

Overview

The WEG SSW05 Soft Starter is a compact, fully digital soft starter with a state-of-the-art DSP (Digital Signal Processor) controller. Its digital construction provides optimum operation, diagnostics capability and full motor protection.

Simplicity in set-up and operation is assured since all parameters and set-up selections are made via DIP switches and potentiometers. Status LEDs alert the user of the operational status of the SSW05. Simplicity, ease of set-up, and the small panel assure quick and easy installation and operation.

Features

- 208-480 VAC, 50/60 Hz input power supply
- Duty cycle: 300% rated current for 10 seconds, 4 starts per hour
- · Built-in bypass contactor
- One digital input for Start/Stop (90-250 VAC)
- One digital input for Fault Reset (90-250 VAC)
- One relay output for Run indication (1A, 250V)
- RS-232 serial port for HMI connection only
- Adjustable acceleration and deceleration ramps (1-20 sec)
- Adjustable pedestal voltage (30-80% of line voltage)
- · Protective features:
- - Motor overload
- - Overcurrent and locked rotor
- - SCR overload
- · Phase loss and phase sequence
- DIN rail or direct mount
- Ambient:
- 0°C [32°F] to 55°C [131°F]
- 3300ft (1000m) altitude
- 90% non-condensing humidity
- · Remote keypad (optional)
- For high inertia loads, see the SSW07 product line



Advantages

- Reduction of stress on couplings and other transmission devices during starting (gearboxes, sheaves, etc.)
- Extended lifetime of motor and mechanical components due to reduced mechanical stress
- Easy operation, programming and maintenance
- Simple electrical wiring
- Operation in ambient temperatures up to 55°C [131°F]

Optional Accessories

• Remote HMI module

Applications

- Centrifugal pumpsRoller tables
- Piston compressors
- Mixers
- Fans
- Roller tables (no load starting)
- Axial fans (low inertia light

Certifications





Selecting the Right Soft Starter

SSW05 Soft Starters – Selection – Steps 1 & 2 (of 4)									
		Typical Applications							
Step 1: Select the application from the list and follow that column down.		Standard	l Duty	Medium	Duty*	Heavy Duty*	Light Duty		
		Default Agitator Bow Thruster - Zero Pitch Compressor - Rotary Vane Compressor - Scroll Conveyor - Unloaded Fan - Low Inertia < 85A Feeder - screw Lathe machines Mixer - Unloaded	Molding Machine Plastic and textile machines Pump - Submersible Centrifugal Pump - Submersible Rotodynamic Saw - Band Transformers, voltage regulators	Ball mill Bow Thruster - Loaded Compressor - Centrifugal Compressor - Reciprocating Compressor - Rotary Screw Conveyor - Loaded Grinder Hammer mill Mills - Flour, etc. Mixer - Loaded Pelletizers	Pump - Positive displacement Reciprocating Pump - Positive displacement Rotary Pump Jack Rolling mill Roots Blower Saw - Circular Screen - Vibrating Tumblers	Centrifuge* *For centrifuges make selection at I(A) = motor FLA x 2.3	Unloaded / Very lightly loaded motor Commercial applications Centrifugal pump Screw compressor (no load starting) Vane vacuum pump Light duty lathe Light duty mixer (no load starting		
Step 2: Trip Class		The SSW05 is for Light Duty only. *		The SSW05 is for Light Duty only. *		The SSW05 is for Light Duty only. *	5		
Confirm the rated starting capability of the soft start against the application.	Rated Starting Capability	The SSW05 is for Light Duty only. *		The SSW05 is for Light Duty only. *		The SSW05 is for Light Duty only. *	3x Motor Current - 10s		
	Max Starts per Hour	Index Ra	ating Standard (Class	4 starts/hr s5) AC53b: 3-10:890; Overcurrent = 3 x soft starter rated current for 10 seconds					
	per nour	Warning: Applying more starts per hour than the specified 4 starts/hr will cause the starter to overheat and fail.							

^{*} For Standard, Medium or Heavy Duty applications, consider the SSW07 family or the SR33 or SR55 Stellar family soft starters.



SSW05 Soft Starters – Selection – Step 3 (of 4)					
Step 3: Consider the operating environment and make the model selection based on a higher horsepower rating.					
Height Above Sea Level	Standard operating height is 3280ft. For every 328ft, increase motor HP by 1%, up to 13.200ft. Example: For a 100HP motor at 4900ft, make model selection based on 105HP (5% higher).				
Operating Temperature	Standard operating temperature is 55°C [122°F].				
Increased Starts per Hour	See SSW07 model for more than 4 starts/hr				



	SSW05 Soft Starters – Selection – Step 4 (of 4)						
Step 4	Step 4: Select SSW05 model based on your motor voltage and horsepower						
	Мо	tor Size		Soft Starter Size			
In-Line Connection				Application Trip Class	Maximum		
HP @				Class 5	Starts Per		
I (A)	230V*	460V*	Size	Class 5	Hour		
10	3	5	1	SSW050010T2246TPZ	4		
16	5	10	1	SSW050016T2246TPZ	4		
23	7.5	15	1	SSW050023T2246TPZ	4		
30	10	20	1	SSW050030T2246TPZ	4		
45	15	30	2	SSW050045T2246TPZ	4		
60	20	40	2	SSW050060T2246TPZ	4		
85	30	60	2	SSW050085T2246TPZ	4		

^{* 230}V=208-240V, 460V=440-480V

WEG Soft Starter Selection Tool Software is available online at automationdirect.com/selectors/softstarters



WEG SSW05 Compact Soft Starters Selection Chart ^{1, 2, 3}								
Part Number	Price	Motor Volts	Motor HP	Soft Starter Amps	Frame Size	Dimensions (HxWxD) (in [mm])	Approx. Weight (lb [kg])	
Input Power Supply: 3-Phase, 230VAC								
SSW050010T2246TPZ	\$324.00		3	10	1			
SSW050016T2246TPZ	\$368.00		5	16	1	5.1 x 2.3 x 5.7 [129.5 x 58.4 x 144.8]	3 [1.4]	
SSW050023T2246TPZ	\$423.00		7.5	23	1			
SSW050030T2246TPZ	\$460.00	230VAC	230VAC 10		1			
SSW050045T2246TPZ	\$575.00		15	45	2	7.3 x 3.1 x 6.8 [185.4 x 78.7 x 172.7]	6 [2.7]	
SSW050060T2246TPZ	\$693.00		20	60	2			
SSW050085T2246TPZ	\$843.00		30	85	2			
	Input Power Supply: 3-Phase, 460VAC							
SSW050010T2246TPZ	\$324.00		5	10	1			
SSW050016T2246TPZ	\$368.00		10	16	1	5.1 x 2.3 x 5.7 [129.5 x 58.4 x 144.8]	3 [1.4]	
SSW050023T2246TPZ	\$423.00		15	23	1			
SSW050030T2246TPZ	\$460.00	460VAC	20	30	1			
SSW050045T2246TPZ	\$575.00		30	45	2		6 [2.7]	
SSW050060T2246TPZ	\$693.00		40	60	2	7.3 x 3.1 x 6.8 [185.4 x 78.7 x 172.7]		
SSW050085T2246TPZ	\$843.00		60	85	2			

2) 90-250 VAC control power supply required.

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

WEG SSW05 Compact Soft Starters Specifications					
	Main Voltage	220-460 VAC (+10%, -15%)			
Power supply	Control Voltage	90-250 VAC			
	Frequency	50/60 Hz (+/- 5Hz)			
Enclosure		IPOO protected chassis			
Duty cycle		300% rated current during 10 seconds, 4 starts per hour			
Digital control inputs		One input for Start/Stop (90-250 VAC) One input for Fault Reset (90-250 VAC)			
Communication		N/A			
Safety protections		Motor overload* Locked rotor* Overcurrent* Phase sequence* Phase loss* SCR overload			
	Pedestal voltage	30-80% of line voltage			
	Accel ramp	1-20 seconds			
Control features	Decel ramp	Off-20 seconds			
	Motor current	30-100% of SSW05 rating			
	Fault reset	Manual or automatic			
	Temperature	32-131°F [0-55°C]			
 Ambient	Humidity	0-90% non-condensing			
7 III III III	Altitude	0-1000 m [0-3300 ft] - standard operation at rated current Up to 4000m [13,200 ft] - with current derating (1% per 100m [328ft] above 1000m [3281ft]			
Conformities	Low voltage	UL508 - Industrial Control Equipment IEC60947-4-2			
	EMC	EMC Directive 89/336/EEC - Industrial Environment, Class A			

^{*} Can be disabled

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.



SSW05 Max UL Overcurrent Protection

UL Maximum Overcurrent Protection Devices 1, 2						
Soft Starter Model Number	Voltage	Max Current	Standard Fault	Fuse		
SSW050010T2246TPZ	220-460 VAC	10A	5kA	Bussman, 170M1563D, 40A, 690V, gr		
SSW050016T2246TPZ	220-460 VAC	16A	5kA	Bussman, 170M1563D, 40A, 690V, gr		
SSW050023T2246TPZ	220-460 VAC	23A	5kA	Bussman, 170M1563D, 40A, 690V, gr		
SSW050030T2246TPZ	220-460 VAC	30A	5kA	Bussman, 170M1565D, 63A, 690V, gr		
SSW050045T2246TPZ	220-460 VAC	45A	5kA	Bussman, 170M1566D, 80A, 690V, gr		
SSW050060T2246TPZ	220-460 VAC	60A	10kA (≥440VAC)	Bussman, 170M1569D, 160A, 690V, gr		
SSW050085T2246TPZ	220-460 VAC	85A	10kA (≥380VAC)	Bussman, 170M1569D, 160A, 690V, gr		

¹⁾ Maximum trip ratings are for non-time-delay overcurrent protection devices.

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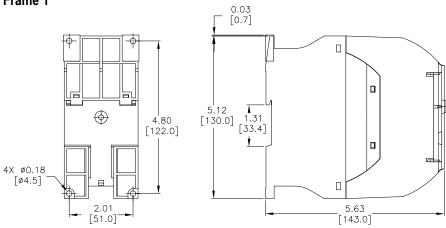
²⁾ Motor branch circuit protection must be based on MOTOR Full Load Current and must comply with applicable local electrical codes. The 2008 NEC section 430.52 recommends a maximum of 175% (up to 225% absolute maximum) of motor FLC for time-delay fuses. (Class CC time-delay fuses are permitted up to the non-time-delay fuse maximum rating.)



SSW05 Series Dimensions

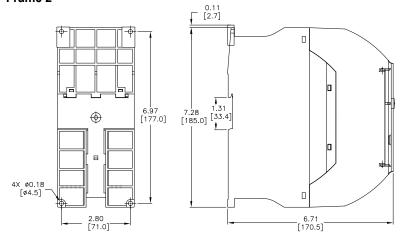
Inches [mm]

Frame 1





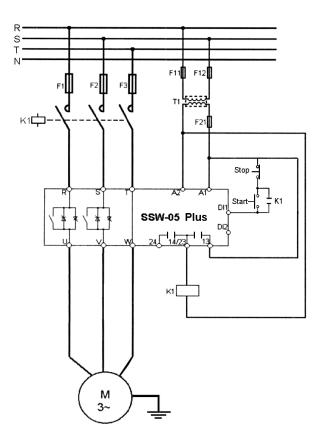
Frame 2







Starting and Stopping Using Contactor and Push Buttons



For further information, please reference additional diagrams available in the SSW05 User Manual.

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Accessories

Accessories				
Part Number Price Description				
SSW05-HMI-RS	\$73.00	Remote HMI module		
SSW05-07-08-CRS-3M	\$25.00	3m [9.84 ft] cable for serial remote HMI		
SSW05-07-08-CRS-5M	\$31.00	5m [16.40 ft] cable for serial remote HMI		







SSW05-07-08-CRS-3M



SSW05-07-08-CRS-5M