

Electrical Panels – Elite Series



ES-1

ES-1 DC Master Panel

This DC master control panel offers a large DC circuit capacity and full metering.

Features:

- Analog DC volt and ammeter, back illuminated with dimmer.
- 4 battery bank test switch.
- DC master breaker (100 Amp standard; 50 or 75 amp optional)
- 22 branch circuit capacity, 20 installed standard; 3-5A, 5-10A, 6-15A, 6-20A or specify
- Red circuit "on" indicator lights.
- LS-III Label set included.
- Multiple position ground Bus Bar included.
- Size: 10"W x 15"H x 4" D, (25.4 X 38.1 X 10.2 CM), Weight 8 lbs., (3.6 Kg.)

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

ES-6 DC Load Center

Features:

- Accommodates one meter; analog standard. (DC 0-50A ammeter standard), or specify DC volts
- 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
- Indicator lights on every circuit.
- LS-III set included.
- Multiple position ground Bus Bar included.
- Size: 5 1/4" W x 15" H x 4" D, (13.3 x 38.1 x 10.2 cm)

ES-7 AC or DC Accessory Panel

Features:

- AC or DC master breaker (AC 50 amp* standard, 30 amp optional, double pole or DC 100 amp standard; 50 or 75 amp optional, single pole.)
- 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
- Indicator lights on every circuit.
- LS-III label set included.
- Multiple position ground Bus Bar included.
- Size: 5 1/4" W x 15" H x 4" D, (13.3 x 38.1 x 10.2 cm)
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.



ES-7

Options

Meters:

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

Alternate Circuit Breaker

Configurations:

Changing circuit breaker value mix or location is never a problem! Simply advise us of the breaker arrangement you need. (Panel specific illustrated order forms listing all options are available at www.newmarpower.com.) Please allow 3-5 days additional lead time to complete the modification.

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

Installation Cut-Out Dimensions

Model	Inches (H x W)	Centimeters (H x W)
ES-1	9 X 14	22.9 X 35.6
ES-3	13 X 8.8	33 X 22.4
ES-4	16.8 X 10.8	42.7 X 27.4
ES-5	19 X 13	48.3 X 33
ES-6D	4.5 X 13	11.4 X 33
ES-7A & 7D	4 X 13.8	10.2 X 35.1

Electrical Panels – Elite Series

AC-DC Master Control

Locating all AC and DC functions on one panel provides a vessel with a central load distribution and monitoring center. Features common to all models include:

- Complete metering of voltage and current on AC and DC systems. Back-lit analog meters are standard.
- 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.
- Multiple position ground bus bar
- Rating 115/230 VAC, 65 VDC

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. Circuit specifications listed at bottom of page. 17" W X 12" H X 4" D, 12 lbs (43.2 X 30.5 X 10.2 cm 5.5 Kg.)



ES-4



Option

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

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

ES-3

This panel combines AC and DC control into one compact panel. See list of specifications at bottom of page. 13.7" W X 10" H X 4" D, 10 lbs (34.8 X 25.4 X 10.2 cm, 4.5Kg.)

ES-3



ES-5

Exceptional yachts require an extraordinary panel which incorporates all the aspects of the vessel's electrical system. The ES-5 is such a panel. In addition to its large DC circuit capacity, the AC section includes 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 16). 20" W x 15" H x 6" D, 20 Lbs. (50.8 X 38.1 X 15.2 cm, 9.1Kg.)

ES-5



Model	DC Circuits	AC Circuits
ES-3	16 Breaker capacity, 12 installed standard; 2-5A, 3-10A, 4-15A, 3-20A or specify	Master (D.P.) 30 amp 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	Master (D.P.) 50 amp* 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. <i>Special Order Only.</i>	
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

*Note (For panels used in 230 VAC applications): 50 amp Master OK for use on 230 VAC line-to-line systems. Not for 230 VAC line-to-neutral systems.



Electrical Panels

NEWMAR offers a wide range of stylishly engineered electrical panels to provide control, protection and monitoring for on-board electrical circuits, ranging from basic meter panels to full-function AC/DC master distribution centers.

The panels are manufactured with 1/8" strong black anodized aluminum, feature elegant graphics, and their modular design allows integration of multiple units for a "custom" installation. All panels are pre-wired with bus bars and ground strips for easy installation, and come with extensive circuit identification label sets.

The circuit breakers use a "trip-free" magnetic-hydraulic mechanism and are UL recognized and CSA listed.

Individual circuit "ON" indicator lights are now standard for all distribution branch circuit breakers. Many models of meter panels and distribution panels are also available as blanks with bus bar, breaker mounting screws, labels and indicator light mounting hardware, allowing the installer to select from a wide array of components for maximum options in electrical system design.

Accessory Panels

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

Stock panels with breakers installed come standard with DC indicator lights, but may be factory modified with AC indicator lights instead. Blank versions of the panels come with all necessary hardware to install lights and breakers. All panels are provided with a circuit identification label set of 22 common on-board electrical functions (see below).



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 lights optional. Size: 7 1/2" x 5 1/4", Weight: 2 lbs.

ACCY-IBX: Blank version of ACCY-IX above. No breakers provided. Label set, light and breaker mounting hardware provided. Weight: 1 lb.

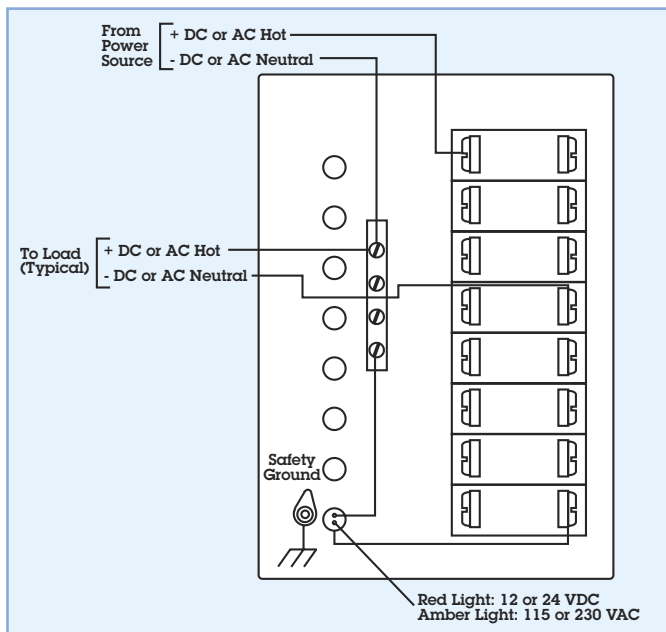
ACCY-IIX: Half-height version of ACCY-IX at left. 3 breaker capacity, 3 installed standard; 3 DC "ON" indicator lights installed standard - AC optional. 1-5A, 1-10A 1-15A or specify. Size: 3 3/4" x 5 1/4", Weight: 1 lb.

ACCY-IIBX: Blank version of ACCY-IIX above. No breakers or lights provided. Label set, light and breaker mounting hardware provided. Weight: 1 lb.



See page 22 for Panel Back Enclosures.

Typical Accessory Panel Wiring Diagram



Installation Cut-Out Dimensions*

	Inches (W x H)	Centimeters (W x H)
ACCY-IX	4 X 6	10.2 X 15.2
ACCY-IBX	4 X 6	10.2 X 15.2
ACCY-IIX	4 X 2.5	10.2 X 6.4
ACCY-IIBX	4 X 2.5	10.2 X 6.4

* Allow approximately 3" depth clearance for all panels on this page.

Label Set Provided

Each panel is provided with a basic set of the following functions listed. Other more extensive label sets (up to 206 functions) are also available separately. To see the complete list, visit www.newmarpower.com and click on Electrical Panel Accessories.

LS-I Standard Set 22 Labels

ACCESSORY	FORE CABIN	SPARE
AFT CABIN	MAIN CABIN	SPREADER
ANCHOR	MAST	SUMP PUMP
BILGE PUMP	NAV/COM	WATER HEATER
BOW	OUTLETS	WATER PRESSURE
CABIN LIGHTS	REFRIGERATOR	WINDLASS
ENGINE ROOM	RUNNING	WINDSHIELD

Electrical Panels

DC Master Panel

DC monitor, protection, and control. Dimensional compatibility allows easy expansion of the system by incorporating additional accessory or monitor panels (see pages 18 and 21, respectively). Features an illuminated, expanded scale DC voltmeter with dual battery bank test switch and individual "ON" indicator lights. A label set of common on-board circuits is provided (see page 18, LS-I, for label list).

DC-IX: Voltmeter with dual battery bank test switch; 11 circuit breaker capacity, 9 installed standard 2-5A, 3-10A, 4-15A or specify.
Panel size: 10 1/2" x 7 1/2", (26.7 X 19 cm.); Weight: 4 lbs., (1.8Kg.)



Installation Cut-Out Dimensions

	Inches	Centimeters
DC-IX	8.3 X 6.3	21.1 X 16

AC Master Panels

Essential control/protection whenever AC from shorepower or generators is on board. A double pole master breaker with power on indicator light protects both hot and neutral legs of the AC circuit. A reverse polarity light provides clear warning when wiring is reversed and poses a shock hazard. Single pole branch circuit breakers (Model AC-IX) and individual "ON" indicator lights provide control and protection of various AC loads. For 115/230 VAC applications – see ratings note. A label set of common on-board circuits is provided (see page 18, LS-I, for label list).

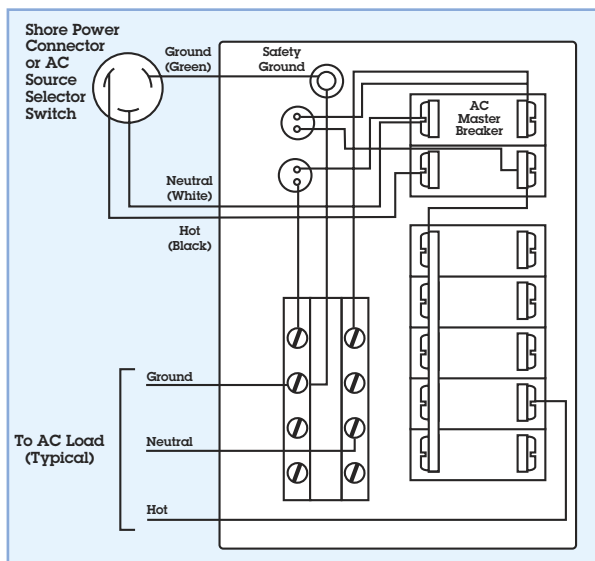
AC-IX: 30 amp master breaker (15A or 50 A* optional), 5 branch circuit capacity 4 installed standard 1-10A, 2-15A, 1-20A, or specify. LS-I Label set included. Panel size: 5 1/4" x 7 1/2", (13.3 X 9.5 cm.)
Weight: 2 lbs., (.9 Kg.)

AC-II: 30 Amp master breaker (15A or 50A* optional).
Panel size: 5 1/4" x 3 3/4" (13.3 X 9.5 cm.),
Weight: 1 lb (.5 Kg.)

*50A option rating note: OK for use on 230 VAC line-to-line systems. *Not* rated for 230 VAC line-to-neutral systems.



Typical AC Panel Wiring Diagram



Installation Cut-Out Dimensions

	Inches	Centimeters
AC-IX	4 X 6	10.2 X 15.2
AC-II	4 X 2.5	10.2 X 6.4

Alternate Circuit Breaker Amperage Ratings

Changing circuit breaker value mix or location for any panel shown on these pages is no problem! Simply advise us of the breaker arrangement you need. (Panel specific illustrated order forms listing all options are available at www.newmarpower.com.) Please allow 3-5 days additional lead time to complete the modification. *Note: There is a modification fee for special configurations – contact factory.*



AC Shore Power Accessories



GI-100

Galvanic Isolator

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

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

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

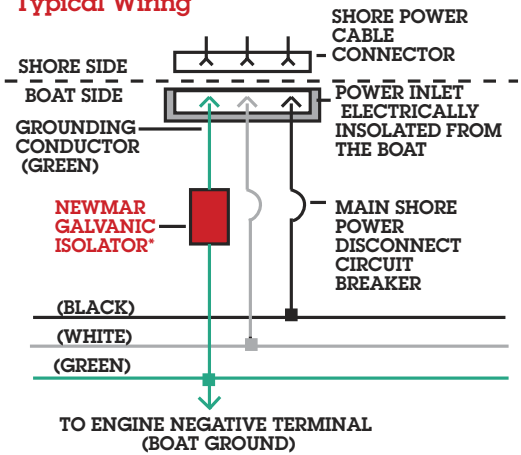
Three models are offered; rated for 30 amp, 50 amp or 100 amp shorepower.

Model	SHORE POWER VAC, Hz	Shore Power Rating, Amps	Dimensions			Weight		
			H	W	D	Lb.	Kg.	
GI-30	115/230, 50-60	30	2.7	4.8	7.3	in.	2.45	1.1
			6.9	12.2	18.5	cm.		
GI-50	115/230, 50-60	50	4.5	4.7	8.9	in.	3.2	1.5
			11.4	11.9	22.6	cm.		
GI-100*	115/230, 50-60	100	15	7.25	7.2	in.	13.35	6
			38.1	18.4	18.2	cm.		

*Special order item.
Allow 2-3 weeks for delivery



Typical Wiring

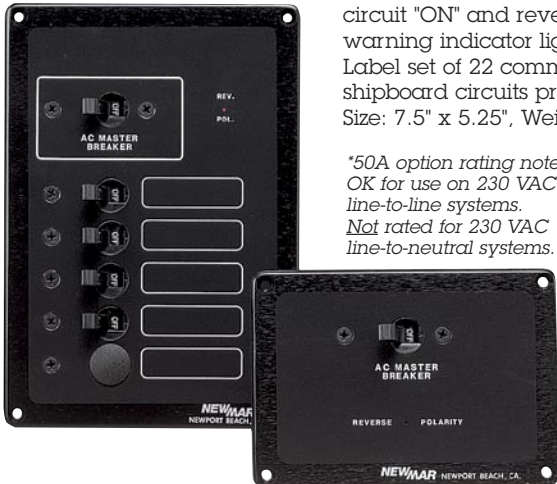


AC Panels

These panels provide essential control and protection for shore and on-board AC sources. Two pole breakers with single toggle provide maximum protection with easy fingertip disconnect. All models feature a reverse polarity warning.

AC-IX: 30 amp double pole master breaker (15A or 50A optional) plus 5 single pole branch capacity, 4 installed standard; 1-10A, 2-15A, 1-20A. Master and branch circuit "ON" and reverse polarity warning indicator lights installed. Label set of 22 common shipboard circuits provided. Size: 7.5" x 5.25", Weight: 2 lbs.

*50A option rating note:
OK for use on 230 VAC line-to-line systems.
Not rated for 230 VAC line-to-neutral systems.



light to provide clear indication when hot/neutral wiring is reversed and presents a shock hazard. Master and branch circuit breakers have power "ON" indicator lights. For 115 or 230 VAC applications.

AC-II: 30 amp double pole master breaker only (15A or 50A optional). Master AC circuit "ON" and reverse polarity warning indicator lights installed. Size: 3.75" x 5.25", Weight: 1 lb.

AC Source Selector Switches



Wide range of sizes and styles available. See page 23.