WEG

SSW900

Characteristics

- Current ranges from 10 to 1,400 A
- Supply voltage from 220 to 575 V ac (T5) or from 380 to 690 V ac (T6)
- Oriented start-up
- Standard connection (3 cables) or motor inside delta connection (6 cables)
- Integral motor thermal protection
- Reduction of voltage drops during motor start
- Pump control function for smart control of pumping systems that prevent water hammer and pressure overshoots in the hydraulic piping

- Great mechanical stresses reduction on the couplings and transmission devices (gear boxes, pulleys, gears, belts, etc.) during the motor start
- Increased motor and equipment lifetime
- Elimination of starting mechanical shock to couplings and driven equipment
- Operation at ambient temperature up to 55 °C without current[1] derating
- Three braking methods to stop the motor and the load faster. Braking methods with or without external contactors

- Built-in bypass: minimizing power losses and heat dissipation in the thyristor, providing space reduction, contributing to energy saving and increasing the product's life
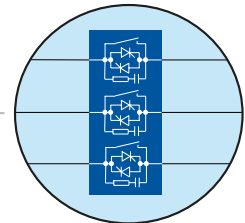
MORE ➕ ADVANTAGES

The SSW900 can substitute direct online starters or star-delta starters, bringing benefits to your application, such as:

- Electric energy savings
- Greater protection and increased durability of the electric motor
- Diagnosis and fault history
- Flexibility, it allows the installation of accessories in the application (Plug & Play)
- Graphic monitoring
- Customizable main screens

Menu navigation

Easy to install

Easy to operate

Simple monitoring

Note: 1) Models A to D.

Easy to Use

USB Port
Easy monitoring via PC
or firmware updating

Removable HMI
Possibility of installation on
panel or machine door

Easy access to the control
terminals: digital and analog
inputs and outputs

Bluetooth connectivity[1]

RTC
Real time clock with event
log including date and time

Graphic HMI
Intuitive, customizable, complete

Ready ⌒ Loc 0.0A 07:47
Configurations
1. Starting and Stopping
2. Nominal Motor Data
3. LOC/REM Selection
4. I/O
5. Protections

Flexibility

Power supply connection

LED
Visual status indication

HMI connection

Two Slots
Possibility to use two
accessory modules

RTC (Real time clock) Battery

I/O
Totally programmable inputs
and outputs

- **5** isolated **digital inputs** 24 V dc
- **1 analog output** 0-10 V dc / 4-20 mA
- **1 input** for motor PTC thermistor
- **3** relay **outputs** 1.0 A / 240 V dc

Quick Connect
Easily detachable
terminals

Motor connection

*Note: 1) HMI with Bluetooth connectivity available as an
accessory item. Please consult availability of certification for your region.*

Adjustable Protections

The SSW900 uses advanced techniques to detect supply line and connection faults, allowing the user to choose the actuation mode of protections (selectable by programming: fault or alarm) for total motor protection:

- Protections for overvoltage, undervoltage, voltage imbalance between phases and phase sequence
- Protections for motor overload and underload
- Thermal protections through Pt-100 reading and motor heating and cooling curves
- Protections against overcurrent and undercurrent, current imbalance, undertorque and overtorque, underpower and overpower

- Protections against short-circuit on the power side
- Bypass protections (overcurrent, undercurrent and failure in the bypass contactor opening)
- Minimum time interval between starts
- Protections against communication faults
- Actuation of the programmable protections between fault or alarm
- Fault auto-reset

Start and Stop Control Methods

The SSW900 offers, through its algorithm, flexibility and high performance control to meet application requirements on start and stop cycles of three-phase induction motors.

	Actuation	
	Start	Stop
Voltage ramp	✔	✔
Voltage ramp + current limit	✔	✘
Current limit	✔	✘
Current ramp	✔	✘
Pump control[1]	✔	✔
Torque control[2]	✔	✔
D.O.L SCR	✔	✘
Coast to stop	✘	✔

Notes: 1) The setting of the function Pump Control is allowed for stopping the motor only when it is used at the starting as well.
2) The setting of the function Torque Control is allowed for stopping the motor only when it is used at the starting as well.

Main Features

Forward / Reverse

JOG

Kick-start

Fire mode (emergency start)
Allows starting and stopping the motor in emergency situations, even when any fault occurs, disregarding the SSW or motor protections. Used to drive hydraulic pumps for firefighting systems.

High performance graphic HMI
Indication of all variables of the motor or SSW in an easy and intuitive way, using many units and formats, through bar graphs or time graphs.

Diagnosis
Several status of the SSW are saved at certain moments to facilitate the diagnosis of faults and problems in the application or in the motor. For instance:
- Faults, with history of all faults and storage in CSV file
- Alarms, with history of all alarms and storage in CSV file
- Event history with storage in CSV file
- All saved information goes with RTC time and date stamp
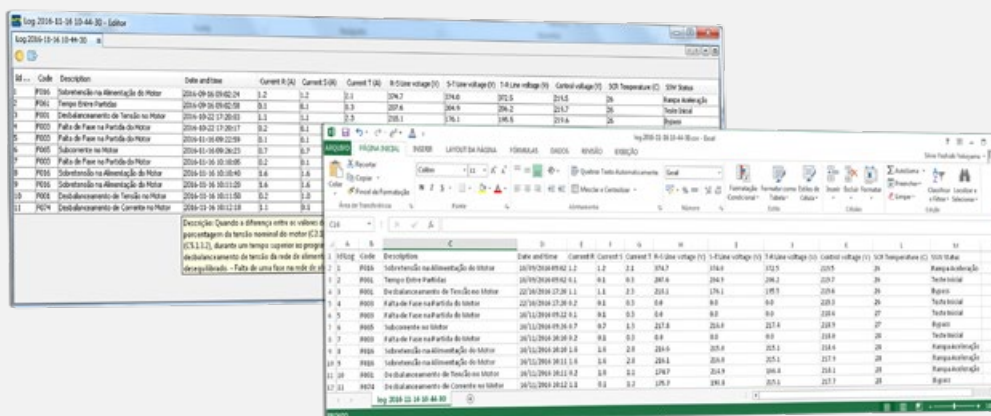
Oriented Startup
Guides the user on how to program the SSW900 easily.

Connectivity

The SSW900 can be integrated to the main Fieldbus industrial communication networks, such as Profibus-DP, CANopen, DeviceNet and EtherNet/IP, using the appropriate plug-in module.

Modbus-RTU		EtherNet/IP
Profibus-DP	**Fieldbus**	Modbus-TCP
DeviceNet	CANopen	PROFINET IO
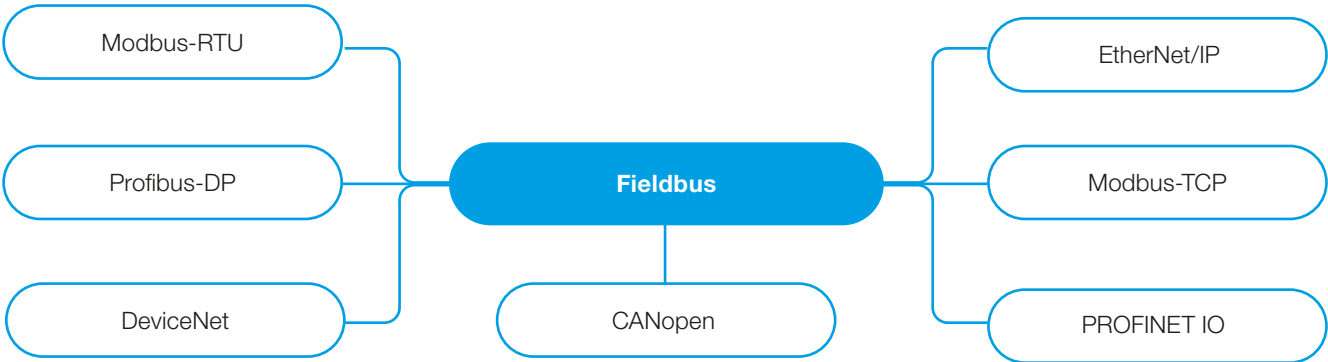
WEG Programming Suite (WPS)

WPS is an integrated PC software that assists in the creation of automation applications allowing graphical monitoring, parameterization and programming in Ladder language (IEC 61131-3) of several WEG product families.

Software WPS

Easy and intuitive environment
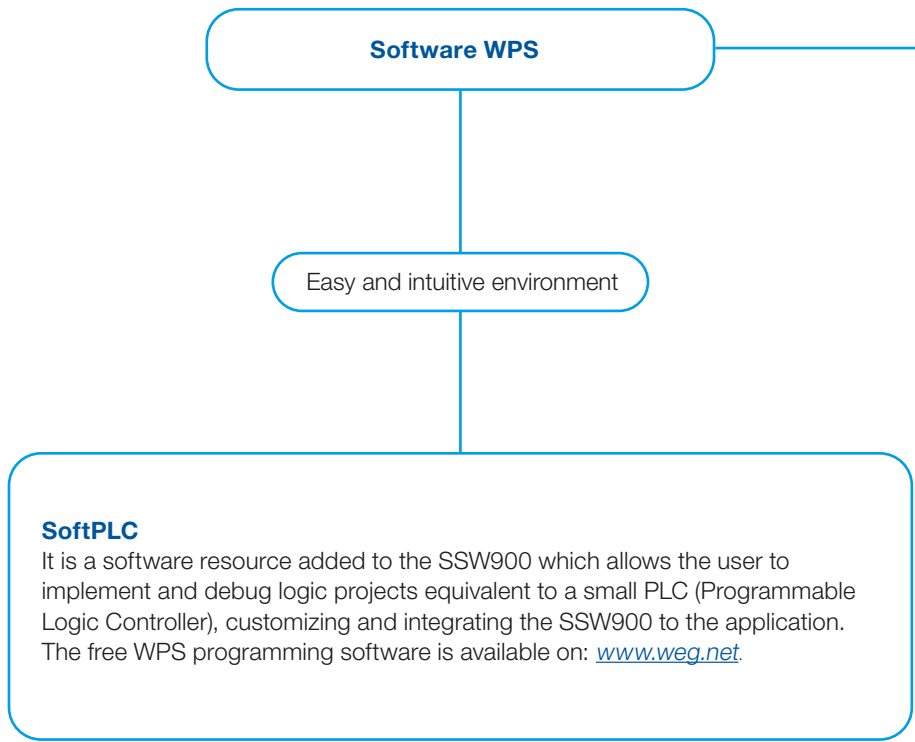
SoftPLC

It is a software resource added to the SSW900 which allows the user to implement and debug logic projects equivalent to a small PLC (Programmable Logic Controller), customizing and integrating the SSW900 to the application. The free WPS programming software is available on: *www.weg.net*.
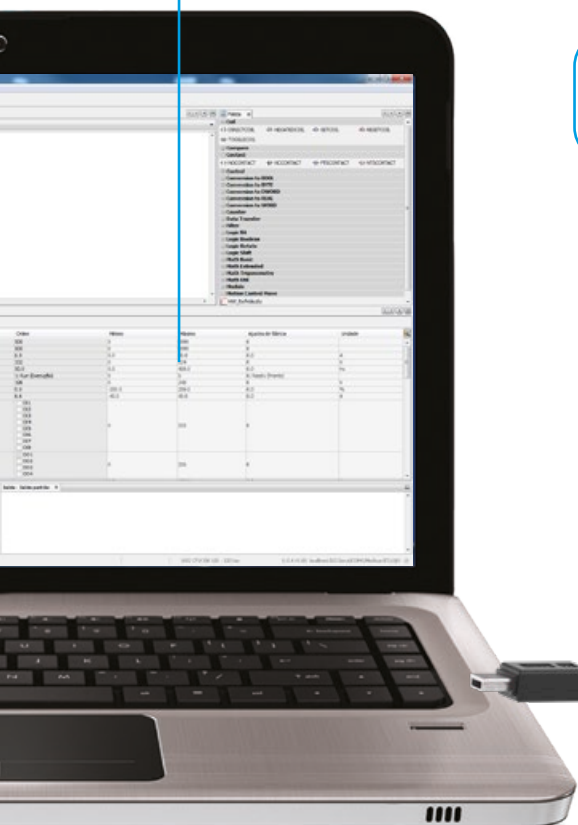
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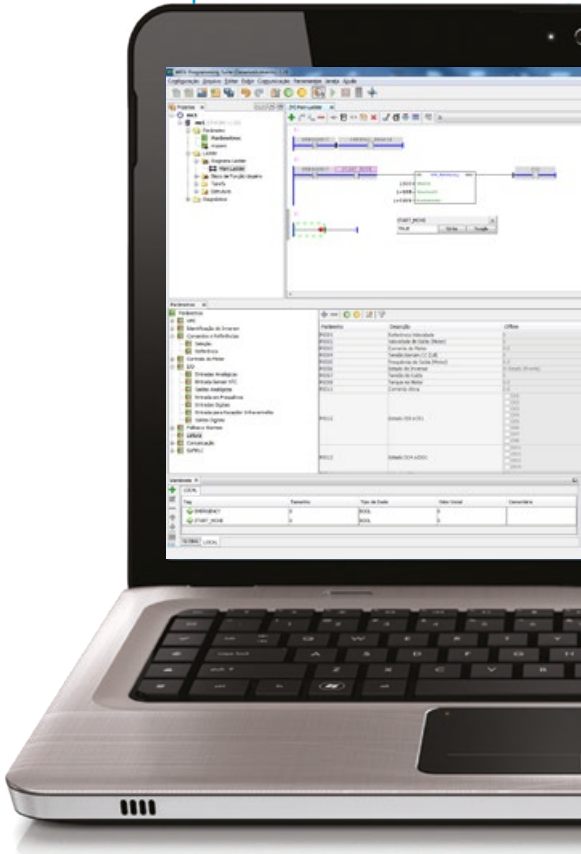
WEG WPS for mobile available:

GET IT ON
Google Play

Download on the
App Store
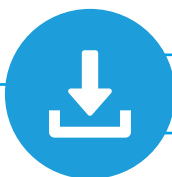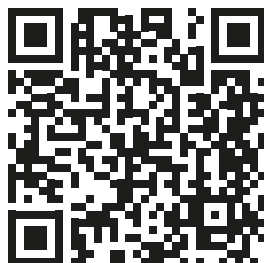
Free on the website: *www.weg.net*.

Bluetooth Communication[1]

**USB connector on
the HMI, available
on standard product**

Pronta ⌂ Loc 0.0A 13:35
Configurações
2 Dados Nominais do Motor
3 Seleção LOC/REM
4 I/O
5 Proteções
6 HMI

SSW900 SOFT-STARTER

Note: 1) HMI with Bluetooth connectivity available as an accessory item.
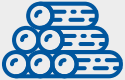
Applications

Cement and Mining

- Dosing pumps
- Sifters / vibrating tables
- Dynamic graders
- Conveyor belts

Chemical and Petrochemical

- Fans / exhaust fans
- Centrifugal pumps
- Dosing pumps
- Centrifuges
- Stirrers / mixers
- Compressors
- Soap extruders

Wood

- Veneer machines
- Polishing machines
- Cutting machines
- Wood chippers
- Saw and plains

Plastic and Rubber

- Extruders
- Blowers
- Mixers
- Calenders
- Granulators

Water & Wastewater

- Centrifugal-pumps
- Suppression systems

Food & Beverage

- Continuous centrifuges
- Roller tables
- Conveyor belts
- Bottling lines

Ceramic

- Fans / exhaust fans
- Continuous dryers / ovens
- Ball mills
- Roller tables
- Conveyor belts

Steel and Metallurgy

- Fans / exhaust fans
- Conveyors
- Drilling machines / grinders
- Pumps

Glass

- Fans / exhaust fans
- Continuous dryers / ovens
- Roller tables

Textile

- Stirrers / mixers
- Dryers / washing machines

Coding[1]

| **1** SSW900 | **2** A | **3** 0010 | **4** T5 | **5** E2 | **6** --- | **7** --- |

1 - Soft-Starter SSW900
2 - Frame size of the SSW900, according to the table below
3 - Rated output current, according to the table below

Frame size	Rated current
A	0010 = 10 A
	0017 = 17 A
	0024 = 24 A
	0030 = 30 A
B	0045 = 45 A
	0061 = 61 A
	0085 = 85 A
	0105 = 105 A
C	0130 = 130 A
	0171 = 171 A
	0200 = 200 A
D	0255 = 255 A
	0312 = 312 A
	0365 = 365 A
	0412 = 412 A
E	0480 = 480 A
	0604 = 604 A
	0670 = 670 A
F	0820 = 820 A
	0950 = 950 A
G	1100 = 1,100 A
	1400 = 1,400 A

Note: 1) Other configurations available upon request.

4 - Rated power supply voltage

T5	220 - 575 V
T6	380 - 690 V

5 - Rated electronic supply voltage

E2	110 - 240 V
E3	110 - 130 V[1]
E4	220 - 240 V[1]

Note: 1) Only for frame D, E, F and G.

6 - Special hardware versions

Blank	Electronic boards with coating class 3C2
EC	Electronic boards with class 3C3 extra coating

7 - Special software version

Blank	Standard software
Sx	Special software