

Trace SW Series

Advanced Sine Wave Power Conversion Center

120 VAC / 60 Hz Models

Applications

- ▶ Off Grid: Widely used throughout the world as a primary source of AC electricity, the SW offers sine wave, utility grade output power, high capacity battery charger, high surge current ability (inrush current), and easy installation.
- ▶ Grid Tie: The SW converts energy from multiple renewable energy sources, such as solar, wind, and microhydro, into AC power, selling power you don't use back to the utility.
- ▶ Backup Power: When the utility fails, the SW Series instantly supplies AC power to critical loads. When utility power returns, it can automatically recharge your batteries in preparation for the next power interruption.

Features

- ▶ Utility grade, sine wave power.
- ▶ Durable construction for long life under extreme environmental conditions.
- ▶ Backed by a two year warranty with an optional three year, extended warranty available.
- ▶ 4000 or 5500 watt continuous output models.
- ▶ Three-stage battery charging (bulk, absorption, and float) with remote temperature sensor for increased performance.
- ▶ Programmable control module with LCD display and LED indicators.
- ▶ Low idle current (less than 1 watt) conserves energy when no loads are present.
- ▶ Soft start capability for starting heavy loads.
- ▶ Islanding protection prevents inverter-generated power from backfeeding to the utility during blackout conditions.
- ▶ Built in starting control circuits for two and three wire generator starting systems.

Expandable & Flexible

- ▶ Series stacking capability for 120/240 VAC operation (optional equipment is required).
- ▶ Parallel stacking capability for greater output at the same voltage (optional equipment is required).
- ▶ Three phase configurations available in a Power Module system for industrial quality power in remote locations (optional equipment is required and only available on 48 volt models).



Electrical Specifications

	SW4024	SW4048	SW5548
AC Input Voltage	120 VAC	120 VAC	120 VAC
AC Input Voltage Range			
All modes except sell mode	80-149 VAC	80-149 VAC	80-149 VAC
Sell mode	106-132 VAC	106-132 VAC	106-132 VAC
AC Input Current*	60 amps AC pass thru / 30 amps AC charging	60 amps AC pass thru / 30 amps AC charging	60 amps AC pass thru / 35 amps AC charging
Continuous Power (@ 25 °C)	4000 VA	4000 VA	5500 VA
Efficiency (Peak)	94%	95%	96%
Output Voltage (RMS)	120 VAC	120 VAC	120 VAC
Output Voltage Regulation	± 5%	± 5%	± 5%
Frequency (Nominal ± 0.04% Crystal Controlled)	60 Hz	60 Hz	60 Hz
Continuous Output (@ 25 °C)	33 amps AC	33 amps AC	46 amps AC
Surge Capability			
5 Sec Rating (Resistive)	8000 watts	8800 watts	9500 watts
1 mSec	110 amps AC	110 amps AC	110 amps AC
100 mSec	78 amps AC	78 amps AC	78 amps AC
Automatic Transfer Relay	60 amps	60 amps	60 amps
DC Input Voltage (Nominal)	24 VDC	48 VDC	48 VDC
DC Input Voltage Range	22-33 VDC	44-66 VDC	44-66 VDC
DC Current at Rated Power	200 amps DC	100 amps DC	140 amps DC
Short Circuit Current	800 amps DC	400 amps DC	400 amps DC
Idle Consumption (Typical at Full Voltage)	< 16 watts	< 16 watts	< 20 watts
Search Mode Consumption	< 1 watt	< 1 watt	< 1 watt
Low Battery Protection (Enabled)	Adjustable low battery cut out and cut in - variable time	Adjustable low battery cut out and cut in - variable time	Adjustable low battery cut out and cut in - variable time
Maximum Charge Rate (Adjustable)	120 amps DC	60 amps DC	70 amps DC
Total Harmonic Distortion	< 5%	< 5%	< 5%

Mechanical Specifications

Specified Temperature Range			
Specified (will meet specified tolerances)	32 °F to 77 °F (0 °C to 25 °C)	32 °F to 77 °F (0 °C to 25 °C)	32 °F to 77 °F (0 °C to 25 °C)
Allowed (may not meet specified tolerances)	-40 °F to 140 °F (-40 °C to 60 °C)	-40 °F to 140 °F (-40 °C to 60 °C)	-40 °F to 140 °F (-40 °C to 60 °C)
Non-Operating	-67 °F to 284 °F (-55 °C to 140 °C)	-67 °F to 284 °F (-55 °C to 140 °C)	-67 °F to 284 °F (-55 °C to 140 °C)
Enclosure Type	Indoor, ventilated, steel chassis with powdercoat finish	Indoor, ventilated, steel chassis with powdercoat finish	Indoor, ventilated, steel chassis with powdercoat finish
Unit Weight	105 lb (48 kg)	105 lb (48 kg)	136 lb (63 kg)
Shipping	111 lb (50 kg)	111 lb (50 kg)	143 lb (65 kg)
Inverter Dimensions	15" H x 22.5" W x 9" D (38 cm H x 57 cm W x 23 cm D)	15" H x 22.5" W x 9" D (38 cm H x 57 cm W x 23 cm D)	15" H x 22.5" W x 9" D (38 cm H x 57 cm W x 23 cm D)
Shipping Dimensions	20" H x 27" W x 15" D (52 cm H x 69 cm W x 40 cm D)	20" H x 27" W x 15" D (52 cm H x 69 cm W x 40 cm D)	20" H x 27" W x 15" D (52 cm H x 69 cm W x 40 cm D)
Mounting	Wall mount	Wall mount	Wall mount
Altitude			
Operating	15,000' (4,572 m)	15,000' (4,572 m)	15,000' (4,572 m)
Non-Operating	50,000" (15,240 m)	50,000" (15,240 m)	50,000" (15,240 m)

Features and Options

Forced Air Cooling	Standard variable speed brushless DC fans
Three-stage charging	Standard three-stage (bulk, absorption, and float)
Control Panel	Standard built-in, two line, backlit, alphanumeric LCD with 8 LED status indicators
Auto Generator Control System	Standard automatic generator control system for two and three wire start generators
Auxiliary Relays	Standard three user adjustable voltage controlled signal relays for control of loads or charging sources
Battery Temperature Sensor	BTS - standard remote battery temperature sensor for increased battery performance
Remote Control	SWRC - optional remote control and status indicator
Stacking Interface	SWI - optional for series stacking of two identical SW units for 120/240 VAC output / SWI/PAR - optional for paralleling two identical SW units for twice the power output at 120 VAC/60 Hz
Conduit Box	SWCB - optional side mount conduit box for code-compliant DC wiring connections

Common Specifications

Waveform	Sine wave, 34 to 52 steps per cycle
Load Sensing (Inverter Mode)	Adjustable 0 to over 200 watts (48 watts default)
Listings	UL Listed to UL 1741 and to CSA 22.2 No. 107.1-95 Standards

* Required for full pass thru and full charging