

Smart choice for power

xantrex



Renewable Energy Catalog

- ▶ Inverters
- ▶ Inverter/Chargers
- ▶ System Components



www.xantrex.com

Renewable Energy Catalog



About Xantrex

Xantrex Technology Inc., which acquired Trace Engineering in 2000, is a world leader in advanced power electronics. Our technology is a key enabler for renewable energy systems, efficiently converting raw electrical energy from any source such as solar, wind, or microhydro, into high-quality household power.

More than 200,000 homes and businesses rely on Xantrex power electronics to bring them electricity anytime, anywhere. Xantrex products allow customers around the world to increase energy efficiency and freedom, while making a positive impact on the environment.

Almost a quarter century of experience goes into creating renewable energy products at Xantrex. Our Distributed Power team has led the renewable energy movement since the 1980s. This knowledge and experience in advanced power electronics is helping to accelerate the adoption of renewable energy.

As part of our commitment to a sustainable future, Xantrex participates in the Green Tags program. Our manufacturing facilities in Arlington, Washington and Livermore, California operate on 100% green electricity.

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BONNEVILLE ENVIRONMENTAL
FOUNDATION

As part of the Bonneville Environmental Foundation Green Tags program, Xantrex manufacturing facilities in the US operate on 100% green electricity.

What is an inverter?

Modern inverters have caused a quiet revolution in the way we live with independent power systems, providing silent AC electricity anytime, anywhere. An inverter is a sophisticated microprocessor controlled device that transforms the DC power collected from your renewable energy source into household (AC) electricity. An inverter that is connected to the grid allows you to sell the excess renewable power you harvest to the utility company.

What is an inverter/charger?

An inverter/charger combines an inverter, battery charger, and transfer switch in one box. In addition to converting DC power from the renewable energy source into AC power, an inverter/charger can also convert AC power from a generator into DC power to recharge batteries. To ensure the power supply is uninterrupted, some models feature automated generator start and stop capabilities, so supplementary power is automatically produced as necessary. The inverter/charger's ability to process multiple forms of incoming power makes it a popular choice for off-grid applications as it provides homes with a completely autonomous supply of electricity.

Wave Forms Explained

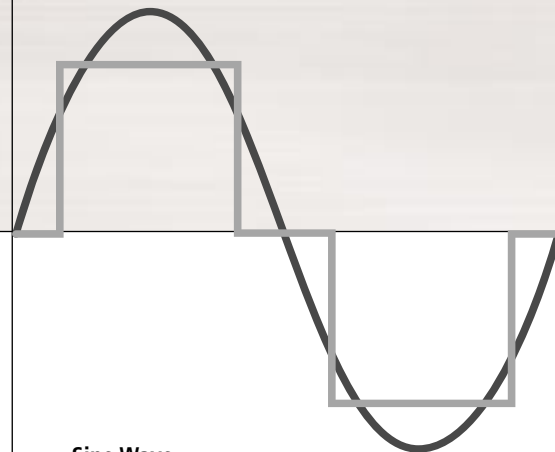
Today's inverters, which simulate utility power electronically, produce two types of AC power: modified sine wave or sine wave. The differences between these types of inverters are subtle, but significant in the way they operate certain types of loads.

Modified Sine Wave Inverters

Modified sine wave inverters can adequately power most household appliances and power tools. These inverters are less expensive. However, this waveform may present certain compromises with some loads such as microwave ovens, laser printers, clocks, and cordless tool chargers.

Sine Wave Inverters

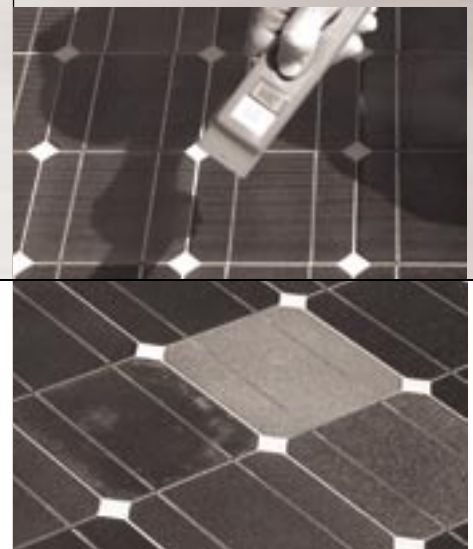
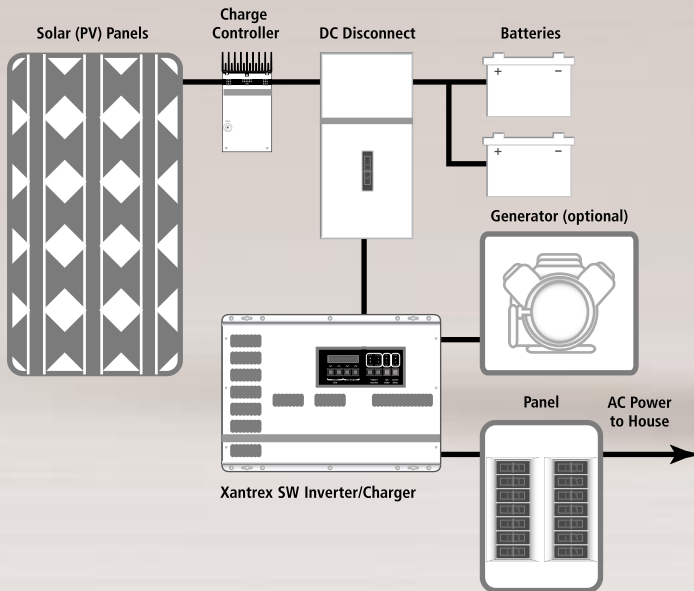
Sine wave inverters are the most sophisticated inverters on the market today. They are designed to replicate and even improve on the quality of electricity supplied by utility companies.



Sine Wave

Modified Sine Wave

Off-grid system with battery and generator backup



Basic Off-Grid System

With a Xantrex off-grid system, you can easily produce your own power without the expense and environmental impact of extending power lines, or relying completely on a generator.

A basic off-grid system consists of a renewable energy source, which generates DC power, a battery bank that stores the DC power, and a Xantrex inverter. Our inverter is the intelligent center of a renewable power system, seamlessly converting DC power to clean, reliable AC electricity for your needs.

The system illustrated here is a solar electric hybrid system that offers additional automatic features. It consists of a solar array, a battery bank, our top-of-the-line Xantrex SW Inverter/Charger, a charge controller that manages battery charging from the solar array, and a generator. When the sun is up, the solar panels generate power to charge batteries and provide electricity. At night, the Xantrex inverter/charger automatically runs your electrical equipment from your battery bank. The generator provides additional back-up battery charging capability for extended periods of cloudy weather. The Xantrex inverter/charger can automatically start the generator and initiate a recharge cycle when the battery bank is depleted, or a load is too large for the batteries to support independently.

Xantrex manufactures a complete range of power products to suit various budgets and electricity requirements. From complete power systems that come ready to install from our factory, to components that can be integrated into a system by a Xantrex Dealer, we have a system to meet your needs.

Glossary of Terms

Alternating Current (AC)

The type of electricity supplied by the utility company. The unique characteristic of this form of electricity is that it reverses direction at regular intervals. For example, 120 VAC 60 Hz power reverses flow 60 times a second, hence the rating 60 Hz (cycles).

Amp

A measurement of the flow of electrical current.

Amp Hour (Ah)

One amp of electrical current flowing for one hour. Expresses the relationship between current (amps) and time. (OHMS law $A = V/R$)

Array

A group of solar electric modules wired together.

Current

The rate of flow of electrical charge. The flow of amps is often expressed as current.

Direct Current (DC)

The type of electricity stored in batteries and generated by solar electric devices. Current flows in a single direction.

Electrolyte

A conductive medium in which the flow of electricity takes place; this is the liquid found inside storage batteries.

Grid

When used in reference to utility power, it refers to a system of electrical transmission and distribution lines.

Ground Fault Protection (GFP)

A circuit protection device that prevents the flow of electrical current to earth if a short circuit is present. Usually required in wet locations, e.g. for outdoor, kitchen, and bathroom circuits.

Hertz (Hz)

The frequency, or number of times per second, that the flow of AC electricity reverses itself. Also referred to as cycles (see alternating current).

High Battery Voltage Protection

A control circuit that disconnects charge current flowing to battery(s) when voltage reaches a dangerously high threshold. Prevents damage created by excess gassing (or boiling) of electrolyte.

Idle Current

The amount of electrical power required to keep an inverter ready to produce electricity on demand.

Inrush Current

The peak power an appliance or tool will draw at the instant it starts up.

Kilowatt (kW)

One thousand watts of electricity. Ten 100-watt light bulbs use one kW of electrical power.

Kilowatt hour (kW/h)

One kW of electrical power used for one hour. Most grid connected electrical meters measure kWh for billing purposes.

Line Loss

A voltage drop caused by resistance in wire during transmission of electrical power over distance.

Load

Any device that consumes electricity to operate. Appliances, tools, and lights are examples of electrical loads.

Low Battery Protection

A control circuit that stops the flow of electricity from batteries to loads when battery voltage drops to dangerously low levels.

Modified Sine Wave

Also called a modified square wave, this type of waveform emulates a sine wave using a series of small steps to create a curve.

National Electric Code (NEC)

The electrical wiring and installation standards used in the United States.

Off Grid

An electrical system that is not connected to a utility distribution grid.

Overload/Overcurrent Protection

A control circuit designed to protect an inverter or similar device from loads exceeding its output capacity. (A fuse, for example, is an overcurrent protection device.)

Parallel Wiring

Batteries or PV modules, wired together to increase ampacity, while voltage remains constant. Two 100 Ah 12 VDC batteries wired in parallel will form a 200 Ah 12 VDC battery bank.

Photovoltaic (PV) Array

Commonly referred to as solar panels, the PV array collects energy from the sun and converts it into DC energy.

Sine Wave

The type of waveform produced by the utility or a generator. Sensitive electrical equipment requires sine wave power to run.

Series Wiring

Batteries or PV modules wired together to increase voltage, while ampacity remains constant. Two 100 Ah 12 VDC batteries wired in series form a 100 Ah 24 VDC battery bank.

Surge Capacity

The amount of current an inverter can deliver for short periods of time. Most electric motors draw up to three times their rated current when starting. An inverter will surge to meet these motor-starting requirements.

Transfer Switch

A switch designed to transfer electricity being supplied to loads from one source of power to another.

Volts (V)

A unit of measure of the pressure in an electrical circuit. If compared to water pressure, a high pressure hose would be considered high voltage, while a slow-moving stream could be compared to low voltage.

Watt(s) (W)

A unit of measurement of the amount of electrical power required or consumed by a tool or appliance. $Watts = Volts \times Amps$

Watt Hour (Wh)

Electrical energy consumption or capacity measured in terms of time. One watt hour of electricity is equal to one watt of power being consumed for one hour.

SW Inverter/Chargers

Advanced Sine Wave Power Inverter/Chargers - 230 VAC/50 Hz Models



The SW Inverter/Charger is our most popular off-grid and back-up power solution. Available in 24- and 48-volt models, it provides utility-grade output power and offers high surge capacity to run most household appliances. The SW offers many programmable features including automatic generator start and stop and automatic load sensing. Its built-in, fully automatic, three-stage battery charger is designed to bring maximum charge to batteries, while using minimum generator run time and fuel.

Features

- ▶ Available in 3300 & 4500 watt models.
- ▶ Utility grade, sine wave power.
- ▶ Durable construction for long life under extreme environmental conditions.
- ▶ Three-stage battery charging (bulk, absorption, and float) and battery equalization 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.
- ▶ Built in starting control circuits for two and three-wire generator starting systems.

Xantrex Power Panel System Solution

Our SW Power Panel is our “plug and play” off-grid electrical system solution. A Power Panels is available in 24 and 48 VDC models. It is custom configured to your specifications. Factory assembled and tested by Xantrex technicians for reliability, the Power panel arrives on a pallet ready to connect to your renewable energy source. This cost effective system is available on a single and dual SW.

Three-phase Commercial-Scale System (380/230VAC)

Xantrex offers a three-phase, commercial scale system built with SW Inverter/Chargers. This system delivers all the features and performance of the SW at continuous power levels from 10 to 13,5 kVAs. Excellent for large, hybrid generator systems, each SW delivers reliable, independent power to each phase to allow generator balancing and 24-hour power, even when the gen-set is off. Generator run time can be reduced or eliminated by adding a renewable power source such as solar panels or wind generators. Three-phase systems are mainly used for off-grid and back-up applications.

Premium Three-phase Power Module

The Xantrex Power Module is a complete, premium three-phase power system that features secure weather-proof enclosures. It is available in two power ratings, ranging in size from 10 kVA to 13,5 kVA (48VDC systems only). Easy to ship and install, the Power module is ideal for remote locations. It is a complete renewable energy system that is assembled onsite into attractive powder-coated enclosures.

All three-phase systems include our revolutionary Phase Monitoring Control System and Power Module Enclosure, plus full SWCA hardware and software. Circuit breakers and disconnect switches are mounted on the outside of the Power Module and are protected by locking weather tight plastic covers. Sealed batteries can be installed in another Power Module enclosure below the electronic modules. Flooded electrolyte batteries should be installed next to the electronic modules in a separate Power Module case. In all configurations, the SW Inverter/Chargers must be ordered separately.

Electrical Specifications

Models	SW3024E	SW3048E	SW4548E
AC Input Voltage	230 VAC	230 VAC	230 VAC
AC Input Voltage Range	150-288 VAC	150-288 VAC	150-288 VAC
AC Input Current	30 amps AC pass through 15 amps AC charging	30 amps AC pass through 15 amps AC charging	30 amps AC pass through 15 amps AC charging
Continuous Power (@ 25 °C)	3300 VA	3300 VA	4500 VA
Efficiency (Peak)	94%	95%	96%
Output Voltage (RMS)	230 VAC	230 VAC	230 VAC
Output Voltage Regulation	± 5%	± 5%	± 5%
Frequency	50 Hz	50 Hz	50 Hz
			Nominal ± 0.04% Crystal Controlled
Continuous Output (@ 25 °C)	14 amps AC	14 amps AC	19 amps AC
100 mSec Surge Capability	38 amps AC	38 amps AC	38 amps AC
Automatic Transfer Relay	30 amps	30 amps	30 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	176 amps DC	88 amps DC	120 amps DC
Short Circuit Current	320 amps DC	160 amps DC	180 amps DC
Idle Consumption (Typ 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 (all models)		
Max. Continuous Charge Rate	100 amps DC	50 amps DC	60 amps DC
Total Voltage Harmonic Distortion	< 5%	< 5%	< 5%
Waveform	Sine wave, 34 to 52 steps per cycle		
Load Sensing (Inverter Mode)	Adjustable, 0 to over 200 watts (48 watts default)		
Power Factor (allowed)	-1 to 1 pf	-1 to 1 pf	-1 to 1 pf

General Specifications

Specified Temperature Range	32 °F to 77 °F (0 °C to 25 °C)		
Enclosure Type	Indoor, ventilated, steel chassis with powdercoat finish		
Unit Weight	105 lb (48 kg)	105 lb (48 kg)	136 lb (63 kg)
Shipping Weight	111 lb (50 kg)	111 lb (50 kg)	143 lb (65 kg)
Inverter Dimensions (H x W x D)	15" x 22.5" x 9" (38 cm x 57 cm x 23 cm)		
Shipping Dimensions	20" x 27" x 15" (52 cm x 69 cm x 40 cm)		
Mounting	Wall mount		
Warranty	2 years		
Part Numbers	SW3024E, SW3048E, SW4548E		

Features & Options

Forced Air Cooling	Standard - variable speed brushless DC fans
Three-stage charging	Standard - three-stage with equalization (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/PAR/E - optional for paralleling two identical SW units for twice the power output at 230 VAC/50 Hz
Conduit Box	SWCB - optional side mount conduit box for code-compliant DC wiring connections

Regulatory Approvals

CE Mark

PS Inverter/Chargers

Economical Sine Wave Power Inverter/Chargers - 230 VAC/50Hz



The PS Inverter/Charger delivers dependable sine wave power at a mid-range price. The 2.5 kW inverter is available in 12 and 24-volt models. It includes a fully automatic three-stage battery charger. This cost-effective inverter/charger also allows you to choose optional features that suit your needs and budget. If you want your generator to start automatically, add the optional GSM and SWRC.

Features

- ▶ 2500 watts of continuous power.
- ▶ Utility grade, sine wave power.
- ▶ Quiet, high-efficiency operation.
- ▶ Three-stage battery charging system (bulk, absorption, and float) with automatic temperature compensation ensures your batteries are properly maintained.
- ▶ Surge capacity of 2.5 times peak power rating starts even the most demanding loads.
- ▶ Low power consumption (preserves battery capacity).
- ▶ Low battery, overload, and over-charge protection circuitry.
- ▶ Seamless transfer switching (grid / generator to battery and battery to grid / generator).

Options

- ▶ Optional SWRC remote allows expanded programming capacity.
- ▶ Optional Generator Start Module (GSM) supports automatic generator start and stop.
- ▶ Stackable design for paralleling.

Electrical Specifications

Models	PS2212E	PS2524E	
AC Input Voltage	230 VAC	230 VAC	
AC Input Voltage Range (default)	206 - 254 VAC	206 - 254 VAC	
AC Input Current (via selector switch)	15 or 30 amps	15 or 30 amps	Required for full pass through and full charging
Continuous Power (@ 25 °C)	2200 VA	2500 VA	
Efficiency (Peak)	90%	92%	
Output Voltage (RMS)	230 VAC	230 VAC	
Output Voltage Regulation (Typical)	± 3%	± 3%	
Frequency (Nominal)	50 Hz	50 Hz	± 0.04% Crystal Controlled
Continuous Output (@ 25 °C)	9.5 amps AC	11 amps AC	
Surge Capability			
5 Sec Rating (Resistive)	4000 watts	6000 watts	
1 mSec	35 amps AC	58 amps AC	
100 mSec	17 amps AC	38 amps AC	
DC Input Voltage (Nominal)	12 VDC	24 VDC	
DC Input Voltage Range	11.8 - 16.5 VDC	22 - 33 VDC	
DC Current at Rated Power	240 amps DC	140 amps DC	
Idle Consumption (Typical at Full Voltage)	< 20 watts	< 20 watts	
Search Mode Consumption	< 0.5 watt	< 0.5 watt	
Maximum Charge Rate (Adjustable)	100 amps DC	65 amps DC	
Total Harmonic Distortion	3 - 5%	3 - 5%	Stand alone operation
Waveform	Sine wave, 34 to 52 steps per cycle		
Load Sensing (Inverter Mode)	Adjustable 0 to 240 watts (48 watts default)		
Power Factor (Allowed)	-1 to 1 pf	-1 to 1 pf	

General Specifications

Specified Temperature Range	32 °F to 104 °F (0 °C to 40 °C)
Enclosure Type	Fully screened, indoor, ventilated, steel chassis with powdercoat finish
Unit Weight	80 lb (36.4 kg)
Shipping	88 lb (40 kg)
Inverter Dimensions (H x W x D)	15.5" x 22.5" x 6.5" (38.7 cm x 57.1 x 16.6 cm)
Shipping Dimensions (H x W x D)	20" x 26" x 12.75" (51 cm x 66 cm x 32.3 cm)
Mounting	Vertical wall mount or shelf mount
Warranty	2 years
Part Numbers	PS2212E, PS2524E - Inverters

Features & Options

Forced Air Cooling	Standard variable speed brushless DC fans
Three-stage charging	Standard three-stage (bulk, absorption, and float)
Communications Adaptor	SWCA - optional adaptor allows PC or modem connection
Battery Temperature Sensor	BTS - standard remote battery temperature sensor for increased battery performance
Remote Control	SWRC - optional remote control and status indicator or RC8 - optional on/off remote control with status LED indicator
Paralleling Kit	SWI/PAR or SWI/PAR/E - optional for paralleling two identical PS units for twice the power output
Conduit Box	PSCB - optional side mount conduit box for code-compliant DC wiring connections
Generator Start	GSM - optional Generator Start Module allows auto generator start
Auxiliary Relay	ALM - optional Auxiliary Load Module provides voltage controlled relays

Regulatory Approvals

UL Listed to UL 1741 and cUL 107.1-95 and CE compliant

DR Inverter/Chargers

230 VAC/50 Hz Modified Sine Wave Inverter/Chargers



The DR Inverter/Charger provides dependable modified sine wave power for businesses, homes and workshops. Available in 1500 and 2400 watt models, it can power most common electrical appliances such as lights, televisions, cash registers, refrigerators, washing machines, computers, and power tools. The DR's high surge capacity gives it the ability to start difficult motor loads. Once set up, all functions of the inverter/charger are fully automatic.

Features

- ▶ Quiet, high efficiency operation.
- ▶ Front panel LED indicators and adjustable switch selectors.
- ▶ Selectable settings for flooded lead acid, gel, or absorbed glass mat (AGM) batteries.
- ▶ Three-stage battery charging (bulk, absorption, and float) for increased performance.
- ▶ Low battery, overload, and high battery, over temperature protection circuitry.
- ▶ Fast switching (grid to battery and battery to grid) for backup power.
- ▶ Low idle current (less than one watt) conserves energy when no loads are present.
- ▶ Generator compatible.

Options

- ▶ Remote battery temperature sensor (BTS) increases battery performance and life.
- ▶ Remote control and status indicator (RC8) allows you to view system status remotely.
- ▶ Side mount conduit box (DRCB) makes code-compliant DC wiring connections convenient.



RC8/100

Remote Control Panel

The RC8/100 remote control panel can be mounted up to 100 feet (30 meters) away for convenient status monitoring and on/off inverter activation.

Electrical Specifications

Model	DR1512E	DR1524E	DR 1548E	DR2424E	
AC Input Voltage	230 VAC	230 VAC	230 VAC	230 VAC	
AC Input Low Transfer Voltage	80 - 210 VAC	80 - 210 VAC	80 - 210 VAC	80 - 210 VAC	
Maximum AC Input Current	25 amps	25 amps	25 amps	30 amps	
Continuous Power (@25 °C)	1500 VA	1500 VA	1500 VA	2400 VA	
Efficiency (Peak)	94%	94%	94%	94%	
Output Voltage (RMS)	230 VAC	230 VAC	230 VAC	230 VAC	
Maximum Output Voltage Regulation	± 5%	± 5%	± 5%	± 5%	
Frequency (Nominal)	50 Hz	50 Hz	50 Hz	50 Hz	± 0.04% Crystal Controlled
Continuous Output (@25 °C)	6.5 amps AC	6.5 amps AC	6.5 amps AC	10.5 amps AC	
1 mSec Surge Capability	20 amps AC	20 amps AC	20 amps AC	40 amps AC	
Automatic Transfer Relay	15 amps	15 amps	15 amps	15 amps	
DC Input Voltage (Nominal)	12.6 VDC	25.2 VDC	50.4 VDC	25.2 VDC	
DC Input Voltage Range	10.9 - 15.5 VDC	21.8 - 31 VDC	43.6 - 62 VDC	21.8 - 31 VDC	
DC Current at Rated Power	150 amps DC	75 amps DC	37 amps DC	120 amps DC	
Idle Consumption (Typical at Full Voltage)	< 10 watts	< 10 watts	< 10 watts	< 10 watts	
Search Mode Consumption	< 1 watt	< 1 watt	< 1 watt	< 1 watt	
Maximum Charge Rate (Adjustable)	70 amps DC	35 amps DC	17.5 amps DC	70 amps DC	
Waveform	Modified sine wave				
Load Sensing (Inverter Mode)	Adjustable 5 to over 100 watts (5 watts default)				
Power Factor (Allowed)	-1 to 1 pf	-1 to 1 pf	-1 to 1 pf	-1 to 1 pf	(lead or lag)

General Specifications

Specified Temperature Range	32 °F to 104 °F (0 °C to 40 °C)				
Enclosure Type	Indoor, ventilated, steel chassis with powder coat finish				
Unit Weight	38 lb (17.2 kg)	38 lb (17.2 kg)	36 lb (16.3 kg)	44 lb (20 kg)	
Shipping	42 lb (19 kg)	42 lb (19 kg)	40 lb (18.1 kg)	48 lb (21.8 kg)	
Dimensions (H x W x D)	8.5" x 22" x 7.25" (21.6 cm x 55.9 cm x 18.4 cm)				
Shipping Dimensions (H x W x D)	13" x 25" x 12" (33 cm x 63.5 cm x 30.5 cm)				
Mounting	Horizontal wall mount				
Warranty	2 years				
Part numbers	DR1512E, DR1524E, DR1548E, DR2424E - DR Inverter/Chargers				
	DRCB - Optional, conduit box				
	RC8 - Optional, remote				
	BTS - Optional, battery temperature sensor				

Features & Options

Forced Air Cooling	Standard forced air variable speed fan
Charging Profiles	Eight standard with two equalize profiles
Three-stage Charging	Standard three-stage (bulk, absorption, and float)
Battery Temperature Sensor	BTS - optional remote battery temperature sensor for increased battery performance
Remote Control	RC8 - optional remote control and status indicator
Conduit Box	DRCB - optional side mount conduit box for code-compliant DC wiring connections

Regulatory Approvals

CE Mark

Note: Specifications subject to change without notice.

UX Inverter/Chargers

230 VAC/50 Hz Economical Inverter/Chargers



The UX Series Inverter/Charger is an economical and efficient choice for moderate power needs. It is easy to operate and provides enough power to run electric tools and many kitchen appliances. This 12 volt inverter is available in 500 and 1100 watt models and can start and run appliances up to three times the continuous rating. The UX is extremely efficient and consumes as little as one-half a watt under no-load conditions.

Features

- ▶ Quiet, high efficiency operation. Backed by a two-year warranty. 500 VA and 1100 VA continuous output models.
- ▶ Front panel LED indicator and adjustable "Search Mode" switch.
- ▶ Selectable settings for flooded lead acid, gel, or absorbed glass mat (AGM) batteries.
- ▶ Low battery, overload, and high battery, over temperature protection circuitry.
- ▶ Fast switching, grid to battery and battery to grid, for backup power (SB models only).
- ▶ Low idle current (less than one watt) conserves energy when no loads are present.
- ▶ Generator compatible for charging (SB models only).

Options

- ▶ SB option: built-in, temperature compensating, three-stage battery charging system and AC input transfer switch to ensure your batteries are properly maintained at all times.
- ▶ Remote battery temperature sensor (BTS) increases battery performance and life (SB models only).
- ▶ Remote control and status indicator (RC8) allows you to view system status remotely.

Electrical Specifications

Models	UX512E(SB)	UX1112E(SB)	
AC Input Voltage	230 VAC	230 VAC	
AC Input Current for Max. Charge	2.5 amps	5 amps	SB models only
AC Input Current for Max. Pass Through	15 amps	15 amps	SB models only
Continuous Power (@25 °C)	500 VA	1100 VA	
Nominal Power	500 VA	1100 VA	
Efficiency (Peak)	92%	92%	
Output Voltage (RMS)	230 VAC	230 VAC	
Waveform	Modified sine wave - all models		
Output Voltage Regulation	± 5%	± 5%	
Frequency (Nominal)	50 Hz	50 Hz	± 0.01% crystal controlled
Continuous AC Output (@25 °C)	2.0 amps	4.8 amps	
100 mSec Surge Capability	10 amps	10 amps	
Automatic Transfer Relay	15 amps	15 amps	SB models only
DC Input Voltage (Nominal)	12 VDC	12 VDC	
DC Input Voltage Range	9.5 - 16.7 VDC	9.5 - 16.7 VDC	
DC Current at Rated Power (Nominal)	41.7 amps	91.7 amps	
Idle Consumption (Typical at Full Voltage)	5 watts	5.5 watts	
Search Mode Consumption	< 1 watt	< 1 watt	
Maximum Charge Rate (Adjustable)	25 amps	50 amps	SB models only
Load Sensing (Inverter Mode)	Adjustable, 5 to over 100 watts (5 watts default) - all models		
Power Factor (Allowed)	0.5 to 1.0 pf	0.5 to 1.0 pf	

General Specifications

Specified Temperature Range	32 °F to 77 °C (0 °C to 25 °C)		
Enclosure Type	Indoor, ventilated, steel chassis with powdercoat finish		
Unit Weight	26 lb (11.8 kg)	30 lb (13.6 kg)	
Shipping	30 lb (13.6 kg)	34 lb (15.4 kg)	
Dimensions (H x W x D)	6" x 10.25" x 15.5" (15.2 cm x 26 cm x 39.4 cm)		
Shipping Dimensions (H x W x D)	20.5" x 27" x 18" (52 cm x 69 cm x 45.7 cm)		
Mounting	Wall or shelf mount		
Warranty	2 years		
Part Numbers	UX512E, UX1112E - UX 50 Hz Inverters UX512ESB, UX1112ESB - UX 50 Hz Inverter/Chargers		

Features & Options

Cooling	Standard on/off DC cooling fan on UX1112E(SB) models
Three-stage Charging	SB models only - standard, three-stage (bulk, absorption, and float)
Control Panel	Standard - on/off switch, LED display, and load sensing potentiometer
High and Low Battery Protection	Standard - automatically shuts down batteries to prevent damage
Battery Temperature Sensor	BTS - optional remote battery temperature sensor for increased battery performance - for use only with SB models
Remote Control	RC8/50 - optional remote control and status indicator with 50' cable

Regulatory Approvals

UX512E(SB) and UX1112E(SB) models carry the CE mark

Note: Specifications subject to change without notice.

Prosine Inverters

1000 Watt and 1800 Watt/230 Volt/50 Hz Sine Wave Inverters



Offering superior quality sine wave output, the Prosine 1000i and Prosine 1800i stand-alone inverters are ideal for electrical systems that already have a quality multistage battery charger. Designed for recreational and industrial applications, Prosine inverters are suitable for both heavy duty and sensitive electronic loads. The inverters are lighter and more compact than others with similar power ratings because they use high-frequency switching technology in the power conversion process.

Ultra-Clean True Sine Wave Power

With less than 3% total harmonic distortion, the Prosine delivers true sine wave output that is identical to AC power supplied by your utility. Expect trouble-free true sine wave electricity for televisions, audio systems, variable speed tools, and more.

Product Features

- ▶ Two models available: 1000 watt (1500 watt surge) and 1800 watt (2900 watt surge)
- ▶ True sine wave output
- ▶ Removable LCD display can be mounted remotely for control and monitoring
- ▶ Unique DC terminals offer 180-degree connections for easy installation in tight places
- ▶ Efficient powersave mode draws only 1.5 watts under no load condition
- ▶ Two year warranty

Protection Features

- ▶ Over temperature shutdown and automatic overload protection
- ▶ Over voltage and under voltage protection
- ▶ Short circuit and AC backfeed protection

Options

- ▶ Available in 12 and 24 volt models
- ▶ Schuko AC receptacle
- ▶ Remote interface kit for remote mounting of display module
- ▶ Models available with Schuko, hardwire, or hardwire with transfer switch



Prosine 1000E/1800 Remote Panel

Inverter Remote Display

This remote panel displays DC input voltage from the battery, DC input current (amps) drawn from the battery, power scale with inverter wattage output, and status/error display for shutdown conditions - overload, over-temperature, and over/under voltage. Comes with 25' (7.6 m) cable.

Electrical Specifications

Model	Prosine 1000i	Prosine 1800i
Output power	1000 watts	1800 watts
Surge rating	1500 watts	2900 watts
Peak output current	11 A	20 A
Output voltage (at no load)	230 VAC RMS +/-3%	230 VAC RSM +/-3%
Output voltage (over full load and battery voltage range)	230 VAC RMS +4%, -10%	230 VAC RMS +4%, -10%
Output frequency	50 Hz +/-0.05 (crystal controlled)	50 Hz +/-0.05 (crystal controlled)
Output waveform	True sine wave (<3% THD)	True sine wave (<3% THD)
Peak efficiency	90%	90%
No load power draw (search mode)	<1.5 W	<1.5 W
No load power draw (idle mode)	<22 W	<22 W
Input voltage range (12 V/24 V)	10 - 16 VDC / 20 - 32 VDC	10 - 16 VDC / 20 - 32 VDC
Transfer relay rating (hardwire/transfer relay models)	10 A	10 A
Transfer time AC to inverter and inverter to AC	Max 2 cycles (typically 1 cycle) <2.5 seconds with Powersave "ON"	

General Specifications

Operating temperature range	0°C - 60°C	0°C - 60°C	
Storage temperature range	-30°C - 70°C	-30°C - 70°C	
AC output types	Hardwire	Hardwire	
	Hardwire with transfer relay	Hardwire with transfer relay	
	Schuko AC receptacle	Schuko AC receptacle	
LCD display panel	Removable; can be mounted remotely (requires remote interface kit - see part number section)		
Recommended DC fuse (12 V model)	175 A (depending on applicable installation codes)	300 A (depending on applicable installation codes)	
Recommended DC fuse (24 V model)	90 A (depending on applicable installation codes)	100 A (depending on applicable installation codes)	
Dimensions (H x W x L)	115 x 280 x 390 mm	115 x 280 x 390 mm	
Weight	7.0 kg	7.5 kg	
Warranty	Two years	Two years	
Part numbers	806-1070 (12 V/230 SCHUKO)	806-1870 (12 V/230 SCHUKO)	
		806-1073 (12 V/230 Hardwire)	806-1873 (12 V/230 Hardwire)
		806-1074 (12 V/230 Hardwire & transfer switch)	806-1874 (12 V/230 Hardwire & transfer switch)
		806-1080 (24 V/230 SCHUKO)	806-1880 (24 V/230 SCHUKO)
		806-1083 (24 V/230 Hardwire)	806-1883 (24 V/230 Hardwire)
		806-1084 (24 V/230 Hardwire & transfer switch)	806-1884 (24 V/230 Hardwire & transfer switch)
		808-1800 Remote interface kit)	808-1800 (Remote interface kit)

Regulatory Approvals

CE Mark - Low Voltage Directive (EN50091-1), EMC Directive (EN50091-2)

e-Mark - Automotive EMC Directive 95/54/EC

Note: Specifications subject to change without notice.

GT100E Grid Tie Inverter

100 kW Three-Phase Power Conversion Center



The Xantrex GT100E Grid Tie Inverter is based on a reliable platform that is used in grid-connect photovoltaic and wind turbine applications in North America and Europe. Easy to install and operate, the GT100E automates start up, and shut down. It incorporates advanced Maximum Power Point Tracking Technology to maximize the energy harvested from a PV array. To minimize power losses during the conversion process, the inverter's switching technology uses insulated gate bi-polar transistors. Multiple inverters can be paralleled for large power installations. Designed for European PV installations, the GT100E meets all applicable CE requirements and is approved by the TÜV Rheinland.

Features

- ▶ Digital Signal Processor (DSP) based controls with self-diagnostics and LCD for display of operating status. Inverter shut off and disconnects.
- ▶ Over- and under-voltage and frequency protection, shutting down the inverter.
- ▶ Anti-islanding protection - prevents back-feeding inverter-generated power to the grid in the event of a utility outage.
- ▶ User definable power tracking matches the inverter to the array, as well as adjustable delay periods to customize system shutdown sequences.
- ▶ Graphical user interface software for real time communications monitoring and control

Options

- ▶ Remote monitoring via telephone modem
- ▶ Faults notification via modem
- ▶ Data acquisition and logging
- ▶ Analog inputs for external measurements

Electrical Specifications

Continuous Power Rating	100 kW AC
Nominal DC Voltage	105 kW DC
Nominal AC Voltage	400 VAC three phase
Nominal AC Frequency	50 Hz
Line Power Factor	> 0.99 above 20% rated power
Maximum AC Line Current	164 amps AC
AC Current Distortion	< 3% THD at rated power
Max. Open Circuit Voltage	600 VDC
Power Tracking Window Range	330 to 600 VDC
Max. DC Input Current	319 amps DC
Peak Inverter Efficiency	95.5% (includes transformer)
European Weighted Efficiency	94.6%
Standby Tare Losses	93 watts

General Specifications

Ambient Temperature Range	-10 °C to +45 °C
Enclosure Environmental Rating	IP21
Enclosure	Rittal TS Series
Weight	955 kg
Dimensions (H x W x D)	205 x 120 x 60 cm
Altitude	up to 2000 m without de-rating
Relative Humidity	0 to 95% non-condensing

Features & Options

Cooling Method	Forced convection cooling
Protective Functions	AC over / under voltage, AC over / under frequency, over temperature, AC and DC over current, DC over voltage
User Display Standard	LCD, two-line, twenty characters with keypad
Disconnects (AC & DC)	Integral to inverter assembly
Isolation Transformer	Integral to inverter assembly
Communications Software	Graphical user interface software for real time communications and control
Data Acquisition and Logging	Adjustable
Interfaces	Telephone modem for remote monitoring and faults notification via modem, RS232
External Measurements	Four analog inputs for authorized external PV plant monitoring

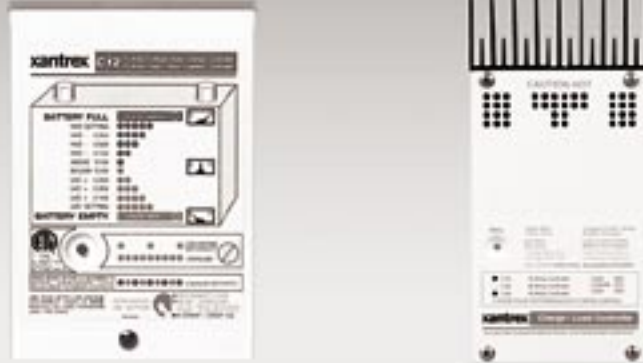
Approvals & Safety

The GT100E is compliant to applicable European Directive and CE marked : ► EMC Directive: EN 50081-2, EN 50082-2 ► Low Voltage Directive: EN 50178
The GT100E complies with the requirements of VDEW
The GT100E is approved by the TÜV Rheinland

Note: Specifications subject to change without notice.

Charge Controllers

Small System Charge or Lighting or Load Controller



C12

The C12 charge, lighting, or load controller is uniquely sophisticated. As a charge controller, it features three-stage charging, user definable voltage parameters and automatic equalization. Standard in the C12's load control circuitry are field adjustable low voltage disconnect and reconnect points, along with a five minute low battery disconnect warning. The C12 also functions as a lighting controller. Lighting run time is adjustable from two to eight hours or can be set for dusk to dawn operation.

C Series

The C35 and C60 are field configurable for 12- and 24- VDC operation. The C40 may be configured for 12-, 24-, or 48- VDC operation. All can be used as a charge, diversion, or load controller and come with a standard multi-color charge status LED.

Features

- ▶ Silent, pulse width modulated microprocessor control (maximizing battery life)
- ▶ Field adjustable voltage and battery type set points
- ▶ Electronic protection against short-circuit, overload, over temperature, and reverse polarity conditions

C12

- ▶ BTS: Battery temperature sensor

C Series

- ▶ CM: Cumulative amp hour meter
- ▶ CM/R: Remote cumulative amp hour meter (available in 50 or 100 foot lengths)
- ▶ BTS: Battery temperature sensor

Optional Accessories



CM and CM/R

Digital Meter or Remote Display

This digital meter mounts onto the front of a charge controller or as a remote it can be installed up to 100' (31 m) away. It displays volts, amps, and resettable cumulative amp hours for a solar array, DC loads, or diversion loads, depending on the application. The CM/R comes with 50' (15 m) or 100' (31 m) communication cable for remote installation.

General Specifications

Model	C35	C40	C60
Voltage Configurations	12 and 24 VDC	12, 24, and 48 VDC	12 and 24 VDC
Max. PV Open Circuit Array Voltage	55 VDC	125 VDC	55 VDC
Charging / Load Current (@ 25 °C)	35 amps DC	40 amps DC	60 amps DC
Max. Peak Current	85 amps	85 amps	85 amps
Max. Voltage Drop Through Controller	0.30 volts	0.30 volts	0.30 volts
Typical Operating Consumption	15 ma	15 ma	15 ma
Typical Idle Consumption	3 ma	3 ma	3 ma
Recommended Breaker Size	45 amps	50 amps	60 amps rated at 100% continuous duty
Recommended Wire Size	#8 AWG	#8 AWG	#6 AWG rated at 90 °C
Lead Acid Battery Settings	Adjustable	Adjustable	Adjustable
NiCad Battery Settings	Adjustable	Adjustable	Adjustable
Load Control Mode	Low Voltage Reconnect - Adjustable (sticker provided with unit) all models Low Voltage Disconnect - User selectable manual or automatic reconnection - includes warning flash before disconnect and provides a one time, user selected grace period) all models		

General Specifications

Specified Temperature Range	32 °F to 104 °F (0 °C to 40 °C)		
Enclosure Type	Indoor, ventilated, powder coated steel with 3/4" and 1" knockouts		
Unit Weight	2.5 lb (1.2 kg)	3.0 lb (1.4 kg)	3.0 lb (1.4 kg)
Shipping	3.0 lb (1.4 kg)	3.5 lb (1.6 kg)	3.5 lb (1.6 kg)
Dimensions (H x W x D)	8.0" x 5.0" x 2.5" 20.3 cm x 12.7 cm x 6.4 cm	10" x 5" x 2.5" 25.4 cm x 12.7 cm x 6.35 cm	10" x 5" x 2.5" (25.4 cm x 12.7 cm x 6.35 cm)
Shipping Dimensions (H x W x D)	12.4" x 7" x 2.5" 31.5 cm x 17.8 cm x 6.4 cm	12.4" x 7" x 2.5" 31.5 cm x 17.8 cm x 6.4 cm	12.4" x 7" x 2.5" 31.5 cm x 17.8 cm x 6.4 cm
Mounting	Vertical wall mount - indoor only		
Altitude - Operating	15,000' (4,572 m)		
Altitude - Non-Operating	50,000' (15,240 m)		
Warranty	2 years		
Part numbers	C35, C40, C60 - Controllers CM - Front Display Panel CM/R-50, CM/R-100 - Remote Display Panel BTS - Battery temperature sensor		

Features & Options

Regulation Method	Solid state, three-stage (bulk, absorption, and float), pulse width modulation
Field Adjustable Control Setpoints	Two user adjustable voltage setpoints for control of loads or charging sources - settings retained if battery is disconnected
Display Panel	CM, CM/R-50, or CM/R-100 - optional LCD - backlit, alphanumeric display showing battery voltage, DC amperage, cumulative amp hours, and amp hours since last reset - remote includes 50' (15 m) or 100' (30.5 m) cable
Equalization Charge	User selectable manual or automatic equalization - every 30 days
Battery Temperature Sensor	BTS - optional remote battery temperature sensor for increased charging precision

Regulatory Approvals

UL Listed to UL 1741 - 1999 and to CSA 22.2 No. 107.1-95 Standards, CE compliant

Note: Specifications subject to change without notice.

Electrical Specifications

Maximum PV Amps	12 amps at 12 VDC only
Maximum DC Load	12 amps with auto reset
Minimum Operating Voltage	6 volts
Maximum Voltage Drop - PV to Battery	0.3 volts
Maximum Voltage Drop - Battery to DC Load	0.15 volts
Regulation Setting	13 to 15 VDC
Equalize Setting	Bulk plus 1 volt for two hours
Typical Consumption while Charging	0.007 amps
Typical Consumption at Night	0.003 amps
Typical Consumption with Load Disconnected	0.003 amps
Maximum Stranded Wire Size	#10 AWG stranded (5.2 mm ²)

General Specifications

Allowed Temperature Range	32 °F to 104 °F (0 °C to 40 °C)
Enclosure Type	Powder coated steel with strain relief for wiring and knockouts for up to three ½" conduits
Unit Weight	2 lb (0.9 kg)
Shipping Weight	2.5 lb (1.13 kg)
Dimensions	6.25" H x 4.3" W x 1.5" D (16.5 cm H x 11 cm W x 4 cm D)
Shipping Dimensions	8" H x 4.6" W x 1.6" D (20.3 cm H x 11.7 cm W x 4 cm D)
Mounting	Vertical wall mount - indoor
Warranty	2 years
Part Numbers	C12 - charge controller

Features & Options

Regulation Method	Standard - three-stage (bulk, absorption, and float), solid state, pulse width modulation
Field Adjustable Control Setpoints	Standard - removable knobs and calibrated scales
Setting Protection	Standard - knobs can be removed to prevent tampering
Testpoints	Standard - provided for each setting
Automatic Equalization	Standard - every 30 days or after voltage reaches low voltage disconnect - can be disabled
External Battery Temperature Compensation	Optional - battery temperature sensor (BTS)
Short Circuit Protection	Standard - fully electronically protected with auto reset and manual reset switch, protects both the loads and PV array from damage from short circuits - a fuse for the battery is still advised to protect the battery wires if located separately
Reverse Polarity Protection	Standard - fully protected
Low Voltage Disconnect	Standard - adjustable automatic or manual operation, manual reconnection includes warning flash of loads five minutes before and a ten minute grace period

Regulatory Approvals

ETL Listed to UL 1741 No. 2 and CSA C22.2 No 14

Note: Specifications subject to change without notice.

Series and Parallel Stacking

► Accessories

SWI/PAR/E

Parallel Stacking Capability (9 kVA Max. Output)

With a parallel stacking interface (SWI/PAR/E), you can connect two identical SW Inverters in parallel to produce twice the output power at the same voltage. So you'll have double the continuous and surge capacity on a single output circuit. The pass-through capacity is also doubled when connected to an AC source such as a fuel powered generator or a utility grid. The inverters operate in parallel and split the loads between them. Parallel Stacking is mainly used for off-grid and back-up applications.

► For use with SW Inverters



Breakers and Disconnects

DC Disconnects and DC Breakers

Xantrex makes DC input safety a simple matter with our complete line of DC disconnects and breakers. The high amperage DC breaker is housed within a powder coated enclosure with conduit knockouts. Our DC disconnects are simple to install and meet all electrical code requirements for appropriate circuit protection.

DC Disconnects are expandable, allowing an additional 175 or 250 amp inverter breaker to be installed for dual inverter installations. DC input/output breakers for PV, charge controllers, or DC loads can also be field installed into our DC Disconnects. The TM500A shunt can also be installed in a DC175 or DC250.

► For use with multiple systems



Disconnect and Breaker Options

- DC250: 250 amp breaker with enclosure
- DC175: 175 amp breaker with enclosure
- GJ250: Additional 250 amp breaker (field installable)
- GJ175: Additional 175 amp breaker (field installable)
- DCBB: Negative/ground bonding block. Connects up to two #4/0 AWG negative cables and grounding system
- CD60DC: 60 amp circuit breaker for solar array input disconnect
Mounts on the side of the DC250 or DC175
- CD15: 15 amp circuit breaker for small DC loads
Mounts on the side of the DC250 or DC175
- CD20: 20 amp circuit breaker for small DC loads
Mounts on the side of the DC250 or DC175

PVGFP

Ground Fault Breakers

PVGFP breakers disconnect the solar array if a ground fault occurs in the wiring. These breakers can be ordered in one to four pole configurations. The PVGFP works with 12-, 24-, and 48- VDC systems with or without batteries.

► For use with multiple systems



Remote Controls

► Accessories

SWCA

SW Communications Adapter

The SWCA allows PC connection and monitoring of up to eight SW or PS Inverters. The package includes the adapter, DOS based software, 25' (7.6 m) of cable and a DB9 connector. The SWCA or SWRC are required on the PS to adjust settings.

► For use with SW and PS Inverters



SWRC

SW Remote Control

The SWRC is a full-function remote control with backlit LCD display. The remote control comes with a standard 25-foot (7.5 m) cable or a 50-foot optional (15 m) cable.

► For use with SW Inverters



TM500A Meter

Battery System Monitor

The TM500A provides easy to understand information. The fuel gauge style battery meter makes keeping track of state-of charge virtually fool proof. The TM500A comes with 50 feet (15m) of cable, a Deltek 50mV/500 amp shunt, a prewired cable, and a plug-in adapter board. Note: 48 volt systems require the TM/48 adapter board.

► For use with multiple systems



Conduit Boxes

SWCB

SW Conduit Box and Power Station Conduit Box

These conduit boxes fit on the DC end of the inverter and make wiring to NEC specifications easy. Knockouts are provided for 1/2", 3/4", and 2" sizes. Order SWCB for use with SW Inverters.

► For use with SW Inverters



DRCB

DR Conduit Box

This conduit box fits on the DC end of the inverter and makes wiring to NEC specifications easy. Knockouts are provided for 1/2", 3/4", 2", and 2 1/2" sizes.

► For use with DR Inverters



Combiner Boxes and Fuses

► Accessories

TCB6 Combiner Box

The TCB6 combiner box makes installing inverters and renewable energy equipment simple and code compliant. These devices meet the UL requirement for series fusing of PV modules when connected in parallel to form larger arrays. The combiner box will accommodate six PV input circuits fused at up to 20 amps per circuit. The maximum continuous current rating of the TCB is 100 amps at 12-, 24-, or 48-VDC. Fuses are available in 5, 6, 8, 10, and 15 amp sizes.

► For use with multiple systems



TFB Fuse Block

The Xantrex Fuse Block has a DC rated class T fuse in a protective holder with slide-off cover and is available in 110, 200, 300, and 400 amps. We make two types of this useful accessory, one with a wire clamp to accept bare copper wire, and another with a post type terminal to accept cables with ring terminals.

► For use with multiple systems



Battery Charging and Monitoring

Truecharge Battery Chargers 200-250 VAC, 50/60Hz 10 amp, 20 amp, and 40 amp DC Output

Truecharge multistage battery chargers are microprocessor controlled for fast and accurate charging of your batteries. A wide AC input voltage range enables proper delivery of a full three-stage charge, and features such as adjustable temperature compensation and independent settings for flooded, gel, and AGM batteries, prevent battery damage due to overcharging.

► For use with multiple systems



Battery Temperature Sensor

The BTS mounts on your battery and measures its temperature. It sends precise information to the inverter/charger or charge controller, which automatically adjusts charging voltage to ensure full battery charge, regardless of the ambient temperature of your battery installation.

The BTS is standard on SW and PS Inverters.

► For use with DR and UX Inverters
and C Series Charge Controllers



Battery Cables

We make it easy to ensure that your system has the right cabling by offering a complete line of UL listed, flexible battery cables. There are twelve cable sizing options, so check with your Xantrex product reseller to determine which cable sizes are right for your system.

► For use with multiple systems



About Xantrex

Xantrex offers renewable energy systems from 600 Watts to 1.5 Mega Watts. Our technology is a key enabler for renewable energy systems, efficiently converting raw electrical energy from any source such as solar, wind, or microhydro, into high-quality power. Xantrex products are also used for mobile, backup and test and measurement applications.

Privately owned with 500 employees and revenues of 119 million Euros in 2003, Xantrex is headquartered in Vancouver, Canada. The company's European headquarters is in Barcelona Spain.

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Smart choice for power

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