- **DC Withstand:**
After installation and in service for the first 5 years:
A = 18kV, B = 25kV, C = 31kV for XLPE Insulated Cables
and A = 45kV, B = 64kV, C = 80kV for EPR Insulated Cables.
(Reference AEIC CS5 and CS6, Section L.2.)

CURRENT

- Continuous rating equal to the rating of the cable.
- Short-Time rating equal to the rating of the cable.

SHIELD DESIGN

- Meets IEEE standard 592 for Exposed Semiconducting Shields on Premolded High Voltage Cable Joints and Separable Insulated Connectors.

Production tests include 100% tests of the premolded joints to assure:

- **Corona Extinction Voltage:** A = 13kV, B = 22kV, C = 31kV minimum, 3pC sensitivity.
- **AC Withstand:** A = 35kV, B = 52kV, C = 69kV, 60 Hz, 1 minute.

Design tests on production joints demonstrate compliance with IEEE 404 including:

- **Corona Extinction Voltage:** A = 13.0kV, B = 21.6kV, C = 30.3kV minimum, 3pC sensitivity.
- **AC Withstand:** A = 35kV, B = 52kV, C = 69kV, 60 Hz 1 minute.
- **DC Withstand:** A = 70kV, B = 100kV, C = 125kV negative polarity, 15 minutes.
- **Impulse Withstand (BIL):** A = 110kV, B = 150kV, C = 200kV, 10 positive and 10 negative, 1.2 x 50 microsecond wave, at conductor temperatures of 20° and 130°C, nominal.
- **Short-Time Current:** magnitude equal to cable.
- **Cyclic Aging:** 30 days at: A = 26.1kV, B = 43.2kV, C = 60.2kV AC continuous, load current for 8 hours per day providing 130° conductor temperature. Joints then subjected to: A = 35kV, B = 52kV, C = 69kV for 5 hours followed by: A = 53kV, B = 78kV, C = 104kV for 1 hour.
- **Load Cycle:** Connectors meet thermal and mechanical requirements of ANSI C119.4, Class A heat cycle, Class 2 partial tension.