# Full-featured Soft Starting Meets Unsurpassed Control

The Eaton S611 soft starter—a powerful combination of performance capability, application flexibility, and one of the best user interface experiences. The S611 is optimized for heavy duty applications.

The Eaton S611 soft starter is the newest entrant to an impressive line of Eaton soft starters that meets the demands of commercial construction and OEMs. This innovative, economical soft starter combines advanced functionality, unsurpassed configuration flexibility, with an extremely comprehensive user interface—in both open and enclosed control applications.

### Why soft start?

Soft starting a motor eliminates abrupt starts and stops, significantly extending the mechanical life of the system. Mechanical system components can also be significantly reduced in size due to lower starting inrush values (250–500% FLA).

### High Performance—integrated.

The Eaton S611 Soft Starter delivers solid performance beyond standard protection features found in most soft starters. Integrated overload protection and internal-run bypass contactors—which eliminate the need and complexity of additional devices—reduces panel size, installation time, and assembly cost. Use the S611 user interface to view advanced monitoring parameters, including power consumption, voltage, current and more. These data can be transmitted via native Modbus or other industry standard communication protocols.

### Easy to commission, easy to service.

The S611 soft starter brings a new era of simplicity to the soft starter category. The contactors and control board are user replaceable for easy field service. This modular design approach minimizes downtime and substantially increases the product's service life.

### Continuing a tradition of reliable products.

Eaton is a market leader in providing soft starters that protect processes, increase safety and reliability and minimizes heat generation. The S611 continues this lineage, while providing more powerful monitoring and protection capabilities and a new user interface that streamlines installation, setup, maintenance and monitoring.

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*Powering Business Worldwide*

# S611 Soft Starter: A High Performance Product with Integrated Bypass and Overload Protection

**Ranging from 26 to 414 amps, the S611 provides an array of built-in features designed to address the needs of the commercial construction and OEMs.**

### Integrated run bypass and overload

Integrated bypass reduces the number of components—power wiring, external contactors, and control wiring—allowing for a smaller enclosure, while increasing the reliability of the installation by reducing failure points. The thermal overload is integrated into the device and can be set to any trip class as deemed necessary.

### Severe duty capable

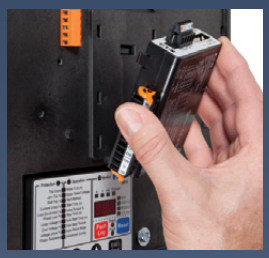
The Eaton S611 soft starter withstands the most rigorous duty cycles. The S611 features conformally coated PCBs suitable for harsh environments. A kick-start function enables soft starting of high inertia loads.

### Sophisticated pump algorithm

An available pump control option enables a sophisticated pump algorithm during start and stop operations, minimizing pressure surges that cause water hammer effect in pumping applications.

### Communication ready

Monitor system operating parameters enterprise-wide through a communications network. Increase process uptime by providing data for process management and preventive diagnostics. Modbus is native, and with the addition of a simple plug-and-play communications adapter, the S611 can communicate on PROFIBUS, DeviceNet, and Ethernet networks.



### Advanced monitoring and protection capabilities, built-in

The S611 soft starter protects against overload, underload, overcurrent, phase loss, phase reversal, jam, stall, auto-manual reset, shorted SCR and over-temperature. It also monitors power consumption, voltage, current, and temperature among other parameters.

### Engineered to industry standards

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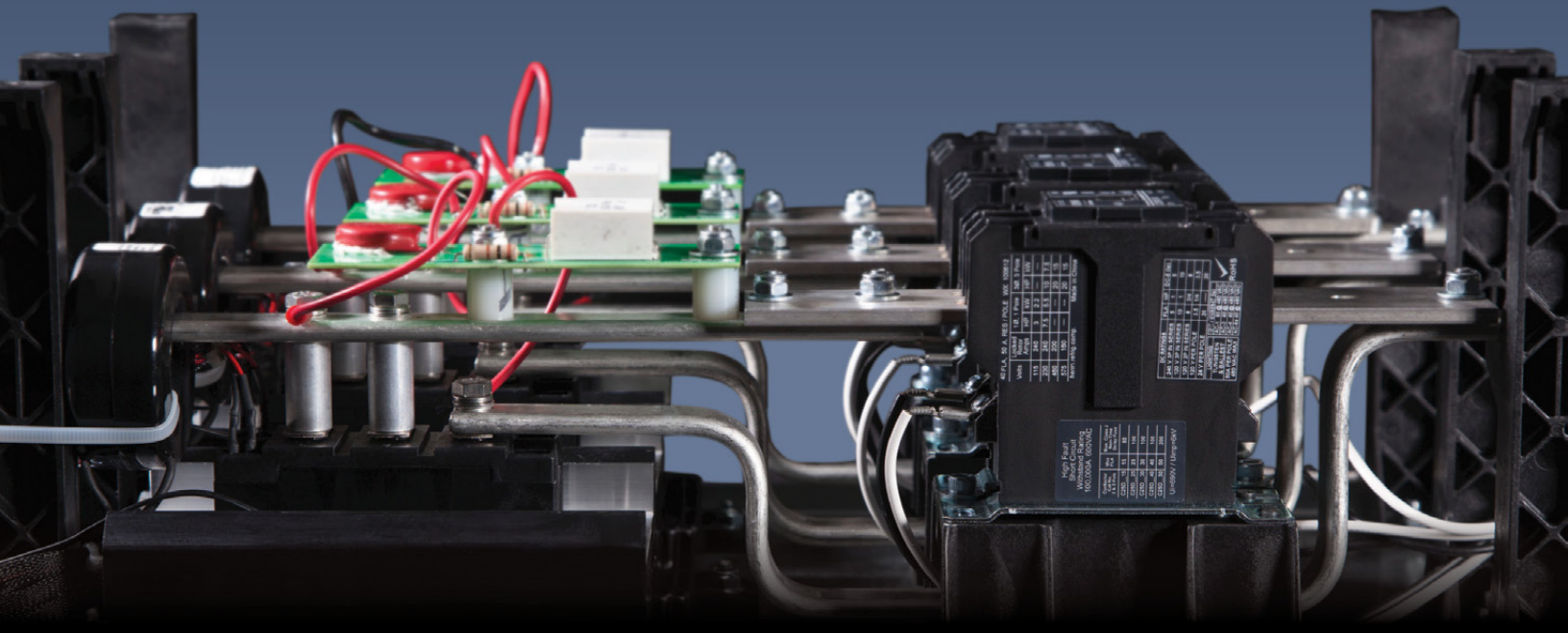
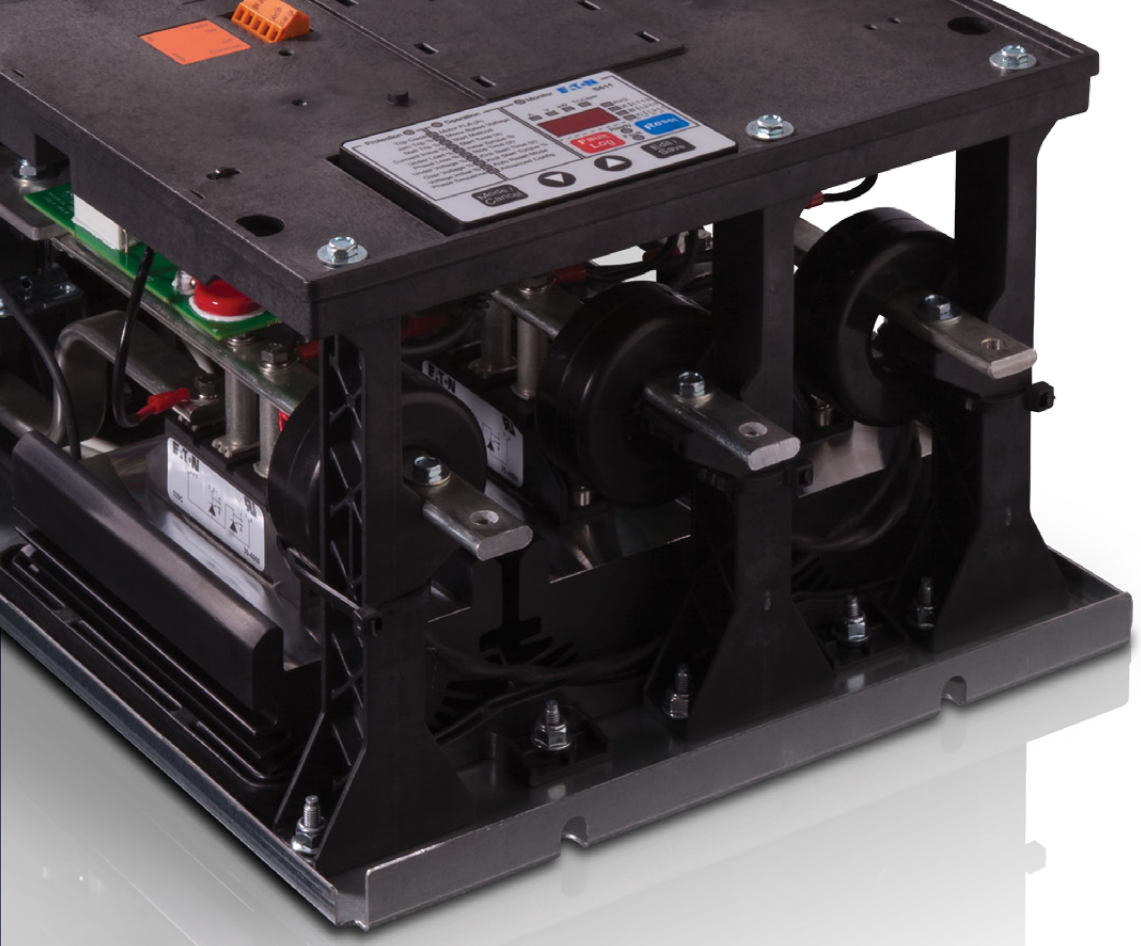


## Servicing Simplified

Easily access and replace key components—including the control board and contactors—to significantly increase service life. If a component needs to be replaced, an end user can complete simple operations without need for a service technician or engineer. Components are stocked and available, ensuring your operation continues with minimal downtime.

## Enclosed Control

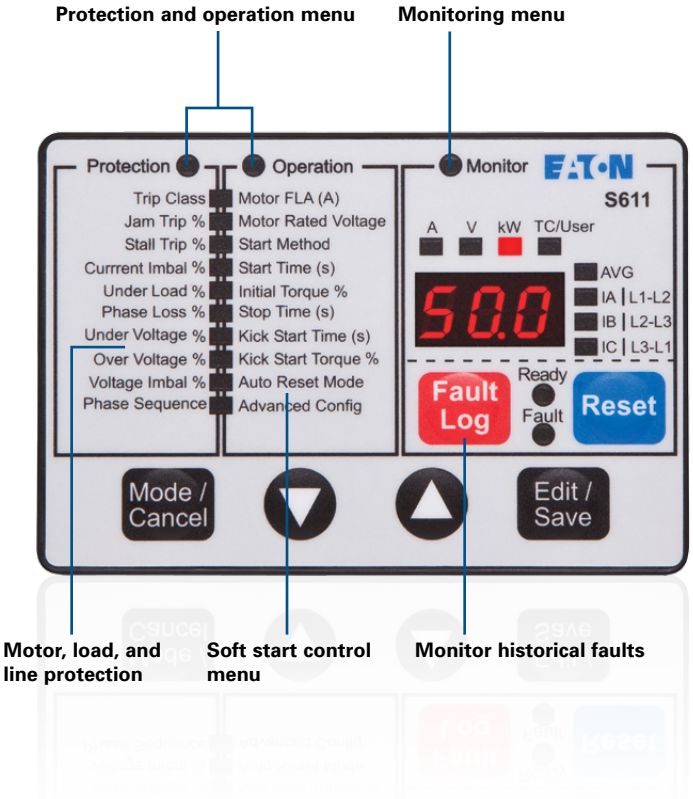
Enclosed S611 soft starters are rated for NEMA Type 1/12/3R/4/4X, and maintain high fault combination ratings up to 100kA with available fuses and up to 65kA with breakers. The enclosed S611 provides additional flexibility and robustness with an optional external, fully rated bypass and remote keypad. It's clear the packaged S611 is engineered for optimum application flexibility.



# Simplified, Intuitive Control

An elegant user interface, which is a standard on all devices, makes commissioning a soft starter easier than ever. This user interface simplifies the setup of initial soft start parameters, makes it easier to monitor performance over time, and streamlines the process of quick adjustments in the field. This intuitive interface can be programmed without the aid of a user manual, and can even be detached from the unit to work remotely—perfect for mounting the display on an enclosure.

Upon power-up, customizing the soft starter is a simple process of toggling into "Operation" mode and adjusting the parameters. Similar customization can be performed through the "Protection" and "Monitor" modes as the application requires. For added flexibility, the user interface of the S611 can be remote-mounted on the outside of a panel. And, once mounted, the bright seven-segment LED provides long-distance visibility of system status.



| Soft Starter (Partial Catalog Number) | | S611A052 | S611A065 | S611A072 | S611B099 | S611B125 | S611C156 | S611C180 | S611D242 | S611E302 | S611E361 | S611F414 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Max. Current Capacity | A | 52 | 65 | 77 | 99 | 125 | 156 | 180 | 242 | 302 | 361 | 414 |
| **Dimensions** | | | | | | | | | | | | |
| Width | inch (mm) | 11.58 (294) | | | 11.58 (294) | | 11.58 (294) | | 11.58 (294) | 17.56 (446) | | 17.56 (446) |
| Height | inch (mm) | 19.45 (494) | | | 19.45 (494) | | 20.83 (529) | | 20.83 (529) | 31.15 (791) | | 31.15 (791) |
| Depth | inch (mm) | 7.46 (189) | | | 7.46 (189) | | 8.37 (213) | | 8.37 (213) | 9.54 (242) | | 9.54 (242) |
| Weight | lb. (kg) | 24 (11) | | | 24 (11) | | 33 (15) | | 38 (15) | 86 (39) | | 102 (46) |
| **General Information** | | | | | | | | | | | | |
| Bypass Mechanical Lifespan | | 10M | | | | | | | | | | |
| Insulating Voltage | V | 660 | | | | | | | | | | |
| Initial Torque | | 0–85% | | | | | | | | | | |
| Ramp Time Range | seconds | 0.5–180 | | | | | | | | | | |
| Soft Stop Time Range | seconds | 0–60 | | | | | | | | | | |
| Kick Start Time Range | seconds | 0–2 | | | | | | | | | | |
| Vibration Resistance—Non-operating | g. | 3g up to 242A units, 2g for 302A to 414A units | | | | | | | | | | |
| Vibration Resistance—Operating | g. | 1 | | | | | | | | | | |
| Shock Resistance | g. | 15g up to 242A units, 5g for 302A to 414A units | | | | | | | | | | |
| Electrical Information | | | | | | | | | | | | |
| Operating Voltage | V | 130–600 | | | | | | | | | | |
| Operating Frequency | Hertz | 47–63 | | | | | | | | | | |
| Overload Setting (Frame) | % FLA | 50–100 | | | | | | | | | | |
| Trip Class | | 5,10,20,30 | | | | | | | | | | |
| **Control Power Requirements** | | | | | | | | | | | | |
| Voltage Range (120V ± 10%) | V | 108–132 | | | | | | | | | | |
| Steady State current | A | 0.375 | | | | | | | | 0.75 | | |
| Inrush Current | A | 0.5 | | | | | | | | 1 | | |
| Ripple | % | 1 | | | | | | | | | | |
| Relays (1) Class A and C | | | | | | | | | | | | |
| Voltage AC—maximum | V | 120 | | | | | | | | | | |
| Voltage DC—maximum | V | 24 | | | | | | | | | | |
| Amps—Maximum | A | 3 | | | | | | | | | | |
| **Environment** | | | | | | | | | | | | |
| Temperature—Operating | °C | –20 to +50 | | | | | | | | | | |
| Temperature—Storage | °C | –40 to +85 | | | | | | | | | | |
| Altitude | Meters | <2000 meters, Derate 0,5% per 100 meters>2000 meters | | | | | | | | | | |
| Humidity | % | <95% Non-condensing | | | | | | | | | | |
| Operating Position | | Vertical, Line Side Up | | | | | | | | | | |
| Pollution Degree IEC947-1 | | 3 | | | | | | | | | | |
| Impulse Withstand Voltage IEC947-4-1 | V | 6000 | | | | | | | | | | |
| Standards and Certifications | | UL Listed, CSA Certification, IEC 60947-4-2 | | | | | | | | | | |
| Monitoring Capabilities | | Power, Phase Currents, Average Current, Phase Voltage, Average Voltage, Control Voltage, Device Temperature, Start Count, Fault Queue, Control Status | | | | | | | | | | |
| Protective Features | | Electronic Overload, Jam, Stall, SCR Over Temperature, Phase Loss, Phase Imbalance, Automatic or Manual Reset Phase Reversal, Shorted SCR Detection, Open SCR Detection, Under Current, Under Voltage, Overvoltage, Diagnostics | | | | | | | | | | |