

TYPE NOVA™ RECLOSER

EQUIPMENT SPECIFICATIONS: Type Nova Recloser

Three-phase automatic circuit recloser with axial-magnetic field vacuum interrupters encapsulated in cycloaliphatic epoxy modules.

STANDARD:

The recloser covered by this specification shall be manufactured and tested in accordance with ANSI C37.60, IEEE, IEC, and NEMA Standards.

QUALITY

The manufacturing facility shall be independently certified to meet ISO 9001 Standards.

RATINGS

| | | | |
|-----------------------------------|----------|----------|----------|
| Maximum Design Voltage, kV | 15.5 | 29.2 | 38 |
| Nominal Operating Voltage, kV | 14.4 | 24.9 | 34.5 |
| Basic Insulation Level (BIL), kV | 110 | 125 | 150 |
| 60 Hz Withstand Voltage, kV | | | |
| Dry, One Minute | 50 | 60 | 70 |
| Wet, Ten Seconds | 45 | 50 | 60 |
| Continuous Current Rating, A RMS | 630/800* | 630/800* | 630/800* |
| Interrupting Rating, Symmetric, A | 12,500 | 12,500 | 12,500 |

* Available optional Ratings.

MECHANICAL LIFE:

The unit shall be designed for 2,500 complete open/close operations. An operation is defined as an open and close operation, returning the mechanism contacts to the original state.

RECLOSER FEATURES:

The recloser shall use cycloaliphatic epoxy for insulation material and provide complete encapsulation of the internal vacuum interrupter. No insulation fillers such as SF6 or foam insulation are acceptable. The encapsulation shall also be completely bonded to the source and load side terminals, eliminating any gaskets, O-ring, or other sealing methods.

The solid polymer insulation shall be highly resistant to ozone, oxygen, moisture, contamination, and ultraviolet light. No coatings are acceptable.

The solid dielectric insulation shall contain no environmentally hazardous or toxic components.

Molding system utilizes Automatic Pressure Gelation (APG) for casting.

A single break on each phase is accomplished by separating contacts inside the vacuum interrupter using axial-magnetic interrupters.

The interruption mechanism is operated by a dual coil magnetic actuator, which uses a low-voltage power source for operation.

The mechanism shall support reclose intervals of .3, 2, and 2 seconds for a four-trip operation sequence.

The mechanism shall perform consistently with uniform opening and closing times with control cables from 7 to 125 ft.

The recloser shall consist of an aluminum mechanism housing that contains a magnetic actuator, which provides linear trip-and-close motion to three encapsulated vacuum interrupter modules.

SF6 gas or foam is not acceptable for insulation medium.

SF6 gas is not acceptable for an interrupting medium.

The unit shall be designed for 2,500 open/close operations.

Operating temperature range shall be -40°C to +65°C.

The mechanism cabinet shall be designed to permit access for service.

Current interruption shall occur in vacuum interrupters, providing long contact life while eliminating the production of toxic by-products.

Three embedded current transformers designed for Cooper Power Systems controls shall provide current sensing.

The mechanism shall include a yellow operating handle to manually trip the recloser. The operating handle shall remain in the down position when tripped and electrically disable any closing from the control.

A contact position semaphore shall be mounted on the bottom of the recloser for access viewing from 360 degrees.

A four-digit mechanical operations counter shall be included on the bottom of the recloser for easy viewing.

The recloser shall include a minimum of 26.5 inches of phase-to-ground creepage for 15 kV class equipment, 30.5 inches of creepage for 27 kV class equipment and 37.5 inches of creepage for 38 kV class equipment.

The recloser shall have a parallel groove-type ground connector mounted to the recloser housing rated for wires sizes #10-#2.

The recloser shall be integrated with the control system using separable weatherproof connectors at the recloser and at the control.

The recloser shall have a version to provide dead line closing functionality.

The NOVA Recloser shall be capable of operation with Cooper Power Systems three-phase recloser controls, types F4C, F5, and F6.

The recloser manufacturer shall have five years experience in the design and manufacture of reclosers, vacuum interrupters, mechanisms, and controls, along with supporting installation and operation documentation.