Demand more
Eaton’s complete line of variable frequency drives

EATON
Powering Business Worldwide
Demand more than good enough

Demand more than good enough means working with a variable frequency drives manufacturer that joins you in the trenches to get the job done right.

Demand Eaton variable frequency drives.

Eaton.com/drives
A drive for any application

Your application might call for an ultra-compact solution, clean power or future configurability. Whether it is a standard product from the catalog or a custom-enclosed variable frequency drive (VFD) solution, Eaton delivers. Eaton drives are designed for industrial, HVAC, water/wastewater treatment, machinery OEM and other application demands. Whether designing a new industrial complex, renovating an existing structure or developing a new machine, Eaton has the right product for your application.

Product selection matrix

<table>
<thead>
<tr>
<th>Application</th>
<th>DE1</th>
<th>DC1</th>
<th>DA1</th>
<th>DH1</th>
<th>H-Max</th>
<th>DG1</th>
<th>SVX</th>
<th>SPX</th>
<th>LCX</th>
<th>SPI/SPA</th>
<th>CPX</th>
<th>CFX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-phase input</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>—</td>
<td>—</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Maximum 230 V hp</td>
<td>3</td>
<td>5</td>
<td>7.5</td>
<td>125</td>
<td>125</td>
<td>125</td>
<td>125</td>
<td>125</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Maximum 480 V hp</td>
<td>10</td>
<td>15</td>
<td>15</td>
<td>250</td>
<td>250</td>
<td>1000</td>
<td>250</td>
<td>1800</td>
<td>1600</td>
<td>1800</td>
<td>800</td>
<td>400</td>
</tr>
<tr>
<td>Maximum 575 V hp</td>
<td>—</td>
<td>—</td>
<td>20</td>
<td>250</td>
<td>—</td>
<td>800</td>
<td>200</td>
<td>2300</td>
<td>3600</td>
<td>2300</td>
<td>800</td>
<td>400</td>
</tr>
<tr>
<td>OEM drives</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>HVAC drives</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>General purpose</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>High performance</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Harmonic mitigating</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
<td>▲</td>
</tr>
</tbody>
</table>

● = Open drive standard
■ = Enclosed drive standard
▲ = Enclosed—consult Enclosed Drives Plant (Watertown, WI)
### Variable frequency drive — product overview

<table>
<thead>
<tr>
<th>Drive</th>
<th>Applications</th>
<th>Description</th>
<th>Offering/ range</th>
</tr>
</thead>
<tbody>
<tr>
<td>DE1</td>
<td>• Variable speed starter</td>
<td>The DE1 variable speed starter (VSS) is designed for customers who have basic applications but still require variable frequency and advanced motor protection. With industry-leading ease of use and a narrow, compact housing, the DE1 allows customers to simplify their design and reduce installation time.</td>
<td>Single-phase to three-phase 230 V to 5 hp Three-phase to three-phase 480 V to 10 hp</td>
</tr>
<tr>
<td>DC1</td>
<td>• General-purpose microdrive • Machinery OEM drive</td>
<td>The DC1 VFD is a compact VFD with only 14 basic parameters, SmartWire-DT™ connectivity and outstanding ease of mounting and installation. The DC1 is perfect for quick commissioning and is ideal for panel builders. This drive supports single-phase motor applications, and an IP66 offering provides unique mounting with integrated disconnect and cover controls.</td>
<td>Single-phase to single-phase 115 V to 0.75 hp 230 V to 1.5 hp Three-phase to three-phase 230 V to 5 hp 480 V to 15 hp</td>
</tr>
<tr>
<td>DA1</td>
<td>• High-performance microdrive • Machinery OEM drive</td>
<td>The DA1 VFD is the perfect match for demanding OEM applications. High-performance processor, safe torque off, multiple fieldbus protocols including SmartWire-D1, sensorless vector control and the possibility to operate permanent magnet motors are sure to leave a lasting impression. The DA1 includes an IP66 offering as well.</td>
<td>Single-phase to three-phase 230 V to 3 hp Three-phase to three-phase 230 V to 7.5 hp 480 V to 15 hp 600 V to 20 hp</td>
</tr>
<tr>
<td>DH1</td>
<td>• HVAC drive</td>
<td>The DH1 HVAC/R drives are part of the Eaton next generation PowerXL series of variable frequency drives specifically engineered to exceed the demands of the HVAC/R market. With an industry-leading energy efficiency algorithm, high short-circuit current rating and robust design, the DH1 offers customers increased efficiency, safety and reliability.</td>
<td>Three-phase to three-phase 230 V to 125 hp 480 V to 250 hp 575 V to 250 hp</td>
</tr>
<tr>
<td>H-Max</td>
<td>• HVAC drive</td>
<td>The H-Max™ VFD is specifically designed to meet the needs of the HVAC industry by offering leading HVAC software and hardware features. With an industry-leading energy efficiency algorithm, high short-circuit current rating and robust design, H-Max offers customers increased efficiency, safety and reliability in both an open and enclosed product.</td>
<td>Three-phase to three-phase 230 V to 125 hp 480 V to 250 hp</td>
</tr>
<tr>
<td>DG1</td>
<td>• General-purpose drive</td>
<td>The DG1 general-purpose drives are part of the Eaton next-generation PowerXL™ series of variable frequency drives specifically engineered for today’s more demanding commercial and industrial applications. With an industry-leading energy-efficiency algorithm, high short-circuit current rating and robust design, the DG1 offers customers increased efficiency, safety and reliability in both an open and enclosed product.</td>
<td>Single-phase to three-phase 230 V to 40 hp 480 V to 75 hp Three-phase to three-phase 230 V to 1000 hp 575 V to 800 hp</td>
</tr>
<tr>
<td>SVX/SPX</td>
<td>• General-purpose drive • High-performance drive</td>
<td>The SVX VFD is a general-purpose, compact, modular solution for variable speed applications and offers a variety of features and application capabilities. If high performance is critical to a customer's application, the SPX VFD is the ideal choice. They are equipped with high processing power, capable of closed loop feedback, safe torque off, permanent magnet motor operation and very precise motor control.</td>
<td>Single-phase to three-phase 230 V to 40 hp 480 V to 60 hp Three-phase to three-phase 230 V to 125 hp 480 V to 1800 hp 575 V to 2300 hp</td>
</tr>
<tr>
<td>Benefits</td>
<td>Acceptance</td>
<td>Communication options</td>
<td>Cross-reference</td>
</tr>
<tr>
<td>----------</td>
<td>------------</td>
<td>------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Ease of use: Copy/paste tool, programmable multi-function inputs, configuration module for quick programming.</td>
<td>UL, IEC</td>
<td>• Modbus RTU</td>
<td>• ABB (ACS 55, 150)</td>
</tr>
<tr>
<td>Space-saving design: DIN rail mountable, side-by-side mounting, numerous orientations, small footprint.</td>
<td>CE, RoHS</td>
<td>• Modbus RTU</td>
<td>• Danfoss (Micro Drive, VLT 2800)</td>
</tr>
<tr>
<td>Efficiency: Temperature controlled fan.</td>
<td></td>
<td>• CANopen</td>
<td>• Hitachi (WJ2000)</td>
</tr>
<tr>
<td>Rugged and reliable: High overload rating (CT), ambient temperature −10 °C to +60 °C without derating, harmonics mitigating design.</td>
<td></td>
<td>• DeviceNet</td>
<td>• Yaskawa (J1000, V1000)</td>
</tr>
<tr>
<td>PowerXL™ series of variable frequency drives specifically engineered for the HVAC industry by offering leading HVAC software and hardware.</td>
<td></td>
<td>• Ethernet/IP</td>
<td>• Lenze (ATV 312, 32)</td>
</tr>
<tr>
<td>• Three-phase 230 V to 3 hp</td>
<td></td>
<td>• PROFIBUS DP</td>
<td>• Siemens (Sinamics G120C)</td>
</tr>
<tr>
<td>• Three-phase 480 V to 75 hp</td>
<td></td>
<td>• DeviceNet</td>
<td>• Rockwell/Allen-Bradley (PowerFlex 753, 755)</td>
</tr>
<tr>
<td>• Three-phase 600 V to 20 hp</td>
<td></td>
<td>• EtherCAT</td>
<td>• Altivar Series 12</td>
</tr>
<tr>
<td>• Three-phase 480 V to 15 hp</td>
<td></td>
<td>• BACNet MS/TP</td>
<td>• Yaskawa (V1000)</td>
</tr>
<tr>
<td>• Single-phase 230 V to 125 hp</td>
<td></td>
<td>• Modbus/TCP</td>
<td>• Siemens (Sinamics G120)</td>
</tr>
<tr>
<td>• Single-phase 230 V to 7.5 hp</td>
<td></td>
<td>• CANopen</td>
<td>• Vacon (NVS)</td>
</tr>
<tr>
<td>• Single-phase 230 V to 5 hp</td>
<td></td>
<td>• BACnet/IP</td>
<td>• Yaskawa (P1000, A1000)</td>
</tr>
<tr>
<td>• Single-phase 230 V to 3 hp</td>
<td></td>
<td>• BACNet MS/TP</td>
<td>• Open IP20, IP66</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• BACnet/IP</td>
<td>• Open IP20, IP66</td>
</tr>
<tr>
<td>Ease of use: Startup Wizard, three built-in applications; customizable software, real time clock, on-board communications, modular design, full text display, keypad copy/paste functionality, two configurable keypad soft keys.</td>
<td></td>
<td>• EtherCAT</td>
<td>• Lenze / AC Tech (8400 Series)</td>
</tr>
<tr>
<td>Space-saving design: Compact design, open NEMA 12 option, on-board I/O expansion provisions.</td>
<td></td>
<td>• CANopen</td>
<td>• Schneider/Square D (Altivar Series 12)</td>
</tr>
<tr>
<td>Efficiency: Built-in 5% DC Link Choke with input surge protection.</td>
<td></td>
<td>• DeviceNet</td>
<td>• Yaskawa J1000, V1000</td>
</tr>
<tr>
<td>Rugged and reliable: Robust time-proven design, durable metal power section, temperature deratings up to 60 °C, conformal coated boards standard.</td>
<td></td>
<td>• Ethernet/IP</td>
<td>• Siemens G110</td>
</tr>
<tr>
<td>Ease of use: Startup Wizard, graphic display and keypad, menu-based navigation, copy/paste tool, local/remote button, programmable multi-function (I/O), built-in communication protocols (BACnet, Modbus®, N2).</td>
<td></td>
<td>• Modbus/TCP</td>
<td>• ABB (ACS310, ACS550)</td>
</tr>
<tr>
<td>Space-saving design: Narrow enclosure, built-in electronic bypass, open NEMA 12 option.</td>
<td></td>
<td>• BACNet MS/IP</td>
<td>• GE (AF-650)</td>
</tr>
<tr>
<td>Efficiency: “Active Energy Control,” offering 2–10% energy savings over competition.</td>
<td></td>
<td>• LonWorks®</td>
<td>• Rockwell/Allen-Bradley (PowerFlex 70, 753)</td>
</tr>
<tr>
<td>Rugged and reliable: 5% DC choke with MOD protection, conformal coated circuit boards, EMC filters.</td>
<td></td>
<td>• Modbus RTU</td>
<td>• Schneider/Square D (Altivar B1, 71)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• CANopen</td>
<td>• Siemens (Sinamics G120)</td>
</tr>
<tr>
<td>Ease of use: Startup Wizard, four built-in applications, real time clock, on-board communications, modular design, full text display, keypad copy/paste functionality.</td>
<td></td>
<td>• BACNet MS/TP</td>
<td>• Vacon (100 HVAC)</td>
</tr>
<tr>
<td>Space-saving design: Compact design, open NEMA 12 option, on-board I/O expansion provisions.</td>
<td></td>
<td>• Modbus/TCP</td>
<td>• ABB (ACH560)</td>
</tr>
<tr>
<td>Efficiency: Built-in 5% DC Link Choke with input surge protection and EMC Category C2 standard.</td>
<td></td>
<td>• DeviceNet</td>
<td>• Danfoss (FC-T02)</td>
</tr>
<tr>
<td>Rugged and reliable: High overload (CT) and low overload (VT) rated, robust time-proven design, durable metal power section, brake chopper circuit, temperature deratings up to 80 °C.</td>
<td></td>
<td>• BACnet/IP</td>
<td>• Yaskawa (V1000)</td>
</tr>
<tr>
<td>Ease of use: Startup Wizard, seven built-in applications, customizable software, advanced capabilities and inputs, local/remote button, modular design, text display.</td>
<td></td>
<td>• CANopen</td>
<td>• Siemens (BT360)</td>
</tr>
<tr>
<td>Space-saving design: Compact design, open NEMA 12 option, on-board I/O expansion provisions.</td>
<td></td>
<td>• BACNet MS/TP</td>
<td>• Vacon (100 HVAC)</td>
</tr>
<tr>
<td>Efficiency: Built-in 3% line reactor and EMI RFI filter H standard, increased microprocessing power.</td>
<td></td>
<td>• Ethernet/IP</td>
<td>• ABB (ACS550, ACS680)</td>
</tr>
<tr>
<td>Rugged and reliable: High overload (CT) and low overload (VT) rated, robust time-proven design, durable metal power section, brake chopper circuit.</td>
<td></td>
<td>• Modbus RTU</td>
<td>• Rockwell/Allen-Bradley (PowerFlex 700, 755)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• PROFIBUS DP</td>
<td>• Schneider/Square D (Altivar 71)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• DeviceNet</td>
<td>• Siemens (Sinamics G130, G180, S120)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• CANopen</td>
<td>• Vacon (NVS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• LonWorks</td>
<td>• Yaskawa (A1000)</td>
</tr>
</tbody>
</table>

**Notes:**
- **Benefits:** Copy/paste tool, programmable multi-function inputs, configuration module for quick programming.
- **Acceptance:** UL, IEC, CE, RoHS.
- **Communication options:** Modbus RTU, CANopen, DeviceNet, BACNet MS/TP, Ethernet/IP, CANopen, BACNet MS/TP, SmartWire-DT.
- **Cross-reference:** ABB (ACS 55, 150), Danfoss (Micro Drive, VLT 2800), Hitachi (WJ2000), Yaskawa (J1000, V1000), Lenze (ATV 312, 32), Schneider/Square D (Altivar Series 12), Yaskawa J1000, V1000, Siemens G110.
- **Enclosure:** Open IP20, IP66.
## Variable frequency drive

### Product overview

<table>
<thead>
<tr>
<th>Drive</th>
<th>Applications</th>
<th>Description</th>
<th>Offering/ range</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCX</td>
<td>• Liquid cooled drive</td>
<td>The LCX VFD is well suited for locations when air-cooling would be difficult or expensive or when space is at a premium. These extremely compact drives are suitable for ships, mines and heavy industry.</td>
<td>Three-phase to three-phase 480 V to 1600 hp 575 V to 3800 hp</td>
</tr>
<tr>
<td>SPI/SPA</td>
<td>• Common DC bus drive • Active front end drive • Regenerative drive</td>
<td>Eaton offers a comprehensive range of common DC bus VFD products. This includes a number of front-end units and inverter units in the entire power range. Common DC bus drives are used in a multitude of applications and combinations. Drives that are braking can transfer the energy directly to the drives in a motoring mode.</td>
<td>Three-phase to three-phase 480 V to 1900 hp 575 V to 2300 hp</td>
</tr>
<tr>
<td>CPX</td>
<td>• 18-pulse drive</td>
<td>The CPX VFD uses advanced 18-pulse clean power technology that significantly reduces line harmonics at the drive input terminals and is designed to exceed IEEE 519-1992 requirements. Delivering true power factor and reducing harmonic distortion prevents upstream transformer overheating and overloading of breakers and feeders, enabling the application of variable frequency drives on generators and other high-impedance power systems.</td>
<td>Three-phase to three-phase 230 V to 200 hp 480 V to 800 hp 575 V to 800 hp (Consult Eaton for larger hp)</td>
</tr>
<tr>
<td>EGF/CFX</td>
<td>• Passive filtered drive</td>
<td>The EGF and CFX drives use a tuned passive filter to significantly reduce the line harmonics generated by a standard 6-pulse drive. Designed for small to mid-sized drive applications, the EGF and CFX, in conjunction with the CPX, offers the user a tiered approach to harmonic mitigation.</td>
<td>Three-phase to three-phase 230 V to 100 hp 480 V to 400 hp 575 V to 400 hp</td>
</tr>
<tr>
<td>EGS Pump</td>
<td>• Remote pumping • Irrigation • Outdoor applications</td>
<td>The Eaton PowerXL™ DG1 three-phase irrigation drive pump panel is specifically designed for the irrigation pumping industry. With a weathertight, painted white NEMA 3R enclosure, the PowerXL DG1 drive pump panel is an energy-efficient and environmentally friendly solution for motor-driven equipment.</td>
<td>Three-phase to three-phase 480 V to 200 hp</td>
</tr>
<tr>
<td>RGX</td>
<td>• Active front end drive • Regenerative drive</td>
<td>The Eaton RGX is specifically designed to meet regenerative and/or low harmonic needs through the use of an active, bidirectional power converter on the front end of a common DC bus drive. The RGX provides dynamic performance for great motor handling, eliminating the need for an external resistor or mechanical braking, thus simplifying system design. It also delivers superior reliability, reducing total current distortion to 2–3%. The active front end design offers great energy savings and design compatibility for a wide range of applications.</td>
<td>Three-phase to three-phase 480 V to 800 hp 575 V to 650 hp</td>
</tr>
<tr>
<td>SC 9000</td>
<td>• Medium-voltage drive</td>
<td>The Ampgard® SC 9000™ medium-voltage VFD combines innovative technology with the reliable design and construction of Eaton Ampgard products. Designed for use with induction or synchronous motors, the Ampgard SC 9000 delivers maximum benefits while being the smallest medium-voltage drive in the industry.</td>
<td>Three-phase to three-phase 2400 to 4160 V Up to 6000 hp</td>
</tr>
</tbody>
</table>
**Benefits**

**Ease of use:** Startup Wizard, customizable software, advanced capabilities and inputs, local/remote button, modular design, text display.

**Space-saving design:** Compact space-saving design especially beneficial for NEMA 4X applications.

**Efficiency:** Advanced low heat transfer cooling system, increased microprocessing power.

**Rugged and reliable:** Same reliable control module and operating system as SPX.

**Communication options**

- EtherNet/IP
- Modbus RTU/TCP
- PROFINET
- DeviceNet
- CANopen
- LonWorks

**Cross-reference**

- ABB (ACS800-07LC)
- Rockwell/Allen-Bradley (PowerFlex 700L)
- Schneider/Square D (Altivar 610)
- Siemens (Sinamics G150)
- Vacon (NX1)

**Enclosure**

- Open IP00

---

**Ease of use:** Startup Wizard, customizable software, advanced capabilities and inputs, local/remote button, modular design, text display.

**Space-saving design:** Compact modular expandable design.

**Efficiency:** Bidirectional/regenerative energy savings capabilities.

**Rugged and reliable:** Same reliable control module and operating system as SPX, shared components for inverter and active front end for reduced spare.

**Communication options**

- EtherNet/IP
- Modbus RTU/TCP
- PROFINET
- DeviceNet
- CANopen
- LonWorks

**Cross-reference**

- ABB (ACS800-14)
- Emerson (Unidrive SP)
- Rockwell/Allen-Bradley (PowerFlex 20, 700AFE)
- Schneider/Square D (Altivar ATV32, LXM32)
- Siemens (Sinamics S120)
- Vacon (NX1)
- Yaskawa (F7)

**Enclosure**

- Open IP00, IP21
- Open NEMA 1

---

**Ease of use:** Uses the core SVX/SPX drive platform; therefore, sharing many of the drive-related characteristics of the component drive including Startup Wizard and built-in applications.

**Space-saving design:** Designed and engineered to optimize space, including flange mounting the drive with the heat sink external to the enclosure. Smallest footprint in the industry.

**Efficiency:** Designed and tested to provide maximum efficiency through best-in-class components.

**Rugged and reliable:** Proven design built on 10+ years of experience in 18-pulse engineering.

**Communication options**

- EtherNet/IP
- Modbus RTU/TCP
- PROFINET
- DeviceNet
- CANopen
- LonWorks

**Cross-reference**

- ABB
- Rockwell/Allen-Bradley
- Schneider/Square D
- Yaskawa

**Enclosure**

- Enclosed NEMA 1, 12, 3R
- Consult Eaton for NEMA 4X

---

**Ease of use:** The PowerXL DG1 drive pump panel is enclosed in a painted white NEMA 3R panel to provide weather tight protection, allowing panel installation outdoors near irrigation equipment without additional shelter. Internet of Things (IoT) connectivity via cellular gateway enables remote monitoring and control.

**Space-saving design:** The PowerXL DG1 drive pump panel is one of the first irrigation panels with an easy-to-use bottom entry. The floor stand enables mounting the panel as a standalone electrical panel.

**Efficiency:** The PowerXL DG1 drive pump panel is an efficient and cost-effective solution.

- Eliminates pump motor inrush current
- Lower energy consumption than rotary phase converters

**Rugged and reliable:** The PowerXL DG1 drive pump panel greatly reduces environmental impact and the high costs associated with powering agricultural and irrigation pump equipment.

- Reduces air and groundwater contamination
- Decreases fuel and lubricant leakage

**Communication options**

- EtherNet/IP
- Modbus RTU/TCP
- PROFINET
- DeviceNet
- CANopen
- LonWorks

**Cross-reference**

- ABB
- Rockwell/Allen-Bradley
- Schneider/Square D
- Yaskawa

**Enclosure**

- Enclosed NEMA 1, 12, 3R
- Consult Eaton for NEMA 4X

---

**Ease of use:** Uses the core SPA/SPI drive platform; therefore, sharing many of the drive-related characteristics of the component drive including Startup Wizard and built-in applications.

**Space-saving design:** The RGX provides dynamic performance for great motor handling, powering agricultural and irrigation pump equipment.

**Efficiency:** Encapsulated drawout inverted to reduce risk of environmental contamination.

**Communication options**

- EtherNet/IP
- Modbus RTU/TCP
- PROFINET
- DeviceNet
- CANopen
- LonWorks

**Cross-reference**

- ABB (ROBICON Perfect Harmony™)
- Rockwell/Allen-Bradley (PowerFlex 700L)
- Toshiba (T300MV1)
- ABB (ACS 1000)

**Enclosure**

- Enclosed NEMA 1
Selection considerations

- What is your system application?
- Is your load constant torque or variable torque?
- What are your voltage and hp requirements?
- What is the motor Full Load Amps (FLA)?
- Do you need an open or enclosed product?
- What NEMA enclosure rating do you need?
- Do you need a main breaker or a bypass?
- Do you need any accessories or communication cards?

PC software

**Software**

9000XDrive and 9000XLoad—Used with SVX, SPX, LCX, SPI, SPA and all enclosed drives using these units
MaxConnect and MaxLoader—Used with H-Max
DrivesConnect—Used with DE1, DCT and DA1
Power Xpert inControl—Used with PowerXL DG1

**Notes:**

Download at Eaton.com/software → Adjustable Frequency Drives → select your product in the next drop down.
Download at Eaton.com/drives → Resources → Software.

Online training

**Eaton 101 Series—low-voltage motor control**


**H-Max VFD demo simulator—online H-Max demo simulation**

Online H-Max training simulator that reviews the keypad, display, menu navigation, basic parameter changes and the operation of the demo cases (www.eaton.com/h-max)

**PowerXL DG1 VFD demo simulator—online DG1 demo simulation**

Online PowerXL DG1 training simulator that reviews the keypad, display, menu navigation, basic parameter changes and the operation of the demo cases (www.eaton.com/DG1)

Classroom training

**Certification and service training**

Commissioner certification training (SVX, SPX, H-Max, CPX, CFX)
Service provider training (SVX, SPX, CPX, CFX, HVX)
Access via Eaton.com/drivestraining

Calculators

**Harmonics estimator—estimate total harmonic distortion (THD) of system**

By having the transformer information and the one-line diagrams, a harmonics analysis can be quickly put together to ensure that the system will meet requirements set by IEEE 519. Drive configurations can quickly be changed, allowing engineers to provide the most cost-effective solution (www.eaton.com/drives → Resources → Harmonics Calculator)

**Energy savings estimator—estimate ROI for system**

The program creates an energy savings estimation report that details yearly energy savings, reduction in CO2 emissions and estimated payback time by analyzing system configuration, total installation costs and duty cycle (www.eaton.com/drives → Resources → Energy Savings Estimator)

For more information, visit Eaton.com/drives