



SC30 Solar Pump Controller

The SC30 Series is a high-protection product tailored for solar water pumping systems. Its housing material complies with UL746C F1 UV resistance and UL746B certifications. Featuring IP65 high protection rating, it integrates a built-in boost module and HD LCD screen. Supporting independent RS485 & CAN dual communication, it enables IOT remote management, ideal for farmland irrigation, remote water supply and many other applications.



✓ Armored Enclosure, Superior Protection

- Combining stylish appearance with robust performance, the unit features an **IP65** high-protection rating and **F1 UV-resistant** housing, standing firm against a wide range of harsh outdoor conditions.
- Fitted with an LCD screen for crystal-clear operational status. It supports simultaneous display of 5 lines of parameters and flexible multi-language customization.

⚙️ Highly Integrated, Efficient Control

- Built-in boost module provides a voltage lift up to **165V**. It eliminates external boosters and reduces PV module quantity, slashing the overall system investment.
- Built-in DC input cables eliminate combiner boxes, enabling fast on-site wiring. It delivers durable long-term operation in fully exposed open-air environments.

📈 Advanced Algorithms, Stable & Reliable

- MPPT tracking efficiency reaches **99.8%**, capturing real-time light changes to maximize solar power utilization.
- New built-in diesel generator software function delivers 24-hour continuous power supply to ensure non-stop water pumping all day long.
- Adopts brand-newd pump self-cleaning control algorithm. Periodic forward & reverse rotation flushes sediment inside the pump to avoid clogging and extend pump service life.
- Integrated multiple advanced control algorithms, with **29+** intelligent protection functions to maximize the service life of the system.

🌐 Dual Communication, System Interconnection

- Equipped with independent **RS485 & CAN** dual communication interfaces for stable multi-unit parallel networking.
- Supports IoT remote monitoring and parameter configuration. The integrated hardware clock enables timed water supply, achieving unattended remote operation.

1PH 220V Output: 2.2kW
3PH 380V Output: 2.2-22kW

MODEL	SC30
DC Input	
DC voltage range	2S Models: 110-450VDC 4T Models: 200-900VDC
MPPT recommend range	2S Models: 200-380VDC 4T Models: 400-750VDC
Start voltage	150/350VDC
AC Input	
AC voltage range	2S Models: 220-240VAC 4T Models: 380-480VAC
Frequency	50/60Hz
Output	
MPPT efficiency	99.8%
Output voltage	2S Models: 0-220VAC 4T Models: 0-380VAC
Output frequency	0-320Hz
Control Performance	
Overload capacity	120% of rated current for 60 seconds, 180% of rated current for 3 seconds
Control motor types	AM, PM, Single-phase motor
Control mode	V/F, SVC, FVC
Carrier frequency	1-16kHz
Function	
Surge protection	Integrated
Undervoltage protection	Integrated
Overvoltage protection	Integrated
Overheat protection	Integrated
Dry-out protection	Integrated
Open circuit protection	Integrated
Short circuit protection	Integrated
PID function	Integrated
Boost function	Single-phase models feature an integrated boost module
Diesel generation	Supports an external diesel generator as backup power for 24/7 supply
Pump self-cleaning	Built-in self-cleaning logic reverses the pump to flush sediment and prevent blockage
Multi-unit connection	Supports parallel operation of multiple pumps for maximum energy efficiency
IOT function	4G
Communication protocol	CAN, RS485
Remote monitoring	Supports data remote monitoring and modified, virtual oscilloscope debugging
AC/DC Switch	When sunlight is insufficient, the AC and DC circuits supply power synchronously
General Information	
Installation	Wall-mounted
Preotection class	IP65
Display	LCD
Cooling method	Force Cooling
Environment	
Altitude	At altitudes below 1,000 m, no derating is required; between 1,000 and 3,000 m, the frequency must be reduced by 1% for every 100 m increase in altitude
Temperature	10°C - 50°C; derating is required when the temperature exceeds 40°C. For every 1°C increase in ambient temperature, derating of approximately 1% is required
Humidity	≤95% RH; avoid condensation
Vibration	The vibration is less than 0.6g