Solar + Grid/GenSet systems **3HP 5HP 7.5HP 10HP**

solar motor systems™
Intelligent power dawn to dusk

Model: SMS-SMC00030GGC 2.3kW/3.0HP
Model: SMS-SMC00050GGC 3.7kW/5.0HP
Model: SMS-SMC00075GGC 5.6kW/7.5HP
Model: SMS-SMC00100GGC 7.5kW/10.0HP

day & nite Anytime Operation

Smart Controllers for 3-Phase Motors

Other controllers switch. This one source balances.

Solar Motor Systems SMC-Series motor controllers bring intelligent and programmable control to high-efficiency 3-phase motors. SMS Solar with Grid/Generator controllers combine the cost-savings of solar power with the predictable operation of grid-connection.

Our proprietary Preferential Differential Source Balancing lets you set your *preferred power source* to use only solar or to use a combination of solar/grid (or generator) during the daytime when electricity rates are highest. The system dynamically manages solar input fluctuations (shadowing) and the deficient power is automatically drawn from the selected alternate source to ensure predictable output and performance.

Digital Signal Processing – *intelligent and programmable control*
Internet of Things (IoT) – *advanced remote monitoring and control*
Differential Source Balancing – *priority switching between sources*

SMS controllers do what others can't

- Useful features eliminate the common conditions of heat and stress that cause motors to fail: soft-start, speed and torque control, ability to reverse the motor, temperature management, overload and over-voltage protection.
- *The Internet of Things* (IoT) makes advanced connectivity, remote monitoring and controls, beyond machine-to-machine communications (M2M) possible.
- *Digital Signal Processing* (DSP) technology practically eliminates electrical and electromagnetic noise and dramatically improves motor performance.

Commercial/Industrial-Grade Performance

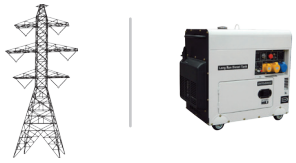
- 100% utilization of DC solar power to run super-efficient 3-Phase AC motors.
- More reliable, compact, lighter & runs longer with less maintenance.
- Plug n' play with standard solar and 3-phase electrical connections.

Lower Cost of Ownership

- Harvest more energy from the available panels and take advantage of the time-of-use billing by your electricity provider.
- Eliminate the need for capacitors for PF compensation for inductive loads.
- Lower your electricity bill by reducing your peak power usage – by soft-starting the motor and reducing start-up (inrush) current.
- Clean AC power results in quieter, smoother, low-heat operation – motors run better and last longer.
- No fuel costs! Lower power bills! No brushes/capacitors to replace!

Conventional Solar Panels
More Solar Energy Harvesting

Σ with Differential Source Balancing



Grid or Generator Connect

Solar Motor Controller

3-Phase Motors
Cooling Fans/Circulation Fans
Condensers/Compressors/Pumps

Performance may vary based on solar panel specifications and installation. Follow solar panel manufacturer instructions.

IMPORTANT: Installations should be performed by certified and licensed installers. Grid-tie systems may require permits. Follow US National Electric Codes (NEC2011) for installation guidelines and restrictions to conform to local electrical codes.

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Take control of time-of-use billing. Eliminate mandatory capacitors. Reduce your peak power usage – *and lower your electricity bill.*

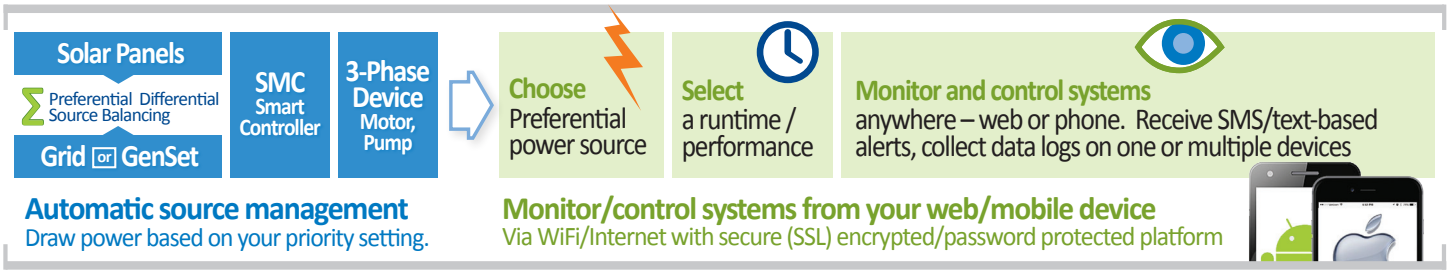
Smart with your money. SMS controllers reduce your electricity use when costs are highest. Power 3-phase devices with free solar power – 100% solar utilization – automatically draw the differential power from the grid (or standby generator) – and lower your electricity bill.

Smart with your time. The Internet of Things (IoT) will change the way you run motors, but it's bigger than that. Set your operation parameters *and* save time with powerful monitoring/controls – wherever you are.

Solar Panels (300w) by HP

Recommended minimum panels. Add more for: low light conditions, increased energy harvesting and longer runtimes each day.

3HP motor	**10** panels
5HP motor	**18** panels
7.5HP motor	**26** panels
10HP motor	**36** panels



Specifications

- Use any standard PV solar panels
- Use any standard 3-Phase AC motor
- Connect to grid* or standard GenSet to draw differential power
- Light weight transformer-less design with low parasitic power loss
- Auto-adjust to variable source (solar)
- Automatic Priority and Differential Source Balancing
- Digital Signal Processing dramatically improves motor performance
- Automatic GenSet starting
- Internet of Things enabled – Monitor and control systems from anywhere that WIFI or Internet is available
- Programmable management of power source and specified time line
- Dry run monitoring
- Programmable SMS (text) based monitoring and alerts
- Real-time synchronization of 24 clock
- Global Parameter Settings: Adjust many devices at once to optimize usage
- If 3-phase is not available – connect single-phase power to the SMC to drive the 3-Phase device**
- Closed-Loop speed control
- Torque control
- Reversible motor (not recommended for pumps)
- Temperature management of controller and 3-phase devices (with SMS alerts)
- Overload/over voltage protection
- Dry run monitoring (pump apps)
- Low electrical and electromagnetic noise
- Highly-efficient MPPT system

*Follow US National Electric Codes (NEC2011) for installation guidelines and restrictions to conform to local electrical codes

**Bypass mode not available

Other SMC models

> **Solar-Only System** – Run 3-Phase AC motors off-grid using only DC solar power.

> **Solar Plus Battery System** – Off-grid DC solar power with the added advantage of predictable and programmable operation – even when the sun is not shining.

SMS Certified Distributor:

www.SolarMotorSystems.com

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