

# PANELTRONICS<sup>®</sup>

INCORPORATED

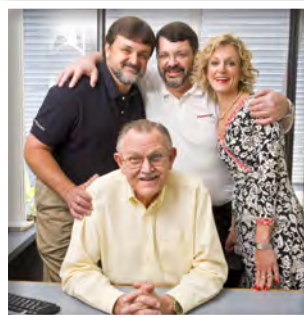
Power Distribution Panels  
Circuit Breaker Panels  
Waterproof Switch Panels  
Instrument Panels  
Box-Build Assemblies  
Enclosure Assemblies  
Mounting Frames  
Parts & Components



## About Paneltronics

Family owned and operated since 1979, Paneltronics is an electrical products manufacturing company based in Hialeah Gardens near Miami, FL, USA.

Paneltronics is an industry leader in the design, engineering and manufacturing of high quality power distribution systems, electrical panels, box-build assemblies, instrument panels, enclosures and electrical components. Paneltronics' electrical panels, assemblies, and systems are specified on a wide variety of vessels, vehicles and equipment.



With more than 225 years of combined in-house electrical expertise and long standing relationships with premier OEMs, Paneltronics offers a broad line of superior engineered products and solutions to the marine, transportation and industrial markets. With a commitment to quality products, service and integrity, Paneltronics is a supplier of choice for OEMs worldwide.

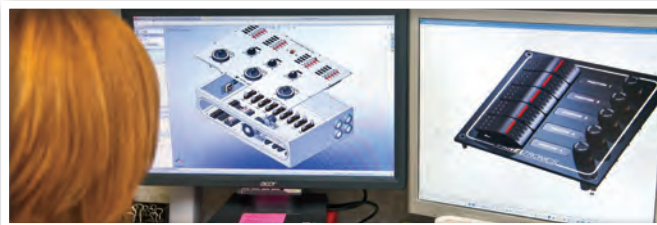
## Mission Statement & Company Focus

**Mission Statement:** Paneltronics is committed to providing high quality, cost effective products and superior service to our customers in an environment of cooperation and integrity.

**Company Focus:** Paneltronics is focused on continuous improvement through advancing streamlined manufacturing processes, engineering and technology. We also concentrate on providing quality and added value, which includes increased safety, reliability, and ease of installation. It is our goal to fulfill and exceed customer needs.

## Capabilities

Paneltronics understands the needs of growing manufacturers in a dynamic economy and responds to these needs. We manufacture in our own U.S. facilities, which allows for scheduling flexibility, control of lead times, manufacturing processes, inventory and product quality and a stronger ability to meet our customers' needs.



**Engineering Capabilities:** Paneltronics' engineering department is a highly trained team of engineers and designers. Our team focuses on both electrical and mechanical design. Paneltronics' engineering and design capabilities include, but are not limited to:

- Product Research, Development & Design
- Electrical & Mechanical Design & Engineering
- 3D-CAD (Solid Works & AutoCAD)
- Compliance/Standards Research & Implementation



**Manufacturing Capabilities:** Paneltronics provides high quality products in a timely fashion. The key is our streamlined manufacturing processes which include a combination of EDI, Kanban Inventory, JIT (Just-in-Time) inventory, Build-to-Print products, High & Low volume custom and aftermarket production, Prototypes, etc. Paneltronics' manufacturing capabilities include, but are not limited to:

- CNC Engraving
- CNC Sheet Metal Punching
- CNC Routing, Cutting & Milling
- Screen Printing
- Painting
- Plastic Injection Molding & Tooling
- Welding & Metal Fabrication
- Electrical & Mechanical Assembly
- Wire Harness Assembly



**Customer Service & Support Capabilities:** Paneltronics' knowledgeable staff is trained to assist our customers in a friendly, accessible and timely fashion. Our in-house professionals have a deep understanding of the product lines and their application. In addition, Paneltronics works with key regional representatives to ensure that you are receiving the best service and support by qualified individuals.



## We manufacture products for:

- Agricultural Equipment
- Boats
- Broadcast Vehicles
- Buses
- Communication Vehicles
- Construction Equipment
- Display & Merchandising Equipment
- Emergency Vehicles
- Fire Trucks
- Generators
- Golf & Turf Equipment
- Hazmat Vehicles
- Material Handlers
- Mobile Command Post Vehicles
- Motor Coaches
- Off-Highway Vehicles
- Portable Compressors
- Specialty Vehicles
- Utility Vehicles
- Yachts



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# Premier & Deluxe Line DC Distribution Panels

Corrosion Resistant Polyurethane Finish with several colors and finishes to choose from

Color Coded Amber LEDs Facilitate Quick Monitoring

Durable Epoxy Silk-Screened Graphics

1/8" Durable Aluminum Construction

Countersunk Screw Mounting Holes



Edge Illuminated Easy-to-Read Analog Meters (Digital Meters Optional)

Rotary Switch Permits Monitoring of Multiple Battery Banks

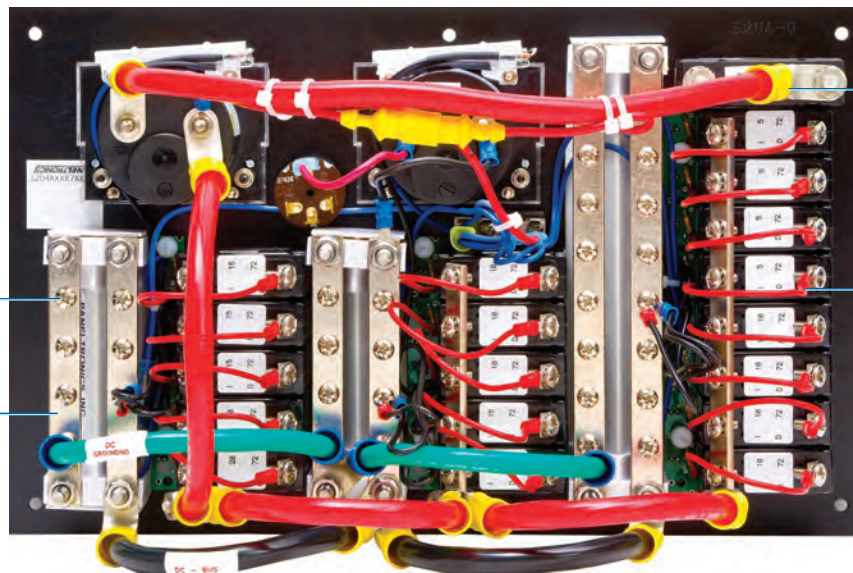
Select From Over 3000 Interchangeable Rear Illuminated Function Labels

Circuit Breaker Amperages are loaded to meet your custom requirements



Conveniently Mounted Bus Bar Connectors Minimize Installation Time

1/2" x 1/8" Tin Plated Copper Buses



Battery Positive Cable Easily Connects to 1/4-20 Circuit Breaker Stud

Completely Pre-Wired Ready for Line and Load Connectors

## Deluxe Line

- A full line of High Quality Power Distribution Panels that can be customized to meet any requirement.

## Premier Line

- A full featured line of High Quality Power Distribution Panels with all the custom and standard features of our Deluxe Line plus a Total Illumination Package.

## Premier and Deluxe Line Features:

- Custom loaded to your specifications
- Most panels ship within 5 working days. Select panels available within 24 hours.
- 1/8" Corrosion resistant aluminum construction
- Two part polyurethane finish
- High accuracy analog meters are standard. Optional digital meters available



## Selection:

- Largest selection of Circuit Breaker and Power Distribution Panels
- Over 250 Modular Panel Designs for Maximum installation flexibility (see page 52)
- Interchangeable, Polycarbonate Function Labels (Over 3000 available)
- Panels are Custom Configured to your specific requirements.
- Optional colors and finishes are available to match every application.
- Free Factory Technical Support



## Flexibility:

- Color coded LED indicators on Premier Line panels
- Backlit labels and meters on Premier Line panels
- High accuracy analog meters, Optional Digital Meters available
- Hydraulic/ Magnetic, Trip Free UL Listed and Recognized and CSA Certified Circuit Breakers
- VDE Approved and CE Compliant Circuit Breakers available



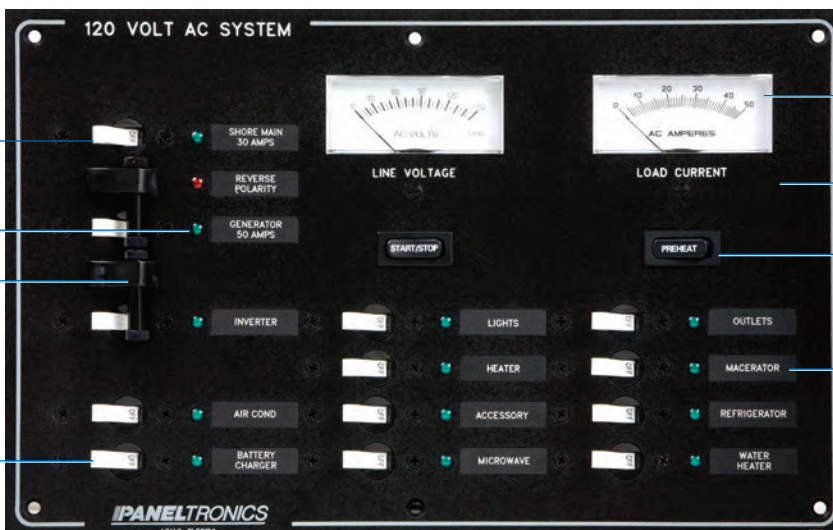


Smart AC Shore Main Circuit Breaker Trips Automatically upon Sensing Reverse Polarity

Color Coded Green LEDs Facilitate Quick Monitoring

Single Source Selector Sliding Gate

Hydraulic/Magnetic, Trip Free, UL Listed or Recognized, CSA Certified Marine Circuit Breakers. CE Approved Circuit Breaker are also available.



Edge Illuminated Easy-to-Read Analog Meters (Digital Meters Optional)

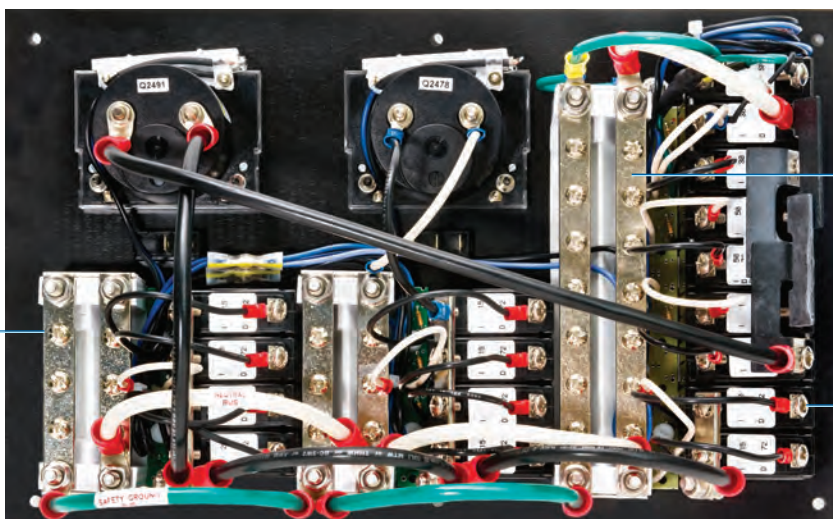


1/8" Durable Aluminum Construction

Convenient Remote Generator Controls for Preheat and Start/Stop

Super Bright LED Backlighting Systems Draw Less Than 1 Amp

Conveniently Mounted Bus Bar Connectors Minimize Installation Time



1/2" x 1/8" Tin Plated Copper Buses



Completely Pre-Wired Ready for Line and Load Connectors

## Installation:

- Completely pre-wired for ease of installation
- Panel mounted Tin Plated Bus Bars
- Panel mounted Bus Connectors
- Detailed Wiring Diagrams for simple and safe installation
- Optional Hinges for further ease of installation
- Product of choice for Premier Boat Builders worldwide

## DC Panel Features:

- Available in 12 VDC, 24 VDC or 32 VDC
- Tin plated, panel mounted DC Positive, DC Negative, and Grounding Bus Bars
- Large Frame DC Mains rated at 5,000 AIC
- Selector Switch permits monitoring of up to 4 Battery Banks
- High performance DC Ammeter Shunts

## AC Panel Features:

- Available in 120 VAC, 240 VAC-60Hz or 220 VAC-50Hz
- AC Shore Main Circuit Breakers include Reverse Polarity Trip Coils that trip automatically upon sensing Reverse Polarity
- Red Warning LED indicates potentially dangerous Reverse Polarity condition
- Tin plated, panel mounted AC Hot, AC Neutral, and Safety Ground Bus Bars
- AC power single source selector sliding gate
- Convenient remote generator controls

## Color Options:

- Textured black finish is standard on all panels.
- Custom colors and custom logos available.
- Premier and Deluxe models are also available in the following color options:

**RAPID24HRS**  
**RESPONSE**

Select panels available within 24 Hours.  
Visit [www.paneltronics.com](http://www.paneltronics.com)



Black(Standard) #3.5    White #3.7    Charcoal Gray #3.11    Woodtec\* Curl Elm    Woodtec\* Teak

# 1000 & 2000 Series Distribution Panels



**1201**  
5.5" W x 4.125" H x 2.25" D  
DC Voltmeter Panel



**1202**  
5.5" W x 4.125" H x 3.5" D  
DC High AMP Breaker Panel  
50A Standard (60, 80, and 100A available)



**2201**  
5.5" W x 8.25" H x 3" D  
DC Battery Selector with  
50 Amp Main



**2202** *Shown with optional Digital Meters*  
5.5" W x 8.25" H x 2.25" D  
DC Volt and Amp Meter Panel



**2203**  
5.5" W x 8.25" H x 3.5" D  
DC 7 Position Circuit Breaker Panel  
with Main



**2204**  
5.5" W x 8.25" H x 3.5" D  
DC 8 Position Circuit Breaker Panel



**2205**  
5.5" W x 8.25" H x 3.5" D  
DC Waterproof 8 Position  
Circuit Breaker Panel



**2206** *Shown with optional Digital Meters*  
11" W x 8.25" H x 3.5" D  
DC 12 Position Panel with Main and Voltmeter



**2301**  
5.5" W x 8.25" H x 2.625" D  
AC Ship/Shore Source  
Selector Panel - 120 VAC 60 Hz



**2303**  
5.5" W x 8.25" H x 5.5" D  
AC Dual Shore/Generator  
Selector Panel - 120 VAC 60 Hz



**2302**  
5.5" W x 8.25" H x 4.625" D  
AC Ship/Shore Source Selector  
Panel - 240 VAC 60 Hz



**2304**  
5.5" W x 8.25" H x 2.25" D  
AC Volt and Amp Meter Panel  
(Available in 120 or 240 VAC)





**2305**  
5.5" W x 8.25" H x 3.5" D  
AC 6 Position Panel with Main



**2308**  
5.5" W x 8.25" H x 3.75" D  
AC High AMP Triple Pole Circuit Breaker Panel



**2311**  
5.5" W x 8.25" H x 6.75" D  
AC 3 Position Source Selector Switch



**2313**  
5.5" W x 6" H x 3.5" D  
AC 3 Position Panel with Main



**2306**  
5.5" W x 8.25" H x 3.5" D  
AC 8 Position Circuit Breaker Panel



**2309**  
5.5" W x 8.25" H x 3.5" D  
AC Source Selection Panel  
Shore Main/Generator Main



**2312**  
5.5" W x 8.25" H x 7.875" D  
AC 4 Position Source Selector Switch



**2314**  
5.5" W x 8.25" H x 3.5" D  
AC Source Selector Shore/  
Generator/Inverter Main



**2307**  
5.5" W x 8.25" H x 3.75" D  
AC High AMP Double Pole  
Circuit Breaker Panel



**2310**  
5.5" W x 8.25" H x 3.5" D  
AC Source Selection Panel  
Shore Main/Parallel Bus A+B



Symbols indicate special features for panels on these pages.

## 1000 & 2000 Series Premier and Deluxe Distribution Panels

DC Panels Available for: AC Panels Available for:

- 12 VDC
- 24 VDC
- 32 VDC
- 120 VAC - 60 Hz
- 240 VAC - 60 Hz
- 220 VAC - 50 Hz

Panel Series	Modular Width	Page
1000	5.50" (139.70 mm)	4
2000	5.50" (139.70 mm)	4
3000	13.75" (349.20 mm)	6
4000	17.75" (450.85 mm)	8
5000	11.00" (279.40 mm)	12
6000	19.00" (482.60 mm)	20



# 3000 Series Distribution Panels



**3201**  
13.75" W x 3.25" H x 3.5" D  
DC 6 Position Circuit Breaker Panel



**3202**  
13.75" W x 4.75" H x 3.5" D  
DC 12 Position Circuit Breaker Panel



**3203** *Shown with optional Digital Meters*  
13.75" W x 7" H x 3.5" D  
DC 12 Position with Main and Meters



**3204**  
13.75" W x 8.5" H x 3.5" D  
DC 18 Position with Main and Meters



**3205** *Shown with optional Digital Meters*  
13.75" W x 10" H x 3.5" D  
DC 24 Position with Main and Meters



**3206**  
13.75" W x 4.75" H x 3.5" D  
DC Waterproof 12 Position Circuit Breaker Panel



**3301**  
13.75" W x 3.25" H x 3.5" D  
AC 6 Position Circuit Breaker Panel



**3302**  
13.75" W x 4.75" H x 3.5" D  
AC 12 Position Circuit Breaker Panel



**3303**  
13.75" W x 3.25" H x 3.5" D  
AC 3 Position Double Pole Circuit Breaker Panel



**3304**  
13.75" W x 4.75" H x 3.5" D  
AC 6 Position Double Pole Circuit Breaker Panel







**3305**  
13.75" W x 6" H x 3.5" D  
AC 7 Position with Main and Meters



**3306**  
13.75" W x 7.5" H x 3.5" D  
AC 9 Position with Shore/Generator Mains and Meters



**3307**  
13.75" W x 10" H x 3.5" D  
AC 12 Position with Dual Shore/Generator Mains and Meters



**3308**  
13.75" W x 8.625" H x 3.5" D  
AC 10 Position with Shore/Generator/Inverter Mains and Meters



**3309**  
13.75" W x 10.5" H x 3.5" D  
AC 12 Position with Dual Shore/Generator/Inverter Mains and Meters

**NEW**



**3310**  
13.75" W x 10" H x 3.5" D  
AC 12 Position with Shore/Generator Mains and Meters  
120/240 VAC

*Shown with optional Digital Meters*



Symbols indicate special features for panels on these pages.

## 3000 Series Premier and Deluxe Distribution Panels

**3200 Series**  
DC Panels Available for:

- 12 VDC
- 24 VDC
- 32 VDC

**3300 Series**  
AC Panels Available for:

- 120 VAC - 60 Hz
- 240 VAC - 60 Hz
- 220 VAC - 50 Hz

Panel Series	Modular Width	Page
1000	5.50" (139.70 mm)	4
2000	5.50" (139.70 mm)	4
3000	13.75" (349.20 mm)	6
4000	17.75" (450.85 mm)	8
5000	11.00" (279.40 mm)	12
6000	19.00" (482.60 mm)	20

# 4000 Series Distribution Panels



**4202**  
17.75" W x 3.25" H x 3.5" D  
DC 8 Position Circuit Breaker Panel



**4203**  
17.75" W x 4.75" H x 3.5" D  
DC 16 Position Circuit Breaker Panel



**4204**  
17.75" W x 7.75" H x 3.5" D  
DC 23 Position with Main and Meters



**4205**  
17.75" W x 9.25" H x 3.5" D  
DC 31 Position with Main and Meters

*Shown with optional Digital Meters*

**NEW**



**4208**  
17.75" W x 3.25" H x 3.5" D  
DC 4 Position Bilge Pump Panel  
Each Position includes Auto/Manual Switch and Push-to-Reset 15 Amp Circuit Breaker



**4206**  
17.75" W x 7.75" H x 3.5" D  
DC 32 Position Circuit Breaker Panel



**4207**  
17.75" W x 11.5" H x 3.5" D  
DC 32 Position with Dual Mains, 2 High Amp Breakers and Meters



**4301**  
17.75" W x 3.25" H x 3.5" D  
AC 4 Position Circuit Breaker Panel



**4302**  
17.75" W x 3.25" H x 3.5" D  
AC 8 Position Circuit Breaker Panel



**4303**  
17.75" W x 4.75" H x 3.5" D  
AC 16 Position Circuit Breaker Panel







**4304**  
17.75" W x 3.25" H x 3.5" D  
AC 4 Position Double Pole Circuit Breaker Panel



**4305**  
17.75" W x 4.75" H x 3.5" D  
AC 8 Position Double Pole Circuit Breaker Panel



**4306**  
17.75" W x 5.25" H x 3.5" D  
AC 8 Position with Shore Main and Meters



**4307**  
17.75" W x 6" H x 3.5" D  
AC 8 Position with Shore/Generator Mains and Meters



**4308**  
17.75" W x 8.75" H x 3.5" D  
AC 18 Position with Shore/Generator Mains and Meters



**4309**  
17.75" W x 9.25" H x 3.5" D  
AC 16 Position with Dual Shore/Generator Mains and Meters

*Shown with optional Digital Meters*



**4310**  
17.75" W x 7.75" H x 3.5" D  
AC 32 Position Circuit Breaker Panel



*Custom Loaded to your Specifications*



*Symbols indicate special features for panels on these pages.*

## 4000 Series Premier and Deluxe Distribution Panels

**4200 Series**  
DC Panels Available for:

- 12 VDC
- 24 VDC
- 32 VDC

**4300 Series**  
AC Panels Available for:

- 120 VAC - 60 Hz
- 240 VAC - 60 Hz
- 220 VAC - 50 Hz

Panel Series	Modular Width	Page
1000	5.50" (139.70 mm)	4
2000	5.50" (139.70 mm)	4
3000	13.75" (349.20 mm)	6
4000	17.75" (450.85 mm)	8
5000	11.00" (279.40 mm)	12
6000	19.00" (482.60 mm)	20

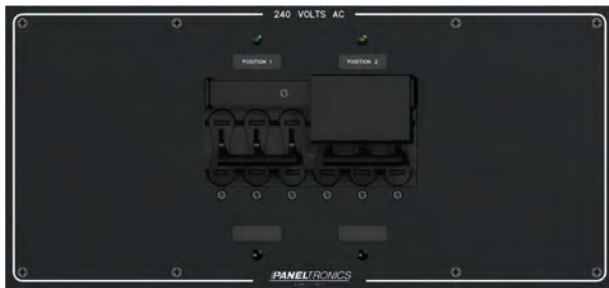
# 4000 Series Distribution Panels



**4311**  
17.75" W x 7.75" H x 3.5" D  
AC 16 Position Double Pole Circuit Breaker Panel



**4314**  
17.75" W x 8.25" H x 3.75" D  
AC High Amp Mains - 4 Position Source Selector - 120/240 VAC



**4312**  
17.75" W x 8.25" H x 3.75" D  
AC High Amp Mains - 2 Position Source Selector - 120/240 VAC



**4315**  
17.75" W x 8.25" H x 3.75" D  
AC High Amp Mains - 5 Position Source Selector - 120/240 VAC



**4313**  
17.75" W x 8.25" H x 3.75" D  
AC High Amp Mains - 3 Position Source Selector - 120/240 VAC



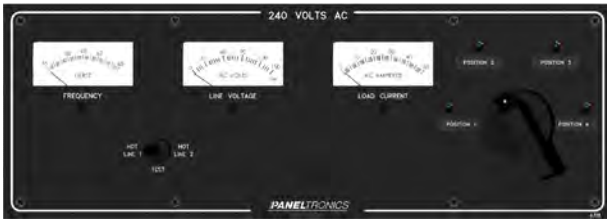
**4316** *Shown with optional Digital Meters*  
17.75" W x 4.75" H x 2.25" D  
AC Meter Panel - Volts, Amps and Frequency - 120/240 VAC



**4317**  
17.75" W x 6.25" H x 6.75" D  
AC Meter Panel with 3 Position Source Selector - 120/240 VAC







**4318**  
17.75" W x 6.25" H x 7.875" D  
AC Meter Panel with 4 Position Source Selector - 120/240 VAC



**4322**  
17.75" W x 4.75" H x 2.25" D  
AC Meter Panel - 2 Volt and 2 Amp Meters - 120/240 VAC

*Shown with optional Digital Meters*



**4320**  
17.75" W x 9.75" H x 3.5" D  
AC Dual Shore/Generator Mains and Parallel Switch with Meters



**4336**  
17.75" W x 9.75" H x 3.5" D  
6 Position Source Selector with Meters

*Shown with optional Digital Meters*



**4321**  
17.75" W x 9.75" H x 3.5" D  
AC Dual Shore/Generator/Inverter Mains and Parallel Switch with Meters

*Shown with optional Digital Meters*



**4338**  
17.75" W x 8.75" H x 3.5" D  
AC 18 Position with 3 Triple Pole Mains and Meters

**NEW**



*Symbols indicate special features for panels on these pages.*

## 4000 Series Premier and Deluxe Distribution Panels

### 4300 Series AC Panels Available for:

- 120 VAC - 60 Hz
- 240 VAC - 60 Hz
- 220 VAC - 50 Hz

Panel Series	Modular Width	Page
1000	5.50" (139.70 mm)	4
2000	5.50" (139.70 mm)	4
3000	13.75" (349.20 mm)	6
4000	17.75" (450.85 mm)	8
5000	11.00" (279.40 mm)	12
6000	19.00" (482.60 mm)	20



**5201**  
11" W x 6.5" H x 3.5" D  
DC 12 Position Circuit Breaker Panel



**5301**  
11" W x 6.5" H x 3.5" D  
AC 12 Position Circuit Breaker Panel



**5202**  
11" W x 11" H x 3.5" D  
DC 24 Position Circuit Breaker Panel



**5302**  
11" W x 11" H x 3.5" D  
AC 24 Position Circuit Breaker Panel



**5203** *Shown with optional Digital Meters*  
11" W x 9.75" H x 3.5" D  
DC 11 Position with Main and Meters



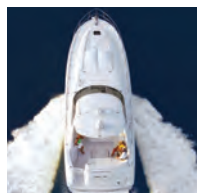
**5303**  
11" W x 6.5" H x 3.5" D  
AC 6 Position Double Pole Circuit Breaker Panel



**5204**  
11" W x 4.5" H x 3.5" D  
DC 6 Position Circuit Breaker Panel



**5304**  
11" W x 9.75" H x 3.5" D  
AC 2 Position Source Selector with Meters



*Symbols indicate special features for panels on these pages.*





**5305**  
11" W x 9.75" H x 3.5" D  
AC Dual Shore/Generator Mains and Parallel Switch with Meters



**5309** *Shown with optional Digital Meters*  
11" W x 9.75" H x 3.5" D  
AC 4 Position Source Selector with Meters (240 VAC)



**5306** *Shown with optional Digital Meters*  
11" W x 9.75" H x 3.5" D  
AC Dual Shore/Generator/Inverter Mains and Parallel Switch with Meters



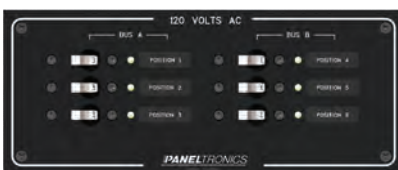
**5310** *Shown with optional Digital Meters*  
11" W x 6.5" H x 3.5" D  
AC 7 Position with Main and Voltmeter



**5311**  
11" W x 4.5" H x 3.5" D  
AC Volt and Amp Meter Panel  
(Available in 120 or 240 VAC)



**5307**  
11" W x 9.75" H x 3.5" D  
AC 3 Position Source Selector with Meters (240 VAC)



**5308**  
11" W x 4.5" H x 3.5" D  
AC 6 Position Circuit Breaker Panel

## 5000 Series Premier and Deluxe Distribution Panels

### 5200 Series

DC Panels Available for:

- 12 VDC
- 24 VDC
- 32 VDC

### 5300 Series

AC Panels Available for:

- 120 VAC - 60 Hz
- 240 VAC - 60 Hz
- 220 VAC - 50 Hz

Panel Series	Modular Width	Page
1000	5.50" (139.70 mm)	4
2000	5.50" (139.70 mm)	4
3000	13.75" (349.20 mm)	6
4000	17.75" (450.85 mm)	8
5000	11.00" (279.40 mm)	12
6000	19.00" (482.60 mm)	20



**3401**  
13.75" W x 12.125" H x 3.5" D  
AC/DC 12 DC Position with Main and 7 AC Position with Shore Main and Meters



**3403** *Shown with optional Digital Meters*  
13.75" W x 16.625" H x 3.5" D  
AC/DC 24 DC Position with Main and 9 AC Position with Shore/Generator Mains



**3402** *Shown with optional Digital Meters*  
13.75" W x 13.625" H x 3.5" D  
AC/DC 18 DC Position with Main and 7 AC Position with Shore Main and Meters



**3404** *Shown with optional Digital Meters*  
13.75" W x 19.125" H x 3.5" D  
AC/DC 24 DC Position with Main and 12 AC Position with Dual Shore/Generator Mains



*Symbols indicate special features for panels on these pages.*





**4401**  
17.75" W x 12.25" H x 3.5" D  
AC/DC 23 DC Position with Main and 8 AC Position with Shore Main and Meters



**5401**  
11" W x 19.25" H x 3.5" D  
AC/DC 21 DC Position with Main and 7 AC Position with Main and Meters



*Shown with optional Digital Meters*

**4402**  
17.75" W x 15.25" H x 3.5" D  
AC/DC 31 DC Position with Main and 12 AC Position with Shore/Generator Mains and Meters



*Shown with optional Digital Meters*

**4403**  
17.75" W x 17.75" H x 3.5" D  
AC/DC 31 DC Position with Main and 16 AC Position with Dual Shore/Generator Mains and Meters

## 3400, 4400 & 5400 Series Premier and Deluxe Distribution Panels

DC Section Available for: AC Section Available for:

- 12 VDC
- 24 VDC
- 32 VDC
- 120 VAC - 60 Hz
- 240 VAC - 60 Hz
- 220 VAC - 50 Hz

Panel Series	Modular Width	Page
1000	5.50" (139.70 mm)	4
2000	5.50" (139.70 mm)	4
3000	13.75" (349.20 mm)	6
4000	17.75" (450.85 mm)	8
5000	11.00" (279.40 mm)	12
6000	19.00" (482.60 mm)	20



**9982201**  
5.5" W x 8.25" H x 3" D  
DC Battery Selector Panel with Large Frame  
50A Main Breaker. Battery Switch has a Marine  
UL Listing of 250 Amps continuous up to 50 VDC



**9972207**  
5.5" W x 4.125" H x 3.5" D  
DC 3 Position Circuit Breaker Panel  
with LED Indicators  
**9982207**  
Without LED Indicators



**9972220**  
5.5" W x 13.5" H x 3.5" D  
DC 12 Position Circuit Breaker Panel  
with Meters - 7 Breakers Installed



**9982202**  
5.5" W x 8.25" H x 2.25" D  
DC Meter Panel. 8-16 VDC Expanded Scale  
Voltmeter and 0-50 DC Ammeter



**9972208**  
5.5" W x 8.25" H x 3.5" D  
DC 8 Position Circuit Breaker Panel  
with Indicator Lights (All hardware is  
included except breakers for  
customizing amperage ratings)  
**9982208**  
Without LED Indicators



**9982301**  
5.5" W x 8.25" H x 2.625" D  
Generator/Shore Single Source Selector Panel  
120 VAC 60 Hz 50A Max  
220 VAC 50 Hz 50A Max



**9972204**  
5.5" W x 8.25" H x 3.5" D  
DC 8 Position Circuit Breaker Panel  
with LED Indicators - 5 Breakers Installed  
**9982204**  
Without LED Indicators



**9972222**  
5.5" W x 8.25" H x 3.5" D  
DC 5 Position Circuit Breaker Panel  
with Voltmeter



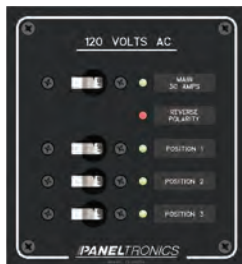
**9982304**  
5.5" W x 8.25" H x 2.25" D  
AC Meter Panel. 0-150 AC Voltmeter  
and 0-50 AC Ammeter







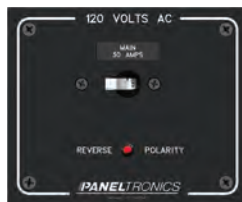
**9972305**  
5.5" W x 8.25" H x 3.5" D  
AC 6 Position Circuit Breaker Panel with 30A Main and LED Indicators - 5 Breakers Installed  
**9982305**  
Without LED Indicators



**9972313**  
5.5" W x 6" H x 3.5" D  
AC 3 Position Circuit Breaker Panel with 30A Main and LED Indicators  
**9982313**  
Without LED Indicators



**9972320**  
5.5" W x 13.5" H x 3.5" D  
AC 10 Position Circuit Breaker Panel with 30A Main and Meters - 6 Breakers Installed



**9982316**  
5.5" W x 4.5" H x 3.5" D  
AC Main - Double Pole - 30 Amp Circuit Breaker with Reverse Polarity Indicator



**9972321**  
5.5" W x 6.5" H x 3.5" D  
AC 240VAC Ship/Shore Selector



**9972322**  
5.5" W x 8.25" H x 3.5" D  
AC 3 Position Circuit Breaker Panel with 30A Double Pole Main Breaker (No reverse polarity trip coil)



**9973210**  
13.75" W x 8.25" H x 3.5" D  
DC 20 Position Circuit Breaker Panel with Meters  
14 Breakers Installed



**9973410**  
13.75" W x 8.25" H x 3.5" D  
AC/DC 19 Position Circuit Breaker Panel with Meters  
13 Breakers Installed



**Panel Insulation Cover: P/N 111-084**

A simple solution for protecting exposed wiring behind the electrical panel. Standard Size: 5.250"W x 8.188"H x 5.125"D Fits most 2000 Series Paneltronics Panels as well as many original equipment panels. Material: 0.125" ABS plastic easily drilled for mounting and wiring.

## Standard Line Panels

This wide selection of pre-engineered panels is factory stocked for immediate delivery. Models include circuit breaker panels, source selectors and instrument panels. Circuit breaker panels are loaded with a breaker assortment to meet most applications. Additional circuit breakers may be purchased for a custom solution to your electrical system.

Made of corrosion resistant aluminum, panels are coated with a black polyurethane finish. Each panel includes mounting hardware and a set of interchangeable function labels.

Point of Purchase Packaging is available, ask a Paneltronics representative for details.

- Factory stocked for immediate delivery
- Completely pre-wired for ease of installation
- Panel mounted tin plated bus bars
- Recessed interchangeable polycarbonate labels
- All mounting hardware is included
- Modular panel designs
- 1/8" Corrosion resistant aluminum construction
- 3-Year Factory Warranty

# Waterproof Line Switch Panels with Fuse Protection



**9960002**  
4.625" W x 6.375" H x 3" D  
DC 6 Position Toggle Switch with Fuse Protection



**9960005**  
4.625" W x 5" H x 3" D  
DC 4 Position Toggle Switch with Fuse Protection



**9960007**  
5.5" W x 6" H x 3" D  
DC 5 Position Illuminated Rocker Switch with Fuse Protection



**9960008**  
5.25" W x 3.75" H x 3" D  
DC 4 Position Toggle Switch with Fuse Protection and LEDs



**9960009**  
7.5" W x 3.75" H x 3" D  
DC 6 Position Toggle Switch with Fuse Protection and LEDs



**9960010**  
2.25" W x 4" H x 3" D  
DC Illuminated Rocker Switch with Fuse Protection



**9960011**  
5.25" W x 4" H x 3" D  
DC 4 Position Illuminated Rocker Switch with Fuse Protection



**9960012**  
7.5" W x 4" H x 3" D  
DC 6 Position Illuminated Rocker Switch with Fuse Protection



**9960013**  
9.5" W x 4" H x 3" D  
DC 8 Position Illuminated Rocker Switch with Fuse Protection



**9960014**  
5.5" W x 4.125" H x 3" D  
DC 3 Position Illuminated Rocker Switch with Fuse Protection



**9960015**  
5.5" W x 8.25" H x 3" D  
DC 7 Position Illuminated Rocker Switch with Fuse Protection



**9952205**  
5.5" W x 8.25" H x 3.5" D  
DC Waterproof 8 Position Circuit Breaker Panel







**9960016**  
4.625" W x 5" H x 3" D  
DC 6 Position Toggle Switch with  
Circuit Breaker Protection



**9960017**  
4.625" W x 5" H x 3" D  
DC 4 Position Toggle Switch with  
Circuit Breaker Protection



**9960018**  
5.5" W x 6" H x 3" D  
DC 5 Position Illuminated Rocker  
Switch with Circuit Breaker Protection



**9960019**  
5.5" W x 4.125" H x 3" D  
DC 3 Position Illuminated Rocker  
Switch with Circuit Breaker Protection



**9960020**  
5.5" W x 8.25" H x 3" D  
DC 7 Position Illuminated Rocker  
Switch with Circuit Breaker Protection



**9960022**  
5.25" W x 5" H x 3" D  
DC 4 Position Illuminated Rocker  
Switch with Circuit Breaker Protection



**9960023**  
7.5" W x 5" H x 3" D  
DC 6 Position Illuminated Rocker Switch with Circuit Breaker Protection



**9960024**  
9.5" W x 5" H x 3" D  
DC 8 Position Illuminated Rocker Switch with Circuit Breaker Protection



**9960021**  
2.25" W x 4" H x 3" D  
DC Illuminated Rocker Switch with Circuit Breaker Protection

## Waterproof Switch Panels

Paneltronics offers a simple, reliable solution to satisfy your switch/fuse panel requirements. These quality panels are made from 1/8" corrosion resistant aluminum and are coated with a black polyurethane finish. Each panel includes mounting hardware and a set of interchangeable function labels.

- Ideal for exposed applications
- Rubber booted toggle switches or illuminated rocker switches
- Front access fuse holders for ease of replacement
- Durable 1/8" aluminum construction
- Pre-wired for ease of installation
- Recessed, interchangeable polycarbonate labels
- Toggle switches are provided with rubber boots for protection against dust and prolonged salt-water spray
- Rocker switches are illuminated and sealed to offer protection against dust and prolonged salt-water spray

## Fused Panels Technical Information

- Fuses: Rated for 10 Amps
- Fuse Holders: Splash proof and molded of high temperature, flame retardant thermoplastic. (UL recognized and CSA certified for 20Amps @ 250V).
- Front access fuse holders for ease of replacement
- DC Positive Bus: 12AWG, flame retardant, moisture resistant conductor
- Terminations are fully insulated 0.25" quick-connect terminals

## Circuit Breaker Panels Technical Information

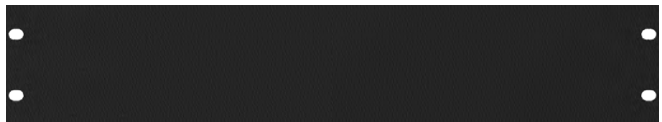
- CE compliant Thermal Push-to-Reset Circuit Breakers
- Circuit Breakers Rated at 15 Amps
- Trip free, Manual Push-to-Reset Type Circuit Breakers
- Rated at 12VDC
- Rubber boots for protection against dust and prolonged salt-water spray



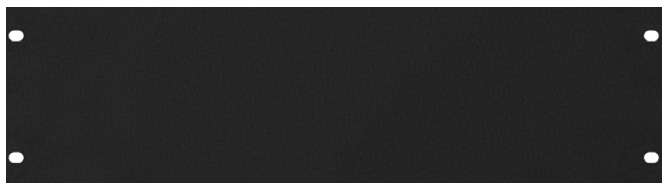
Symbols indicate special features for panels on these pages.



**6001**  
19" W x 1.75" H (1-U)  
Blank Panel



**6002**  
19" W x 3.50" H (2-U)  
Blank Panel



**6003**  
19" W x 5.25" H (3-U)  
Blank Panel



**6004**  
19" W x 7.00" H (4-U)  
Blank Panel



**6201**  
19" W x 5.25" H (3-U)  
10 Position DC Power Distribution Panel with Meters  
Include up to 5 High Amp Circuit Breaker Positions



**6202**  
19" W x 8.75" H (5-U)  
28 Position DC Power Distribution Panel with Meters  
Include a High Amp Main Circuit Breaker



**6301**  
19" W x 5.25" H (3-U)  
1 - AC High Amp Main with Meters  
(available for 120 VAC, 240 VAC - 60 Hz and 220 VAC - 50 Hz)



**6302**  
19" W x 5.25" H (3-U)  
2 - AC High Amp Mains with Source Selection Sliding Gate Interlock and Meters  
(available for 120 VAC, 240 VAC - 60 Hz and 220 VAC - 50 Hz)



**6303**  
19" W x 5.25" H (3-U)  
3 - AC High Amp Mains with Source Selection Sliding Gate Interlock and Meters  
(available for 120 VAC, 240 VAC - 60 Hz and 220 VAC - 50 Hz)





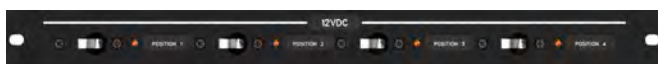
**NEW**



**6304**  
19" W x 8.75" H (5-U)  
18 Position AC Power Distribution Panel with Meters and 2 - AC High Amp Mains with Source Selection Sliding Gate Interlock (Designed for a 120/240 VAC System)



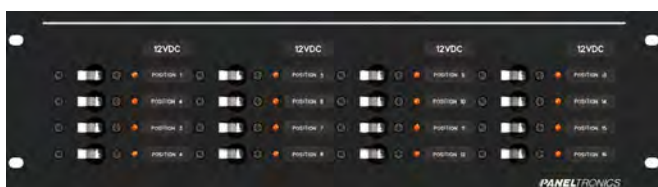
**6401**  
19" W x 3.50" H (2-U)  
Meter Panel Monitor Volts and Amps from both AC and DC sources



**6402**  
19" W x 1.75" H (1-U)  
4 Position Circuit Breaker Panel- Available for AC or DC loads



**6403**  
19" W x 3.50" H (2-U)  
8 Position Circuit Breaker Panel- Available for AC or DC loads



**6404**  
19" W x 5.25" H (3-U)  
16 Position Circuit Breaker Panel- Available for AC or DC loads

Paneltronics Rack Mount Panels are designed for control, monitoring, and protection of AC and DC electrical loads. These panels have all of the features and benefits of the Premier Line Panels detailed on pages 3 and 4. However, they are specifically designed for mounting onto Electronic Industries Association (EIA) compliant 19" racks accommodating preferred 482.60 mm standard panel widths and the modular unit "U" height of 44.45 mm.

These Rack Mount panels can be used to quickly and easily configure custom power distribution systems. They offer a varied selection of modular designs that combined can create large or small systems. The series includes panels for 12VDC, 24VDC, and 120VAC-60Hz, 240VAC-60Hz, and 220VAC-50Hz.

**6000 Series  
19" Rack Mount Distribution Panels**

- DC Panels Available for:**
- 12 VDC
  - 24 VDC
- AC Panels Available for:**
- 120 VAC - 60 Hz
  - 240 VAC - 60 Hz
  - 220 VAC - 50 Hz

Panel Series	Modular Width	Page
1000	5.50" (139.70 mm)	4
2000	5.50" (139.70 mm)	4
3000	13.75" (349.20 mm)	6
4000	17.75" (450.85 mm)	8
5000	11.00" (279.40 mm)	12
6000	19.00" (482.60 mm)	20



Symbols indicate special features for panels on these pages.

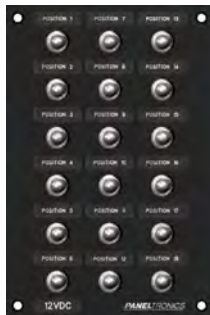
# 7000 Series Push-to-Reset Distribution Panels



**7203**  
16.50" W x 5.50" H x 2.50" D DC 30 Position Push-to-Reset Circuit Breaker Panel  
**9997203**  
Black, 12/24 VDC, Loaded with 30 - 15Amp Push-to-Reset Circuit Breakers



**7226**  
4.50" W x 9.00" H x 2.50" D  
DC 12 Position Push-to-Reset  
Circuit Breaker Panel  
**9997226** Black, 12/24 VDC,  
Loaded with 12 - 15Amp  
Push-to-Reset Circuit Breakers



**7236**  
6.00" W x 9.00" H x 2.50" D  
DC 18 Position Push-to-Reset  
Circuit Breaker Panel  
**9997236**  
Black, 12/24 VDC,  
Loaded with 18 - 15Amp  
Push-to-Reset Circuit Breakers



**7252**  
9.00" W x 3.50" H x 2.50" D DC 10 Position Push-to-Reset Circuit Breaker Panel  
**9997252**  
Black, 12/24 VDC, Loaded with 10 - 15Amp Push-to-Reset Circuit Breakers



**7253**  
9.00" W x 4.85" H x 2.50" D DC 15 Position Push-to-Reset Circuit Breaker Panel  
**9997253**  
Black, 12/24 VDC, Loaded with 15 - 15Amp Push-to-Reset Circuit Breakers



**7255**  
9.00" W x 7.60" H x 2.50" D DC 25 Position Push-to-Reset Circuit Breaker Panel  
**9997255**  
Black, 12/24 VDC, Loaded with 25 - 15Amp Push-to-Reset Circuit Breakers



**7262**  
10.50" W x 3.50" H x 2.50" D DC 12 Position Push-to-Reset Circuit Breaker Panel  
**9997262**  
Black, 12/24 VDC, Loaded with 12 - 15Amp Push-to-Reset Circuit Breakers

*Shown with optional Rubber Boots*



**7263**  
10.50" W x 4.85" H x 2.50" D DC 18 Position Push-to-Reset Circuit Breaker Panel  
**9997263**  
Black, 12/24 VDC, Loaded with 18 - 15Amp Push-to-Reset Circuit Breakers



**7273**  
12.00" W x 5.50" H x 2.50" D DC 21 Position Push-to-Reset Circuit Breaker Panel  
**9997273**  
Black, 12/24 VDC, Loaded with 21 - 15Amp Push-to-Reset Circuit Breakers

**NEW**

## Push-to-Reset Circuit Protection for 12 VDC or 24 VDC Electrical systems.

This panel line is designed for applications where 24-hour circuit protection is required or for circuit protection of loads that are switched remotely.

Optional Clear Rubber Boots can be installed on the circuit breakers to protect the front of the panels and accommodate installation in exposed wet area such as open cockpits and flybridges.

A Black textured polyurethane finish is standard on all panels. Additional color options are also available - see page 3.

### Features:

- 24 Hour Circuit Protection
- 12 VDC or 24 VDC
- Custom Loaded to your Specifications (5, 10, 15, 20, 25, and 30 Amps)
- Custom Labeled to your Specifications (see pages 47- 51 for label selection)
- Pre-wired with Common Positive Buses for faster installation

### Circuit Breakers:

- Ignition Protected (UL 1500/ISO8846)
- Trip Free (ABYC E-11.10.1.5.4)
- Manual Reset type (ABYC E-11.10.1.5.6 )
- UL Recognized (UL 1077) and CSA certified
- CE marked



*Symbols indicate special features for panels on these pages.*



Simplify your installation while adding protection, safety, and enhanced appearance of your electrical system.

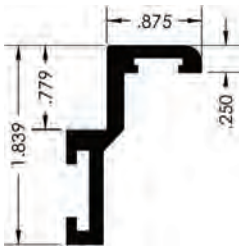
## Mounting Frames

Decorative aluminum Mounting Frames eliminate the pressure of making an exact cutout for the panel to fit in and are available in three designs: High Profile, Slim, and Recessed Slim. Recessed and High Profile Frames recess the panel to help prevent accidental turning on or off of circuit breakers. In addition, a smoked or clear Plexiglas door may be installed for added protection of the panel.

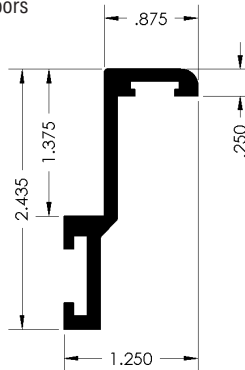
All Slim Frames are ideal for smaller areas; the flange is only 7/8". All frames are available in custom sizes to fit your specific customized panel configuration. They may be used to accommodate multiple panel combinations and may also be hinged to allow for easier installation and future service of the electrical system. Designed for the marine environment with durable materials, these frames create an elegant, finished look.

Benefits:

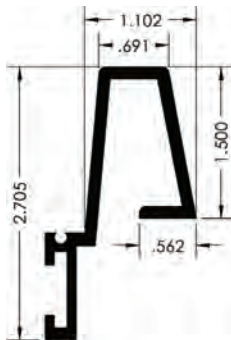
- Reduce installation time
- Help to prevent accidental turning on or off of critical circuits
- Enhance the panel installation
- Conceal bulkhead cutout imperfections
- Provide the option to add Plexiglas doors



**Slim Frame**  
P/N 111-267



**Recessed Slim Frame**  
P/N 111-427



**High Profile Frame**  
P/N 100-649K



**Isometric View**



## Plexiglas Doors

These attractive doors are available in either a clear or smoked finish and are hinged to conveniently open left or right, up or down. They are factory installed as an option, and in addition to providing a more smooth and finished look, they also help to protect your panel from dust, the environment, and accidental turning on or off of critical circuits.

Benefits:

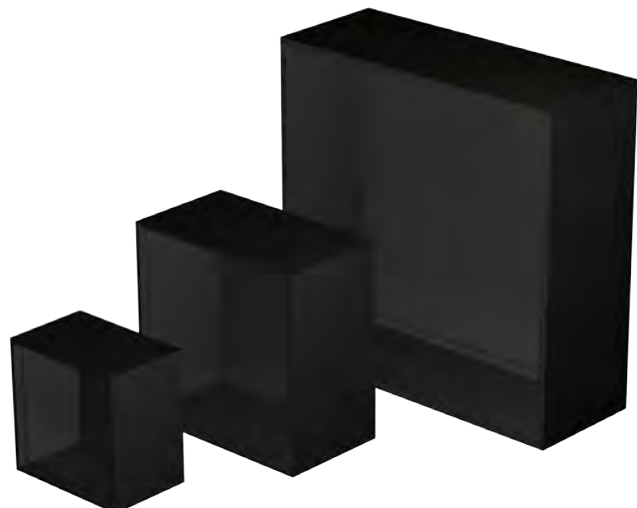
- Help to protect panel from dust and accidental access
- Help to prevent accidental turning on or off of critical circuits
- Enhance appearance

## Enclosures

Protecting the electrical connections at the panel can help prevent potential electrical hazards. Paneltronics' enclosures protect the wiring in situations where the back of the panel may be exposed. Terminal blocks and bus bars can also be mounted on the back plate of the enclosure providing a central location for your wiring. Enclosures are available in standard depths, while the widths and heights are custom sized to meet your requirements. Paneltronics' enclosures are designed for the harsh marine environments and constructed of durable, corrosion resistant aluminum.

Benefits:

- Electro-Mechanical protection to exposed components
- Custom sized to fit most panel configurations
- Can be used for a variety of applications
- Custom wire access ports can be added



**Standard Enclosure Depths: 6.50", 8.50", 10.00"**

Paneltronics designs and manufactures custom enclosure box-build assemblies that efficiently consolidate multiple parts, components, and functions into a central control unit. These pre-assembled units can be designed for use in engine rooms, engine compartments, or any conveniently accessible location where centralized control is required.

Our Engineering Team carefully evaluates every design element and incorporates all specifications for size constraints as well as mounting, vibration, environmental and accessibility requirements. These are coupled with the specific electrical and mechanical requirements to design an optimal cost effective solution. Our team can also design turnkey solutions from concept to finished product or build-to-print to satisfy specific OEM customer requirements.

These high quality enclosures are designed for rugged environments such as off-highway, heavy truck, construction, or marine applications. They simplify installation by reducing labor and providing a central location for operation and/or troubleshooting.

## Solutions

Paneltronics enclosure box-build assemblies provide efficient consolidated assembly solutions for several common functions and requirements including:

- Ignition protection
- Battery switching
- Circuit protection
- Common buses
- Solenoids
- Relays
- Control module protection
- Sensors
- Monitoring devices



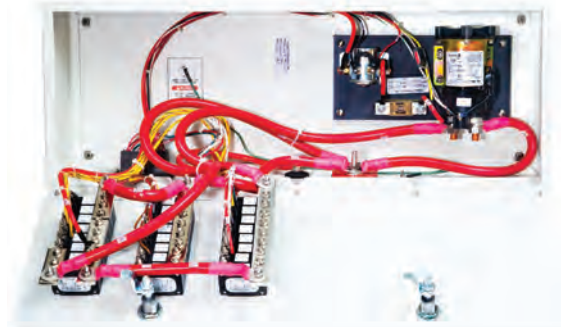
**Ignition Protected Main DC power distribution enclosure assembly.** Includes: battery switching solenoids, circuit breakers, fuse blocks, relays, external power studs and connectors.



**Main AC/DC Electrical Distribution Panel and Enclosure assembly.** Isolated AC and DC distribution panels are individually hinged. Includes: terminal blocks, ground buses, relays, and wire access openings. All wires are labeled for easier installation.



**Flush mount DC Control Panel with enclosure protection and internal wire management.** Includes: meters, circuit breakers, switches for remote battery selection, terminal blocks, ground buses, and rear access connectors and power studs.



**Main DC Control Engine Room Panel with enclosure protection.** Includes: ignition protected circuit breakers, solenoids, relays, ANL fuses, wire access ports, external connectors and power studs. Key locked access for easier and safer service.



## Features

Enclosure box-build assemblies features include:

- Surface or bulkhead mount options
- Hinged front panel faces or covers
- Wire access ports
- High amp, custom flexible buses
- Multi-pin bulkhead connectors
- High amp power feed-through studs
- Corrosion resistant aluminum fabrication
- Polyurethane or powder coat finishes
- Optional pre-fabricated fiberglass or plastic enclosures

## Benefits

Enclosure box-build assemblies benefit the production process with:

- Reduced installation labor and increased productivity
- Consistent electro-mechanical assemblies
- A central location for key functions and components
- Reduced wiring errors on the production line
- Go-to point for system troubleshooting
- Added durability and reliability
- Turnkey assemblies from a single source



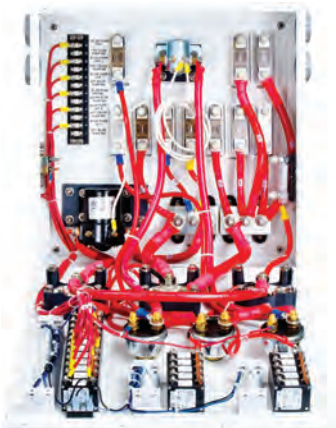
**Main DC Power Distribution Enclosure assembly.** Includes: battery switches, circuit breakers, ANL fuse blocks, relays, and external access ports.



**Main AC/DC Electrical Distribution Panels mounted on a hinged mounting frame.** The complete assembly opens along with the AC enclosure permanently attached with mounting hardware. Includes: terminal blocks, ground buses, and wire access ports. This assembly includes a Plexiglas door for additional protection.



**Bulkhead mount Main DC Engine Room Control Panel with enclosure protection.** Includes: ignition protected circuit breakers, fire protection control module, external connectors and power studs.



**Main DC Power Disconnect and Distribution Enclosure assembly.** This assembly is pre-wired with flexible bus bars that permit a higher density in a smaller enclosure. Includes: a NEMA rated fiberglass enclosure, ignition protected circuit breakers, battery switching solenoids, relays, fuse blocks, control modules, and external connectors and power studs.

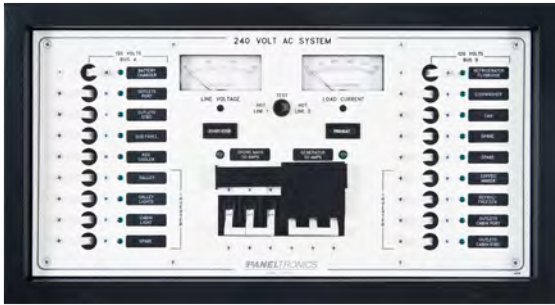


# OEM Custom Panels

Paneltronics is an outsource turnkey manufacturer of electrical power distribution panels, instruments panels, switch panels and enclosure box-build assemblies for Original Equipment Manufactures - OEMs. These products gave us our start in 1979 and continue to be the main stay of our business.

Paneltronics' OEM customers rely on our Design, Engineering, and Manufacturing expertise to deliver custom panels, systems, and assemblies that are technically superior, quality built, and can be trusted to perform reliably. Our flexibility allows us to build-to-print or fully deliver from concept through completion.

Contact our Technical Sales Team to discuss your custom requirements and let us put our experts to work for you.



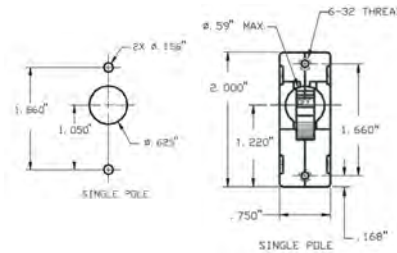




## "A" Frame Magnetic Circuit Breakers

- Standard branch AC or DC circuit breaker for Paneltronics electrical distribution panels
- Meets all American Boat and Yacht Council (ABYC) Standards for non ignition protected circuit breakers
- UL Recognized (UL 1077) for use in the U.S.A. and CSA Certified for use in Canada (ABYC E-11.10.2.1)
- Trip free (ABYC E-11.10.1.5.4 and E-11.10.2.1.1)
- Manual reset (ABYC E-11.10.1.5.6 and E-11.10.2.1.1)

206-072S



### Specifications

Handle Color	White
Maximum Amperage	50 Amps
Maximum Voltage/ AIC Rating	32 VDC/ 2,500 Amps with no Back-up Fuse (ABYC E-11.10.1.5.5) 250 V 50/ 60 Hz / 3,650 Amps with maximum rated series 80 Amp Back-up Fuse (ABYC E-11.10.2.1.2)
Rated Switch Cycles	10,000 actuations at rated current and voltage
Electrical Hardware	Screw 10-32 x 3/8" pan combo head (P/N 197-188)
Mounting Hardware	Screw 6-32 x 5/16 black flat Phillips head (P/N 197-002) Screw 6-32 x 5/16" white flat Phillips head (P/N 197-002W)
Hole Plugs	5/8" diameter Black (P/N 016-005) and White (P/N 016-021)

Amperage	Circuit Breaker Part Numbers	
	Single Pole	Double Pole
5	206-070S	206-078S
10	206-071S	206-079S
15	206-072S	206-080S
20	206-073S	206-081S
25	206-074S	206-082S
30	206-075S	206-083S
40	206-076S	206-084S
50	206-077S	206-085S

## CE Compliant "A" Frame Magnetic Circuit Breakers

- Branch AC or DC circuit breaker for Paneltronics electrical distribution panels
- Meets all American Boat and Yacht Council (ABYC) Standards for non-ignition protected circuit breakers
- UL Recognized (UL 1077) for use in the U.S.A., and CSA Certified for use in Canada, VDE Approved, and CE Compliant for use in Europe (ABYC E-11.10.2.1)
- Trip free (ABYC E-11.10.1.5.4 and E-11.10.2.1.1)
- Manual reset (ABYC E-11.10.1.5.6 and E-11.10.2.1.1)

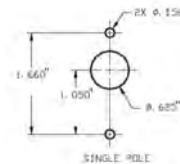
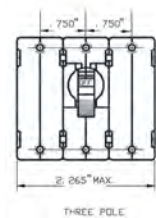
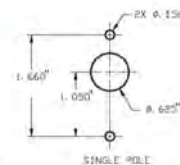
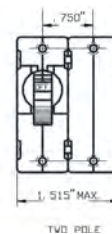
### Specifications

Handle Color	White or Black
Maximum Amperage	30 Amps
Maximum Voltage/ AIC Rating	80 VDC/ 7,500 Amps with no Back-up Fuse (ABYC E-11.10.1.5.5) 250 V 50/ 60 Hz / 5,000 Amps with maximum rated series 80 Amp Back-up Fuse (ABYC E-11.10.2.1.2)
Rated Switch Cycles	10,000 actuations at rated current and voltage
Electrical Hardware	Screw 10-32 x 3/8" pan combo head (P/N 197-188) External tooth lockwasher #10 (P/N 197-051)
Mounting Hardware	Screw 6-32 x 1/4" black flat Phillips head (P/N 197-182) Screw 6-32 x 1/4" white flat Phillips head (P/N 197-182W)
Hole Plugs	5/8" diameter Black (P/N 016-005) and White (P/N 016-021)

206-165S



206-087S



Amperage	CE Compliant				
	Single Pole	Double Pole-Single Handle	Double Pole-Double Handle		Double Pole-Double Handle
Handle Color >	White	Black	White	Black	Black
1	206-210S	206-227S			
2	206-149S	206-228S			
5	206-151S	206-230S	206-161S	206-333S	206-240S
7.5	206-152S	206-231S			
10	206-153S	206-232S	206-162S	206-334S	206-241S
15	206-154S	206-233S	206-163S	206-335S	206-242S
16	206-155S	206-234S	206-164S	206-336S	206-243S
20	206-156S	206-235S	206-165S	206-337S	206-244S
25	206-157S	206-236S	206-166S	206-338S	206-245S
30	206-158S	206-237S	206-167S	206-339S	206-246S

## Shore Main Circuit Breakers with Reverse Polarity Trip Coil

- Shore main AC circuit breaker for Paneltronics electrical distribution panels
- 120VAC 60 Hz (simultaneously breaks both hot and neutral legs)
- 220VAC 50 Hz (simultaneously breaks both live and neutral legs)
- Reverse Polarity Protector 65VAC trip coil (Surge arrestor P/N 281-001 required) (ABYC E-11.6.3.3.1)

Amperage	CE Marked		
Handle Color >	White	White	Black
16/65V	206-086	206-171S	206-343S
30/65V	206-087S	206-172S	206-344S
50/65V	206-353S		

Smart Breaker: Trips automatically upon sensing reverse polarity

## Circuit Breaker Handle Locks

- For CE compliant "A" and "C" Frame Breakers
- Prevents inadvertent actuation of the circuit breaker handle in either the ON or OFF position
- Does not interfere with the circuit breaker's trip mechanism

Color	Part Number Single Handle
Red	206-213
Black	206-214
White	206-215

206-213





## Panel Seal/ Waterproof "A" Frame Magnetic Circuit Breakers

- Branch AC or DC Circuit Breakers for Paneltronics electrical distribution panels
- Meets all American Boat and Yacht Council (ABYC) Standards for non ignition protected circuit breakers
- UL Recognized (UL 1077) for use in the U.S.A., and CSA Certified for use in Canada
- Trip free (ABYC E-11.10.1.5.4 and E-11.10.2.1.1)
- Manual reset (ABYC E-11.10.1.5.6 and E-11.10.2.1.1)

### Specifications

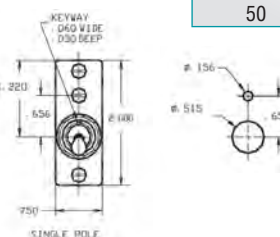
Handle	Metal with Silicon rubber seal
Maximum Amperage	50 Amps
Maximum Voltage/ AIC	32 VDC/ 2,500 Amps with no Back-up Fuse (ABYC E-11.10.1.5.6)
Rating	Rated Switch Cycles 10,000 actuations at rated current and voltage
Electrical Hardware	Screw 10-32 x 3/8" pan combo head (P/N 197-188)
Mounting Hardware	Hex nut 1/2-32 (supplied with circuit breaker)
	Lockwasher 1/2" internal tooth (supplied with circuit breaker)
Optional Boot	Black silicone rubber (P/N 048-015)

206-052S



Amperage	Part Number
5	206-051S
10	206-052S
15	206-053S
20	206-054S
25	206-055S
30	206-056S
40	206-057S
50	206-058S

048-015



## "C" Frame Magnetic Circuit Breakers

- Standard Circuit Breakers for Paneltronics electrical distribution panels
- Meets all American Boat and Yacht Council (ABYC) Standards for non-ignition protected circuit breakers
- UL Recognized (UL 1077) for use in the U.S.A., and CSA Certified for use in Canada
- Trip free (ABYC E-11.10.1.5.4)
- Manual reset (ABYC E-11.10.1.5.6)

### Specifications

Electrical Hardware	Hex Nut 1/4-20 (supplied with circuit breaker)
Flat Washer	1/4" Diameter (supplied with circuit breaker)
Mounting Hardware for non-CE Breakers	Screw 6-32 x 5/16" black flat Phillips head (P/N 197-002)
Mounting Hardware for CE Breakers	Screw 6-32 x 5/16" white flat Phillips head (P/N 197-002W)
Hole Plug	Screw 6-32 x 1/4" black flat Phillips head (P/N 197-182)
	Screw 6-32 x 1/4" white flat Phillips head (P/N 197-182W)
	Black (P/N 100-295)

206-025



206-131

## Circuit Breaker Part Number

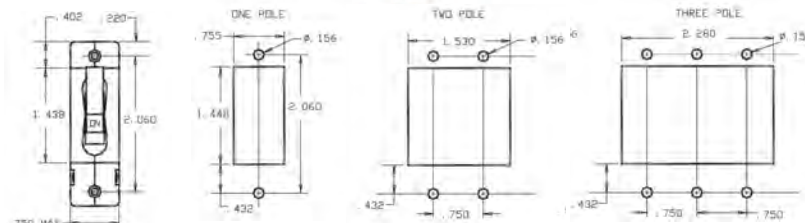
		"C" Frame- UL Recognized				CE Compliant			
Amp	37 VDC MAX AIC 5,000 Amps	250 VAC MAX AIC 5,000 Amps		80 VDC MAX AIC 10,000 Amps		250 VAC MAX AIC 5,000 Amps			
	Single Pole White	Double Pole White	Triple Pole White	Single Pole White	Single Pole Black	Double Pole White	Double Pole Black	Triple Pole White	Triple Pole Black
10		206-137				206-224	206-258		
15		206-138				206-209	206-259		
20		206-139				206-225	206-261		
25		206-140				206-226	206-262		
30		206-129	206-059			206-178	206-263	206-184	206-270
40	206-144	206-130	206-060	206-173	206-253	206-179	206-350	206-185	206-271
50	206-026	206-131	206-061	206-174	206-254	206-180	206-352	206-186	206-272
60	206-049	206-132	206-062	206-175	206-255				
80	206-024	206-133	206-135	206-176	206-256				
100	206-025	206-134	206-136	206-177	206-257				

## Shore Main Circuit Breakers with Reverse Polarity Trip Coil

"C" Frame- UL Recognized			
Amperage	250 VAC MAX - AIC 5,000 Amps		
	CE Compliant		
	Triple Pole White	Triple Pole White	Triple Pole Black
16A/65V	206-127	206-190	206-276
30A/65V	206-126	206-191	206-277
50A/65V	206-128	206-192	206-278

Smart Breaker: Trips automatically upon sensing reverse polarity

206-136



## "E" Frame Magnetic Circuit Breakers

- Standard three pole Circuit Breakers for Paneltronics electrical distribution panels
- Meets all American Boat and Yacht Council (ABYC) Standards for non ignition protected circuit breakers
- UL Listed (UL 489) for use in the U.S.A., and CSA Certified for use in Canada
- Trip free (ABYC E-11.10.1.5.4)
- Manual reset (ABYC E-11.10.1.5.6)

### Specifications

Handle Color	Black
Maximum Amperage	100 Amps
Maximum Voltage/ AIC Rating	240 VAC/ 5,000 Amps
Rated Switch Cycle	10,000 actuations at rated current and voltage
Electrical Hardware	Hex Nut 1/4-20 (supplied with circuit breaker)
Flat Washer	1/4" Diameter (supplied with circuit breaker)
Torque Rating	45 in-lbs (5Nm) max
Mounting Hardware	6@ 6-32 x 3/8" black flat head Phillips head (197-098) 6@ 6-32 x 3/8" white flat head Phillips head (197-098W)
Torque Rating	8 in-lbs (0.9Nm) max
Hole Plug	Black (100-296)

Amperage	Circuit Breaker Part Numbers	
	Double Pole	Triple Pole
16	206-034	206-036
30	206-043	206-037
40	206-044	206-038
50	206-045	206-039
60	206-046	206-040
80	206-047	206-041
100	206-048	206-042



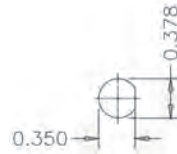
206-039

## Single Pole - Ignition Protected CE Compliant Thermal Push-to-Reset Circuit Breakers

- Branch Circuit Breaker for Paneltronics electrical distribution panels 12 or 24 VDC breaks positive line
- Meets all American Boat and Yacht Council (ABYC) Standards for ignition protected circuit breakers UL 1500 and ISO 8846
- UL Recognized (UL 1077) for use in the U.S.A., CSA Certified for use in Canada and CE Compliant for use in Europe
- Trip free (ABYC E-11.10.1.5.4)
- Manual reset (ABYC E-11.10.1.5.6)

### Specifications

Handle Color	White
Maximum Amperage	30 Amps
Maximum Voltage/ AIC Rating	32 VDC/ 2,500 Amps (ABYC E -11.10.1.5.5)
Mounting Hardware	Knurled dress nut 3/8-27 black plastic (P/N 001-185) Backup hex nut 3/8-27 brass nickel-plated (P/N 001-181)
Boot	Clear Silicone rubber boot fits 3/8-27 UNS-2B bushing (P/N 048-033) White Silicone rubber boot fits 3/8-27 UNS-2B bushing (P/N 048-034) Black Silicone rubber boot fits 3/8-27 UNS-2B bushing (P/N 048-035)



048-034



004-528

Amperage	1/4" Quick Connect Terminals	Screw Terminals	90° Screw Terminals
5	004-524	004-507	004-624
7	004-525		004-625
10	004-526	004-508	004-626
15	004-527	001-195	004-627
20	004-528	004-509	004-628
25	004-529		004-629
30	004-530		004-630

## Series 187 Panel Mount Thermal Circuit Breakers (MRCB)

- Main circuit breaker over current protection for 12VDC systems, and Branch circuit breaker protection for 12 or 24VDC systems
- Ignition Protected (ABYC E-11.10.1.5.1 and SAE J1171)
- Meets the requirements of SAE J1428 for use in the U.S.A. and CE marked for use in Europe
- Trip free (ABYC E-11.10.1.5.4)
- Manual reset (ABYC E-11.10.1.5.6)

### Specifications

Handle Color	Yellow
Maximum Voltage	48VDC
Maximum Amperage	150 Amps
AIC Rating	5,000 Amps @ 12VDC 3,000 Amps @ 24VDC 1,500 Amps @ 42VDC
Watertight per IEC 60529	IP66 Rating
Operating Temperature	-40°F (-40°C) to 185°F (85°C)
Mounting Hardware	2@ #10 X 1" Pan Head Phillips Screw Black (198-014)

Part Number	Amperage
010-009	100



010-009

Panel mount and surface mount in additional amperages available. Contact Paneltronics for availability and information.

## Circuit Breaker Color Caps

- For "A" Frame Breakers (except CE Compliant and Waterproof units)
- Provides high visibility color coding for critical circuits



206-096

Part Number	206-093	206-094	206-095	206-096	206-097	206-098	206-099
Color	Red	Orange	Yellow	Green	Blue	Gray	White

## Circuit Breaker Hole Plugs

- For "A" Frame Breakers
- Covers unused circuit breaker panel position



016-004

Part Number	Diameter	Color
016-004	1/2"	Black
016-020	1/2"	White
016-005	5/8"	Black
016-021	5/8"	White



## S Series Push To Reset Thermal Circuit Breakers (SDLM)

- Main and Branch circuit breaker overcurrent protection for 12VDC systems.
- Ignition Protected (ABYC E-11.10.1.5.1 and SAE J1171)
- Meets the requirements of SAE J1625 for use in the U.S.A. and CE marked for use in Europe
- Trip free (ABYC E-11.10.1.5.4)
- Manual reset (ABYC E-11.10.1.5.6)

### Specifications

Handle Color	Red
Maximum Voltage	30VDC
Maximum Amperage	150 Amps
AIC Rating	5,000 Amps @ 12VDC
Watertight per IEC 60529	IP67 Rating
Operating Temperature	-60°F (-51.1°C) to 160°F (71°C)
Mounting Hardware	#10-32 X 3/4" Flat Head Phillips Screw Black (197-095)

Amperage	Part Number
80	001-401
90	001-778
105	001-360
120	001-375
150	001-729

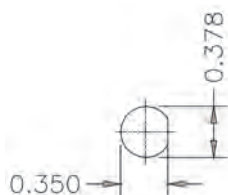


001-729

## Fuse Holder Assembly

- Low profile
- Splash Proof
- For AGC and 3AG glass fuses (1/4" Diameter x 1/4" Long)
- Maximum panel thickness 0.300 inches
- Tin plated brass terminals
- UL Recognized and CSA Certified (250 VAC/ 250 VDC 20 A max)

Part Number
010-005



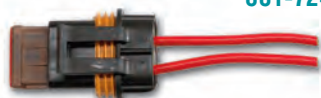
010-005

## In-line ATC fuse holder assembly

- Waterproof
- Terminals are tin plated brass
- 8" pigtails are tin plated copper 105°C (ABYC E-11.14.2.1.1)
- Accepts ignition protected (UL 1500/ SAE J1171) ATC Type fuse with 5,000 AIC rating at 24 VDC (ABYC E-11.10.1.6.2)

### CAP for 001-724

Part Number	Pigtail Gauge	Pigtail Color
001-724	#14	Red
001-730	#12	Red



001-724

## ATC type Ignition Protected Fuse

- Ignition protected (UL 1500/ SAE J1171) ATC TYPE
- AIC Rating- 5000 Amps at 24 VDC- (ABYC E-11.10.1.6.2)
- Sealed with silicon-sand arc quenching filler
- Standard 1/4" blade

Part Number	Rating	Color
010-001	5A	Tan
010-002	7.5A	Brown
010-006	10A	Red

001-001



001-006



## Circuit Breaker Mounting Screws

- Screws are stainless steel 6-32 phillips
- Heads are coated with polyurethane paint to prevent corrosion

Part Number	Screw Head	Length	Color
197-001	Pan	5/16"	Black
197-002	Flat	5/16"	Black
197-182	Flat	1/4"	Black
197-133	Pan	3/8"	Black
197-098	Flat	3/8"	Black
197-001W	Pan	5/16"	White
197-002W	Flat	5/16"	White
197-182W	Flat	1/4"	White
197-098W	Flat	3/8"	White



197-002W



197-002

## Combo Head Screws

- For "A" Frame Circuit Breaker electrical connections and terminal strips
- Screws are 10-32 stainless steel
- Install with either blade or phillips screwdriver

Part Number	Length
197-188	3/8"



197-188

## Sealing Boots For C-Frame Circuit Breakers

- Front-panel mounted boot and frame for single lever and rocker actuated C-Frame circuit breakers
- Transparent boot marked ON with molded-in trigger to eliminate contact teasing
- Will not discolor or crack due to UV/ageing
- RoHs compliant

### Specifications

Material	Boot, Transparent Silicone Rubber Frame, Steel Zinc Plated with Chromate Finish
Operating Temperature	-80°F (-62.2°C) To 400°F (204°C)
Watertight per IEC 60529	IP66 Rating Or IP68 depending on installation
Mounting Hardware	2@ #6-32 X 3/8" slotted stainless steel screws with Rubber O-Rings (supplied with boot)

Part Number	Frame Color
001-723	Chrome
001-723B	Black



001-723B

## Digital Meters

- Monitor marine/ land based power distribution and generating systems (ABYC E-11.9.3.2)
- AC voltmeter and AC ammeter are true RMS (ABYC E-11.9.3.2.3)
- Surface mount with only two 5/32" diameter holes
- Window mount in standard 2.5" analog meter cutout (2.90" W x 1.28" H)
- Three digit LED display (Frequency meters are two digits)
- Reversed Polarity Protected
- Splashproof front
- Includes pigtails, mounting hardware, and instructions

Part Number	Description	Range	Input	Sensitivity	Shunt or CT P/N
570-001B	DC Voltmeter	0-50 VDC	Direct Read	0-50 VDC	N/A
570-002B	DC Ammeter	0-100 DCA	Shunt Rated	100 A/50 mV	289-013
570-003B	AC Voltmeter	10-250 VAC	Direct Read	0-250 VAC	N/A
570-004B	AC Ammeter	0-100 ACA	Transformer Rated	100 A/ 100 mA	289-009
570-005B	Freq. Meter	10-99 Hz	Direct Read	120-240 VAC	N/A
570-006B	DC Ammeter	0-500 DCA	Shunt Rated	500 A/ 200 mV	289-037

570-001B

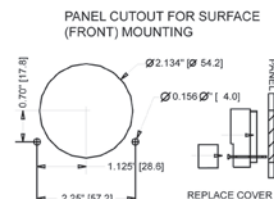
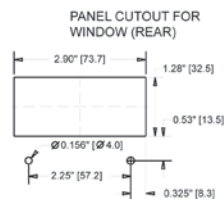


## Specifications

Display Character Size	9/16"
Input Voltage	8-32 VDC
Power Consumption	1 Watt 12VDC
Accuracy	+/-1 Count
Operating Temperature Range	32-122°F

## Dimensions

Width	3.08" (78.23 mm)
Height	2.38" (60.45mm)
Depth	1.0" (25.40mm)



## DC Ammeter Shunts

- Compact space-saving design
- Insulated mounting base
- End blocks are machined from solid naval brass
- Temperature coefficient 0.002% per 1°C
- Resistance elements are manganin for long term temperature stability
- Potential terminals are 6-32 brass screws

289-013



289-037



Part Number	Rating	Size L x W x H	High and Low Line Terminals
289-010	50 mV/80 A	1.625 x 1.25 x 1.687	1/4- 28 UNF Studs
289-013	50 mV/100 A	1.625 x 1.25 x 1.687	1/4- 28 UNF Studs
289-015	50 mV/50 A	1.625 x 1.25 x 1.687	1/4- 28 UNF Studs
289-037	200 mV/500 A	3.250 x 1.75 x 1.750	3/8-16 UNC hex Head Bolt

## AC Miniature Meter Current Transformer

- Tape wound for quiet, long term, reliable, performance
- Tough PVC moisture resistant coating
- Rated for 50/60 Hz operation
- 6" secondary pigtails are tin plated, copper and are color coded red and black
- Temperature range 0-80°C



289-009

Approximate Dimensions:  
 1.77 inches - OD  
 0.72 inches - ID  
 0.49 inches - H

Part Number	Coil Ratio	Max Primary Current	Secondary Output
289-009	1000-1	100 Amps	100mA

## Solid State 12 Volt Dual Blower Controller

- Enables remote control of two blower motors from multiple locations
- Conveniently located, low current, SPST Momentary, switches with Integral Green LED Status Indicators (P/N 004-454) Control Blower Motors
- Status indicators flash if either blower fails
- Requires three #14 AWG Conductor Switch Control Circuit
- Surface Mount
- Meets SAE J1171, External Ignition Protection of Marine Devices (ABYC E-11.5.3.1 AND E-11.4.15 Note 7)

139-004

## Specifications

Enclosure Material	ABS - UL 94 V-0
Color	Black
Weight	0.12 lb (0.005 kg)
Size	4.3" (109.4 mm) x 3.8" (95.3 mm) x 1.4" (35.6 mm)
Mounting Hardware	4@ 8-32 x 1/2" round head slotted screw with external tooth lock washer (197-033)
Maximum Voltage	16 VDC
Minimum Voltage	10 VDC
Maximum Current	10 Amps per blower motor
Fuse	2@ 10 Amps Ignition Protected blade type (010-006)
Fuse Holder	2@ In-Line blade type (001-724)
Operating Temperature	-40°F (-40°C) to 185°F (85°C)

Part Number  
139-004





## Analog Meters

- Window Mount
- Easy to read compatible scale plates
- True RMA AC voltmeters accurately read inverter modified square wave output (ABYC E-11.9.3.2.3)
- AC voltmeters can be installed on panelboards that are permanently connected to motors or generators (ABYC E-11.9.3.2)
- Accuracy +/- 2%

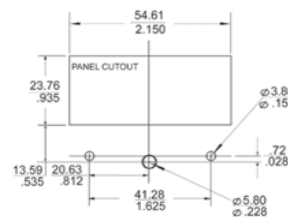
### M1- 1 1/2" Panel Meters

Part Number	Meter Type	Range	Description	Sensitivity
289-053	DC Volts	8-16 VDC	Moving magnet, suppressed zero	100 ohm/V
289-054	DC Amps	0-50 DCA	Moving magnet, zero left, internal shunt	N/A
289-049	AC Volts	0-150 VAC	Taut band, moving coil, rectifier type	900 ohm/V
289-050	AC Volts	0-300 VAC	Taut band, moving coil, rectifier type	900 ohm/V
289-051	AC Amps	0-50 ACA	Moving magnet, external transformer rated	CT P/N 289-009

289-053



M1



M1

### M2- 2 1/2" Panel Meters

Part Number	Meter Type	Range	Description	Sensitivity
289-001	DC Volts	8-16 VDC	Taut band, moving coil, suppressed zero	1000 ohm/V
289-017	DC Volts	16-32 VDC	Taut band, moving coil, suppressed zero	1000 ohm/V
289-025	DC Volts	0-50 VDC	Taut band, moving coil	1000 ohm/V

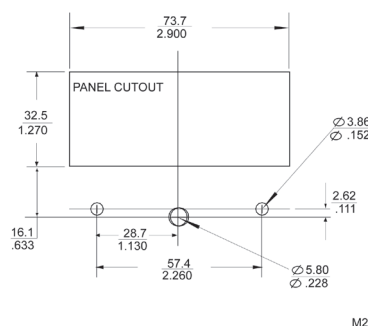
Part Number	Meter Type	Range	Description	Shunt P/N
289-002	DC Amps	0-50 DCA	Taut band, moving coil, zero left, internal shunt	N/A
289-005	DC Amps	0-80 DCA	Taut band, moving coil, 50Mv/80A shunt rated	289-010
289-014	DC Amps	0-100 DCA	Taut band, moving coil, 50Mv/100A shunt rated	289-013
289-016	DC Amps	0-50 DCA	Taut band, moving coil, 50Mv/50A shunt rated	289-015
289-031	DC Amps	100-0-100	Taut band, moving coil, 50Mv/100A shunt rated	289-013

Part Number	Meter Type	Range	Description	Sensitivity
289-003	AC Volts	0-150 VAC	Iron vane, 60 Hz nominal input, true RMS	126K ohm/V
289-007	AC Volts	0-300 VAC	Iron vane, 60 Hz nominal input, true RMS	33.55K ohm/V

289-003



M2



M2

Part Number	Meter Type	Range	Description	CT P/N
289-004	AC Amps	0-50 ACA	Taut band, moving coil, rectified type, self contained	N/A
289-006	AC Amps	0-80 ACA	Taut band, moving coil, rectified type, transformer rated	289-009
289-011	AC Amps	0-50 ACA	Taut band, moving coil, rectified type, transformer rated	289-009
289-024	AC Amps	0-100 ACA	Taut band, moving coil, rectified type, transformer rated	289-009
289-055	AC Amps	0-200 ACA	Taut band, moving coil, rectified type, transformer rated	289-009

Part Number	Meter Type	Range	Description	Input Voltage
289-027	Frequency	45-55 Hz	220 VAC 50Hz	220 VAC
289-029	Frequency	55-65 Hz	120 VAC 60Hz	120 VAC
289-034	Frequency	45-65 Hz	240 VAC 60 Hz or 220 VAC 50Hz	240 VAC

### Analog Meter Illumination Kits (for M2 type meters only)

- High intensity red LED 12VDC 12mA, 24 VDC 6mA, and 32 VDC 4mA
- Easy to install prism assembly

Part Number	LED Color	LED Voltage
100-249-7	Red	12 VDC
100-249-8	Red	24 VDC
100-249-9	Red	32 VDC

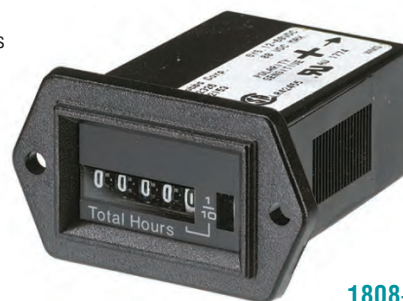


### Series 8500 Quartz Plus DC Hour Meters

- 10,000 hour quartz hour meter with automatic recycle to zero
- Displays operating time in hours and tenths, plus running indicator
- Shockproof quartz and odometer gear train mechanism totally sealed in a polyester case with gasketed glass lens
- UL Recognized and CSA Certified

### Specifications

Input Voltage	12 - 60VDC	<b>Part Number</b> 1808-001
Max Input Voltage	80VDC	
Power Consumption	0.05 Watts @ 12VDC	
Accuracy	+/- 0.02%	
Watertight per IEC 60529	IP 66 Rating	
Operating Temperature	-40°F (-40°C) To 185°F (85°C)	
Display Character Size	0.12" (3mm)	
Electrical Termination	1/4" Quick Connect Tab	
Panel Cutout	1.74" (44.19mm) X 0.925" (23.49mm)	
Mounting Hardware	6-32 X 1/2" Pan Head Phillips Screw Black (197-003)	



1808-001

## Source Selection Rotary Switches

- Provides a convenient method of selecting from multiple power sources (ABYC E-11.5.5.6)
- Contacts break before make to maintain isolation of power sources (ABYC E-11.5.5.6.1)
- Mounts on panels up to 1/4" (6.35mm) thick
- UL Listed, CE marked, and CSA Certified
- Body made of non-corrosive materials
- I-Handle standard
- Operating Temperature: -13°F (-25°C) to 131°F (55°C)



006-012

## Special Function Switches

- Three Phase AC Voltmeter/Ammeter Switch
- Enables the monitoring of three phase voltage and current by a single voltmeter and ammeter.

Part Number	AC V MAX	AC I MAX	Maximum Wire Size	Width in (mm)	Height in (mm)	Depth in (mm)
006-040	300	10	14 AWG	1.18 (30)	1.18 (30)	3.41 (86.6)

- Mounting Hardware
- 2@ M3 X 10mm 0.35 PITCH Phillips Screw
- Black (006-042B)

## Standard AC Source Selector Switches

Part Number	Function		AC V MAX	AC I MAX	Maximum Wire Size	Width in (mm)	Height in (mm)	Depth in (mm)	Configuration
	Sources	Poles							
006-004	2	2	600	50	8 AWG	2.52 (64)	2.52 (64)	2.56 (65)	Source 1 / OFF / Source 2 (120V/220V)
006-012	2	3	600	100	2 AWG	3.46 (88)	3.46 (88)	4.51 (114.5)	Source 1 / OFF / Source 2 (240V)
006-008	3	4	600	65	6 AWG	2.52 (64)	2.52 (64)	5.39 (136.8)	Source 1 / Source 1+ Source 2 / Source 3 (120V/220V)
006-032	3	3	600	100	2 AWG	3.46 (88)	3.46 (88)	6.59 (167.5)	Source 1 / 2 / 3 (240V)
006-035	3	2	600	100	2 AWG	3.46 (88)	3.46 (88)	4.51 (114.5)	Source 1 / 2 / 3 (120V/220V)
006-036	4	2	600	100	2 AWG	3.46 (88)	3.46 (88)	5.55 (141)	Source 1 / 2 / 3 / 4 (120V/220V)
006-037	4	3	600	100	2 AWG	3.46 (88)	3.46 (88)	7.64 (194.1)	Source 1 / 2 / 3 / 4 (240V)

- Mounting Hardware
- 4@ 8-32 X 1" Pan Head Phillips Screw
- Black (197-126B)



001-329



001-251



001-330

## Rocker Switches

- UL Recognized and CSA Certified
- Single Pole Non-Illuminated
- Snap-in Mounting
- Replacement Switches for Paneltronics' Deluxe and Premier Panels

( ) Momentary

Part Number	Poles/Throw	Action	Actuator Marking
001-251	SPST	OFF/ON	None
001-199	SPST	OFF/(ON)	None
001-329	SPST	OFF/(ON)	PREHEAT
001-361	SPST	OFF/(ON)	START/STOP
001-200	SPDT	(ON)/OFF/(ON)	None
001-330	SPDT	(ON)/OFF/(ON)	START/STOP

## Specifications

Maximum Contact Rating	6 Amps @ 125VAC or 4 Amps @ 250VAC
Contacts	Silver Plated Copper
Terminals	Silver Plated Copper 1/4" (6.3mm) Quick Connects
Operating Temperature	-4°F (-20°C) To 131°F (55°C)
Housing and Actuator	Black Thermoplastic
Flammability Rating	UL 94 V-2
Rated IEC 60529	IP40
Panel Thickness	1/8" (3.18mm)
Recommended Panel Cut-Out	1.188" (30.18mm) X 0.468" (11.89mm)

## Metal Bat Handle Toggle Switches

- Single or double pole, and maintaining or momentary configurations are available
- Rated at 10A 250VAC, 15A 125VAC and 15A 30VDC (ABYC E-11.12.1.1)
- AC units are UL Recognized for use in the USA and CSA Certified for use in Canada
- Optional silicone rubber boots provide a watertight panel seal
- 1/4" male tab terminals are standard
- Hole plugs 1/2" diameter Black (P/N 016-004) and White (P/N 016-020)

.500" [12.70]



001-008



001-009



001-010



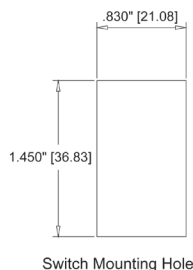
( ) Momentary

Part Number	Poles/Throw	Action
001-008	SPST	ON/OFF
001-009	DPST	ON/OFF
001-010	SPDT	ON/OFF/ON
001-011	DPDT	ON/OFF/ON
001-012	SPST	OFF/(ON)
001-013	SPDT	(ON)/OFF/(OFF)
001-014	DPDT	(ON)/OFF/(ON)
001-015	SP PROG	OFF/ON/ON
001-016	DPST	OFF/(ON)
001-017	SPST	ON/(OFF)
001-252	SPDT	ON/(ON)



## Rocker Switches (Waterproof Contura)

- Single or double pole, and maintaining or momentary configurations are available
- Sealed IP68 rated per IEC 529
- Ignition protection construction meets requirements of UL 1500 and ISO 8846
- Black textured actuators (Hard Surface with Bumps)
- Red incandescent 12VDC 80mA Status Indicators
- Contacts are rated at 12VDC 20A, or 24VDC 15A (ABYC E-11.12.1.1)
- DC moisture resistant Per Mil-Std 202F, Method 107F
- Optional rubber gaskets provide a watertight panel seal meets IP67 (P/N 004-176)
- 1/4" male tab terminals are standard without barriers (ABYC E-11-14.5.4 Exception)
- Hole plug Black (P/N 001-295)



001-675



( ) Momentary

Part Number	Poles/Throw	Action	Status Indicator
001-675	SPST	ON/OFF	1 Dependent
004-246	SPST	ON/ON	None
004-178	SPST	OFF/(ON)	None
001-700	SPDT	ON/OFF/ON	2 Dependent
001-692	SPDT	ON/OFF/ON	None
004-244	SPDT	(ON)/OFF/(ON)	None
004-179	DPST	ON/ON	None
001-699	DPDT	ON/OFF/ON	2 Dependent
001-455	DPDT	ON/OFF/ON	None
004-194	DPDT	ON/OFF/(ON)	None
001-453	DPDT	ON/(OFF)/ON	None

001-204



### 5/32" - LED Indicators

- Ideal for use as Status or Alarm Indicators
- Small T-1 size LED's
- Nylon housing is classified UL 94 V-0
- Press to fit into 0.166" diameter panel hole
- Pigtails are tin plated, 22 gauge, stranded, copper, 7" in length stripped 1/4" (ABYC E-11.14.1.2 and Exception 5)

Part Number	Voltage	LED Color
001-156	12-14 VDC	Red
001-203	12-14 VDC	Green
001-204	12-14 VDC	Amber
111-176	24 VDC	Red
111-177	24 VDC	Green
048-021	120 VAC	Red
048-022	120 VAC	Green
048-023	120 VAC	Amber
048-024	240 VAC	Red
048-025	240 VAC	Amber
048-026	240 VAC	Green

048-004



### 1/4" - LED Indicators

- Ideal for use as High Visibility Status or Alarm Indicators
- Large T-1 3/4 size LED's
- Nylon housing is classified UL 94 V-0
- Press to fit into 0.25" diameter panel hole
- Pigtails are tin plated, 22 gauge, stranded, copper, 7" in length stripped 1/4" (ABYC E-11.14.1.2 and Exception 5)

Part Number	Voltage	LED Color
048-003	12-14 VDC	Red
048-004	12-14 VDC	Green
048-005	12-14 VDC	Amber
048-029	24 VDC	Amber
048-011	120 VDC	Red
048-016	120 VAC	Green
048-017	120 VAC	Amber
048-027	240 VAC	Green
048-028	240 VAC	Red

048-007



### Incandescent Indicators

- Ideal for use as High Visibility Status or Alarm Indicators
- Large polycarbonate Lens
- Black bezel
- Nylon housing
- Press to fit into 0.312" diameter panel hole
- Pigtails are tin plated, 18 gauge, stranded, copper, 6" in length stripped 3/8" (ABYC E-11.14.1.2 and Exception 5)

Part Number	Voltage	LED Color
048-006	14 VDC	Red
048-007	14 VDC	Green
048-008	14 VDC	Amber

## Silicone Rubber Boots

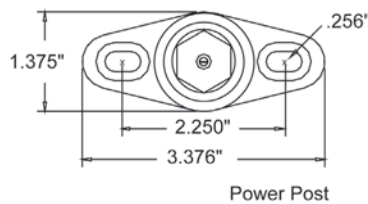
- For bat handle toggle switches, push button switches, and panel seal circuit breakers
- Provides a watertight seal between switch actuator, bushing, and panel face
- Highly flexible, tear resistant, silicone rubber construction enables an un-obstructed visual indication of switch actuator position (Except 048-034 and 048-035)
- Mounting nuts are bonded to eliminate delamination
- Thermal characteristics insure reliable performance over a wide temperature range
- Inhibits the rotation of switches or circuit breakers subjected to low frequency vibration
- Resists discoloring and cracking



Part Number	Base Thread Size	Base Shape	Base Diameter	Color	Height	Typical Application
048-001	15/35-32NS-2B	Hex	5/8"	Black	7/8"	Toggle Switch (pg.34)
048-002	15/35-32NS-2B	Round	23/32"	Black	7/8"	Toggle Switch (pg.34)
048-010	15/35-32NS-2B	Hex	5/8"	Gray	7/8"	Toggle Switch (pg.34)
048-015	1/2-32NS-2B	Round	23/32"	Black	7/8"	Waterproof Breaker (pg.29)
048-018	15/35-32NS-2B	Hex	5/8"	Black	3/8"	Toggle Switch (pg.34)
048-033	3/8-27NS-2B	Round	5/8"	Clear	5/8"	Push Button Breaker (pg.30)
048-034	3/8-27NS-2B	Round	5/8"	White	5/8"	Push Button Breaker (pg.30)
048-035	3/8-27NS-2B	Round	5/8"	Black	5/8"	Push Button Breaker (pg.30)

## Power Posts

- Insulated bases are glass reinforced Nylon
- All fasteners are galvanically compatible to reduce corrosion (ABYC E-11.14.5.2)
- Studs are 300 series stainless steel
- Assembly includes stainless steel hex nut, split lockwasher, and flat washer
- Rated for 48VDC Maximum
- Current ratings are dependent on wire and terminal size utilized



100-880



Part Number	Stud Size	Stud Length	Outside Dimension
100-880	1/4-20	1.125"	3.375" L x 1.375" W x 2.000" H
100-881	3/8-16	1"	3.375" L x 1.375" W x 1.875" H
100-884	1/2-13	1.5"	3.375" L x 1.375" W x 2.375" H

## High Current Feed Through Bushings

- Passes high current carrying conductors through 1/8" (3.18mm) panel thickness
- Provides strain relief and eliminates conductor insulation chafing
- Resists up to 422 in lbs (47.7Nm) of anti-rotation torque

## Specifications

Maximum Operating Voltage	48VDC
Stud Material	Brass
Insulator Bushing Material	Glass Filled Nylon
Insulator Bushing Color	Black
Panel Cutout	Use Greenlee Double D Punch #60098(1.375" X 1.125" Diameter)

111-313-TP



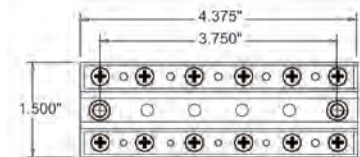
111-312-TP

Part Number	Finish	I Max	Description	Max Torque	Weight
111-312	Brass	250 Amps	3/8"-16 Stud	192 in lbs (21.7Nm)	0.22 lb (0.10kg)
111-312-TP	Tin-Plated Brass	250 Amps	3/8"-16 Stud	192 in lbs (21.7Nm)	0.22 lb (0.10kg)
111-313	Brass	400 Amps	1/2"-13 Stud	422 in lbs (47.7Nm)	0.4 lb (0.18kg)
111-313-TP	Tin-Plated Brass	400 Amps	1/2"-13 Stud	422 in lbs (47.7Nm)	0.4 lb (0.18kg)

## Dual Bus Common Bus (tin plated brass)

- Maximum continuous current rating is 60DCA
- Maximum voltage rating is 48VDC
- All fasteners and the bus are galvanically compatible to reduce corrosion (ABYC E-11.14.5.2)
- Bus material is 0.360" x 0.090" tin plated brass
- Back material is black Nylon

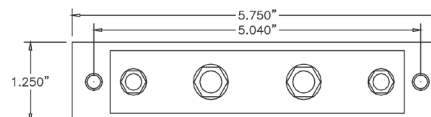
111-283-90



Part Number	Description	Outside Dimension
111-283-90	12x 8-32 x 1/4" tin plated brass combo head screws	4.375" L x 1.500" W x 0.430" H

## Bus Bar (tin plated copper)

- Maximum continuous current rating is 445DCA
- Maximum voltage rating is 48VDC
- All fasteners and the bus are galvanically compatible to reduce corrosion (ABYC E-11.14.5.2)
- Two 1/4-20 stainless steel studs with four nickel plated brass hex nuts and two stainless steel split lockwashers
- Bus material is 1" x 1/4" copper tin plated
- Back material is black Nylon



100-887

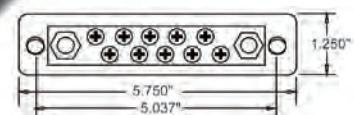
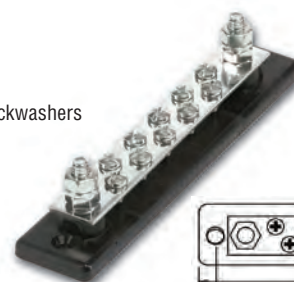
Part Number	Description	Outside Dimension
100-875	2 x 3/8-16 stainless steel studs, 4 x hex nuts, 2 x lockwashers	5.750" L x 1.250" W x 1.875" H
100-877	4 x 3/8-16 stainless steel studs, 8 x hex nuts, 2 x lockwashers	8.750" L x 1.250" W x 1.875" H

## Bus Bars (nickel plated brass)

- Maximum voltage rating is 48VDC
- All fasteners and the bus are galvanically compatible to reduce corrosion (ABYC E-11.14.5.2)
- Bus material is 3/32" thick corrosion resistant nickel plated brass
- Two 1/4-20 nickel plated brass studs with four nickel plated brass hex nuts and two stainless steel split lockwashers
- Back material is black Nylon

048-036

Part Number	Amperage	Description	Outside Dimension
048-036	100 DCA	10 x 10-24 nickel plate brass combo head screws	5.750" L x 1.250" W x 1.344" H
048-037	120 DCA	12 x 10-24 nickel plate brass combo head screws	5.750" L x 1.250" W x 1.344" H





## Bus Bar with Termination Holes Plus Power Feeder Hole

- Gang Up to 16 Single Pole A, B, or C Frame Magnetic Circuit Breakers plus Power Feeder Connection

### Specifications

Material Solid 1/2" (12.7 mm) x 1/8" (3.2mm) Tin Plated Copper  
 Terminations Holes 7/32" (5.6mm) Diameter spaced on 3/4" (19mm) Centers  
 1 @ 1/4" (6.35mm) Diameter Power Feeder Connection Hole  
 Ampacity 100 Amps Max



Part Number	Total Length in Inches	Total Number of Holes	Number of 1/4" Diameter Holes	Number of 7/32" Diameter Holes
100-153-TP	1.625	3	1	2
100-154-TP	2.375	4	1	3
100-155-TP	3.125	5	1	4
100-156-TP	3.875	6	1	5
100-157-TP	4.625	7	1	6
100-158-TP	5.375	8	1	7
100-159-TP	6.125	9	1	8
100-160-TP	6.875	10	1	9
100-161-TP	7.625	11	1	10
100-162-TP	8.375	12	1	11
100-163-TP	9.125	13	1	12
100-164-TP	9.875	14	1	13

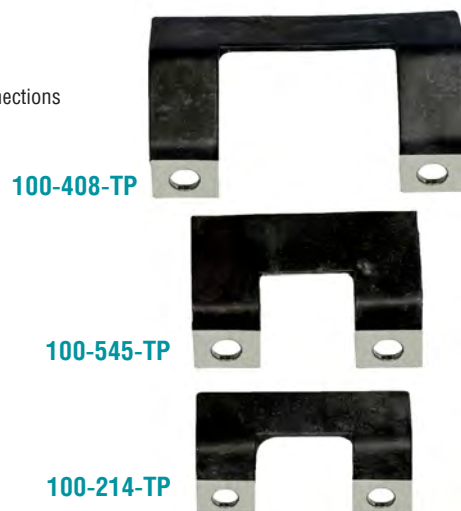
## Main Circuit Breaker Bus Bar Jumpers

- Insulated, tin plated, solid copper, bus bar jumpers facilitate hot and neutral main circuit breaker load connections
- Reduces weight, saves space, and minimizes assembly time
- For se with A, B, or C frame magnetic circuit breakers mounted on 3/4" (19mm) centers

### Specifications

Material Tin Plated Copper  
 Insulation Rubber

Part Number	Max Amp	Spacing (Center to Center)	Jumper Type	Circuit Breaker Frame Size
100-214-TP	100 Amps	1.5" (38 mm)	1 place	A & B
100-545-TP	150 Amps	1.5" (38 mm)	1 place	A, B & C
100-408-TP	150 Amps	2.25" (57 mm)	2 place	A, B & C



## Heavy Duty Remote Latching Battery Switches

- Battery switch meets the requirements Of ABYC E-11.6.1.2.1
- Eliminate long runs of unprotected Cranking Motor Cable (ABYC E-11.10.1.1.1 Exception 1)
- Install in close proximity to batteries (ABYC E-11.6.1.2.2)
- External Ignition Protection of Marine Devices (ABYC E-11.5.3.1 AND E-11.4.15 Note 7), Meets SAE J1171
- Conveniently located, low current, DPDT, Momentary, Control Switch opens and closes Latching Switch Contacts (P/N 001-453)
- Patented Magnetic Latching Mechanism draws zero current in open or closed position
- Operating Temperature from -40°F (-40°C) to 185°F (85°C)
- Replacement switches for Paneltronics battery management enclosures

Part Number >	570-012	139-032
Intermittent DC Rating (Up to 30 Seconds)	500 Amps	1,200 Amps
Continuous DC Rating	100 Amps	200 Amps
Nominal Actuation Volts	12 VDC	12 VDC
Minimum Actuation Volts	10.5 VDC	10.5 VDC
Actuation Current	3.0 Amps	5.6 Amps
Actuation Time Max	0.2 Sec	0.2 Sec
Switching Cycles	10,000	10,000
Coil Terminal	10-32	10-32
Torque	30 in lbs.	30 in lbs.
Switch Terminal	5/16-24	1/2-13
Torque	108 in lbs.	144 in lbs.
MOV P/N	N/A	139-034
Weight	0.8 lbs	4.4. lbs
Length	3.6 in	3.7 in
Depth	2.8 in	4.1 in
Height	3.6 in	7.1 in
Coil Fuses	5 Amp	7.5 Amp



570-012



139-032

## Highlights from - A Step-by-Step Approach to the Design of an AC or DC Marine Electrical System

One of the questions most frequently asked by boat owners during visits to our boat show booths over the years is “How do I go about designing a safe, compliant marine AC or DC electrical system that will meet all of my present and future power requirements?” Unfortunately, there is no simple answer to this question. However, after 25 years of listening attentively to customers, we have developed the following useful step-by-step approach to marine AC and DC electrical system design.

The marine industry is fortunate to have a boating standards organization. The American Boat and Yacht Council or ABYC is a consortium of boaters, marine surveyors, boat manufacturers, and the U.S. Coast Guard, working together to establish marine safety standards and recommended practices. Paneltronics is proud to have direct involvement in ABYC electrical standards development. Since 1988, we have actively participated on the ABYC Electrical Project Technical Committee. We design and manufacture our products to comply with ABYC standards, and we encourage you, as a potential customer, to do the same. Since we will be referring to ABYC Standard E-11, *\*AC and DC Electrical Systems on Boats* throughout this text, you should obtain a copy. Excerpts from ABYC E-11 can be found on our website [www.paneltronics.com](http://www.paneltronics.com).

## ELEMENTS OF A SAFE MARINE ELECTRICAL SYSTEM

### Step 1 - Safety First:

Although every Paneltronics panel is completely pre-wired for ease of installation, we recommend that if you are not comfortable working with electricity and you want to avoid possible exposure to shock or electrocution, hire a qualified and experienced marine electrician. An ABYC Certified Marine Technician would be a great place to start. For a list of certified technicians, visit the ABYC website at [www.abycinc.org](http://www.abycinc.org), go to Certified Technicians and follow the screen directions.

A safety issue that must not be overlooked is fire. In an article “Why Boats Catch Fire,” published in the July 2003 issue of *Seaworthy* magazine, a Boat U.S. Marine Insurance claim study revealed that 55% of all boat fires start onboard vessels in the AC or DC wire harness, or in related appliances. Once ignited, electrical fires are difficult to extinguish unless the fault can be isolated from the power source, since heat generated from shorted wiring can re-ignite a totally extinguished fire. To minimize the possibility of damage, injury, or loss of life caused by boat electrical fires, you must design your electrical system to both isolate and limit the current in each appliance circuit. Obviously, the related costs required to isolate individual circuits in marine electrical systems will be greater than those incurred for similar residential wiring. The justification for this additional margin of safety on boats is that an open window or door can provide an easy escape from a burning house, but walking away from a burning boat may not be an option. By isolating individual circuits, there is a greater likelihood that critical electrical appliances will function during a fire emergency.

### Overcurrent Protection:

It is our view that the magnetic circuit breaker is presently the most reliable and cost effective device for use in the marine environment to isolate and limit the current in an individual appliance circuit. Although it is common practice to use single rating circuit breakers (i.e. 15 Amps) for all loads, this may, at best, provide only conductor (wire) protection. Proper circuit breaker selection and sizing is critical. By selecting the proper amperage rating for each load (ABYC E-11.10.2.2), both the conductor and the individual appliance connected in the circuit will be isolated and current limited.

## CIRCUIT BREAKER SELECTION CHART

### 1. CIRCUIT BREAKER FULL LOAD AMP RATING:

Circuit breaker must be rated not to exceed the current rating of the load (F.L. AMPS), and must protect the smallest conductor in that circuit (ABYC E-11.10.2.3).

### 2. CIRCUIT BREAKER VOLTAGE RATING:

Circuit breakers must be rated for a maximum voltage (MAX V) not less than the voltage of the power source AC or DC (ABYC E-11.10.1.5.2 and ABYC E- 11.10.2.4).

### 3. CIRCUIT BREAKER FREQUENCY:

Circuit breakers must be rated AC - (50/60 HERTZ), DC, or AC/DC - (DC/60Hz) (ABYC E- 11.5.2.2.7).

### 4. CIRCUIT BREAKER TRIP DELAY:

Circuit breaker must have a (DELAY) rating that is compatible with the power source AC or DC and tolerant to the inrush characteristics of the load (motor, lamp, resistive, inductive).

### 5. CIRCUIT BREAKER TRIP AMPS:

Circuit breaker must have a (TRIP AMPS) rating that indicates the current level where the breaker will trip.

### 6. CIRCUIT BREAKER INTERRUPTING CAPACITY:

Circuit breakers must have an ampere interrupting capacity (AIC) that is compliant with ABYC E-11.10.1.5.5 and ABYC E-11.10.2.1.2.

### 7. CIRCUIT BREAKER IGNITION PROTECTION LABEL:

Circuit breakers installed in fume areas must be tested and labeled “IGNITION PROTECTED” (ABYC E-11.5.2.2.8) and (ABYC E- 11.10.1.5.1)

*Note: UL 1500 tested units will be marked with “IGNITION PROTECTED” and units tested to SAE J1171 will be marked “SAE J1171”. ISO 8846 is not presently an approved ABYC rating.*

*\*Copies of Standard E-11 AC and DC Electrical Systems on Boats are available from the American Boat and Yacht Council, 613 Third Street, Suite 10 , Annapolis , MD 21403 , Phone (410) 990-4460*

**Step 2 - Load Calculation:**

Before considering battery ratings, generator outputs, or wire gauges, you should first establish the total AC and/or DC requirements for your electrical system. For DC systems, refer to ABYC E-11.8.1.1 and complete Table II. For AC systems, see ABYC E-11.8.2 and complete all the sections through E-11.8.2.2.5. Remember to plan for future expansion. The addition of spare circuits now will save you considerable time and money in the future. Once you have determined your power requirements, you can then consider power source options.

**Table II - Electrical Load Requirement Worksheet**

Column A		Column B	
Load	Amperes	Load	Amperes
Navigation Lights		Cigarette Lighter	
Bilge Blower(s)		Cabin Lighting	
Bilge Pump(s)		Horn	
Wiper(s)		Additional Electronic Equipment	
Largest Radio (Transmit Mode)		Trim Tabs	
Depth Sounder		Power Trim	
Radar		Toilets	
Searchlight		Anchor Windlass	
Instrument(s)		Winches	
Alarm System (standby mode)		Fresh Water Pump(s)	
Refrigerator			
Engine Electronics			
Total Column A		Total Column B	
		10% Column B	
		Largest Item in Column B	

Total Load Required:  
 Total Column A: \_\_\_\_\_ Total Column B: \_\_\_\_\_  
 (The largest of 10% of Column B or the Largest Item)  
 Total Load: \_\_\_\_\_

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**Step 3 - DC System:**

The most widely used DC power source is the battery. Other sources of DC power include solar panels, wind generators, and alternators, but for the purpose of this article we will only concentrate on batteries. The most popular DC voltage rating found on vessels is 12VDC, although 24VDC and 32VDC are also popular ratings on larger boats. Paneltronics offers DC panels in 12VDC, 24VDC, and 32VDC.

**Engine Starting Batteries:**

Engine cranking batteries are similar in construction and function to automotive batteries, but the materials used in automotive batteries

will limit their longevity in a marine environment. Engine cranking batteries are designed to deliver a short burst of power, followed by a quick recharge. The Marine Engine General Data Sheet supplied by the engine manufacturer will specify the minimum Cold Cranking Ampere (CCA) battery rating required to ensure a reliable engine start (see ABYC E-11.4.3 DEFINITIONS Battery cold cranking performance and ABYC E-11.6.1.1.1).

**House Batteries:**

Unlike cranking batteries, house batteries are constructed with thick lead plates designed to be discharged over a long period of time. They may be discharged to about 50% of their capacity, and then recharged. These deep cycle batteries, so called because of this characteristic, are the batteries of choice for running appliances during long cruises. To select the proper rating for your deep cycle batteries, first refer to Table II in Step 2, and expand the data by multiplying each appliance load current (in amps) by the number of hours you plan to operate the appliance (in a 24 hour period). The sum of these amp-hour requirements represents Part 1 of the total DC Daily Load. Part 2 is calculated if an optional inverter is installed on your AC system, and is explained in the inverter section later in this article.

With the exception of cranking motor circuits, please note that overcurrent protection is required in all conductors connected directly to the batteries. (See ABYC E-11.10.1.1.1 and FIGURE 15 for placement requirements). It is important to remember that overcurrent devices placed in fume areas must also be ignition protected (ABYC E-11.10.1.5.1).

**Step 4 - AC System:**

AC represents Alternating Current. In marine electrical systems, the most common sources for alternating current (AC) are shore power from utility company generators, onboard generators, and inverters.

**Shore Power:**

In the United States, the 3 most readily available marine shore cord configurations are 120VAC- 30 Amps, 120VAC- 50 Amps, and 240VAC- 50 Amps (ABYC E-11.6.3.1.1 through E-11.6.3.2.3). AC shore cord systems rated at 220VAC- 50Hz are commonly used in Europe and other parts of the world. Paneltronics offers panels for all these electrical systems, including panels with circuit breakers having the required European CE approval. When selecting shore power cords, check the quantity and ampacity of the inlets available on the dockside stanchions where your vessel will be docked. Then evaluate the physical weight and cost of each available shore power cord set that will power the maximum number of AC loads calculated in Step 2 above (ABYC E-11.8.2.1 through ABYC E-11.8.2.1.2).



## Shore Power (Continued):

Leakage Currents caused by defective wiring or defective electric appliance onboard a vessel present a significant shock hazard to personnel. In order to significantly reduce the risk of electric shock hazard to personnel in the water near a vessel, boarding a vessel, or onboard a vessel that is connected to shore power, effective July 2009 each 120VAC 60Hz or 240VAC 60Hz shore power cord set, or feed, must be protected by an Equipment Leakage Circuit Interrupter (ELCI) (see ABYC E-11.11.1). The ELCI may be a stand alone device or part of the Main Shore Power Disconnect Circuit Breaker located on the AC distribution panel.

If the distance from the shore power inlet mounted on the vessel is greater than 10 feet, measured along the conductor from the location of the Main Shore Power Disconnect Circuit Breaker, an additional overcurrent protection device and the ELCI is required within 10 feet of the power inlet (ABYC E-11.10.2.8.3 through E-11.10.2.8.3.1). ELCI devices installed in fume areas must be mounted in enclosures that are “Ignition Protected” (ABYC E-11.5.3.1) and ABYC E-11.4.15). In addition, ELCI devices mounted in locations subject to rain, spray, or splash must be weather proof (ABYC E-11.4.31).

Another dangerous condition that can create a shock hazard for personnel in the water near a vessel, boarding a vessel, or onboard a vessel is Reverse Polarity. This is the unintentional backward connection of the hot (ungrounded/black), the neutral (grounded/white), or grounding (grounded/green) AC shore conductors. ABYC requires that a visible indicator of reverse polarity be present near the AC shore main circuit breaker (ABYC E-11.6.3.3.1). As an additional safety feature, Paneltronics provides an AC Shore Main Circuit Breaker that includes a Reverse Polarity trip coil. This “smart” circuit breaker trips automatically upon sensing a potentially dangerous reverse polarity condition.

It is our opinion that the installation of Isolation Transformers should be considered for all shore power circuits (ABYC E-11.7.1). They are designed to prevent galvanic corrosion and the hazard of electric shock caused by reverse polarity in the dockside stanchion. Personnel who are boarding, onboard, or swimming in close proximity to an unprotected vessel connected to an improperly wired dockside stanchion are exposed to potentially lethal electric shocks. Properly installed, isolation transformers magnetically couple a vessel’s AC system to shore, and at the same time, they isolate shore ground from the floating grounded neutral AC system onboard the vessel (ABYC E-11.17.4) and (ABYC E-11.17.5).

**Note:** Isolation Transformers should be mounted on a non-conductive surface. Mounting hardware should not come in contact with any vessel metallic structural members. Finally, to insure that total isolation from shore ground is maintained, ground connections from telephone lines and cable TV must also be isolated by transformers.

## AC Generators:

Generators are machines for generating AC electricity. To determine the size of the proper AC generator required for your application, multiply the total AC load calculated in amperes in Step 2 above (see ABYC E-11.8.2.2.5) by the AC system voltage, and divide by 1000. This result is the minimum KVA generator output rating required for a single-phase system (ABYC E-11.8.2.1.3).

**Note:** The AC system onboard vessel is a polarized grounded neutral system (ABYC E-11.5.5.1), (ABYC E-11.5.5.2), and (ABYC E-11.5.3.2.1); therefore, the generator neutral must be grounded at the generator (ABYC E-11.5.5.2.3).

Observance of the 7/40-inch rule for the placement of overcurrent protection devices may require their placement within a gasoline fume area near engines or generators (ABYC E-11.10.2.8.1), (E-11.10.2.8.4), and (ABYC E-11.4.15 DEFINITIONS Ignition protection). These overcurrent protection devices must be ignition protected. Paneltronics manufacturers circuit breaker panels with ignition protected (UL 1500) two-pole C-Frame circuit breakers that will bring your generator installation into compliance (ABYC E-11.10.2.7.1).

## Inverters:

Inverters are devices that convert DC battery power to Alternating Current (AC) for powering household appliances. These devices are very popular on smaller boats, or as back-up to generators. Larger inverters may be used in place of generators. Inverter advantages include quiet, pollution free AC power on demand. However, larger inverters require larger battery banks to sustain their operation.

**Note:** Inverters are a major consumer of stored DC battery power. Consider this when calculating your total battery requirements. To determine the battery requirements for an inverter, use this simple calculation. Multiply each AC appliance power rating in watts by the number of hours you plan to operate the device for a 24 hour period (watt-hours); then add the sum of all AC appliances powered by the inverter and divide by the DC system voltage (12, 24, or 32VDC). This total should be added to Part 1 of your previous DC calculations for Daily Load. Finally, multiply 4 (diversity factor) to obtain the total Amp-hour rating of the required battery bank.

## Single Power Source Selection:

Cogeneration, powering a load by multiple power sources at the same time, does not presently meet ABYC standards (ABYC E-11.8.2.1.4). Therefore, single source selection that isolates all power sources must be assured with the use of a break before make switch or lockout device (ABYC E-11.5.5.6.1). Paneltronics panels offer these for safe selection of up to 6 power sources (i.e. shore power, generators, or inverters) (ABYC E-11.5.5.7).

## Wire Sizing:

The construction of insulated conductors (wire) used in marine AC and DC systems is very different. Conductors approved for AC use may also be used for DC, but the converse is not true. The insulation temperature rating of most marine wire available today, AC or DC, is 105°C. By selecting 105°C rated insulated wire apposed to 75°C rated wire, higher currents can be transmitted safely using thinner, lighter wire. The markings on individual marine wire conductors must include type/style, voltage rating, gauge, and temperature rating (ABYC E-11.14.1.1). The minimum wire size permitted for marine use is 16 American Wire Gauge (AWG); however, there are several exceptions (see ABYC E-11.14.1.2). The possibility of strain hardening caused by low frequency vibration present on vessels mandates the exclusive use of stranded copper wire (ABYC E-11.14.2.4. and ABYC E-11.14.3.6). Tinned, stranded copper wire is the preferred wire conductor for use in marine electrical systems because it offers maximum protection against corrosion. At junctions, this wire is galvanically compatible with tin plated terminals. This compatibility helps prevent high resistance connections, overheated junctions, and fires.

## DC Wire:

DC wire must have a minimum 50-volt insulation rating (ABYC E-11.14.2.1), and this insulation must meet the temperature rating requirements of the Society of Automotive Engineers (SAE) J378 and SAE J1127, or J1128 (ABYC E-14.2.1.1 through ABYC E-11.14.2.1.1.4). Wire types that conform to these requirements, such as GPT (PVC marine engine and component wire) and Boat Cable (UL 1426), are readily available. To calculate conductor size, see ABYC E-11.14.2.2 through ABYC E-11.14.2.7.1).

## AC Wire:

AC wire must have a minimum 600-volt insulation rating (ABYC E-11.14.3.1), and flexible cords must have a minimum 300-volt insulation rating (ABYC E-11.14.3.2). This insulation must also meet the flame retardant and moisture resistant requirements of UL 83 (ABYC E-11.14.3.4). Wire types that conform to these requirements, such as AWM 1230, AWM 1231, and Boat Cable (UL 1426), are also readily available. To calculate conductor size, see ABYC E-11 AP TABLE 1 and ABYC E-11.14.3.5 through ABYC E-11.14.3.7.2.

## AC and DC Power Distribution Panels:

The primary considerations in the selection of an AC or DC power distribution panel are DESIGN, QUALITY, FUNCTION, and STYLE. Although many panels appear to be similar, a close inspection may show practical and functional differences.

## Design Elements to be considered:

- Custom Configurability - Does the panel offer you the option to select the appropriate circuit breaker amperages to isolate and limit loads?
- Physical size - Does the panel fit in the space that you have available?
- Modularity - Does the panel offer you horizontal or vertical layout options?
- Flexibility - Does the panel offer you an option for future expansion?
- Ergonomics - Does the panel have a user-friendly layout?

## Functional Elements to be considered:

- LED Indicator Lights - Color-coded LED's can be very functional.
- Backlighting - Meters and Labels should be easily read in low light conditions.
- Function Labels - Labels should be easy to add and change.
- Meters - Meters should be accurate with easy to read scales or digital displays.

## Quality features to look for:

- Tinned stranded copper wire rated at 105°C
- Bus Bars  
*Properly rated for total ampacity*  
*Solid Copper/Tin Plated*  
*Conveniently Panel Mounted*
- Panel should be made of a corrosion resistant material such as aluminum
- Durable surface finish such as polyurethane or powder coat finish
- Quality Components
- Superior Workmanship

By now you should have determined the total number of circuit breakers, the ampacity for each load, and all of your power inputs. In addition, you should have considered the design, function and quality elements that you want to incorporate in your panel. By coupling this information with the physical size available for your installation, you should be able to select the proper AC and/or DC power distribution panel. Paneltronics offers you over 180 modular panel designs. Each model is pre-wired for a simple installation. For additional product information, please visit us online at [www.paneltronics.com](http://www.paneltronics.com) or call us toll free at 1-800-36-PANEL. Factory trained technicians are available to help you design a safe, compliant marine AC or DC electrical panel system that will meet all of your present and future power requirements.

*For a complete Glossary log on to [www.paneltronics.com](http://www.paneltronics.com)*

**ABYC:** American Boat and Yacht Council, a voluntary standards creating body for the marine industry responsible for Standards and Recommended Practices.

**Ampacity:** The current carrying capacity of a conductor or device.

**Bus Bar:** A rectangular conducting bar, usually solid copper or brass, that carries currents to several electric circuits.

**CE (Conformité Européenne):** The CE marking is a conformity marking consisting of the letters “CE”. The CE marking is applied to products regulated by certain European health, safety, and environmental protection legislation. The CE marking is obligatory for products it applies to. The manufacturer affixes the marking certifying that the product conforms to applicable regulations, in order to be allowed to sell the product in the European market.

**CFR (Code of Federal Regulations):** The written regulations of the United States Federal Government.

**Circuit:** A closed path of electrically, or electro-magnetically connected, components or devices that is capable of current flow. Typically consisting of loads, sources, conductors, and circuit protection (circuit breakers and fuses). For example: A battery, fuse, and bilge pump connected together with wire are a circuit. The path must be continuous and closed.

**Circuit Breaker:** An automatic switch that stops the flow of current in a circuit at a predetermined level without destroying itself.

**Conductor:** That part of an electrical circuit whose resistance relative to the balance of the circuit is zero. For example, in a circuit consisting of a light bulb and a battery, connected together with wire, the wire is referred to as the conductor.

**Current Rating:** The maximum current in amperes that a device will carry continuously under defined conditions without exceeding specified performance limits.

**Current Transformer:** The “CT”, as current transformers are commonly referred to, is used by AC ammeters to “sense” current flow in a wire in an AC circuit. It is a toroidal coil of wire through which a wire whose current we wish to measure is passed. It is normally encapsulated and looks like a “doughnut”, which is how electricians commonly refer to it. The doughnut has two wires coming out of it, which are connected to the AC ammeter. As current flows in the AC wire we wish to measure, it induces a current flow in the current transformer. The magnitude of the current varies directly with the current flowing in the AC wire. Current transformers are rated by the number of maximum amps that can flow in the measured wire and the current generated, by the CT, at that current flow. For example: A 50:5 CT is rated for 50 amps flowing in the measured wire, and it generates 5 amps of current as a consequence.

**DC Grounding Conductor:** A normally non-current carrying conductor used to connect metallic non-current carrying parts of direct

current devices to the engine negative terminal, or its bus, for the purpose of minimizing stray current corrosion.

**Deep-Cycle Batteries:** Batteries with thick plates to allow for reserve energy to be stored within the battery plate and released during slow discharge for prolonged periods. The high-density active material remains within the batteries’ plate/grid structure longer, resisting the normal degradation found in cycling conditions. Deep cycle batteries are typically used where the battery is discharged to a great extent and then recharged.

**Digital Meter:** A digital meter is one that displays values as numerical values rather than as the position of a meter on a relative scale.

**Direct Current (DC):** An electric current that always flows in the same direction. The magnitude may vary but the current direction is always the same. Commonly referred to as DC. Examples of direct current sources are batteries, fuel cells, and photovoltaic cells. DC sources such as battery chargers and alternators actually use rectified AC current as the source.

**Double Pole:** A switch, circuit breaker, or relay that makes or breaks two isolated circuits at the same time.

**Engine Negative Terminal:** The point at which the engine negative, generally the engine block, is connected to the negative of the battery.

**Equipment Leakage Circuit Interrupter (ELCI):** A residual current device which detects equipment ground fault leakage current and disconnects in 120VAC 60Hz systems the hot (ungrounded / black) and the neutral (grounded / white) current carrying conductors at a preset threshold. In a 240VAC 60Hz system, the ELCI disconnects both (ungrounded / black) and the (ungrounded / red) current carrying conductors at a preset trip threshold. The ELCI device meets the requirements of UL 1053 and UL 943 except that the maximum trip level is 30mA and the maximum trip time is 100ms.

**Fault:** A defect in the normal circuit configuration, usually due to unintentional grounding. Commonly referred to as a short circuit.

**Frequency:** For an oscillating or varying current, frequency is the number of complete cycles per second in alternating current direction. The standard unit of frequency is the hertz, abbreviated Hz. If a current completes one cycle per second, then the frequency is 1 Hz; 60 cycles per second equals 60 Hz (the standard alternating-current utility frequency).

**Fuse:** A conductive device designed to melt when amperage flow through it exceeds a rated amount

**Galvanic Corrosion:** Corrosion resulting from dissimilar electrically connected metals being immersed in an electrolyte.

**Galvanic Isolator:** A device installed in series with the green grounding conductor of the AC shore power cable designed to block galvanic DC current flow but permit the passage of AC if required.



**Generator:** A rotating machine capable of generating electrical power. In the narrow definition generator refers to a DC machine and alternator refers to an AC machine. However, in common use the term generator is used to refer to AC machines as well.

**GFCI (Grounded-Fault Circuit Interrupter):** A safety device that breaks an AC circuit anytime a short to ground occurs; also known as a residual current circuit breaker (RCCB).

**Hertz:** Hertz is a unit of frequency of one cycle per second. It replaces the earlier term of “cycle per second (cps).” The abbreviation for Hertz is Hz.

**Hot:** Hot usually refers to the ungrounded current carrying conductors in an AC system. These would typically have a voltage of 120V or 240V in the United States. The term Hot is also used to describe a circuit that is energized, and has a potential greater than ground.

**Ignition Protected:** A critical designation for any electrical device that is to be used in an area where gasoline, battery, or CNG or LPG vapors may accumulate. The ABYC describes ignition protection as: “the design and construction of a device such that under design operating conditions: it will not ignite a flammable hydrocarbon mixture surrounding the device when an ignition source causes an internal explosion, or it is capable of releasing sufficient electrical or thermal energy to ignite a hydrocarbon mixture, or the source of the ignition is hermetically sealed.” It is important to note that unlike most of the ABYC standards ignition-protection requirements are also mandated by USCG regulations, and compliance is not voluntary, but mandatory.

**Interrupt Capacity (AIC):** Maximum short-circuit current at rated voltage which protective device is required to interrupt under operating duty specified and with normal frequency recovery voltage not less than rated voltage.

**Inverter:** A device used to change stored DC from a battery source to AC on demand to power appliances.

**Isolation Transformer:** An AC device consisting of an isolated primary coil, connected to shore power; an isolated copper shield, connected to the shore grounding conductor; and an isolated secondary coil, connected to the onboard bus and magnetically coupled to the primary coil. See ABYC E-11.7.1.

**Magnetic Circuit Breaker:** Breaker that uses the magnetic field generated by a current-carrying coil to open the circuit.

**Main:** Refers to the main circuit breaker or bus in a power distribution system. This is the input power source for the system

**NEMA:** National Electrical Manufacturers Association

**Over Current Protection Device:** A device, such as a fuse or circuit breaker, designed to interrupt the circuit when the current flow exceeds a predetermined value.

**Polarity:** Refers to the electrical charge, which may be positive or negative. It also refers to the positive and negative terminals of a battery or load in a DC system. In AC systems it refers to the connections made to the hot and neutral. There is often a reverse polarity light that indicates if the neutral and hot are reversed.

**Polarized System:** An electrical system in which the positive and negative or the hot and neutral must be connected in a particular way and cannot be switched. Sometimes there are mechanical preventions to insure the correct polarity. For example, in an AC plug the physical configuration of the plug and receptacle force a polarized connection.

**Reverse Polarity:** The unintentional backward connection of the hot (ungrounded / black), the neutral (grounded / white), or grounding (grounded / green) AC shore conductors. This condition can create a shock hazard for personnel in the water near a vessel, boarding a vessel, or onboard a vessel.

**Tin Plated:** A plating of the element tin, which prevents corrosion. Commonly used to plate copper components such as a power bus.

**Trip-free Circuit Breaker:** A breaker designed in such a way that the resetting means cannot be manually held in to override the current-interrupting mechanism.

**UL:** Underwriters Laboratories Marine Department, POB 13995, 12 Laboratory Drive, Research Triangle Park, NC 27709. Phone: (919) 549-1400. Web site: www.ul.com.

**UL Listed:** Indicates that a device or component has met certain specifications as set forth by Underwriters Laboratory. Further, it means that the device or component has been tested for conformance and ‘listed’ with UL so it can use the UL logo and claim conformance to the specification.

**Volt (Voltage):** The unit of electric potential and electromotive force, equal to the difference of electric potential between two points on a conducting wire carrying a constant current of one ampere when the power dissipated between the points is one watt.

**Volt-Amps:** The product of volts and amps, which is watts in a DC system and the apparent power in an AC system.

**Voltage Drop:** The loss of voltage as it works its way through a circuit. Excessive voltage drop indicates unwanted resistance in circuit or circuit component.

**Wire Amperage Rating:** The current a conductor can carry under a set of specified conditions such as open air, in an enclosure, and at a specified temperature.

**Wire Sizing:** A process to determine the appropriate conductor gauge, stranding, and insulation temperature rating based on length of run (voltage drop), circuit ampacity, ambient temperature, and bundling.



Part Number:

Enter Function Labels and Circuit Breaker Ratings Below. Please Type or Print Clearly.

Company Name

POSITION	5 Amp	10 Amp	15 Amp	20 Amp	25 Amp	30 Amp	40 Amp	50 Amp	Plug	Other
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## Three Year Limited Warranty

Paneltronics, Inc., warrants its products to be free from defects in materials and workmanship under normal use for a period of three years from the date of purchase. In the event a defect in any part or parts appears within the warranty period, the product must be returned to Paneltronics, Inc. for replacement, repair, or refund. If Paneltronics, Inc. determines that repair cannot be made within a reasonable period of time, it may at its sole discretion, elect to replace the product or refund the purchase price. Any charges for transportation or installation of the original warranted item or its replacement are not covered by this limited warranty. No other person or company is authorized to make repairs under this warranty. Neither does this warranty cover (A) any incidental or consequential expenses to the user resulting from non-function or malfunction of the product or (B) any products which after delivery have been installed, tested, repaired, or altered other than according to Paneltronics' instructions or (C) if, in Paneltronics' reasonable opinion, the item or product has sustained damage by faulty installation or repair, misuse, misapplication, accident or any external force.

Maximum liability shall in any case not exceed the purchase price for the product claimed to be defective.

Paneltronics, Inc. makes no warranty of any sort, expressed or implied, with respect to any product, except as above. Any warranties are limited to the duration of this warranty, and Paneltronics shall not be liable with respect to them or, where allowed by law, for any incidental or consequential damages resulting from defects.

**Proof of Purchase is required for warranty service.**

## Cancellations

If your order is in production and you must cancel the order, a minimum of 20% will be charged, plus any additional costs, which Paneltronics has incurred, depending on how far the order has progressed. Also, if you have changes to be made, and your order has passed the point where the changes were to have taken place, there will be a charge for work already done. Please note: It is not always possible to make changes on an order. Contact your Customer Service Representative to check on the status of the order before requesting a change to be made.

## Claims

All claims must be made within 15 days of the invoice date.

## Return Goods Policy

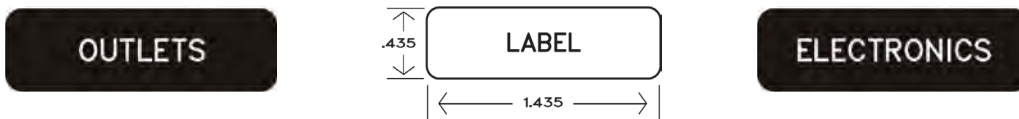
No returns are permitted without a Return Goods Authorization number issued by Paneltronics. This number must appear on the outside of the package and on the packing slip. Goods must be returned in proper protective packaging for repair, replacement or credit, and are subject to all the terms, conditions and warranty policies of Paneltronics. Credit will only be issued to Paneltronics' original customer. All goods returned for credit are subject to a minimum restocking charge of 20%. Goods may not be returned after 60 days from the invoice date. Custom panels are not returnable for credit. All returned goods must be sent with freight prepaid.

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Select from over 3000 Circuit Labels to create your own customized panel.

Labels are black polycarbonate, with translucent white lettering. The white portion is lighted when the backlighting is on.



Labels shown are actual size. For a complete list visit [www.paneltronics.com](http://www.paneltronics.com)

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| <p>110 VAC/PHONE SYSTEM<br/>115 V BLOWER<br/>12 V BATTERIES<br/>12 V WATER MAKER<br/>12 VDC<br/>12 VDC C/ P OUTLET PORT<br/>12 VDC C/ P OUTLET STBD<br/>12 VDC INVERTER<br/>12 VDC POWER OUTLETS<br/>12 VDC STEREO<br/>12 VDC STEREO<br/>12 VDC STEREO AMPLIFIER<br/>12 VDC STEREO AMPLIFIER 1<br/>12 VDC STEREO AMPLIFIER 2<br/>12 VOLT BATTERIES<br/>12 VOLT CONVERTER<br/>12 VOLT DC MAIN<br/>12 VOLT DC MAIN<br/>12 VOLT DC OUTLETS<br/>12 VOLT OUTLET<br/>12 VOLT OUTLETS<br/>12 VOLT RACK<br/>120 VAC<br/>120 VAC LIGHTS<br/>120 VAC-60 HZ<br/>120/240 DC<br/>120/240 VAC<br/>120/240 VAC GROUP 1<br/>120VAC-60HZ<br/>12V DC SUPPLY<br/>12VDC DOME LIGHTS<br/>150 AMP CHGR 50/60 HZ<br/>1-STOP 2-60 3-BACKUP<br/>220 VAC GALLEY<br/>220 VAC MASTER<br/>220V 50HZ<br/>24 VDC C/ P OUTLETS PORT<br/>24 VDC C/ P OUTLETS STBD<br/>24 VDC CHARGER<br/>24 VDC GALLEY<br/>24 VOLT BATTERIES<br/>24 VOLT CONVERTER<br/>24 VOLT DC MAIN<br/>24 VOLT DC OUTLETS<br/>24 VOLT OUTLETS<br/>24/12 VDC CONVERTER<br/>240 VAC<br/>24-12 VDC CONVERTER<br/>24V DC BATTERY POWER<br/>30 A MAIN<br/>32 VDC CHARGER<br/>32 VOLT BATTERIES<br/>32 VOLT DC MAIN<br/>35 AMP AC MAIN<br/>360° RED<br/>360° WHITE</p> <p><b>A</b></p> <p>A.C. OUTLETS LEFT<br/>A.C. OUTLETS RIGHT<br/>A/C - REFRIG PUMP<br/>A/C HEATER COLD HOT<br/>A/C PANEL<br/>A/C PANEL<br/>A/C PUMP<br/>A/C RAW WATER 1<br/>A/C RAW WATER 2<br/>A/C THERMOSTAT<br/>ABS<br/>AC - REFRIG PUMP<br/>AC AUX FWD<br/>AC AUX REAR<br/>AC COMPRESSOR<br/>AC FAN<br/>AC FRESH WTR PUMP<br/>AC GROUNDING<br/>AC MAIN<br/>AC OUTLET<br/>AC OUTLETS<br/>AC OUTLETS 1<br/>AC OUTLETS 2<br/>AC OUTLETS 3<br/>AC OUTLETS 4<br/>AC OUTLETS 5<br/>AC OUTLETS 6<br/>AC OUTLETS 7</p> | <p>AC OUTLETS 8<br/>AC OUTLETS PORT<br/>AC OUTLETS STBD<br/>AC R EXT<br/>AC R INT<br/>AC REFRIGERATION<br/>AC REFRIGERATOR<br/>AC SALON<br/>AC SEAWATER PUMP<br/>AC OUTLETS EXT<br/>AC/DC PANEL<br/>AC/DC PANEL LIGHTS<br/>ACC<br/>ACC 1<br/>ACC 2<br/>ACC 3<br/>ACC 4<br/>ACC 5<br/>ACC 6<br/>ACC 7<br/>ACC 8<br/>ACCENT LIGHTS<br/>ACCESSORY<br/>ACCESS POINT<br/>ACTUATORS<br/>ADF<br/>ADO<br/>AERATOR<br/>AERIAL BASE LIGHTS<br/>AERIAL POWER<br/>AERIAL PTO<br/>AERIAL TIP LIGHTS<br/>AFT<br/>AFT 12 AMPS<br/>AFT 1 12 AMPS<br/>AFT 1 100 AMPS<br/>AFT 1 16 AMPS<br/>AFT 1 30 AMPS<br/>AFT 1 50 AMPS<br/>AFT 100 AMPS<br/>AFT 16 AMPS<br/>AFT 2 100 AMPS<br/>AFT 2 16 AMPS<br/>AFT 2 30 AMPS<br/>AFT 2 50 AMPS<br/>AFT 30 AMPS<br/>AFT 50 AMPS<br/>AFT CABIN<br/>AFT DECK<br/>AFT DECK COURTESY LTS<br/>AFT FLOOR HEATER<br/>AFT HOUSE DECK<br/>AFT LAZARRETTE BLOWER<br/>AFT OUTLETS<br/>AFT SEARCHLIGHT<br/>AFT STATE LIGHTS<br/>AFT TOILET LIGHTS<br/>AIMING SYSTEM<br/>AIR ALARM<br/>AIR CHILLER 1<br/>AIR CHILLER 2<br/>AIR COMP OUTLET<br/>AIR COMPRESSOR<br/>AIR COMPRESSOR 1<br/>AIR COMPRESSOR 2<br/>AIR COND<br/>AIR COND # 2<br/>AIR COND 1<br/>AIR COND 2<br/>AIR COND 3<br/>AIR COND 4<br/>AIR COND 5<br/>AIR COND AFT<br/>AIR COND AFT DECK<br/>AIR COND AFT STRM<br/>AIR COND AIR AFT<br/>AIR COND AUX AFT<br/>AIR COND AUX FWD<br/>AIR COND AUX MID<br/>AIR COND CABINS<br/>AIR COND CAPTAIN<br/>AIR COND CHILLER 1<br/>AIR COND CHILLER 2<br/>AIR COND CHILLER 3<br/>AIR COND CHILLER 4</p> | <p>AIR COND COCKPIT<br/>AIR COND COMP 2<br/>AIR COND CREW<br/>AIR COND CREW AFT<br/>AIR COND CREW FWD<br/>AIR COND CREW LOUNGE<br/>AIR COND DINING AREA<br/>AIR COND ENG ROOM<br/>AIR COND FLYBRIDGE<br/>AIR COND FRONT<br/>AIR COND FWD<br/>AIR COND GALLEY<br/>AIR COND GUEST<br/>AIR COND GUEST PORT<br/>AIR COND GUEST STBD<br/>AIR COND HELM<br/>AIR COND ID<br/>AIR COND LOUNGE<br/>AIR COND MAIN<br/>AIR COND MAIN DECK<br/>AIR COND MASTER<br/>AIR COND MID<br/>AIR COND PILOT HOUSE<br/>AIR COND PORT<br/>AIR COND PORT CABIN<br/>AIR COND PORT HELM<br/>AIR COND PORT PUMP<br/>AIR COND PRIMARY<br/>AIR COND PUMP<br/>AIR COND PUMP AFT<br/>AIR COND PUMP FWD<br/>AIR COND PUMP MID<br/>AIR COND REAR<br/>AIR COND SALON<br/>AIR COND SALON PORT<br/>AIR COND SALON STBD<br/>AIR COND SALON/GALLEY<br/>AIR COND SECONDARY<br/>AIR COND STATEROOM<br/>AIR COND STBD<br/>AIR COND STBD CABIN<br/>AIR COND STBD HELM<br/>AIR COND STBD PUMP<br/>AIR COND STUDIO<br/>AIR COND UTILITY<br/>AIR COND V.I.P.<br/>AIR COND WHEELHOUSE<br/>AIR COND. CAB<br/>AIR DOOR<br/>AIR DRYER<br/>AIR EXHAUST SYSTEM<br/>AIR FILTER<br/>AIR HANDLER<br/>AIR HANDLER 1<br/>AIR HANDLER 2<br/>AIR HANDLER 3<br/>AIR HANDLER 4<br/>AIR HORN<br/>AIR LOCK<br/>AIS<br/>AISLE LIGHTS<br/>AK 1<br/>AK 2<br/>AK 3<br/>AK 4<br/>AK MOBILE<br/>ALARM<br/>ALARM INTERFACE<br/>ALARM MASTER<br/>ALARM SYSTEM<br/>ALLEY LIGHTS LEFT<br/>ALLEY LIGHTS RIGHT<br/>ALTERNATOR DISCONNECT<br/>AMPLIFIER<br/>AN/FCC-100<br/>AN/PSC-5# 1<br/>AN/PSC-5# 2<br/>ANCHOR<br/>ANCHOR LIFT<br/>ANCHOR LIGHT<br/>ANCHOR LIGHTS<br/>ANCHOR LOCKER LIGHT<br/>ANCHOR LT MAIN<br/>ANCHOR LT MIZZEN<br/>ANCHOR WASHDOWN</p> | <p>ANCHOR/ RUNNING LTS<br/>ANTENNA<br/>ANTENNA BOOSTER<br/>ANTENNA LIGHTS<br/>ANTI-ROLLING<br/>APPLIANCES<br/>ARCH<br/>ARCH LIGHT AFT<br/>ARCH LIGHT FWD<br/>ARCH LIGHTS<br/>ATMOSPHERIC MONITORS<br/>AUDIO ENHANCEMENT<br/>AUDIO PANEL EXT NO. 3<br/>AUDIO PANEL EXT NO. 4<br/>AUDIO PANEL NO. 1<br/>AUDIO PANEL NO. 2<br/>AUDIO PLAYBACK<br/>AUDIO PLAYBACK SYS<br/>AUDIO RECEIVERS<br/>AUDIO RECORDERS<br/>AUDIO/VIDEO SYSTEM<br/>AUTO CHAIN<br/>AUTO HEATER<br/>AUTO HELM<br/>AUTO MAN<br/>AUTO MAN/BILGE PUMP<br/>AUTO PILOT<br/>AUTO PILOT 1<br/>AUTO PILOT 2<br/>AUTO PILOT PUMP<br/>AUTO/MAN PORT<br/>AUTO/MAN STBD<br/>AUTO/MANUAL<br/>AUTOMATIC<br/>AUTOMATIC BILGE PUMPS<br/>AUTOMATIC DOOR<br/>AUTOMOTIVE HEATER<br/>AUX A/C FWD<br/>AUXILIAR<br/>AUXILIARY BILGE PUMP<br/>AUXILIARY CONSOLE<br/>AUXILIARY LIGHTS<br/>AUXILIARY OUTLETS<br/>AUXILIARY PANEL<br/>AVID OUTLETS<br/>AWNINGS</p> <p><b>B</b></p> <p>B &amp; G INSTRUMENTS<br/>BACK LIGHTING<br/>BACKUP INVERTER 1<br/>BACKUP INVERTER 2<br/>BAIT COOLER<br/>BAIT PUMP<br/>BAIT PUMP OUT<br/>BAIT PUMP OUT<br/>BAITWELL<br/>BAITWELL DRAIN PUMP<br/>BAITWELL LIGHTS<br/>BAITWELL PUMP<br/>BAITWELL SEAWATER PUMP<br/>BALLAST CONTROLS<br/>BALLAST PUMP<br/>BAR<br/>BAR FLYBRIDGE<br/>BAR LIGHTS<br/>BASEBAND SWITCH<br/>BATH CONVECTOR<br/>BATH HEATER<br/>BATH RECEPT<br/>BATHROOM<br/>BATHROOM LIGHTS<br/>BATT CHARGER BRIDGE<br/>BATT CHARGER PORT<br/>BATT CHARGER STBD<br/>BATT CHARGER WHEELHOUSE<br/>BATTERY<br/>BATTERY 2<br/>BATTERY BLOWER<br/>BATTERY BOX LIGHT<br/>BATTERY CHARGER<br/>BATTERY CHARGER 1<br/>BATTERY CHARGER 2<br/>BATTERY CHARGER 3<br/>BATTERY CHARGER 4<br/>BATTERY CHRG 12 VOLT</p> | <p>BATTERY CHRG 24 VOLT<br/>BATTERY CHRG 32 VOLT<br/>BATTERY COMP BLOWER<br/>BATTERY COMPARTMENT<br/>BATTERY COND HOUSE<br/>BATTERY COND PORT<br/>BATTERY COND STDB<br/>BATTERY CONNECTION<br/>BATTERY MONITOR<br/>BATTERY PARALLEL<br/>BATTERY TEST<br/>BATTERY TEST 1<br/>BATTERY TEST 2<br/>BATTERY TEST 3<br/>BAY HEATER<br/>BEACON<br/>BED LIFT<br/>BEDROOM HEATER<br/>BEDROOM LIGHTS<br/>BEVERAGE DISPENSER<br/>BEVERAGE LIFT<br/>BILGE 1<br/>BILGE AFT<br/>BILGE ALARM<br/>BILGE ALARM AFT<br/>BILGE ALARM FWD<br/>BILGE ALARM MID<br/>BILGE BLOWER<br/>BILGE DRY OUT PUMP<br/>BILGE ENG RM<br/>BILGE FWD<br/>BILGE LIGHTS<br/>BILGE LIGHTS FWD<br/>BILGE MID<br/>BILGE PUMP<br/>BILGE PUMP 1<br/>BILGE PUMP 2<br/>BILGE PUMP 3<br/>BILGE PUMP 4<br/>BILGE PUMP 5<br/>BILGE PUMP 6<br/>BILGE PUMP 7<br/>BILGE PUMP AFT<br/>BILGE PUMP AFT # 1<br/>BILGE PUMP AFT # 2<br/>BILGE PUMP AFT # 3<br/>BILGE PUMP AFT MAN<br/>BILGE PUMP AUTO<br/>BILGE PUMP AUTO AFT<br/>BILGE PUMP AUTO FWD<br/>BILGE PUMP AUTO MAN<br/>BILGE PUMP AUTO MID<br/>BILGE PUMP BOW<br/>BILGE PUMP CABIN<br/>BILGE PUMP CENTER<br/>BILGE PUMP COCKPIT<br/>BILGE PUMP CREW<br/>BILGE PUMP ENG RM AFT<br/>BILGE PUMP ENG RM FWD<br/>BILGE PUMP ENGINE ROOM<br/>BILGE PUMP FWD<br/>BILGE PUMP FWD # 1<br/>BILGE PUMP FWD # 2<br/>BILGE PUMP FWD # 3<br/>BILGE PUMP FWD MAN<br/>BILGE PUMP GALLEY<br/>BILGE PUMP GEN RM<br/>BILGE PUMP GUEST<br/>BILGE PUMP LAZARRETTE<br/>BILGE PUMP LOUNGE<br/>BILGE PUMP MANUAL<br/>BILGE PUMP MASTER<br/>BILGE PUMP MID # 1<br/>BILGE PUMP MID # 2<br/>BILGE PUMP MID # 3<br/>BILGE PUMP MID MAN<br/>BILGE PUMP PORT MTR<br/>BILGE PUMP REAR<br/>BILGE PUMP STBD<br/>BILGE PUMP STBD MTR<br/>BILGE PUMP STERN<br/>BILGE PUMP UTILITY</p> | <p>BILGE PUMPS<br/>BIMINI LIFT<br/>BINNACLE<br/>BLACK WATER AFT<br/>BLACK WATER FWD<br/>BLANK LABEL<br/>BLENDER<br/>BLOCK HEATER<br/>BLOCK HEATER PORT<br/>BLOCK HEATER STBD<br/>BLOWER<br/>BLOWER (FANS) PORT<br/>BLOWER (FANS) STBD<br/>BLOWER AFT<br/>BLOWER PORT<br/>BLOWER PORT ENGINE<br/>BLOWER POWER<br/>BLOWER STBD<br/>BLOWERS<br/>BLOWERS TOILET<br/>BLUE DOME LTS<br/>BOARDING RAMP<br/>BOAT DAVIT<br/>BOOM LIGHT<br/>BOOTH BAY<br/>BOTH<br/>BOW LIGHT<br/>BOW THRUSTERS<br/>BRIDGE<br/>BRIDGE DECK LTS<br/>BRIDGE DISPLAY<br/>BRIDGE DOOR LOCKS<br/>BRIDGE INSTRUMENTS<br/>BRIDGE LIGHT<br/>BRIDGE LIGHTS<br/>BRIDGE SUPPLY<br/>BRIDGE SUPPLY 1<br/>BRIDGE SUPPLY 12V<br/>BRIDGE SUPPLY 2<br/>BRIDGE WATCH<br/>BSEP LIGHTS<br/>BUGGY TOP SUPPLY<br/>BUNK LIGHTS<br/>BUNK RECEPTACLES<br/>BUNK TV SYSTEM<br/>BURGLAR ALARM<br/>BUS A<br/>BUS B<br/>BYPASS</p> <p><b>C</b></p> <p>CAB OUTLETS<br/>CABIN DOOR LOCKS<br/>CABIN FANS<br/>CABIN HEATER<br/>CABIN LIGHT<br/>CABIN LIGHTS<br/>CABIN LIGHTS 1<br/>CABIN LIGHTS 2<br/>CABIN LIGHTS 3<br/>CABIN LIGHTS 4<br/>CABIN LIGHTS 5<br/>CABIN LIGHTS 6<br/>CABIN LIGHTS 7<br/>CABIN LIGHTS 8<br/>CABIN LIGHTS A<br/>CABIN LIGHTS B<br/>CABIN LIGHTS FWD<br/>CABIN LIGHTS HEAD<br/>CABIN LIGHTS MAIN<br/>CABIN LIGHTS MASTER<br/>CABIN LIGHTS MID<br/>CABIN LIGHTS PORT<br/>CABIN LIGHTS SALON<br/>CABIN LIGHTS STBD<br/>CABIN MASTER<br/>CABIN OUTLETS<br/>CABIN STEREO<br/>CABINET LIGHTS<br/>CABINET LIGHTS PORT<br/>CABINET LIGHTS STBD<br/>CABLEMASTER<br/>CABLEMASTER 1<br/>CABLEMASTER 2<br/>CABLEMASTER PORT</p> |
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CABLEMASTER STBD  
 CAMERA  
 CAMERA DRY  
 CAMERA PORTS  
 CAMERA SWITCHER  
 CAMERA WASH  
 CAMERA/RADAR  
 CAMERAS  
 CAPTAIN'S CHAIR  
 CAPTAIN'S HEAD  
 CAPTAINS QTRS  
 CASSETE PLAYER  
 CAT ALARM  
 CB  
 CCTV  
 CCU  
 CD CHANGER  
 CD PLAYER  
 CDX  
 CEILING FAN  
 CEILING LIGHTS  
 CELLULAR PHONE  
 CENTER C/P STEP BOX  
 CENTRAL VACUUM  
 CENTRAL VACUUM AFT  
 CENTRAL VACUUM FWD  
 CHAIN COUNTER  
 CHAIN LOCKER  
 CHANDELIER  
 CHARGER  
 CHARGER/INVERTER  
 CHART LIGHT  
 CHART PLOTTER  
 CHART RECORDER  
 CHILL BOX  
 CHILLED WATER PUMP  
 CHILLER CIRC. WATER PUMP  
 CHOKER  
 CIR. PUMP ALARM  
 CIRC PUMP  
 CIRCUIT 1  
 CIRCUIT 2  
 CIRCUIT 3  
 CIRCUIT 4  
 CIRCUIT 5  
 CIRCUIT 6  
 CIRCUIT 7  
 CIRCUIT 8  
 CIRCUIT 9  
 CIRCUIT 10  
 CIRCUIT 11  
 CIRCUIT 12  
 CIRCUIT 13  
 CIRCUIT 14  
 CIRCUIT 15  
 CIRCUIT 16  
 CIRCUIT 17  
 CIRCUIT 18  
 CIRCULATING HI FANS LO  
 CIRCULATION FANS  
 CIRCULATOR PUMP  
 CLEAR DIESEL  
 CLEARANCE ID  
 CLOCK LIGHTS  
 CLOSET LIGHT  
 CO - DETECTOR  
 CO MONITOR  
 COACH LIGHTS  
 COCKPIT BLOWERS  
 COCKPIT CAMERA  
 COCKPIT FREEZER  
 COCKPIT FREEZER 2  
 COCKPIT GRILL  
 COCKPIT HATCH  
 COCKPIT ICE MAKER  
 COCKPIT INDIRECT LIGHTS  
 COCKPIT INSTRUMENTS  
 COCKPIT LIGHTS  
 COCKPIT REFRIG  
 COCKPIT REFRIG 1  
 COCKPIT ROPE LTS  
 COCKPIT SUMP  
 COCKPIT SUPPLY  
 COCKPIT VISOR LIGHTS  
 COFFEE MAKER  
 COCKPIT DC LIGHTS  
 COLD FISH WELL  
 COLLISION AVOIDANCE  
 COLOR SOUNDER  
 COMMAND LIGHTS  
 COMM MODE  
 COMMUNICATION ELECTRONICS  
 COMP 240 VOLT  
 COMPACTOR  
 COMPANIONWAY SUB PANEL  
 COMPANIONWAY/DAY HEAD  
 FEED  
 COMPARTMENT HEATER  
 COMPARTMENT LIGHT

COMPARTMENT LIGHTS AFT  
 COMPARTMENT LIGHTS FWD  
 COMPARTMENT OUTLET  
 COMPASS LIGHT  
 COMPASS LIGHTS  
 COMPASS STURDY  
 COMPRESSOR  
 COMPRESSOR (VALVE)  
 COMPRESSOR 1  
 COMPRESSOR 2  
 COMPRESSOR HORN  
 COMPT. CONVECTOR  
 COMPUTER  
 COMPUTER 1  
 COMPUTER 2  
 COMPUTER DISPLAY  
 COMPUTER LINE A  
 COMPUTER LINE B  
 COMPUTER NETWORK  
 CONDENSATE PUMPS  
 CONDENSER PUMP  
 CONNECT TO +24 VDC  
 CONNECTOR PANEL  
 CONSOLE LIGHT  
 CONTROL LAPTOP  
 CONTROL RM CONVECTOR  
 CONV#2 STDB-ENG  
 CONVECTOR 2  
 CONVECTORS  
 CONVENIENCE OUTLETS  
 CONVERT MIC SYSTEM  
 CONVERTER 12V  
 CONVERTER PORT  
 CONVERTER STBD  
 CONVERTOR  
 CONVERTOR 1  
 COOKING GRILL  
 COOKING STEAK GRILL  
 COOKTOP  
 COOKTOP CREW LOUNGE  
 COOL PLATE  
 COOLING PUMP  
 COPIER  
 COPILOT SEAT  
 CORD 1  
 CORD 2  
 CORROSION METER  
 COUNTER LIGHTS  
 COURTESY  
 COURTESY A  
 COURTESY B  
 COURTESY LIGHTS  
 COURTESY LIGHTS AFT  
 COURTESY LIGHTS FWD  
 COURTESY LIGHTS MID  
 CONVERTER 12V  
 CRANE CONTROL  
 CREW CABIN A/C  
 CREW CABIN LIGHTS  
 CREW CABIN OUTLETS  
 CREW HEAD OUTLET  
 CREW LIGHTS  
 CREW LIGHTS LV  
 CREW QUARTER LIGHTS  
 CREW QUARTERS  
 CRITICAL  
 CROSSOVER SOLENOID  
 CRT  
 CRUSHED ICE MAKER  
 CUDDY LIGHTS  
 CURB BAYS  
 CURB LIGHTS  
 CURB SCENE LIGHTS  
 CURB SIDE CONF. OUTLET  
 CURB SIDE INTERIOR  
 CURBSIDE FLOODS  
 CURIO LIGHTS  
 CURSIDE/REAR FLOODS  
 C-WAY PANEL

**D**  
 DAMAGE CONTROL PUMP  
 DASHBOARD PANELS  
 DATA MARINE  
 DAVIT  
 DAVITS  
 DAY HEAD FAN  
 DAY HEAD OUTLETS  
 DAY HEAD SUB PANEL  
 DAY HEAD SUPPLY  
 DAYHEAD LIGHTS  
 DC BUS TIE  
 DC LIGHTS  
 DC MAIN  
 DC MAIN A 60 AMPS  
 DC MAIN B 60 AMPS  
 DC OUT 1  
 DC OUT 2  
 DC OUT 3  
 DC OUTLETS  
 DC OUTLETS 1

DC OUTLETS 2  
 DC OUTLETS 3  
 DC OUTLETS 4  
 DC OUTLETS 5  
 DC OUTLETS 6  
 DC OUTLETS 7  
 DC OUTLETS 8  
 DC PANEL  
 DC PUMPS  
 DC REFRIGERATOR  
 DC1  
 DC2  
 DC3  
 DC-BUS  
 DDEC  
 DDEC CRT PILOT HOUSE  
 DDEC ENG RM COMPUTER  
 DDEC ERIM PORT  
 DDEC ERIM STBD  
 DDEC MIM PORT  
 DDEC MIM STBD  
 DDEC PORT COMPUTER  
 DDEC PORT EGIM  
 DDEC PORT ENG IGNITION  
 DDEC STBD COMPUTER  
 DDEC STBD EGIM  
 DDEC STBD ENG IGNITION  
 DECCA  
 DECK HOUSE LIGHTS  
 DECK HOUSE OUTLET  
 DECK LIGHTS  
 DECK LIGHTS AFT  
 DECK LIGHTS FWD  
 DECK LIGHTS FWD STAIR  
 DECK LIGHTS PORT  
 DECK LIGHTS PORT AFT  
 DECK LIGHTS PORT FWD  
 DECK LIGHTS PORT MID  
 DECK LIGHTS STBD  
 DECK LIGHTS STBD AFT  
 DECK LIGHTS STBD FWD  
 DECK LIGHTS STBD MID  
 DECK LIGHTS/COCKPIT  
 DECK LIVEWELL  
 DECK WASH PUMP  
 DECKWASH PUMP SALT WATER  
 DECOR LIGHTS  
 DEEP DROP OUTLETS  
 DEFOG FANS  
 DEFROSTER  
 DEFROSTER HI LOW  
 DEHUMIDIFIER  
 DEPTH  
 DEPTH FINDER  
 DEPTH RECORDER  
 DEPTH SOUNDER  
 DEPTH SOUNDER PORT  
 DEPTH SOUNDER STBD  
 DEPTH/SPEED  
 DESALINATOR  
 DESK LIGHTS  
 DIGITAL DEPTH  
 DIGITAL INST SCREEN  
 DIMMER  
 DINETTE HEATER  
 DINETTE OUTLETS  
 DINING ROOM OVERHEAD LTS  
 DINING ROOM WALL LIGHTS  
 DIPLEXER (INDOOR)  
 DISCHARGE PUMP  
 DISHWASHER  
 DISPATCH  
 DISPOSAL  
 DISTILLER  
 DIVE COMPRESSOR  
 DIVE LIGHTS  
 DOCKING LIGHT PORT  
 DOCKING LIGHT STBD  
 DOCKING LIGHTS  
 DOCKING LIGHTS AFT  
 DOCKING LT FWD  
 DOME LIGHTS  
 DOWN RIGGER  
 DREDGE REELS  
 DRINKING WATER  
 DRIVE TRIM CONTROL  
 DRIVER A/C  
 DRIVER/PASS CAB. HEATERS  
 DRIVER/PASS. CAB  
 DRIVERS LIGHT  
 DROP DOWN BOX  
 DRYER  
 DRYER LAUNDRY  
 DRYOUT BILGE AFT  
 DRYOUT BILGE FWD  
 DSS  
 DUMB WAITER  
 DUMP VALVES  
 DVD  
 DVD PLAYER

**E**  
 ELECTRIC HATCH  
 ELECTRIC HEADS  
 ELECTRIC HORN  
 ELECTRIC REEL  
 ELECTRIC REEL PORT  
 ELECTRIC REEL STBD  
 ELECTRIC SLIDE  
 ELECTRIC WINDLASS  
 ELECTRO HELM  
 ELECTRONIC BATTERY  
 ELECTRONIC BATTERY CHARGER  
 ELECTRONICS  
 ELECTRONICS BRIDGE  
 ELECTRONICS FLYBRIDGE  
 ELECTRONICS WHEELHOUSE  
 EMERG MAIN 50 AMPS  
 EMERG STOP PORT  
 EMERG STOP STBD  
 EMERGENCY BACKUP SYS  
 EMERGENCY BATTERY ELECT  
 EMERGENCY BEACON  
 EMERGENCY DC LIGHTING  
 EMERGENCY LIGHTS  
 EMERGENCY PUMPS  
 ENG & GEN RM LIGHT  
 ENG BATT CHARGER  
 ENG BATTERY CHARGER  
 ENG CONTROL PORT  
 ENG CONTROL STBD  
 ENG GEN ROOM  
 ENG MEMORY  
 ENG PARALLEL  
 ENG PRESSURE  
 ENG RM CIRC FANS  
 ENG RM LT STBD  
 ENG RM LTS PORT  
 ENG ROOM  
 ENG ROOM FANS  
 ENG ROOM FANS INLET  
 ENG ROOM FANS OUTLET  
 ENG ROOM LIGHTS  
 ENG ROOM LTS AFT  
 ENG ROOM LTS FWD  
 ENG ROOM OUTLETS  
 ENG ROOM PANEL MAIN  
 ENG ROOM RECEPTACLES  
 ENG. RM. OUTLET & GENERATOR HTR  
 ENG. RM. SUB. FEED  
 ENGINE  
 ENGINE ALARM  
 ENGINE ALARM SYS  
 ENGINE BLOCK HEATER  
 ENGINE CONTROLS  
 ENGINE DRIVEN REFRIGERATOR  
 ENGINE DRIVEN SEAWATER PUMP  
 ENGINE EXHAUST FAN  
 ENGINE HATCH  
 ENGINE HEATER PORT  
 ENGINE HEATER STBD  
 ENGINE IDLE  
 ENGINE INSTRUMENTS  
 ENGINE LAZ OUTLET  
 ENGINE MACERATOR  
 ENGINE MEMORY  
 ENGINE OIL PAN PUMP  
 ENGINE REFRIG  
 ENGINE RM BILGE PUMP  
 ENGINE ROOM BLOWER  
 ENGINE ROOM BLOWERS  
 ENGINE ROOM HEAD  
 ENGINE ROOM PANEL  
 ENGINE ROOM SUB-PANEL  
 ENGINE ROOM SUPPLY  
 ENGINE ROOM VACUUM  
 ENGINE SHUTDOWN  
 ENGINE SLOW MODE  
 ENGINE TEMP  
 ENTERTAINMENT  
 ENTERTAINMENT CENTER  
 ENTRY LIGHTS  
 ENTRY STEP  
 EQUALIZER  
 EQUIP RM BLOWER  
 EQUIP RM LIGHTS  
 ER BILGE PUMP  
 ER EXHAUST FAN  
 ER SUPPLY FAN  
 ESKIMO ICE  
 ESKIMO ICE MAKER  
 ETHERNET SWITCH  
 EXHAUST FAN  
 EXHAUST FAN RIGHT ENG  
 EXHAUST LEFT ENG  
 EXHAUST TEMP  
 EXHAUST VENT  
 EXTERIOR 1  
 EXTERIOR 2  
 EXTERIOR 3  
 EXTERIOR 4

EXTERIOR COURTESY LIGHTS  
 EXTERIOR LIGHTS  
**F**  
 FAILING LIGHT  
 FAN  
 FAN - ENGINE OIL COOLER  
 FAN 1  
 FAN 2  
 FAN RADIATOR  
 FAN SPEED  
 FAN TRANSMISSION  
 FANS  
 FANS 3  
 FANS PORT  
 FANS STBDS  
 FATHOMETER  
 FAX  
 FIBEROPTIC  
 FILLING PUMP  
 FILTER BOSS  
 FILTER SYSTEM  
 FIRE ALARM  
 FIRE EXT  
 FIRE HORN  
 FIRE PUMP  
 FIRE STROBE  
 FIRE/HIGHWATER  
 FISH BOX DRAIN PUMP  
 FISH FINDER  
 FISHBOX CHILLER  
 FISHBOX ICEMAKER  
 FISHBOX MACERATOR  
 FISHBOX PUMP OUT  
 FISHING LIGHT  
 FISHING LIGHTS  
 FLAPS  
 FLIR  
 FLIR DE-ICER  
 FLOOD LIGHT  
 FLOOD LIGHTS  
 FLOOD LIGHTS AFT  
 FLOOD LIGHTS FWD  
 FLOOD LIGHTS LEFT  
 FLOOD LIGHTS REAR  
 FLOOD LIGHTS RIGHT  
 FLOOR HEAT BATH  
 FLOOR HEAT FWD  
 FLOOR HEAT MID  
 FLOOR HEAT REAR  
 FLOOR LIGHTS  
 FLOSCAN  
 FLOURESCENT  
 FLUID GAUGE  
 FLUORECENT LIGHTS  
 FLUXGATE COMPASS  
 FLY BRIDGE LIGHTS  
 FLY BRIDGE SUPPLY  
 FLY BRIDGE VHF  
 FLYBRIDGE  
 FLYBRIDGE DEFROSTER  
 FLYBRIDGE DRINK BOX  
 FLYBRIDGE ELECTRONICS  
 FLYBRIDGE GPS  
 FLYBRIDGE ICEMAKER  
 FLYBRIDGE OUTLETS  
 FLYBRIDGE REFRIG  
 FLYBRIDGE SUB PANEL  
 FM EXCITER  
 FM TRANSMITTER 1  
 FM TRANSMITTER 2  
 FM TRANSMITTER 3  
 FOAM PRO  
 FOG LIGHTS  
 FOOD CENTER  
 FOOD PROCESSOR  
 FOOT LIGHTS EMERGENCY  
 FORE CABIN  
 FORE PEAK LIGHTS  
 FOREDECK ELECTRONICS  
 FOREDECK LIGHT  
 FORWARD  
 FORWARD STAIR LIGHT  
 FREEZER  
 FREEZER 1  
 FREEZER 2  
 FREEZER 3  
 FREEZER AFT DECK  
 FREEZER ALARM  
 FREEZER BAIT BOX  
 FREEZER BAIT PUMP  
 FREEZER BRIDGE  
 FREEZER C/P  
 FREEZER FLYBRIDGE  
 FREEZER PILOT HOUSE  
 FREEZER UTILITY ROOM  
 FREEZER WATER MAKER  
 FRESH WATER  
 FRESH WATER BACKUP PUMP  
 FRESH WATER PUMP  
 FRESH WATER PUMP 1

FRESH WATER PUMP 2  
 FRESH WATER WASH DOWN  
 FRIDGE  
 FROG  
 FRONT A/C CONDENSER  
 FRONT A/C EVAPORATOR  
 FRONT A/V  
 FRONT AMPLIFIER  
 FRONT DECK  
 FRONT DINETTE  
 FRONT FLOURESCENT  
 FRONT LOUNGE HEATER  
 FRONT LT BAR 180/360  
 FRONT OUTLETS  
 FRONT PLASMA  
 FRONT REDS  
 FUEL AFT  
 FUEL FILL  
 FUEL FILL MONITOR  
 FUEL FILTER  
 FUEL FLOW PORT  
 FUEL FLOW STBD  
 FUEL FWD  
 FUEL GAUGES  
 FUEL PRIME  
 FUEL PRIMER PUMP  
 FUEL PRIMER PUMP PORT  
 FUEL PRIMER PUMP STBD  
 FUEL PUMP  
 FUEL PUMP 1  
 FUEL PUMP 2  
 FUEL PUMP 3  
 FUEL PUMP PORT  
 FUEL PUMP STBD  
 FUEL PUMPS  
 FUEL PURIFIER  
 FUEL TANK HEATER  
 FUEL TRANSFER  
 FUEL TRANSFER AFT  
 FUEL TRANSFER BACKUP  
 FUEL TRANSFER CONTROL  
 FUEL TRANSFER FWD  
 FUEL TRANSFER PRIMARY  
 FUEL TRANSFER PRIMER  
 FUEL TRANSFER PUMP  
 FUEL TRANSFER PUMP PORT  
 FUEL TRANSFER PUMP STBD  
 FUEL/WATER GAUGE  
 FURLER JIB  
 FURLER MAIN SAIL  
 FURLER SPINNAKER  
 FURNACE  
 FURUNO 1100  
 FURUNO RD-30  
 FWD  
 FWD 1 100 AMPS  
 FWD 1 16 AMPS  
 FWD 1 30 AMPS  
 FWD 1 50 AMPS  
 FWD 100 AMPS  
 FWD 16 AMPS  
 FWD 2 100 AMPS  
 FWD 2 16 AMPS  
 FWD 2 30 AMPS  
 FWD 2 50 AMPS  
 FWD 30 AMPS  
 FWD 50 AMPS  
 FWD BILGE PUMP  
 FWD BOW RECP.  
 FWD CABIN & TOILET LTS  
 FWD CABIN SUPPLY  
 FWD DECK  
 FWD DE-ICER  
 FWD FLOOR HTR  
 FWD HEAD FAN  
 FWD SEARCH LIGHT  
 FWD SHOWER BOX  
 FWD SLIDE OUTLETS  
 FWD STATE LIGHTS  
 FWD SUB PANEL

**G**  
 GAC CHASSIS  
 GALLERY LIGHT  
 GALLEY  
 GALLEY APPLIANCES  
 GALLEY BLOWER  
 GALLEY CABINET LIGHTS  
 GALLEY DC LIGHTS  
 GALLEY DRAIN  
 GALLEY EXHAUST  
 GALLEY FAN  
 GALLEY FLUORESCENT  
 GALLEY HALL LIGHTS  
 GALLEY HEATER  
 GALLEY ICE MAKER  
 GALLEY LIGHT  
 GALLEY LIGHTS  
 GALLEY LIGHTS 1  
 GALLEY LIGHTS 2  
 GALLEY LTS PORT



GALLEY LTS STBD	GRINDER	HEATER CABIN	INS BACKUP PWR	LIGHTS CREW FWD	MAIN INVERTER
GALLEY MACERATOR	GROUNDING BUS	HEATER CRR	INSTA - HOT WATER	LIGHTS CREW LOUNGE	MAIN NO 2A 100 AMPS
GALLEY OUTLET 2	GROUP 1 POWER	HEATER ENGINE ROOM	INSTA-HOT	LIGHTS DINNING AREA 1	MAIN NO 2B 100 AMPS
GALLEY OUTLET 3	GROUP 2 POWER	HEATER FAN	INSTRUMENT LIGHTS	LIGHTS DINNING AREA 2	MAIN NO 3 50 AMPS
GALLEY OUTLET 4	GUEST A/V	HEATER FANS	INSTRUMENTS	LIGHTS DINNING ROOM	MAIN SAIL FURLING
GALLEY OUTLET 5	GUEST AND CREW STEREO	HEATER FWD	INSTRUMENTS LO HI	LIGHTS EXTERIOR	MAIN SALOON LIGHTS
GALLEY RECEPT	GUEST BATH	HEATER GALLEY	INTERCOM	LIGHTS FLYBRIDGE	MAIN WINCH PORT
GALLEY REFRIG 1	GUEST BCABIN OUTLETS	HEATER GUEST	INTERCOM - TELEPHONE	LIGHTS FRONT CURB	MAIN WINCH STBD
GALLEY REFRIG 2	GUEST CABIN A/C	HEATER HI	INTERCOM HAILER	LIGHTS FRONT LOUNGE	MAKE UP LIGHTS
GALLEY REFRIGERATOR	GUEST CABIN AUX	HEATER LOW	INTERIOR COURTESY LIGHTS	LIGHTS FRONT STREET	MAN OVERBOARD ALARM
GALLEY SINK	GUEST CABIN LIGHT LV	HEATER MASTER	INTERIOR LIGHTS	LIGHTS FWD	MANUAL
GALLEY SINK LIGHTS	GUEST CABIN LIGHTS	HEATER MID	INTERIOR RECEPTACLES	LIGHTS GALLEY	MAP LIGHT
GALLEY SPARE	GUEST CABIN RECEPTACLE	HEATER PLUMBING BAY	INTERNAL LIGHTS	LIGHTS GEN ROOM	MAST 1
GALLEY SUB-PANEL	GUEST CABIN TOILET	HEATER SALON	INTERNAL VIDEO	LIGHTS GUEST	MAST 2
GALLEY/HALL HEATER	GUEST CONTROLLER	HEATER STORAGE BAY	INTERSECTION LIGHTS	LIGHTS GUEST BATH PORT	MAST AIR COMPRESSOR
GALLEY/HALL HEATERS	GUEST HEAD OUTLET	HELM	INVERTER	LIGHTS GUEST BATH STBD	MAST FLOOD AFT
GALVANIC ISOLATOR	GUEST STATE LIGHTS	HELM A	INVERTER 1	LIGHTS GUEST PORT	MAST FLOOD FWD
GALVANIC ISOLATOR #1	GUEST TV	HELM B	INVERTER 2	LIGHTS GUEST POWDER	MAST FLOOD LTS
GALVANIC ISOLATOR #2	GUEST VANITY	HELM BLOWERS	INVERTER CHARGER	LIGHTS GUEST STBD	MAST LIGHT
GARBAGE DISPOSAL	GYRO COMPASS	HELM C	INVERTER INPUT	LIGHTS GUNNEL	MAST LIGHTS
GAS ALARM	GYRO/SAT TV	HELM CHAIR	INVERTER MAIN	LIGHTS HEAD	MAST STROBE
GAS SOLENOID	<b>H</b>	HELM ELECTRONICS	INVERTER OUTPUT	LIGHTS INTERIOR	MAST/JACK CONTROLS
GAS VALVE	H.P.A.	HELM PANEL	INVERTER OUTPUT MAIN	LIGHTS LAUNDRY	MASTER
GAUGES	HAILER	HELM SEAT	INVERTER SUPPLY	LIGHTS LOW VOLTAGE	MASTER & TOILET LTS
GB OUTLETS	HAILER 1	HELM SUB PANEL	IRIDIUM	LIGHTS MASTER	MASTER / START
GC	HAILER 2	HF TRANSCEIVER	ISOLATION TRANSFORMER	LIGHTS MASTER BATH	MASTER AV
GEAR TEMP	HAIR DRYER	HIDE A BERTH	<b>J</b>	LIGHTS MID	MASTER CABIN A/C
GEN 30 AMPS	HAIR DRYER AFT LOWER BR	HIGH IDLE	JACKKNIFE ALARM	LIGHTS OVERHEAD FWD	MASTER CABIN OUTLETS
GEN BATT CHARGER	HAIR DRYER AFT UPPER BR	HIGH IDLE	JACKKNIFE APPROACHING	LIGHTS OVERHEAD REAR	MASTER CABIN RECEPTACLE
GEN BATTERY	HAIR DRYER CAPTAIN BATH	HIGH PSI PUMP	JACKS	LIGHTS REAR CURB	MASTER CABIN TOILET
GEN BATTERY COND	HAIR DRYER FWD BATH	HIGH WATER ALARM	JACUZZI	LIGHTS REAR LOUNGE	MASTER CEILING LIGHTS
GEN BLOWER	HAIR DRYER FWD LOWER BR	HOLDING PORT	JACUZZI AFT	LIGHTS REAR STREET	MASTER CONSOLE
GEN PARALLEL	HAIR DRYER FWD UPPER BR	HOLDING PUMP	JACUZZI FWD	LIGHTS RR	MASTER CONTROLLER
GEN ROOM	HALL HEATER	HOLDING TANK	JET CONTROLS	LIGHTS SALON	MASTER GUEST CUDDY ETC
GEN ROOM BLOWER	HALL LIGHTS	HOLDING TANK AFT	JET HYDRAULIC ALARM	LIGHTS SALON 1	MASTER HEAD OUTLET
GEN/HVAC MACERATOR	HALLWAY LIGHTS	HOLDING TANK ALARM	JOG STICKS	LIGHTS SALON 2	MASTER LIGHTS
GEN/INVERTER	HALOGEN LIGHT	HOLDING TANK FWD	<b>K</b>	LIGHTS STORAGE	MASTER LIGHTS LV
GENERAL ALARM	HALON FIRE SYSTEM	HOLDING TANK HEATER	KAMEWA MAIN	LIGHTS UTILITY	MASTER LIGHTS PORT
GENERAL LIGHTS	HALON PORT	HOLDING TANK MID	KEG COOLER	LIGHTS V.I.P.	MASTER LIGHTS STBD
GENERAL PURPOSE	HALON STBD	HOLDING TANK PUMP	KITCHEN 1	LIGHTS V.I.P. BATH	MASTER STEREO
GENERATOR	HALYARD WINCH	HOLDING TANK PUMP AFT	KITCHEN 2	LIGHTS WHEELHOUSE	MASTER TOILET BLWR
GENERATOR 1	HAM RADIO	HOLDING TANK PUMP FWD	KITCHEN HEATER	LIGHTS X FMR	MASTER TV
GENERATOR 1 BLOCK HEATER	HAM TR CVR	HOOD BLOWER	KITE REEL PORT	LIGHTS-FANS	MASTER VANITY
GENERATOR 10 KW	HARDTOP SUPPLY	HOOD FAN	KITE REEL STBD	LINE 1 LINE 2	MASTER WALL LIGHTS
GENERATOR 100 AMPS	HAT LIGHT	HOOD LIGHT	KNOT METER	LIVEWELL	MASTHEAD LIGHT
GENERATOR 12 KW	HAT LIGHT TEST	HORN	<b>L</b>	LIVEWELL 1	MATRIX SWITCHER
GENERATOR 18 KW	HATCH LIFT	HORN 1	LAMP RACK NO.3	LIVEWELL 2	MATRIX SYSTEMS
GENERATOR 2	HATCH RELAYS	HORN 2	LAMP RACK NO.4	LIVEWELL BACKUP	MBT AFT
GENERATOR 2 BLOCK HEATER	HAULING	HORN AIR/ELECTRIC	LAN	LIVEWELL BACKUP	MBT FWD
GENERATOR 20	HAULING 2	HORN COMPRESSOR	LASER PLOTTER	LIVEWELL INPUT	MEDICAL EQUIPMENT
GENERATOR 20 KW	HAZARD	HORN RELAY	LAVATORY	LIVEWELL MACERATOR	MEMORY
GENERATOR 3	HDTV	HOSE MASTER	LAZARETTE BLOWER	LIVEWELL OUTPUT	MERCATHODES
GENERATOR 30	HEAD	HOSE REEL	LAZARETTE LIGHTS	LIVEWELL PUMP	MEZZANINE LIGHTS
GENERATOR 30 AMPS	HEAD AFT	HOT TUB FILL	LAZARETTE LIVEWELLS	LIVING ROOM HEATER	MICRO ANTENNA
GENERATOR 30 KW	HEAD BLOWER	HOT TUB HEATER	LAZER PLOTTER	LOAD CELL	MICROWAVE
GENERATOR 4.5 KW	HEAD BLOWER AFT	HOT WATER	LECTRA SAM 1	LOAD GROUP 1	MICROWAVE LINE B
GENERATOR 40 AMPS	HEAD BLOWER FWD	HOT WATER PUMP	LECTRA SAM 2	LOAD GROUP 2	MICROWAVE REAR DECK
GENERATOR 5.5 KW	HEAD BLOWER GUEST	HOTEYE	LECTRASAN	LOCKER LIGHTS	MICROWAVE RECEIVERS
GENERATOR 50 AMPS	HEAD BLOWER MASTER	HOUSE BATTERY	LED BYPASS	LOG	MID 1 16 AMPS
GENERATOR 6.5 KW	HEAD BLOWER PORT	HPR SENSOR	LEFT BLOWER	LORAN	MID 1 30 AMPS
GENERATOR 60 AMPS	HEAD BLOWER STBD	HRP ALARM UNIT	LEFT BUNK CONVENIENCE	LORAN 1	MID 1 50 AMPS
GENERATOR 8 KW	HEAD CREWS	HUB	LEFT CAB TELE LIGHT	LORAN 2	MID 1 100 AMPS
GENERATOR 80 AMPS	HEAD DAY	HVAC 1	LEFT FUEL PRIMER PUMP	LORAN GPS	MID 100 AMPS
GENERATOR ALARM	HEAD EXHAUST	HVAC 2	LEFT OUTLETS	LORAN SAT NAV.	MID 16 AMPS
GENERATOR BLOCK HEATER	HEAD FAN CREWS	HVAC 3	LEFT REEL	LORAN/DECCA	MID 2 16 AMPS
GENERATOR DIRECT	HEAD FAN GUEST	HYDRAULIC ALARM	LEFT SCENE LIGHTS	LOUD HAILER	MID 2 30 AMPS
GENERATOR FAST IDLE	HEAD FAN MASTER	HYDRAULIC CLUTCH	LEVELING JACKS	LOUNGE	MID 2 50 AMPS
GENERATOR PARALLEL	HEAD FWD	HYDRAULIC SYSTEM	LH WINDSHIELD WIPER	LOUNGE LIGHT	MID 2 100 AMPS
GENERATOR PREHEAT	HEAD GUEST	HYDRAULIC TANK ALARM	LIGHTER	LOW IDLE	MID 30 AMPS
GENERATOR PRE-HEAT	HEAD GUEST FWD	HYDROGEN GEN	LIGHTING	LOWER DECK	MID 50 AMPS
GENERATOR ROOM PANEL	HEAD INLET PUMP	HYDRONIC HEAT	LIGHTS	LP 1	MID BILGE PUMP
GENERATOR START/STOP	HEAD MASTER	HYDROTECH PUMP	LIGHTS 1	LP 2	MID LIGHTS
GENERATOR STOP/START	HEAD OUTLETS	<b>I</b>	LIGHTS 2	LP GAS	MINI DISC PLAYER
GENOA FURLER	HEAD PORT	ICAM	LIGHTS 3	LPG CONTROL	MISTER
GFCP	HEAD PUMP	ICAM PUMP	LIGHTS 4	LPG/12 V	MIZZEN FLOOD
GFCP/MODEL 3014	HEAD STBD	ICE MAKER	LIGHTS 5	LUBE OIL PUMP	MMC AUX
GFI CIRCUIT 1	HEAD SYSTEM	ICE MAKER 1	LIGHTS 6	<b>M</b>	MMC MAIN
GFI CIRCUIT 2	HEAD VAC GEN 1	ICE MAKER 2	LIGHTS 7	MACERATOR	MOBIL DATA TERMINAL
GFI OUTLET	HEAD VAC GEN 2	ICE MAKER BRIDGE	LIGHTS 8	MACERATOR 1	MONITOR
GFI OUTLETS No. 1	HEADHUNTER GAUGES	ICE MAKER FLY	LIGHTS 9	MACERATOR 2	MONITOR 1
GFI OUTLETS No. 2	HEADLIGHT FLASHER	ICE MAKER SALON	LIGHTS 10	MACERATOR BAITWELL	MONITOR 2
GLOVEBOX	HEADLIGHT SWITCH	ICEBOX	LIGHTS ABOVE DECK	MACERATOR FISH BOX	MONITOR 3
GLOW PLUGS	HEADLIGHTS	ICEBOX DRAIN	LIGHTS AFT	MACERATOR GREYWATER	MONITOR 4
GOOSENECK LIGHTS	HEAT COIL 1	ICEBOX DRAIN PUMP	LIGHTS AFT DECK	MACERATOR PORT	MONITOR FIRE SYS
GPS	HEAT COIL 2	ICEBOX LEFT	LIGHTS ANCHOR	MACERATOR PUMP	MONITORS
GPS 1	HEAT STRIP	ICEBOX RIGHT	LIGHTS BAITWELL	MACERATOR SEWAGE	MOTION DETECTOR
GPS 2	HEATER	ICEMAKER DINNING AREA	LIGHTS BELOW DECKS	MACERATOR STBD	MRIL
GPS GYRO 1	HEATER 1	IF/M & C DIPLEXER	LIGHTS BILGE	MAIN	MSD
GPS PORT	HEATER 1A	IGNITION	LIGHTS BRIDGE	MAIN 100 AMPS	MSTR STATERM HEATER
GPS STBD	HEATER 1B	IGNITION CENTER	LIGHTS BUNK	MAIN 16 AMPS	MTU PANEL
GPS/LORAN	HEATER 2	IGNITION PORT	LIGHTS CAPTAIN	MAIN 30 AMPS	MUTE
GPS/PLOTTER	HEATER 3	IGNITION STBD	LIGHTS CAPTAIN BATH	MAIN 50 AMPS	<b>N</b>
GRAY WATER AFT	HEATER 4	IGNITION SWITCH	LIGHTS CHAIN LOCKER	MAIN 60 AMPS	NACTEX
GRAY WATER FWD	HEATER 5	ILLUMINATED GLASS	LIGHTS CLOSET	MAIN 80 AMPS	NAV / ANCH LIGHTS
GRAY WATER PUMP	HEATER A/C	IMPRESSED CURRENT PORT	LIGHTS COMPANION WAY	MAIN BATTERY CHARGER 1	NAV / ANCHOR
GRAY WATER PUMP MANUAL	HEATER AFT	IMPRESSED CURRENT STBD	LIGHTS CONSOLE	MAIN BATTERY CHARGER 2	NAV / TEX
GRILL	HEATER BAY	INDICATOR LIGHTS	LIGHTS CORRIDOR	MAIN DECK PORT LIGHTS	NAV AREA
GRILL # 1	HEATER C1	INDIRECT LIGHTS	LIGHTS CREW AFT	MAIN DECK STBD LIGHTS	NAV COM
GRILL # 2	HEATER C2	INFRARED ILLUMINATOR	LIGHTS CREW BATH AFT	MAIN ENGINE HATCH LIFT	NAV DISPLAY 1
GRILL/RANGE	HEATER C3	INLET VALVE	LIGHTS CREW BATH FWD	MAIN FURLER	NAV DISPLAY 2

NAV MULTIPLEXER  
NAV NET  
NAV NETWORK  
NAV STATION LIGHTS  
NAV/ANCHOR  
NAVIGATION ELECTRONICS  
NAVIGATION INSTRUMENTS  
NAVIGATION LIGHT  
NAVIGATION LIGHTS  
NAV-NET 1  
NAV-NET 2  
NEGATIVE  
NETWORK  
NEUTRAL 1 & 2  
NEUTRAL 3 & 4  
NEUTRAL BUS  
NEUTRAL LINE 1  
NEUTRAL SOLENOIDS  
NIGHT LIGHTS  
NIGHT SCAN  
NITROGEN GEN  
NORMAL  
NORTHSTAR 490  
NORTHSTAR 6000  
NORTHSTAR 6000I  
NORTHSTAR 952  
NORTHSTAR NETWORK  
NOT IN USE  
NOT UNDER COMMAND LTS  
NOTEJET 486

## O

OBRNE  
OCU  
OFF  
OFF / ON  
OFFICE LIGHTS  
OIL CHANGE  
OIL CHANGE PUMP  
OIL CHANGE PUMP PORT  
OIL CHANGE PUMP STBD  
OIL CHG. PUMP / DC REFRIG.  
OIL PUMP  
ON  
ON AIR  
ON DECK LIVWELL  
ON DECK LIVWELL 1  
ON DECK LIVWELL 2  
ON ROAD DIESEL  
OPENSKY CELL SITE  
OPTIONAL EQUIPMENT  
ORANGE OUTLET  
OUTLET BRDG  
OUTLET COMPARTMENT  
OUTLET COMPUTER  
OUTLET FLYBRIDGE  
OUTLET FWD  
OUTLET LEFT FRONT  
OUTLET LEFT REAR  
OUTLET LEFT SIDE  
OUTLET MAIN  
OUTLET MID PORT  
OUTLET RIGHT FRONT  
OUTLET RIGHT REAR  
OUTLET RIGHT SIDE  
OUTLET TECH CABIN  
OUTLETS  
OUTLETS 1  
OUTLETS 2  
OUTLETS 3  
OUTLETS 4  
OUTLETS 5  
OUTLETS 6  
OUTLETS 7  
OUTLETS A  
OUTLETS ABOVE DECK  
OUTLETS AFT  
OUTLETS AFT HEAD  
OUTLETS AFT PORT  
OUTLETS AFT STBD  
OUTLETS B  
OUTLETS BATHROOM  
OUTLETS BELOW DECKS  
OUTLETS BILGE  
OUTLETS CAB  
OUTLETS CABIN  
OUTLETS CABIN AFT  
OUTLETS CABIN FWD  
OUTLETS CABIN HEAD  
OUTLETS CABIN MID  
OUTLETS CABIN PORT  
OUTLETS CABIN STBD  
OUTLETS CIRCUIT-B  
OUTLETS COCKPIT  
OUTLETS CREW  
OUTLETS CREW HEAD  
OUTLETS DECK  
OUTLETS DECK AFT  
OUTLETS DECK FWD  
OUTLETS DECK PORT  
OUTLETS DECK STBD

OUTLETS ENG ROOM  
OUTLETS EXT AFT  
OUTLETS EXT FWD  
OUTLETS EXTERIOR  
OUTLETS FLYBRIDGE  
OUTLETS FWD  
OUTLETS FWD HEAD  
OUTLETS FWD LTS  
OUTLETS FWD PORT  
OUTLETS FWD STBD  
OUTLETS GALLEY  
OUTLETS GALLEY 1  
OUTLETS GALLEY 2  
OUTLETS GUEST CABIN  
OUTLETS HEAD  
OUTLETS INTERIOR  
OUTLETS INVERTER  
OUTLETS LAZARETTE  
OUTLETS LEFT  
OUTLETS LOUNGE  
OUTLETS MAIN CABIN  
OUTLETS MAIN DECK  
OUTLETS MAST  
OUTLETS MASTER CABIN  
OUTLETS MID  
OUTLETS MID STBD  
OUTLETS NAV/ COM  
OUTLETS PILOT HOUSE  
OUTLETS PLUMBING BAY  
OUTLETS PORT  
OUTLETS PORT 1  
OUTLETS PORT 2  
OUTLETS PS  
OUTLETS PS PORT  
OUTLETS REAR  
OUTLETS RIGHT  
OUTLETS SALON  
OUTLETS SALON PORT  
OUTLETS SALON STBD  
OUTLETS SALON/FWD  
OUTLETS STAR  
OUTLETS STATEROOMS  
OUTLETS STBD  
OUTLETS STBD 1  
OUTLETS STBD 2  
OUTLETS STORAGE BAY  
OUTLETS STUDIO  
OUTLETS WHEELHOUSE  
OUTRIGGER  
OUTSIDE FWD LTS  
OUTSIDE LIGHTS  
OUTSIDE PORT LTS  
OUTSIDE STBD LTS  
OVEN  
OVEN # 2  
OVER PRESSURE FAN  
OVERHEAD ELEX  
OVERHEAD LIGHTS  
OWNER'S CABIN LIGHTS

## P

PA SYSTEM  
PAN/TILE  
PAN/TILT  
PANEL DIMMER  
PANEL INSTRUMENT  
PANEL LIGHTS  
PANELTRONICS  
PARALLEL  
PARALLEL 12V  
PARALLEL 24V  
PARALLEL BUS A+B  
PARKER PUMP #1  
PARKER PUMP #2  
PASS THROUGH WINDOW  
PASSARALLE CONTROLS  
PC PLOTTER  
PEDESTAL POWER  
PELCO  
PERIMETER EQUIPMENT  
PERMA PUB  
PH OUTLET/ TV/ DVD  
PHONE # 1  
PHONE # 2  
PICKUP LIGHTS  
PILOT HOUSE LIGHTS  
PILOT HOUSE SUPPLY  
PILOTHOUSE RECEPTACLE  
PIPE HEATER  
PLASMA TV.  
PLASMA TV. LIFT  
PLATFORM LIGHTS  
PLOTTER  
PLOTTER LORAN  
PORCH LIGHT  
PORCH LIGHTS  
PORT  
PORT 1 100 AMPS  
PORT 1 16 AMPS  
PORT 1 30 AMPS  
PORT 1 50 AMPS

PORT 100 AMPS  
PORT 16 AMPS  
PORT 2 100 AMPS  
PORT 2 16 AMPS  
PORT 2 30 AMPS  
PORT 2 50 AMPS  
PORT 30 AMPS  
PORT 50 AMPS  
PORT AFT GREY WATER  
PORT ALT  
PORT ARG  
PORT BAITWELL 1  
PORT BAITWELL 2  
PORT BATTERY  
PORT BLACK WATER  
PORT BLOWER  
PORT C/P STEP BOX  
PORT CABIN A/C  
PORT CHARGER LOWER  
PORT CHARGER UPPER  
PORT CONTROL ACTUATOR  
PORT DC LIGHTS  
PORT DIESEL  
PORT DISPLAY  
PORT DOCKING  
PORT DOME LIGHTS  
PORT EMERG STOP  
PORT ENG ALARM  
PORT ENG BATT CHRNG  
PORT ENG CONTROL  
PORT ENG RM BILGE PUMP  
PORT ENG START  
PORT ENG STRAINER  
PORT ENGINE  
PORT ENGINE BLOCK HEATER  
PORT ENGINE IGNITION  
PORT ENGINE ROOM  
PORT FLOOD  
PORT FRESH WATER  
PORT FUEL BOOSTER PUMP  
PORT FUEL FILL  
PORT FUEL PRIMER  
PORT FUEL TANK MONITOR  
PORT FWD BILGE PUMP  
PORT FWD FUEL  
PORT FWD GREY WATER  
PORT FWD SODIUM  
PORT GEN  
PORT HEAD FAN  
PORT HRP JOYSTICK  
PORT HRP MAIN  
PORT HYD CONTROL  
PORT IGNITION  
PORT INVERTER  
PORT KITE REEL  
PORT LIGHTS  
PORT LINE 1  
PORT LINE 2  
PORT MAIN  
PORT ON DECK LIVWELL PUMP  
PORT PILOT  
PORT SOLE BOX BACKUP PUMP  
PORT SUNROOF  
PORT TEASER  
PORT THRUST  
PORT TRANSFORMER  
PORT TRIM TABS  
PORT WATER HEATER  
PORT WATER TANK MONITOR  
PORT/STBD POWER  
PORTABLE APPLIANCE  
POWER  
POWER CONVERTER #1  
POWER CONVERTER #2  
POWER CONVERTER #3  
POWER HELM SEAT  
POWER WASHER  
PRE HEAT PORT  
PRE HEAT STBD  
PREHEAT  
PRELIMINARY  
PRESSURE PUMP  
PRIMARY FUEL PUMP  
PRIMARY WINCH PORT  
PRIMARY WINCH STBD  
PRIMARY WINCHES  
PRIME PUMP  
PRINTER  
PRODUCERS CONSOLE  
PROP PITCH CONTROL  
PROPULSION  
PTO ENGAGED  
PUMP  
PUMP 2  
PUMP FUSE BLOCK  
PUMP OUT  
PUMP RM BLOWER

## Q

QUARTZ LIGHTS  
QUARTZ LT FBRIDGE OUTL  
QUARTZ LTS.AFT  
QUARTZ LTS.FWD

## R

RACK C OUTLETS  
RACK D OUTLETS  
RACK E OUTLETS  
RACK F OUTLETS  
RACK 1  
RACK 2  
RACK 3  
RACK 4  
RACK 5  
RACK 6  
RACK 7  
RACK 8  
RACK A FANS  
RACK A/B CURB 2  
RACK B  
RACK B FANS  
RACK C  
RACK D  
RACK E  
RACK F  
RACK G  
RACK H  
RACK OUTLETS  
RACK SERVICE  
RACKS  
RADAR  
RADAR 1  
RADAR 2  
RADAR ARCH LIGHT  
RADAR/CHART PLOTTER  
RADIO  
RADIO 1  
RADIO 2  
RADIO 3  
RADIO 4  
RADIO 5  
RADIO 6  
RADIO 7  
RADIO 8  
RADIO AM/FM  
RADIO CONTROL  
RADIO LIGHTS  
RADIO MEMORY  
RADIO PA  
RADIOS  
RAIL LIGHTS  
RANGE  
RAW WASH DOWN  
RAW WATER PUMP  
RDF  
RDT  
READING LIGHTS  
REAR A/C CONDENSER  
REAR A/C EVAPORATOR  
REAR AMBER  
REAR AMPLIFIER  
REAR COMMAND LIGHT  
REAR DECK  
REAR DECK SWIM LIGHTS  
REAR DINETTE  
REAR FLOODS  
REAR LIGHTS  
REAR LOUNGE  
REAR LOUNGE HEATER  
REAR MAST CAB CAMERA  
POWER  
REAR SCENE LIGHT  
RECEIVER  
RECEPTACLES  
RECEPTACLES 1  
RECEPTACLES 2 & 3  
RED WHITE RED  
RED / WHITE LIGHTS  
RED DIESEL  
RED LIGHTS MIDDLE  
RED NIGHT LIGHTS  
RED OH LIGHTS  
REEL LIGHTS  
REEL OUTLETS  
REEL REWIND  
REFRIDGE AFT DECK 3  
REFRIG - FREEZER  
REFRIG CREW  
REFRIG SALON  
REFRIG STEP BOX  
REFRIGERATION  
REFRIGERATOR  
REFRIGERATOR 1  
REFRIGERATOR 2  
REFRIGERATOR 3  
REFRIGERATOR AFT DECK  
REFRIGERATOR BRIDGE  
REFRIGERATOR DINING AREA  
REFRIGERATOR DRAWER

REFRIGERATOR FISH BOX  
REFRIGERATOR FLYBRIDGE  
REFRIGERATOR LAUNDRY  
REFRIGERATOR MASTER  
REFRIGERATOR PILOT HOUSE  
REFRIGERATOR PUMP  
REFRIGERATOR STEP BOX  
REFRIGERATOR UTILITY RM  
REGULATOR  
RELAY  
RELAY CONTROL  
REMOTE PNL RELAY COIL  
RESPONSE LIGHTS  
RETRACTABLE HELM  
REVERSE FUEL TANKS  
REVERSE POLARITY  
REVISION  
RFSEP LIGHTS  
RH WINDSHIELD WIPER  
RIGHT BLOWER  
RIGHT BUNK CONVENIENCE  
RIGHT CAB TELE LIGHT  
RIGHT FUEL PRIMER PUMP  
RIGHT OUTLETS  
RIGHT REEL  
RIGHT SCENE LIGHT  
ROD LOCKER  
ROOF  
ROOF OUTLET  
ROPE LIGHT  
ROPE LIGHTS  
RSEP LIGHTS  
RUDDER INDICATOR  
RUDDER LIGHTS  
RUNNING LIGHTS  
RUNNING LTS PORT  
RUNNING LTS STBD

## S

S/ S BATTERY CHARGER  
SABRE CHARGER  
SAFETY GND  
SAFETY SYSTEM  
SAILING CONTROLS  
SAILING INSTRUMENTS  
SAILING LIGHTS  
SALON  
SALON / EXTERIOR LTS  
SALON / GALLEY LIGHTS  
SALON A/C  
SALON A/C 1  
SALON A/C 2  
SALON CABINET LIGHTS  
SALON CEILING LIGHTS  
SALON DOOR  
SALON FWD LIGHTS  
SALON HEAD RECEPTACLE  
SALON LIGHTS  
SALON LIGHTS PORT  
SALON LIGHTS STBD  
SALON OUTLET BLINDS  
SALON OUTLETS PORT  
SALON OUTLETS STBD  
SALON PORT HEATER  
SALON REFRIG  
SALON STBD HEATER  
SALON STEEP BOX  
SALON STEREO  
SALON WALL LIGHTS  
SALON WINDOW LIFT  
SALONG OUTLET BLINDS  
SALT WATER  
SALTWATER PUMP  
SALTWATER WASHDOWN  
SAT / NAV  
SAT / NAV / GPS  
SAT COM  
SAT PHONE  
SAT RADIO  
SAT TV  
SAT WEATHER  
SATCOM-WFAX  
SATELLITE DISH  
SATELLITE PHONE  
SATELLITE RADIO  
SATELLITE SYSTEM  
SCANNER  
SCOPE  
SCRUBBER  
SEA WATER  
SEA WATER PUMP  
SEA WATER TEMP  
SEAKEY  
SEARCHLIGHT  
SEARCHLIGHT 1  
SEARCHLIGHT 2  
SEARCHLIGHT HAND HELD  
SEARCHLIGHT PORT  
SEARCHLIGHT REMOTE  
SEARCHLIGHT STBD  
SEAT ADJUSTER

SECONDARY FUEL PUMP  
SECURITY SYSTEM  
SERVICE POWER  
SERVICE RETURN  
SET UP CHART  
SEWAGE PUMP  
SHAFT PUMP PORT  
SHAFT PUMP STBD  
SHORE  
SHORE 1  
SHORE 1 16 AMPS  
SHORE 1 30 AMPS  
SHORE 1 50 AMPS  
SHORE 1 100 AMPS  
SHORE 100  
SHORE 2  
SHORE 2 16 AMPS  
SHORE 2 30 AMPS  
SHORE 2 50 AMPS  
SHORE 2 100 AMPS  
SHORE 2  
SHORE 2 16 AMPS  
SHORE 2 30 AMPS  
SHORE 2 50 AMPS  
SHORE 2 100 AMPS  
SHORE 30  
SHORE 50  
SHORE CORD  
SHORE CORD REEL  
SHORE CORD REEL 1  
SHORE CORD REEL 2  
SHORE LINE 1  
SHORE LINE 2  
SHORE LINE 3  
SHORE LINE PORT  
SHORE LINE STBD  
SHORE MAIN  
SHORE MAIN / REV POLARITY  
SHORE MAIN 100 AMPS  
SHORE MAIN 16 AMPS  
SHORE MAIN 30 AMPS  
SHORE MAIN 50 AMPS  
SHORE POWER  
SHORE POWER DIRECT  
SHORE POWER STBD  
SHORE PWR REV POLARITY  
SHOWER DISCHARGE  
SHOWER DRAIN  
SHOWER PUMP  
SHOWER PUMP AFT  
SHOWER PUMP CREW  
SHOWER PUMP CREWS  
SHOWER PUMP FWD  
SHOWER PUMP GUEST  
SHOWER PUMP MASTER  
SHOWER PUMP PORT  
SHOWER PUMP STBD  
SHOWER PUMPS  
SHOWER STEAMER  
SHOWER SUMP PUMP  
SHOWER SUMP PUMP AFT  
SHOWER SUMPS  
SHUTDOWN VALVE  
SIDE LIGHTS  
SIMRAD  
SINGGARS  
SINK DRAIN  
SIREN  
SLIDEOUTS  
SMOKE DETECTORS  
SMORE ALARMS  
SMU PWR & FAN  
SOCKET 240V WINCH  
SOCKET CABIN LINE 1  
SOCKET WINCH LINE B  
SOFFIT LIGHTS  
SOLAR LIVWELL  
SOLAR LIVWELL DRAIN  
SOLAR PANEL  
SONAR  
SONAR DISPLAY  
SOUNDER  
SPA  
SPA BOW  
SPA OWNER  
SPARE  
SPARE 12 V  
SPEC ALARM  
SPEED / LOG  
SPOTLIGHT  
SPREADER LIGHTS  
SPREADER LT MAIN  
SPREADER LT MIZZEN  
SPREADER LTS AFT  
SPREADER LTS FWD  
SSB  
SSB 1  
SSB 2  
SSB / AMATEUR  
SSB TUNER  
SSB-VHF  
STABILIZER  
STABILIZER BLOWER  
STAIR LIGHTS

STANDARD CUSTOM GALLEY  
 OUTLETS 2  
 START  
 START / STOP  
 START PORT  
 START STBD  
 STARTER BUTTON  
 STATEROOM LIGHTS  
 STATEROOM LIGHTS AFT  
 STATEROOM LIGHTS FWD  
 STATEROOM LIGHTS MASTER  
 STATEROOM LTS MAIN  
 STATEROOM LTS PORT  
 STATEROOM LTS STBD  
 STATEROOM OUTLETS  
 STATEROOM PANEL MAIN  
 STATEROOM PORT LIGHTS  
 STATIC INV OUTPUT  
 STBD  
 STBD 16 AMPS  
 STBD 30 AMPS  
 STBD 50 AMPS  
 STBD 100 AMPS  
 STBD 1 16 AMPS  
 STBD 1 30 AMPS  
 STBD 1 50 AMPS  
 STBD 1 100 AMPS  
 STBD 2 16AMPS  
 STBD 2 30 AMPS  
 STBD 2 50 AMPS  
 STBD 2 100 AMPS  
 STBD AFT GREY WATER  
 STBD ARG  
 STBD BAITWELL 1  
 STBD BAITWELL 2  
 STBD BATTERY  
 STBD BLACK BATTERY  
 STBD C/ P STEP BOX  
 STBD CHARGER 50/60 HZ  
 STBD CONTROL ACTUATOR  
 STBD DC LIGHTS  
 STBD DIESEL  
 STBD DISPLAY  
 STBD DOME LIGHTS  
 STBD EMERG STOP  
 STBD ENG ALARM  
 STBD ENG BATT CHRGR  
 STBD ENG CONTROL  
 STBD ENG HEATER  
 STBD ENG RM BILGE PUMP  
 STBD ENG START  
 STBD ENG STRAINER  
 STBD ENGINE  
 STBD ENGINE BLOCK HEATER  
 STBD ENGINE IGNITION  
 STBD FLOOD  
 STBD FRESH WATER  
 STBD FUEL BOOSTER PUMP  
 STBD FUEL PRIME  
 STBD FUEL TANK MONITOR  
 STBD FWD BILGE PUMP  
 STBD FWD FUEL  
 STBD FWD GREY WATER  
 STBD FWD SODIUM  
 STBD GEN  
 STBD GUEST  
 STBD HOLDING TANK MONITOR  
 STBD HOUSE DECK  
 STBD HRP IND  
 STBD HRP JOYSTICK  
 STBD HRP MAIN  
 STBD HYD CONTROL  
 STBD IGNITION  
 STBD INVERTER  
 STBD KITE REEL  
 STBD LIGHTS  
 STBD LINE 1  
 STBD LINE 2  
 STBD MAIN  
 STBD ON DECK LIVEWELL PUMP  
 STBD PILOT  
 STBD RELAY MODULE  
 STBD SOLE BOX BACKUP PUMP  
 STBD SOLE BOX LIVEWELL PUMP  
 STBD STATERM & TOILET BLWR  
 STBD STATERM & TOILET LTS  
 STBD SUNROOF  
 STBD TEASER  
 STBD THRUST  
 STBD TRANSFORMER  
 STBD TRIM TAB  
 STBD WATER TANK MONITOR  
 STEAMING LIGHT  
 STEAMING LIGHTS  
 STEERING 1  
 STEERING 2  
 STEERING FAST  
 STEERING HYD PUMP  
 STEERING SLOW  
 STEP COVER

STEP LIGHT  
 STEP LIGHTS WHEEL HOUSE  
 STEPWELL HEATER  
 STEREO  
 STEREO 12 V  
 STEREO AMPLIFIER  
 STEREO CREW CABIN  
 STEREO F/B  
 STEREO F/ROOM  
 STEREO FLYBRIDGE  
 STEREO FWD CABIN  
 STEREO MEMORY  
 STEREO P/ROOM  
 STEREO PORT CABIN  
 STEREO S/ROOM  
 STEREO STBD CABIN  
 STERN FLOODS  
 STERN LIGHT  
 STOP  
 STORAGE LIGHT  
 STOVE  
 STOVE SOLENOID  
 STOVE/ MICROWAVE  
 STREET SCENE LIGHTS  
 STREET SIDE COMM. OUTLET  
 STREET SIDE CONF. OUTLET  
 STREET SIDE FLOOD  
 STREET SIDE FLOODS  
 STRIP BUNK LIGHTS  
 STRIP LIGHTS  
 STROBE LIGHT  
 STUDIO  
 STUDIO CONVECTOR  
 STUDIO LIGHTS  
 STURDY  
 SUB PANEL  
 SUB PANEL AFT CABIN  
 SUB PANEL CIRCUIT A  
 SUB PANEL CIRCUIT B  
 SUB PANEL FEED  
 SUB PANEL FLY BRIDGE  
 SUB WOOFER  
 SUMP ALARM  
 SUMP PUMP  
 SUMP PUMP 1  
 SUMP PUMP 2  
 SUMP PUMP 3  
 SUMP PUMP 4  
 SUMP PUMP AFT  
 SUMP PUMP ENGINE RM  
 SUMP PUMP FWD  
 SUMP PUMP MANUAL  
 SUMP PUMP PORT  
 SUMP PUMP STBD  
 SUMP PUMPS  
 SUN ROOF  
 SUPPORT CONSOLE  
 SURVEILLANCE CAMERA  
 SURVEILLANCE CAMERA 1  
 SURVEILLANCE CAMERA 2  
 SWE-DISH DE-ICING  
 SWE-DISH HPA  
 SWIM PLATFORM  
 SYNCRO

**T**

TABLE LIFT UP/DOWN  
 TABS DOWN  
 TABS UP  
 TACKLE LIVEWELL  
 TACSAT AMP NO 1.  
 TACSAT AMP NO 2.  
 TANK ALARM  
 TANK MONITOR / RELAY  
 CONTROL  
 TANK MONITOR/RELAY  
 TANK MONITORS  
 TANK PUMP PORT  
 TANK PUMP STBD  
 TAPE DECK  
 TEASER REEL  
 TEASER REEL  
 TECHNICAL MAIN  
 TECHNICAL SYSTEM  
 TELEPHONE SYSTEM  
 TELEVISION FLYBRIDGE  
 TELEX  
 TEMP ALARM  
 TENSIONING SYSTEM  
 TEST  
 THERMAL IMAGE  
 THRUSTER  
 TIE BAR  
 TILLER LIGHT BAR  
 TINKS BRAIN  
 TINKS DRIVE  
 TOASTER  
 TOILET  
 TOILET AFT  
 TOILET BOW  
 TOILET FWD

TOILET MAIN  
 TOILET PORT  
 TOILET SALON  
 TOILET STBD  
 TOP DECK  
 TOP DECK # 1  
 TOP DECK # 2  
 TOTALIZER  
 TOW 1  
 TOW 2  
 TOW 3  
 TOWER  
 TOWER 12V SUPPLY  
 TOWER 24V SUPPLY  
 TOWER ELEX  
 TOWER LIGHTS  
 TOWER MAIN  
 TOWER POWER  
 TOWER SUPPLY  
 TOWER/MAST  
 TOWING LIGHTS  
 TRACK LIGHTS  
 TRAILER POWER  
 TRANSFER  
 TRANSFER PUMP  
 TRANSFORMER  
 TRANSFORMER PRIMARY  
 TRANSFORMER SECONDARY  
 TRANSMITTER 1  
 TRANSMITTER 2  
 TRANSOM BOX BACKUP PUMP  
 TRANSOM BOX LIVEWELL PUMP  
 TRANSOM LIVEWELL  
 TRANSOM LIVEWELL 1  
 TRANSOM LIVEWELL 2  
 TRASH COMPACTOR  
 TRICKLE CHARGER  
 TRI-COLOR LIGHT  
 TRIM TAB INDICATOR  
 TRIM TABS  
 TROLL  
 TROLLING VALVE  
 TUNA TUBES  
 TURBINE CONTROLS  
 TURNTABLE 1  
 TURNTABLE 2  
 TV  
 TV & STEREO CENTER  
 TV ANTENNA  
 TV CAMERA 1  
 TV CAMERA 2  
 TV DOOR  
 TV LIFT  
 TV TRANSMITTER 1  
 TV TRANSMITTER 2  
 TV TRANSMITTER 3  
 TV/ SALON  
 TV/STEREO  
 TV/VCR

**U**

U/F AMP  
 U/F RECEPTACLES  
 UHF  
 UHF 1  
 UHF 2  
 UHF TV TRANSMITTER  
 UNDER COMP HEATER  
 UNDER FLOOR HEATER 1  
 UNDER FLOOR HEATER 2  
 UNDERCABINET LIGHT  
 UNDERCABINET LIGHTS  
 UNDERFLOOR HEATER  
 UNDERFLOOR OUTLETS  
 UNDERWATER CAMERA  
 UNDERWATER LIGHT  
 UNDERWATER LIGHT MID  
 UNDERWATER LIGHT PORT  
 UNDERWATER LIGHT STBD  
 UNDERWATER LIGHTS  
 UNDERWATER LTS 1  
 UNDERWATER LTS 2  
 UNDERWATER PHONE  
 UNITS IN  
 UNITS OUT  
 UP / DOWN  
 UPPER DECK  
 UPS A1  
 UPS A2  
 UPS A3  
 UPS No.1  
 UPS No.2  
 UPS No.3  
 UPS SYSTEM  
 UTILITY  
 UTILITY BILGE  
 UTILITY FRONT  
 UTILITY LTS  
 UTILITY MAIN  
 UTILITY REAR  
 UTILITY RM LIGHTS

UTILITY U/F  
 UV FILTER  
 UV WATER PURIFIER

**V**

V BERTH  
 VAC & SHOWER PUMP  
 VACUUM CLEANER  
 VACUUM PUMP  
 VALANCE LIGHTS  
 VANITY  
 VANITY LIGHTS  
 VBT FLOOD  
 VBT VENT  
 VCR  
 VCR 1  
 VCR 2  
 VEH. STROBES  
 VEI CPU  
 VEI SYSTEMS  
 VENTILATION  
 VENTS  
 VERTICAL THRUST  
 VESSEL MAP STATUS  
 VHF  
 VHF 1  
 VHF 2  
 VHF 3  
 VHF LD  
 VHF PH  
 VHF RADIOS  
 VHF/SSB  
 VHF/STEREO  
 VHF-HI TV TRANSMITTER  
 VHF-LO TV TRANSMITTER  
 VHS  
 VIAS CAPTAIN  
 VIAS ENG ROOM  
 VIAS FLYBRIDGE  
 VIAS MONITOR  
 VIAS WHEELHOUSE  
 VIDEO DEPTH  
 VIDEO PLOTTER  
 VIDEO PORTS  
 VIDEO RECORDER  
 VIDEO SCOPE  
 VIDEO SECURITY SYSTEM  
 VIDEO SOUNDER  
 VIDEO SPLITTER  
 VIDEO SYSTEM  
 VIDEOSCOPE CAMERA  
 VITAL BUS  
 VOLTAGE METERS

**W**

W/C LIFT  
 WALL LAMP  
 WARNING DRAWER  
 WARNING DRAWER  
 WASH DOWN  
 WASHDOWN PUMP  
 WASHER  
 WASHER/DRYER  
 WASTE PUMP  
 WASTE TREATMENT  
 WATCH ALARM  
 WATER  
 WATER ALARM  
 WATER FILTER  
 WATER GAUGE  
 WATER HEATER  
 WATER HEATER 1  
 WATER HEATER 2  
 WATER LEVEL  
 WATER MAKER  
 WATER MAKER 2  
 WATER MAKER ELECTRONICS  
 WATER MAKER PORT  
 WATER MAKER STBD  
 WATER PRES/ SHOWER SUMP  
 WATER PRESSURE  
 WATER PRESSURE 1  
 WATER PRESSURE 2  
 WATER PUMP  
 WATER TANK GAUGE  
 WATER TANK PUMP 1  
 WATER TANK PUMP 2  
 WATER TEMP  
 WATERMAKER ELECTRONICS  
 WEATHER  
 WEATHER FAX  
 WEATHER INSTR  
 WEBASTO BOILER  
 WELDER  
 WET ICE A/C  
 WHEELHOUSE BILGE  
 WHEELHOUSE FAN  
 WHEELHOUSE LIGHTS  
 WHEELHOUSE SUPPLY  
 WHIRLPOOL  
 WHITE DOME LTS  
 WHITE OH LIGHTS

WI-FI  
 WINCH  
 WINCH CONTROLLER  
 WINCH LIGHTS  
 WINCH MID  
 WINCH PORT  
 WINCH STBD  
 WIND GENERATOR  
 WIND INSTR  
 WIND INSTRUMENT  
 WIND/DEP/SPD  
 WINDEX  
 WINDLASS  
 WINDLASS 12 V  
 WINDLASS BOW  
 WINDLASS COCKPIT  
 WINDOW ACTUATOR  
 WINDOW HEATER  
 WINDOW HEATER PORT  
 WINDOW HEATER STBD  
 WINDOW OPENER  
 WINDOW SHADE  
 WINDOW VENT  
 WINDSHIELD  
 WINDSHIELD VENT  
 WINDSHIELD WASH  
 WINDSHIELD WASHER  
 WINDSHIELD WIPERS  
 WINE CELLAR  
 WINE COOLER  
 WIPER  
 WIPER CENTER  
 WIPER MID  
 WIPER PORT  
 WIPER STBD  
 WIPERS  
 WIRELESS  
 WORK STATION  
 WORK/BACK-UP LGHTS

**Y**

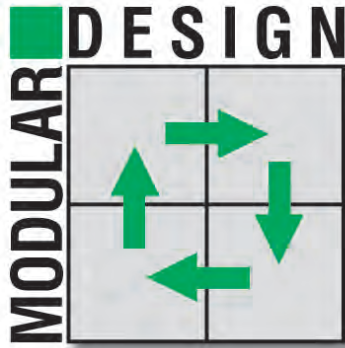
YELLOW 1  
 YELLOW 2  
 YELLOW 3  
 YEOMAN  
 Y-VALVE

**Z**

Z-GUARD

Individual and Custom labels may  
 be purchased on our website:  
[www.paneltronics.com](http://www.paneltronics.com)

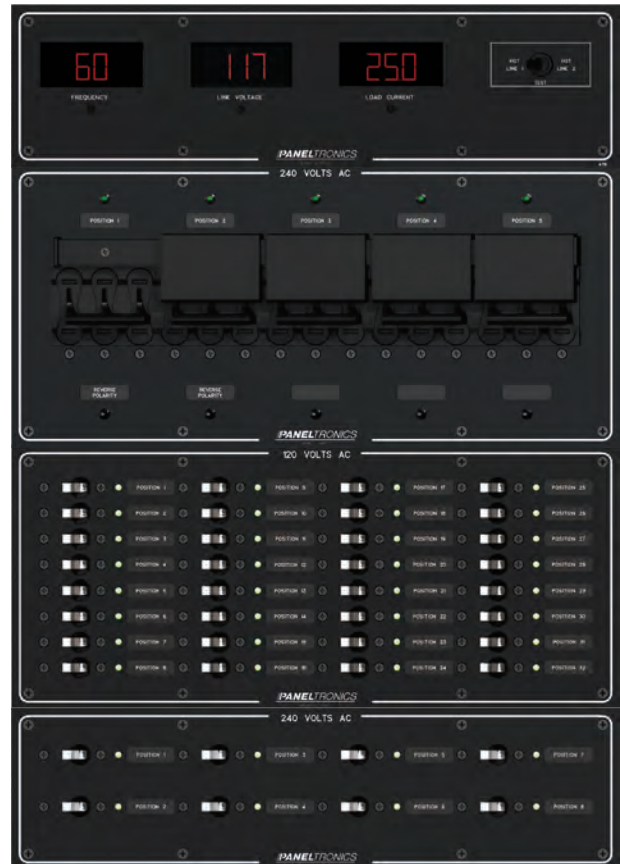




## Modular Design

- Paneltronics panels are Modular in design
- Flexible designs to go high or wide
- Combine panels from different series to meet your specific requirements
- Custom blank panels can be made to incorporate additional components
- Panel groups are often mounted onto a custom hinged frame and enclosure
- Frame and enclosure mounted panel groups are shipped as a complete assembly

Our Technical Sales Representatives can help you with creative modular designs.



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