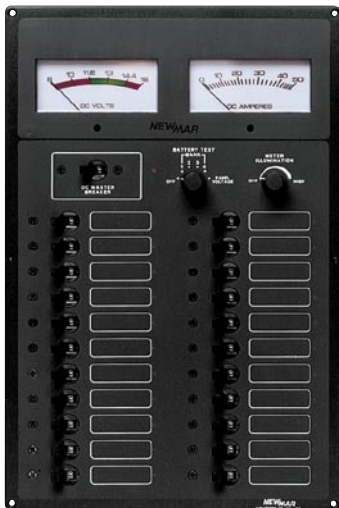


Electrical Panels



ES-1 DC Master Panel

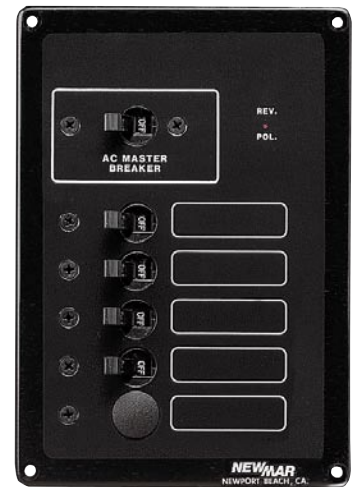
Features:

- 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.
- EV label set included.
- Size: 10"W x 15"H x 4" D, Weight 8 lbs., (3.6 Kg.)

ES-1

AC-IX Master Panel

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. EV label set provided. Size: 5 1/4" x 7 1/2", Weight: 2 lbs.



AC-IX



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.
- EV 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: 7lbs.

ES-6

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.
- EV label set included.
- Multiple position ground Bus Bar included.
- Size: 5 1/4"W x 15"H x 4"D, Weight 7 lbs., (3.2 Kg.)



ES-7

Standard Switches

An AC source selector switch is an essential item for any vehicles with an on-board AC generator and/or inverter. 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); custom engraving is available - contact factory.

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



SS-3.0

SS-7.5 INV

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

*May be configured as a 63 Amp, 4

† For Vehicles with on-board generator and inverter

** Custom plates available - contact factory



DC Power Onboard - Emergency & Specialty Vehicles

**CUSTOM DESIGN
PANELS AVAILABLE FOR
PRODUCTION VEHICLES
- SEND SPECIFICATIONS
FOR QUOTE**

Electrical Panels

AC-DC Master Control

Locating all AC and DC functions on one panel provides a vehicle with a central load distribution and monitoring center. Features common to all models on this page 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
- EV label set included.
- 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. Circuit specifications listed at bottom of page. 17" W X 12" H X 4" D 12 lbs



ES-4



Option

For vehicles 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.

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

Large command vehicles require an extraordinary panel which incorporates all the aspects of the 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 previous page). 20" W x 15" H x 6" D 20 Lbs.

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 8 S.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.</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.



DC Power Onboard - Emergency & Specialty Vehicles