

Modified Sine Wave Inverter/Chargers, 230 VAC/50 Hz



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

Suitable for use in boats, RVs, trucks, or work vehicles, Freedom Combi Inverter/Chargers supply AC power from a DC source. All models are regulated to 230 V RMS and their output frequency is crystal controlled to 50 Hz. Freedom Combis provide automatic transfer switching between inverter power and incoming AC power. The Freedom Remote is available for inverter/charger control and basic system monitoring. For advanced battery monitoring and remote control, systems can be paired with optional Link instrumentation.

Product Features

- ▶ 1000-watt continuous output with 3000-watt surge (Freedom Combi 10)
- ▶ 2000-watt continuous output with 4500-watt surge (Freedom Combi 20)
- ▶ 2500-watt continuous output with 5200-watt surge (Freedom Combi 25)
- ▶ Three stage battery charger recharges batteries quickly and accurately
- ▶ Built-in transfer switch automatically transfers between inverter power and incoming AC power
- ▶ Power sharing prevents source AC input circuit breaker from tripping
- ▶ 30 month warranty

Protection Features

- ▶ Over voltage and under voltage protection
- ▶ Overload protection
- ▶ Over temperature protection
- ▶ Circuit breaker protection

Accessories

- ▶ Compatible with Freedom Remote and Link instrumentation

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Electrical Specifications - Inverter

Model	10-12/10-24	20-12/20-24	25-12/25-24
Output power (continuous)	1000 W	2000 W	2500 W
Surge rating	3000 W	4500 W	5200 W
Output frequency regulation	50 Hz quartz crystal controlled	50 Hz quartz crystal controlled	50 Hz quartz crystal controlled
Inverter voltage regulation	230 V \pm 5% true RMS	230 V \pm 5% true RMS	230 V \pm 5% true RMS
Output wave form	Modified sine wave	Modified sine wave	Modified sine wave
Efficiency	85%	84%	86%
Peak efficiency	92%	93%	94%
No load current draw (idle mode)	0.12A/0.06 A	0.12A/0.06 A	0.12A/0.06 A
AC output connections	Single	Single	Single
AC input connections	Single	Single	Dual
AC transfer switch	15 A	15 A	15 A

Electrical Specifications - Charger

Charge rate	50 A DC/25 A DC	100 A DC/50 A DC	130 A DC/65 A DC
AC input voltage range	180–260 VAC	180–260 VAC	180–260 VAC
Battery voltage (nominal)	12 VDC/24 VDC	12 VDC/24 VDC	12 VDC/24 VDC
Battery voltage range	10–15.5 VDC/20–31 VDC	10–15.5 VDC/20–31 VDC	10–15.5 VDC/20–31 VDC
Low battery cut-out	10 VDC/20 VDC	10 VDC/20 VDC	10 VDC/20 VDC
AC input (max. charge mode)	6 A AC	11 A AC	14 A AC
Bulk charge voltage	14.3 VDC/28.6 VDC*	14.3 VDC/28.6 VDC*	14.3 VDC/28.6 VDC*
Float charge voltage	13.4 VDC/26.8 VDC*	13.4 VDC/26.8 VDC*	13.4 VDC/26.8 VDC*
Charge control	3-stage	3-stage	3-stage
Battery type settings	Wet/gel	Wet/gel	Wet/gel
Equalization	Yes	Yes	Yes

* Voltages will vary depending on battery type selected and temperature.

General Specifications

Operating Temperature	32°F – 104°F (0°C – 40°C)		
Storage Temperature	32°F – 104°F (0°C – 40°C)		
Optional remotes	Freedom Remote or Link instrumentation		
Dimensions (H x W x L)	7.0 x 9.75 x 12.0" (178 x 238 x 305 mm)	8.75 X 11.5 X 12.0" (222 x 292 x 305 mm)	8.75 X 11.5 X 12.0" (222 x 292 x 305 mm)
Weight	31 lb (14 kg)	52 lb (24 kg)	56 lb (25 kg)
Warranty	30 months	30 months	30 months
Part numbers	81-0114-12 (12 volt) CE*	81-0234-12 (12 volt) CE*	81-0235-12 (12 volt) CE*
	81-0114-24 (24 volt) CE*	81-0234-24 (24 volt) CE*	81-0235-24 (24 volt) CE*
	84-2056-01 (Remote Panel, 12 V)		
	84-2019-02 (Link 1000, 12/24 V)		
	84-2000-06 (Link 2000, 12/24 V)		

Regulatory Approvals

*CE mark EN 55 022 EN 50 082-1 EN 50-091-1

Note: Specifications subject to change without notice.