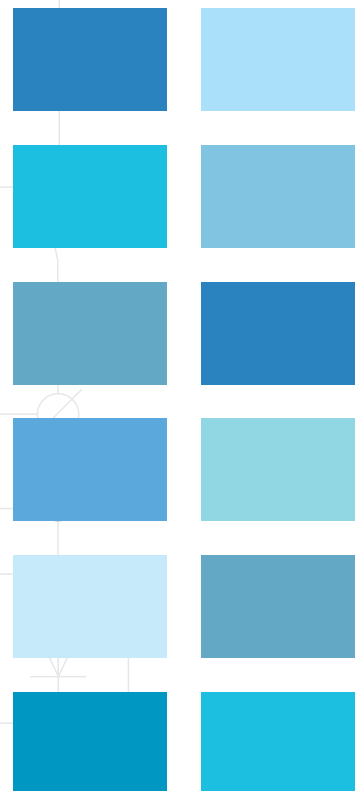


SSW07

Soft Starter



LED FAULT	LED READY	FAULT DESCRIPTION
1s	OFF	FREQUENCY RANGE
1a	ON	OVERTEMPERATURE
2s	OFF	UNDERVOLTAGE
2a	ON	START TIMEOUT
3a	OFF	BY-PASS OPEN
4a	OFF	OVERCURRENT BEFORE BY-PASS
5a	OFF	BY-PASS OVERCURRENT



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 and 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.



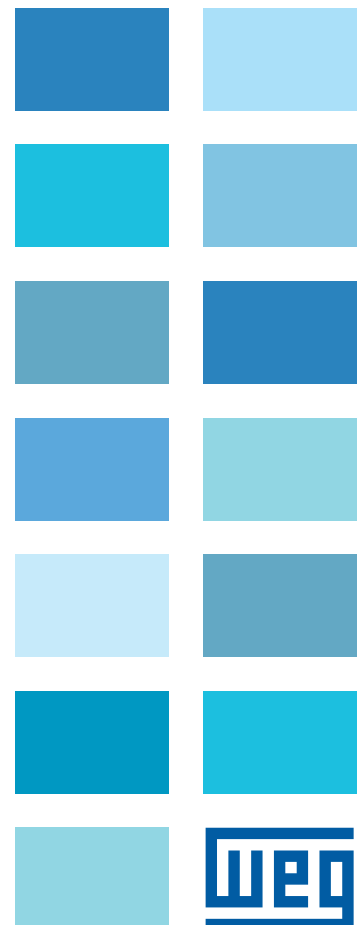
Applications

- 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 55°C (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 Ixt values (thermal image)



SOFT STARTERS



Soft Starters

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
INPUT POWER SUPPLY: THREE PHASE - 220V / 230V								
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	\$1,646	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	
INPUT POWER SUPPLY: THREE PHASE - 440V / 460V								
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	\$1,646	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	
INPUT POWER SUPPLY: THREE PHASE - 575V								
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	\$1,646	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	

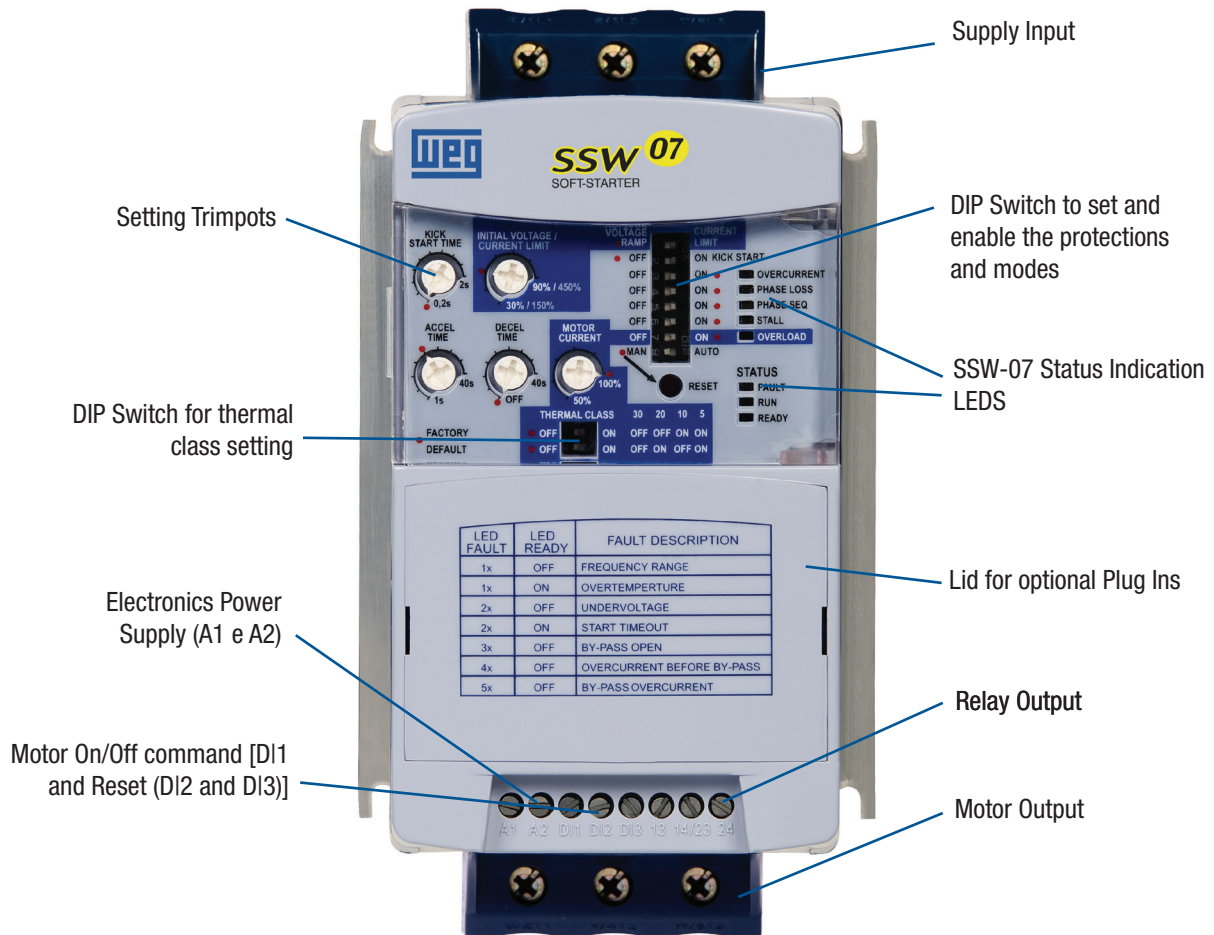
SOFT STARTERS

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	\$23	V1
	6.6 ft Remote Keypad Cable	CAB-RS-2	\$31	V1
	10 ft Remote Keypad Cable	CAB-RS-3	\$41	V1
	16 ft Remote Keypad Cable	CAB-RS-5	\$51	V1
	25 ft Remote Keypad Cable	CAB-RS-7.5	\$62	V1
	33 ft Remote Keypad Cable	CAB-RS-10	\$72	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
Lugs	SSW07 Lug Kit - Size 3 (130-200A)	SSW07-LK130-200	\$162	E1

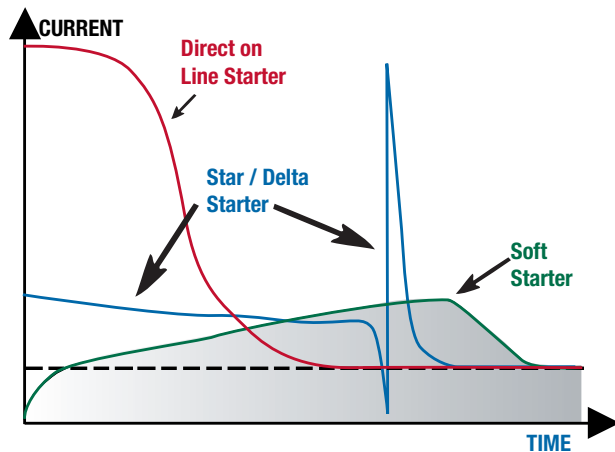
Soft Starters SSW07

Applications and Indications

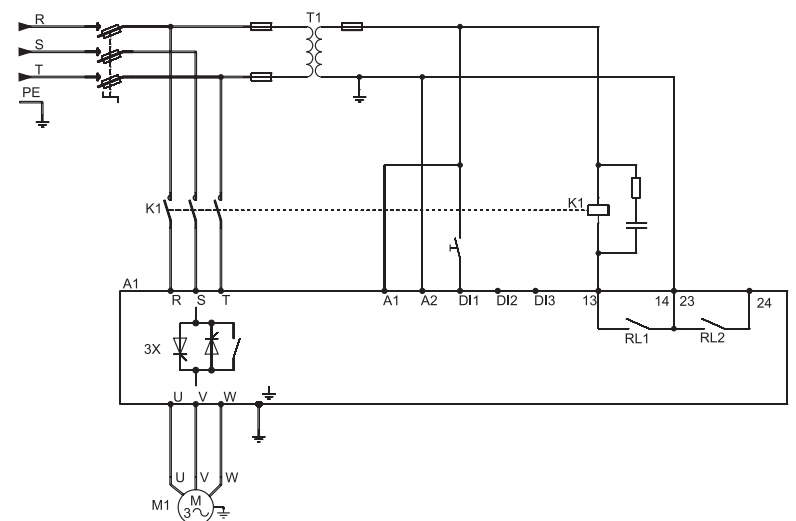


SOFT STARTERS

Starting Method Comparison



Typical Starters





Soft Starters SSW07



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 requirements.

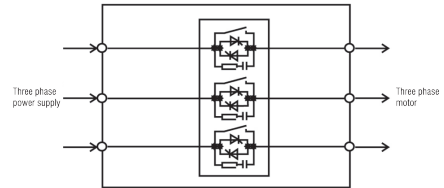
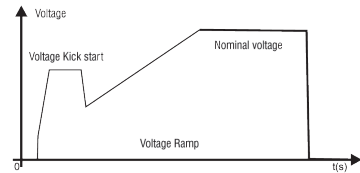
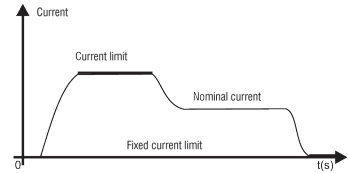
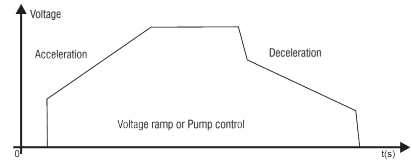
Voltage Kick Start

Enables an initial voltage pulse which, applied to the motor, provides initial starting torque reinforcement.

This is necessary for starting high breakaway torque loads.

Built in By Pass

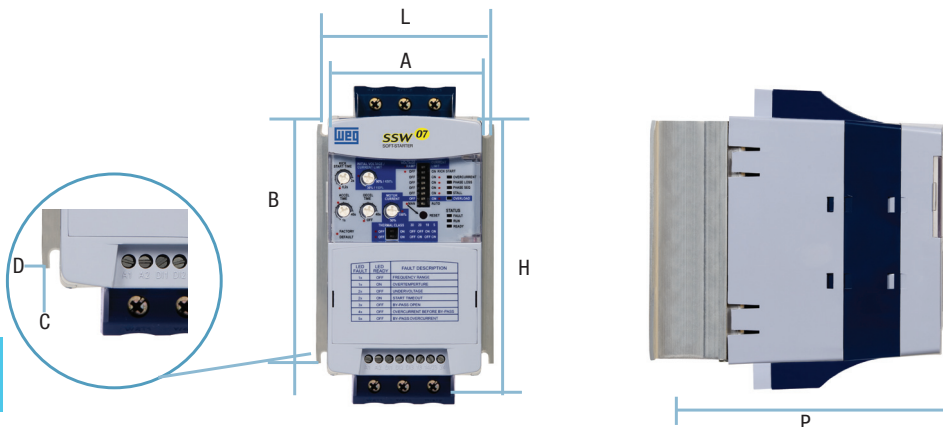
Built-in by-pass minimizes power losses and heat dissipation in the thyristors, providing size reduction and contributing to energy saving. This is available in all models.



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



Data is subject to change without notice.

Soft Starters

SSW07

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

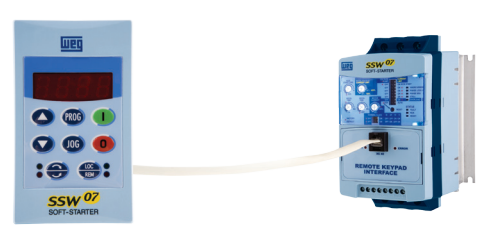
The MMI with 7-segment LED display allows excellent parameter visualization from distance. The interface incorporates the “Copy” function, which permits to copy the parameterization from a SSW07 to other ones, providing fast programming, reliability and repeatability in serial manufacturing machinery.

Plug-in type MMI in front of product.



HMI-REMOTE SW07

Remote HMI for placing in panel door or machinery console.



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



SOFT STARTERS





Soft Starters

SSW07

SSW07 – Accessories and Options



CAB-COMM-3 OR CAB-COMM-10

Cable for connecting RS-232.
Cable length in 3 and 10m.



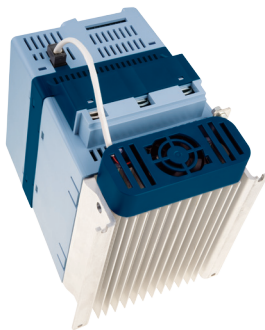
COMMUNICATION MODULES

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 for heavy duty starting cycle.

Soft Starters

SSW07

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	

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

Soft Starters

SSW07

Technical Specifications

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)	

SOFT STARTERS