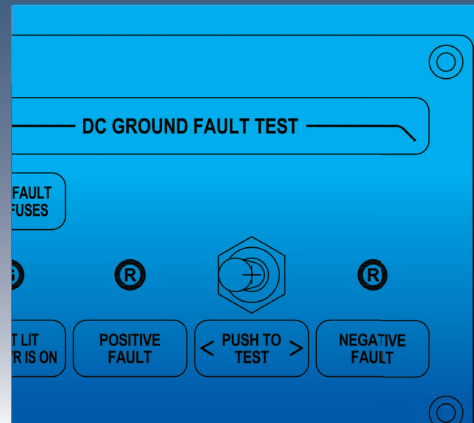


# NEWMAR<sup>®</sup>

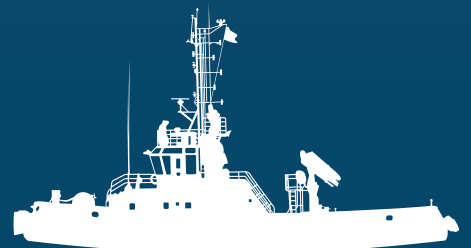
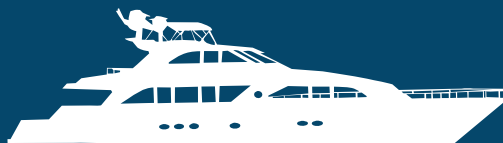
## DC Power Onboard<sup>SM</sup>

### Electrical Control Panels



## Stock and Custom

*Send us your sketch, we'll do the rest!*



# Electrical Panels Onboard

<b>Accessory Series</b> DC & AC	1
<b>Elite Series</b> DC & AC Load Centers	2
<b>Elite Series</b> AC/DC Combination Master Panels & Specifications	3 - 4
<b>Custom Panel Templates</b> Starting Point for Your Custom Design Process	6 - 9
<b>Digital Instruments</b> AC & DC	10
<b>Panel Meters</b> Digital & Analog	11
<b>Circuit Breakers &amp; AC Source Selector Switches</b>	12 - 13
<b>Panels Accessories &amp; Terminal Blocks</b>	14 - 15
<b>Junction Boxes &amp; Enclosures</b>	16 - 17



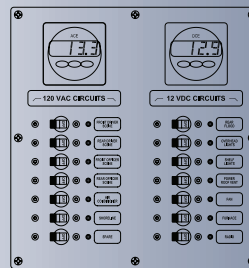
Elite Series  
ES 1, 6, & 7  
Page 2



Accessory Panels  
Page 1



Elite Series  
ES 3, 4, & 5  
Page 4 - 5



Custom Panel Templates  
Pages 6 - 9



Panel Meters  
Analog & Digital  
Page 11



Digital Instruments  
Page 10



Panel Accessories/  
Terminal Blocks  
Page 14 - 15



Circuit Breakers & AC  
Source Selection Switches  
Page 12 - 13



Junction Boxes & Enclosures  
Page 16 - 17

# Accessory DC/AC Panels

These versatile panels are ideal when only a limited number of electrical circuits are needed, or for larger systems where their modular design makes for an easy and attractive expansion of existing system capacity.

All panels are provided with a circuit identification label set of 22 common on-board electrical functions is provided. Other more extensive label sets (up to 206 functions) are also available separately, see page 20.



**ACCY-I**  
5.25" x 7.5"

## Accessory Panels

**ACCY-IX:** 8 breaker capacity, 5 installed standard; 2-5A, 1-10A, 1-15A, 1-20A or specify. 8 DC circuit "ON" indicator lights installed standard, AC indicator lights installed on special order basis. LS-1 Label Set included.

**ACCY-IBX:** Blank version of ACCY-IX above. No breakers or indicator lights provided. Label set, indicator light and breaker mounting hardware provided.



**ACCY-II**  
5.25" x 3.75"

**ACCY-IBX:** Half-height version of ACCY-IX (above), 3 breaker capacity, 3 installed standard: 1-5A, 1-10A 1-15A or specify. With DC "ON" indicator lights installed on special order basis.

## AC Master Panels



**AC-I**  
5.25" x 7.5"

**AC-IX:** 30 amp master breaker (15A or 50A\* optional), 5 branch circuit capacity, 5 installed AC "ON" indicator lights, and 4 installed standard: 1-10A, 2-15A, 1-20A, or specify. LS-I Label set included.



**AC-II**  
5.25" x 3.75"

**AC-IBX:** 30 Amp master breaker (15A or 50A\* optional) with reverse polarity warning light.

# Elite Series Panels

## ES-1 DC Master Panel

### Features

- Analog DC volt and ammeter, back illuminated with dimmer
- 12 volt standard, 24 volt optional
- 4 battery bank test switch.
- DC master breaker (100amp standard; 50 or 75 amp optional)
- 22 branch circuit capacity, 20 installed standard; 3-5A, 5-10A, 6-15A, 6-20A or specify
- Weight: 8 lbs., (3.6 Kg.)



10" W X 15" H X 4" D  
22 Breaker Capacity

Because of their exact height match and style compatibility, the panels below are ideal companions for expanding circuit capacity of the ES-1 or ES-5, or they may be used as stand-alone load centers.

## ES-6 DC Load Center

### Features

- Accommodates one meter; analog standard. (DC 0-50A ammeter standard), or DC 12 volts or 24 volts optional
- Master breaker (DC-75 amp standard; 50 or 100 amp optional, single pole)
- 10 branch circuit capacity, 8 installed standard: 1-5A, 2-10A, 4-15A, 1- 20A



5.25" W X 15" H X 4" D  
10 Breaker Capacity

## ES-7 AC or DC Accessory Panel

### Features

- AC (120/240V) or DC (12/24V) master breaker (double pole AC 50 amp\* standard, 30 amp optional, or DC 100 single pole amp standard; 50 or 75 amp optional)
- 16 branch circuit capacity, 12 installed standard:  
ES-7A: 2-10A, 5-15A, 5-20A  
ES-7D: 2-5A, 3-10A, 5-15A, 2-20A
- Weight: 7 lbs., (3.2 Kg.)

\* Note 50 amp master OK for use on 230 VAC line-to-line systems. For 230 VAC line-to-neutral systems 30 amp is maximum master breaker value.



5.25" W x 15" H x 4" D  
16 Breaker Capacity

# Elite Series Panels

## AC-DC Master Combined Control Panels

Locating all AC and DC functions on one panel provides a vessel with a central load distribution and monitoring center.

- Complete metering of voltage and current on AC and DC systems. Back-lit analog meters
- AC master breaker(s) with reverse polarity warning light.
- Power "on" indicator lights on all circuits.
- Four battery bank voltage test switch
- Deluxe label set (LS-III) included, 206 functions
- 115 VAC standard/230 VAC optional  
12 VDC standard/24 VDC optional

## ES-3 Compact AC/DC Load Center



**13.7" W X 10" H X 4" D**  
**6 AC and 16 DC Breaker Capacity**

## ES-4

Large 3-1/2" scale meters and an ample circuit breaker capacity makes this the panel of choice for boats in the 35'-45' range.



**17" W X 12" H X 4" D**  
**8 AC and 20 DC Breaker Capacity**



### Option

For vessels with an onboard generator, the panel may be fitted with a 7.5 or 15 kW ship-shore AC source selector switch. Specify ES-4SS option when ordering.

## ES-5

Has large DC circuit capacity and AC section including two load groups and a source selector switch for two shore power lines and a 15kW generator. Pre-heat and start-stop controls are standard. Additional system capacity can be obtained by incorporating model ES-6 or ES-7 (listed on page 3).



**20" W x 15" H x 6" D**  
**20 AC and 24 DC Breaker Capacity**

# Elite Series Specifications

## Installation Dimensions

Model	Panel Size		Cut Out	
	(W x H) Inches	(W x H) Centimeters	(W x H) Inches	(W x H) Centimeters
ES-1	10 x 15	25.4 x 38.1	14 X 9	35.6 X 22.9
ES-3	13.7 x 10	34.8 x 25.4	8.8 X 13	22.4 X 33
ES-4	17 x 12	43.2 x 30.5	10.8 X 16.8	27.4 X 42.7
ES-5	20 x 15	50.8 x 38.1	13 X 19	33 X 48.3
ES-6D	5.25 x 15	13.3 x 38.1	13 X 4.5	33 X 11.4
ES-7A & 7D	5.25 x 15	13.3 x 38.1	13.8 X 4	35.1 X 10.2

Model	DC Circuits	AC Circuits
ES-1	100A master plus 22 single pole breaker capacity, 20 installed standard, 3-5A, 5-10A, 6-15A, 6-20A	
ES-3	16 Breaker capacity, 12 Installed standard; 2-5A, 3-10A, 4-15A, 3-20A or specify	30 amp master standard 50 amp optional, plus 6 S.P. branch capacity, 5 installed standard; 1-10A, 15A, 2-20A or specify
ES-4	20 Breaker capacity, 16 Installed standard; 3-5A, 3-10A, 5-15A, 5-20A or specify	50 amp master standard plus 8S.P. branch capacity, 6 installed standard; 1-10A, 3-15A, 2-20A or specify
ES-4SS	Same as above with 7.5 kW, three position (Shore-Off-Gen) ship shore selector switch installed. Special Order Only.	
ES-5	Master plus 24 breaker capacity, 20 installed standard; 3-5A, 4-10A, 7-15A, 6-20A or specify	Two load groups each consisting of: Master breaker (D.P.) 50 amp* standard plus 10 S.P. branch capacity, 8 installed standard; 2-10A, 3-15A, 3-20A or specify
ES-6D	75A master plus 10 single pole breaker capacity, 8 installed standard, 1-5A, 2-10A, 4-15A, 1-20A	
ES-7A		50A double pole master plus 16 single pole breaker capacity, 12 installed standard, 2-10A, 5-15A, 5-20A
ES-7D	100A master plus 16 single pole breaker capacity, 12 installed standard, 2-5A, 3-10A, 5-15A, 2-20A	

## Options

### Meters:

Standard voltmeters are for 12 VDC or 115 VAC applications. (Ammeter range depends on master breaker value.) Voltmeters can be installed for 24 VDC or 230 VAC applications. Contact the factory for a complete list of metering options

### Alternate Circuit Breaker Configurations:

To change circuit breaker value mix or location, advise us the breaker arrangement. (Order forms listing all options are available - see "Download PDF Order form" link below each product description.) Allow 3-5 days additional lead time to complete the modification.

*Note: There is a mod. fee for special configurations - contact factory*



DC Power Onboard

# Custom Panel Capabilities

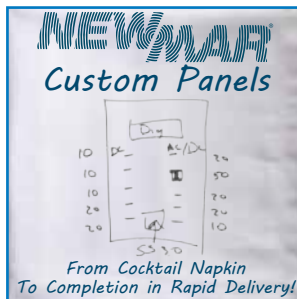
## Custom Panels

**“ Send Your Sketch or Spec, We’ll Do the Rest!”**

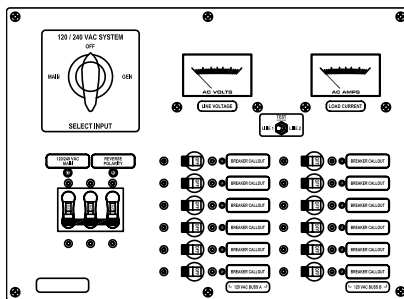
- Any Size, Shape, Graphics, Lettering
- Meters, Breakers, Switches, Alarms, & Custom Components
- UL 489 Breakers
- Fiber Optic Back Lighting Option
- Pre-Wired and Ready for Installation

View Template Library online at [www.DCPowerOnboard.com](http://www.DCPowerOnboard.com)

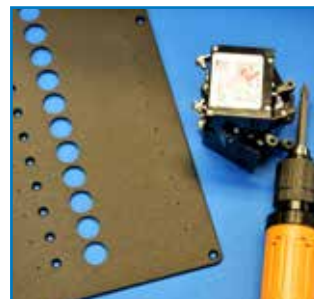
## Custom Panel Process Rapid Delivery!



Submit Your Concept



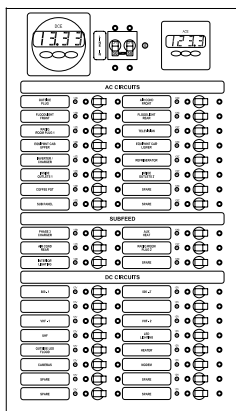
CAD Drawing Prepared For Your Approval



Fab and Assembly



Pre-Wired, Tested and Ready for Installation



Available mounted in or on NEMA Enclosures

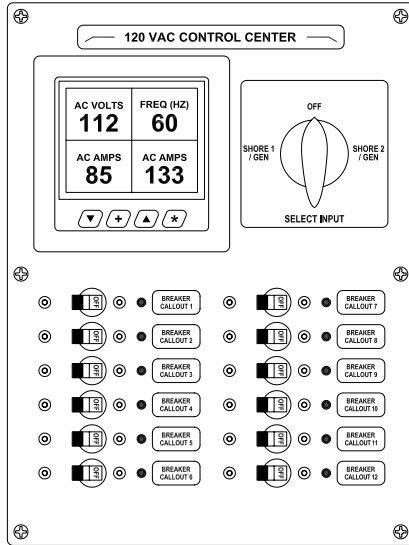


See following pages for sample templates, or view entire template library online.  
[www.DCPowerOnboard.com/CustomPanels](http://www.DCPowerOnboard.com/CustomPanels)



# Custom Panel Templates - AC

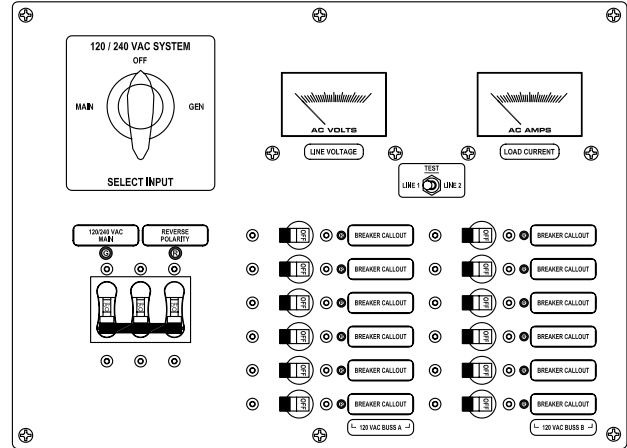
Built As Shown or Customized to Your Specification.



## 120/240V AC #A10

Source Selector Switch  
Digital Volt, Amp, Frequency Meter  
12 Single Pole

Dimensions: 8.5" x 11.25"

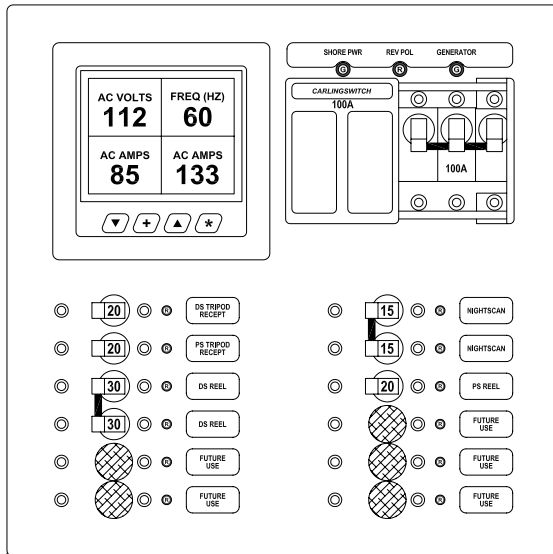


## 120/240V AC #A12

Three Pole Master, Source Selector Switch,  
Analog Volt and Amp Meter  
12 Single Pole

Dimensions: 13.75" x 10"

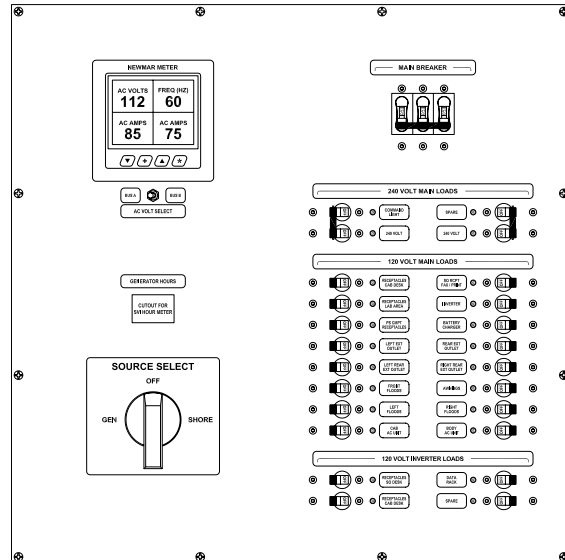
View complete specifications and order forms online!  
Visit [Newmarpower.com](http://Newmarpower.com), click on custom panel link.



## 120 or 240V AC #A14

Three Pole Master/Slide Source Selector  
Digital Volt, Amp, Frequency Meter  
12 Single Pole or 6 Double Pole

Dimensions: 11" x 11"



## 120/240V AC #A16

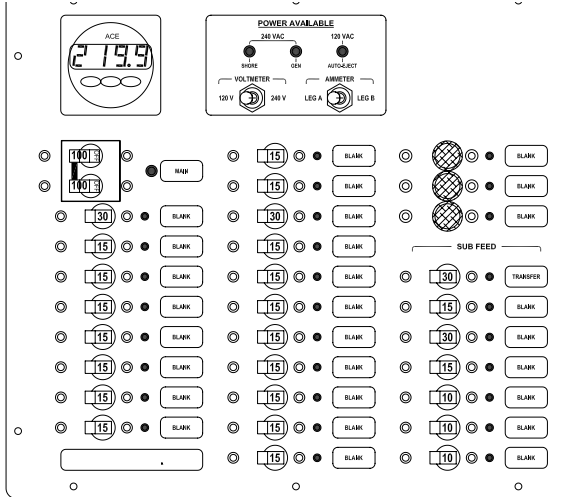
Three Pole AC Master,  
Source Selector Switch,  
Digital Volt, Amp, Frequency Meter  
2 Double Pole, 16 Single Pole Main Loads,  
4 Single Pole Inverter Loads

Dimensions: 20" x 20"

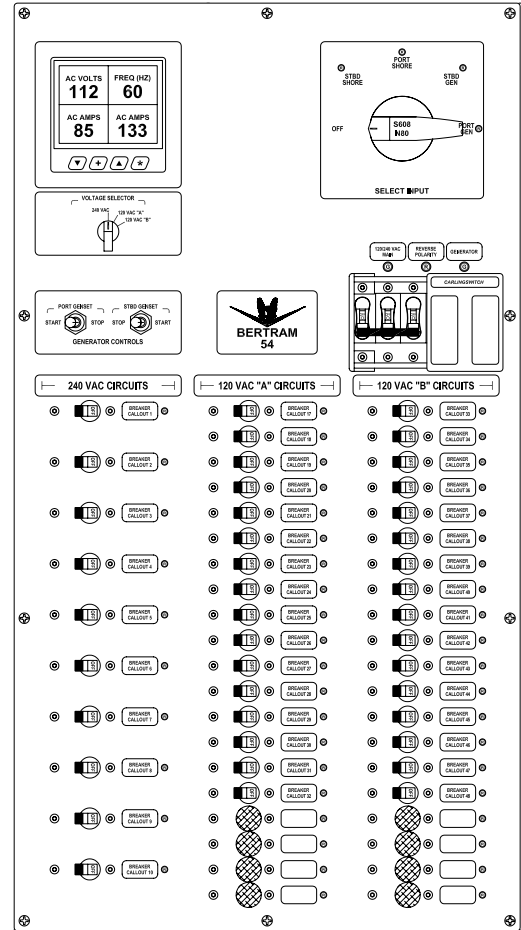


# Custom Panel Templates - AC

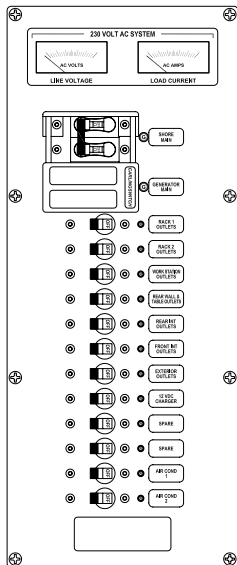
Built As Shown or Customized to Your Specification.



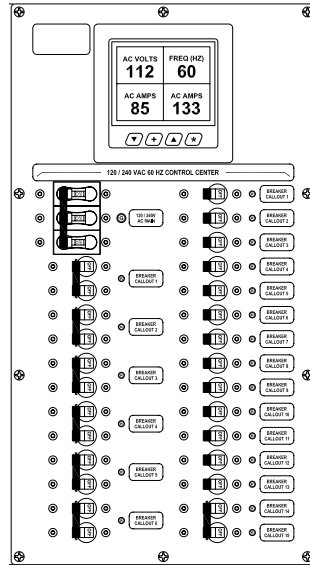
**120/240V AC #A18**  
 Double Pole Master  
 Digital AC Volt, Amp,  
 Frequency, kW Meter  
 21 Main Load Single Pole  
 7 Sub-Feed Single Pole  
 Dimensions: 14.5" x 12.75"



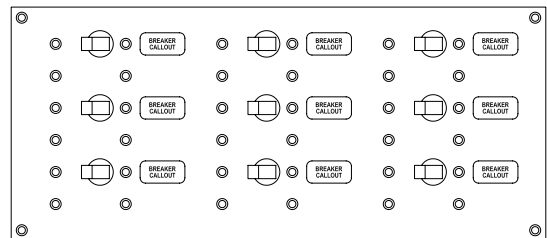
**120/240V AC #A24**  
 Three Pole Master/Slide Source Selector  
 Digital AC Volt, Amp, Frequency Meter  
 10 Double Pole, 20 Single Pole (Leg A),  
 20 Single Pole (Leg B)  
 Dimensions: 15" x 27.75"



**120V AC #A20**  
 Double Pole AC Master/  
 Slide Source Selector  
 Analog Volt & Amp Meter  
 12 Single Pole  
 Dimensions: 9" x 17"



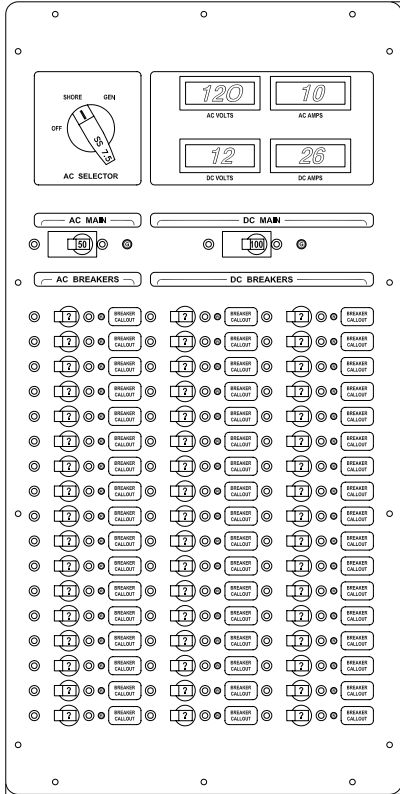
**120/240V AC #A22**  
 Three Pole AC Master  
 Digital Volt, Amp,  
 Frequency Meter  
 7 Double Pole,  
 13 Single Pole  
 Dimensions: 6.75" x 18.5"



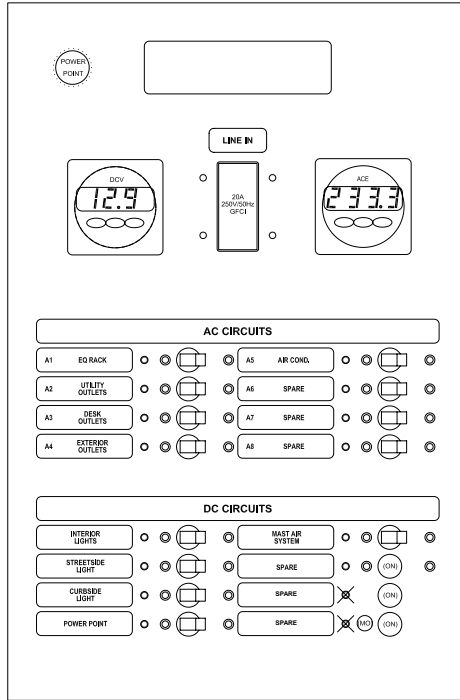
**240V AC Subpanel #A26**  
 9 Double Pole  
 Dimensions: 12" x 5.5"

# Custom Panel Templates - AC/DC

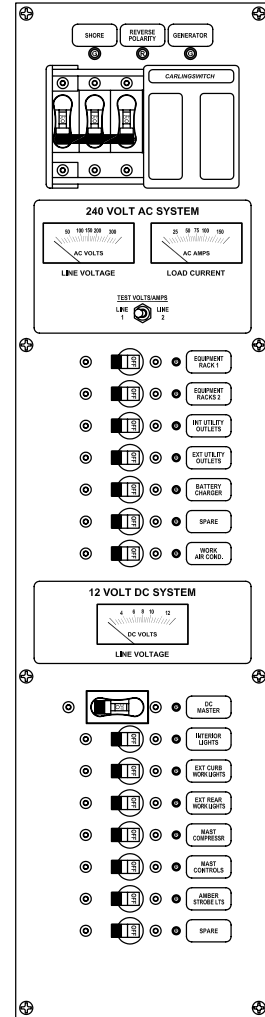
Built As Shown or Customized to Your Specification.



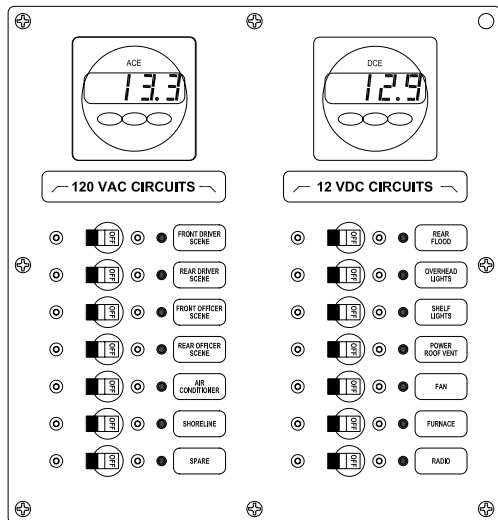
**120V AC - 12V DC #AD16**  
 AC Master, Source Selector  
 Switch  
 Digital Volt & Amp Meters  
 17 Single Pole  
 DC Master  
 Digital Volt & Amp Meter  
 34 Single Pole  
 Dimensions: 12" x 24"



**120V AC - 12V DC #AD18**  
 AC Master  
 Digital Volt-AmpFreq-Hour Meter  
 8 Single Pole  
 DC Master  
 Digital Volt Meter  
 8 Single Pole  
 Dimensions: 12" x 24"



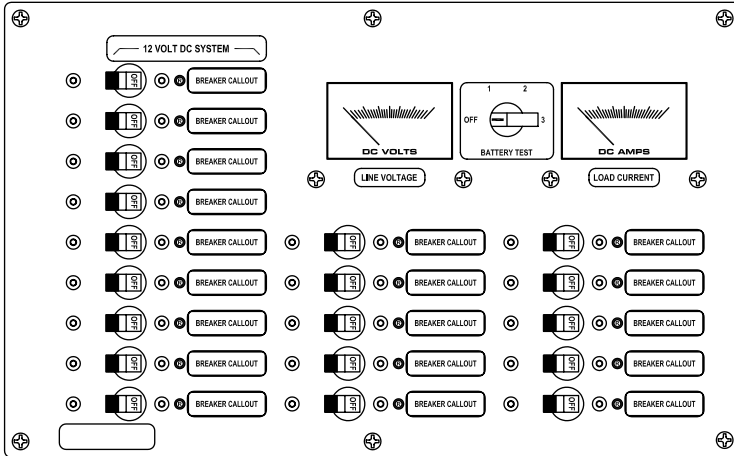
**120V AC - 12V DC #AD20**  
 AC Master/Source Selector  
 Analog AC Volt & Amp  
 Meters  
 Branch Breakers  
 DC Master  
 Analog DC Volt Meter  
 7 Single Pole  
 Dimensions: 5.7" x 23"



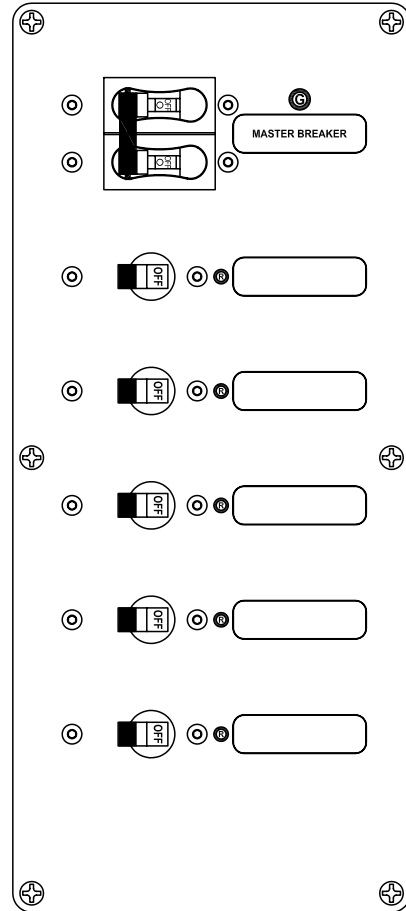
**120V AC - 12V DC #AD22**  
 AC Single Pole  
 DC Master  
 Digital Volt & Amp Meter  
 7 Single Pole  
 Digital Volt Meter  
 7 Single Pole  
 Dimensions: 10" x 10.5"

# Custom Panel Templates - DC

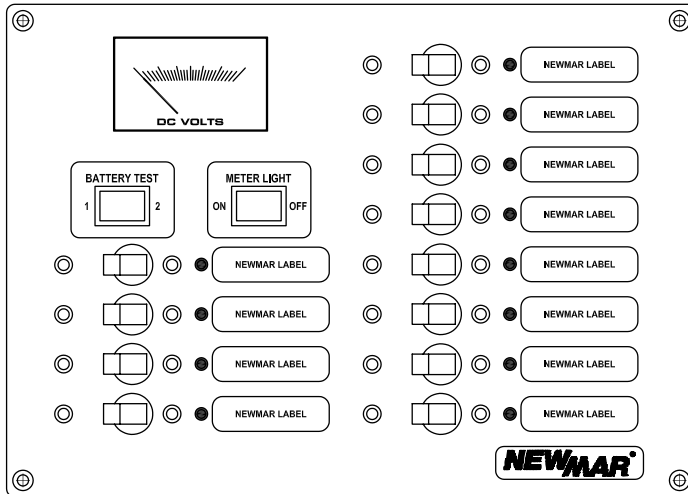
Built As Shown or Customized to Your Specification.



**12/24V DC #D10**  
 19 Single Pole Branch Circuits  
 Analog DC Volt & Ammeters  
 3 Battery Test Switch  
 Dimensions: 8.5" x 13.75"



**12/24V DC #D14**  
 Double Pole Master  
 5 Double Pole Branch Circuits  
 Dimensions: 14.5" x 9.5"



**12V DC #D12**  
 Analog DC Volt Meter  
 12 Single Pole  
 Dimensions: 10.5" x 7.5"

# Digital Instruments



## DCV: DC Voltmeter

Monitors three battery banks, 12 and/or 24 volt systems. Reads to the nearest 1/10 volt. Features a programmable high/low voltage alarm circuit for each bank. NMEA 0183 compatible for PC interface. Only available in 2-1/2" version



## DCE: DC Energy Monitor

Displays volts, amps, energy used and remaining for 12 or 24 volt systems up to 500 amps and up to 3,000 amp-hour capacity. Makes DC energy management a breeze. Monitor voltage on up to three separate banks. House bank (or battery bank of choice) may be also be programmed for the following functions: 1) Monitor charge/discharge amperage. 2) Total energy monitor can be set for amp-hours or percent-of-charge. 3) High/low voltage alarm, plus alarm set-point for low amp-hours remaining. 500 amp shunt included. NMEA 0183 compatible output for data logging. Available in 2-1/2" or 4-1/4" square face, see below.



## ACE: AC Energy Monitor

For 115/230 volt systems. Reads: 90-300 VAC (True RMS), 0-150 amps, frequency from 40-70 Hz and power from 0-45 kW. Features alarm circuits for high/low voltage and high/low frequency. Can be programmed to provide automatic generator shutdown (see Remote Alarm Option on the following page) in the event that voltage or frequency exceed predetermined range. Current and voltage transformers are included. 12 or 24 volt source required to power meter. Available in 2-1/2" face.

## Remote Alarm Relay Option - All Models

All instruments shown have programmable alarms. A relay is available that activates remote indicators from the instrument alarm signal output terminal allowing remote activation and/or connection to the vessel's 12 or 24 volt alarm panel.

### Model

**DIR** Digital Instrument Relay

**Input Signal:** 5 VDC (from instrument)

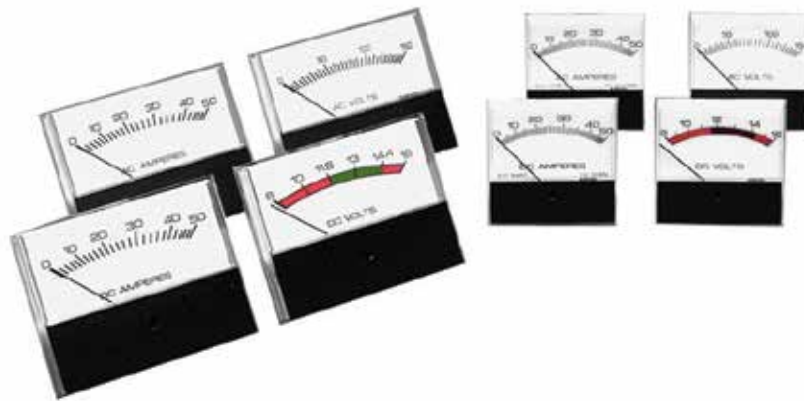
**Relay Rating:** 12/24 VDC, 10 amps

**Size:** 2.4" x 1.4" x 1.5"



*DC Power Onboard*

# Panel Meters - Analog



Assemble an electrical monitoring system using these analog, panel mount meters. Meters are available with 2-1/2" and 3-1/2" face sizes.

Easy to read graphics with unit divisions give precise readouts at a glance. designed for front panel mounting.

## AC Meters

- AC Volt 0-150
- AC Volt 0-300
- AC Amp 0-50 with current transformer
- AC Amp 0-100 with current transformer

## DC Meters

- DC Volt 8-16
- DC Volt 16-32
- DC Amp 0-50 with shunt
- DC Amp 0-100 with shunt

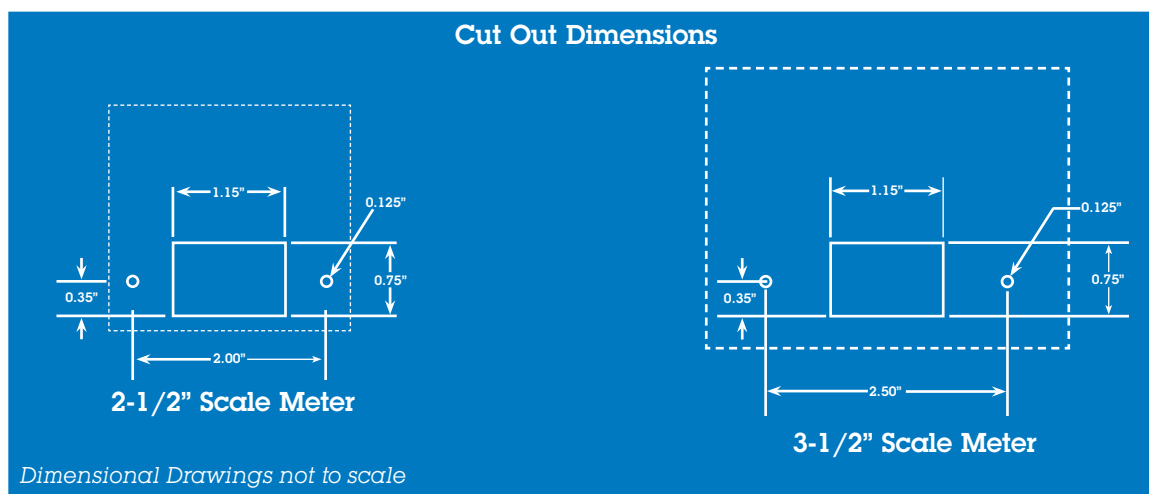
## Replacement Shunts/Current Transformers

- Shunt for 0-50 DC ammeter, P/N: 573-0502-9
- Shunt for 0-100 DC ammeter, P/N: 575-100-0
- Current transformer for 0-50 AC ammeter, P/N: 575-9030-0
- Current transformer for 0-100 AC ammeter, P/N: 575-9030-0

## Meter Face Measurements

**3.5" scale:** 3-3/4" W x 2-7/8" H (9.5 X 7.3 cm)

**2.5" scale:** 2-1/2" W x 2-3/8" H (6.3 X 6.0 cm)



# Panel Accessories - Circuit Breakers

## Standard Series: Single and Double Pole - "A" Frame

Fit all NEWMAR electrical panels, as well as most other brands

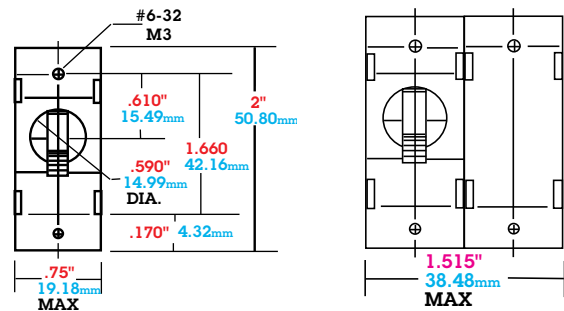
- Feature magnetic-hydraulic "trip-free" mechanism
- 5-30 amp rated to 65 VDC or 277 VAC; 40 and 50 amp rated to 32 VDC or 120 VAC (See rating note below).
- Mounting screws not provide order separately
- #10 screw terminals on rear for wiring



All circuit breakers offered by NEWMAR are UL recognized and CSA listed for AC and DC systems.

- Black toggle handles
- Single pole values: 5, 10, 15, 20, 25, 30, 40 or 50 amp.
- Double pole values: 15, 20, 30 or 50 amp

*Important Circuit Breaker Rating Note:* Standard series breakers shown on this page which are rated higher than 30 amps are acceptable for use in 230 VAC Line-to-Line systems (where each leg is 115 VAC - to - neutral), but are not rated for 230 VAC line-to-neutral systems.



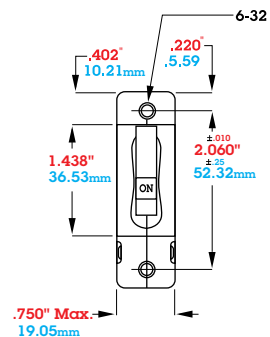
## High Amperage Series: Single Pole - "C" Frame

Rated for up to 65 VDC or 120/240 VAC service

- Feature auxiliary contacts for optional remote monitoring of circuit breaker status (Form C)
- 1/4" studs on rear for wiring

### Options

- Current rating of 75 or 100 amps
- Black toggle handle
- Two 6-32 screws required for mounting; not included - order separately



## High Amperage Series - Double Pole "C" Frame

- 30, 50, or 100 amp
- Black toggle handle



# AC Source Switches

An AC source selector switch is an essential item for any vessel with an on-board AC generator and/or inverter. By isolating power source inputs, the switch eliminates the safety hazard and/or damage that can occur if two AC sources are applied to the same circuit simultaneously.

These switches are fitted with a compact escutcheon plate with engraved switch position nomenclature (mounting dimensions below).

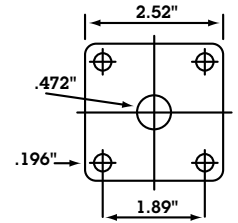
The switches carry cUL approval, are CE marked, and feature heavy duty contacts and a positive step cam mechanism for low resistance contact closure. May be rear mounted in panel with thickness up to 1/4".



Model	Amperage @ 115/230V	Number of Poles	Switch Positions	Standard Plate Markings	Depth Dimensions
SS-3.0	30	2	2 + "OFF"	SHIP-OFF-SHORE	2-1/8"
SS-7.5	63	2	2 + "OFF"	SHIP-OFF-SHORE	2-3/8"
SS-7.5 INV †	63	2	3 + "OFF"	OFF-GEN-INV-SHORE	3-1/2"
SS-15*	126	2	2 + "OFF"	SHIP-OFF-SHORE	4"

\* May be configured as a 63 amp, 4 pole switch  
 † For vessels with onboard generator and inverter

**Mounting Flange Dimensions**  
 All standard switches



If none of the standard switches listed on the adjacent page meet your requirements, Newmar will custom configure an AC selector switch for you. Please allow 2 weeks for shipment. Contact factory for pricing.

**1) Determine the following:**

- A) Amperage/kW rating required
- B) Number of switch positions required
- C) Number of poles required

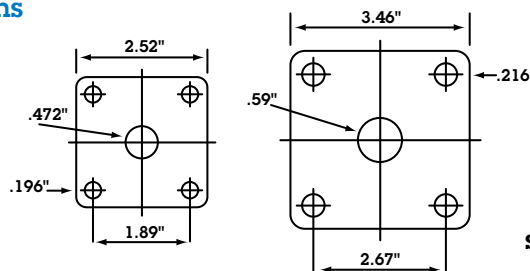
**3) Select the desired switch selector position labeling:**

- SHORE GEN PORT SHORE PORT GEN
  - SHORE 1 GEN 1 STBD SHORE STBD GEN
  - SHORE 2 GEN 2 INV
- or specify the position labeling you require.

**2) Use the chart below to determine model number**

Amperage/kw Rating @ 120 VAC	2 Postion Plus Off		3 Postion Plus Off		4 Postion Plus Off	
	2 Pole	3 Pole	2 Pole	3 Pole	2 Pole	3 Pole
63 Amp (7.5 kw)	SS-7.5	S-632	S-623	S-633	S-624	S-634
80 Amp (10 kw)	S-822	S-832	S-823	S-833	S-824	S-834
100 Amp (12.5 kw)	S-1022	S-1032	S-1023	S-1033	S-1024	S-1034
125 Amp (15.5 kw)	SS-15	S-1232	S-1223	S-1233	S-1224	S-1234

**Mounting Flange Dimensions**



**100 and 125 amp special order switches**



**DC Power Onboard**

# Panel Accessories

## High Current Fuses/Fuseblocks

Essential safety item for all inverter installations and other high amperage DC circuit over-current protection.

### Features

- Heavy duty 500 amp, insulated, compact fuse block with corrosion-resistant 5/16" studs
- Secures to surface with two #10 flat head screws or bolts (not included)
- Clear lexan cover insulates conductive parts, per ABYC/USCG requirements
- Accepts industry standard ANL tin-plated copper fuses. Purchase separately.
- See-through mica element for easy identification of blown fuse



Model	Size (H x W x D)
-------	------------------

AFB-500	3" x 6.25" x 1.95
---------	-------------------

**Fuse Models (numeral indicates amperage):** ANL-50, ANL-100, ANL-150, ANL-200, ANL-250, ANL-300, ANL-350, ANL-400, ANL-500 (All rated to 80 VDC)

## Label Sets

Ideal for custom labeling of switch or circuit breaker positions on any NEWMAR or similarly constructed electrical panel. White lettering on black peel-and-stick mylar. Label size: 1.75" W x .5" H. See website for a full list of labels.



## Indicator Lights

Use as "circuit on" or service indicator light on AC or DC systems. Snap-in panel mount in 5/16" hole. 6", 18 AWG leads.

Model
-------

115/230 VAC Amber*
--------------------

115/230 VAC Red
-----------------

115/230 VAC Green
-------------------

12/24 VDC Red*
----------------

12/24 VDC Green
-----------------



\* standard replacement light for Newmar panels available in skin pack or bulk pack.

## Panel Back Enclosures

Secure to the rear of many common electrical panels to protect crew against injury or panel against damage from accidental contact. Heavy duty ABS plastic. May be cut or drilled to suit wiring needs. (Intermediate mounting surface between panel and enclosure required)

Model	Fits these Newmar Panels	Size (H x W x D)
-------	--------------------------	------------------

BE-855	ACCY-IX, ACCY-IBX, AC-IX	8" x 5" x 5"
--------	--------------------------	--------------



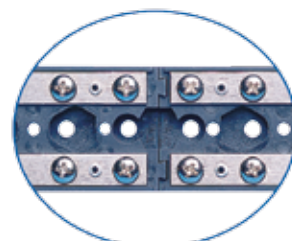
DC Power Onboard



# Terminal Strips & Bus Bars

## Terminal Strips

- Use as a common negative/neutral bus for AC or DC systems. Dual terminal strips in 4 or 8 screw positions on 3/4" centers are secured to an insulated base. No conductive parts in the base are exposed to the mounting surface. All hardware, bus material and fasteners are nickel-plated brass.
- Interlocking bases allow use of multiple terminal strips and bus bars (described below) to produce secure and neat wiring assemblies. The terminal strip bases have provisions for either #8 or #10 mounting screws.
- Clear protective covering provided
- # 8 screw terminals; rated to 100 amps



Interlocking Feature

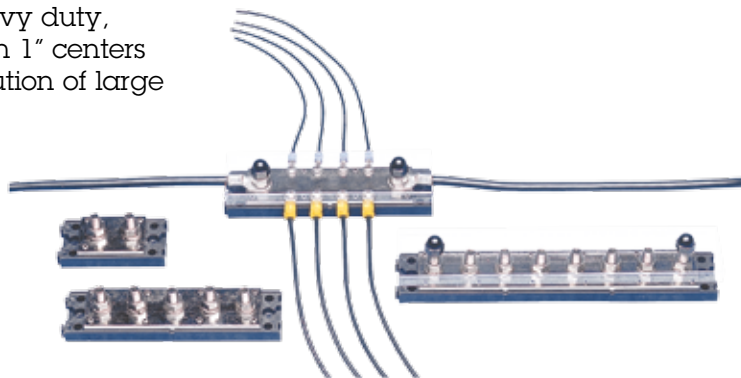
Model	Total # of Base Terminals	Size
TS-2x4	8	3-1/16" x 1-1/2"
TS-2x8	16	6-1/16" x 1-1/2"

## Bus Bars

Ideal as a DC ground tie point or positive bus, these heavy duty, 500 amp rated bus bar assemblies feature 5/16" studs on 1" centers in 1/4" thick copper bar for common connection/distribution of large wire gauges and accommodate 5/16" ring terminals.

- Insulated base resin with clear protective cover

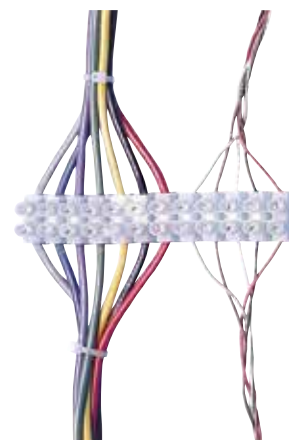
Model	Qty. of 5/16" Studs	Size
BB-2 3	2	1/16" x 1 1/2"
BB-2/8	2 plus 8 - #8 screws	6-1/16" x 1-1/2"
BB-5	5	6-1/16" x 1-1/2"
BB-8	8	9-1/16" x 1-1/2"



## Connector Strips

Molded nylon encases 6 or 12 pairs of connectors that use screw compression to secure wires without use of lugs - ideal for electronic installations. Brass barrels capture wires and are held in place with a stainless steel "finger" compressed by a screw. The screw does not make contact with the wires, protecting the copper strands from cuts and breakage. Same connector strip used in BX Series boxes, see page 16.

- 3 Sizes: ranging from 6 to 16 gauge strips are easily cut to meet wiring requirements and space limitations.



Model	# of Terminal Pairs	Max Wire Gauge	Max Amps*	Size (L X W X H)
CS-1	12	16	6	3.75" x .675" x .5"
CS-2	12	14	10	4.5" x .75" x .75"
CS-3	12	12	16	5.5" x .875" x .8"

\*Per terminal



DC Power Onboard

# Junction Boxes

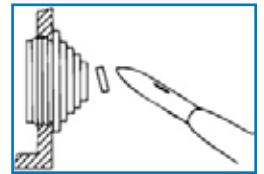
## PX Series: Waterproof Junction Boxes

- Ideal for making wiring connections above or below decks, even in areas subject to occasional spray
- Similar to BX Series junction boxes, but made from rugged, non-corrosive, high impact polypropylene
- Snap-on cover provides watertight seal
- "Universal" cut-to-fit (see diagram) graduated diameter cable entries accommodate wide cable range
- Multiple position connector strips with "captive" screw compression wire terminals installed, see matrix below for connector strip specifications per box
- Multiple knockouts provided for conduit access (in addition to cable entries)
- IEC Waterproof Rating: IP55 – "Water projected in jets against the enclosure from any direction shall have no harmful effects."



Model	PX-1	PX-2	PX-3
Number of Connector Strips	1	2	2
Positions per Strip	6	6	9
Max Wire Gauge	16	16	16
Number of Cable Entry Ports	5	7	7
Number of Cable Entries Installed	3	7	7
Spare Cable Entries Provided	2	0	0
Cable Diameter Range (inches)	.14 - .81	.14 - .81	.14 - .99
Cable Diameter Range (mm)	3.5 - 20.5	3.5 - 20.5	3.5 - 25.5
Box Size (inches)	2.95 x 2.95 x 1.66	3.35 x 3.35 x 1.66	4.45 x 4.45 x 2.29
Box Size (cm)	7.5 x 7.5 x 4.2	8.5 x 8.5 x 4.2	11.3 x 11.3 x 5.8

Graduated Diameter, Flexible Cut-to-Fit Cable Entries



## BX Series: Splashproof Junction Boxes

- Provides for secure, protected wiring connections in wheel house or below decks and engine rooms. IP rating 54 - "Splashproof"
- Rugged cast aluminum box with white enamel finish
- Metal box reduces electrical interference
- Easy wiring access through multiple grommeted cable entries
- Supplied with high quality connector strips - secure wires with compression fittings – no terminals required, see matrix for connector strips' specifications per box



Model	BX-1	BX-2	BX-3
Number of Connector Strips	1	1	2
Positions per Strip	6	12	11
Max Wire Gauge	16	16	14
Max Amps (per position)	6	6	10
Cable Entries	2	8	2
Cable Diameter	.25"	.37"	.59"
Box Size (inches)	2 x 2 x 1.2	4.4 x 2.4 x 1.2	4.7 x 3.7 x 1.3
Box Size (cm)	5.1 x 5.1 x 3.1	11.2 x 6.1 x 3.1	11.9 x 9.4 x 3.3



DC Power Onboard

# Electrical Enclosures & Cable Entries

## EX Series: Electrical Enclosures

These enclosures provide functional and professional protective cases for wire connectors, terminal blocks, relays, solenoids, fuses, etc. The corrosion-resistant polycarbonate cases are ideal for marine applications, and the deep cavity design leaves room for securing wiring and components and making connections. In addition, instruments, switches and panels can be surface mounted to the cover, as there is ample space for rear projection and wiring.



DC Power Onboard by Newmar provides Electrical Enclosures and Cable Entries. EX Series Electrical Enclosures provide functional and professional protective cases for wire connectors, terminal blocks, relays, solenoids, fuses, etc. Cable Entries have many models to choose from with waterproof or splash-proof enclosure cable entries in various sizes.

The enclosures have gasketed covers with captured non-corrosive securing screws and offer various levels of water resistant integrity per installer option, depending on type of cable entry used (see below). Waterproof entries provide IP68 protection while the splash-proof entries are rated at IP54. Two Splash-proof entries are (model SPF-1) included with the enclosures.

Enclosure mounting points are located in the bottom of the box and caps for waterproof sealing of the mounting holes are provided. Also supplied is an internal base plate with stand-off mounts for securing components inside the enclosure.



Application example - EX-474 shown with digital instruments mounted in cover

Knock-outs in numerous sizes are positioned on all four sides of the enclosures, giving the installer many options on cable entry type and location for convenient, professional wiring. (See choices of Cable Entries below.)

Model	Size L x W x D (Inches)	Knock-Outs (size cross-reference below)
EX-373	7.09 x 3.7 x 3.19	PG-16
EX-474	7.09 x 4.33 x 4.37	PG-21
EX-1074	7.09 x 10.0 x 4.37	PG-29

## Waterproof Fittings

For complete waterproof assembly (IP68) use these compression fittings. Retaining nut secures fitting to enclosures, compression hub creates waterproof seal around wires. Various sizes are available in a wide range of cable diameters.



WPF-3



WPF-2



WPF-1

Model	Cable Diameter Range	Mounting Hole Diameter	EX Enclosure Knock-Out Size Ref.
WPF-1	.2" - .47"	.91" (22.5 mm)	PG-16
WPF-2	.35" - .71"	1.14" (29.0 mm)	PG-21
WPF-3	.55" - .98"	1.48" (37.5 mm)	PG-29





**NEWMAR®**

# Electrical Control Panels

[www.DCPowerOnboard.com](http://www.DCPowerOnboard.com)



P.O. Box 1306 Newport Beach, CA 92663  
2911 W. Garry Ave, Santa Ana, CA 92704  
Phone: 714-751-0488 ■ Fax: 714-957-1621  
E-Mail: [salesDPO@newmarpower.com](mailto:salesDPO@newmarpower.com)

Distributed By:

