

2023 Power Catalogue

DC Power Onboard

Battery Chargers | Inverters | DC Converters
DC Power Conditioners | DC Power Solutions
Power Supplies



About Newmar

Company Profile

Newmar is a brand of Mission Critical Electronics (MCE) under the Marine Power Division alongside its sister brands ASEA Power Systems and Xantrex.

Headquartered in Costa Mesa, California, MCE provides specialized products for critical systems in a wide variety of applications operating under the leading brands ASEA Power Systems, Xantrex Technology, Power Products, Kussmaul Electronics, American Battery Charging, DuraComm and ZeroRPM. These brands have been built on the strength of their team and their ability to connect with customers. MCE takes great pride in translating its customers' needs into the highest quality products and solutions available in the markets it serves. MCE delivers those products with an unmatched level of responsiveness.



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Battery Chargers

Phase Three Series

12 Volt

24 Volt

12 Volt | PT-25W



12 Volt | PT-24-13W



12 Volt | PT-24-13W

“Smart” battery charging technology for 12 and 24 systems aboard work boats, military vessels, commercial vessels, and recreational craft.

These chargers interact with batteries providing the optimum three stage charge process for fast recovery and conditioning, maximizing performance and extending battery life.

Features

- “Smart” circuitry provides three stage charging: bulk, absorption, float
- Gel-Cell/Flooded Lead-Acid/AGM battery type switch selects optimum charge/float voltages
- Optional sensor adjusts output voltage based on battery temperature (except PT-7)
- Current limiting prevents damage from overloading
- Use as a power supply - can power loads without a battery in-line
- ABS Type Approved battery charger and power supply
- PT-MCU Control/Monitor optional

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12 Volt

	PT-7	PT-14W	PT-25W	PT-40U	PT-80
Input VAC	88-132/176-264	85-64	90-132/180-264	90-264	90-264
Max Output Amps	7	14	25	40	80
Output Banks	2	3	3	3	3
Battery Cap. (Amp-Hours)	14-70	28-140	50-250	80-400	160-800
Case Size Ref	A-1	A-2	A-2	A-3	A-5
Weight: Lbs./Kg.	3.2/1.5	8/4	8.2/4	11/6	15.2/7
Temp. Sensor Type	N/A	TCS-12/24	TCS-12/24	TCS-12/24	TCS-12/24
Remote Panel Model	N/A	RP	RP	EVM	RP

24 Volt

	PT-24-8W	PT-24-13W	PT-24-20U	PT-24-45U	PT-24-95U
Input VAC	85-264	90-132/180-264	90-264	90-264	90-264
Max Output Amps	8	13	20	45	95
Output Banks	3	3	3	3	3
Battery Cap. (Amp-Hours)	16-80	26-130	40-200	90-450	180-950
Case Size Ref	A-2	A-2	A-3	A-5	A-6
Weight: Lbs./Kg.	8/4	8.2/4	11/6	12.2/6	24.5/11
Temp. Sensor Type	TCS-12/24	TCS-12/24	TCS-12/24	TCS-12/24	TCS-12/24
Remote Panel Model	RP	RP	N/A	RP	RP

OPTION ACCESSORIES



Remote Panel, model RP
applicable to most models

LED's indicate charger output stage



Remote Panel, model RP
applicable to most models

Charger model: TCS-12/24 o TP



PT-MCU Control/Monitor
AC input breaker output voltage adjust

Digital DC volt meter with alarm

Phase Three Modular Series

The PTMS charger provides a significant improvement in DC system reliability by utilizing multiple independent charger modules that plug into the bulkhead mounted case, and should a fault occur in one module, the system continues to operate, thus is considered "fault" tolerant.

The system consists of a wall mount case which serves as connection point to AC input and 24V, 3 battery bank output and contains three front-facing power bays, each accommodating a 22.5 amp charger module which slides and locks in place creating a 24V, 67 amp charger. If a module fault occurs, a front panel indicator and alarm relay is activated and the system continues operating on the other modules.

A fourth bay houses the "smart" controller circuit that provides 3 step charging, battery type selector switch, temperature compensation, system status LED's, alarm contacts and indicators. Should the controller suffer a fault, the charger will still operate at full power at float voltage mode. The controller module is also configured for easy plug-in replacement in the field.

Vessel operators appreciate this system approach to reliability and serviceability whereby a fault in one of the modules is easily identified and it can be quickly replaced with an on-hand spare or an exchange unit from the factory, all the while the charging system and the vessel continue to operate.



24 Volt | PTM-24-22



24 Volt | PTM-24-22

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System Specifications

Input Voltage/Frequency	90-264 VAC, 47-63 Hz
Battery Type Selector	Lead Acid/AGM/Gel-cell
Battery Banks	3
Temperature Compensation Sensor (Optional)	Model: TCS-12/24
Status Indicators	Output OK No Output Check System Battery Too Hot Total Output Bar Graph
Remote Monitor Outputs (Form C)	AC Fail/ Module Fail/ Low Voltage
Temperature Rating	0-60 C; derate linearly from 100% output @ 50 C to 80% output @ 60 C
Mechanical	Case Material: Powder coated Stainless Steel Cooling: Forced air per module
Compliances	ABS type approved redundant power system for essential services and as a battery charger, CE Mark, UL Recognized Power Modules

Model	Modules Installed	Max Output Amps @ 24V	Max Input Amps @ 115/230 VAC	Size in inches (H x W x D)	Weight Lbs.
PTMS-24-67	3	67	18/9	20.9 x 10.9 x 8.8	35



Articulated tug barges utilize PTMS Chargers to maintain batteries and supply power to essential services



Engine room installation

PT-MCU Battery Charger

Phase Three - Monitor/Control Unit

Designed for installation in conjunction with most models of PT Battery Chargers, this unit provides additional functionality in monitoring, control, and alarms. It contains a 3 battery banks: Digital DC volt meter, a PT charger float voltage adjustment, and AC Master circuit breaker for control and protection of charger input power.

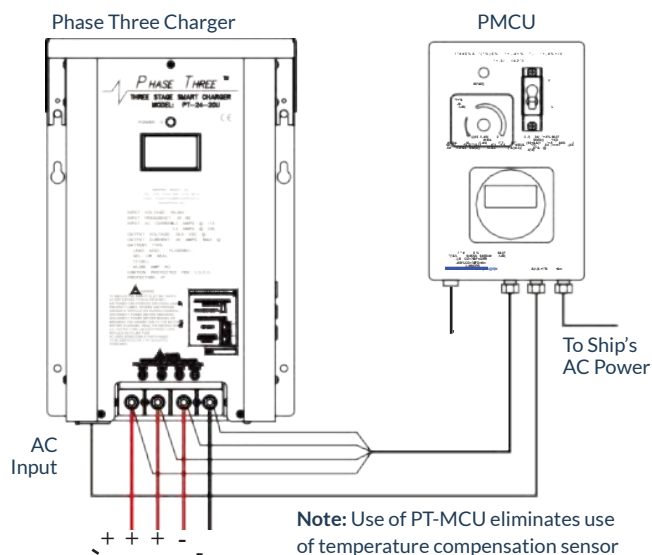
A 10 foot wiring harness is provided for AC input and DC monitor wiring to the charger. The unit carries ABS type approval for Charging Systems, thus providing full compatibility when paired with PT chargers which are also ABS Type approved.



24 Volt | PTM-24-22

Features

- Digital readout of 3 battery bank voltages to 1/10th volt
- DC high/low voltage alarm with adjustable set-points
- Output float voltage adjustment pot; permits fine tuning from -4% to +5%
- AC failure Form C contact (120/240V AC)
- AC circuit breaker (30A, double pole) provides overcurrent protection and manual disconnect
- AC power ON indicator light
- 10' wiring harness for easy connection of PT Series Charger
- Compatible with: PT-14W, PT-25W, PT-40U, PT-80, PT-24-8W, PT-24-13W, PT-24-20U, PT-24-45U, PT-24-95U, and PTMS-24-67



Options

- Remote relay for Hi/Low voltage alarms (model DIR)
- Wires harness to length



Model	Size in inches (H x W x D)	Weight Lbs.
PT-MCU	8.7 x 4.6 x 5.5	5.5 Lbs.

ABC Series Battery Charger

The ABC 12-6 charger produces 3 step output (bulk, absorption, and float) to 2 isolated battery banks providing fast recovery and ideal cell conditioning which maximizes battery performance and life. Its rugged heat sink case utilizes convection rather than forced air cooling, thus dust and moisture are not introduced inside the unit making it ideal for hostile environments (For battery systems which require high continuous output, see our Phase Three Chargers 12V or 24 and 32V).

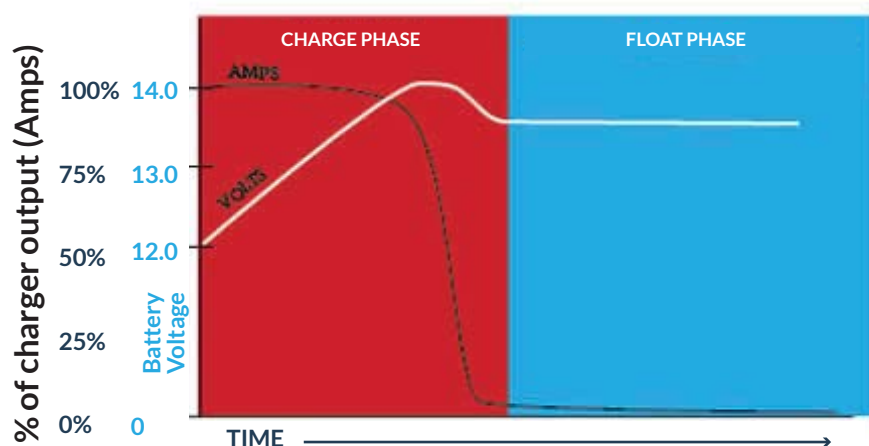


Features

- Total output ammeter
- Dual output banks
- On-off switch and power "on" indicator light
- Vibration absorbing mounting grommets
- Powder coat aluminum case
- 115/230 VAC input selector switch
- Auto-reset thermal overload protection
- Conformal coating of circuit board
- Convection cooled case, no fans. Ideal for high moisture environments

Specifications

Model	ABC 12-6
Input	5/2.5
Amps @ F.L.	90-130 VAC or 180-264 VAC, 50-60Hz
Output Volts	12
Output Banks	2
Output Amps	6



Typical Charge Curves for ABC Series

Duty Cycle Ratings

Rated charging output 20 min.,
derate to 50% for continuous output

Operating Temperature

0 - 40° C

Float Voltage

13.4 VDC

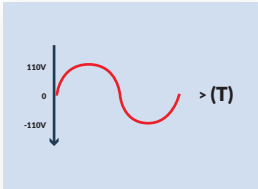
Inverters

PS Series


The PS Series inverters produce high efficient, pure sine wave output from 12 or 24 volt battery input with high surge power for motor start. A power saving mode, with user friendly adjustable set points, conserves batteries when not in use. A remote control/display panel and front panel indicator lights allow for easy system monitoring and control.

Features

- 1000, 1500, 2000W models
- Pure sine wave 115V output
- High efficiency ~ 90%
- Power saving mode helps conserve battery when not in use with user adjustable set points
- AC duplex outlet on front panel
- Rugged and compact aluminum case, ideal for marine applications
- Meets UL458
- Front panel status indicator lights:
 - Input voltage
 - Output power level
 - Power mode
 - Fault status
 - Remote control included
- Protection:
 - Low input voltage
 - Overload
 - Short circuit
 - Over temp



Pure Sine Wave output for interference free operation



Power entertainment systems without running generator



Make a pot of coffee when AC power is not available

Description	Input	AC Output		Dimensions HxWxD in inches	Weight
		Continuous	Surge		
12-1000 PS	12V	1000W	2000W	3.46x7.17x15.1	8.8
12-1500 PS	12V	1500W	3000W	3.46x7.52x16.34	10.5
12-2000 PS	12V	2000W	4000W	6.53x8.22x14.5	12.2
24-1000 PS	24V	1000W	2000W	3.46x7.17x15.1	8.8



1000 Watt

2000 Watt

Remote Panel Included

Inverter Chargers

Torque Series

TQ Inverter-Chargers deliver pure, sinusoidal AC for flawless operation of all appliances and sensitive electronics. These units are ideal for entertainment systems, and computers and other microprocessor based equipment which are intolerant to AC wave distortion. They provide peak power for motor starting, and high continuous duty ratings.

Whenever shore or generator AC power is available, a built-in automatic transfer switch activates the multi-stage, temperature compensated battery charger providing rapid and safe replenishment of the inverter battery bank. AC input current limit in charging mode can be programmed to match available shore power, thus preventing tripping the dock breaker. A front panel Diagnostic monitor panel provides system status, and an optional LCD remote display is available.



Pure Sine Inverter/Charger



Optional Remote LCD Monitor & Control Indicator Panel

Features

- Built-in high output, 3 stage charger for rapid battery bank replenishment - programmable for gel-cell, flooded lead-acid or AGM battery type with automatic temperature compensation sensor
- Pure sine wave provides distortion free AC output
- Programmable AC input power limiting avoids nuisance tripping of shore power breakers when limited power is available
- Rugged heavy duty case and power components
- UL listed
- Optional: Remote LCD Monitor & Control Panel Model: TQ-DSP-12/24

Model

	1000TQ-12	1500TQ-12	2000TQ-12	3000TQ-12	3600TQ-24
Inverter Sine Wave Output					
Watt (Surge)	1500	2500	4500	5500	8000
Watts (Continuous)	1000	1500	2000	3000	3600
Inverter Input					
VDC	10.5-17	10.5-17	10.5-17	10.5-17	21 - 30
Max. Amps	104	147	204	315	400
Charger Input: 95 - 135V AC, 60 Hz.					
Max. Amps	8	12	16	22	23
Charger Output					
Max Amps @ V	60A@12V	75A@12V	125A@12V	150A@12V	90A@24V
Case (H x W x H) Inches					
Case Size Ref.	12 x 14 x 6	12 x 14 x 6	14 x 14 x 6	15 x 16 x 8	14 x 17 x 8
Weight (Lbs.)	40	40	40	68	68

DC UPS

Electronics require a clean and reliable source of DC power for proper operation, they are highly vulnerable to shut down / reboot / data corruption caused by power drop out during engine start and low voltage from over worked batteries. RF Interference generated by alternators and motors also impedes proper operation. A DC UPS is the remedy to these issues.

Protection During Engine Start



StartGuard

This unit has an internal battery that supplies supplemental power to electronics during the engine cranking cycle when there is an abrupt voltage drop caused by the high amperage draw of the starter motor. A sense wire connected to the start switch brings the battery online whenever the engine is cranked. This prevents reboot, memory dump, and loss of data in GPS, sounders, and radios.

Model NS-12-20

Input	Output	Size (HxWxD)	Weight	Back-up
12V	12V 20A	8.25 x 4.9 x 3.5 inches	5.5 lbs.	20 Amps for 1 min.

Redundant Power Source Integration



Automatic Power Selector (APS)

The APS enables integration of a redundant power source to critical electronic loads. It automatically selects the higher voltage of two independent DC power sources and routes that source to the load. Should one source falter or fail, the other will automatically supply the load with no transfer delay, thus operation continues uninterrupted.

Model

	Max Loads	Size (HxWxD)	Weight
APS-70	70 Amps	3.25 x 4.5 x 3.1 inches	2 lbs.
APS-160	160 Amps	9 x 4.5 x 3.1 inches	5 lbs.

Continuous Protection

Nav-Pac and MDP contain an internal battery that supports electronics when primary input power falters or altogether fails.



Nav-Pac

- Internal 5AH battery
- Recharges directly from primary voltage source
- Filters electronic interference
- Absorbs line voltage spikes
- Available in 12 volt, 20 amp and 24 volt, 15 amp models

Model

	Input	Output	Size in inches (H x W x D)	Weight
NP-12	12V	12V 20A	5.25 x 6.2 x 7.5	6 lbs.
NP-24	24V	24V 15A	6 x 6.75 x 7.5	8 lbs.

Battery Backup

12V	8A for 15 min.	12A for 8 min.	18A for 2 min.	20A for 1 min.
24V	8A for 15 min.	12A for 8 min.	15A for 2 min.	



Mobile Data Power

- Internal 7AH battery
- Internal 3 stage charger maintains battery in peak condition
- Filters electronic interference absorbs line voltage spikes
- Low voltage output signal interfaces with Motorola work stations and video recorders initiating orderly shutdown.
- Programmable timer disconnects load from battery at specified time after ignition shut off
- 25 amp load rating

Model

	Input	Output	Size in inches (H x W x D)	Weight
MDP-25.0	12V	12V 25A	5.75 x 6 x 8.5	10 lbs.

Battery Backup

12V	25A for 8 min.	10A for 20 min.	5A for 60 min.
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Integrated Power System

The Integrated Power System (IPS) is a unique multifunction power supply which incorporates built-in battery back-up and numerous power accessories within a rackmount chassis.



All models with batteries | Size 3.5 (H) x 17 (W) x 18 (D) | Weight 33 lbs.

Features

- Precision regulated power supply maintains batteries at peak charge and supplies system load
- Built-in batteries instantly power load during AC failure - no switch-over delay. Input terminals provided for integrating additional external batteries for increased back-up capacity (except IPS-12-40)
- Automatic low voltage and manual battery disconnect
- Numerous front panel monitors--L.E.D. status indicators and digital ammeter/voltmeter
- Form C summary failure alarm contacts
- 19" or 23" rack mount, flush or 6" forward mounting
- Input 115/230V AC, 50-60 Hz.

Model

	VDC	Adjustment Range	Amps Continuous	Supplemental Input Ports	Internal Battery Capacity	Ground Reference
IPS 12-40	13.6	10 - 15V DC	40	N/A	20 A-H	Negative
IPS 48-11	54.4	40 - 60V DC	11	40 Amps	5 A-H	Positive



Power-Pac

The 12 volt supply features built-in back-up batteries which are charged during normal operation and then continue to power radios when AC power is lost.

- Power Supply Output: 13.6V, 10 amps intermittent, 5amps continuous
- Low battery alarm and disconnect
- Aux. input terminals for integrating additional external batteries
- 115/230V AC input

Model

	Max Loads	Size (HxWxD)	Weight
PP-7	7 Ah	5.3 x 9 x 10.5 inches	18 lbs.
PP-14	14 Ah	5.3 x 9 x 10.5 inches	24 lbs.

Battery Isolators

These heavy duty isolators allow charging multiple batteries automatically from one or two alternators, and prevent discharge or ‘dumping’ of one battery into another. Each battery is charged according to its need without overcharging, rated for 12, 24, or 36 volt, negative ground DC systems. Feature conservatively rated diodes and a rustproof anodized aluminum heat sink case. Models are available for 70, 120 and 165 amp alternators.



Features

- Heavy duty construction
- Rated for systems up to 48 volts DC, negative ground
- Rust-proof anodized aluminum case
- Stainless steel mounting hardware provided
- Protective covers provided for terminals

Specifications

- Operating Temperature: -40 to +80°
- Duty Cycle: Continuous rating to 50° C Derate linearly to 70% @ 80° C
- Temp. Rise: 5° C at full rated current
- Voltage Drop: 0.7V @ 50% load, 0.9V @ full load

Model	Alternator Sources	Battery Bank	Max. Amp.	Stud Terminal Size in mm	Size in inches (L x W x H)	Weight Lbs.
1-2-70	1	2	70	6 mm	3.25 x 4.5 x 3.1	2
1-3-70	1	3	70	6 mm	3.25 x 4.5 x 3.1	2
2-3-70	2	3	70	6 mm	6.5 x 4.5 x 3.1	4
1-2-120	1	2	120	6 mm	6.5 x 4.5 x 3.1	3
1-3-120	1	3	120	6 mm	6.5 x 4.5 x 3.1	3
2-3-120	2	3	120	6 mm	12.5 x 4.5 x 3.1	5
1-3-165	1	3	165	6 mm	9 x 4.5 x 3.1	5

Note: These battery isolators are not compatible with self-exciting alternators. The alternator must have an external excitation lead. Please consult the manufacturer of your alternator if you are unsure of your configuration

Battery Integrators

Charging multiple battery banks without use of diode isolators dictates that the batteries be connected or “integrated” only whenever a charge voltage is present so that they may be charged simultaneously, then disconnected or “isolated” when charge voltage is no longer present to allow for selective discharge and avoid having the secondary or standby battery drain into the primary battery.



Features

Features

- Enables charging of two separate banks without voltage drop, yet maintains 100% isolation at all other times.
- Heavy duty silver-plated contactor, continuous duty rated to 100 amps or 200 amp depending on model
- Voltage sense circuit, epoxy encapsulated and heavy duty continuous rated solenoid are all designed for use in marine environments
- 12 volt, 100 amp model has ignition protection rating
- Easy three-wire hook up for two bank systems (BATT +, BATT +, GROUND)
- Terminal for optional wiring of remote light indicating when battery banks are integrated
- Optional internal connection can be wired through key starter or manual over ride switch, tying battery banks together for extra boost during engine start

Specifications

Operating Temperature:

Control: -40 to +85° C

Solenoid: -28 to +48° C

Terminals: Battery Connections: 5/16" copper alloy stud

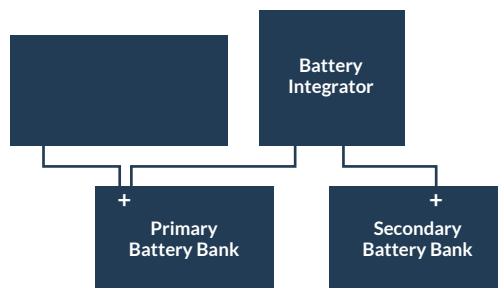
Dimensions (H x W x D)/Weight:

100 Amp Models: 3" x 3.25" x 2.5" / 1Lb.

200 Amp Model: 4" x 3.3" x 4.1" / 2 Lbs.

Approvals: CE Marked

Typical Installation



Model

	Voltage	Battery Integration Point	Battery Disconnect Point	Max. Continuous Current	Peak Maximum Current
BI-100*	12 VDC	13.2 VDC	12.8 VDC	100 Amps	400 Amps
BI-200	12 VDC	13.2 VDC	12.8 VDC	200 Amps	600 Amps
BI-24-100	24 VDC	26.4 VDC	25.6 VDC	100 Amps	400 Amps

*Ignition Protected

Noise Filters

Phase Three Series Modular

The interference or electronic “noise” generated by alternators, ignition systems, motors, etc., can render a vehicle or vessel’s radio or other electronic equipment virtually useless. This interference takes the form of popping or static on radios or audio gear and garbled images or “hash” on video displays.

These specialized filters can be used singly or in combination to attenuate conducted line noise, either at the affected equipment or at the noise source.



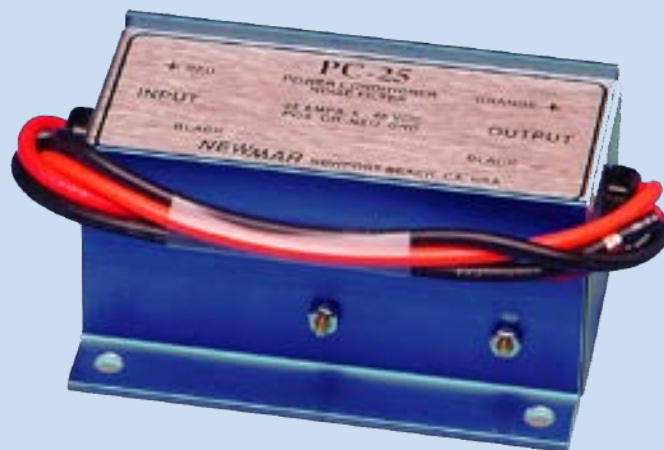
Features

- Heavy duty aluminum construction
- Operate on 6-48 VDC systems
- Integral mounting flanges for secure installation
- Nickle plated, brass stud connectors on alternator filters accommodate high current cables and terminals
- Color coded wire leads on PC models make in-line installation easy

Filtered Frequencies

- Model 150A: 70 kHz – 100 MHz
- Models PC-10 and PC-25: Audio – 200 MHz

Model	Rating	Installation Location	Size (inches) (H x W x D)	Weight in lbs.
150-A	150 Amp	At alternator	3.25 x 5.7 x 3.25	3
PC-10	10 Amp	At affected equipment in “+” and “-” leads	1.25 x 4.25 x 3	1
PC-25	25 Amp	At affected equipment in “+” and “-” leads	2 x 4.25 x 3.25	2



Heavy Duty Power Supplies

These super-rugged DC power supplies are ideal for powering 12 and 24 volt communication/navigation equipment onboard commercial vessels where reliability is essential. The proven linear circuit design provides pure noise free output and long service life



Features

- Excellent Regulation and Ripple Spec: Output voltage maintained within 1% under all rated line and load line and load conditions
- Provides solid power source for electronics
- Polyurethane conformal coated PC board and corrosion resistant heavy duty aluminum case with integral shock mounts assures survival in hostile environments
- Heat generated by semi-conductors is extracted and dissipated by large heat sink fins for cool operation
- Protection: over-voltage, current limit; (set @ 105% of intermittent rating), thermal overload and input/output fusing
- Thermally activated cooling fan on "CD" units
- 115/230V AC, 50-60 Hz. input

Options

- Modify for use as a Battery Charger
- Output voltage adjust
- Transfer relay for back-up battery in event of power failure (ERC option)

Model	Output Voltage	Output Amps Inter.	Amps Cont.	Size (inches) (H x W x D)	Weight Lbs.
12 Volt					
115-12-8	13.6V DC	8	5	6 X 4.6 X 8.5	10
115-12-20A	13.6V DC	20	8	5.7 X 4.8 X 16.3	20
115-12-35CD	13.6V DC	35	35	6.5 x 9.5 x 14	32
24 Volt					
115-24-10	24.5V DC	10	4	5.7 X 4.8 X 16.3	20
115-24-18CD	24.5V DC	18	18	6.5 x 9.5 x 14	32
115-24-35CD	24.5V DC	35	35	6.5 x 13 x 18.75	60

*Intermittent: 20 minutes max on time, 20% duty, Continuous: 24 Hours/Day 100% Duty

DC Converter Standard Series

Convert 20-50 VDC input to 12 or 24 VDC negative ground output for powering communication/navigation equipment, on negative ground systems. Ideal for powering voice, data and navigation electronics in marine applications

Features

- Excellent Regulation: Output voltage maintained within 1% under all line and load conditions
- Heat generated by semi-conductors is extracted and dissipated by large heat sink fins that maximize air contact for cool operation and long life of components
- Conformal coating on PC boards and corrosion-resistant powder coated aluminum case with heavy duty shock mounts assure survival in hostile environments
- Current limiting
- Automatic thermal shutdown
- Short circuit proof
- Reverse polarity and overvoltage protection



Model No.
32-12-25



Model No.
32-12-35

Options

- Operation as a battery charger or parallel redundant operation (contact factory)
- 24V output

Model	Input Voltage	Output Voltage	Output Inter.	Amps Cont.	Size in inches (H x W x D)	Weight Lbs.
24-12-3	17-32	13.6	3A	3A	4 x 4 x 2	1
32-12-6	20-50	13.6	6A	6A	3 x 5 x 11	3
32-12-10	20-50	13.6	10A	10A	5 x 6 x 11	5
32-12-15	20-50	13.6	15A	15A	5 x 6 x 11	5
32-12-25	20-50	13.6	25A	20A	6 x 5 x 14	8
32-12-35	20-50	13.6	35A	30A	6 x 5 x 16	12
32-12-50	20-50	13.6	50A	40A	7 x 7 x 19	16

DC Converter Isolated Series

The Isolated Series provides voltage from conversion as well as input/output isolation, allowing use of negative ground gear with positive or floating ground battery systems, or vice versa. 12 or 24 volt stabilizers may also be used for electronics that are highly sensitive to input voltage fluctuation.

Using an Isolated Converter as a voltage stabilizer on 12 or 24 volt systems can solve conducted noise and interference problems on sensitive DC powered devices for communication, navigation systems and DC micro-processor based electronics.

Features

- Wide range of input voltage
- Precise output voltage regulation
- Reverse polarity protection
- Total input/output isolation, pos. or neg. ground
- Current limiting, short circuit proof output
- Automatic re-setting thermal shutdown
- High/low input voltage shutdown
- Polyurethane conformal coating on PC board
- Rugged case designed for high vibration applications



Options

- Operation as a battery charger or parallel redundant operation (contact factory)
- 24V output (contact factory)

Model	Input Voltage	Input Amps	Output Voltage	Output Amps Intermittent Continuous		Size in inches (H x W x D)	Weight (Lbs.)
12-12-35I	10 - 16*	56	13.6	35	20	6 x 6.8 x 16.5	12
12-24-18I	10 - 16*	56	24.5	18	10	6 x 6.8 x 16.5	12
48-12-6I	20 - 56	4.8	13.6	6	6	4.25 x 5.9 x 7.7	7
48-24-3I	20 - 56	4.8	24.6	3	3	4.25 x 5.9 x 7.7	7
48-12-18I	20 - 56	14.4	13.6	18	10	4.25 x 5.9 x 14	8
48-24-9I	20 - 56	14.4	24.5	9	5	4.25 x 5.9 x 14	8
48-12-35I	20 - 56	28	13.6	35	20	6 x 6.8 x 16.5	12
48-24-18I	20 - 56	28	24.5	18	10	6 x 6.8 x 16.5	12

*11.5 VDC minimum start-up voltage, then operates @ 10-16 VDC from 1 Amp minimum to full load

Step-up Converters & DC Power Stabilizers

Step-up Series

These "UP" converters produce 24 volts from 12 volt systems and are ideal for managing dual voltage applications without having to install a 24 volt battery and dedicated charging system. Choose from two types depending on your application. Standard, non-isolated where input and output share common ground reference, and isolated where input and output are galvanically separated.

Standard, Non-isolated Series

- Intended for use on negative ground systems
- 10 -15V DC input range
- Available in 7, 16 and 25 amp outputs
- Current limited, voltage spike suppression, automatic thermal shutdown and recovery

Isolated Series

- Allows positive/negative ground compatibility between 12V battery and 24V accessories
- Input/output isolation 250V DC



Model: 12-24-16

Model

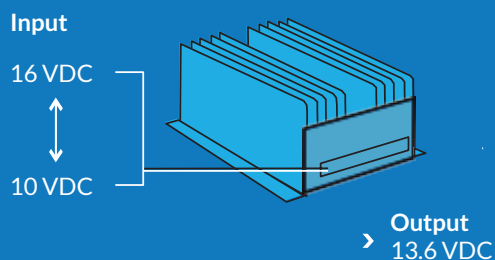
Model	Input Voltage	Output Voltage	Output Amps	Size in inches (H x W x D)	Weight Lbs.
Standard - Non-isolated					
12-24-7	10 - 15	27.2	7	4 x 4 x 2	1.4
12-24-16	10 - 15	27.2	16	8 x 13 x 24	3.35
12-24-25	10 - 15	27.2	25	6 x 7 x 17	4.1
Isolated					
12-24-18I	10 - 16	24.5	18	6 x 7 x 17	12

DC Power Stabilizers

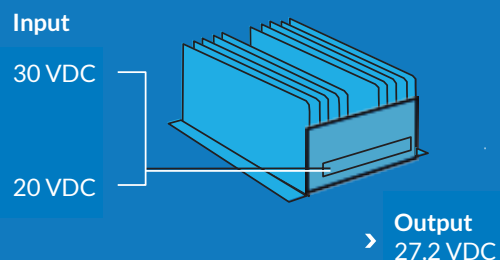
Feed sensitive electronics with clean and proper voltage regardless of battery condition. These stabilizing converters provide continuous, precisely regulated output free of conducted noise over the entire range of a battery's usable voltage, thus eliminating fluctuating input voltage and noise which can cause shutdown, diminish performance and possibly damage sensitive circuitry.



12 Volt System



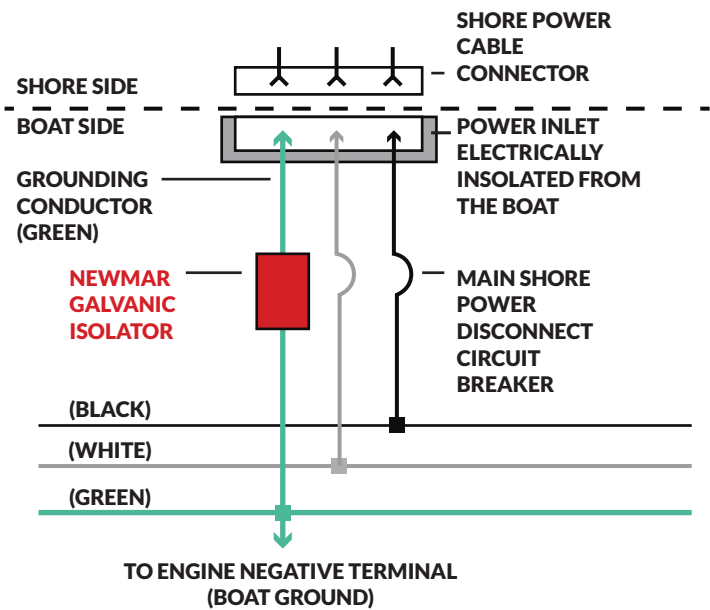
24 Volt System



Model	Input Voltage	Input Amps	Output Voltage	Output Amps Intermittent Continuous		Size in inches (H x W x D)	Weight (Lbs.)
12-12-3I	10 - 16*	4	13.6	3	3	3.5 x 3.5 x 1.75	1
12-12-6I	10 - 16*	8	13.6	6	6	6.5 x 4 x 1.75	2
24-24-35I	10 - 16*	56	13.6	35	20	6 x 6.8 x 16.5	12
24-24-3I	20 - 32	3.7	27.2	3	3	3.5 x 3.5 x 1.75	1
24-24-7I	20 - 32	8.7	27.2	7	7	6.5 x 4 x 1.75	2
48-24-3I	20 - 56	4.8	24.5	3	3	2.8 x 4.2 x 10.4	7
48-24-9I	20 - 56	14.4	24.5	9	5	3.5 x 3.5 x 1.75	8
48-24-18I	20 - 56	28	24.5	18	10	6 x 6.8 x 16.5	12

*11.5 VDC minimum start-up voltage, then operates @ 10-16 VDC from 1 Amp minimum to full load

Galvanic Isolators



Sacrificial zincs corrode away as they protect metal thru hulls, shafts, and props from damaging electrolysis. Stray, low voltage current flowing between the AC safety ground and DC bonding system is a principal cause of this “galvanic” action.

Installing the Galvanic Isolator between the AC safety ground and DC bonding system (see diagram), blocks a majority of the low voltage currents and corrosive action on the zincs is significantly reduced (while the integrity of the critical safety ground path is maintained.) This means a significant savings in boat haul-out fees and zinc replacement costs.

For additional safety, all units feature a large capacitor, providing a secondary low impedance path for sending AC current to ground.

Two models are offered; rated for 30 or 50 amp shore-power



Model	Shore Power VAC, Hz	Shore Power Rating, Amps	Size (inches) (H x W x D)	Size (cms) (H x W x D)	Weight in lbs.	Weight in kg.
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GI-30	115/230, 50-60	30	2.7 x 4.8 x 7.3	6.9 x 12.2 x 18.5	2.45	1.1
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Model	Shore Power VAC, Hz	Shore Power Rating, Amps	Size (inches) (H x W x D)	Size (cms) (H x W x D)	Weight in lbs.	Weight in lbs.
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GI-50	115/230, 50-60	50	4.5 x 4.7 x 8.9	11.4 x 11.9 x 22.6	3.2	1.5
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Hailer Horns

Phase Three Series Modular

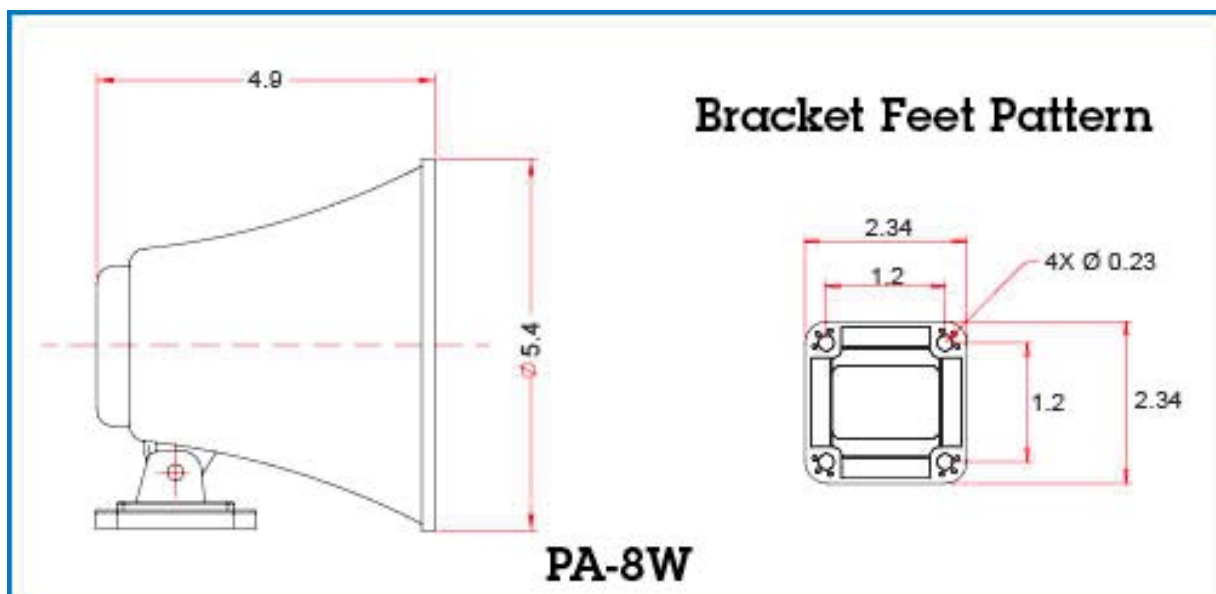
Clear, distortion free, waterproof deck horns are ideal for shipboard paging, hailing, fog horn and alarm systems. High impact plastic construction and assembled with stainless steel hardware. 8 Ohm.

Model	Output Nominal/ Peak	Weight in lbs.
PA-8W	8 watts / 12 watts	1 lb.
PA-30/20	30 watts / 20 watts	3 lbs.
PA-40/30	40 watts / 30 watts	5 lbs.
PA-60/40	60 watts / 40 watts	8 lbs.

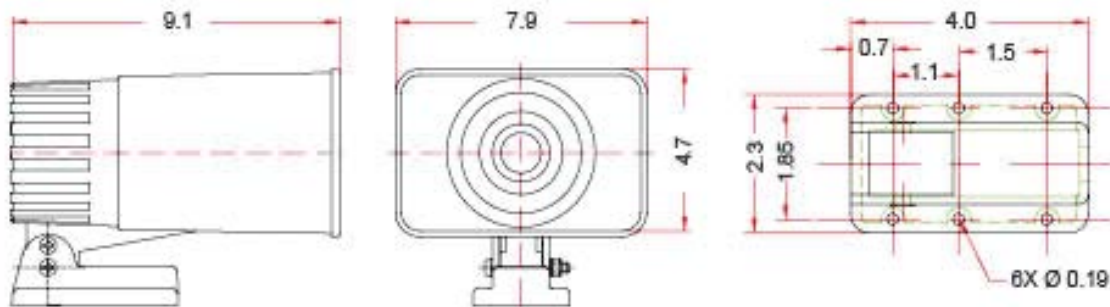
Note: Model PA-60/40 is a commercial grade horn which also features excellent sensitivity as a microphone for use in talk-back systems.



Mounting Dimensional Drawings



Bracket Feet Pattern



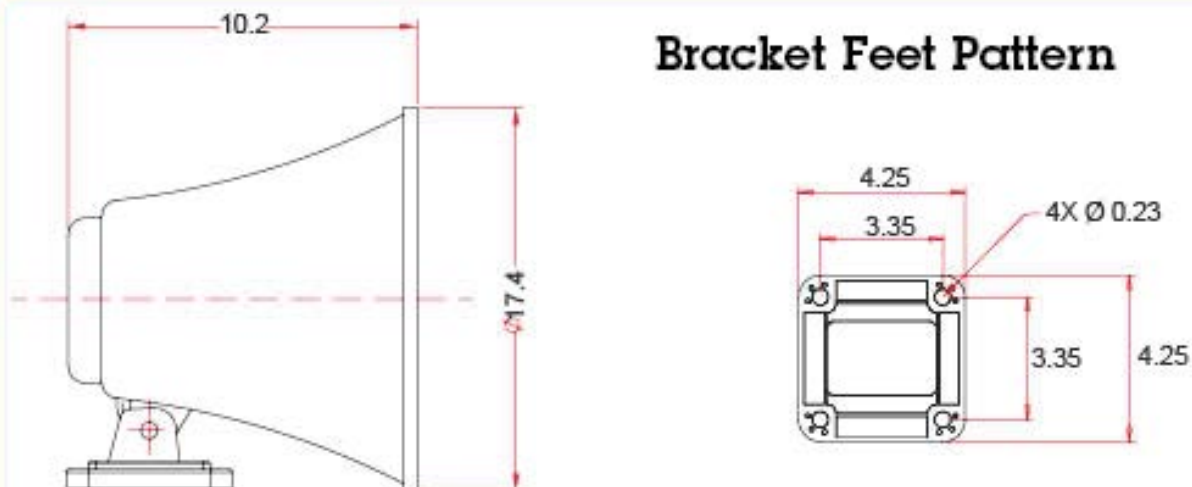
PA-30/20

Bracket Feet Pattern



PA-40/30

Bracket Feet Pattern



PA-60/40



About Mission Critical Electronics

Mission Critical Electronics (MCE) is parent of Xantrex and many other industry leading brands such as Kussmaul Electronics, ZeroRPM, Newmar Power, ASEA Power Systems, Power Products, Purkeys, and American Battery Charging. Headquartered in Huntington Beach, California, MCE is a leader in the development of innovative solutions for power conversion, energy storage, power generation and shore power connectivity for a wide variety of application in vehicle, marine, industrial and network markets. MCE takes great pride in translating its customers needs into the highest quality products and solutions available in the markets in service. MCE delivers its products and solutions with an unmatched level of responsiveness.

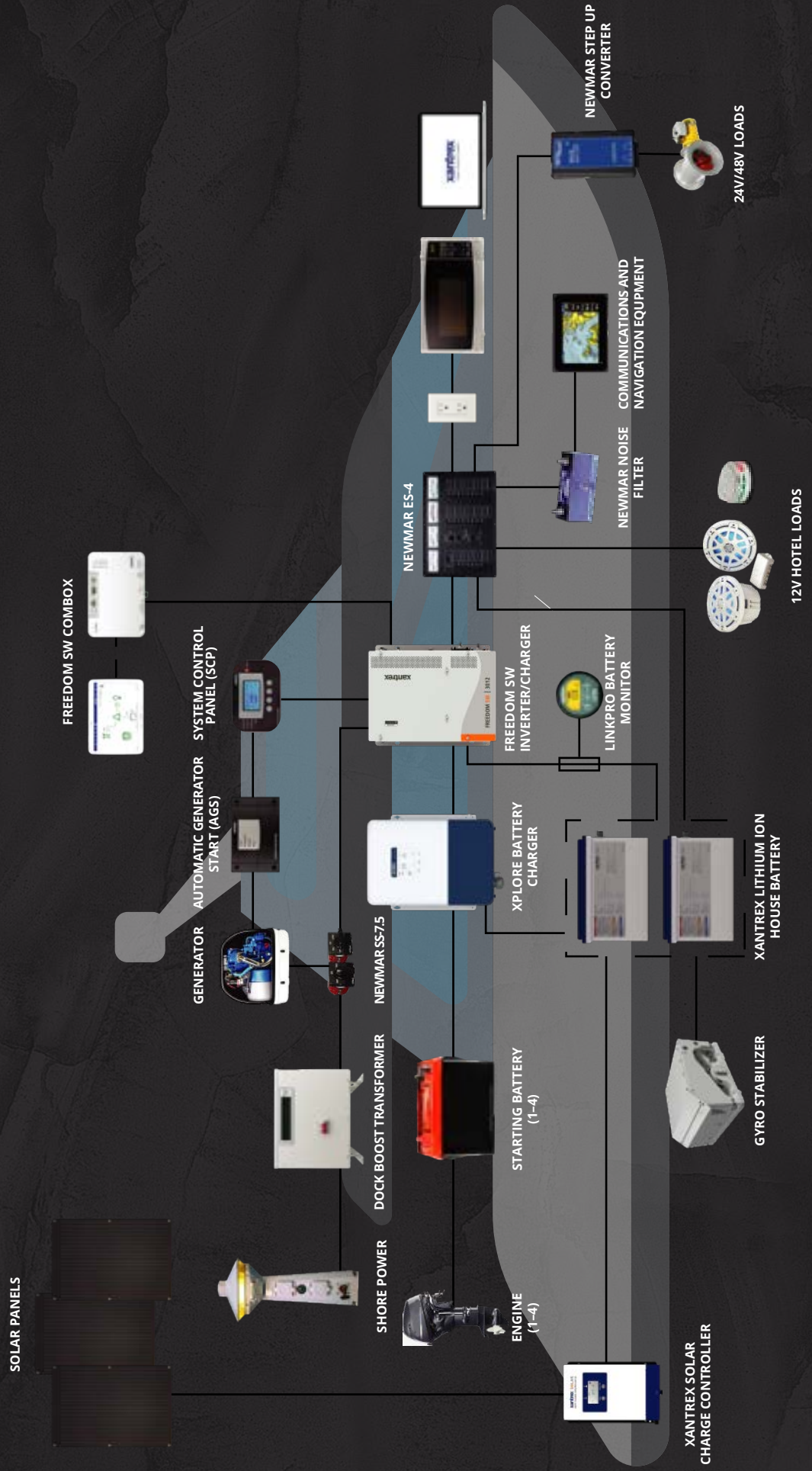
MCE serves its customers in North America through 9 offices and a 3rd party warehouse facility. MCE also maintains manufacturing facilities in the US and employs over 300 people. MCE continues to invest in advanced and innovative technologies for electrification of power systems in boats and vehicles.

The introduction of FREEDOM eGEN, ZERORPM and SAFEX power systems are a testament to MCE's commitment of offering clean, green, environmentally friendly power solutions for both recreational and commercial applications.

MCE offers a complete suite of AC and DC power solutions including energy storage and renewable energy source for vehicle and marine applications.

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