DATASHEET
Soft-Starter



Main Features

Reference	: SSW900B0085T5E2
Product code	: 12956628
Product family	: SSW900

Basic data

Power	
- Rated current	: 85 A
- Power supply	: 220-575V
- Power supply type	: TT / TN / IT
- Frequency	: 50/60Hz
- Number of controlled phases	: 3 phases
- Integrated bypass	: Yes
Motor power - standard connection (cv/kW)	
- 220/230V	: 30 / 22
- 380/400V	: 60 / 45
- 440/460V	: 60 / 45
- 575V	: 75 / 55
- 690V	: No
Motor power - delta inside connection (cv/kW)	
- 220/230V	: No
- 380/400V	: No
- 440/460V	: No
- 575V	: No
Electronic and fan	
Supply voltage (control)	: 110-240V
Supply voltage (cooler)	: 110-240V
Connection to the motor	
- Standard (3 leads)	: Yes
- Inside delta (6 leads)	: No
Duty cycle	
- Standard [1]	: AC-53b 3-30:1170
- With ventilation kit [2]	: AC-53b 3-30:330
Digital inputs	
- Quantity (standard)	: 6
- Type	: DC NPN / PNP
- Voltage	: 24 Vdc
- Minimum high level	: 18 Vdc
- Maximum low level	: 3 Vdc
- Maximum voltage	: 30 Vdc
- Input current	: 11 mA @ 24 Vdc
- Function	: Programmable
- Reading via communication	: Yes
Input for motor thermistor	
- Quantity (standard)	: 1
- Activation	: 3k9 Ohms
- Deactivation	: 1k6 Ohms
- Minimum resistance	: 100 Ohms
Analog outputs	
- Quantity (standard)	: 1
- Level	: 0 to 10 Vdc and 0 to 20 mA
- Resolution	: 10 bits
- Function	: Programmable
- Write via communication	: Yes
Digital outputs	
- Quantity	: 3
- Type	: 2 x NO relay, 1 NO/NC relay
- Maximum voltage	: 250 Vac
- Maximum current	: 1 A
- Function	: Programmable
- Write via communication	: Yes
Functions and Features	
Control type start and stop	
- Voltage ramp	: Yes
- Voltage ramp and current limit	: Yes
- Current limit	: Yes

- Current limitation ramp : Yes
- Pump control : Yes
- Torque control : Yes
- Direct on line start : Yes

Functions/Features

Specials functions

- Torque pulse at start (kick start) : Yes
- Jog : Yes
- DC braking (with contactor) : Yes
- Optimal Braking (without contactor) : Yes
- Reverse braking : Yes
- Changing of the rotation direction : Yes
- Multimotor application : No
- Emergency start (Fire Mode) : Yes

Diagnosis

- Latest faults : Yes, LOG
- Starting and cycle diagnosis : Yes
- Last previous faults : Yes
- Last previous alarms : Yes
- Last previous events : Yes

Others

- Set-up of the programmable fan : Yes
- Copy of the parameters via keypad : Yes
- User 1 and user 2 : Yes
- Oriented Start-up : Yes
- Protections actuation in errors and alarms : Yes
- Fault auto reset : Yes
- Real time clock (RTC) : Yes
- SoftPLC (ladder programming) : Yes, 4K bytes

Slots (para accessories options)

- Quantity : 2
- Digital inputs and outputs expansion : No
- PTC inputs : No
- Pt-100 inputs : Yes
- Current sensor (by extern bypass) : No

Comunications (see Comunication)

Protections

Voltage

- Power supply phase loss : Yes
- Overvoltage and undervoltage : Yes
- Voltage imbalance : Yes
- Electronic undervoltage (control) : Yes

Current

- Overcurrent and undercurrent : Yes
- Current imbalance : Yes

Torque

- Overtorque e undertorque : Yes

Power

- Overpower and underpower : Yes

Temperature

- Thyristor overheating : Yes
- PTC thermistor motor overheating : Yes
- PT100 thermocouple motor overheating : Available with optional

Overload

- Motor overload (thermal class) : Yes
- Thyristor overload : Yes
- Inverted phase sequence : Yes
- External fault : Yes
- Not connected motor : Yes
- Wrong motor connection : Yes
- Frequency out of range : Yes

Ground fault

- Ground fault : No

Bypass

- Bypass not opened : Yes
- Bypass not closed : Yes
- Overcurrent before closing the bypass : Yes
- Undercurrent before closing the bypass : Yes

Time

- Time before starting : Yes
- Time after starting : Yes
- Time between starting : Yes
- Locked rotor at start : Yes

Communications

- Programming error	: Yes
- Communication faults	: Yes
Power	
- Power short circuit with motor switched off	: Yes
- Thyristor fault	: Yes
- Hardware self-diagnosis	: Programmable via optional
Parameterization	
- Parameterization via trimpots and dip switches	: No
- Parameterization via keypad	: Yes
- Parameterization via software	: WPS
Local HMI	
- Type	: Yes, removable
Remote HMI	
- Type	: Local removable
- Frame for HMI	: Optional
- HMI degree of protection	: IP56
- Maximum cable length	: 20 m / 65.6 ft
Local or remote HMI data	
- Display	: LCD graphic
- Keys	: 12 keys
- Password	: Yes
- Language	: Yes
- Help	: Yes
- Copy function	: Yes
- Status graphic (read)	: Yes
- HMI USB	: Yes
Communication	
- Modbus-RTU RS-232	: No
- Modbus-RTU RS-485	: Available with optional
- Modbus-RTU USB	: Yes
- WEG Bus	: No
- Modbus-TCP	: Available with optional
- Profibus-DP	: Available with optional
- Profibus-DPV1	: Available with optional
- Profinet	: Available with optional
- DeviceNet	: Available with optional
- EtherNet/IP	: No
- EtherNet/IP 2P	: Available with optional
- Profinet IO 2P	: Available with optional
- CANopen	: Available with optional
Ambient conditions	
- Enclosure	: IP20
- Pollution degree (UL 508)	: 2
Temperature	
- Minimum	: -10 °C / 14 °F
- Rated	: 55 °C / 131 °F
- Current reduction factor above nominal [3]	: 2% for each degree
Relative humidity (non-condensing)	
- Minimum	: 5 %
- Maximum	: 90 %
Altitude	
- Under rated operating conditions	: 1000 m (3281 ft)
- Maximum allowed with reduction factor [4]	: 4000 m (13123 ft)
- Current reduction factor above 1000 m [5]	: 1 % for each 100 m (328 ft)
- Voltage reduction factor above 2000 m [6]	: 1.1 % for each 100 m (328 ft)
Dimensions	
- Frame	: B
- Height	: 208 mm / 8.2 in
- Width	: 144 mm / 5.7 in
- Depth	: 260 mm / 10.2 in
- Weight	: 4.02 kg / 8.86 lb
Sustentability Directives	
- RoHS	: Yes
- Conformal coating	: 3C2
Standards Compliance	
- Safety	: UL 508
- Low voltage	: EN 60947-4-2
- Overvoltage category	: III (UL508 / EN61010)
- EMC	: Directive 89/336/EEC
Certifications	
- Product certification	: UL, CE and EAC

Notes
1) Starting duty cicle AC-53b 3-30:1170:

- 3 x Rated current of the SSW900 during 30 s;
- 3 starts per hour;
- 100% of the time with rated current;
- With bypass;
- from 0 to 55 °C without current derating

3) For temperature over the rated value;
4) With reduction factor;
5) For altitude above 1000 m (3281 ft);
6) For altitude above 2000 m (6562 ft);
7) Image merely illustrative;
8) For further information consult the product manuals SSW900.