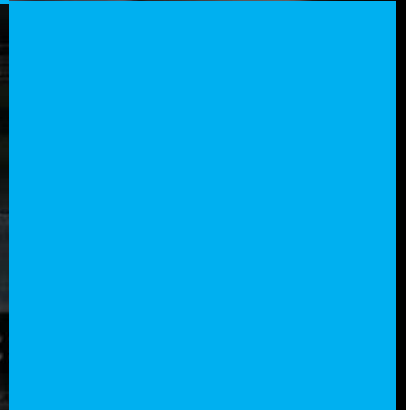
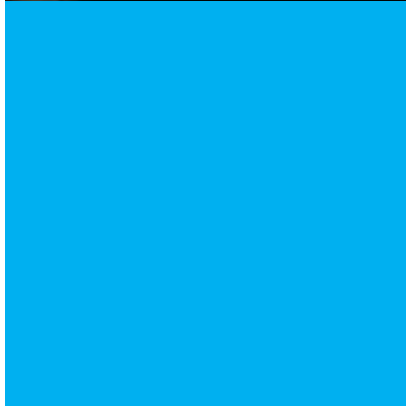


# Price Guide



RIGHT FROM  
THE START





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## Low Voltage Soft Starters

**Standard Product** - available from stock or order online

SSX3 Series - Fully featured digital soft starter

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# SSX3 Series

## Fully featured digital soft starter

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All SSX3 chassis units are available to ship immediately from our Houston warehouse. Contact us Toll Free @ 1.844.279.8295 or for Local Factory Support 832.243.5372 Fax 832.569.5645 / [factoryassistance@spikeelectric.com](mailto:factoryassistance@spikeelectric.com)

# SSX3 Series

## Chassis units

### Specifications

#### General

Current range ..... 23 A ~ 1600 A (nominal)  
 Motor connection ..... In-line or inside delta  
 Bypass ..... Integrated internal or external

#### Supply

##### Mains voltage

SSX3-xxxx-V4 ..... 200 VAC ~ 440 VAC (±10%)  
 SSX3-xxxx-V7 ..... 380 VAC ~ 690 VAC (±10%)

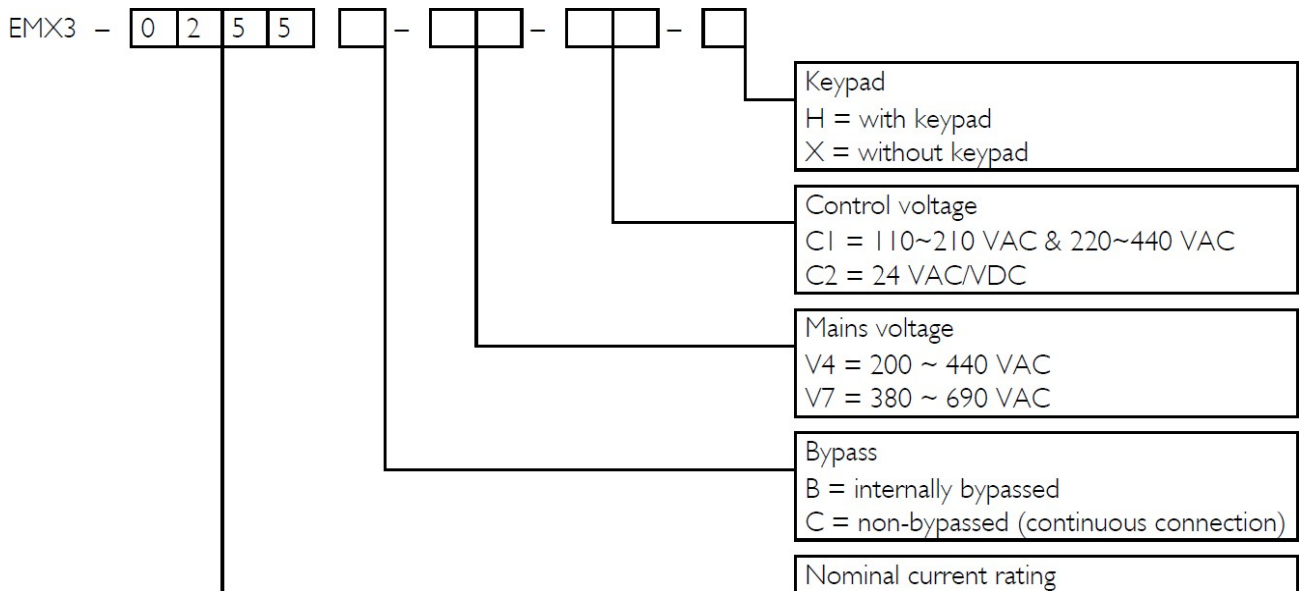
##### Control voltage (A1, A2, A3)

C1 ..... 110 ~ 210 VAC (+10% / -15%)  
 ..... or 220 ~ 440 VAC (+10% / -15%)

C2 ..... 24 VAC / 24 VDC (±20%)

Mains frequency ..... 45 Hz to 66 Hz

### Part Number





# SSX3 Series

## Chassis units with built-in bypass and motor overload

Part Number	Light Duty		Standard Duty		Heavy Duty		Dimensions (inches)			Weight (lbs)	Price
	HP	Max amps	HP	Max amps	HP	Max amps	H	W	D		
	SSX3-0023B-V4-C1-H	7.5	23	7.5	21	5	16	11.7	6.2		
SSX3-0043B-V4-C1-H	15	43	10	39	10	29	11.7	6.2	7.6	10	\$1,350
SSX3-0050B-V4-C1-H	---	50	15	46	---	35	11.7	6.2	7.6	10	\$1,395
SSX3-0053B-V4-C1-H	20	53	20	53	15	45	11.7	6.2	7.6	10	\$1,458
SSX3-0076B-V4-C1-H	25	76	25	65	---	46	11.7	6.2	8.8	10	\$1,490
SSX3-0097B-V4-C1-H	30	97	30	79	20	58	11.7	6.2	8.8	11	\$1,790
SSX3-0100B-V4-C1-H	---	100	---	84	---	65	11.7	6.2	8.8	11	\$2,002
SSX3-0105B-V4-C1-H	40	105	40	105	30	79	11.7	6.2	8.8	11	\$2,225
SSX3-0145B-V4-C1-H	50	145	---	124	---	90	17.3	11.2	9.9	31	\$2,510
SSX3-0170B-V4-C1-H	60	170	50	141	40	110	17.3	11.2	9.9	32	\$2,620
SSX3-0200B-V4-C1-H	75	200	60	159	50	135	17.3	11.2	9.9	34	\$2,900
SSX3-0220B-V4-C1-H	---	220	---	180	---	156	17.3	11.2	9.9	34	\$3,878
SSX3-0255B-V4-C1-H	100	255	75	205	60	180	17.4	16.7	11.8	58	\$4,331
SSX3-0350B-V4-C1-H	125	360	100	302	75	240	17.4	16.7	11.8	65	\$4,815
SSX3-0425B-V4-C1-H	150	425	150	360	100	302	17.4	16.7	11.8	65	\$5,589
SSX3-0500B-V4-C1-H	200	515	---	384	125	324	25.2	17.1	11.7	111	\$5,850
SSX3-0580B-V4-C1-H	---	590	---	426	150	360	25.2	17.1	11.7	111	\$6,090
SSX3-0700B-V4-C1-H	250	700	200	515	---	431	25.2	17.1	11.7	140	\$6,689
SSX3-0820B-V4-C1-H	300	820	250	605	200	509	25.2	17.1	11.7	140	\$7,972
SSX3-0920B-V4-C1-H	350	920	---	673	---	590	25.2	17.1	11.7	142	\$8,990
SSX3-1000B-V4-C1-H	400	1000	300	783	250	720	25.2	17.1	11.7	142	\$9,161

## Chassis units with motor overload, non-bypassed, continuous duty

SSX3-0255C-V4-C1-H	100	242	75	220	60	160	18.2	15.4	11.0	51	\$3,580
SSX3-0360C-V4-C1-H	150	360	100	302	100	242	27.2	17.0	11.9	80	\$3,700
SSX3-0380C-V4-C1-H	---	380	125	341	---	272	27.2	17.0	11.9	80	\$3,725
SSX3-0430C-V4-C1-H	---	430	150	360	---	302	27.2	17.0	11.9	80	\$4,764
SSX3-0620C-V4-C1-H	250	620	200	493	150	394	27.2	17.0	11.9	88	\$5,888
SSX3-0650C-V4-C1-H	---	650	---	515	---	414	27.2	17.0	11.9	88	\$6,688
SSX3-0790C-V4-C1-H	300	790	250	661	200	527	27.2	17.0	11.9	88	\$7,571
SSX3-0930C-V4-C1-H	350	930	300	751	250	597	27.2	17.0	11.9	114	\$8,015
SSX3-1200C-V4-C1-H	500	1200	450	1148	350	932	33.8	22.6	14.3	284	\$12,299
SSX3-1410C-V4-C1-H	---	1410	500	1200	400	979	33.8	22.6	14.3	287	\$14,990
SSX3-1600C-V4-C1-H	600	1600	600	1444	450	1181	33.8	22.6	14.3	309	\$17,750



# SSX3 Series

## Chassis units with built-in bypass and motor overload

### 460 VAC

Part Number	Light Duty		Standard Duty		Heavy Duty		Dimensions (inches)			Weight (lbs)	Price
	HP	Max amps	HP	Max amps	HP	Max amps	H	W	D		
SSX3-0023B-V7-C1-H	15	23	15	21	10	16	11.7	6.2	7.6	10	\$1,300
SSX3-0043B-V7-C1-H	30	43	25	39	20	29	11.7	6.2	7.6	10	\$1,350
SSX3-0050B-V7-C1-H	---	50	30	46	25	35	11.7	6.2	7.6	10	\$1,395
SSX3-0053B-V7-C1-H	40	53	40	53	30	45	11.7	6.2	7.6	10	\$1,458
SSX3-0076B-V7-C1-H	60	76	50	65	---	46	11.7	6.2	8.8	10	\$1,490
SSX3-0097B-V7-C1-H	75	97	60	79	40	58	11.7	6.2	8.8	11	\$1,790
SSX3-0100B-V7-C1-H	---	100	---	84	50	65	11.7	6.2	8.8	11	\$2,002
SSX3-0105B-V7-C1-H	---	105	75	105	60	79	11.7	6.2	8.8	11	\$2,225
SSX3-0145B-V7-C1-H	100	145	100	124	---	90	17.3	11.2	9.9	31	\$2,510
SSX3-0170B-V7-C1-H	125	170	---	141	75	110	17.3	11.2	9.9	32	\$2,630
SSX3-0200B-V7-C1-H	150	200	125	159	100	135	17.3	11.2	9.9	34	\$2,900
SSX3-0220B-V7-C1-H	---	220	150	180	125	156	17.3	11.2	9.9	34	\$3,878
SSX3-0255B-V7-C1-H	200	255	---	205	150	180	17.4	16.7	11.8	58	\$4,331
SSX3-0350B-V7-C1-H	300	360	250	302	200	240	17.4	16.7	11.8	65	\$4,815
SSX3-0425B-V7-C1-H	350	425	300	360	250	302	17.4	16.7	11.8	65	\$5,589
SSX3-0500B-V7-C1-H	450	515	---	384	---	324	25.2	17.1	11.7	111	\$5,850
SSX3-0580B-V7-C1-H	500	590	350	426	300	360	25.2	17.1	11.7	111	\$6,090
SSX3-0700B-V7-C1-H	---	700	400	515	350	431	25.2	17.1	11.7	140	\$6,689
SSX3-0820B-V7-C1-H	600	820	500	605	400	509	25.2	17.1	11.7	140	\$7,972
SSX3-0920B-V7-C1-H	700	920	---	673	500	590	25.2	17.1	11.7	142	\$8,990
SSX3-1000B-V7-C1-H	800	1000	600	783	600	720	25.2	17.1	11.7	142	\$9,161

## Chassis units with motor overload, non-bypassed, continuous duty

SSX3-0255C-V7-C1-H	200	242	150	220	125	160	18.2	15.4	11.0	51	\$3,580
SSX3-0360C-V7-C1-H	300	360	250	302	200	242	27.2	17.0	11.9	80	\$3,700
SSX3-0380C-V7-C1-H	---	380	---	341	---	272	27.2	17.0	11.9	80	\$3,725
SSX3-0430C-V7-C1-H	350	430	300	360	250	302	27.2	17.0	11.9	80	\$4,764
SSX3-0620C-V7-C1-H	500	620	400	493	300	394	27.2	17.0	11.9	88	\$5,888
SSX3-0650C-V7-C1-H	---	650	450	515	350	414	27.2	17.0	11.9	88	\$6,688
SSX3-0790C-V7-C1-H	600	790	500	661	450	527	27.2	17.0	11.9	88	\$7,571
SSX3-0930C-V7-C1-H	700	930	600	751	500	597	27.2	17.0	11.9	114	\$8,015
SSX3-1200C-V7-C1-H	1000	1200	900	1148	800	932	33.8	22.6	14.3	284	\$12,299
SSX3-1410C-V7-C1-H	1100	1410	1000	1200	900	979	33.8	22.6	14.3	287	\$14,990
SSX3-1600C-V7-C1-H	1300	1600	1200	1444	1000	1181	33.8	22.6	14.3	309	\$17,750



# SSX3 Series

## Chassis units with built-in bypass and motor overload

Part Number	Light Duty		Standard Duty		Heavy Duty		Dimensions (inches)			Weight (lbs)	Price
	HP	Max amps	HP	Max amps	HP	Max amps	H	W	D		
	SSX3-0023B-V7-C1-H	20	23	20	21	15	16	11.7	6.2		
SSX3-0043B-V7-C1-H	40	43	30	39	25	29	11.7	6.2	7.6	10	\$1,350
SSX3-0050B-V7-C1-H	---	50	40	46	30	35	11.7	6.2	7.6	10	\$1,395
SSX3-0053B-V7-C1-H	50	53	50	53	40	45	11.7	6.2	7.6	10	\$1,458
SSX3-0076B-V7-C1-H	75	76	60	65	---	46	11.7	6.2	8.8	10	\$1,490
SSX3-0097B-V7-C1-H	---	97	75	79	50	58	11.7	6.2	8.8	11	\$1,790
SSX3-0100B-V7-C1-H	100	100	---	84	60	65	11.7	6.2	8.8	11	\$2,002
SSX3-0105B-V7-C1-H	---	105	100	105	75	79	11.7	6.2	8.8	11	\$2,225
SSX3-0145B-V7-C1-H	150	145	125	124	---	90	17.3	11.2	9.9	31	\$2,510
SSX3-0170B-V7-C1-H	---	170	150	141	100	110	17.3	11.2	9.9	32	\$2,620
SSX3-0200B-V7-C1-H	200	200	---	159	125	135	17.3	11.2	9.9	34	\$2,900
SSX3-0220B-V7-C1-H	---	220	---	180	150	156	17.3	11.2	9.9	34	\$3,878
SSX3-0255B-V7-C1-H	250	255	200	205	---	180	17.4	16.7	11.8	58	\$4,331
SSX3-0350B-V7-C1-H	350	360	300	302	200	240	17.4	16.7	11.8	65	\$4,815
SSX3-0425B-V7-C1-H	450	425	350	360	300	302	17.4	16.7	11.8	65	\$5,589
SSX3-0500B-V7-C1-H	500	515	400	384	---	324	25.2	17.1	11.7	111	\$5,850
SSX3-0580B-V7-C1-H	600	590	450	426	350	360	25.2	17.1	11.7	111	\$6,090
SSX3-0700B-V7-C1-H	700	700	500	515	450	431	25.2	17.1	11.7	140	\$6,689
SSX3-0820B-V7-C1-H	800	820	600	605	500	509	25.2	17.1	11.7	140	\$7,972
SSX3-0920B-V7-C1-H	900	920	700	673	---	590	25.2	17.1	11.7	142	\$8,990
SSX3-1000B-V7-C1-H	1000	1000	800	783	600	720	25.2	17.1	11.7	142	\$9,161

## Chassis units with motor overload, non-bypassed, continuous duty

SSX3-0255C-V7-C1-H	250	242	200	220	150	160	18.2	15.4	11.0	51	\$3,580
SSX3-0360C-V7-C1-H	350	360	300	302	250	242	27.2	17.0	11.9	80	\$3,700
SSX3-0380C-V7-C1-H	400	380	350	341	---	272	27.2	17.0	11.9	80	\$3,725
SSX3-0430C-V7-C1-H	450	430	---	360	300	302	27.2	17.0	11.9	80	\$4,764
SSX3-0620C-V7-C1-H	600	620	500	493	400	394	27.2	17.0	11.9	88	\$5,888
SSX3-0650C-V7-C1-H	---	650	---	515	450	414	27.2	17.0	11.9	88	\$6,688
SSX3-0790C-V7-C1-H	800	790	600	661	---	527	27.2	17.0	11.9	88	\$7,571
SSX3-0930C-V7-C1-H	---	930	700	751	600	597	27.2	17.0	11.9	114	\$8,015
SSX3-1200C-V7-C1-H	1200	1200	1100	1148	900	932	33.8	22.6	14.3	284	\$12,299
SSX3-1410C-V7-C1-H	1400	1410	1200	1200	1000	979	33.8	22.6	14.3	287	\$14,990
SSX3-1600C-V7-C1-H	1500	1600	1500	1444	1200	1181	33.8	22.6	14.3	309	\$17,750





# Accessories

Enhance your SSX3

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## Remote keypads for control and monitoring

995-04938-00	SSX3 Keypad	\$280
995-08133-00	SSX3 Keypad Mounting Kit (3m)	\$50
995-04803-00	SSX3 I/O Expansion Card	\$193
995-04804-00	SSX3 RTD/Ground Fault Expansion Card	\$273

## Communication interfaces for network integration

PIM-DN-01	DeviceNet Interface	\$275
PIM-MB-01	Modbus Interface	\$190
PIM-PB-01	Profibus Interface	\$350
PIM-USB-01	USB Interface	\$175
PIM-MT-01	Modbus TCP Interface	\$650
PIM-PN-01	Profinet Interface	\$800
PIM-EI-01	Ethernet IP Interface	\$708

## IP20 Fingerguards for personnel safety

995-06348-00	Fingerguard Kit, SSX3 0145B-0220B	\$289
995-14549-00	Fingerguard Kit, SSX3 0255B-0425B	\$489
995-14788-00	Fingerguard Kit, SSX3 0500B-1000B	\$870

Communication Interfaces



Fingerguards



Expansion cards



# SSX3 - Standard Combinations

## NEMA 12 - Standard Duty

Includes:

- SSX3 internally bypassed starter
- NEMA 12 enclosure
- circuit breaker with rotary handle
- control power transformer



## NEMA 12 - Heavy Duty

Includes:

- SSX3 soft starter
- NEMA 12 enclosure
- line rated bypass contactor
- circuit breaker with flange handle
- control power transformer
- SS/Off/ATL switch
- door-mounted keypad
- pushbuttons (start/stop/reset)
- indicator lights (run/power on/fault)
- electronic overload class 1-30
- service entrance rated



## NEMA 3R Package - Heavy Duty

Same as NEMA 12 heavy duty combo, but also includes:

- NEMA 3R enclosure
- space heater with thermostat



Additional options can be added if required (see page 21 for all available options), and custom packages can be configured for other rating requirements - see the Custom Packages section on page 14.



# SSX3 NEMA Combination Starters

## NEMA 12 - Standard Duty

Part Number	Horsepower			Max amps	CB rating (amps)	Dimensions (inches)			Weight (lbs)	List Price*
	240V	480V	575V			H	W	D		
SSX3-0065B-4-SD-N12-CB-0-0	25	50	60	65	100	24	20	12	170	\$4,180
SSX3-0096B-4-SD-N12-CB-0-0	30	75	100	96	150	24	20	12	175	\$4,550
SSX3-0125B-4-SD-N12-CB-0-0	50	100	125	125	200	30	24	12	200	\$5,188
SSX3-0180B-4-SD-N12-CB-0-0	60	150	150	180	300	30	24	12	210	\$6,298
SSX3-0240B-4-SD-N12-CB-0-0	75	200	200	240	400	48	36	16	250	\$6,650
SSX3-0360B-4-SD-N12-CB-0-0	150	300	350	360	600	48	36	16	260	\$8,289
SSX3-0477B-4-SD-N12-CB-0-0	200	400	500	477	800	60	36	16	420	\$10,398

## NEMA 12 - Heavy Duty

Part Number	Horsepower			Max amps	CB rating (amps)	Dimensions (inches)			Weight (lbs)	List Price*
	240V	480V	575V			H	W	D		
SSX3-0065B-4-HD-N12-CB-K-PD	25	50	60	65	100	36	32	12	220	\$5,105
SSX3-0096C-4-HD-N12-CB-K-PD	30	75	100	96	150	48	38	16	275	\$6,344
SSX3-0125C-4-HD-N12-CB-K-PD	50	100	125	125	200	48	38	16	295	\$7,170
SSX3-0180C-4-HD-N12-CB-K-PD	60	150	150	180	300	48	38	16	320	\$7,333
SSX3-0240C-4-HD-N12-CB-K-PD	75	200	200	240	400	48	38	16	335	\$9,411
SSX3-0360C-4-HD-N12-CB-K-PD	150	300	350	360	600	48	38	16	350	\$10,785
SSX3-0477C-4-HD-N12-CB-K-PD	200	400	500	515	800	90	40	18	775	\$13,900
SSX3-0720C-4-HD-N12-CB-K-PD	250	600	600	720	1200	90	40	18	820	\$19,326

## NEMA 3R Package - Heavy Duty

Part Number	Horsepower			Max amps	CB rating (amps)	Dimensions (inches)			Weight (lbs)	List Price*
	240V	480V	575V			H	W	D		
SSX3-0065B-4-HD-N3R-CB-KC-PD	25	50	60	65	100	36	32	12	220	\$5,647
SSX3-0096C-4-HD-N3R-CB-KC-PD	30	75	100	96	150	48	38	16	275	\$6,710
SSX3-0125C-4-HD-N3R-CB-KC-PD	50	100	125	125	150	48	38	16	295	\$7,792
SSX3-0180C-4-HD-N3R-CB-KC-PD	60	150	150	180	300	48	38	16	320	\$9,085
SSX3-0240C-4-HD-N3R-CB-KC-PD	75	200	200	240	400	48	38	16	335	\$10,706
SSX3-0360C-4-HD-N3R-CB-KC-PD	150	300	350	360	600	48	38	16	350	\$12,118
SSX3-0477C-4-HD-N3R-CB-KC-PD	200	400	500	515	800	90	40	18	775	\$16,694
SSX3-0720C-4-HD-N3R-CB-KC-PD	250	600	600	720	1200	90	40	18	820	\$22,400

\* Prices are for 230 VAC or 460 VAC models. For 575 VAC, add 5%.

# CSXi Series

## Cost-effective analog softstarter



### Specifications

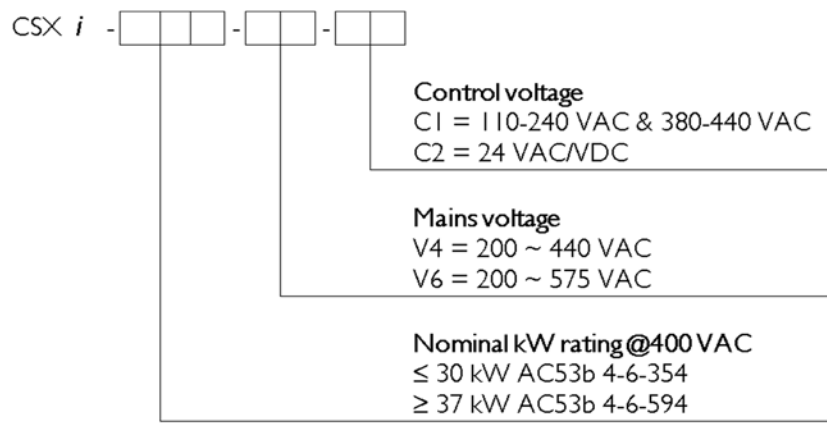
#### General

Current range ..... 18 A ~ 200 A (nominal)  
Motor connection ..... In-line  
Bypass ..... Internal

#### Supply

Mains voltage  
CSXi-xxxx-V4 ..... 3 x 200 VAC ~ 440 VAC (+10% / -15%)  
CSXi-xxxx-V6 ..... 3 x 200 VAC ~ 575 VAC (+10% / -15%)  
Control voltage (A1, A2, A3)  
C1 ..... 110 ~ 240 VAC (+10% / -15%)  
..... or 380 ~ 440 VAC (+10% / -15%)  
C2 ..... 24 VAC / 24 VDC ( $\pm 20\%$ )  
Mains frequency ..... 45 Hz to 66 Hz

#### Part Number



All CSXi chassis units are available for immediate shipping from our Houston warehouse.  
Contact us Toll Free @ 1.844.279.8295 or for Local Factory Support 832.243.5372 Fax 832.569.5645 /  
[factoryassistance@spikeelectric.com](mailto:factoryassistance@spikeelectric.com)



# CSXi Series

## Chassis units with built in-bypass and motor overload

	Standard Duty (HP)			Max amps		Dimensions				Weight (lbs)	Price
	230 VAC	460 VAC	575 VAC	40 °C	50 °C	H	W	D			
CSXi-007-V6-C1	5	10	15	18	17	8.0	3.9	6.5	5.3	6	\$615
CSXi-015-V6-C1	10	25	30	34	32	8.0	3.9	6.5	5.3	6	\$730
CSXi-018-V6-C1	15	30	40	42	40	8.0	3.9	6.5	5.3	6	\$800
CSXi-022-V6-C1	---	---	---	48	44	8.0	3.9	6.5	5.3	6	\$850
CSXi-030-V6-C1	20	40	50	60	55	8.0	3.9	6.5	5.3	6	\$973
CSXi-037-V6-C1	25	50	60	75	68	8.5	5.7	7.6	9.5	10	\$1,380
CSXi-045-V6-C1	30	60	75	85	78	8.5	5.7	7.6	9.5	10	\$1,400
CSXi-055-V6-C1	---	75	100	100	100	8.5	5.7	7.6	9.5	10	\$1,575
CSXi-075-V6-C1	50	100	125	140	133	9.5	8.0	8.4	15.0	15	\$1,980
CSXi-090-V6-C1	60	125	150	170	157	9.5	8.0	8.4	15.0	15	\$2,200
CSXi-110-V6-C1	75	150	200	200	186	9.5	8.0	8.4	15.0	15	\$2,390

Ratings are based on 6 second start time at 400% current limit. For other duty ratings, or for assistance in selecting the correct starter for your application, contact Spike Electric Controls.



# Accessories

## Enhance your CSXi

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### Remote keypads for control and monitoring

PIM-RO-01	CSXi Remote Operator & Interface Kit (complete set)	\$413
PIM-RZ-01	CSXi Remote Operator Interface (does not include keypad)	\$175
RCM01	CSXi Remote Operator (keypad only)	\$305
RCM02	CSXi Remote Operator & PT Kit	\$537

### Communication interfaces for network integration

PIM-DN-01	DeviceNet Interface	\$275
PIM-MB-01	Modbus Interface	\$190
PIM-PB-01	Profibus Interface	\$350
PIM-USB-01	USB Interface	\$175
PIM-MT-01	Modbus TCP Interface	\$650
PIM-PN-01	Profinet Interface	\$800
PIM-EI-01	Ethernet IP Interface	\$708

### IP20 Fingerguards for personnel safety

995-03503-00	Fingerguard Kit, CSXi 075-110	\$209
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Fingerguard Kit



Communication Interfaces



Remote Operator





# CSXi Pump Panel Starters



## Standard enclosed systems

Description	Standard Duty (HP)			Max amps		CB rating (amps)	Dimensions			Weight (lbs)	List Price
	230 VAC	460 VAC	575 VAC	40 °C	50 °C		H	W	D		
CSXi-007-V6-C1-MCB-RS-SS-N3R	5	10	15	18	17	40	20	16	8	39	\$2,838
CSXi-015-V6-C1-MCB-RS-SS-N3R	10	25	30	34	32	60	20	16	8	40	\$3,069
CSXi-018-V6-C1-MCB-RS-SS-N3R	15	30	40	42	40	70	20	16	8	42	\$3,132
CSXi-030-V6-C1-MCB-RS-SS-N3R	20	40	50	60	55	100	20	16	8	43	\$3,286
CSXi-037-V6-C1-MCB-RS-SS-N3R	25	50	60	75	68	125	24	20	10	66	\$3,933
CSXi-045-V6-C1-MCB-RS-SS-N3R	30	60	75	85	78	150	24	20	10	67	\$3,958
CSXi-055-V6-C1-MCB-RS-SS-N3R	---	75	100	100	100	150	24	20	10	75	\$4,177
CSXi-075-V6-C1-MCB-RS-SS-N3R	50	100	125	140	133	200	24	20	10	80	\$4,822
CSXi-090-V6-C1-MCB-RS-SS-N3R	60	125	150	170	157	250	24	20	10	86	\$5,097
CSXi-110-V6-C1-MCB-RS-SS-N3R	75	150	200	200	186	300	24	20	10	88	\$5,397

Note: These codes are for 480 VAC units. For 230 VAC change (4) to (2); for 575 VAC change (4) to (5)

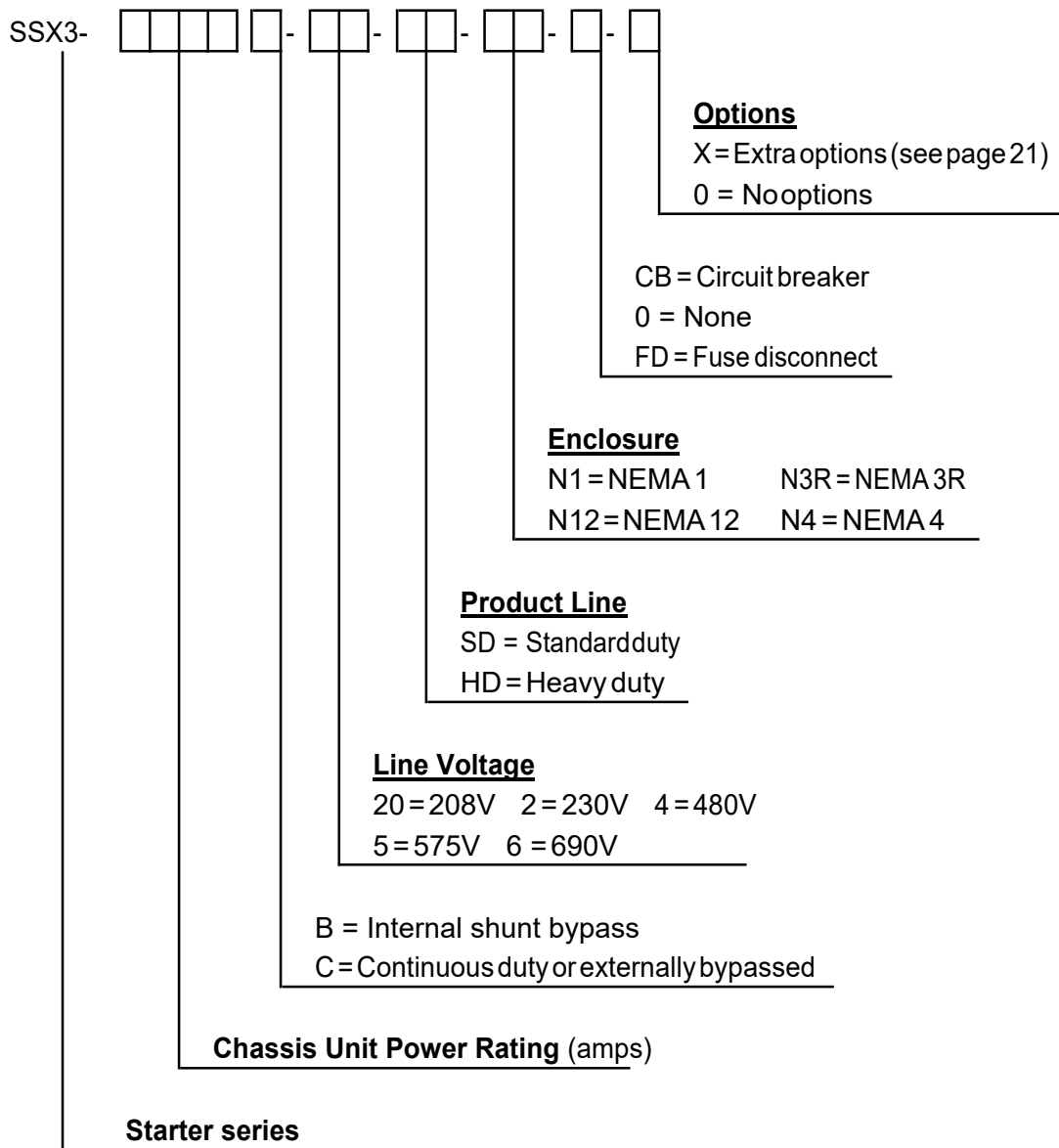
### Standard features:

- NEMA 3R enclosure
- CSXi solid state starter with built-in bypass
- Circuit breaker with door operator (35 kAIC)
- Control power transformer
- Start/Stop Pushbutton, Reset PB

Additional accessories and options can also be added from page 12.

# Custom Engineered Packages

## Engineered Package Builder





# Custom Engineered Packages



We can engineer a complete package with starter, options and accessories to suit your requirements, no matter how complex. All SSX3 starters are available to be built into custom packages, with different enclosure and duty ratings, and a wide selection of accessories and options.

Contact us Toll Free @ 1.844.279.8295 or for Local Factory Support 832.243.5372 Fax 832.569.5645 / [factoryassistance@spikeelectric.com](mailto:factoryassistance@spikeelectric.com) to discuss how we can deliver to your requirements.

# NEMA 12 Engineered Package

## Standard duty non-combostarter

Part Number	Horsepower			Max amps	Dimensions			Weight Lbs.	Base Price*
	240V	480V	575V*		H	W	D		
SSX3-0021B-x-SD-N12-0-x	7.5	15	20	21	24	20	12	140	\$2,660
SSX3-0034B-x-SD-N12-0-x	10	25	30	34	24	20	12	140	\$2,701
SSX3-0040B-x-SD-N12-0-x	15	30	40	40	24	20	12	140	\$2,720
SSX3-0052B-x-SD-N12-0-x	20	40	50	52	24	20	12	140	\$2,801
SSX3-0065B-x-SD-N12-0-x	25	50	60	65	24	20	12	160	\$3,618
SSX3-0077B-x-SD-N12-0-x	30	60	75	77	24	20	12	160	\$4,044
SSX3-0096B-x-SD-N12-0-x	40	75	100	96	24	20	12	160	\$4,488
SSX3-0125B-x-SD-N12-0-x	---	100	125	125	30	24	12	180	\$4,722
SSX3-0141B-x-SD-N12-0-x	50	---	150	141	30	24	12	180	\$4,901
SSX3-0156B-x-SD-N12-0-x	60	125	---	156	30	24	12	180	\$4,999
SSX3-0180B-x-SD-N12-0-x	---	150	---	180	30	24	12	180	\$5,065
SSX3-0205B-x-SD-N12-0-x	75		200	205	48	36	16	220	\$5,196
SSX3-0240B-x-SD-N12-0-x	---	200	250	240	48	36	16	220	\$5,220
SSX3-0302B-x-SD-N12-0-x	100	250	300	302	48	36	16	220	\$5,780
SSX3-0360B-x-SD-N12-0-x	150	300	350	360	48	36	16	220	\$6,060
SSX3-0384B-x-SD-N12-0-x	---	---	400	384	48	36	16	275	\$7,901
SSX3-0414B-x-SD-N12-0-x	---	350	450	414	48	36	16	275	\$7,988
SSX3-0477B-x-SD-N12-0-x	---	400	---	477	60	36	16	390	\$8,344
SSX3-0515B-x-SD-N12-0-x	200	450	500	515	60	36	16	390	\$10,508
SSX3-0590B-x-SD-N12-0-x	250	500	600	590	72	36	18	475	\$10,550
SSX3-0673B-x-SD-N12-0-x	---	---	700	673	72	36	18	475	\$12,001
SSX3-0720B-x-SD-N12-0-x	300	600	---	720	72	36	18	475	\$12,500

### Includes:

NEMA 12 enclosure

SSX3 solid state starter w/shunt rated bypass

Control power transformer

Configure the part number with the voltage required (page 14) and any additional options (page 21).

\* Base prices are for 230 VAC or 460 VAC with options as listed. For 575 VAC, add 5%.

# NEMA 12 Engineered Package

## Standard duty combo starter with circuit breaker

Part Number	Horsepower			Max amps	CB rating (amps)	Dimensions			Weight Lbs.	Base Price*
	240V	480V	575V*			H	W	D		
SSX3-0021B-x-SD-N12-CB-x	7.5	15	20	21	40	24	20	12	150	\$3,101
SSX3-0034B-x-SD-N12-CB-x	10	25	30	34	60	24	20	12	150	\$3,134
SSX3-0040B-x-SD-N12-CB-x	15	30	40	40	70	24	20	12	150	\$3,176
SSX3-0052B-x-SD-N12-CB-x	20	40	50	52	90	24	20	12	150	\$3,197
SSX3-0065B-x-SD-N12-CB-x	25	50	60	65	100	24	20	12	170	\$4,330
SSX3-0077B-x-SD-N12-CB-x	30	60	75	77	125	24	20	12	170	\$4,394
SSX3-0096B-x-SD-N12-CB-x	40	75	100	96	150	24	20	12	175	\$4,700
SSX3-0125B-x-SD-N12-CB-x	---	100	125	125	200	30	24	12	200	\$5,338
SSX3-0141B-x-SD-N12-CB-x	50	---	150	141	225	30	24	12	200	\$5,880
SSX3-0156B-x-SD-N12-CB-x	60	125	---	156	250	30	24	12	210	\$6,250
SSX3-0180B-x-SD-N12-CB-x	---	150	---	180	300	30	24	12	210	\$6,448
SSX3-0205B-x-SD-N12-CB-x	75	---	200	205	250	48	36	16	250	\$6,590
SSX3-0240B-x-SD-N12-CB-x	---	200	250	240	400	48	36	16	250	\$6,950
SSX3-0302B-x-SD-N12-CB-x	100	250	300	302	500	48	36	16	250	\$7,500
SSX3-0360B-x-SD-N12-CB-x	150	300	350	360	600	48	36	16	260	\$8,589
SSX3-0384B-x-SD-N12-CB-x	---	---	400	384	600	48	36	16	300	\$8,807
SSX3-0414B-x-SD-N12-CB-x	---	350	450	414	700	48	36	16	300	\$9,890
SSX3-0477B-x-SD-N12-CB-x	---	400	---	477	800	60	36	16	420	\$10,698
SSX3-0515B-x-SD-N12-CB-x	200	450	500	515	800	60	36	16	420	\$13,772
SSX3-0590B-x-SD-N12-CB-x	250	500	600	590	1200	72	36	18	500	\$14,602
SSX3-0673B-x-SD-N12-CB-x	---	---	700	673	1200	72	36	18	500	\$14,900
SSX3-0720B-x-SD-N12-CB-x	300	600	---	720	1200	72	36	18	500	\$16,275



### Includes:

- NEMA 12 enclosure
- Circuit breaker w/rotary handle
- SSX3 solid state starter w/shunt rated bypass
- Control power transformer

Configure the part number with the voltage required (page 14) and any additional options (page 21).

\* Base prices are for 230 VAC or 460 VAC with options as listed. For 575 VAC, add 5%.

# NEMA 12 Engineered Package

## Heavy duty non-combostarter

Part Number	Horsepower			Max amps	Dimensions			Weight Lbs.	Base Price*
	240V	480V	575V*		H	W	D		
SSX3-0014B-x-HD-N12-0-x	5	10	15	14	36	30	12	180	\$3,990
SSX3-0027B-x-HD-N12-0-x	10	20	25	27	36	30	12	180	\$4,025
SSX3-0034B-x-HD-N12-0-x	---	25	30	34	36	30	12	180	\$4,075
SSX3-0040B-x-HD-N12-0-x	15	30	40	40	36	30	12	180	\$4,100
SSX3-0052B-x-HD-N12-0-x	20	40	50	52	36	30	12	180	\$4,150
SSX3-0065B-x-HD-N12-0-x	25	50	60	65	36	30	12	200	\$4,656
SSX3-0077B-x-HD-N12-0-x	30	60	75	77	36	30	12	200	\$5,210
SSX3-0096C-x-HD-N12-0-x	40	75	100	96	48	36	16	250	\$5,344
SSX3-0125C-x-HD-N12-0-x	50	100	125	125	48	36	16	250	\$6,009
SSX3-0156C-x-HD-N12-0-x	60	125	150	156	48	36	16	250	\$6,150
SSX3-0180C-x-HD-N12-0-x	---	150	---	180	48	36	16	250	\$6,280
SSX3-0240C-x-HD-N12-0-x	100	200	250	240	48	36	16	275	\$8,315
SSX3-0302C-x-HD-N12-0-x	---	250	300	302	48	36	16	275	\$8,680
SSX3-0360C-x-HD-N12-0-x	150	300	350	360	48	36	16	275	\$9,585
SSX3-0414C-x-HD-N12-0-x	---	350	450	414	72	38	16	400	\$11,075
SSX3-0477C-x-HD-N12-0-x	200	400	500	477	90	40	16	600	\$12,400
SSX3-0515C-x-HD-N12-0-x	---	450	---	515	90	40	18	600	\$14,669
SSX3-0590C-x-HD-N12-0-x	250	500	600	590	90	40	18	700	\$16,500
SSX3-0720C-x-HD-N12-0-x	300	600	---	720	90	40	18	700	\$18,007
SSX3-0840C-x-HD-N12-0-x	350	700	800	840	90	40	18	750	\$23,448
SSX3-0960C-x-HD-N12-0-x	400	800	1000	960	90	72	20	950	\$26,394
SSX3-1080C-x-HD-N12-0-x	---	900	1100	1080	90	72	20	950	\$31,085
SSX3-1200C-x-HD-N12-0-x	450	1000	1200	1200	90	72	20	950	\$34,875

**Includes:**

- NEMA 12 enclosure
- SSX3 solid state starter
- Line start rated bypass contactor
- Control power transformer
- SS / Off / ATL switch
- Electronic overload class 1-30



Configure the part number with the voltage required (page 14) and any additional options (page 21).

\*Base prices are for 230 VAC or 460 VAC with options as listed. For 575 VAC, add 5%.

# NEMA 12 Engineered Package

## Heavy duty combo starter with circuit breaker

Part Number	Horsepower			Max amps	CB rating (amps)	Dimensions			Weight Lbs.	Base Price*
	240V	480V	575V*			H	W	D		
SSX3-0014B-x-HD-N12-CB-x	5	10	15	14	30	36	32	12	200	\$4,090
SSX3-0027B-x-HD-N12-CB-x	10	20	25	27	50	36	32	12	200	\$4,125
SSX3-0034B-x-HD-N12-CB-x	---	25	30	34	60	36	32	12	200	\$4,175
SSX3-0040B-x-HD-N12-CB-x	15	30	40	40	70	36	32	12	200	\$4,200
SSX3-0052B-x-HD-N12-CB-x	20	40	50	52	90	36	32	12	200	\$4,250
SSX3-0065B-x-HD-N12-CB-x	25	50	60	65	100	36	32	12	220	\$4,705
SSX3-0077B-x-HD-N12-CB-x	30	60	75	77	125	36	32	12	220	\$5,651
SSX3-0096C-x-HD-N12-CB-x	40	75	100	96	150	48	38	16	275	\$5,944
SSX3-0125C-x-HD-N12-CB-x	50	100	125	125	200	48	38	16	295	\$6,370
SSX3-0156C-x-HD-N12-CB-x	60	125	150	156	250	48	38	16	300	\$6,872
SSX3-0180C-x-HD-N12-CB-x	---	150	---	180	300	48	38	16	320	\$6,933
SSX3-0240C-x-HD-N12-CB-x	100	200	250	240	400	48	38	16	335	\$9,011
SSX3-0302C-x-HD-N12-CB-x	---	250	300	302	500	48	38	16	340	\$9,987
SSX3-0360C-x-HD-N12-CB-x	150	300	350	360	600	48	38	16	350	\$10,385
SSX3-0414C-x-HD-N12-CB-x	---	350	450	414	700	72	38	16	500	\$12,998
SSX3-0477C-x-HD-N12-CB-x	200	400	500	477	800	90	40	16	750	\$13,500
SSX3-0515C-x-HD-N12-CB-x	---	450	---	515	800	90	40	18	775	\$16,149
SSX3-0590C-x-HD-N12-CB-x	250	500	600	590	1200	90	40	18	820	\$18,610
SSX3-0720C-x-HD-N12-CB-x	300	600	---	720	1200	90	40	18	820	\$18,926
SSX3-0840C-x-HD-N12-CB-x	350	700	800	840	1200	90	40	18	850	\$33,001
SSX3-0960C-x-HD-N12-CB-x	400	800	1000	960	1200	90	72	20	1050	\$34,981
SSX3-1080C-x-HD-N12-CB-x	---	900	1100	1080	1400	90	72	20	1050	\$37,888
SSX3-1200C-x-HD-N12-CB-x	450	1000	1200	1200	2000	90	72	20	1050	\$45,000

### Includes:

- NEMA 12 enclosure
- Circuit breaker w/flange handle
- SSX3 solid state starter
- Line start rated bypass contactor
- Control power transformer
- SS / Off / ATL switch
- Electronic overload class 1-30



Configure the part number with the voltage required (page 14) and any additional options (page 21).

\*Base prices are for 230 VAC or 460 VAC with options as listed. For 575 VAC, add 5%.

# NEMA 3R Engineered Package

## Heavy duty combo starter with circuit breaker

Part Number	Horsepower			Max amps	CB rating (amps)	Dimensions			Weight Lbs.	Base Price*
	240V	480V	575V*			H	W	D		
SSX3-0014B-x-HD-N3R-CB-x	5	10	15	14	30	36	32	12	220	\$4,515
SSX3-0027B-x-HD-N3R-CB-x	10	20	25	27	50	36	32	12	220	\$4,550
SSX3-0034B-x-HD-N3R-CB-x	---	25	30	34	60	36	32	12	220	\$4,600
SSX3-0040B-x-HD-N3R-CB-x	15	30	40	40	70	36	32	12	220	\$4,650
SSX3-0052B-x-HD-N3R-CB-x	20	40	50	52	90	36	32	12	220	\$4,675
SSX3-0065B-x-HD-N3R-CB-x	25	50	60	65	100	36	32	12	240	\$5,247
SSX3-0077B-x-HD-N3R-CB-x	30	60	75	77	125	36	32	12	240	\$6,076
SSX3-0096C-x-HD-N3R-CB-x	40	75	100	96	150	48	38	16	295	\$6,369
SSX3-0125C-x-HD-N3R-CB-x	50	100	125	125	200	48	38	16	295	\$7,395
SSX3-0156C-x-HD-N3R-CB-x	60	125	150	156	250	48	38	16	320	\$7,855
SSX3-0180C-x-HD-N3R-CB-x	---	150	---	180	300	48	38	16	340	\$8,059
SSX3-0240C-x-HD-N3R-CB-x	100	200	250	240	400	48	38	16	355	\$10,306
SSX3-0302C-x-HD-N3R-CB-x		250	300	302	500	48	38	16	360	\$11,480
SSX3-0360C-x-HD-N3R-CB-x	150	300	350	360	600	48	38	16	370	\$11,718
SSX3-0414C-x-HD-N3R-CB-x	---	350	450	414	700	72	38	16	550	\$15,500
SSX3-0477C-x-HD-N3R-CB-x	200	400	500	477	800	90	40	16	800	\$16,294
SSX3-0515C-x-HD-N3R-CB-x	---	450	---	515	800	90	40	18	800	\$16,694
SSX3-0590C-x-HD-N3R-CB-x	250	500	600	590	1200	90	40	18	850	\$19,555
SSX3-0720C-x-HD-N3R-CB-x	300	600	---	720	1200	90	40	18	850	\$22,228
SSX3-0840C-x-HD-N3R-CB-x	350	700	800	840	1200	90	40	18	850	\$34,500
SSX3-0960C-x-HD-N3R-CB-x	400	800	1000	960	1200	90	72	20	1100	\$41,481
SSX3-1080C-x-HD-N3R-CB-x	---	900	1100	1080	1400	90	72	20	1100	\$45,388
SSX3-1200C-x-HD-N3R-CB-x	450	1000	1200	1200	2000	90	72	20	1100	\$51,000



**Includes:**

- NEMA 3R enclosure
- Circuit breaker w/flange handle
- SSX3 solid state starter
- Line start rated bypass contactor
- Control power transformer
- Space heater w/thermostat
- Electronic overload class 1-30

Configure the part number with the voltage required (page 14) and any additional options (page 21).

\*Base prices are for 230 VAC or 460 VAC with options as listed. For 575 VAC, add 5%.

# Engineered Packages

## Options

To include options in your custom package, simply add the option code to the end of the part number. You can add as many options as you like, and list them in any order.

Code	Description	Price Adder
K	Door Mounted Keypad	\$ 150
KC	Door Mounted Keypad w/3R Cover	\$ 250.00
PD	Start/Stop PB, Reset PB, HOA, Power On PL, Run PL, and Fault PL	\$ 292.50
PD1	Start/Stop PB, Reset PB, HOA	\$ 213.75
PD2	Start/Stop PB, Run Light, HOA	\$ 189.00
RS	Reset Pushbutton	\$ -
SS	Start / Stop Pushbutton	\$ -
HOA	Hand / Off / Auto	\$ 112.50
ES	Emergency Stop Mushroom Head	\$ 87.75
PLG	Pilot Light "Green"	\$ 58.50
PLR	Pilot Light "Red"	\$ 58.50
PLA	Pilot Light "Amber"	\$ 58.50
PLW	Pilot Light "White"	\$ 58.50
SPT	Space Heater w/Thermostat	\$ 191.25
FF	Enclosure Fan & Filter (NEMA 12)	\$ 191.25
FF3	Enclosure Fan & Filter (NEMA 3R)	\$ 393.75
EF1	Enclosure Feet 12" High	\$ 310.50
EF2	Enclosure Feet 18" High	\$ 391.50
IO	SSX3 I/O Expansion Card	\$ 86.85
GF	SSX3 RTD/Ground Fault Expansion Card	\$ 122.85
DN	DeviceNet Interface	\$ 123.75
MB	Modbus Interface	\$ 85.50
PB	Profibus Interface	\$ 157.50
USB	USB Interface	\$ 78.75
TCP	Modbus TCP Interface	\$ 292.50
PN	Profinet Interface	\$ 360.00
IP	Ethernet IP Interface	\$ 318.60
FG1	Kit, Fingerguard, SSX3 0145B-0220B	\$ 130.05
FG2	Kit, Fingerguard, SSX3 0255B-0425B	\$ 220.05
FG3	Kit, Fingerguard, SSX3 0500B-1000B	\$ 391.50

# MVSS Medium Voltage Soft Starters

## 2.3 kV - 15 kV, up to 1200 A

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NEMA 3R outdoor rated starter

MVSS gets your motor up and running smoothly and reliably, while providing all the motor and load protection features you would expect in a medium voltage soft starter. Our fully enclosed MVSS is a complete E2 starter offering which includes a load break disconnect switch, in-line vacuum contactor and fully rated bypass vacuum contactor, and motor overload protection.

MVSS soft starters are just one of Spike Electric's medium voltage solutions. If your installation requires a complete metal clad system or if arc fault protection is needed, contact us for details on our MVX Series.



# MVSS Medium Voltage Soft Starters

## Specifications

### Part Number Description

MVSS-     -     -  -

**Enclosure**

N1 = NEMA 1      N12 = NEMA 12  
 N3R = NEMA 3R      N3ROD = NEMA 3R outdoor rated  
 N4 = NEMA 4

**Control Voltage**

C1 = 120 VAC/230 VAC

**Mains Voltage**

V02 = 2300 VAC 50/60 Hz  
 V03 = 3300 VAC 50/60 Hz  
 V04 = 4160 VAC 50/60 Hz  
 V06 = 6600 VAC 50/60 Hz  
 V11 = 11000 VAC 50/60 Hz  
 V13 = 13800 VAC 50/60 Hz

**Power Rating (amps)**

See ratings charts on p24-25

**Starter series**

## Specifications

Mains voltage .....	2.3 kV ~ 15 kV (±10%)
Control voltage .....	120 VAC or 230 VAC
Current range .....	110 A ~ 1200 A (nominal)
Rated frequency (fr) .....	50/60 Hz
Max start current .....	400% FLC
Max start time .....	30 seconds at 400% FLC
Operating temperature .....	-10 °C to +50 °C, max +60 °C with derating
Storage temperature .....	-25 °C to +70 °C
Altitude .....	1000 m ASL, higher with derating
Relative humidity .....	5% to 95%, non-condensing

# MVSS Medium Voltage Soft Starters

## Ratings - 2.3 kV - 6.6 kV

System Voltage	Starter Current	Motor HP	Motor kW	H	Dimensions and Weights: N1, 4/3R* Class E2 Starter		
					W	D	lbs
<b>2.3 kV</b>							
	110	500	360	93	36	30	1100
	200	900	660	93	36	30	1100
	400	1750	1330	93	36	30	1250
	600	2500	2000	93	72	30	2400
	800	3425	2660	93	96	36	3500
	1000	4275	3330	93	96	36	3500
<b>3.3 kV</b>							
	110	675	520	93	36	30	1250
	200	1225	950	93	36	30	1250
	400	2500	1910	93	36	30	1260
	500	3000	2340	93	72	30	2400
	600	3675	2850	93	72	30	2400
	800	4900	3820	93	78	36	2800
	1000	6125	4780	93	96	36	3500
<b>4.2 kV</b>							
	60	500	360	93	36	30	1250
	110	900	660	93	36	30	1250
	200	1500	1200	93	36	30	1250
	360	3000	2238	93	36	30	1300
	400	3250	2400	93	36	30	1300
	500	4000	3000	93	72	30	2400
	600	4500	3610	93	72	30	2400
	800	6175	4820	93	109	36	2800
	1000	7725	6030	93	109	36	3500
<b>6.6 kV</b>							
	70	850	670	93	36	30	1300
	140	1725	1340	93	36	30	1300
	250	3000	2390	93	45	30	1750
	300	3500	2870	93	45	30	1750
	400	5000	3820	93	72	30	1750
	500	6000	4700	93	72	30	2600
	600	6750	5600	93	109	36	3100
	700	8575	6740	93	109	36	3500
	800	9800	7650	93	109	36	3500
	1000	12250	9570	93	109	36	3500
	1200	14700	11500	93	109	44	4000

# MVSS Medium Voltage Soft Starters

Ratings - 11.0 kV - 13.8 kV

System Voltage	Starter Current	Motor HP	Motor kW	H	Dimensions and Weights: N1, 4/3R* Class E2 Starter		
					W	D	lbs
<b>11kV</b>							
	70	1500	1100	93	126	44	4650
	140	3000	2200	93	126	44	4650
	250	5100	4000	93	126	44	4650
	300	6125	4800	93	126	44	4650
	400	8175	6300	93	126	44	4650
	700	14300	11200	93	138	55	6000
	800	16350	12800	93	138	55	6000
	1000	20425	16000	93	138	55	6200
	1200	24525	19200	93	138	55	6200
<b>13.8 kV</b>							
	70	1800	1400	93	126	44	6200
	140	3600	2800	93	126	44	6200
	250	6400	5000	93	126	44	6200
	300	8000	6000	93	126	44	6200
	400	10000	8000	93	126	44	6200
	700	18000	14000	93	126	55	6400
	800	20000	16000	93	166	55	6400
	1000	25000	20000	93	166	55	7000
	1200	30000	24000	93	166	55	7000

Contact factory for pricing and availability of standard units and custom line-ups.



\* NEMA 3R outdoor rated (door-in-door) model also available. Contact us for dimensions and further information.

# Medium Voltage Soft Starter Request Form

Please supply ALL the following information so we can accurately select a starter for your application.

Type of application (pump, compressor, conveyor, etc.) \_\_\_\_\_

Motor rated power (KW or HP) \_\_\_\_\_ Motor Full Load Current (FLA) \_\_\_\_\_

Motor nominal voltage (V) \_\_\_\_\_ Motor synchronous speed (RPM) \_\_\_\_\_

Motor current vs. speed curve or I<sub>st</sub>/I<sub>n</sub> (% or Per Unit) \_\_\_\_\_ Motor speed/torque curve or T<sub>max</sub>/T<sub>n</sub> (% or Per Unit) \_\_\_\_\_

Rotor inertia J=GD<sup>2</sup>/4 (kgm<sup>2</sup>) \_\_\_\_\_ Load speed/torque curve (% or per unit) \_\_\_\_\_

Load inertia J=GD<sup>2</sup>/4 (kgm<sup>2</sup>) at motor speed \_\_\_\_\_

Starts per hour \_\_\_\_\_ Time between starts \_\_\_\_\_

Cabinet degree of protection (1PXX/NEMA) \_\_\_\_\_

Ambient temperature (operating & storage) requirement \_\_\_\_\_ Altitude (meters or feet above sea level) \_\_\_\_\_

Power cables entry (top or bottom) \_\_\_\_\_ # of units (single, multiple in line up) \_\_\_\_\_

Soft starter only (IEC style) or standard unit with load break switch and power fuses/VCB \_\_\_\_\_ If line-up of multiple units, how many per line-up (required for sizing horizontal/overhead bus). \_\_\_\_\_

Max. shipping split dimensions (WxHxD) \_\_\_\_\_

Additional notes / requirements:

**If your application involves a synchronous motor (soft starter with synchronous exciter), please also indicate:**

Type of exciter (rotating or static) \_\_\_\_\_ New or refurbished motor? \_\_\_\_\_

Full nameplate data of motor and exciter \_\_\_\_\_ Data for existing/old excitation system \_\_\_\_\_

For rotating exciter: DC voltage, DC current of the exciter generator field \_\_\_\_\_ For static exciter: DC voltage, DC current of motor field \_\_\_\_\_

For static exciter: full data of field starting/discharge resistor \_\_\_\_\_

If retrofit application, will the existing static exciter field starting/ discharge resistor be used? If not, is this within soft starter manufacturer's scope of supply? \_\_\_\_\_ Availability of LV 3 phase supply KVA required: 250V x IDC x 3 phase x 1.3. Advise voltage and frequency. \_\_\_\_\_

Additional notes / requirements:

To receive a personalized quotation, please send this form to [factoryassistance@spikeelectric.com](mailto:factoryassistance@spikeelectric.com)

# Low Voltage Soft Starter Request Form

Customer: \_\_\_\_\_ Contact: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

Application: \_\_\_\_\_ Starting Time: \_\_\_\_\_ (if known)

Starts/Stops \_\_\_\_\_ per hour or day or ...?

**Motor Data:**

_____ Horsepower	_____ Voltage: 208V	_____ 50Hz	Any special motor notes: _____ _____ _____ _____
_____ FLA (Full Load Amps)	_____ 240V	_____ 60Hz	
_____ RPM's	_____ 480V		
_____ Service factor	_____ 575V		
	_____ 690V		

Motor Type: \_\_\_\_\_ Standard \_\_\_\_\_ Wye-Delta \_\_\_\_\_ Two speed  
 \_\_\_\_\_ Synchronous \_\_\_\_\_ Wound Rotor \_\_\_\_\_ Single or \_\_\_\_\_ Dual windings (select one)

Starter Type: \_\_\_\_\_ Solid state starter \_\_\_\_\_ Wye-delta  
 \_\_\_\_\_ Across the line (ATL or DOL) \_\_\_\_\_ Auto transformer

**Starter Data:**

Enclosure Type:	Disconnect Type:	Control Voltage:
None (Chassis Unit Only)	None	24V
NEMA 1	Fuseable	220V
NEMA 12	Circuit breaker	110V
NEMA 3R		
NEMA 4 (Painted)		
_____ NEMA 4X		

Soft Starter:  
 \_\_\_\_\_ (SD) Standard Duty w/Shunt Rated Bypass  
 \_\_\_\_\_ (HD) Heavy Duty w/Line Rated Bypass

**Starter Package Options:**

\_\_\_\_\_ Door mounted keypad  
 \_\_\_\_\_ Start/stop pushbutton  
 \_\_\_\_\_ Reset pushbutton  
 \_\_\_\_\_ Emergency stop mushroom head  
 \_\_\_\_\_ Power On light  
 \_\_\_\_\_ Run light  
 \_\_\_\_\_ Fault light  
 \_\_\_\_\_ Soft/Off/ATL switch (HD units only)  
 \_\_\_\_\_ Space heater w/thermostat

**Starter Options:**

\_\_\_\_\_ Fingerguard kit  
 \_\_\_\_\_ (over power terminals)  
 \_\_\_\_\_ I/O Expansion Card  
 \_\_\_\_\_ RTD/Ground Fault Card

Enclosure Options:

\_\_\_\_\_ 12" Feet  
 \_\_\_\_\_ 18" Feet  
 \_\_\_\_\_ Fan & Filter

**Communications:**

\_\_\_\_\_ USB Interface  
 \_\_\_\_\_ Modbus Interface  
 \_\_\_\_\_ DeviceNet Interface  
 \_\_\_\_\_ Profibus Interface  
 \_\_\_\_\_ Modbus TCP Interface  
 \_\_\_\_\_ Profinet Interface  
 \_\_\_\_\_ Ethernet IP Interface

To receive a personalized quotation, please send this form to [factoryassistance@spikeelectric.com](mailto:factoryassistance@spikeelectric.com)

# SPARE PARTS - SSX3 Series

Part Number	Description	Price
995-05724-00	Kit, Main Control PCB, 0023B-0220B, C1	\$684
995-05725-00	Kit, Main Control PCB, 0255C-1600C, C1	\$684
995-09479-00	Kit 24V Control G1B~G5C GM3KP, C2	\$684
995-05726-00	230V Backplane PCB, 0023B-0105B V4	\$442
995-05727-00	230V Backplane PCB, 0145B-1600 B/C V4	\$442
995-05887-00	Kit, Backplane PCB, 0023B-0105B, V7	\$507
995-05888-00	Kit, Backplane PCB, 0145B-1600C, V7	\$507
995-05729-00	Kit, Model PCB, 0023B	\$347
995-05730-00	Kit, Model PCB, 0043B	\$347
995-05731-00	Kit, Model PCB, 0050B	\$347
995-05732-00	Kit, Model PCB, 0053B	\$347
995-05733-00	Kit, Model PCB, 0076B	\$347
995-05734-00	Kit, Model PCB, 0097B	\$347
995-05735-00	Kit, Model PCB, 0100B	\$347
995-05736-00	Kit, Model PCB, 0105B	\$347
995-05737-00	Kit, Model PCB, 0145B	\$347
995-05738-00	Kit, Model PCB, 0170B	\$347
995-05739-00	Kit, Model PCB, 0200B	\$347
995-05740-00	Kit, Model PCB, 0220B	\$347
995-05741-00	Kit, Model PCB, 0255C	\$347
995-05742-00	Kit, Model PCB, 0360C	\$347
995-05743-00	Kit, Model PCB, 0380C	\$347
995-05744-00	Kit, Model PCB, 0430C	\$347
995-05745-00	Kit, Model PCB, 0620C	\$347
995-05746-00	Kit, Model PCB, 0650C	\$347
995-05747-00	Kit, Model PCB, 0790C	\$347
995-05748-00	Kit, Model PCB, 0930C	\$347
995-05749-00	Kit, Model PCB, 1200C	\$347
995-05750-00	Kit, Model PCB, 1410C	\$347
995-05751-00	Kit, Model PCB, 1600C	\$347
995-10506-00	Kit, Model PCB, 0255B	\$347
995-10507-00	Kit, Model PCB, 0350B (V13 or older)	\$347
995-10508-00	Kit, Model PCB, 0425B (V13 or older)	\$347
995-10509-00	Kit, Model PCB, 0500B	\$347
995-10510-00	Kit, Model PCB, 0580B	\$347
995-10511-00	Kit, Model PCB, 0700B	\$347
995-10512-00	Kit, Model PCB, 0820B	\$347
995-10513-00	Kit, Model PCB, 0920B	\$347
995-10514-00	Kit, Model PCB, 1000B	\$347
995-14498-00	Kit, Model PCB, 0350B (V14 or newer)	\$347
995-14499-00	Kit, Model PCB, 0425B (V14 or newer)	\$347
995-09519-00	Kit, Bypass Driver 0145B-0220B (V8 or newer)	\$302
995-10505-00	Kit, Bypass Driver 0270B-0580B (V13 or older), 0700B-1000B	\$316
995-13448-00	Kit, Bypass Driver 0255B, 0350B-0580B (V14 or newer)	\$316

# SPARE PARTS - SSX3 Series

Part Number	Description	Price
995-05753-00	Kit, SCR, 0023B	\$138
995-05754-00	Kit, SCR, 0043B	\$142
995-05755-00	Kit, SCR, 0050B	\$147
995-05756-00	Kit, SCR, 0053B-0076B	\$187
995-05757-00	Kit, SCR, 0097B	\$289
995-05758-00	Kit, SCR, 0100B	\$298
995-05759-00	Kit, SCR, 0105B-0145B	\$338
995-05760-00	Kit, SCR, 0170B	\$578
995-05761-00	Kit, SCR, 0200B	\$597
995-05762-00	Kit, SCR, 0220B, 0255B/C	\$687
995-14504-00	Kit, SCR, 0270B, 0350B~0425B (V14 or newer)	\$938
995-10133-00	Kit Phase Arm Assembly 0350B (V13 or older)	\$3,609
995-10134-00	Kit Phase Arm Assembly 0425B (V13 or older)	\$3,791
995-10135-00	Kit Phase Arm Assembly 0500B (V13 or older)	\$4,440
995-14501-00	Kit Phase Arm Assembly 0500B (V14 or newer)	\$4,347
995-10136-00	Kit Phase Arm Assembly 0580B (V13 or older), 0700B	\$5,102
995-14502-00	Kit Phase Arm Assembly 0580B (V14 or newer)	\$5,009
995-10139-00	Kit Phase Arm Assembly 0820B	\$5,471
995-10140-00	Kit Phase Arm Assembly 0920B	\$6,182
995-10141-00	Kit Phase Arm Assembly 1000B	\$6,524
995-05899-00	Kit, Power Assembly, 0360C	\$1,973
995-05900-00	Kit, Power Assembly, 0380C	\$2,062
995-05901-00	Kit, Power Assembly, 0430C	\$2,662
995-05902-00	Kit, Power Assembly, 0620C	\$3,067
995-05903-00	Kit, Power Assembly, 0650C	\$3,231
995-05904-00	Kit, Power Assembly, 0790C	\$4,316
995-05905-00	Kit, Power Assembly, 0930C	\$4,738
995-05906-00	Kit, Power Assembly, 1200C	\$7,307
995-05907-00	Kit, Power Assembly, 1410C	\$9,120
995-05908-00	Kit, Power Assembly, 1600C	\$10,902
995-05763-00	Kit, Fan, 0076B-0220B	\$113
995-05946-00	Kit, Fan, 0255C-0620C, 0255B-1000B	\$164
995-05947-00	Kit, Fan, 0650C-1600C	\$584
995-05765-00	Kit, CT, 0023B-0105B	\$84
995-05766-00	Kit, CT, 0145B-0255B/C, 0350B-0425B (V14 or newer)	\$107
995-05949-00	Kit, CT, 0360C	\$218
995-05950-00	Kit, CT, 0380C-0430C	\$231
995-05951-00	Kit, CT, 0620C-0650C	\$253
995-05952-00	Kit, CT, 0790C	\$289
995-05953-00	Kit, CT, 0930C	\$307
995-05954-00	Kit, CT, 1200C	\$347
995-05955-00	Kit, CT, 1410C	\$369
995-05956-00	Kit, CT, 1600C	\$413
995-05767-00	Kit, Bypass Contactor, 0076B-0105B	\$173
995-09520-00	Kit, Bypass Contactor, 0145B-0220B (V8 or newer)	\$436
995-13449-00	Kit, Bypass Contactor, 0255B-0270B, 0350B (V14 or newer)	\$480
995-14503-00	Kit, Bypass Contactor, 0425B-0580B (V14 or newer)	\$480
995-11342-00	Kit Snubber 0270B-0425B (V13 or older), 0500B-1000B	\$418
995-11343-00	Kit Snubber 0360C-0930C	\$591
995-11345-00	Kit Snubber 1200C-1600C	\$658

# Spike Electric Controls

## Standard Terms and Conditions of Sale

### **1. Scope of Supply**

The products ("Products") as defined in the Purchase Order entered between Spike Electric Controls and the buyer ("Buyer"), to which these Terms and Conditions relate.

### **2. Prices**

Prices for the Products shall be in accordance with the Purchase Order. Any duties, taxes or additional costs such as freight, insurance, and any other fees shall be born solely by the Buyer. Spike Electric Controls reserves the right to change the prices, with thirty (30) days prior written notice to the Buyer. If, by reason of any rise in the cost of materials, labor or transportation, or in conforming to any laws or regulations that are applicable to the Products supplied hereunder, the cost to Spike Electric Controls of performing its obligations under the Purchase Order or hereunder shall be increased, then a fair and reasonable estimation of the amount of such increase shall be added to the Price as set forth in the Purchase Order. Prices and Delivery Terms are as stipulated herein and in the Purchase Order.

### **3. Order and Payment**

With respect to customers with principal place of business within Canada or the United States of America, payment shall be made within net thirty (30) days of the date of Spike Electric Controls invoice unless otherwise expressly agreed to by Spike Electric Controls in writing. All other customers must pay the entire product price in full prior to shipment by Spike Electric Controls, unless otherwise agreed to in writing in advance by an authorized officer of Spike Electric Controls. Payment will be made by check made payable to Spike Electric Controls or by ACH or wire transfer payment to the Spike Electric Controls bank account. Bank details are as set forth on Spike Electric Controls invoices or as advised by Spike Electric Controls in writing. The Buyer must notify Spike Electric Controls in writing within 7 days of the date of the invoice of any errors within the invoice. Failure to notify will result in Spike Electric Controls assuming acceptance of the invoice in full. Payment will be deemed to be made only upon receipt by Spike Electric Controls of the entire sum as stipulated in the Purchase Order. Buyer shall pay interest at the rate of 1% on the amount of any late payment calculated on a week-to-week basis until the actual date of payment. If Buyer is in delay with any payment, Spike Electric Controls, without prejudice to its rights provided for by law, may refuse the further performance of the Purchase Order until payment, together with the interest for late payments, is received in full or until new terms of payment and Delivery Time have been agreed to. If Buyer has not paid the amount due within sixty (60) working days, Spike Electric Controls may terminate the Purchase Order and claim for compensation any losses, costs, damages and expenses it has incurred. Unless otherwise agreed in writing, any request by the Buyer for cancellation of an order or for the rescheduling of any deliveries shall be subject to the acceptance by Spike Electric Controls, at its sole discretion and subject to a reasonable administrative charge. If Buyer



cancels the Purchase Order without having received Spike Electric Controls prior written consent or delays payment beyond a reasonable time, Spike Electric Controls will be entitled to claim for any damages caused as a result of the buyer's cancellation and hereby agrees to indemnify Spike Electric Controls against all losses, costs, damages, charges and expenses arising out of any order and its cancellation or rescheduling. In this event, the Buyer waives any claim for the Products in whole or part.

#### **4. Order Acknowledgement, Delivery Time and Transfer of Title & Risk**

Spike Electric Controls will acknowledge the Purchase Order in writing, establishing Delivery Time, within ten (10) days after receipt of a firm Purchase Order. Delivery Time will be from the time Spike Electric Controls receives the firm Purchase Order with full data until the Product is delivered either Ex-Works (INCOTERMS 2010) or from the Spike Electric Controls manufacturing/warehouse location as per the terms of the original quotation. Any date or time quoted for Delivery Time is to be treated as an estimate only. If Spike Electric Controls anticipates that it will not be able to deliver the Product at the agreed upon Delivery Time, Spike Electric Controls shall, without delay, notify Buyer in writing, stating the reason for the delay and if possible, the new anticipated Delivery Time. Delivery Time may be delayed because of conditions beyond Spike Electric Controls reasonable control, and in no event shall Spike Electric Controls be liable for any damages or penalty for any delay in Delivery Time. Delivery of the Products and transfer of risk of loss to Buyer shall be in accordance with INCOTERMS 2000, and shall occur upon shipment of the Products, Ex-Works or from the Spike Electric Controls warehouse location (if goods are shipped from stock). Title to the Products will transfer to Buyer only upon receipt by Spike Electric Controls of payment in full, for the Products supplied. Until such time, Spike Electric Controls shall retain title and exclusive ownership of the Products. The Buyer hereby grants to Spike Electric Controls a purchase money security interest in and to all Products purchased from Spike Electric Controls for which payment in full has not been received by Spike Electric Controls, all accounts receivable related thereto whether now owned or held by the Buyer or hereafter acquired and/or used by the Buyer in the Buyer's business, and all additions thereto, and all replacements and substitutions therefor ("Collateral"). The Buyer agrees to the preparation, execution, delivery and/or filing by Spike Electric Controls of all such documents as Spike Electric Controls may reasonably request (including delivery of the Collateral to Spike by the Buyer upon reasonable request from time to time) or file for perfection, from time to time, as necessary or required to perfect or otherwise secure or maintain such security interest, including UCC-1 financing statements (or such similar or equivalent documents or instruments) sufficient to create a perfected, valid security interest in and to the Collateral.

#### **5. Packing and Shipping Documents**

The Product will be packaged in Spike Electric Controls standard packaging, suitable for inland shipment, as well as for storage, provided Buyer follows Spike Electric Controls storage and handling instructions, as shown in Spike Electric Controls manuals. Spike Electric Controls will mark the packaging, according to Buyers instructions. The Buyer, at its own expense, will obtain from the relevant local authorities any and all licenses and/or approvals required for importing, distributing and servicing the Products and otherwise

fulfilling its obligations under this Agreement.

## **6. Spike Electric Controls On-Site Services**

At the Buyer's written request, and subject to availability of Spike Electric Controls personnel, Spike Electric Controls shall provide certain on-site services. Such services shall include the installation, start-up and training with respect to the Product and the use thereof. Unless agreed otherwise, the price for such on-site services shall be pursuant to Spike Electric Controls current daily or hourly rates for such services and shall be charged from the time the Spike Electric Controls engineer leaves the factory location. Travel days will be billed at ½ the normal daily on-site rate. In addition to the aforementioned daily service charges, airfare and other travel expenses will be billed at cost. Buyer will reimburse Spike Electric Controls for any reasonable out-of-pocket expenses incurred by Spike Electric Controls in connection with performing any of the aforementioned services at Buyer's site. Buyer shall issue a separate written Work Order or Purchase Order for the provision of the on-site services.

## **7. Inspection of Product and Storage**

The Buyer shall inspect the Product within seven (7) working days of receiving it, however not later than thirty (30) days from date of shipment from Spike Electric Controls factory or warehouse, and shall notify Spike Electric Controls immediately, in writing, of any deficiencies. If Buyer fails to do so, the Products shall be deemed to have been accepted. In addition, the Buyer will carefully follow Spike Electric Controls storage and handling instructions, as shown in Spike Electric Controls manuals.

## **8. Products Quality**

Unless otherwise agreed in writing, Spike Electric Controls guarantees that the Products will conform to the quality standards and the technical specifications supplied by Spike Electric Controls, as these may be modified, substituted or improved.

## **9. Warranty and Product Services**

9.1 The Buyer's Warranty in Section 9 and 10 is subject to the Buyer promptly sending to Spike Electric Controls notice of defect and satisfactory proof thereof and establishing that the Products have been correctly stored, handled, applied, installed, maintained and operated in accordance with Spike Electric Controls written instructions, appropriate codes, regulations and good practice, within the limits of rated capacity and normal usage.

9.2 Buyer will return at Buyer's sole cost and expense, subject to Section 9.4, the defective part, after receipt from Spike Electric Controls of a written Return Material Authorization (RMA).

9.3. In the case of medium voltage soft starters, Spike Electric Controls will remedy the defect on site if possible. Parts and labor will be provided at no charge if deemed to be a warranty defect.

9.4 Spike Electric Controls will test the returned part(s), and in the event that Spike Electric Controls finds that the part is defective in accordance with the Warranty Terms, during the Warranty Period, then Spike Electric Controls will reimburse Buyer for the direct cost of shipment of the part to Spike Electric

Controls Plant and also pay for the cost of shipment of the repaired or replaced item from Spike Electric Controls to the Buyer. For the avoidance of doubt, Spike Electric Controls shall decide, at its sole discretion, whether to repair or replace the damaged part or Product(s).

9.5 The Warranty Period shall be 12 months from the date of installation of the Products or up to a maximum of 18 months from Delivery, whichever occurs first.

9.6 The Warranty shall expire immediately if Buyer or a third party makes inappropriate modifications or repair of the Product or if in the case of defect(s), the Buyer does not take immediate steps to minimize the damage.

9.7 In the event that Spike Electric Controls is required to repair the Product at the Buyer's facilities or on-site, the said Warranty is subject to Buyer paying in full all travel and living expenses (billed at cost) incurred by the Spike Electric Controls service engineer in the repair of the Product. Furthermore, if applicable, Buyer will provide a trained engineer to accompany Spike Electric Controls service engineer while he is on site.

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## **10. DISCLAIMER OF WARRANTY AND LIMITATION OF LIABILITY**

**THE WARRANTY AT SECTION 9 AND 10 IS THE BUYER'S EXCLUSIVE REMEDY, AND SPIKE ELECTRIC CONTROLS MAKES NO OTHER REPRESENTATIONS OR WARRANTIES REGARDING SPIKE ELECTRIC CONTROLS PRODUCTS AND HEREBY EXCLUDES AND DISCLAIMS, TO THE EXTENT PERMITTED BY APPLICABLE LAW (INCLUDING BUT NOT LIMITED TO, THE UNIFORM COMMERCIAL CODE OF THE STATE OF PENNSYLVANIA AND/OR THE BUYER'S DOMICILE AND PRINCIPAL PLACE OF BUSINESS, AND AS THE SAME MAY BE AMENDED FROM TIME TO TIME), ANY AND ALL IMPLIED WARRANTIES WITH RESPECT TO SPIKE ELECTRIC CONTROLS PRODUCTS, INCLUDING, WITHOUT LIMITATION, ANY EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, SATISFACTORY QUALITY, CORRESPONDENCE WITH DESCRIPTION, AND/OR NON-INFRINGEMENT.**

**SPIKE ELECTRIC CONTROLS'S LIABILITY SHALL BE LIMITED TO THE REPAIR OR REPLACEMENT OF, AT SPIKE ELECTRIC CONTROLS'S OPTION, THE SPIKE ELECTRIC CONTROLS PRODUCTS OR COMPONENT PARTS THEREOF AT SPIKE ELECTRIC CONTROLS'S SOLE AND ABSOLUTE DISCRETION AND SUBJECT TO THE LIMITATIONS AT SECTION 9. IN NO EVENT SHALL SPIKE ELECTRIC CONTROLS BE LIABLE TO THE BUYER OR ANY OTHER PARTY FOR ANY LOST PROFITS OR FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, WHETHER BASED ON CONTRACT, TORT OR ANY OTHER LEGAL THEORY, CONCEPT OR BASIS.**

**THIS WARRANTY DOES NOT COVER NORMAL OR REMEDIAL MAINTENANCE REPAIRS, FAILURES DUE TO ACCIDENT OR IMPROPER USE OF THE PRODUCT, DAMAGES OR DEFECTS IN THE PRODUCT CAUSED OR CONTRIBUTED TO BY ANY CAUSE EXTERNAL TO THE PRODUCT. PURSUANT TO ARTICLE 6 OF THE 1980 UNITED NATIONS CONVENTION ON CONTRACTS FOR THE INTERNATIONAL SALE OF GOODS ("UN CONVENTION"), THE PARTIES HEREBY EXPRESSLY AGREE THAT THE UN CONVENTION SHALL NOT APPLY TO THIS AGREEMENT**

**(INCLUDING BUT NOT LIMITED TO ARTICLE 35 OF THE CONVENTION OR ANY SUCCESSOR PROVISION THERETO) OR THE RELATIONSHIP BETWEEN THE PARTIES**

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The Buyer shall indemnify and defend Spike Electric Controls and its employees in respect of any claims by third parties which arise from the performance or non-performance by the Buyer or its authorized representative of its obligations pursuant to this Agreement or the Purchase Order.

**11. Force Majeure**

Neither Party shall be liable for failure to perform or for delay in performance resulting from any cause beyond its reasonable control, or due to compliance with government regulations, acts of God, acts or omissions on the part of the other Party, fires, floods or labor disputes and strikes. Any delay resulting from any such cause shall postpone Delivery Time to the extent caused thereby.

**12. Survival upon Termination**

12.1 Spike Electric Controls or the Buyer may terminate for cause any agreement to which these Terms and Conditions apply as follows: (i) upon thirty (30) days written notice of a material breach to the other party, provided such breach remains uncured at the expiration of the notice period; or (ii) if the other party becomes the subject of a petition in bankruptcy or any proceeding relating to insolvency, receivership, liquidation, or composition for the benefit of its creditors.

12.2 All sections of these Terms and Conditions will survive termination under Section 12.1 or the termination of the parties' relationship, including, without limitation, confidentiality obligations, warranty disclaimers and limitations of liability. Any obligations to make payments accrued or due hereunder and which obligations arise prior to termination of any agreement or relationship will survive such termination.

**13. Confidentiality and Proprietary Information**

All technical information relating to the Product's design and manufacture, any business or technical information of Spike Electric Controls, including but not limited to any information relating to the Spike Electric Controls Product plans, designs, costs, product prices and names, finances, marketing plans, business opportunities, personnel, research, development or know-how that is marked or otherwise identified as confidential or proprietary, or that the Buyer knows or should know is confidential or proprietary, is to be regarded and treated as proprietary information, save as may be required by law. Buyer will maintain and preserve full confidentiality of all proprietary information relating to the Products, whether received directly or indirectly, and will take all necessary steps to prevent its disclosure to third parties.

All confidential information passed to the Buyer by Spike Electric Controls shall remain the exclusive property of Spike Electric Controls and the Buyer undertakes to return such information at the request of Spike Electric Controls or, at the latest, upon termination or expiration of this Agreement. The Buyer will not use Spike Electric Controls confidential information except as permitted herein, and will not disclose such confidential information to any third party except as is reasonably required in connection with the exercise of its rights and obligations under these Terms and Conditions (and only subject to binding use

and disclosure restrictions at least as protective as those set forth herein executed in writing by such employees and consultants). Should the Parties hereto need to exchange additional information, which is proprietary to either of them, such an exchange shall not occur unless and until an agreement is mutually agreed upon in writing, setting forth the obligations of the receiving party regarding the confidential treatment of such information. Nothing in this section is to be construed as imposing any obligation on the part of Spike Electric Controls to disclose to Buyer proprietary information.

The Buyer hereby acknowledges that any proprietary rights used on or in relation to the Products supplied hereunder, including, but not limited to, any title or ownership rights, trademarks, tradenames, patent rights, copyrights and trade secret rights, shall at all times and for all purposes vest and remain vested in Spike Electric Controls and nothing in these Terms and Conditions and/or the Purchase Order grants any rights or license to the Buyer to any such proprietary rights.

#### **14. Governing Law**

This Purchase Order agreement shall be construed as a U.S. contract, governed by the laws of the State of Pennsylvania.

#### **15. Arbitration**

The parties undertake to fulfill their obligations under this agreement and the Purchase Order in good faith and shall endeavor to equitably settle any dispute that may arise under this Agreement and/or the Purchase Order. Any dispute arising out of or related to this Agreement and/or the Purchase Order and not so amicably settled, shall be finally settled by binding arbitration in accordance with the rules and procedures of the American Arbitration Association.

#### **16. Miscellaneous**

16.1 These Terms and Conditions and the Purchase Order constitute the entire and exclusive agreement of the parties with respect to the subject matter and supersedes all other terms and conditions in any other verbal or written communication. These Terms and Conditions may only be changed by a written agreement executed by both Spike Electric Controls and the Buyer. If there is a conflict between these Terms and Conditions and the Purchase Order, the provisions of these Terms and Conditions shall prevail. Any supply accepted in pursuant to these Terms and Conditions shall be taken as conclusive acceptance of the provisions of these Terms and Conditions and the respective Purchase Order.

16.2 Should any of the Terms and Conditions violate any law or be held invalid or unenforceable by a court of competent jurisdiction, then such provision shall be deemed to be restated to reflect as nearly as possible the original intentions of the parties, in accordance with applicable law, and the remainder of the Terms and Conditions shall remain in full force and effect.

16.3 Since a breach by the Buyer of any of the promises or agreements contained herein may result in irreparable and continuing damage to Spike Electric Controls for which there may be no adequate remedy at law, Spike Electric Controls shall be entitled to injunctive relief and/or a decree for specific performance, and such other relief as may be proper (including monetary damages if appropriate) and,

without derogating from the above, nothing in these Term and Conditions shall be construed as derogating from any right or remedy that Spike Electric Controls may be entitled to under applicable law.

16.4 No agency, partnership, joint venture, or employment is created as a result of these Terms and Conditions and/or the Purchase Order and Buyer does not have any authority of any kind to bind Spike Electric Controls in any respect whatsoever.

16.5 All notices under this Agreement will be in writing and will be deemed to have been duly given: ( i ) when received, if personally delivered; (ii) upon placement for next day delivery by recognized overnight delivery service; (iii) upon placement for delivery by certified or registered mail, return receipt requested; or (iv) upon recipient's electronic confirmation of receipt of notice, if notice transmitted by facsimile or e-mail. Notices shall be addressed to the addresses (including email address or facsimile number) detailed in the Purchase Order or as modified by delivery of written notice in the manner set forth herein by one Party to the other Party from time to time.

16.6 The Buyer agrees not to assign any of its contractual rights herein without the prior written consent of Spike Electric Controls.

**END**

# NOTES

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RIGHT FROM  
THE START

