Motors | Automation | Energy | Paints

Soft Starters

SSW07

AB.508.SSW07

Soft Starters SSW07

- Soft Starters are static starting switches, designed for the acceleration, deceleration and protection of the three phase, electric induction motor through the control of the voltage applied to the motor.
- The SSW07, with DSP control (Digital Signal Processor), was designed to provide great performance at motor starts and stops with excellent cost-benefit relation.
- Easy to set up, it simplifies start-up activities and daily operation.
- The SSW07 is compact, contributing to optimized space in electric panels.
- The SSW07 incorporates all electric motor protections.
- The SSW07 adapts to customer needs through its easy-to-install optional accessories.
- Thus, a keypad, a communication interface or a motor PTC input can be added to the product.

Applications

- Chemical and Petrochemical
- Plastic and Rubber
- Pulp and Paper
- Sugar and Alcohol
- Beverages
- Cement and Mining
- Food and Ration
- Textile
- Metallurgy
- Ceramics
- Glass
- Refrigeration
- Wood
- Sanitation
- Load Transportation

Standard Features

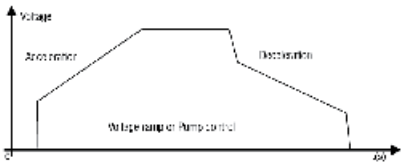
- Strong reduction on mechanical stresses over the coupling and transmission devices (gearboxes, pulleys, gears, conveyors, etc.) during the start
- Eliminates mechanical shock
- Increases motor and machine mechanical equipment lifetime due to the elimination of mechanical shock
- Easy operation, setup, maintenance & installation
- Simple electric installation
- Operates in environments up to 55ºC (without current reduction for all models)
- Integral, electronic motor protection
- Built-in electronic thermal relay
- Avoids the “Water Hammer” in pumps
- Limitation of voltage drop during start
- Universal voltage (220 to 575 Vac)
- Switched type power supply with EMC filter for the control electronics (110 to 240 Vac)
- Voltage monitoring of the electronics to back-up I x t values (thermal image)

SSW07 – Programming Features

All programming necessary for starting any type of load is available through trimpots and dip-switch.

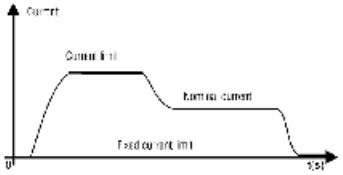
Voltage Ramp

Permits smooth acceleration and/or deceleration, through voltage ramps.



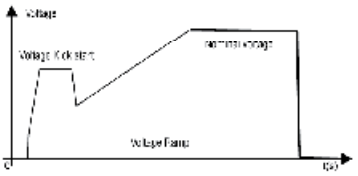
Current Limit

Permits to set the current limit during the start, according to the application requiriments.



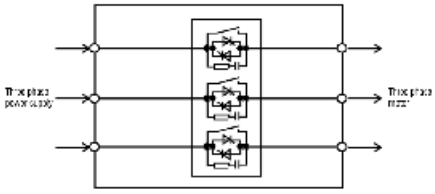
Voltage Kick Start

Enables an initial voltage pulse which, applied to the motor, provides initial starting torque reinforcement. This is necessary for starting high breakway torque loads.



Built in By Pass

Built-in by-pass minimizes power losses and heat dissipation in the thyristors, providing size reduction and contributing to energy saving. This is available in all models.



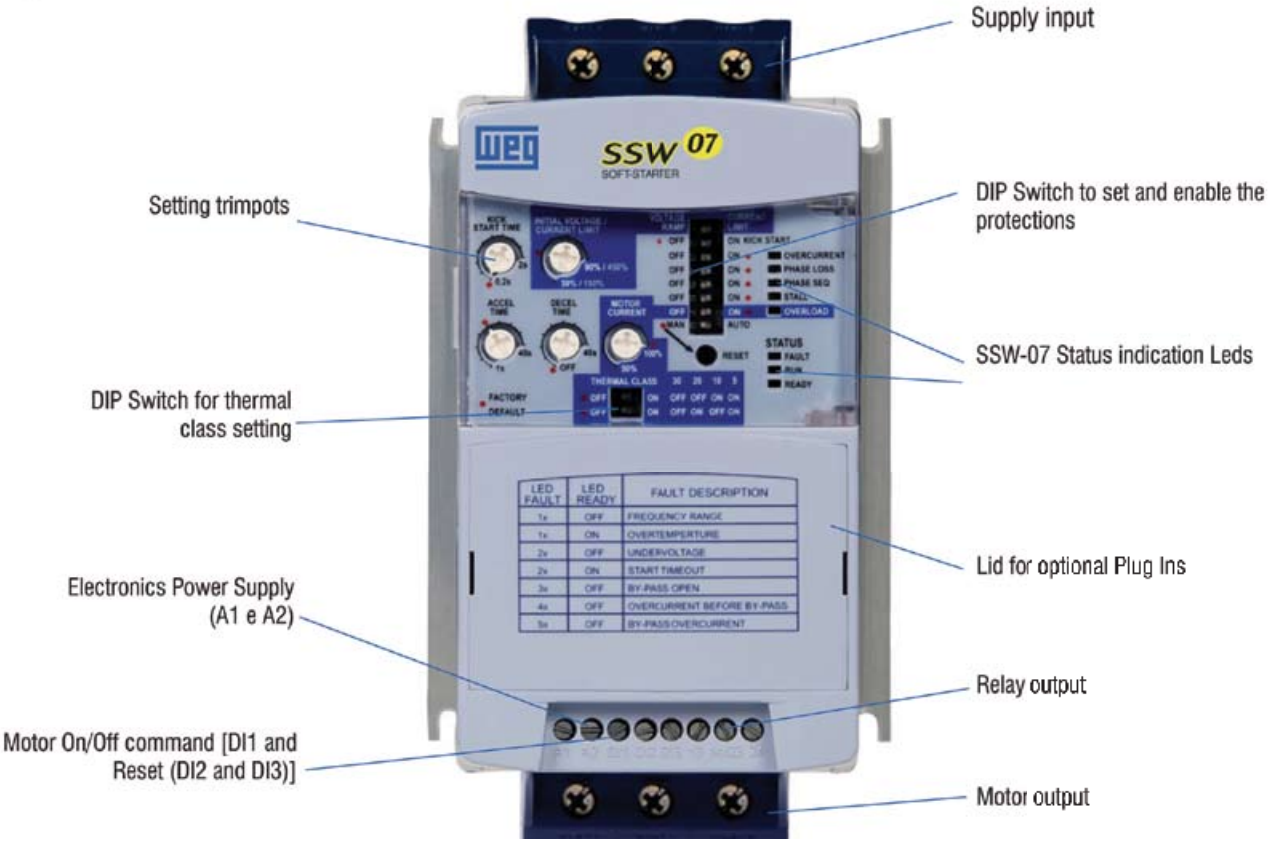
SSW07 – IP20 Frame Size 1 and 2, IP00 Frame Size 3

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
220V / 230V	**INPUT POWER SUPPLY: THREE PHASE - 220V / 230V**							
	6	17	SSW070017T5SZ	1	6.38 x 3.74 x 6.18	2.9	$1,158	E1
	7.5	24	SSW070024T5SZ	1	6.38 x 3.74 x 6.18	2.9	$1,241	E1
	10	30	SSW070030T5SZ	1	6.38 x 3.74 x 6.18	2.9	$1,281	E1
	15	45	SSW070045T5SZ	2	8.2 x 5.57 x 7.94	7.28	$1,461	E1
	20	61	SSW070061T5SZ	2	8.2 x 5.57 x 7.94	7.28	$1,546	E1
	30	85	SSW070085T5SZ	2	8.2 x 5.57 x 7.94	7.28	$1,992	E1
	50	130	SSW070130T5SZ	3	10.9 x 8.6 x 8.66	16.8	$2,501	E1
	60	171	SSW070171T5SZ	3	10.9 x 8.6 x 8.66	16.8	$3,177	E1
	75	200	SSW070200T5SZ	3	10.9 x 8.6 x 8.66	16.8	$3,766	E1
440V / 460V	**INPUT POWER SUPPLY: THREE PHASE - 440V / 460V**							
	12.5	17	SSW070017T5SZ	1	6.38 x 3.74 x 6.18	2.9	$1,158	E1
	15	24	SSW070024T5SZ	1	6.38 x 3.74 x 6.18	2.9	$1,241	E1
	20	30	SSW070030T5SZ	1	6.38 x 3.74 x 6.18	2.9	$1,281	E1
	30	45	SSW070045T5SZ	2	8.2 x 5.57 x 7.94	7.28	$1,461	E1
	50	61	SSW070061T5SZ	2	8.2 x 5.57 x 7.94	7.28	$1,546	E1
	60	85	SSW070085T5SZ	2	8.2 x 5.57 x 7.94	7.28	$1,992	E1
	100	130	SSW070130T5SZ	3	10.9 x 8.6 x 8.66	16.8	$2,501	E1
	125	171	SSW070171T5SZ	3	10.9 x 8.6 x 8.66	16.8	$3,177	E1
	150	200	SSW070200T5SZ	3	10.9 x 8.6 x 8.66	16.8	$3,766	E1
575V	**INPUT POWER SUPPLY: THREE PHASE - 575V**							
	15	17	SSW070017T5SZ	1	6.38 x 3.74 x 6.18	2.9	$1,158	E1
	20	24	SSW070024T5SZ	1	6.38 x 3.74 x 6.18	2.9	$1,241	E1
	30	30	SSW070030T5SZ	1	6.38 x 3.74 x 6.18	2.9	$1,281	E1
	40	45	SSW070045T5SZ	2	8.2 x 5.57 x 7.94	7.28	$1,461	E1
	60	61	SSW070061T5SZ	2	8.2 x 5.57 x 7.94	7.28	$1,546	E1
	75	85	SSW070085T5SZ	2	8.2 x 5.57 x 7.94	7.28	$1,992	E1
	125	130	SSW070130T5SZ	3	10.9 x 8.6 x 8.66	16.8	$2,501	E1
	175	171	SSW070171T5SZ	3	10.9 x 8.6 x 8.66	16.8	$3,177	E1
	200	200	SSW070200T5SZ	3	10.9 x 8.6 x 8.66	16.8	$3,766	E1

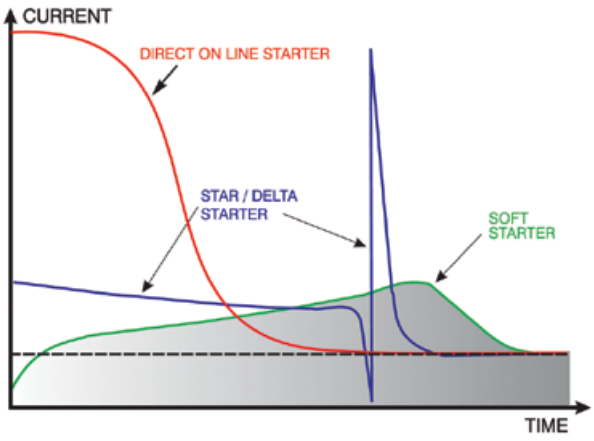
SSW07 – Accessories

	Description	Catalog Number	List Price	Multiplier Symbol
Keypads	Keypad	HMI-LOCAL-SSW07	$ 174	E1
	Remote Keypad Kit	HMI-REMOTE-SSW07	$ 340	E1
Keypad Cables	3.3 ft Remote Keypad Cable	CAB-RS-1	$ 14	V1
	6.6 ft Remote Keypad Cable	CAB-RS-2	$ 17	V1
	10 ft Remote Keypad Cable	CAB-RS-3	$ 20	V1
	16 ft Remote Keypad Cable	CAB-RS-5	$ 25	V1
	25 ft Remote Keypad Cable	CAB-RS-7.5	$ 34	V1
	33 ft Remote Keypad Cable	CAB-RS-10	$ 39	V1
Communication	RS-232 Communication Kit	KRS-232-SSW07	$ 121	E1
	RS-485 Communication Kit	KRS-485-SSW07	$ 201	E1
	Cable for Communication RS232 (DB9-DB9) - 3m	CAB-COMM-3	$ 75	E1
	Cable for Communication RS232 (DB9-DB9) - 10m	CAB-COMM-10	$ 164	E1
KITS	Ventilation Kit M2 (Frame Size 2, 45 to 85A)	SSW07-VENT KIT-M2	$ 51	E1
	Ventilation Kit M3 (Frame Size 3, 130 o 200A)	SSW07-VENT KIT-M3	$ 94	E1
	PTC Kit for motor	KIT-PTC-SSW07-MOTOR	$ 123	E1
	IP20 Kit for M3 (Frame Size 3, 130 o 200A)	KIT-IP20-SSW07	$ 62	E1
	Superdrive G2 Kit (KRS-232-SSW07+CAB-COMM-3+CD Software)	KSDG2-SSW07	$ 225	E1

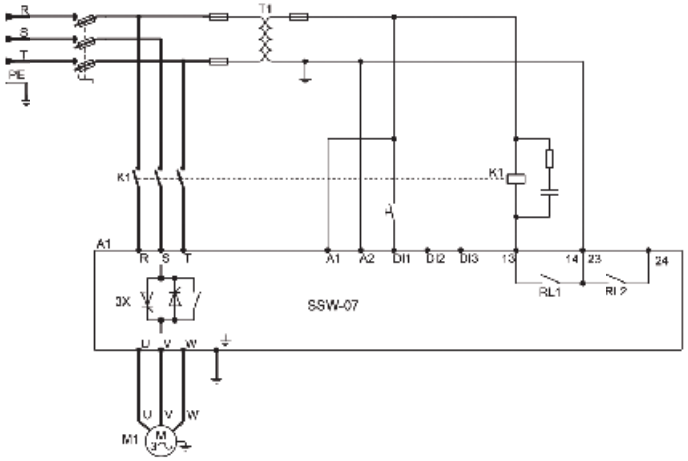
Applications and Indications



Starting Method Comparison



Typical Starters



Accessories and Options

The SSW07 Soft Starters can be interconnected to quick “FieldBus” communication networks, through Modbus RTU protocol. Mainly designed to integrate large industrial automation plants, the quick communication networks provide advantages in supervision, monitoring and control, “online” and complete, over the Soft Starters, providing high performance and great operating flexibility, which characteristics are demanded for complex and/or integrated system applications. For interconnection in “FieldBus” type communication networks, the SSW07 Soft Starters allows the installation of plug-in type optionals on the front of the product. There are optional modules for the Modbus RTU protocol for communication in RS-232 or RS-485.

HMI-LOCAL-SSW07

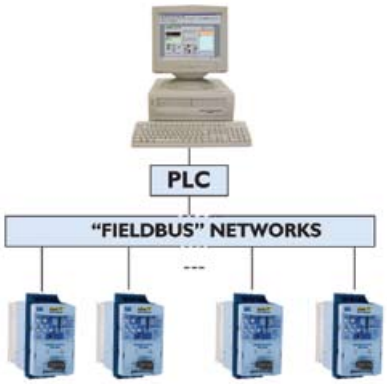
The MMI with 7-segment LED display allows excellent parameter visualization from distance. The interface incorporates the “Copy” function, which permits to copy the parameterization from a SSW07 to other ones, providing fast programming, reliability and repeatability in serial manufacturing machinery. Plug-in type MMI in front of product.

SSW-07 local MMI

HMI-REMOTE-SW07 Remote HMI for placing in panel door or machinery console.

SSW-07 remote MMI

Cable for connecting MMI to SSW07. Cable length: 1, 2, 3, 5, 7.5 and 10m.



KSDG2-SSW07

Software in Windows platform, for SSW07 parameterization, command and monitoring.

- SSW07 automatic identification
- Reads SSW07 parameters
- Writes parameters in SSW07
- Edits online parameters in SSW07
- Edits offline parameters in PC
- Enables creation of all application documentation
- Easily accessible
- Enables parameterization, command and monitoring of the SSW07
- Supplied with a 3m RS-232 serial cable when the Superdrive G2 software is acquired
- Free version available at WEG’s website www.weg.net

SSW07 – Accessories and Options

CAB-COMM-3 OR CAB-COMM-10

Cable for connecting RS-232.

Cable length in 3 and 10m.

COMMUNICATION MODULES

DeviceNet via gateway MFW-01/DN or Profibus-DP via gateway MFW-01/PD.

KIT-PTC-SSW07 MOTOR

Optional module for motor PTC connection.

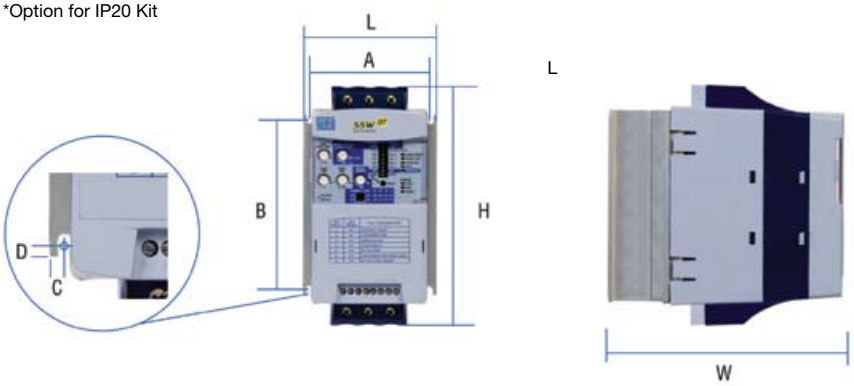
SSW07-VENT KIT-M2 OR M3

For models from 45 A to 200 A.'A ventilation kit is necessary or heavy duty starting cycle.

Dimensions and Weights

SSW-07 Model	Height H mm (In)	Width L mm (In)	Depth. P mm (In)	A mm (In)	B mm (In)	C mm (In)	D mm (In)	Fixing screw	Weight kg (lb)	Enclosure
SSW070017 SSW070024 SSW070030	162 (6.38)	95 (3.74)	157 (6.18)	85 (3.35)	120 (4.72)	5 (0.20)	4 (0.16)	M4	1.3 (2.9)	IP20
SSW070045 SSW070061 SSW070085	208 (8.19)	144 (5.67)	203 (7.99)	132 (5.2)	148 (5.83)	6 (0.24)	3.4 (0.13)	M4	3.3 (7.28)	IP20
SSW070130 SSW070171 SSW070200	276 (10.9)	223 (8.78)	220 (8.66)	208 (8.19)	210 (8.27)	7.5 (0.3)	5 (0.2)	M5	7.6 16.8)	IP00*

Table 3.1 Data for installation with dimensions in mm (in)
*Option for IP20 Kit



Technical Specifications

Power Supply	Power	220 to 575 Vac	
	Control	110 to 240 Vca (-15% to +10%), or 94 to 264 Vac	
	Frequency	50 to 60 Hz (+/- 10%), or 45 to 66 Hz	
Enclosure	Injected plastic	IP20 in models from 17 to 85 A	
		IP00 in models from 130 to 200 A (IP20 as option)	
Control	Control Method	Voltage variation over the load (three-phase induction motor)	
	CPU	DSP type microcontroller (Digital Signal Processor)	
	Types of Control	Voltage ramp	
		Current limitation	
Starting Cycle (1)	Normal	300% (3 x Inom.) during 30 s, 10 starts per hour (every 6 minutes)	
Inputs	Digital	3 isolated programmable inputs	
Outputs	Relay	02 relays with NO contacts, 240Vac, 1A, programmable functions	
Safety	Protections (Standard)	Overcurrent;	Locked Rotor
		Overcurrent before By-pass	Excess starting time
		Phase loss;	Frequency outside tolerance
		Inverted phase sequence;	By-pass contact open
		Overtemperature in power heatsink;	Undervoltage in control supply
		Motor Overload (class 5 to 30)	
	Protections (with Accessory)	Undercurrent	Programming error
		Current imbalance	Serial communication error
		Subcurrent before By-pass	MMI communication error
		External defects	Overtemperature in motor PTC
Functions / Resources	Standard	Voltage ramp (Initial voltage: 30% to 90%)	
		Current limitation (150% to 450% of SSW-07 rated current)	
		Starting time (1 to 40s)	
		Kick Start (Off - 0,2 to 2s)	
		Deceleration ramp (0 to 40s)	
		Motor and SSW-07 current relation (50% to 100%)	
		Faults auto-reset	
		Thermal memory auto-reset	
		Factory standard reset	
		Soft-starter built-in By-pass	
Programming Accessory (MMI or Serial communication)	Command	On, Off / Reset and Parameterization (function Programming)	
	Additional Functions / Resources	Starting time up to 240s	
		Deceleration time up to 240s	
		Program enabling password	
		Selection for Local / Remote operation	
		COPY function (SSW-07 >>> MMI and MMI >>> SSW-07)	
		Programmable rated voltage	
	Supervision (Reading)	Motor current (%Soft-Starter In)	
		Motor current (%motor In)	
		Motor current (A)	
		Current indication in each phase R-S-T	
		Supply network frequency	
		Apparent power supplied to load (kVA)	
		Soft-Starter status	
		Digital input and output status	
		Back up of 4 last errors	
		Soft-Starter Software Version	
		Heatsink temperature	
		Motor thermal protection status	
Accessories and Options	Options	Plug-in type local MMI	
		MMI remote Kit	
		1,2,3,5,7.5 and 10m for remote MMI interconnection	
		RS-232 communication kit	
		SSW-07 interconnection cables>>> PC Serial (RS-232) 3 and 10m	
		RS-485 communication kit	
		Motor PTC kit	
		Ventilation kit for size 2 (45 to 85 A)	
		Ventilation kit for size 3 (130 to 200 A)	
		IP20 kit for size 3 (130 to 200 A)	
Finishing	Color	Lid: Gray Ultra Mat	
		Cabinet: Blue Ultra Mat	
Conformities / Standards	Safety	UL 508 Standard- Industrial Control Equipment	
	Low voltage	EN60947-4-2;LVD 2006/95/EC Standard – Low voltage Directive	
	EMC	EMC 89/336/EEC Directive – Industrial Environment	
	UL (USA) / cUL (Canada)	Underwriters Laboratories Inc. – USA	
	CE (Europe)	Conformity test conducted by EPCOS	
	C-Tick (Australia)	Australian Communication Authority	
	GOST (Russia)		

(1) For the 45 to 200 A currents using the ventilation kit.

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www.weg.net

Please contact your authorized distributor:

AB.508.SSW07