

## Technical Data and Specifications

### Soft Starters—S811

Description	S811 Soft Starter (Partial Catalog Number)			
	S811N37	S811N66	S811R10	S811R13
Max. current capacity	37	66	105	135
FLA range	11–37	20–66	32–105	42–135
<b>General Information</b>				
Bypass mechanical lifespan	10M	10M	10M	10M
Insulating voltage Ui	660V	660V	660V	660V
Ramp time range	0.5–180 seconds (0.5–360 seconds extended ramp)	0.5–180 seconds (0.5–360 seconds extended ramp)	0.5–180 seconds (0.5–360 seconds extended ramp)	0.5–180 seconds (0.5–360 seconds extended ramp)
Resistance to vibration	3g	3g	3g	3g
Resistance to shock	15g	15g	15g	15g
<b>Electrical Information</b>				
Operating voltage	200–600V	200–600V	200–600V	200–600V
Operating frequency	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz
Overload setting	30–100%	30–100%	30–100%	30–100%
Trip class	5, 10, 20 and 30	5, 10, 20 and 30	5, 10, 20 and 30	5, 10, 20 and 30
<b>Cabling Capacity (IEC 947)</b>				
Number of conductors	1	1	1	1
Wire sizes	14–2	14–2	14–4/0	14–4/0
Type of connectors	Box lug	Box lug	Box lug	Box lug
<b>Control Wiring (12-Pin)</b>				
Wire sizes in AWG	22–14	22–14	22–14	22–14
Number of conductors (stranded)	2 (or one AWG 12)	2 (or one AWG 12)	2 (or one AWG 12)	2 (or one AWG 12)
Torque requirements in lb-in	3.5	3.5	3.5	3.5
Solid, stranded or flexible max. size in mm <sup>2</sup>	3.31	3.31	3.31	3.31
<b>Control Power Requirements</b>				
Voltage range (24V ±10%)	21.6–26.4	21.6–26.4	21.6–26.4	21.6–26.4
Steady-state current amps	1.0	1.0	1.0	1.0
Inrush current amps	10	10	10	10
Ripple	1%	1%	1%	1%
<b>Relays (1) Class A and C</b>				
Voltage AC—maximum	240	240	240	240
Voltage DC—maximum	120	120	120	120
Amps—maximum	3	3	3	3
<b>Environment</b>				
Temperature—operating	–30 to 50°C (no derating) consult factory for operation >50°C	–30 to 50°C (no derating) consult factory for operation >50°C	–30 to 50°C (no derating) consult factory for operation >50°C	–30 to 50°C (no derating) consult factory for operation >50°C
Temperature—storage	–50 to 70°C	–50 to 70°C	–50 to 70°C	–50 to 70°C
Altitude	<2000m—consult factory for operation >2000m	<2000m—consult factory for operation >2000m	<2000m—consult factory for operation >2000m	<2000m—consult factory for operation >2000m
Humidity	<95% noncondensing	<95% noncondensing	<95% noncondensing	<95% noncondensing
Operating position	Any	Any	Any	Any
Pollution degree IEC947-1	3	3	3	3
Impulse withstand voltage IEC947-4-1	6000V	6000V	6000V	6000V

## Soft Starters—S811, continued

Description	S811 Soft Starter (Partial Catalog Number)			
	S811T18	S811T24	S811T30	S811U36
Max. current capacity	180	240	304	360
FLA range	56–180	75–240	95–304	112–360
<b>General Information</b>				
Bypass mechanical lifespan	10M	10M	10M	10M
Insulating voltage $U_i$	660V	660V	660V	660V
Ramp time range	0.5–180 seconds (0.5–360 seconds extended ramp)	0.5–180 seconds (0.5–360 seconds extended ramp)	0.5–180 seconds (0.5–360 seconds extended ramp)	0.5–180 seconds (0.5–360 seconds extended ramp)
Resistance to vibration	3g	3g	3g	3g
Resistance to shock	15g	15g	15g	15g
<b>Electrical Information</b>				
Operating voltage	200–600V	200–600V	200–600V	200–600V
Operating frequency	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz
Overload setting	30–100%	30–100%	30–100%	30–100%
Trip class	5, 10, 20 and 30	5, 10, 20 and 30	5, 10, 20 and 30	5, 10, 20 and 30
<b>Cabling Capacity (IEC 947)</b>				
Number of conductors	1 or 2	1 or 2	1 or 2	1 or 2
Wire sizes	4 AWG to 500 kcmil	4 AWG to 500 kcmil	4 AWG to 500 kcmil	4 AWG to 500 kcmil
Type of connectors	Add-on lug kit	Add-on lug kit	Add-on lug kit	Add-on lug kit
<b>Control Wiring (12-Pin)</b>				
Wire sizes in AWG	22–14	22–14	22–14	22–14
Number of conductors (stranded)	2 (or one AWG 12)	2 (or one AWG 12)	2 (or one AWG 12)	2 (or one AWG 12)
Torque requirements in lb-in	3.5	3.5	3.5	3.5
Solid, stranded or flexible max. size in mm <sup>2</sup>	3.31	3.31	3.31	3.31
<b>Control Power Requirements</b>				
Voltage range (24V ±10%)	21.6–26.4	21.6–26.4	21.6–26.4	21.6–26.4
Steady-state current amps	1.0	1.0	1.0	1.0
Inrush current amps	10	10	10	10
Ripple	1%	1%	1%	1%
<b>Relays (1) Class A and C</b>				
Voltage AC—maximum	240	240	240	240
Voltage DC—maximum	120	120	120	120
Amps—maximum	3	3	3	3
<b>Environment</b>				
Temperature—operating	–30 to 50°C (no derating) consult factory for operation >50°C	–30 to 50°C (no derating) consult factory for operation >50°C	–30 to 50°C (no derating) consult factory for operation >50°C	–30 to 50°C (no derating) consult factory for operation >50°C
Temperature—storage	–50 to 70°C	–50 to 70°C	–50 to 70°C	–50 to 70°C
Altitude	<2000m—consult factory for operation >2000m	<2000m—consult factory for operation >2000m	<2000m—consult factory for operation >2000m	<2000m—consult factory for operation >2000m
Humidity	<95% noncondensing	<95% noncondensing	<95% noncondensing	<95% noncondensing
Operating position	Any	Any	Any	Any
Pollution degree IEC947-1	3	3	3	3
Impulse withstand voltage IEC947-4-1	6000V	6000V	6000V	6000V

## Soft Starters—S811, continued

Description	S811 Soft Starter (Partial Catalog Number)			
	S811U42	S811U50 <sup>①</sup>	S811V36	S811V42
Max. current capacity	420	500	360	420
FLA range	131–420	156–500	112–360	131–420
<b>General Information</b>				
Bypass mechanical lifespan	10M	10M	10M	10M
Insulating voltage U <sub>i</sub>	660V	660V	660V	660V
Ramp time range	0.5–180 seconds (0.5–360 seconds extended ramp)	0.5–180 seconds (0.5–360 seconds extended ramp)	0.5–180 seconds (0.5–360 seconds extended ramp)	0.5–180 seconds (0.5–360 seconds extended ramp)
Resistance to vibration	3g	3g	3g	3g
Resistance to shock	15g	15g	15g	15g
<b>Electrical Information</b>				
Operating voltage	200–600V	200–600V	200–600V	200–600V
Operating frequency	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz
Overload setting	30–100%	30–100%	30–100%	30–100%
Trip class	5, 10, 20 and 30	5, 10, 20 and 30	5, 10, 20 and 30	5, 10, 20 and 30
<b>Cabling Capacity (IEC 947)</b>				
Number of conductors	1 or 2	1 or 2	2, 4 or 6	2, 4 or 6
Wire sizes	4 AWG to 500 kcmil	4 AWG to 500 kcmil	4 AWG to 500 kcmil	4 AWG to 500 kcmil
Type of connectors	Add-on lug kit	Add-on lug kit	Add-on lug kit	Add-on lug kit
<b>Control Wiring (12-Pin)</b>				
Wire sizes in AWG	22–14	22–14	22–14	22–14
Number of conductors (stranded)	2 (or one AWG 12)	2 (or one AWG 12)	2 (or one AWG 12)	2 (or one AWG 12)
Torque requirements in lb-in	3.5	3.5	3.5	3.5
Solid, stranded or flexible max. size in mm <sup>2</sup>	3.31	3.31	3.31	3.31
<b>Control Power Requirements</b>				
Voltage range (24V ±10%)	21.6–26.4	21.6–26.4	21.6–26.4	21.6–26.4
Steady-state current amps	1.0	1.0	1.4	1.4
Inrush current amps	10	10	10	10
Ripple	1%	1%	1%	1%
<b>Relays (1) Class A and C</b>				
Voltage AC—maximum	240	240	240	240
Voltage DC—maximum	120	120	120	120
Amps—maximum	3	3	3	3
<b>Environment</b>				
Temperature—operating	–30 to 50°C (no derating) consult factory for operation >50°C	–30 to 50°C (no derating) consult factory for operation >50°C	–30 to 50°C (no derating) consult factory for operation >50°C	–30 to 50°C (no derating) consult factory for operation >50°C
Temperature—storage	–50 to 70°C	–50 to 70°C	–50 to 70°C	–50 to 70°C
Altitude	<2000m—consult factory for operation >2000m	<2000m—consult factory for operation >2000m	<2000m—consult factory for operation >2000m	<2000m—consult factory for operation >2000m
Humidity	<95% noncondensing	<95% noncondensing	<95% noncondensing	<95% noncondensing
Operating position	Any	Any	Any	Any
Pollution degree IEC947-1	3	3	3	3
Impulse withstand voltage IEC947-4-1	6000V	6000V	6000V	6000V

**Note**

① U-Frame 500A unit does not have IEC certification.

## Soft Starters—S811, continued

Description	S811 Soft Starter (Partial Catalog Number)				
	S811V50	S811V65	S811V72	S811V85	S811V10 <sup>①</sup>
Max. current capacity	500	650	720	850	1000
FLA range	156–500	203–650	225–720	265–580	320–1000
<b>General Information</b>					
Bypass mechanical lifespan	10M	10M	10M	10M	10M
Insulating voltage U <sub>i</sub>	660V	660V	660V	660V	660V
Ramp time range	0.5–180 seconds (0.5–360 seconds extended ramp)	0.5–180 seconds (0.5–360 seconds extended ramp)	0.5–180 seconds (0.5–360 seconds extended ramp)	0.5–180 seconds (0.5–360 seconds extended ramp)	0.5–180 seconds (0.5–360 seconds extended ramp)
Resistance to vibration	3g	3g	3g	3g	3g
Resistance to shock	15g	15g	15g	15g	15g
<b>Electrical Information</b>					
Operating voltage	200–600V	200–600V	200–600V	200–600V	200–600V
Operating frequency	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz
Overload setting	30–100%	30–100%	30–100%	30–100%	30–100%
Trip class	5, 10, 20 and 30	5, 10, 20 and 30	5, 10, 20 and 30	5, 10, 20 and 30	5, 10, 20 and 30
<b>Cabling Capacity (IEC 947)</b>					
Number of conductors	2, 4 or 6	2, 4 or 6	2, 4 or 6	2, 4 or 6	2, 4 or 6
Wire sizes	2/0 to 500 kcmil	2/0 to 500 kcmil	2/0 to 500 kcmil	2/0 to 500 kcmil	2/0 to 500 kcmil
Type of connectors	Add-on lug kit	Add-on lug kit	Add-on lug kit	Add-on lug kit	Add-on lug kit
<b>Control Wiring (12-Pin)</b>					
Wire sizes in AWG	22–14	22–14	22–14	22–14	22–14
Number of conductors (stranded)	2 (or one AWG 12)	2 (or one AWG 12)	2 (or one AWG 12)	2 (or one AWG 12)	2 (or one AWG 12)
Torque requirements in lb-in	3.5	3.5	3.5	3.5	3.5
Solid, stranded or flexible max. size in mm <sup>2</sup>	3.31	3.31	3.31	3.31	3.31
<b>Control Power Requirements</b>					
Voltage range (24V ±10%)	21.6–26.4	21.6–26.4	21.6–26.4	21.6–26.4	21.6–26.4
Steady-state current amps	1.4	1.4	1.4	1.4	1.4
Inrush current amps	10	10	10	10	10
Ripple	1%	1%	1%	1%	1%
<b>Relays (1) Class A and C</b>					
Voltage AC—maximum	240	240	240	240	240
Voltage DC—maximum	120	120	120	120	120
Amps—maximum	3	3	3	3	3
<b>Environment</b>					
Temperature—operating	–30 to 50°C (no derating) consult factory for operation >50°C	–30 to 50°C (no derating) consult factory for operation >50°C	–30 to 50°C (no derating) consult factory for operation >50°C	–30 to 50°C (no derating) consult factory for operation >50°C	–30 to 50°C (no derating) consult factory for operation >50°C
Temperature—storage	–50 to 70°C	–50 to 70°C	–50 to 70°C	–50 to 70°C	–50 to 70°C
Altitude	<2000m—consult factory for operation >2000m	<2000m—consult factory for operation >2000m	<2000m—consult factory for operation >2000m	<2000m—consult factory for operation >2000m	<2000m—consult factory for operation >2000m
Humidity	<95% noncondensing	<95% noncondensing	<95% noncondensing	<95% noncondensing	<95% noncondensing
Operating position	Any	Any	Any	Any	Any
Pollution degree IEC947-1	3	3	3	3	3
Impulse withstand voltage IEC947-4-1	6000V	6000V	6000V	6000V	6000V

**Note**

① UR recognized product.