

## Type S801, Intelligent Technologies (IT) Soft Starters

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S801

### Product Description

Eaton's Cutler-Hammer® Intelligent Technologies (IT) S801 Line of Reduced Voltage Soft Starters is very compact, multi-functional, easy to install and easy to program. Designed to control acceleration and deceleration of 3-phase motors, the line is available for current ranges from 12 amp all the way through 1000 amp applications and is suitable for mounting in motor control centers or in enclosed control (NEMA 1, 4, 4X and 12) applications.

### Application Description

The S801 line of IT Soft Starters is designed to be the smallest, most compact soft starter in the market today. With this small size, it can easily fit in place of existing soft starter designs, wye-delta starters or across-the-line NEMA and IEC starters. This feature allows easy retrofits of existing Motor Control Centers or Enclosures and saves the expense of replacing existing structure or adding a new one to house a soft starter.

The product is designed to work with 3-phase motors in a Delta (3-lead) configuration. The S801 works with all motors from fractional horsepower up to motors requiring 1000 amps of steady state current. The built-in overload (in ranges from 12 – 1000 amps) and run bypass contactor make installation and setup quick and easy. The overload also offers some advanced protective functions to give additional motor protection.

With the pump control option, it is the number one soft starter available for pumping applications. The unique soft stopping control provides a smooth transition for stopping a motor and eliminates the "water-hammer" effect that can damage pipes, valves and pumps.

### Features

- Built-in overload protection
- Built-in run bypass contactor
- Adjustable ramp times
- Adjustable torque control
- Adjustable kick start control
- Programmable overload settings, 31 – 100% (3.2:1) of rated current for the unit
- Physically fits in place of most NEMA and IEC starters
- Easy to use control interface module
- Soft stop control
- Multiple trip class settings (5, 10, 20 and 30)
- Six SCR control
- Optional pump control

### Benefits

- Reduced wear on belts, gears, chains, clutches, shafts and bearings
- Allows for controlling the inrush current to the motor
- Reduced inrush current leads to more stable power grid and can lower peak demand charges
- Elimination of water-hammer in pumping applications
- Less shock to product on conveyor lines and material handling gear
- 24V DC control enhances personnel and equipment safety

### Operation

#### Overload Functionality

##### Overtemperature

Protects the device from overheating. Starter will shutdown at 110°C.

##### Jam

Selectable protective feature, unit trips to prevent damage to motor during normal run.

##### Stall

Selectable protective feature, unit trips to protect system in event motor can not get to rated speed in the defined ramp period.

##### Phase Loss

Selectable protective feature, trips under voltage loss condition to any phase.

##### Phase Reversal

Selectable protective feature, trips when phase rotation is something other than A-B-C.

##### Kick Start

Selectable feature which provides a current "kick" of up to 550% of full load current for 0 to 2.0 seconds. This provides the additional torque required at startup to break free a motor.

##### Ramp Start

Provides a constant increase in torque to the motor.

##### Current Limit Start

Limits the maximum current available to the motor during the startup phase.

##### Soft Stop

Allows for a controlled stopping of a frictional load.

##### Shorted SCR Detection

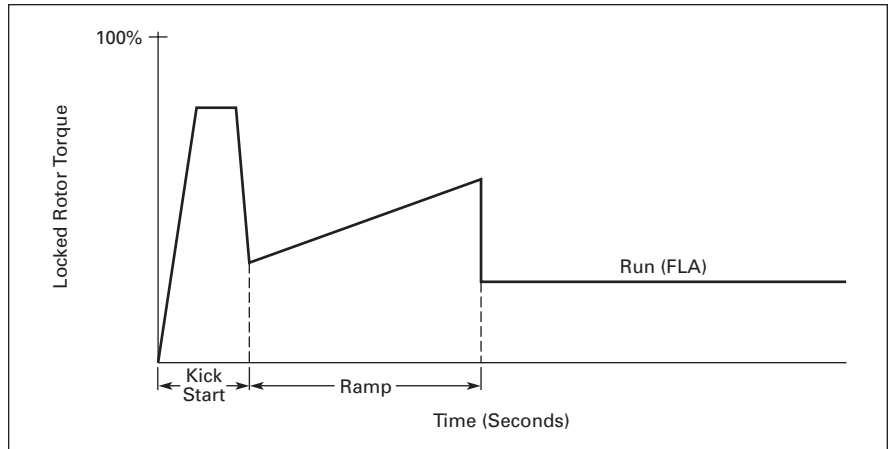
Monitors for shorted SCR in the power polls.

**Starting Characteristics**

**Kick Start**

Provides an initial boost of current to the motor to help break free the rotor and start spinning the motor.

- 0 – 85% of locked rotor torque.
- 0 – 2.0 seconds duration.

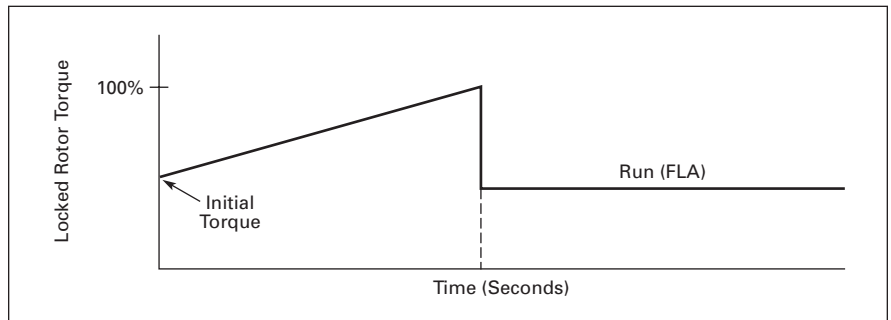


**Figure 1. Starting Characteristics — Kick Start**

**Ramp Start**

The most commonly used form of soft start. This allows you to set the initial torque value (of the ramp) and then raises it to full voltage conditions.

- Adjustable initial torque = 0 – 85% of locked rotor torque.
- Adjustable ramp time = .5 – 180 seconds (can be extended with factory modification).

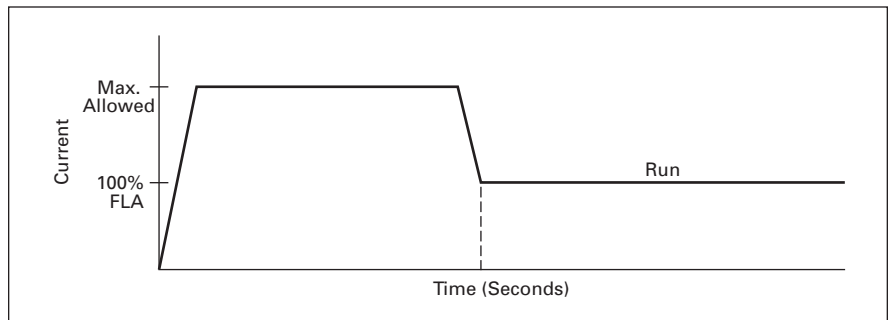


**Figure 2. Starting Characteristics — Ramp Start**

**Current Limit**

This mode of soft starting is used when it becomes necessary to limit the maximum starting current due to long start times or to protect the motor.

- Maximum current of 0 – 85% locked rotor current.
- Adjustable ramp time = .5 – 180 seconds (can be extended with factory modification).

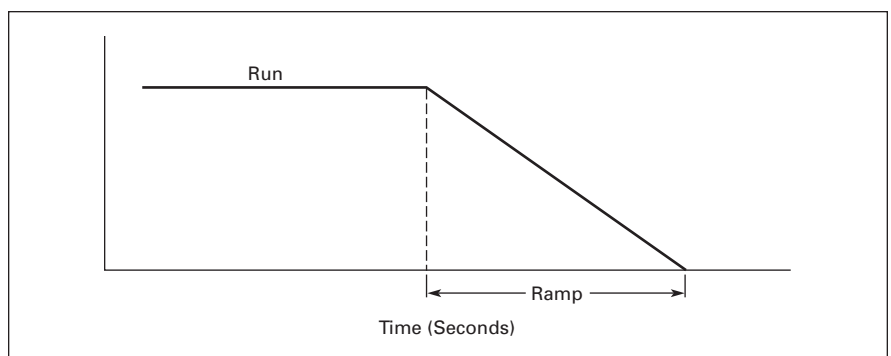


**Figure 3. Starting Characteristics — Current Limit**

**Soft Stop**

Used when an extended coast-to-rest period is desired. Often used with high friction loads where a sudden stop may cause system or product damage.

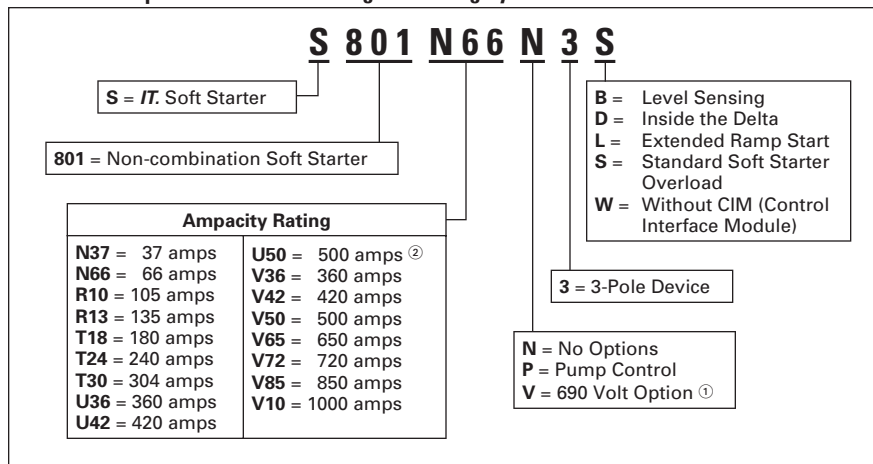
- Stop time = 0 – 60 seconds.



**Figure 4. Starting Characteristics — Soft Stop**

## Catalog Number Selection

Table 1. S801 Open Soft Starters Catalog Numbering System



① Not available on U-Frame.

② U-Frame 500 Amp unit does not have IEC Certification.



65 mm, Catalog Number S801N



110 mm, Catalog Number S801R



200 mm, Catalog Number S801T



290 mm, Catalog Number S801V

**Product Selection**

**Base Ratings**

The table below is the base ratings for the *IT* Soft Starter. The tables included in this catalog are meant to be a selection table for different applications, but to match a unit to your exact application, consult with your local Eaton representative or call our Technical Resource Center.

**Table 2. Standard Duty Ratings**

Starting Method	Ramp Current % of FLA	Ramp Time Seconds	Starts per Hour	Ambient Temperature
vs. Soft Start	300%	30 sec.	3	50°C
vs. Full Voltage	500%	10 sec.	3	50°C
vs. Wye-Delta	350%	20 sec.	3	50°C
vs. 80% RVAT	480%	20 sec.	2	50°C
vs. 65% RVAT	390%	20 sec.	3	50°C
vs. 50% RVAT	300%	20 sec.	4	50°C

**Table 3. Product Selection — Standard Duty Rating Open Soft Starters**

Max. Current	Three-Phase Motor											Catalog Number ①②	Price U.S. \$	
	kW Rating (50 Hertz)			hp Rating (60 Hertz)										
	230 Volt	380 – 400 Volt	440 Volt	200V		230V		460V		575V				
			1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF				
<b>Frame Size N</b>														
37	10	18.5	18.5	18.5	10	10	10	10	25	20	30	30	S801N37N3S S801N66N3S	1,910. 2,935.
66	18.5	30	37	20	15	20	20	50	40	60	50			
<b>Frame Size R</b>														
105	30	55	59	30	25	40	30	75	60	100	75	S801R10N3S S801R13N3S	4,420. 5,300.	
135	40	63	80	40	30	50	40	100	75	125	100			
<b>Frame Size T</b>														
180	51	90	110	60	50	60	60	150	125	150	150	S801T18N3S S801T24N3S S801T30N3S	5,640. 6,000. 6,370.	
240	75	110	147	75	60	75	75	200	150	200	200			
304	90	160	185	100	75	100	100	250	200	300	250			
<b>Frame Size U</b>														
360	110	185	220	125	100	150	125	300	250	350	300	S801U36N3S S801U42N3S S801U50N3S ③④	6,670. 8,070. 9,070.	
420	129	220	257	150	125	175	150	350	300	450	350			
500	150	257	300	150	150	200	150	400	350	500	450			
<b>Frame Size V</b>														
360	110	185	220	125	100	150	125	300	250	350	300	S801V36N3S S801V42N3S S801V50N3S S801V65N3S S801V72N3S S801V85N3S S801V10N3S ⑤	7,170. 8,070. 9,070. 10,570. 12,150. 14,710. 24,540.	
420	129	220	257	150	125	175	150	350	300	450	350			
500	150	257	300	150	150	200	150	400	350	500	450			
650	200	355	425	250	200	250	200	500	450	600	500			
720	220	400	450	—	—	300	250	600	500	700	600			
850	257	475	500	—	—	350	300	700	600	900	700			
1000	315	560	600	—	—	400	350	800	700	1000	800			

① For a longer ramp acceleration time of .5 to 360 seconds, see **Page 11**.  
 ② For 2-wire (level sensing) control, change the last digit from **S** to **2**.  
 ③ 15 sec. start, 300% inrush, 40°C, 1 start every 15 minutes. If these start parameters are exceeded, please refer to 290 mm V-Frame, 500A starter.  
 ④ U-Frame 500 Amp does not have IEC Certification.  
 ⑤ For more information on optimum performance of the 1000A Frame Size V S801, see Appendix C of MN03902008E.

## Type S801, Intelligent Technologies (IT) Soft Starters

### Severe Duty Ratings

Motor applications and customer needs come in many different varieties. With the standard and severe duty rating tables, we have attempted to provide guidelines on what the *IT* Soft Starter is capable of. If the application falls under these categories, you can use these charts. For other applications, or when a question arises, a program in Bid Manager is designed to assist you in selecting the proper soft starter.

**Table 4. Severe Duty Ratings**

Starting Method	Ramp Current % of FLA	Ramp Time Seconds	Starts per Hour	Ambient Temperature
vs. Soft Start	450%	30 sec.	4	50°C
vs. Full Voltage	500%	10 sec.	10	50°C
vs. Wye-Delta	350%	65 sec.	3	50°C
vs. 80% RVAT	480%	25 sec.	4	50°C
vs. 65% RVAT	390%	40 sec.	4	50°C
vs. 50% RVAT	300%	60 sec.	4	50°C

**Table 5. Product Selection — Severe Duty Rating Open Soft Starters**

Max. Current	Three-Phase Motor											Catalog Number <sup>①②</sup>	Price U.S. \$
	kW Rating (50 Hertz)			hp Rating (60 Hertz)									
	230 Volt	380 – 400 Volt	440 Volt	200V		230V		460V		575V			
			1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF			
<b>Frame Size N</b>													
22	5.5	10	11	5	5	7-1/2	5	15	10	20	15	S801N37N3S	1,910.
42	11	18.5	22	10	10	15	10	30	25	40	30	S801N66N3S	2,935.
<b>Frame Size R</b>													
65	15	30	33	15	15	20	15	50	40	50	50	S801R10N3S	4,420.
80	22	40	45	25	20	30	25	60	50	75	60	S801R13N3S	5,300.
<b>Frame Size T</b>													
115	33	59	63	30	30	40	30	75	75	100	100	S801T18N3S	5,640.
150	45	80	90	50	40	50	50	100	100	150	125	S801T24N3S	6,000.
192	55	100	110	60	50	75	60	150	125	200	150	S801T30N3S	6,370.
<b>Frame Size U</b>													
240	75	110	147	75	60	75	75	200	150	200	200	S801U36N3S	6,670.
305	90	160	185	100	75	100	100	250	200	300	250	S801U42N3S	8,070.
365	110	185	220	125	100	150	125	300	250	350	300	S801U50N3S <sup>③</sup>	9,070.
<b>Frame Size V</b>													
240	75	110	147	75	60	75	75	200	150	200	200	S801V36N3S	7,170.
305	90	160	185	100	75	100	100	250	200	300	250	S801V42N3S	8,070.
365	110	185	220	125	100	150	125	300	250	350	300	S801V50N3S	9,070.
420	129	220	257	150	125	150	150	350	300	450	350	S801V65N3S	10,570.
480	147	257	295	150	150	200	150	400	350	500	450	S801V72N3S	12,150.
525	160	280	335	150	150	200	150	450	350	500	450	S801V85N3S	14,710.
600	185	315	375	200	150	250	200	500	450	600	500	S801V10N3S <sup>④</sup>	24,540.

① For a longer ramp acceleration time of .5 to 360 seconds, see **Page 11**.  
 ② For 2-wire (level sensing) control, change the last digit from **S** to **2**.  
 ③ U-Frame 500 Amp unit does not have IEC Certification.  
 ④ For more information on optimum performance of the 1000A Frame Size V S801, see Appendix C of MN03902008E.

**Inside-the-Delta Standard Duty Ratings**

**Table 6. 15 Second Ramp, 4 Starts per Hour, 300% Current Limit @ 40°C Ambient**

Max. Continuous Motor Line Current	Three-Phase Motor											Catalog Number	Price U.S. \$
	kW Rating (50 Hertz)			hp Rating (60 Hertz)									
	230	380 – 400	440	200V		230V		460V		575V			
	Volt	Volt	Volt	1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF		
<b>Frame Size N</b>													
65	10	18.5	18.5	15	15	15	15	40	30	50	50	S801N37N3D	2,225.
114	18.5	30	37	30	25	30	30	75	60	100	75	S801N66N3D	3,210.
<b>Frame Size R</b>													
182	30	55	59	50	40	60	50	125	100	150	125	S801R10N3D	4,675.
234	40	63	80	60	50	75	60	150	125	200	150	S801R13N3D	5,530.
<b>Frame Size T</b>													
311	51	90	110	100	75	100	100	250	200	250	250	S801T18N3D	5,850.
415	75	110	147	125	100	125	125	300	250	300	300	S801T24N3D	6,190.
526	90	160	185	150	125	150	150	400	300	400	400	S801T30N3D	6,550.
<b>Frame Size U</b>													
623	110	185	220	200	150	250	200	450	400	550	450	S801U36N3D	7,170.
727	129	220	257	250	200	300	250	550	450	700	550	S801U42N3D	7,230.
865	150	257	300	250	250	300	250	600	550	750	700	S801U50N3D <sup>①②</sup>	9,070.
<b>Frame Size V</b>													
623	110	185	220	200	150	250	200	450	400	550	450	S801V36N3D	7,520.
727	129	220	257	250	200	300	250	550	450	700	550	S801V42N3D	8,410.
865	150	257	300	250	250	300	250	600	550	750	700	S801V50N3D	9,410.
1125	200	355	425	400	300	400	300	750	700	900	750	S801V65N3D	10,570.
1246	—	—	—	—	—	—	—	—	—	—	—	S801V72N3D	12,150.
1471	—	—	—	—	—	—	—	—	—	—	—	S801V85N3D	14,710.
—	—	—	—	—	—	—	—	—	—	—	—	S801V10N3D <sup>③</sup>	24,830.

① 15 sec. start, 300% inrush, 40°C, 1 start every 15 minutes. If these start parameters are exceeded, please refer to 290 mm V-Frame, 865A Inside-the-Delta Starter.  
 ② U-Frame 500 Amp unit does not have IEC Certification.  
 ③ For more information on optimum performance of the 1000A Frame Size V Inside-the-Delta S801, see Appendix C of MN03902009E.

**Table 7. 25 Second Ramp, 4 Starts per Hour, 300% Current Limit @ 40°C Ambient**

Max. Continuous Motor Line Current	Three-Phase Motor											Catalog Number	Price U.S. \$
	kW Rating (50 Hertz)			hp Rating (60 Hertz)									
	230	380 – 400	440	200V		230V		460V		575V			
	Volt	Volt	Volt	1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF		
<b>Frame Size N</b>													
58	9	15	18.5	15	10	15	15	40	30	50	40	S801N37N3D	2,225.
108	15	30	33	30	25	30	30	60	60	100	75	S801N66N3D	3,210.
<b>Frame Size R</b>													
164	25	45	55	50	40	50	50	125	100	125	125	S801R10N3D	4,675.
206	33	63	63	60	50	60	50	125	125	150	150	S801R13N3D	5,530.
<b>Frame Size T</b>													
257	45	80	90	75	60	75	60	150	150	250	200	S801T18N3D	5,850.
365	63	110	132	100	100	125	100	250	250	300	250	S801T24N3D	6,190.
477	80	147	160	125	125	150	125	300	300	400	400	S801T30N3D	6,550.
<b>Frame Size U</b>													
554	90	160	185	150	125	200	150	400	300	450	400	S801U36N3D	7,170.
646	110	200	220	200	150	250	200	500	400	550	450	S801U42N3D	7,230.
796	140	250	280	250	200	250	250	550	500	700	600	S801U50N3D <sup>④⑤</sup>	9,070.
<b>Frame Size V</b>													
554	90	160	185	150	125	200	150	400	300	450	400	S801V36N3D	7,520.
646	110	200	220	200	150	250	200	500	400	550	450	S801V42N3D	8,410.
796	140	250	280	250	200	250	250	550	500	700	600	S801V50N3D	9,410.
1055	185	315	375	400	250	300	300	800	700	900	750	S801V65N3D	10,570.
1176	200	375	445	—	300	400	300	900	800	900	900	S801V72N3D	12,150.
1358	—	—	—	—	—	—	—	—	—	—	—	S801V85N3D	14,710.
—	—	—	—	—	—	—	—	—	—	—	—	S801V10N3D <sup>⑥</sup>	24,830.

④ 15 sec. start, 300% inrush, 40°C, 1 start every 15 minutes. If these start parameters are exceeded, please refer to 290 mm V-Frame, 796A Inside-the-Delta Starter.  
 ⑤ U-Frame 500 Amp unit does not have IEC Certification.  
 ⑥ For more information on optimum performance of the 1000A Frame Size V Inside-the-Delta S801, see Appendix C of MN03902009E.

## Type S801, Intelligent Technologies (IT.) Soft Starters

### Inside-the-Delta Standard Duty Ratings

Table 8. 15 Second Ramp, 4 Starts per Hour, 300% Current Limit @ 50°C Ambient

Max. Continuous Motor Line Current	Three-Phase Motor											Catalog Number	Price U.S. \$
	kW Rating (50 Hertz)			hp Rating (60 Hertz)									
	230	380 – 400	440	200V		230V		460V		575V			
	Volt	Volt	Volt	1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF		
<b>Frame Size N</b>													
58	9	15	18.5	15	10	15	15	40	30	50	40	S801N37N3D	2,225.
108	15	30	33	30	25	30	30	60	60	100	75	S801N66N3D	3,210.
<b>Frame Size R</b>													
164	25	45	55	50	40	50	50	125	100	125	125	S801R10N3D	4,675.
206	33	63	63	60	50	60	60	125	125	150	150	S801R13N3D	5,530.
<b>Frame Size T</b>													
257	45	80	90	75	60	75	75	150	150	250	200	S801T18N3D	5,850.
365	63	110	132	100	100	125	100	250	250	300	250	S801T24N3D	6,190.
477	80	147	160	125	125	150	125	300	300	400	400	S801T30N3D	6,550.
<b>Frame Size U</b>													
554	90	160	185	150	125	200	150	400	300	450	400	S801U36N3D	7,170.
646	110	200	220	200	150	250	200	450	400	550	450	S801U42N3D	7,230.
796	140	250	280	250	200	250	250	550	450	700	600	S801U50N3D ①	9,070.
<b>Frame Size V</b>													
554	90	160	185	150	125	200	150	400	300	450	400	S801V36N3D	7,520.
646	110	200	220	200	150	250	200	450	400	550	450	S801V42N3D	8,410.
796	140	250	280	250	200	250	250	550	450	700	600	S801V50N3D	9,410.
1055	185	315	375	400	250	300	300	750	700	900	750	S801V65N3D	10,570.
1176	200	375	445	—	—	—	—	—	—	—	—	S801V72N3D	12,150.
1358	257	450	500	—	—	—	—	—	—	—	—	S801V85N3D	14,710.
—	—	—	—	—	—	—	—	—	—	—	—	S801V10N3D ②	24,830.

① U-Frame 500 Amp unit does not have IEC Certification.

② For more information on optimum performance of the 1000A Frame Size V Inside-the-Delta S801, see Appendix C of MN03902009E.

Table 9. 50 Second Ramp, 2 Starts per Hour, 300% Current Limit @ 50°C Ambient

Max. Continuous Motor Line Current	Three-Phase Motor											Catalog Number	Price U.S. \$
	kW Rating (50 Hertz)			hp Rating (60 Hertz)									
	230	380 – 400	440	200V		230V		460V		575V			
	Volt	Volt	Volt	1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF		
<b>Frame Size N</b>													
36	5.5	10	11	7-1/2	7-1/2	7-1/2	7-1/2	25	15	25	25	S801N37N3D	2,225.
73	11	18.5	22	15	15	25	15	50	40	60	50	S801N66N3D	3,210.
<b>Frame Size R</b>													
103	15	30	33	25	25	30	25	60	60	75	75	S801R10N3D	4,675.
138	22	40	45	40	30	50	40	100	75	125	100	S801R13N3D	5,530.
<b>Frame Size T</b>													
199	33	59	63	50	50	60	50	125	125	150	150	S801T18N3D	5,850.
257	45	80	90	75	60	75	75	150	150	250	200	S801T24N3D	6,190.
324	55	100	110	100	75	100	100	250	200	300	250	S801T30N3D	6,550.
<b>Frame Size U</b>													
485	80	150	160	125	125	150	125	300	300	400	400	S801U36N3D	7,170.
580	100	180	200	150	150	200	150	400	300	550	450	S801U42N3D	7,230.
646	110	200	220	200	150	250	200	450	400	550	450	S801U50N3D ③	9,070.
<b>Frame Size V</b>													
485	80	150	160	125	125	150	125	300	300	400	400	S801V36N3D	7,520.
580	100	180	200	150	150	200	150	400	300	550	450	S801V42N3D	8,410.
646	110	200	220	200	150	250	200	450	400	550	450	S801V50N3D	9,410.
727	129	220	257	250	200	250	250	550	500	700	550	S801V65N3D	10,570.
816	147	257	295	250	250	300	250	600	550	750	700	S801V72N3D	12,150.
1021	180	315	375	300	250	300	300	750	600	900	750	S801V85N3D	14,710.
—	—	—	—	—	—	—	—	—	—	—	—	S801V10N3D ④	24,830.

③ U-Frame 500 Amp unit does not have IEC Certification.

④ For more information on optimum performance of the 1000A Frame Size V Inside-the-Delta S801, see Appendix C of MN03902009E.

Discount Symbol ..... 1CD1

**Inside-the-Delta Standard Duty Ratings**

**Table 10. 15 Second Ramp, 4 Starts per Hour, 450% Current Limit @ 40°C Ambient**

Max. Continuous Motor Line Current	Three-Phase Motor											Catalog Number	Price U.S. \$
	kW Rating (50 Hertz)			hp Rating (60 Hertz)									
	230	380 – 400	440	200V		230V		460V		575V			
	Volt	Volt	Volt	1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF		
<b>Frame Size N</b>													
47	7.5	12.5	15	10	10	15	10	30	25	40	30	S801N37N3D	2,225.
83	12.5	22	25	25	15	25	25	50	50	60	60	S801N66N3D	3,210.
<b>Frame Size R</b>													
126	18.5	37	40	30	30	40	30	75	60	100	100	S801R10N3D	4,675.
162	25	45	55	50	40	50	50	100	100	125	125	S801R13N3D	5,530.
<b>Frame Size T</b>													
266	45	80	90	75	60	100	75	150	150	250	200	S801T18N3D	5,850.
379	63	110	132	100	100	125	100	250	250	300	250	S801T24N3D	6,190.
485	80	150	160	125	125	150	125	300	300	400	400	S801T30N3D	6,550.
<b>Frame Size U</b>													
580	100	185	200	150	150	200	150	400	300	550	450	S801U36N3D	7,170.
695	110	200	250	200	150	250	200	450	400	600	550	S801U42N3D	7,230.
798	140	250	280	250	200	250	250	550	450	700	600	S801U50N3D <sup>①</sup>	9,070.
<b>Frame Size V</b>													
580	100	185	200	150	150	200	150	400	300	550	450	S801V36N3D	7,520.
695	110	200	250	200	150	250	200	450	400	600	550	S801V42N3D	8,410.
798	140	250	280	250	200	250	250	550	450	700	600	S801V50N3D	9,410.
908	160	280	335	250	250	300	250	700	550	750	700	S801V65N3D	10,570.
1021	—	—	—	—	—	—	—	—	—	—	—	S801V72N3D	12,150.
1125	—	—	—	—	—	—	—	—	—	—	—	S801V85N3D	14,710.

① U-Frame 500 Amp unit does not have IEC Certification.

**Table 11. 30 Second Ramp, 4 Starts per Hour, 450% Current Limit @ 40°C Ambient**

Max. Continuous Motor Line Current	Three-Phase Motor											Catalog Number	Price U.S. \$
	kW Rating (50 Hertz)			hp Rating (60 Hertz)									
	230	380 – 400	440	200V		230V		460V		575V			
	Volt	Volt	Volt	1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF		
<b>Frame Size N</b>													
36	5.5	10	12.5	7-1/2	7-1/2	7-1/2	7-1/2	25	15	25	25	S801N37N3D	2,225.
69	11	18.5	22	15	15	15	15	50	40	50	50	S801N66N3D	3,210.
<b>Frame Size R</b>													
96	15	25	30	25	25	30	25	60	50	75	60	S801R10N3D	4,675.
130	22	37	45	30	30	40	30	75	75	100	100	S801R13N3D	5,530.
<b>Frame Size T</b>													
257	45	80	90	75	60	75	75	150	150	250	200	S801T18N3D	5,850.
365	63	110	132	100	100	125	100	250	250	300	250	S801T24N3D	6,190.
448	80	140	160	125	125	150	125	300	250	400	300	S801T30N3D	6,550.
<b>Frame Size U</b>													
503	90	160	185	150	125	150	150	300	300	450	400	S801U36N3D	7,170.
580	100	180	200	150	150	200	150	400	300	550	450	S801U42N3D	7,230.
646	110	200	220	200	150	250	200	450	400	550	450	S801U50N3D <sup>②</sup>	9,070.
<b>Frame Size V</b>													
503	90	160	185	150	125	150	150	300	300	450	400	S801V36N3D	7,520.
580	100	180	200	150	150	200	150	400	300	550	450	S801V42N3D	8,410.
646	110	200	220	200	150	250	200	450	400	550	450	S801V50N3D	9,410.
727	129	220	257	250	200	250	250	550	450	700	550	S801V65N3D	10,570.
796	—	—	—	—	—	—	—	—	—	—	—	S801V72N3D	12,150.
865	—	—	—	—	—	—	—	—	—	—	—	S801V85N3D	14,710.

② U-Frame 500 Amp unit does not have IEC Certification.



**Type S801, Intelligent Technologies (IT) Soft Starters**

**Inside-the-Delta Severe Duty Ratings**

Severe Duty Ratings are defined as any combination of parameters that exceed the Standard Duty Ratings where the ramp time is over 30 seconds, the number of starts per hour exceeds 4, or the current limit set is over 300%.

Example: 35-Second Ramp, 5 Starts per Hour 350% Current Limit @ 40°C Ambient.

**Table 12. Severe Duty Inside-the-Delta Ratings**

Max. Continuous Motor Line Current	Three-Phase Motor											Catalog Number	Price U.S. \$	
	kW Rating (50 Hertz)			hp Rating (60 Hertz)										
	230	380 – 400	440	200V		230V		460V		575V				
	Volt	Volt	Volt	1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF	1.0SF	1.15SF			
<b>Frame Size N</b>														
39	5.5	10	11	7-1/2	7-1/2	10	7-1/2	25	15	30	25	S801N37N3D S801N66N3D	2,225.	
73	11	18.5	22	15	15	25	15	50	40	60	50		3,210.	
<b>Frame Size R</b>														
111	15	30	33	25	25	30	25	75	60	75	75	S801R10N3D S801R13N3D	4,675.	
138	22	40	45	40	30	50	40	100	75	120	100		5,530.	
<b>Frame Size T</b>														
199	33	59	63	50	50	60	50	125	125	150	150	S801T18N3D S801T24N3D S801T30N3D	5,850.	
257	45	80	90	75	60	75	75	150	150	250	200		6,190.	
324	55	100	110	100	75	100	100	250	200	300	250		6,550.	
<b>Frame Size U</b>														
415	75	110	147	125	100	125	125	300	250	300	300	S801U36N3D S801U42N3D S801U50N3D ①	7,170.	
526	90	160	185	150	120	150	150	400	300	450	400		7,230.	
623	110	185	220	200	150	250	200	450	400	550	450		9,070.	
<b>Frame Size V</b>														
415	75	110	147	125	100	125	125	300	250	300	300	S801V36N3D S801V42N3D S801V50N3D S801V65N3D S801V72N3D S801V72N3D S801V85N3D S801V10N3D ②	7,520.	
526	90	160	185	150	120	150	150	400	300	450	400		8,410.	
623	110	185	220	200	150	250	200	450	400	550	450		9,410.	
727	129	220	257	250	200	250	250	550	450	700	550		10,570.	
816	147	257	295	250	250	300	250	600	550	750	700		12,150.	
908	160	280	335	250	250	300	250	700	550	750	700		14,710.	
—	—	—	—	—	—	—	—	—	—	—	—		—	24,830.

① U-Frame 500 Amp unit does not have IEC Certification.

② For more information on optimum performance of the 1000A Frame Size V Inside-the-Delta S801, see Appendix C of MN03902009E.