Protection you can count on

Eaton combines its industry-leading current-limiting fuse and molded rubber loadbreak elbow technology into one fused loadbreak elbow switching device. No longer is there a need to purchase switchgear or replace sectionalizing equipment in order to provide full-range current-limiting protection to underground distribution systems.

Full-range current-limiting protection

Eaton continues to provide customers with innovative designs. We have the experience to meet the demand for solutions to installation problems while offering cost saving benefits for your distribution systems.

Eaton’s Cooper Power™ series fused loadbreak elbow connector, available in 15 kV, 25 kV and 28 kV voltage classes, is the right solution that provides a convenient, compact and cost-effective means to adding fuse protection to underground distribution systems, for connecting underground cables to transformers, switching cabinets and junctions equipped with 200 A, 15 kV, 25 kV and 28 kV class loadbreak bushings, manufactured to IEEE® Std 386E. It combines a fully shielded and insulated plug-in termination with full-range current-limiting fuse protection.

Eaton’s design incorporates solid internal connections preventing the elbow and cable housings from separating and the potential of partial discharge related issues. It is 25% lighter and 25% smaller in diameter than the competitor’s design, which means it’s easier to operate with a hotstick and reduces congestion in underground installations.

Key design features and benefits that separate Eaton from other manufacturers

Solid internal connections

- Eliminates the possibility of the elbow and cable housing interfaces from separating and the potential of partial discharge related issues—increased reliability
- No additional hardware required to hold housings together—easier to install

Compact and lightweight

- 25% lighter than other manufactured units—easier to operate on the end of a hotstick
- 25% smaller in diameter than other manufactured units—eliminates installation congestion and provides unobstructed operation

Over 40 years of industry-leading current-limiting fuse technology

- Protection you can count on
Additional design features and benefits

- Easily retrofittable to existing 200 A underground installations
- Simply replace the 15 kV, 25 kV or 28 kV class loadbreak elbow with a 15 kV, 25 kV or 28 kV class fused loadbreak elbow connector
- Convenient and cost-effective
  - Improves the reliability of distribution systems without the need to add a separate piece of switchgear or replace sectionalizing equipment
- Easy to install
  - Installs similarly to a standard 200 A loadbreak elbow
  - No special training required for linemen or contractors
- Full-range current-limiting protection
  - Ensures reliable operation of all overloads and fault current
- EPDM molded rubber deadfront construction
- Eliminates exposed live parts
- Fully submersible
- Built-in voltage test points
- Provides quick blown fuse indication
- Hotstick operable
- Provides an industry standard loadbreak elbow switching device
- Field replaceable fuse
- Fuse is quick and easy to replace, minimizing customer outages
- Quality control and technical support
  - Eaton-manufactured EPDM rubber housing and current-limiting fuse element
  - Complete quality control
  - Superior customer technical support
- EPDM molded rubber deadfront construction
- Eliminates exposed live parts
- Fully submersible
- Built-in voltage test points
- Provides quick blown fuse indication
- Hotstick operable
- Provides an industry standard loadbreak elbow switching device
- Field replaceable fuse
- Fuse is quick and easy to replace, minimizing customer outages

EXCLUSIVELY DESIGNED

Eaton’s Cooper Power series fused loadbreak elbow connector current-limiting fuse is designed specifically for use in the company’s 15 kV, 25 kV or 28 kV class fused loadbreak elbow connector. The full-range current-limiting rating ensures reliable operation of all overloads and fault currents. Available current ratings of 8.3 kV from 6 A to 40 A, 15.5 kV and 17.2 kV from 6 A to 20 A.

Design tests

- IEEE Std C37.40 standard, service conditions and definitions for high-voltage fuses
- IEEE Std C37.41 standard, design tests for high-voltage fuses
- IEEE Std 386 standard, separable insulated connector systems
- ANSI T C37.47 standard, specifications for distribution fuse disconnecting switches and current-limiting fuses
- Eaton exclusive multi-stress test

Fuse production tests

100% tested according to Eaton’s requirements:
- Physical inspection
- I2t testing
- Resistance testing

Fused loadbreak elbow connector production tests

IEEE Std 386 standard testing:
- AC 60 Hz 1 minute withstand:
  - 34 kV (15 kV class)
  - 40 kV (25 kV class)
  - 45 kV (28 kV class)
- Minimum corona voltage level:
  - 11 kV (15 kV class)
  - 19 kV (25 kV class)
  - 21.5 kV (28 kV class)
- Test point voltage test

Tested according to Eaton’s requirements:
- Physical inspection
- Periodic dissection
- Periodic x-ray analysis