

EAT•N

Cutler-Hammer

SVX9000 Adjustable Frequency Drives

Product Focus

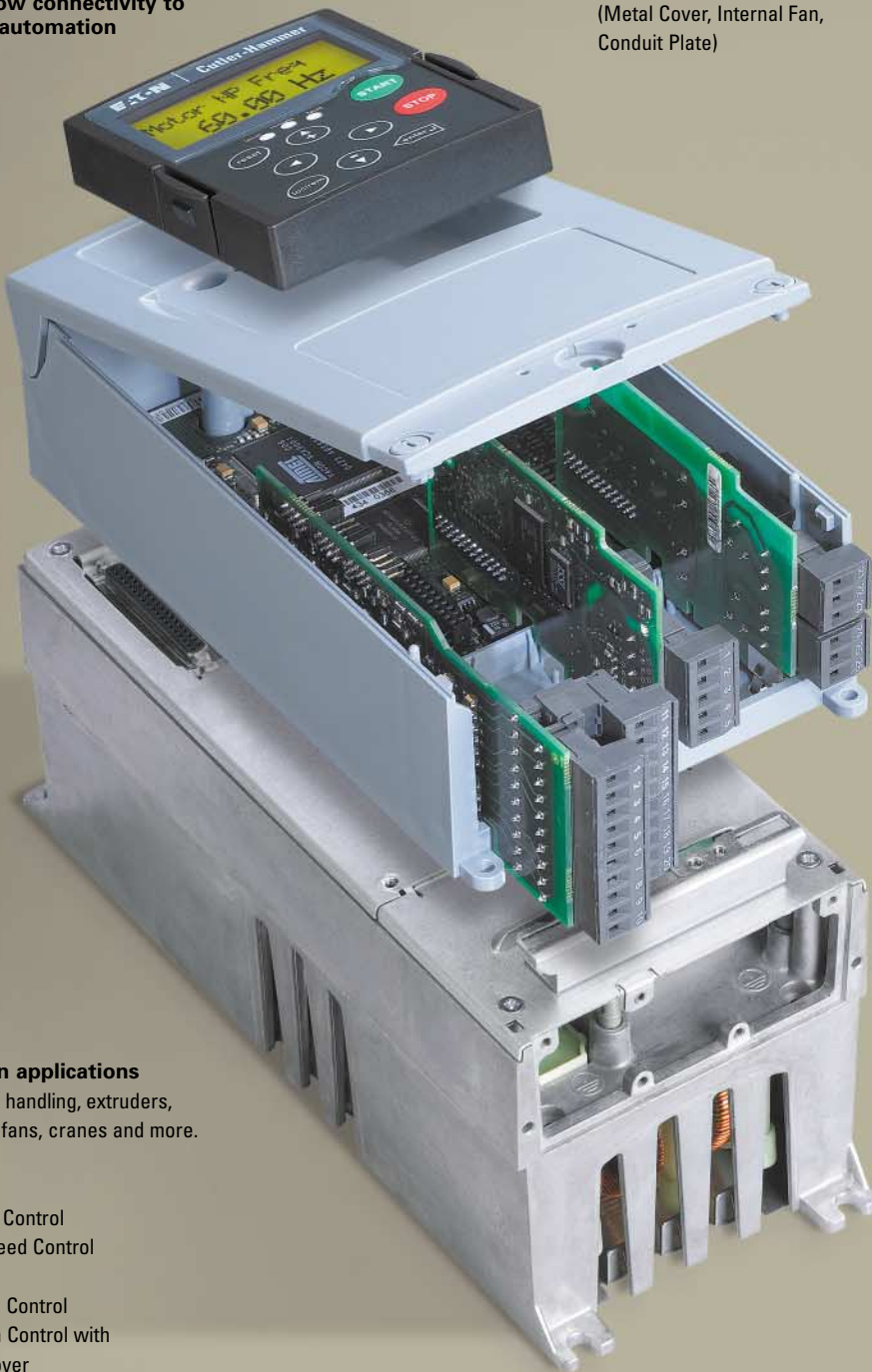


Modular, Configurable, Compact



Multiple communication protocols allow connectivity to any existing automation system

- ModBus
- ProfiBus DP
- LonWorks
- CanBus
- CANopen
- DeviceNet



SVX9000 enclosures

Standard NEMA Type 1 (IP21)
 Sealed NEMA Type 12 (IP54)
 (Metal Cover, Internal Fan,
 Conduit Plate)



Power module

- 3/4 Hp to 1100 Hp
- 208/230 V, 480 V, 575/690 V
- Semiconductor technology
- Connections via multi-pole connector
- Remote mount with a fiber optic cable
- 208/230/480 V AC frame sizes 4-6 equipped with a built-in brake chopper

Power unit options:

- Input and output filters
- Brake resistors
- NEMA Type 1 (IP21)
- NEMA Type 12 (IP54)
- Open chassis frame 10 and larger

Power supplies

- +10 V DC reference
- +24 V DC auxiliary
- Encoder (+15 V DC/+24 V DC)

Seven built-in applications

Use for material handling, extruders, mixers, pumps, fans, cranes and more.

- Basic
- Standard
- Local/Remote Control
- Multi-step Speed Control
- PID Control
- Multi-purpose Control
- Pump and Fan Control with Auto-changeover



Modular, Configurable and Compact. Presenting the SVX9000 Series.

Cutler-Hammer SVX9000 Adjustable Frequency Drives are the compact, modular solution to variable speed applications. They enable a broad range of new application capabilities. A complete selection of option cards allows you to configure the drive to meet any requirement. With its wide voltage range, high overload ability, and user-friendly alphanumeric keypad, SVX9000 Drives are the smart decision for every user. Its small footprint ensures a comfortable fit in the tightest installations, and backward compatibility means upgrading from the popular SV9000 is simple and easy.

Modular design:

Convenient and cost effective.

Just three screws link the control module to the power module. What's more, control units are interchangeable within frame sizes while software, control panels, I/O and communication cards are common throughout the line. Separating the power and control units provides installation advantages and reduced spare parts requirements. For convenience, the SVX9000 is field convertible from NEMA 1 to NEMA 12 (Frames 4-6). And like the popular SV9000, reduced size equates to less panel space and easy retrofits. When stepping up to the SVX9000, all power and control terminations match the SV9000.

Quick Start-up Wizard.

Even when the drive is unpowered, the SVX9000 lets you program and test the drive. The control logic module can be powered from an external +24 V DC source so you're ready to train, test and go live whenever needed. Whether you choose local or remote operations via the keypad, simple copy/paste functions streamline the process.

Communication

Flexibility. The SVX9000 may be configured with several different communication protocols, making it easy to communicate with all commonly used control systems. The control unit's powerful microprocessor can be used for local control tasks, thereby freeing resources of the control system for other control tasks. 9000XEngine, our versatile block-programming tool, eliminates the need for a PLC and significantly simplifies the control system.

Optional I/O:

Configuration simplified.

Up to five plug-and-play I/O cards, each with unique input and output configurations, can be installed. Multiple analog and digital input and output combinations, communication protocols and additional application-specific hardware are available.



Similar Family Look and Feel

Built upon the successful SV9000 platform, the SVX9000 is the next generation. What was good just got better!

- The 7 built-in applications are the same as the SV9000 but enhanced in the SVX9000 for increased functionality.
- I/O terminals have the same designations as previous models. 1=1, 2=2, etc.
- Metal conduit entry for power connections.
- The input/output power wiring location is consistent from previous models.
- The NEMA 12 remote mount keypad features the same footprint and mounting holes as the SV9000.

9000XLoad

9000XLoad is an easy-to-use tool for uploading system, application and option card software intended for use by engineering, commissioning and service personnel. 9000XLoad is also suitable for loading custom applications to the SVX9000 drive.

PC Tools – Drag and drop configuration. Store and access whenever needed.

9000XDrive

9000XDrive is a software tool that allows uploading and downloading drive parameters. Parameters can be changed, saved, and uploaded to any number of SVX9000 drives. The tool has the ability to print parameters or save them to a file for future use and reference. Parameters can be compared to default values to determine drive setup. Operator functions include the ability to set references, start and stop the drive, and to monitor signals and actual values. These values can be displayed via a graphic display.

9000XEngine

Create IEC 1131-3 compliant custom applications with 9000XEngine. This graphical design tool customizes the control logic and parameters in the SVX9000. Functional Block Diagram (FBD), Ladder Diagram (LD) and Structured Text (ST) are all part of the function set. 9000XEngine enables the creation of parameters, fault messages and other application-related features.

The collage displays several software windows:

- 9000XDrive Main Menu:** A tree view showing categories like 'Main Menu', 'P1.1 Max Frequency', 'P1.2 Max Frequency', etc., with corresponding values.
- Monitoring Window:** A graph showing Motor Speed (rpm) and Output Frequency (Hz) over time. Below the graph is a table with columns: Drive, Type, Signal Name, Actual, Unit, Min, Max, Auto.
- Parameter List:** A table with columns: Index, Variable Text, Value, Default, Unit, Min, Max. It lists parameters like P1.1 Max Frequency (0.00 Hz), P1.2 Max Frequency (60.00 Hz), etc.
- Operating Window:** A control panel with buttons for 'PC Control', 'Reset', and 'Flower 0%', along with a 'Keypad' section.

The SVX9000 Series at a glance:

- Wide range of horsepower and voltage selection
- Start-up wizard
- Modular design concept
- External +24 V DC can be used to power the controller
- Built-in 3% line reactor
- Open and Enclosed Drives (CT rated to 50°C)
- 30-fault history with status at time of fault
- Easy operation

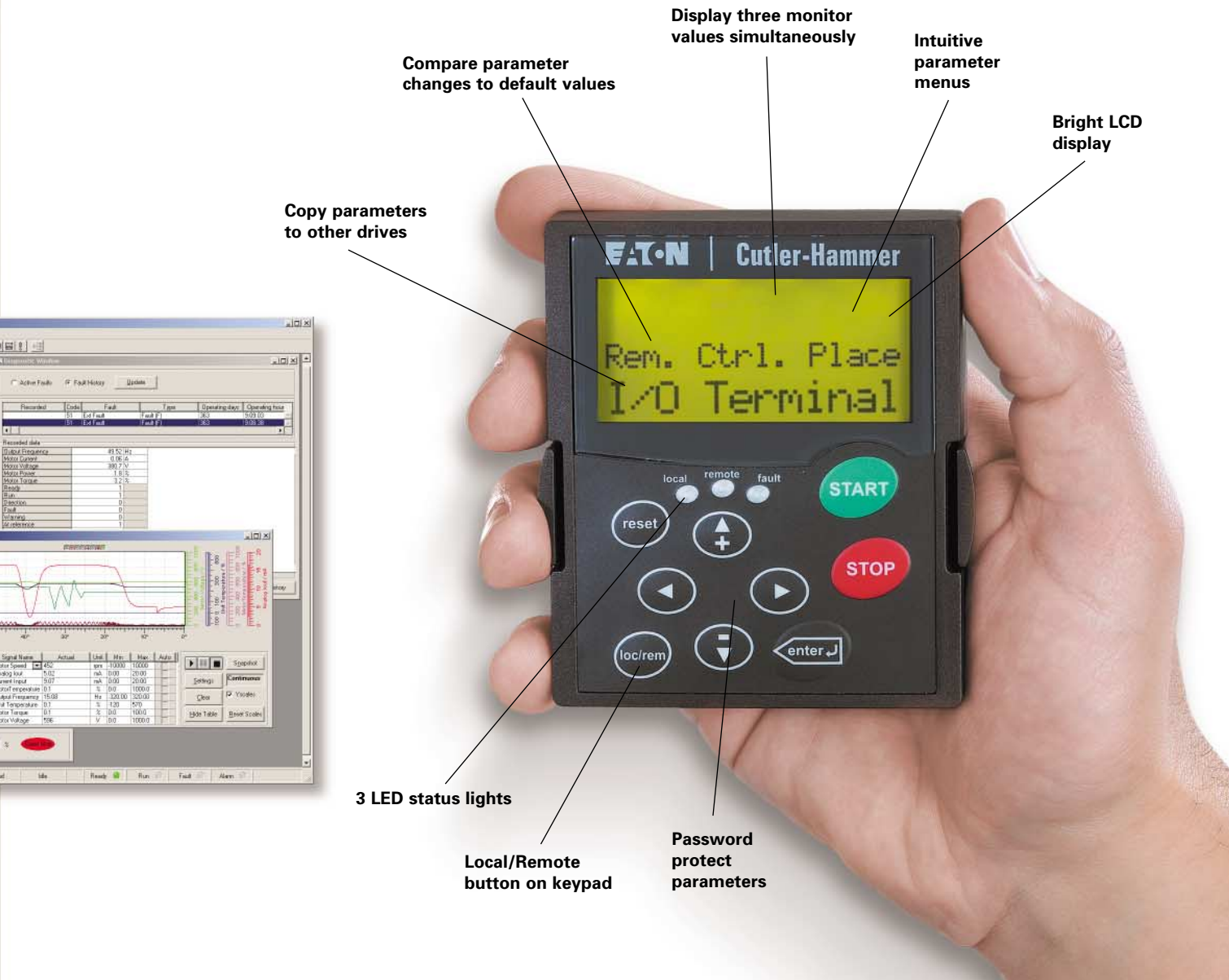
SPX9000 Series at a glance:

- High performance for demanding applications
- Increased micro-processing power (4 times more CPU capability)
- Encoder feedback
- High resolution analog inputs
- Speed and torque loop capability
- Customizable software
- Same ease of operation

The SVX9000 keypad and display unit.

The SVX9000 keypad offers the user a full view into the drive. The keypad provides the ability to view and change parameters, as well as monitor actual running values. Built in upload and download capability makes programming several SVX9000s a snap, cutting installation time. The three-line alphanumeric programmable display with status indicators uses English words for parameters, status, and diagnostic messages without the use of codes and lookup tables. The display has large, clear characters easily visible in any light condition.

| Horsepower | Voltage Range | Enclosure Style |
|----------------|---------------|-----------------|
| 3/4 to 100 Hp | 208, 230 V | N1, N12 |
| 1 to 200 Hp | 380, 480 V | N1, N12 |
| 250 to 1100 Hp | 480 V | Open Chassis |
| 2 to 150 Hp | 575, 690 V | N1, N12 |
| 200+ Hp | 575, 690 V | Open Chassis |



Compare parameter changes to default values

Display three monitor values simultaneously

Intuitive parameter menus

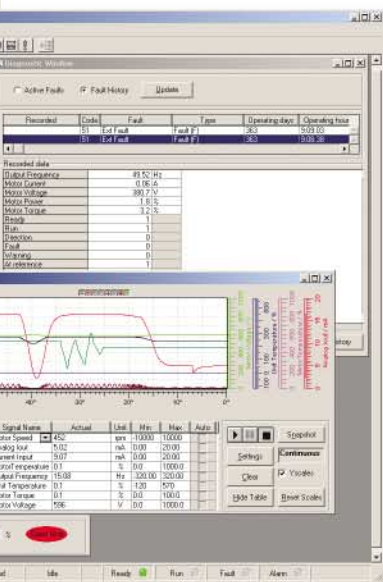
Bright LCD display

Copy parameters to other drives

3 LED status lights

Local/Remote button on keypad

Password protect parameters



Eaton's electrical business is a global leader in electrical control, power distribution, and industrial automation products and services. Through advanced product development, world-class manufacturing methods, and global engineering services and support, Eaton's electrical business provides customer-driven solutions under brand names such as Cutler-Hammer,[®] Powerware,[®] Durant,[®] Heinemann,[®] Holec[®] and MEM,[®] which globally serve the changing needs of the industrial, utility, light commercial, residential, and OEM markets. For more information, visit www.EatonElectrical.com.

Eaton Corporation is a diversified industrial manufacturer with 2003 sales of \$8.1 billion. Eaton is a global leader in fluid power systems and services for industrial, mobile and aircraft equipment; electrical systems and components for power quality, distribution and control; automotive engine air management systems and powertrain controls for fuel economy; and intelligent drivetrain systems for fuel economy and safety in trucks. Eaton has 55,000 employees and sells products to customers in more than 100 countries. For more information, visit www.eaton.com.

Eaton Electrical Inc.
1000 Cherrington Parkway
Moon Township, PA 15108
United States
tel: 1-800-809-2772
www.EatonElectrical.com/Drives

EAT•N

Cutler-Hammer

© 2004 Eaton Corporation
All Rights Reserved
Printed in USA
Form No. BR04003001E / MZ-21
November 2004