

Pad-mounted source transfer (PST) system



Fast, smart source transfer in a compact package

PST switchgear with iST control is a compact, outdoor, self-contained system ideal for critical medium-voltage loads, including healthcare facilities, data centers, broadcast studios and production facilities that require highly dependable power for continuous, optimum operation.

Eaton's Cooper Power™ series pad-mounted source transfer (PST) with iST control, designed to work together, provide automatic transfer between preferred and alternate sources, as well as fault protection for critical loads—reducing outages during the time it would otherwise take to return-to-normal power. The iST controls have a comprehensive suite of source transfer and restoration configurations, overcurrent protection, metering and SCADA capabilities.

Fast source transfer

The PST system provides immediate action, in six cycles or less, for multiple functions including:

- Automatic transfer between the primary source and alternate utility source with preferred source selection
- Automatic transfer between the primary source and backup generation with the ability to start up and shut down a backup generator

Save time, money and space

- Integrated protection, transfer, system metering, event diagnostics, communications, and customized logic engine (Idea Workbench™) simplifies installation with fewer boxes and interfaces
- Reduced footprint and profile, up to 89%, compared to alternative medium-voltage source transfer methods
- Cost-effective, self-contained package
- Designed for installation in harsh outdoor environments
- Eliminates need for additional relays required to start up or shut down a generator system



Powering Business Worldwide



Single, integrated system

One integrated package will handle both your overcurrent/fault protection needs and your sophisticated source transfer requirements.

- Uses Eaton's Cooper Power series patented stored energy CI interrupters, providing many years of maintenance- and trouble-free performance
- Includes iST control with battery backup to manage all your source transfer, overcurrent protection, metering, communications and SCADA requirements
- Internal potential transformers (PTs) monitor the health of each source and provide control power
- Internally mounted current transformers (CTs) provide load information and overcurrent/fault protection
- Integrated source-transfer, remote supervisory and automation schemes available for easy setup and plug 'n play functionality
- Fully assembled from factory, no additional on-site assembly required



Flexible source transfer and overcurrent elements

The transfer, source health and restoration parameters include:

- Undervoltage
- Underfrequency
- Overfrequency
- Sync check for parallel (no-blink) restoration
- Non-parallel restoration
- Fault blocking to prevent transferring a healthy source into a downstream fault

Automatic restoration mode

Normal restorations can be either non-parallel with an adjustable time delay, or parallel with sync check.

The parallel with sync check restoration mode supervises source closing for both automatic and manual operations. The sync check function compares characteristics of both sources. Paralleling of the sources is permitted only when all parameters are within your configurable thresholds, allowing for the return to referred transfer to be "blinkless."

Manual restoration mode

In manual mode, the sync check function prevents accidental paralleling of non-synchronous sources.



Easily integrates into your distribution automation (DA) or grid-tie generation

You can pull power monitoring information and data into the control system for smart grid operation to assist in evaluating energy consumption and trends.

- Relay metering and compact integral current and voltage sensing
- Trending information can be recorded by the configurable Data Profiler in the relay, or communicated via DNP3 or Modbus® to your SCADA or DMS system
- Microprocessor-based overcurrent control provides advanced, flexible protection
- External-trip option allows fault interrupters to be tripped remotely

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

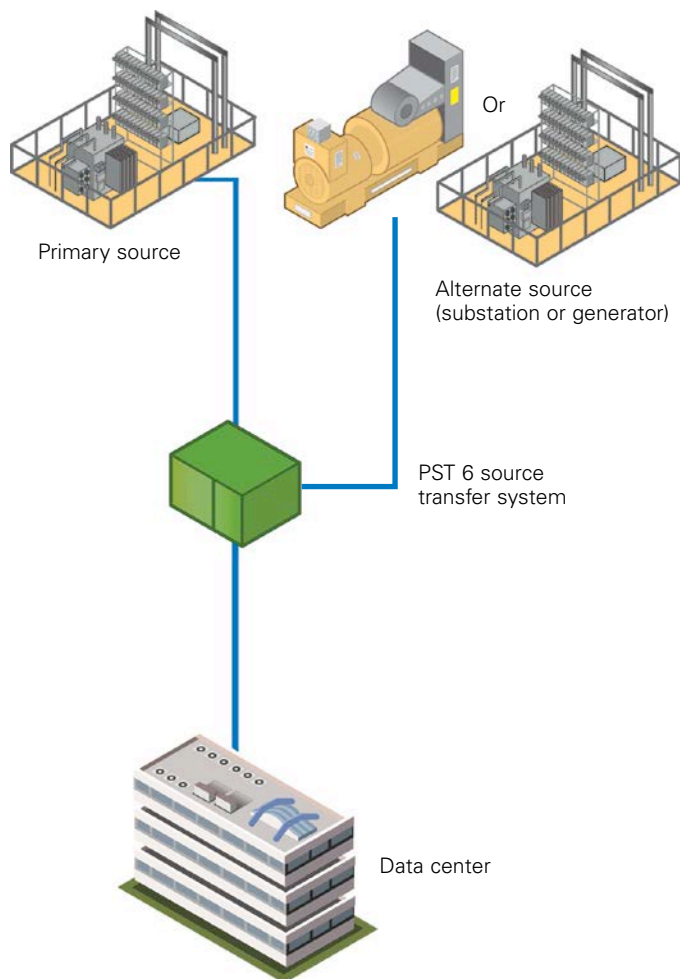
Adaptable control fits your changing needs

Sophisticated and evolving applications require a control that is customizable to meet special or changing requirements.

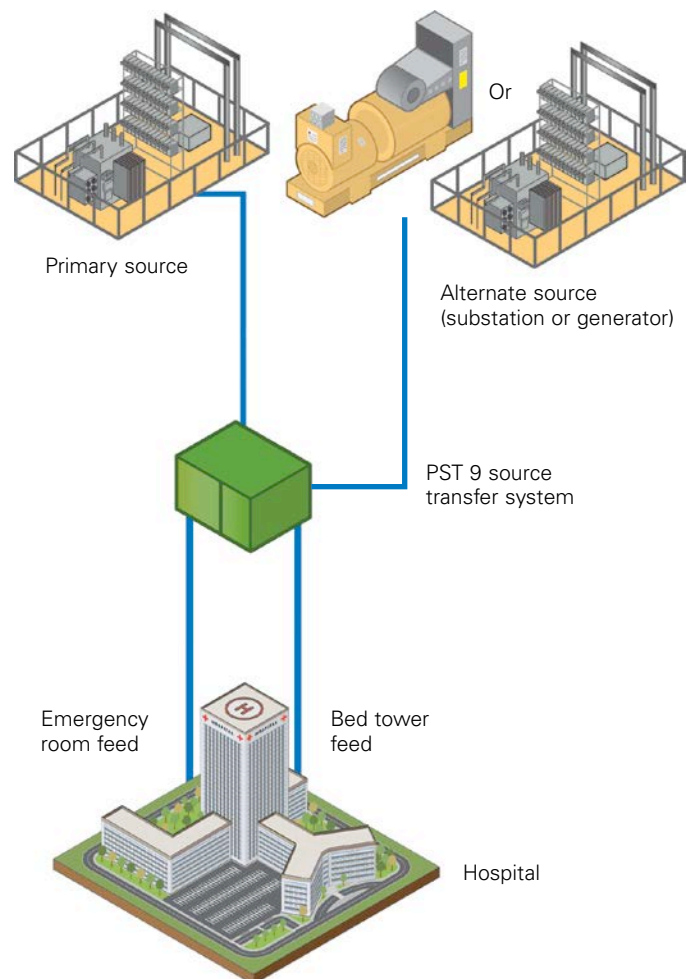
- Utilizes easy-to-learn ProView™ application software with graphical programming and ability to customize for specific applications
- Speeds service restoration through collection of real-time data and integration with SCADA systems and Eaton's Cooper Power series Yukon™ Feeder Automation software
- Uses Idea Workbench tool for easy customization



Single-load function with PST 6 system



Dual-load function with PST 9 system



The green solution to increase reliability for critical loads

Eaton's PST switchgear can be filled with biodegradable E200™ fluid—the environmentally preferred choice for PST switchgear. E200 is a clear, low-viscosity fluid with excellent thermal and dielectric properties across the full temperature range for switchgear. All of this combined with a fire point greater than 300 °C makes E200 fluid ideally suited for switchgear applications.

Eaton has a long history of innovation and an industry-leading position in underground distribution. With more than 50 years of experience, we have the switchgear, relays and an unsurpassed array of underground distribution products, in addition to automation products and expertise, to optimize reliability and productivity on your distribution system.

Idea Workbench

With the powerful Idea Workbench development platform, users can create custom-engineered logic for hardware control, status, communications, and front panel operation and indication. In addition, the Idea Workbench provides the flexibility to modify analog and binary data per your specific automation applications. An intuitive drag-and-drop graphical programming interface allows even complicated algorithms to be easily constructed.

Source transfer solution support

Eaton provides a single point of contact with experts on-call to provide comprehensive support before, during and after installation.

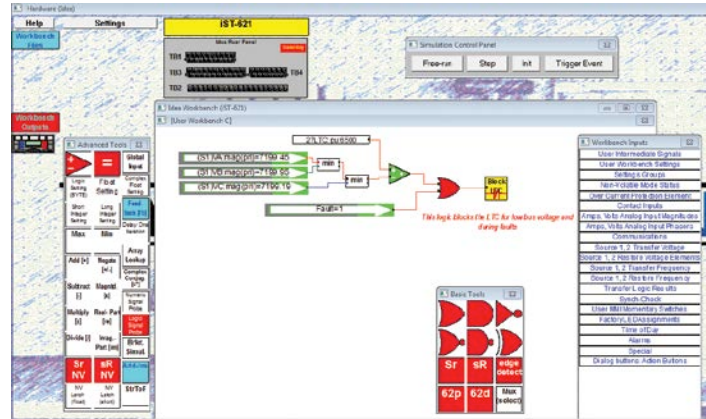
- Eaton's Electrical Engineering Services & Systems (EESS) provides a full suite of services including:
 - Startup and commissioning equipment
 - Perform planned maintenance
 - Monitor performance
 - Coordination studies
 - Arc-flash studies
 - Turnkey projects
- Switchgear Support Group (SSG) is dedicated to providing answers to technical questions and after-sales support

Operator safety

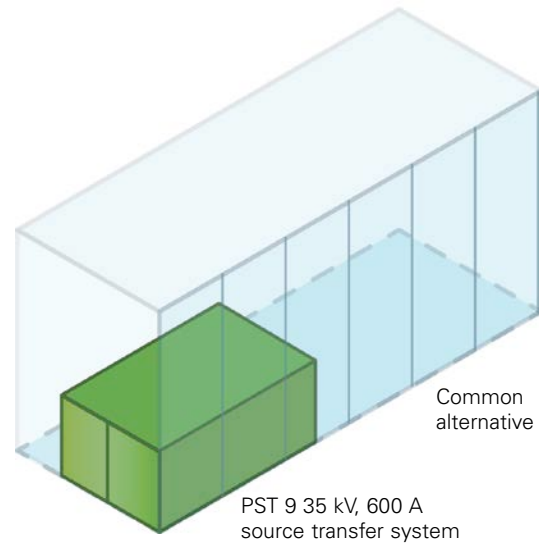
- Optional visible disconnect means available
 - Optional internal visible-break switch with viewing window verifies open circuit without removing cables and provides a means to ground cables internally—available on tap ways of a model 9
 - Cleer™ visible break available on source ways
- Optional externally mounted controls allow for local settings changes without accessing the cable compartment

PST switchgear ratings

Description	15 kV	27 kV	35 kV
Maximum design voltage	15.5	27	38
BIL, kV	95	125	150
Continuous current (max.), A	600	600	600
Interrupting current (sym./asym.), kA	12/20	12/20	12/20
Momentary current 10 cycles (asym.), kA	20	20	25



Idea Workbench allows you to customize the program to your needs



PST source transfer systems are up to 89% smaller than other medium-voltage source transfer options

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

Eaton's Power Systems Division
2300 Badger Drive
Waukesha, WI 53188
United States
Eaton.com/cooperpowerseries

© 2017 Eaton
All Rights Reserved
Printed in USA
Publication No. PA285004EN / Z19892
Supersedes B285-01043
September 2017



For Eaton's Cooper Power series product information, visit Eaton.com/cooperpowerseries

Eaton is a registered trademark.
All other trademarks are property of their respective owners.

Follow us on social media to get the latest product and support information.

