S811+ soft starter frequently asked questions

Q: What are the major features of the S811+?

A: The S811+ has many user friendly operations and protections parameters that may be configured by the end user for top performance including:

Operations

- Voltage ramp or current limit start
- Kick start
- Soft stop or pump stop
- Level or edge sense
- Internal bypass contactors
- Voltage and current monitoring capability

Protections

- Electronic overload
- Jam and stall protection
- Voltage phase loss, phase imbalance, phase reversal
- High and low voltage and current protection
- Pole over temperature protection
- SCR shorted and open detection

Q: Does the S811+ have network communication capability?

A: Yes. The S811+ has Modbus® and DeviceNet™ (selectable) as native protocols. Additional protocols such as Ethernet and PROFIBUS® may be used with dedicated comms adapters for the S811+

Q: How long does it take to program the unit?

A: The Digital Interface Module (DIM) is a user interface that is organized to quickly enter appropriate settings. In many cases, only the motor FLA and mains system voltage need adjustment, as the default settings may be used for initial startup.

Q: I will be installing several S811+s in the same application(s). Do I have to program each one separately?

A: No. The DIM on the S811+ can transfer all the parameters from one S811+ to another, or be used as a "master" to load initial parameter settings into S811+s.

Q: What are the similarities between the S811+ and S811?

A: The S811+ is an upgraded version of the S811. Both devices have the identical power structure and base assembly. The printed circuit board and firmware used on the S811+ is new. They have the same (S811+ default) start and stop methods, options and ratings, and they use the same accessories. The default control terminal wiring is identical, making the S811+ a direct replacement unit for the S811. The S811+ has retained all the features as the S811 and offers an expanded feature set.

Added new features include:

Monitoring features

- Average line power
- Power factor
- Auto reset count

Protection features

- External E-stop
- External trip
- Fault warning functionality
- External warning
- Custom fault/warning auxiliary relays
- Auto reset delay timer
- Auto reset counter
- Auto reset limit
- Power up reset
- Motor power
- Analog input
- Start delay
- Power on start delay

Operational features and benefits

- Motor wiring configuration user selectable between inline and inside-the-delta
- Modbus native communications protocol
- Programmable control terminal block functionality
- 2nd start ramp profile capability
- Alarm-No-Trip functionality
- Digital Interface Module (DIM) cloning

Q: What are the major applications that the S811+ may be used in?

A: The S811+ is a full featured RVSS that is targeted for many diverse markets including:

- Pumps
- Fans
- Conveyors
- Crushers
- Cetrifuges

Q: What are the differences between an S811+ and an S811?

A: Physical differences include an improved printed circuit board, the change to the communications port from a connector to a screw terminal set, and different front plastic housing. The S811+ includes a DIM with slightly different firmware. The DIMs from the S811+ may be exchanged with an S811, but some functionality will be lost. The S811+ retains the removable locking control terminal block.

Firmware changes include enhancements to the existing protective features, additional protective features, a fault queue, programmable control terminal inputs and auxiliary contacts. The S811+ also has built in Modbus and QC Port communication capabilities.

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Q: What is the difference between an S811+ standard and an S811+ premium?

A: The standard unit includes all the functions required for normal applications and includes inline and inside-the-delta mains wiring configurations. The S811+ includes all the standard features plus extended ramp and pump control options for full function performance.

Q: What are the catalog numbers?

A: The catalog identification scheme has changed slightly from that of the S811 as follows:

S801+ Standard: **S801+...N3S**—level/edge sense, inline wiring config. only.

S811+ Standard: **S811+...N3S**—level/edge sense; inline and inside-the-delta wiring config.

S811+ Premium: **S811+...P3S**—level/edge sense; inline and inside-the-delta wiring config; pump control; extended ramp.

S811+ (690V Rated): **S811+T18V3S thru S811+V85V3S** (no U-Frames); Level/edge sense; inline and inside-the-delta wiring config; pump control; extended ramp.

Q: Who should I contact for technical assistance?

A: For open units, contact the Technical Resource Center (800) 809-2772.

For Enclosed units contact the Technical Resource Center (800) 809-2772.

For MCC's contact Fayetteville MCC Marketing.

Q: Is the S811+ available in enclosed control and/or a motor control center?

A: Yes. Similar to the S811 that it is replacing, the S811+ may be ordered in either form.

Q: Who should I contact for pricing?

A: For open units, contact the regional Pricing Manager in Avery Creek.

For Enclosed units contact Fayetteville Enclosed Control Marketing.

For MCC's contact Fayetteville MCC Marketing.

Q: Who should I contact for warranty assistance?

A: For open units, contact the Milwaukee PIC (Product Integrity Center) (800) 345-0434.

For Enclosed units and MCC's contact Fayetteville PIC (Product Integrity Center).

Q: Where can I find technical data on the S811+?

A: Technical data is included in the User Manual (MN03900001E) and the catalog supplement for this product.

Q: How does the S811+ stack up against the competition?

A: A competitive analysis document is available from the Product Manager.

Q: Can an S811 be upgraded to an S811+?

A: Although this is technically possible, no upgrade kits or programs are currently available.

Future upgrade kits or programs may be implemented based on technical feasibility and customer demand. Please advise Product Manager of customer interest.

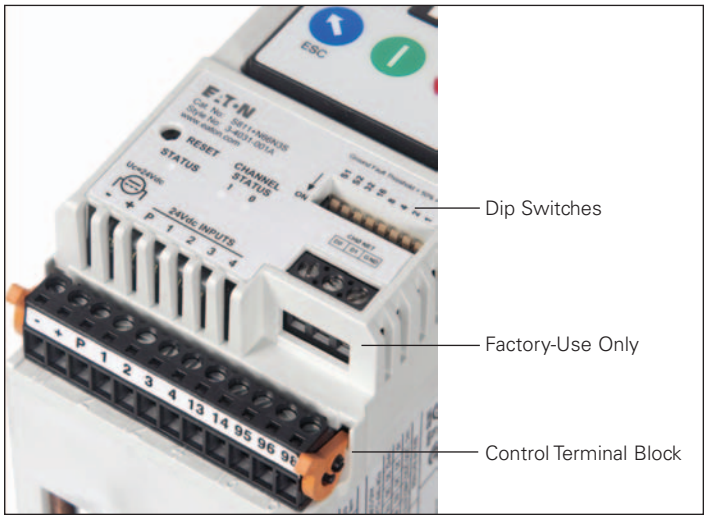
Q: I have an S801 in an application. Can I upgrade to (or replace with) the S811+?

A: Yes, the mounting dimensions are identical to the S801 (or S811). The unit height is slightly higher, but will normally fit into an existing enclosure or MCC.

Additionally, lug design from the T-, U-, and V-Frames have been retained from the S801 and S811 and maybe used with the S811+.

Q: Where is the Comms Port channel?

A: The figure below illustrates the Communication Port and DIP switches.



Q: Does the S811+ have inside-the-delta control?

A: The S811+ now offers user selectability between the inline wiring config. (default) and inside-the-delta wiring config. for all frames sizes up to 600V. Selected frame sizes are available for 690V operation. This feature is accessed in the Soft Start Config. Menu.

Q: How does the S811+ communicate on common industrial networks?

A: The S811+ has resident Modbus and QC Port communications. Communications on common industrial networks are facilitated by one of the Eaton Network Adapters. Ethernet IP/Modbus TCP are available now. Additional networks including DeviceNet and PROFIBUS are planned.

Q: What are the ratings of the S811+?

A: The ratings are the same as the S811:

- 11–1000A
- Up to 690V
- 10–1000 hp
- 10–600 kW

Q: Will the S811 be discontinued?

A: Yes.

Q: How do the S801+ and S811+ list prices compare?

A: S801+ /S811+ prices are within 5% of the existing S801/S811 prices.

Q: Can a DIM from an S811 be used on an S811+?

A: Yes, but with slightly impaired functionality. Functions in the LCD DIM menu such as uploading/downloading settings, run delay, and local jog enable will not be available.

Q: Can the S811+ run without the DIM?

A: Yes.

Q: Can a CIM be used on an S811+?

A: Yes.

Q: Can an S811 on a QCPort network be replaced with an S811+?

A: Yes. An optional adapter is available to allow the connector from the QCPort network to simply plug into the adapter without the need for re-terminating any connections.

Q: What renewal parts are available for the S811+?

A: Renewal parts include the DIM, DIM cable and locking control terminal block.

Q: What are the terminal control block input function options?

A:

- Run command
- Ramp—second ramp profile
- Jog
- Local
- Reset
- E-Stop
- Alarm-No-Trip enable
- External Trip
- External Warning
- Disable overload on start
- Analog Input

Q: What are the relay configuration options?

A:

- Fault/Fault NOT
- Bypassed/Bypassed NOT
- Motor Energized/Motor Energized NOT
- Warning/Warning NOT
- Custom Fault Warning/Custom Fault Warning NOT

Q: What is the control voltage?

A: The control voltage is 24 Vdc and power supply requirements are the same as the S811, 24 Vdc at 240 watts.

Q: Can the control voltage for the S811+ be changed to 120 Vac?

A: The S811+ will only recognize 24 Vdc signals at the control terminal block. If the S811+ is to be fitted into a 120 Vac control system, interposing relay(s) will be needed (120 Vac relay would control the 24 Vdc signal to the RVSS).

Q: Are the faults codes the same as the S811?

A: Most of the fault codes are the same as the S811. New features have been added to the S811+, so additional fault codes have been added to the fault code structure.

Q: What are the fault codes for the S811+?

A: A complete list of the fault codes and fault parameter options are available in the S811+ User manual.

Q: I have heard that the S811+ can provide warnings instead of trips. How does this work?

A: The S811+ has the ability for the end user to select either Fault Trip, Fault Warning, or Disable options for important Protection parameters. Selecting a Fault Trip (default) option will cause the unit to trip if the affected parameter is outside the operating parameters. If the Fault Warning option is selected, the unit will display the fault, but the application (motor) will continue to run. Selecting the Disable option (not recommended) causes the unit to ignore the Fault condition.

Q: What are the DIM Menus?

A:

- Monitoring
- Soft Start Config
- Protections
- Advanced I/O Setup
- Network Setup
- LCD DIM Setup

Q: What literature is available for the S811+?

A: Tab 39 Catalog—Volume 6: Pub. Number CA01810007E

S811+ User Manual: Pub. Number MN03900001E

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