# DATASHEET
## Soft-Starter



## Main Features

| | |
|---|---|
| Reference | : SSW900F0820T5E3 |
| Product code | : 14418584 |
| Product family | : SSW900 |

**Basic data**

| | |
|---|---|
| Power | |
| - Rated current | : 820 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 | : 350 / 260 |
| - 380/400V | : 550 / 410 |
| - 440/460V | : 700 / 525 |
| - 575V | : 800 / 600 |
| - 690V | : No |
| **Motor power - delta inside connection (cv/kW)** | |
| - 220/230V | : 600 / 450 |
| - 380/400V | : 1000 / 750 |
| - 440/460V | : 1200 / 900 |
| - 575V | : 1550 / 1140 |
| Electronic and fan | |
| Supply voltage (control) | : 110-130V |
| Supply voltage (cooler) | : 110-130V |
| Connection to the motor | |
| - Standard (3 leads) | : Yes |
| - Inside delta (6 leads) | : Yes |
| Duty cycle | |
| - Standard [1] | : AC-53b 3-30:690 |
| - With ventilation kit [2] | : No |
| **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 | : IP00 |
| - Pollution degree (UL 508) | : 2 |
| **Temperature** | |
| - Minimum | : -10 °C / 14 °F |
| - Rated | : 40 °C / 104 °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 | : F |
| - Height | : 760 mm / 29.9 in |
| - Width | : 464 mm / 18.3 in |
| - Depth | : 316 mm / 12.4 in |
| - Weight | : 75.4 kg / 166.2 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 3-30:690:

- 3 x Rated current of the SSW900 during ;
- ;
- 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.