



Runs anything, from office equipment to household appliances and electronics

AC Power Inverter with High Surge Capability, 3-Stage Charger

With filtered modified sine wave output, Freedom inverter/chargers run virtually anything, from electrical equipment to appliances and electronics in your RV. Temperature controlled multistage charging ensures that your batteries are recharged quickly, and automatic shutdown and other safety features protect your expensive deep-cycle batteries from excessive depletion.

For inverter/charger control and basic system monitoring, use the Freedom Basic Remote. For advanced battery monitoring and remote control, Freedom 458 systems can be paired with optional Link instrumentation.

Product Features

- ▶ MSW AC power inverter with high surge capability
- ▶ Automatic 3-stage battery charger
- ▶ Temperature compensation with equalization stage provides optimal charging of deep cycle batteries
- ▶ Built-in transfer switch automatically transfers between inverter power and incoming AC power
- ▶ Power sharing prevents source AC input circuit breaker from tripping
- ▶ Customized settings can be programmed with the Freedom Basic Remote or Link 1000 panels
- ▶ Includes battery temperature sensor
- ▶ 30 month warranty

Protection Features

- ▶ Over voltage and under voltage protection
- ▶ Over-temperature protection
- ▶ Overload protection
- ▶ Short circuit protection



UL and cUL listed to 458 Standard

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1000 - 3000 Watt Modified Sine Wave

Electrical Specifications – Inverter

Model	10	15	20	25	30
Output power (continuous)	1000 W	1500 W	2000 W	2500 W	3000 W
Surge power (AC amps)	25 A	37.5 A	50 A	62.5 A	75 A
Output frequency regulation	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz
Inverter voltage regulation	120 V +/-5% true RMS	120 V +/-5% true RMS	120 V +/-5% true RMS	120 V +/-5% true RMS	120 V +/-5% true RMS
Output wave form	Modified sine wave	Modified sine wave	Modified sine wave	Modified sine wave	Modified sine wave
Efficiency (full load)	85%	86%	85%	87%	86%
Peak efficiency	93%	92%	92%	92%	93%
No load current draw (idle mode)	0.12 A	0.12 A	0.12 A	0.12 A	0.12 A
AC output connections	Single	Single**	Single**	Dual	Single/Dual
AC input connections	Single	Single	Single	Dual	Single/Dual
AC transfer switch	30 A	30 A	30 A	30 A	30A

*Quartz regulated

**For dual, see circuit breaker options below under "Part Numbers"

Electrical Specifications – Charger

Charge rate	50 A DC	75 A DC	100 A DC	130 A DC	140 A DC
AC input voltage range	90 130 VAC	90 130 VAC	90 130 VAC	90 130 VAC	90 130 VAC
Battery voltage (nominal)	12 VDC	12 VDC	12 VDC	12 VDC	12 VDC
Battery voltage range	10.0 15.5 VDC	10.0 15.5 VDC	10.0 15.5 VDC	10.0 15.5 VDC	10.0 15.5 VDC
Low battery cut-out	10.0 VDC	10.0 VDC	10.0 VDC	10.0 VDC	10.0 VDC
AC input (max. charge mode)	12 A AC	17 A AC	21 A AC	26 A AC	28 A AC
Bulk charge voltage	14.3 VDC***	14.3 VDC***	14.3 VDC***	14.3 VDC***	14.3 VDC***
Float charge voltage	13.4 VDC***	13.4 VDC***	13.4 VDC***	13.4 VDC***	13.4 VDC***
Equalize charge voltage	16.3 VDC	16.3 VDC	16.3 VDC	16.3 VDC	16.3 V
Charge control	3-stage	3-stage	3-stage	3-stage	3-stage
Battery type settings	Wet / Gel 1 / Gel 2 / AGM	Wet / Gel 1 / Gel 2 / AGM	Wet / Gel 1 / Gel 2 / AGM	Wet / Gel 1 / Gel 2 / AGM	Wet / Gel 1 / Gel 2 / AGM
Equalization	Yes	Yes	Yes	Yes	Yes
Temperature sensitive charging	Yes	Yes	Yes	Yes	Yes

***Default value varies with battery type and temperature

General Specifications

Optimal operating temperature range	32°F – 104°F (0°C – 40°C) *derated below 0°C and above 40°C				
Optional remotes	Freedom Basic Remote or Link instrumentation				
Dimensions (H x W x L)	7.9 x 11.5 x 13.2" (201 x 292 x 335 mm)				
Weight	45 lb (20 kg)	45 lb (20 kg)	45 lb (20 kg)	50 lb (23 kg)	50 lb (23 kg)
Warranty	30 months	30 months	30 months	30 months	30 months
Part numbers					
Single input, single output	81-1010-12	81-1510-12	81-2010-12		81-3010-12
Single input, dual output - 20/20 circuit breakers		81-1521-12	81-2021-12		
Single input, dual output - 20/15 circuit breakers		81-1522-12	81-2022-12		
Single input, dual output - 15/15 circuit breakers		81-1523-12	81-2023-12		
Dual input, dual output				81-2530-12	81-3030-12
Freedom Basic Remote	84-2056-01	84-2056-01	84-2056-01	84-2056-01	84-2056-01
Link 1000	84-2019-02	84-2019-02	84-2019-02	84-2019-02	84-2019-02
Link 2000	84-2000-06	84-2000-06	84-2000-06	84-2000-06	84-2000-06
Thermal Sensor Assembly 15'	76-0022-00	76-0022-00	76-0022-00	76-0022-00	76-0022-00
Thermal Sensor Assembly 20'	76-0022-01	76-0022-01	76-0022-01	76-0022-01	76-0022-01
Thermal Sensor Assembly 30'	76-0022-02	76-0022-02	76-0022-02	76-0022-02	76-0022-02

Regulatory Approvals

UL and cUL listed to 458 standard

Note: Specifications subject to change without notice.