

SSW06

SOFT-STARTER



WEG Motors and Drives, the proven leader in AC motor control, maintains their leadership role in Soft Starter technology with the release of the 3rd generation SSW06 Soft Starter Product Line. Many of the advantages that have been proven successful in WEG's CFW09 Variable Frequency Drive are now integrated into the SSW06 Soft Starter.

ADVANTAGES

A **Dual Readout Digital Copy Keypad** allows maximum ease of operation by providing a high visibility red LED display and a 2-line by 16-character alpha-numeric display that virtually eliminates the need for an instruction manual during set-up and operation. The alpha-numeric readout can display in English, Spanish, German or Portuguese. The copy keypad function allows the storage of two unique sets of User Parameters for easy recall. This can also be used to download these parameters to other SSW06's for easy set-up and "cloning" of multiple soft starters.

"Oriented Start-Up" is a WEG exclusive advantage that simplifies the initial start-up of the SSW06. The SSW06 asks for operational and motor information via the keypad, thereby assuring correct operation and the motor overload protection is setup accurately.

The **Built-in Bypass Contactor** will automatically put the AC motor "across-the-line" once the SSW06 has smoothly accelerated the motor up-to-speed. The bypass contactor will minimize power losses and heat dissipation by removing the SCR's from the motor control and also provide energy savings and a smaller overall soft starter package. The user can mount the SSW06 inside of a more protective enclosure, NEMA1, NEMA3R, NEMA12, NEMA4 and NEMA4X with minimal cooling requirements.

Universal Source Voltage allows a single unit to be used in applications with voltages ranging from 220 to 575V AC three phase, 50/60Hz. The appropriate soft starter would be selected by the full load Amps of the AC motor.

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



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The SSW06 is WEG's third generation Soft Starter line. It's keypad with dual display provides high visibility on bright, red LED digits and ease of programming with the aid of a plain English display. Integral bypass contacts eliminate heat dissipation once the motor is at full voltage, which makes it extremely compact and allows for simple integration into non ventilated enclosures and replacement of electromechanical starters in Motor Control Centers.



APPLICATIONS

STANDARD FEATURES

- Pumps
- Fans
- Blowers
- Compressors
- Crushers
- Saws
- Grinders
- Mixers

- 0 - 600V, 50/60Hz input power supply
- Built-in run rated (A1) bypass contactor
- Duty cycle: 300% full load amps for 30 seconds, 10 starts per hour
- Voltage ramp or current limit start modes
- Detachable keypad with dual display (LCD and LED) and copy function
- 90 - 250Vac auxiliary control voltage
- Single 32 bit RISC processor based control board
- IP00 protected chassis enclosure
- Six isolated 24Vdc programmable digital inputs
- Three programmable relay outputs (2 Aip - 250V)
- 0 - 10Vdc programmable analog output
- 4 20mA programmable analog output
- Motor ITC thermistor input
- RS-232 serial interface
- Adjustable acceleration and deceleration ramps (1 - 299 seconds)
- Adjustable pedestal voltage (25 - 90% of line voltage)

- Diagnostic features: Motor overload, over current and phase loss, motor immediate over and under current, SCR over temperature and fault, line phase loss and phase sequence, line over and under voltage
- Display readings: Motor current, voltage, kW and power factor, line voltage and frequency, four last fault trips, run and power-up timers
- Ambient: 32 °F (0°C) to 131°F (55°C), 3300 ft (1000m) altitude, 90% non-condensing humidity

OPTIONAL FEATURES

- RS-485 serial interface
- Remote keypad cables and mounting frame
- Programming software
- RS-485-SSW06



SOFT STARTERS



SSW06 – IP00 PROTECTED CHASSIS ENCLOSURE

Motor Volts	Motor HP	Soft Starter AMPS	Catalog Number	Frame Size	Dimensions (in.) H x W x D	App. Shpg. Wt. (lbs.)	List Price	Multiplier Symbol
INPUT POWER SUPPLY: THREE-PHASE - 230V								
230V	25 / 30	85	SSW060085T2257ESZ	1	14.6 x 5.2 x 9.6	19	\$ 2,771	E1
	50	130	SSW060130T2257ESZ	1	14.6 x 5.2 x 9.6	19	\$ 3,547	E1
	60	170	SSW060170T2257ESZ	2	17.3 x 8.8 x 11	41	\$ 4,270	E1
	75	205	SSW060205T2257ESZ	2	17.3 x 8.8 x 11	41	\$ 5,354	E1
	100	255	SSW060255T2257ESZ	3	21.6 x 14.6 x 12.3	87	\$ 7,188	E1
	125	312	SSW060312T2257ESZ	3	21.6 x 14.6 x 12.3	87	\$ 7,896	E1
	150	365	SSW060365T2257ESZ	3	21.6 x 14.6 x 12.3	87	\$ 8,721	E1
INPUT POWER SUPPLY: THREE-PHASE - 460V								
460V	50 / 60	85	SSW060085T2257ESZ	1	14.6 x 5.2 x 9.6	19	\$ 2,771	E1
	75 / 100	130	SSW060130T2257ESZ	1	14.6 x 5.2 x 9.6	19	\$ 3,547	E1
	125	170	SSW060170T2257ESZ	2	17.3 x 8.8 x 11	41	\$ 4,270	E1
	150	205	SSW060205T2257ESZ	2	17.3 x 8.8 x 11	41	\$ 5,354	E1
	200	255	SSW060255T2257ESZ	3	21.6 x 14.6 x 12.3	87	\$ 7,188	E1
	250	312	SSW060312T2257ESZ	3	21.6 x 14.6 x 12.3	87	\$ 7,896	E1
	300	365	SSW060365T2257ESZ	3	21.6 x 14.6 x 12.3	87	\$ 8,721	E1
INPUT POWER SUPPLY: THREE-PHASE - 575V								
575V	75	85	SSW060085T2257ESZ	1	14.6 x 5.2 x 9.6	19	\$ 2,771	E1
	100 / 125	130	SSW060130T2257ESZ	1	14.6 x 5.2 x 9.6	19	\$ 3,547	E1
	150	170	SSW060170T2257ESZ	2	17.3 x 8.8 x 11	41	\$ 4,270	E1
	200	205	SSW060205T2257ESZ	2	17.3 x 8.8 x 11	41	\$ 5,354	E1
	250	255	SSW060255T2257ESZ	3	21.6 x 14.6 x 12.3	87	\$ 7,188	E1
	300	312	SSW060312T2257ESZ	3	21.6 x 14.6 x 12.3	87	\$ 7,896	E1
	350	365	SSW060365T2257ESZ	3	21.6 x 14.6 x 12.3	87	\$ 8,721	E1

- Notes:**
- 1) "HP" rating based on Table 430-150 of the NEC. Use as a guide only. Motor FLA may vary with speed and manufacturer. **ALWAYS compare motor FLA to Nominal AMPS of starter.**
 - 2) 120V or 240V Control Power Supply required.
 - 3) For other technical data please refer to WEG product manual.

SSW06 – ACCESSORIES

	Description	Catalog Number	List Price	Multiplier Symbol
Keypads and Keypad Cables	Standard Keypad with LED & LCD	HMI-SSW06-LCD	\$ 202	E1
	Remote Keypad FRAME KIT	KMR-SSW06	\$ 63	E1
	3.3 ft. Remote Keypad Cable	CAB-HMI-SSW06-1	\$ 33	E1
	6.6 ft. Remote Keypad Cable	CAB-HMI-SSW06-2	\$ 39	E1
	10 ft. Remote Keypad Cable	CAB-HMI-SSW06-3	\$ 44	E1
	16 ft. Remote Keypad Cable	CAB-HMI-SSW06-5	\$ 55	E1
Communication	Profibus DP Communication Kit	KFD-PD-SSW06	\$ 1,120	E1
	DeviceNet Communication Kit	KFB-DN-SSW06	\$ 1,009	E1
	Interface for RS-485 Communication	KRS-485-SSW06	\$ 189	E1
IP20 Kits	SSW06 IP20 Kit - Size 2 (85-130A)	KIT IP20 SSW06 M2	\$ 210	E1
	SSW06 IP20 Kit - Size 3 (170-205A)	KIT IP20 SSW06 M3	\$ 236	E1
	SSW06 IP20 Kit - Size 4 (255-365A)	KIT IP20 SSW06 M4	\$ 254	E1
Lug Kits	SSW06 Lug Kit - Size 2 (85-130A)	SSW06-LK085-130	\$ 99	E1
	SSW06 Lug Kit - Size 3 (170-205A)	SSW06-LK170-205	\$ 162	E1
	SSW06 Lug Kit - Size 4 (255-365A)	SSW06-LK255-365	\$ 293	E1



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SSW06 – TECHNICAL DATA

POWER SUPPLY	Main Voltage	Three-phase 220 - 575VAC (+10%, -15%)			
	Control Voltage	Single-phase 110 - 230 VAC (+10%, -15%), Fan: 110 or 230 VAC only for frame size 4			
	Frequency	50 / 60 Hz (+/- 10 %)			
ENCLOSURE	Metallic Cabinet	IP-00 Degree of Protection			
	Color	Cover: Opaque Gray, Cabinet: Opaque Blue			
CONTROL	Method	Voltage ramp, Current Limit and Pump Control			
	Power Supply	Switched mode			
	CPU	32 bit RISC Microprocessor			
STARTING DUTY CYCLE (10 Starts / Hour)	Normal	300 % (3 x Irated) for 30 s			
	Heavy	450 % (4.5 x Irated) for 30 s with 33% current derating			
CONTROL INPUTS	Digital	5 X 24 VDC programmable isolated inputs 1 X Motor PTC thermistor			
CONTROL OUTPUTS	Relay	2 programmable outputs 250 VAC / 1A Form A Contact (NO) 1 programmable output 250 VAC / 1A Form C Contact (NO+NC)			
	Analog	1 Programmable Output (11 bits): 0 - 10 VDC 1 programmable output (11 bits) 0 - 20mA or 4 - 20mA			
SAFETY	Protections	Under voltage, phase fault or phase imbalance	Excess current limit time		
		Over temperature	Motor locked rotor		
		Motor Overload – i2t	Motor Over Current and Under Current		
		External Fault	Phase sequence		
		Copy function error	Control Under Voltage		
		Motor not connected	Opened bypass contactor		
		Over Voltage	Over current before bypass		
		Programming error	Immediate over current during bypass		
		Communication errors	Current Imbalance		
		Keypad connection error	Power supply frequency out of range		
		Motor Over current	Under current before bypass		
		Motor Over temperature (via Thermistor Input)	Bypass contacts not opened		
		Self Diagnosis error			
FUNCTIONS / FEATURES	Standard	Built-in operator interface, detachable with dual display LED + LCD			
		Programming enabling password			
		LCD display Language selection: English, Spanish, German and Portuguese			
		Local / Remote operation selection			
		PUMP CONTROL function (Water hammer protection for pumps)			
		COPY function (Soft-Starter to Keypad or Keypad to Soft-Starter)			
		Soft starter integral by-pass contactor			
		FWD / REV Feature via Digital Input (Needs External Contactor)			
		RS-232 Serial Interface			
		Motor PTC thermistor input			
		Programmable line voltage	220 - 575 VAC		
		Programmable initial (pedestal) voltage	25 ... 90% of Rated Input Voltage		
		Programmable acceleration ramp	1 ... 999 seconds		
		Programmable deceleration ramp	OFF, 1 ... 299 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	0 ... 99 % above rated current		
		Programmable immediate over current time	OFF, 1 ... 99 seconds		
		Programmable immediate motor under current	0 ... 99 % below rated current		
		Programmable immediate under current time	OFF, 1 ... 99 seconds		
		Programmable starting torque boost, voltage or current (KICK-START)	Level: 70 - 90% of line voltage Level: 300 - 700% of soft starter rated current Duration: 0.1 - 2 s		
		Programmable fault auto-reset	OFF, 1 - 600 s		
		Programmable motor thermal memory auto-reset	OFF, 1 - 600 s		
		Motor thermal overload protection class	0 (disabled); 5; 10; 15; 20; 25; 30; 35; 40; 45		
		Motor Service Factor	0 (disabled); 0.01 - 1.50		
	Optional	Cable for remote keypad connection (3 to 15ft)			
		Remote keypad mounting frame			
KEYPAD	Programming / Commands	Start / Stop, Reset and Programming			
	Display readings	Increase and decrease parameters and their content			
		Soft-Starter Output current (% of soft starter rated current)			
		Motor current (Amps)			
		Motor current (% of motor rated current)			
		Line frequency (0 - 99 Hz)			
		Line Voltage (0 - 999VAC)			
		Soft starter output voltage (0 - 999VAC)			
		Motor active power (kW)			
		Motor apparent power (kVA)			
		Soft starter status			
		Digital and analog I/Os status			
		Motor power factor (0.00 - 0.99)			
		Time Powered			
		Time Enabled			
		Four last faults back-up			
		Soft starter firmware version			
		Motor thermal protection (0 - 250)			
		Motor current indication in each phase R-S-T			
		Line voltage indication R-S / S-T / T-R			
AMBIENT	Temperature	0...131 °F (0 ... 55°C); standard operation at rated current			
	Humidity	20 ... 90% non condensing			
	Altitude	0...3300 ft (0 ... 1000 m); standard operation at rated current Up to 13300 ft (4000 m): with 10% / 1000 m Output Current De-rating			
CONFORMITIES	Safety	UL 508 Standard - Industrial Control Equipment			
	Low Voltage	EN 60947-4-2 Standard; LVD 73/23/EEC – Low Voltage Directive			
	EMC	EMC directive 89 / 336 / EEC - Industrial Environment			
	UL (USA) / cUL (Canada)	Underwriters Laboratories Inc. - USA			
	CE (EUROPE)	Phoenix Test-Lab / Germany			
	C-Tick (Australia)	Australian Communications Authority			

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