



Protect service to critical loads with automatic source transfer

Enhance system reliability to critical loads with high-speed communications and reliable switching between two sources.

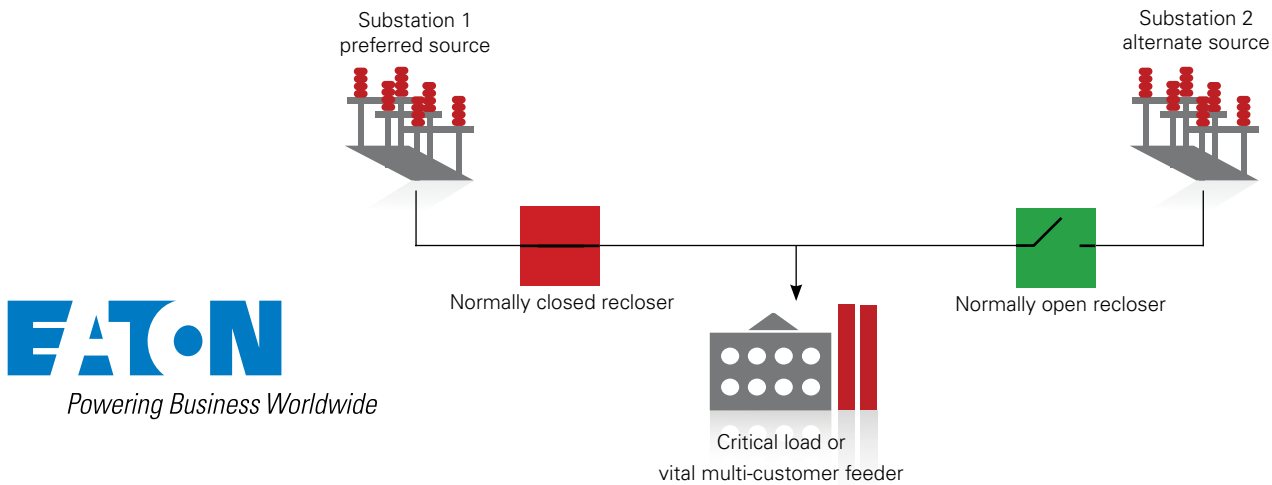
Eaton's Cooper Power™ series automatic source transfer (AST) system is ideally designed to protect critical loads that cannot tolerate a sustained loss of voltage event. The customized Form 6 controls communicate via PeerComm™, a high-speed, peer-to-peer protocol, enabling transfers to an alternate source in as little as five cycles. Multiple long-range communications options are available, supporting not only premium utility loads, but also vital feeders with multiple high-profile valued customers.

Rapid communication ensures minimal service disruption

Fast transfer times allowing source transfer to occur before backup power, including generators, is required. When fast transfer mode is selected, and one device declares an AST action, neither device waits for confirmation from the other before initiating an OPEN or CLOSE function. To ensure rapid communication, we recommend utilizing fiber-optic communications that will result in transfer times of five to 10 cycles. The fast transfer mode is not recommended when using radios, as the radio delay will result in slower transfer times.

Flexible, user-selectable restoration options quickly return your system to normal

- Local restoration—each control is manually operated
- Automatic restoration/manual initiation—restoration to the preferred source is manually initiated from either control
- Automatic restoration/automatic initiation—occurs once the preferred feeder voltage returns



Enhance your system reliability by quickly transferring sources with Eaton's Cooper Power series AST system.

How it works

The AST system monitors voltage on the source side of both reclosers while maintaining overcurrent protection capabilities. The two reclosers maintain constant communication with each other via the PeerComm protocol.

When AST is Ready, if the voltage of the closed recloser falls below a preset limit, the AST system starts timing. Upon completion of the timer, the closed recloser will open and the open recloser will close, restoring service to the critical load.

The AST system will remain in this Active state and restoration depends upon the restoration mode selected.

Automatic restoration mode

In the automatic restoration/manual initiation mode, the AST system will stay in the alternate configuration unless one of the devices is manually operated.

In this mode, the other device will also operate to bring the system back into the AST Ready state.

In the automatic restoration/automatic initiation mode, the AST system will return the load to the preferred source once that source is again stable, via a preset timer.

For both of the automatic restoration modes, the system can be configured to perform "Make Before Break" or "Break Before Make" operations.

Manual restoration mode

In manual restoration mode, the devices will stay in the alternate configuration until manually returned to the preferred configuration. However, in this mode, there is a voltage seeking option that will allow the AST system to seek a valid source regardless of the restoration mode.

Voltage simulator

The AST system comes with a built-in voltage simulator.

- Allows a technician to simulate loss of voltage of AST sources and monitor system response of the AST system
- Extremely useful for commissioning to ensure functionality in the field as intended
- Can be switched into and out of simulation mode via ProView™ software
- By default, the simulator is automatically disabled after 5 minutes, avoiding accidental continuation in simulation mode

System requirements

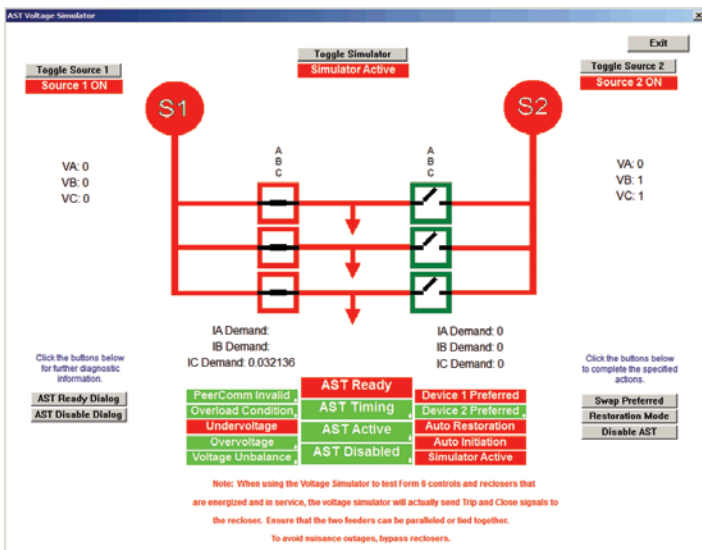
- NOVA™, VSA or VVE three-phase reclosers, or NOVA-TS or NOVA STS triple-single reclosers
- Form 6 controls
- Source- and load-side potential transformer (PT) for control power

Hardwired communication options

- Single- or multi-mode fiber optics (serial or Ethernet)
- Category 5 Ethernet
- RS-232/RS-485

Radio options

- Serial and Ethernet radios



AST voltage simulator user interface.



Form 6 control for superior communication using PeerComm protocol.



Three-phase NOVA recloser on one end of an AST application.

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