

## SSW03

WEG SSW03 Soft Starters are built to match the ruggedness and reliability of WEG motors, providing a complete and cost effective solution. Full microprocessor based control allows easy adjustment through the keypad during start-up, and complete motor protection. A specific pump control feature prevents running pumps at no load and eliminates pipeline water hammer.



## APPLICATIONS

- Pumps
- Fans
- Blowers
- Compressors
- Conveyors
- Crushers
- Saws
- Grinders
- Escalators

## STANDARD FEATURES

- 208-440V and 460-575V, 50/60Hz input power supply
- Duty cycle: 300% of full load current during 30 seconds every 6 minutes
- Keypad with LED display
- Four programmable isolated digital inputs (24 VDC)
- Two programmable relay outputs (1 Amp - 250V)
- One programmable analog output
- Protective features: Motor overload (TIMP), under and over current, power supply phase loss, motor phase loss, thyristor fault, phase sequence, soft starter over temperature and external fault

- Control features: Pump control, acceleration and deceleration independently adjustable ramps, kick start, pedestal voltage, voltage ramp start, constant current start, bypass relay, JOG, DC braking, energy saving, auto-reset and fault history
- Display readings: Motor Amps (kW, kVA, PF and Volts)
- Ambient: 32°F (0°C) to 104°F (40°C), 3300ft (1000m) altitude, 90% non-condensing humidity

## OPTIONAL FEATURES

- Remote Keypad
- PC Programming Software

FRACTIONAL HP

GENERAL PURPOSE

NEMA PREMIUM EFFICIENCY

CRUSHER® DUTY

IEC TRU-METRIC™

PUMP MOTORS

DEFINITE PURPOSE

ADD-ON™ MODIFICATIONS

MOTOR TECHNICAL DATA

DRIVES & SOFT STARTERS

CONTROLS





# SOFT STARTERS



## SSW03 – PROTECTED CHASSIS ENCLOSURE

Motor Volts	Motor HP	Soft Starter Nominal AMPS	Soft Starter Max. Cont. AMPS	Catalog Number	Frame Size	Dimensions (in.) H x W x D	App. Shpg. Wt. (lbs.)	List Price	Multiplier Symbol
<b>230 V</b>									
<b>INPUT POWER SUPPLY: THREE-PHASE - 230V</b>									
	50	120	144	SSW031203D1	1	15 X 9 X 10	40	\$ 3,195	E1
	75	170	204	SSW031703D1	2	19 X 9 X 10	55	\$ 3,555	E1
	75	205	246	SSW032053D1	2	19 X 9 X 10	55	\$ 4,204	E1
	100	255	306	SSW032553D1	3	21 X 21 X 12	155	\$ 5,366	E1
	100	290	348	SSW032903D1	3	21 X 21 X 12	155	\$ 5,763	E1
	125	340	408	SSW033403D1	3	21 X 21 X 12	155	\$ 5,969	E1
	150	410	492	SSW034103D1	4	24 X 21 X 13	183	\$ 6,173	E1
	200	475	570	SSW034753D1	5	26 X 21 X 13	207	\$ 7,374	E1
	250	580	696	SSW035803D1	5	26 X 21 X 13	207	\$ 7,820	E1
	250	670	804	SSW036703D1	6	28 X 21 X 13	214	\$ 9,223	E1
	300	800	960	SSW038003D1	7	34 X 21 X 14	309	\$ 11,469	E1
	400	950	1140	SSW039503D1	7	34 X 21 X 14	309	\$ 17,104	E1
<b>460 V</b>									
<b>INPUT POWER SUPPLY: THREE PHASE - 460V</b>									
	100	120	144	SSW031203G1	1	15 X 9 X 10	40	\$ 3,195	E1
	150	170	204	SSW031703G1	2	19 X 9 X 10	55	\$ 3,555	E1
	150	205	246	SSW032053G1	2	19 X 9 X 10	55	\$ 4,204	E1
	200	255	306	SSW032553G1	3	21 X 21 X 12	155	\$ 5,366	E1
	250	290	348	SSW032903G1	3	21 X 21 X 12	155	\$ 5,763	E1
	300	340	408	SSW033403G1	3	21 X 21 X 12	155	\$ 5,969	E1
	350	410	492	SSW034103G1	4	24 X 21 X 13	183	\$ 6,173	E1
	400	475	570	SSW034753G1	5	26 X 21 X 13	207	\$ 7,374	E1
	500	580	696	SSW035803G1	5	26 X 21 X 13	207	\$ 7,820	E1
	600	670	804	SSW036703G1	6	28 X 21 X 13	214	\$ 9,223	E1
	700	800	960	SSW038003G1	7	34 X 21 X 14	309	\$ 11,469	E1
	800	950	1140	SSW039503G1	7	34 X 21 X 14	309	\$ 17,104	E1
<b>575 V</b>									
<b>INPUT POWER SUPPLY: THREE PHASE - 575V</b>									
	125	120	144	SSW031203G1	1	15 X 9 X 10	40	\$ 3,195	E1
	150	170	204	SSW031703G1	2	19 X 9 X 10	55	\$ 3,555	E1
	200	205	246	SSW032053G1	2	19 X 9 X 10	55	\$ 4,204	E1
	250	255	306	SSW032553G1	3	21 X 21 X 12	155	\$ 5,366	E1
	300	290	348	SSW032903G1	3	21 X 21 X 12	155	\$ 5,763	E1
	350	340	408	SSW033403G1	3	21 X 21 X 12	155	\$ 5,969	E1
	400	410	492	SSW034103G1	4	24 X 21 X 13	183	\$ 6,173	E1
	500	475	570	SSW034753G1	5	26 X 21 X 13	207	\$ 7,374	E1
	600	580	696	SSW035803G1	5	26 X 21 X 13	207	\$ 7,820	E1
	700	670	804	SSW036703G1	6	28 X 21 X 13	214	\$ 9,223	E1
	900	800	960	SSW038003G1	7	34 X 21 X 14	309	\$ 11,469	E1
	1000	950	1140	SSW039503G1	7	34 X 21 X 14	309	\$ 17,104	E1

POR = Price on request

**Notes:** 1) "HP" rating based on "average FLA values". Use as a guide only. Motor FLA may vary with speed and manufacturer.

**ALWAYS compare motor FLA to Nominal AMPS and Max Continuous AMPS of starter.**

2) 120V Control and Blower Power Supply required.

3) For other technical data please refer to WEG product manual.

FRACTIONAL HP

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# SOFT STARTERS



## SSW03 – IP20 “FINGER-SAFE” ENCLOSURE

Motor Volts	Motor HP	Soft Starter Nominal AMPS	Soft Starter Max. Cont. AMPS	Catalog Number	Dimensions (in.) H x W x D	App. Shpg. Wt. (lbs.)	List Price	Multiplier Symbol
<b>INPUT POWER SUPPLY: THREE-PHASE - 230V</b>								
230V	50	120	144	SSW031203D1IP20	24.5 X 9 X 10	55	\$ 3,507	E1
	75	170	204	SSW031703D1IP20	28.5 X 9 X 10	70	\$ 3,867	E1
	75	205	246	SSW032053D1IP20	28.5 X 9 X 10	70	\$ 4,516	E1
	100	255	306	SSW032553D1IP20	35 X 21 X 12	190	\$ 5,768	E1
	100	290	348	SSW032903D1IP20	35 X 21 X 12	190	\$ 6,165	E1
	125	340	408	SSW033403D1IP20	35 X 21 X 12	190	\$ 6,371	E1
	150	410	492	SSW034103D1IP20	35 X 21 X 13	220	\$ 6,575	E1
	200	475	570	SSW034753D1IP20	40 X 21 X 13	250	\$ 7,819	E1
	250	580	696	SSW035803D1IP20	40 X 21 X 13	250	\$ 8,265	E1
	250	670	804	SSW036703D1IP20	44 X 21 X 13	265	\$ 9,668	E1
	300	800	960	SSW038003D1IP20	53 X 21 X 14	365	\$ 11,985	E1
	400	950	1140	SSW039503D1IP20	53 X 21 X 14	365	\$ 17,520	E1
<b>INPUT POWER SUPPLY: THREE-PHASE - 460V</b>								
460V	100	120	144	SSW031203G1IP20	24.5 X 9 X 10	55	\$ 3,507	E1
	150	170	204	SSW031703G1IP20	28.5 X 9 X 10	70	\$ 3,867	E1
	150	205	246	SSW032053G1IP20	28.5 X 9 X 10	70	\$ 4,516	E1
	200	255	306	SSW032553G1IP20	35 X 21 X 12	190	\$ 5,768	E1
	250	290	348	SSW032903G1IP20	35 X 21 X 12	190	\$ 6,165	E1
	300	340	408	SSW033403G1IP20	35 X 21 X 12	190	\$ 6,371	E1
	350	410	492	SSW034103G1IP20	35 X 21 X 13	220	\$ 6,575	E1
	400	475	570	SSW034753G1IP20	40 X 21 X 13	250	\$ 7,819	E1
	500	580	696	SSW035803G1IP20	40 X 21 X 13	250	\$ 8,265	E1
	600	670	804	SSW036703G1IP20	44 X 21 X 13	265	\$ 9,668	E1
	700	800	960	SSW038003G1IP20	53 X 21 X 14	365	\$ 11,985	E1
	800	950	1140	SSW039503G1IP20	53 X 21 X 14	365	\$ 17,520	E1

<b>OPTION TO ADD START &amp; STOP PUSHBUTTONS TO IP20 COVER:</b>	\$ 105	E1
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- Notes:** 1) "HP" rating based on "average FLA values". Use as a guide only. Motor FLA may vary with speed and manufacturer. **ALWAYS compare motor FLA to Nominal AMPS and Max Continuous AMPS of starter.**  
 2) For other technical data please refer to WEG product manual.  
 3) Contact factory for 575V.  
 4) Includes Control Power Transformer with fuses.

## SSW03 – ACCESSORIES

Description	Catalog Number	List Price	Multiplier Symbol
Keypad with LED display without cable	IHM-3P	\$ 67	E1
Kit for Remote Keypad (Cable and Dummy Cover) 3.3 ft. (1 m.)	IHM-3P.1	\$ 111	E1
Kit for Remote Keypad (Cable and Dummy Cover) 6.6 ft. (2 m.)	IHM-3P.2	\$ 190	E1
Kit for Remote Keypad (Cable and Dummy Cover) 10 ft. (3 m.)	IHM-3P.3	\$ 268	E1

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## SSW03 – TECHNICAL DATA

POWER SUPPLY	Main Voltage	Model D: 230 / 220 / 240 / 380 / 400V (+10%, -15%) Model G: 460 / 480 / 575 (+10%, -15%) 50 / 60 Hz +/- 5 Hz		
	Control Voltage	110/120Vac or 220/230Vac		
ENCLOSURE	Metallic Cabinet	IP-00		
	Color	Cover: Opaque Gray, Cabinet: Opaque Blue		
CONTROL	Method	Motor Voltage Variation		
	Power Supply	Switched mode Power Supply		
	CPU	16 bit Microprocessor		
STARTING DUTY CYCLE (10 Starts / Hour)	Normal	300 % (3 x Rated) for 20 s ( 10 starts/ hour)		
INPUTS	Digital	4 X 24 VDC programmable isolated inputs		
	Relay	2 programmable outputs 250 VAC / 1A Form A Contact (NO)		
	Analog	2 programmable outputs 250 VAC / 1A Form A Contact (NO)		
OUTPUTS	Analog	1 Output (Reversing (NO NC) : 250 V / 1 A -- Fault Indication		
	Serial Interface	RS 232		
SAFETY	Protections	Power supply phase Loss	Programming Error	
		Motor Phase Loss	Motor locked rotor	
		Motor Overload – i2t	CPU Error	
		External Fault	Motor Immediate Over current	
		Phase sequence	Motor Over temperature (via Thermistor Input)	
		Motor Immediate Under Current	Self Diagnosis error	
		Thyristor Fault	Thyristor's/Heatsink Over Temperature	
		Serial Communication error		
Functions/Features	Standard	Built-in operator interface, detachable with dual display LED + LCD		
		Programming enabling password		
		Fault Auto Diagnosis		
		Local / Remote operation selection		
		PUMP CONTROL function (Water hammer protection for pumps)		
		ENERGY SAVING Feature		
		BYPASS RELAY		
		FWD / REV Feature via Digital Input (Needs External Contactor)		
		RS-232 Serial Interface		
		Motor PTC thermistor input		
		Programmable IPedestal Voltage 25 ... 90 % of Rated Voltage		
		Programmable acceleration ramp		1 ... 240 Seconds
		Programmable deceleration ramp		OFF, 2 ... 240 seconds
		Programmable step down voltage for deceleration		100 ... 40 % of line voltage
		Programmable starting current limit		OFF, 150 ... 500 % of motor rated current
		Programmable immediate motor over current		105 ... 200 % above rated current
		Programmable immediate over current time		OFF, 1 ... 20 seconds
		Programmable immediate motor under current		25 ... 95 % below rated current
		Programmable immediate under current time		OFF, 1 ... 30 seconds
		KICK START		Level: 70 - 90% of line voltage Duration: 0.1 - 2 seconds
		DC Braking (DC Current Injection)		Level: 30 ... 50% of Rated Voltage Time 1 ... 10 Seconds
		Programmable Motor Overload Protection		OFF, 50 ... 120% of rated content
		JOG Function		25 ... 50% of Rated Voltage
		Programmable Fault Auto Reset		OFF, 10 ... 600 seconds
		Programmable Motor Thermal Memory Auto Reset		OFF, 1 ... 600 seconds
		Motor Thermal Overload Protection Class		5, 10, 15, 20, 25, 30
		Motor service Factor		0.80 ... 1.50
Programmable Line Voltage		220 ... 440 V and 460 ... 575 V		
	Optional	Remote Operator Interface (LEDs)		
Operator Interface (Keypad)	Programming / Commands	Start, Stop/ Reset and Programming Increment and Decrement Parameters Content		
	Display readings	Output Current ( Motor ) - [ A ] Output Current (Motor) - [% of Related] Load Active Power [kW] Load Apparent Power [kVA] S Thermal Protection Statue [0 ... 250% ]	Output Voltage - [ 0 ... 100% Rated Voltage ] Motor Output Factor - [0.00 ... 0.99] 4 Last Faults Back-up Soft Starter Software Version	
AMBIENT	Temperature	0 ... 40° Celsius (32 ... 104° F) S 40 ... 55° Celsius (104 ... 131° F)		
	Humidity	0 ... 90% Non Condensing		
	Altitude	0 ... 1000 m (3,300 ft) Standard operation at Rated Current Up to 4000 m (13,200 ft) - With Current Derating (1%/100 m (328 ft) above 1000m (13,200 ft)		
CONFORMITIES	Color	Cover: Light Grey RAL 7032	Cabinet: Dark Grey RAL 7022	
	Safety	UL 508 Standard - Industrial Control Equipment		
	Low Voltage	EN 60947 -4-2 Standard ; LVD 73/23/EEC - Low Voltage Directive		
	EMC	EMCDirective 89 / 336 /EEC - Industrial Environment ( with Additional Filter)		
CERTIFICATIONS	UL (USA) / cUL (Canada)	Underwriters Laboratories Inc. - USA		
	CE (EUROPE)	Certified by ITS - UK		

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