



FREEDOM EX INVERTER/CHARGER/CONVERTER DATASHEET



AVAILABLE IN:
48V

**4000W/
80A chg/45A cvt**

ALL IN ONE PACKAGE

Power Inverter, Lithium Ion ready Battery Charger, 12VDC Converter Power Supply, 50A Transfer Relay in One Package.

The new FREEDOM EX 4000 is a truly unique, true sine wave power solution packing a powerful 48VDC, 4000W (8000W [5s]) inverter, 80A 48VDC battery charger, 50A transfer relay and a 48VDC to 12VDC, 45A converter inside one box. Designed for mobile applications that utilize 48VDC battery systems, the FREEDOM EX 4000 is designed to work as a standalone AC and DC power solution or supplement an existing generator to create a hybrid system.

The FREEDOM EX 4000 features the most widely used communication protocols – RV-C (RV), J1939 (Truck) and NMEA 2000 (Marine) enabling it to be used in virtually any application that requires integration with 3rd party MFPs and software.



Parallel and Series Stacking



Extended Surge Rating



Highly configurable charger specifically designed for lithium ion batteries



48 to 12VDC Voltage Converter Output



Built-in 50A Transfer Relay



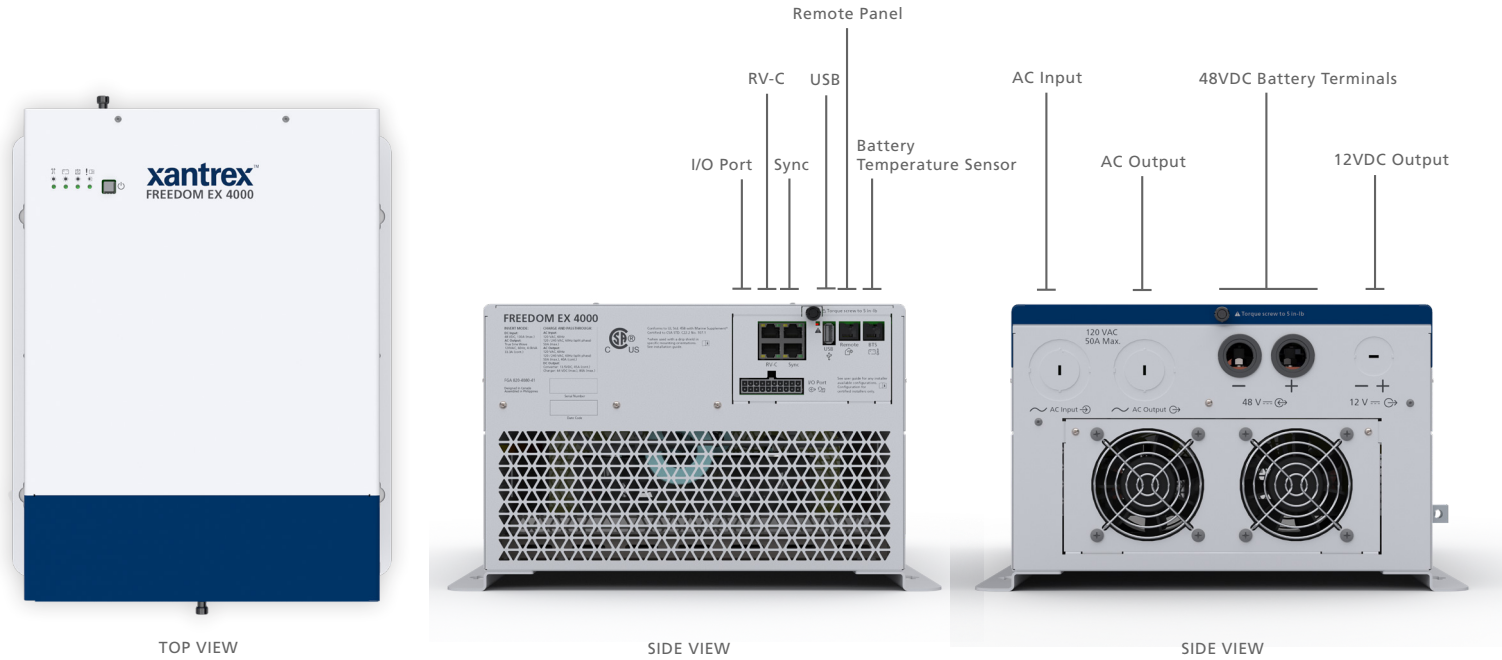
Ignition Control

APPLICATIONS:



**3 YEAR
WARRANTY**

www.xantrex.com
CUSTOMER CARE: 1.800.670.0707



PRODUCT FEATURES

DC-DC Voltage Converter

- 48VDC to 12VDC output, simplifies installation, fewer components, fewer cables, reduced installation time

Highly configurable charger specifically designed for lithium ion batteries

- Power factor correction, temperature compensation, power share, battery equalization and the ability to configure charging profile and stages and set charge output to desired amps

Built-in 50A Transfer Relay

- 50A split input (split phase dual out - SPDO)
All 120V loads and 240V loads are powered up in this case
- 30A dual single-phase input through a Dogbone Adapter (dual in dual out - DIDO)
All 120V loads get powered up
- 30A single phase input (single in single out - SISO)
Only 120V loads connected to L1 get powered up

Extended Surge Rating

- Surges to 2X continuous power for 5 seconds for motor loads

True Sine Wave AC Power

- For operation of sensitive and motor loads

Ignition Control

- Feature to turn inverter on/off via a 12VDC signal and to minimize battery drain by switching the inverter off when the ignition key is turned off

Stacking Support

- Stack up to 3 units in parallel; up to 2 units in series

RECOMMENDED ACCESSORIES

COMPLETE YOUR ELECTRICAL SYSTEM



FREEDOM EX REMOTE PANEL
808-0817-03

ELECTRICAL SPECS - INVERTER

FREEDOM EX 4000 (820-4080-41) DATASHEET

| | FREEDOM EX 4000 |
|-------------------------------------|--|
| AC Output Operating Voltage Options | 105 - 130VAC |
| Continuous Output Power | Continuous Power 4000 W @40°C True sine wave (TSW) at 120Vac |
| Continuous AC Output Current | 33A |
| Surge Power | 8000W(5 sec) |
| Frequency | 60Hz |

ELECTRICAL SPECS - BATTERY CHARGER/PASS-THROUGH

| CHARGER MODE: | FREEDOM EX 4000 |
|---|--|
| Nominal DC Output Voltage | 48VDC |
| Charger Voltage Range | 40 - 64VDC |
| Maximum DC Output Current (user configurable down to 5 A) | 80A |
| Supported Battery Types | Flooded, Gel, AGM, Lithium Ion, Custom |
| PASSTHROUGH: | |
| AC Input Voltage: - Single-phase (L1 - N and L2 - N) - Split-phase* (L1 - L2) | 80 - 138Vac 160 - 276Vac |
| Frequency (input/output) | 60Hz |
| Continuous AC current (input/output) | 40A |

* L1-N must be within the single-phase qualification voltage range.

ELECTRICAL SPECS - 12 VDC POWER SUPPLY

| | FREEDOM EX 4000 |
|---|--|
| Nominal DC Output Voltage (fully regulated) | 13.5VDC |
| Maximum DC Output Current | 45ADC continuous (at 77°F (25°C) ambient) 50ADC for 15 minutes (at 77°F (25°C) ambient) 70ADC for 6 minutes (at 77°F (25°C) ambient) |
| Typical Application* | Powering 12 VDC Loads |

*Not to be used as a battery charger

ELECTRICAL SPECS - COMMUNICATIONS SUPPORTED

| | FREEDOM EX 4000 |
|-------------------------------------|--------------------|
| Recreational Vehicles (RV) | RV-C Protocol |
| Trucking Vehicles (future offering) | J-1939 Protocol |
| Marine Vessels (future offering) | NMEA-2000 Protocol |

GENERAL SPECS

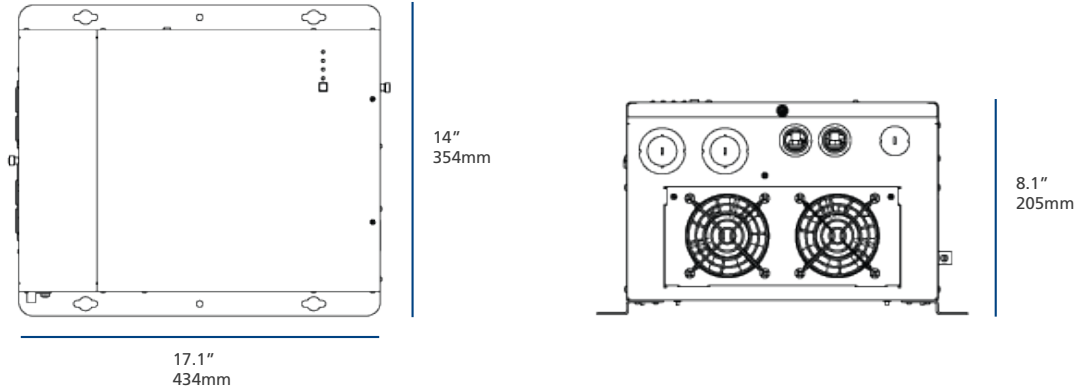
| | FREEDOM EX 4000 |
|----------------------------------|---|
| Operating Temperature Range | 14 to 140°F (-10 to 60°C), with output derated above 104°F (40°C) |
| Storage Temperature Range | -40 to 158°F (-40 to 70°C) |
| Operating Humidity Range | 5 to 95% RH, non-condensing |
| Transfer Relay AC Current Rating | 50A (40A continuous) |
| Part Number | 820-4080-41 |
| L x W x H | 17.1" (434mm) x 14" (354mm) x 8.1" (205mm) |
| Net Weight | 79.4lbs (36.0kg) |

REGULATORY APPROVALS

FREEDOM EX 4000

| | |
|--------|---|
| Safety | CSA certified to CSA Std. to CSA 107.1 and, conforms to UL Std. UL458 and UL458 Marine Supplement (drip shield with product number 808-9004 required) ABYC E-11, A-31, A-32 |
| EMC | 47 CFR (FCC) Part 15B, Class B and CAN ICES-3(B) / NMB-3(B) |

FREEDOM EX 4000 DIMENSIONS



ACCESSORIES

| Mfg Part # | Description |
|-------------|----------------------------------|
| 808-0232-01 | BTS (battery temperature sensor) |
| 809-0901 | network terminator |
| 023-0189-01 | ferrite core |
| 808-0817-03 | remote panel |
| 808-0820 | 20-pin communication harness |
| 808-9004 | drip shield |

NOTE: Contact Xantrex or your dealer to order these accessories.

CONTACT

CUSTOMER SERVICE

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Hours of operation:
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