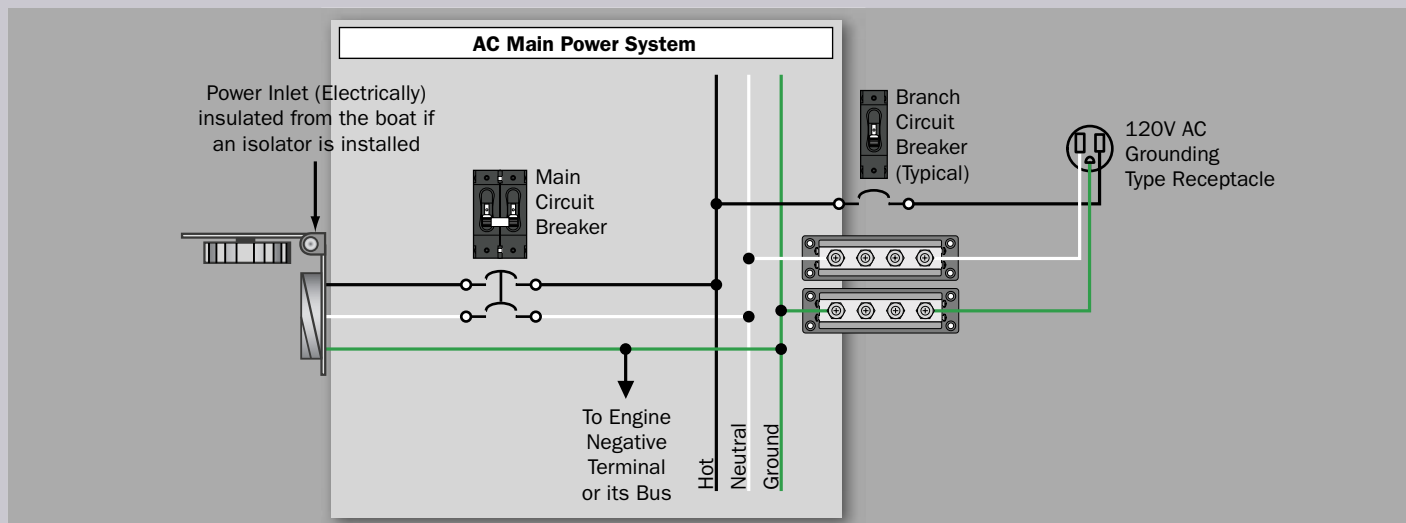


The AC Main Power System begins at the sources of AC power (Shore Power, Generator or Inverter). It ends at the Line terminal connection of the AC branch circuit breaker for the Hot wire and at the branch circuit connection block for the Neutral and Safety ground wires.



## Purpose

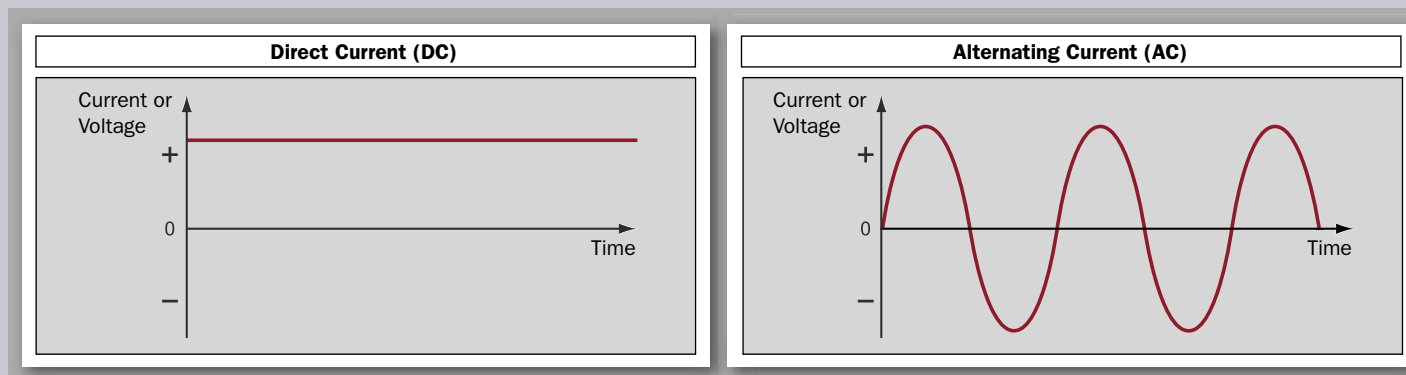
- Provide a path for delivering power from the ship's sources of AC power to the AC branch distribution system
- Provide a path for returning fault currents to ground via the green safety ground wire
- Provide galvanic Isolation in the green safety ground wire
- Provide a means for disconnecting AC power when the boat is not in use or in emergencies
- Provide electrical separation to insure that two sources of AC power are never connected
- Provide circuit protection for neutral and line wires in the AC main system
- Provide ground fault protection (See RCD in Glossary page 124) in European Systems

## System Configurations

Due to the nature of alternating current, the devices used to distribute AC power are frequently the same as the devices that perform AC circuit protection. Therefore, this section of the catalog contains both AC main distribution systems and AC main circuit protection, referred to collectively as AC main power systems. Before selecting components for an AC system, several important distinctions about AC power must be considered.

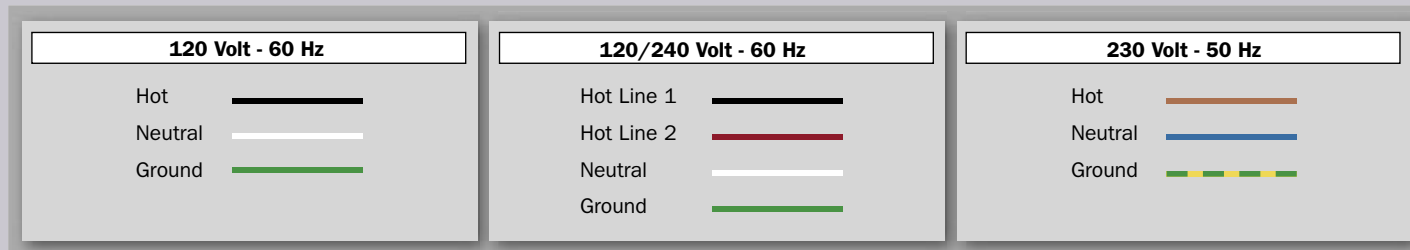
## Direct Current (DC) vs. Alternating Current (AC)

In DC systems current flow is in one direction - from the point of higher voltage (electrical pressure) to lower voltage. In AC systems the voltage reverses 60 times each second (50 times each second in Europe and other parts of the world), called "cycles" or "Hertz" (Hz). This voltage reversal also reverses the current flow and gives this type of power its name - Alternating Current (AC). Because of this alternating current and the higher voltages it uses, (120 and 240 Volts AC vs. 12 or 24 Volts DC) the wiring configurations and components for AC current are different than DC.



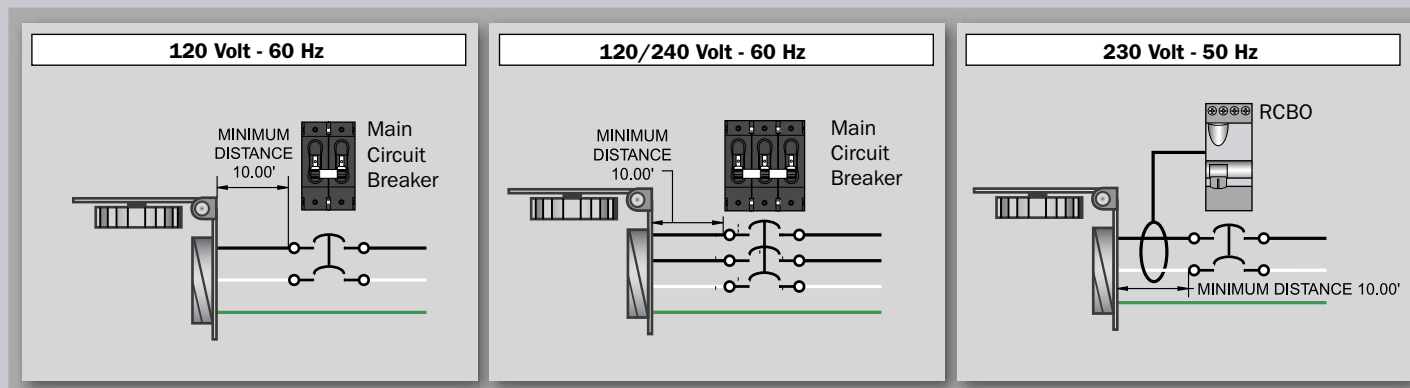
## AC Wire Systems

The three most common AC systems used on boats are shown below. In all cases the ground, sometimes called safety ground to clarify its purpose and differentiate it from the DC ground or negative, is said to be a “normally non-current carrying wire”. Its purpose is to provide the lowest resistance path for AC currents that have strayed from their proper containment in the normally current carrying hot and neutral wires. The ground wire is connected to the exterior conductive parts of AC devices that could be touched by a person during normal operation and conducts errant AC currents safely to ground rather than passing them through a human body. The ground wire is never passed through a switch or circuit breaker.



## Physical configuration of AC Main circuit breakers

Sources of AC power, whether shore power or on board generators and inverters, always have a circuit breaker near the power source. This circuit breaker is designated the AC main circuit breaker. The AC main circuit breaker always has a pole for each of the hot and neutral wires in the circuit assuring that circuit protection functions are not compromised in reverse polarity (see page 124) situations. The requirement stipulates that 120 Volt systems use a double pole main circuit breaker. Although not required by the ABYC Standards, three pole circuit breakers with the Neutral connected through the third pole are sometimes used on 120/240 Volt systems. In cases where the main circuit breaker is also used for source selection the Neutral must be switched to maintain the correct Neutral connection.



## Devices Qualifying as AC Main Circuit Breakers

In order to qualify as an AC main circuit breaker four primary characteristics must be present:

1. The circuit breaker must have an Ampere Interrupt Rating (AIC) meeting those requirements of the table below:

### Ampere Interrupt Rating - ABYC Table

AC Shore Power Source	Main Circuit Breaker	Branch Circuit Breaker
120V - 30A	3,000	3,000
120V - 50A	3,000	3,000
120/240V - 50A	5,000	3,000
240V - 50A	5,000	3,000

2. The circuit breaker must be multiple pole, usually 2 or 3 (see “AC Wire Systems” above).
3. The circuit breaker must be rated for the appropriate AC system voltage in which it will be used.
4. The circuit breaker must be available in amperages appropriate to the design amperage of the system.

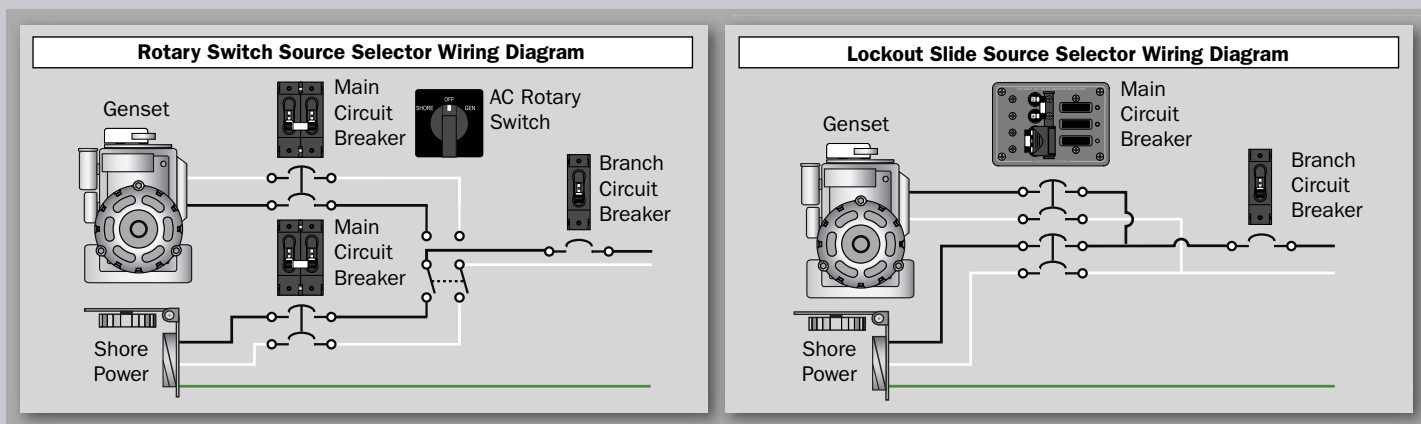
In the USA, this is generally 30 and 50 Amperes, while European systems are generally 16 and 32 Amperes.

European systems also require that a Residual Current Device (RCD) (see page 124) be installed on the entire AC system and this is generally implemented as Residual Current Breaker Overload (RCBO) (see page 124) device which incorporates a double pole circuit breaker and an RCD into a single device.

## AC Source Selectors

AC sources from shore power, generator sets, inverters, and isolation transformers must be switched in such a way that ensures only one AC source is connected and all other AC sources are completely disconnected. Hazards to personnel and damage to equipment can occur if sources are improperly connected to each other. A properly designed selector system will allow only the appropriate neutral and hot source conductors to connect to the load without allowing the system to supply power backwards to unused connections or sources. Neutrals and grounds are treated differently with on board sources than with shore power and the system must handle each accordingly.

In marine AC systems there are two common methods used to assure that two different AC sources are never connected to each other. AC Lockout Slides are devices that slide between circuit breaker handles and allow only 1 handle to be in the "ON" position at a time. Circuit breakers with properly configured slides can have different numbers of poles and different current ratings for each breaker. AC Rotary Switches use a switching mechanism to prevent connection of different AC sources. Each system has its advantages and disadvantages as shown below:



### Advantages

- Compact
- Can handle up to 4 sources
- More intuitive operation

### Disadvantage

- Expensive relative to lockout slides
- Requires additional circuit protection

### Advantages

- Integrates circuit protection and source selection into 1 unit
- Lower cost for both circuit protection and source selection
- Flexible configurations for dual shore cords

### Disadvantages

- Require more space
- Impractical for more than 3 sources

## Selecting AC Circuit Protection

### 1) Determine these two numbers:

- The amperage capacity of the smallest wire in the circuit to be protected. See the ABYC Ampacity Rating Table on page 28.
- The maximum continuous current that will flow in the circuit.

### 2) Consult the ABYC Interrupt Rating table on page 61 for the minimum Interrupt rating required for the application.

Limit the selection to a circuit breaker type that meets the interrupt capacity requirement.

### 3) Select a circuit breaker amperage rating that is:

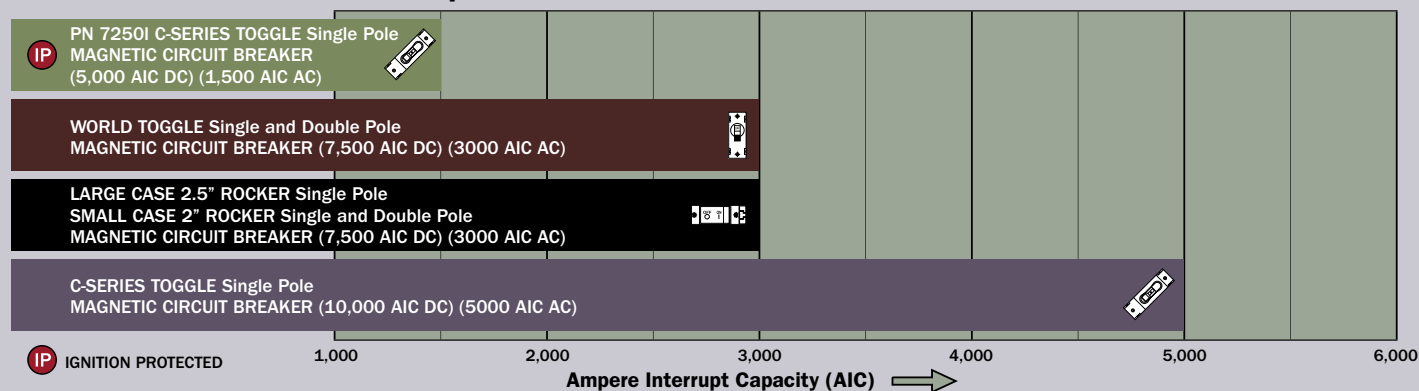
- Smaller than the amperage capacity of the smallest wire (from step 1a)
- Larger than the maximum continuous current that will flow in the circuit (from step 1b) It is recommended that the amperage rating be at the upper end of this range to allow for surge currents and increase in the number of devices on the circuit.

### 4) Verify that the voltage rating of the selected circuit breaker meets or exceeds the circuit voltage.

### 5) There are other issues that may be considered by reading ABYC E-11.12 Circuit Protection.

See [www.blueseasystems.com](http://www.blueseasystems.com) for ABYC Standards.

## Circuit Protection Device Comparison Table



### Single and Double Pole Toggle World Circuit Breakers

The World Circuit Breaker meets all American Boat and Yacht Council (ABYC) standards, is UL 1077 recognized, TUV certified, CE marked for Europe, and CSA certified for Canada.

- The industry standard circuit breaker for Blue Sea Systems electrical panels
- Combines switching and circuit protection into a single device
- Double pole used as 120/240 Volt AC branch circuit breakers to switch line 1 and line 2
- “Trip Free” design cannot be held “ON” during fault current condition
- For circuit breaker mounting panels (see page 87)

**Specifications**

Circuit Breaker Type	Magnetic Hydraulic - Trip free
Maximum Amperage	50 Amperes AC/DC
Maximum Voltage	277 Volts AC/65 Volts DC
Rated Switch Cycles	10,000 @ rated amperage and voltage
Delay	See <a href="http://www.blueseasea.com">www.blueseasea.com</a>
Weight	Single Pole 0.17Lb (0.08Kg) Double Pole 0.34Lb (0.15Kg)
Mounting screw	#6-32
Terminal screw	#10-32 SS with external tooth lockwasher

**CE marked**

7200



7233



**Interrupt Ratings** (see ABYC Interrupt rating Requirements page 62)

World Circuit Breakers - Single and Double Pole			
		UL 1077 - UL/CSA (US/Canada) <sup>1</sup>	EN60934 - TUV (Europe)
Voltage	Current	Interrupt Ratings	Interrupt Ratings
65V DC	5-50A	7,500A	1,500A
120V AC	5-50A	3,000A	1,500A
120/240V AC	10-50A	3,000A	1,500A
250V AC	10-50A	3,000A	1,500A

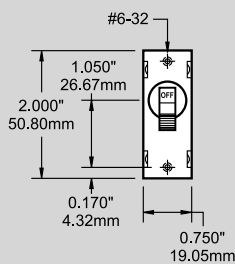
<sup>1</sup> UL Recognized

Single Pole		
PN	Color	Amperage
7200	Black	5A
7201	Red	5A
7202	White	5A
7347	Black	8A
7299	White	8A
7204	Black	10A
7205	Red	10A
7206	White	10A
7208	Black	15A
7209	Red	15A
7210	White	15A
7212	Black	20A
7213	Red	20A
7214	White	20A
7216	Black	25A
7217	Red	25A

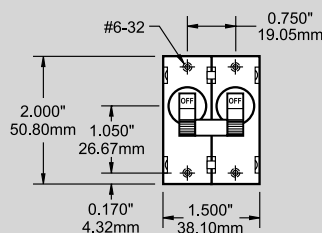
Single Pole		
PN	Color	Amperage
7218	White	25A
7220	Black	30A
7221	Red	30A
7222	White	30A
7224	Black	40A
7225	Red	40A
7226	White	40A
7228	Black	50A
7229	Red	50A
7230	White	50A

Double Pole		
PN	Color	Amperage
7232	Black	10A
7233	White	10A
7234	Black	15A
7235	White	15A
7348	Black	16A
7294	White	16A
7236	Black	20A
7260	White	20A
7237	Black	30A
7238	White	30A
7349	Black	32A
7295	White	32A
7239	Black	40A
7240	White	40A
7241	Black	50A
7242	White	50A

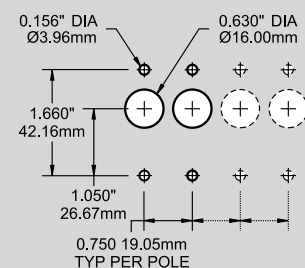
**NEW PRODUCT**



**Single Pole Toggle Circuit Breaker Dimensions**



**Double Pole Toggle Circuit Breaker Dimensions**



**Toggle Panel Cutout Detail**

## Single and Double Pole Small Case 2" Rocker Circuit Breakers

- Rocker actuator gives modern appearance to electrical distribution panels
- Dual color rocker gives clear visual indication of handle position
- Double pole used as 120/240 Volt AC branch circuit breakers to switch line 1 and line 2
- "Trip Free" design cannot be held "ON" during fault current condition

### Specifications

Circuit Breaker Type	Magnetic Hydraulic - Trip free
Maximum Amperage	See table below
Maximum Voltage	See table below
Rated Switch Cycles	10,000@rated amperage and voltage
Delay	See <a href="http://www.blueseas.com">www.blueseas.com</a>
Mounting screw	#6-32
Terminal screw	#10-32 SS with external tooth lockwasher
<b>CE marked</b>	



7300



7320

**AIRPAX**

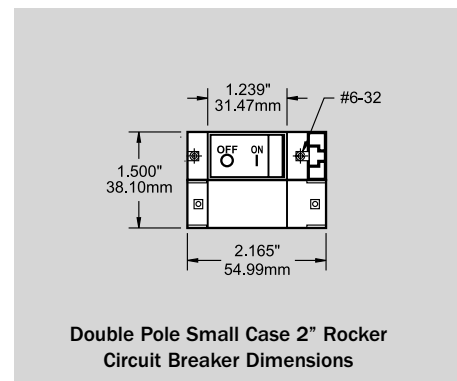
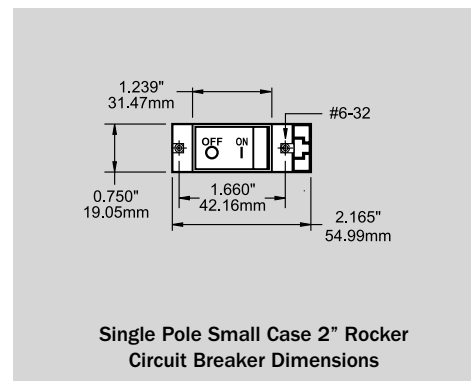
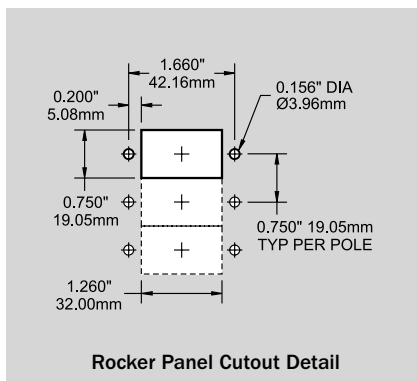
**Interrupt Ratings** (see ABYC Interrupt rating Requirements page 62)

Small Case Rocker Circuit Breakers - Single and Double Pole			
		UL 1077 - UL/CSA (US/Canada) <sup>1</sup>	EN60934 - VDE (Europe)
Voltage	Current	Interrupt Ratings	Interrupt Ratings
65V DC	5-50A	-	2,000A
80V DC	5-30A	-	4,000A
80V DC	5-50A	7,500A	-
125V AC	5-50A	3,000A	-
240V AC	5-50A	2,000A	-
250V AC	5-30A	2,000A	2,000A
250V AC	5-50A	-	2,000A

<sup>1</sup> UL Recognized

PN	Poles	Amperage	Weight Lb (Kg)	PN	Poles	Amperage	Weight Lb (Kg)
7300	1	5A	0.19 (0.09)	7320	2	10A	0.36 (0.16)
7301	1	8A	0.19 (0.09)	7321	2	15A	0.36 (0.16)
7302	1	10A	0.19 (0.09)	7322	2	16A	0.36 (0.16)
7303	1	15A	0.19 (0.09)	7323	2	20A	0.36 (0.16)
7304	1	20A	0.19 (0.09)	7324	2	30A	0.36 (0.16)
7305	1	25A	0.19 (0.09)	7325	2	32A	0.36 (0.16)
7306	1	30A	0.19 (0.09)	7326	2	40A	0.36 (0.16)
7307	1	40A	0.19 (0.09)	7327	2	50A	0.36 (0.16)
7308	1	50A	0.19 (0.09)	4110	-	Panel Plug Kit	-

AC MAIN POWER DISTRIBUTION AND CIRCUIT PROTECTION





7251



7287

### C-Series Double and Triple Pole Circuit Breakers

- 5,000 Ampere interrupt capacity to meet ABYC requirements for 120/240 Volt 50 Ampere main protection
- Double pole can be used as 120 Volt AC main circuit breaker to switch line 1 and line 2
- Triple pole can be used as 240 Volt AC main circuit breaker to switch line 1 and line 2
- Double and triple pole circuit breakers will trip all poles if any one pole trips
- "Trip Free" design cannot be held "ON" during fault current condition

#### Specifications

Circuit Breaker Type	Magnetic
Maximum Amperage	100 Amperes AC
Maximum Voltage	250 Volts AC
Delay	See <a href="http://www.blueseas.com">www.blueseas.com</a>

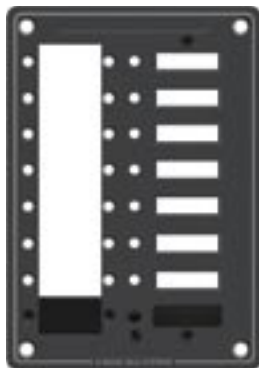
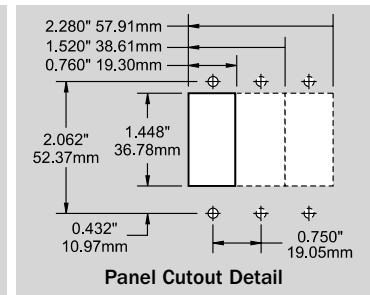
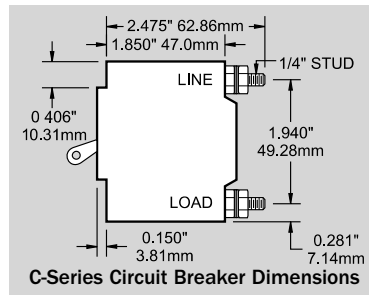
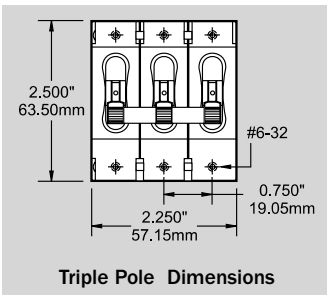
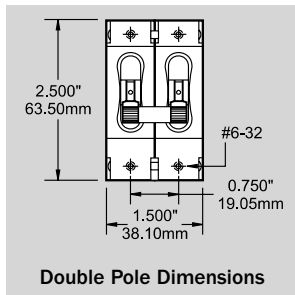
Interrupt Ratings (see ABYC Interrupt rating Requirements page 62)

C-Series Circuit Breakers - Double and Triple Pole			
		UL 1077 - UL/CSA (US/Canada) <sup>1</sup>	EN60934 - TUV (Europe)
Voltage	Current	Interrupt Ratings	Interrupt Ratings
125/250V AC	30-100A	5,000A	5,000A
250V AC	30-100A	5,000A	5,000A

<sup>1</sup> UL Recognized

► See page 74 for single pole C-Series Magnetic Circuit Breakers.

PN	Color	Poles	Amperage	Weight Lb (Kg)
7365	White	2	30A	0.56 (0.26)
7251	White	2	50A	0.56 (0.26)
7254	White	2	60A	0.56 (0.26)
7256	White	2	80A	0.56 (0.26)
7258	White	2	100A	0.56 (0.26)
7287	White	3	50A	0.93 (0.46)
7288	White	3	60A	0.93 (0.46)
7289	White	3	80A	0.93 (0.46)
7290	White	3	100A	0.93 (0.46)



8087



8088

### Magnetic Circuit Breaker Mounting Panels

- Designed for C-Series Magnetic Circuit Breakers (see above and page 32 and 74)
- Panel plugs can be inserted to fill blank positions
- Heavy 1/8" aluminum 5052 alloy
- Two-part polyurethane slate gray finish
- Accepts standard Blue Sea Systems backlightable labels (see pages 90-94)
- Accepts standard Blue Sea Systems "ON" indicating LEDs (see page 87)
- Industry standard height and width
- Optional Panel Plug Kit 8089 includes Circuit Breaker Mounting Screws, panel plug, LED plug, and blank label

PN	Description	Width in" (mm)	Height in"	Weight Lb (Kg)
8087	8 Position	5.25 (133.35)	7.50 (190.50)	0.40 (0.18)
8088	3 Position	5.25 (133.35)	3.75 (95.25)	0.28 (0.13)
8089	Panel Plug Kit	-	-	0.10 (0.04)

AC MAIN POWER DISTRIBUTION AND CIRCUIT PROTECTION



### AC Main Only Toggle Circuit Breaker Panels

- Red reverse polarity indicating LED
- Safety ground screw on panel back
- Combines switching and circuit protection into a single device
- “Trip Free” design cannot be held “ON” during fault current condition

**Specifications**

Circuit Breaker Type: Magnetic Hydraulic - Trip free  
 Panel Material: Heavy 1/8" aluminum 5052 alloy  
 Primary Finish: Mil-C-5541C or equivalent immersion undercoating for lifetime corrosion resistance  
 Final Panel Finish: 2-part polyurethane slate gray finish  
 Circuit Breakers: Double Pole AC/DC Magnetic Toggle Circuit Breaker (see pages 63 and 72)  
 Ratings: 65 Volts DC  
 277 Volts AC Maximum  
 Delay: See [www.blueseas.com](http://www.blueseas.com)  
 CE marked

▶ Available with a choice of white or black circuit breakers installed.

Main Only



8077/8079/8177\*/8179\*  
 3077/3079/3177\*/3179\*

\* 230 Volt (typical for European applications)

120 VOLT		AC Main Only Toggle Circuit Breaker Panels							
PN	PN	Description	Width in" (mm)	Height in" (mm)	Weight Lb (Kg)	Installed Double Pole Circuit Breakers			
						16A	30A	32A	50A
8077	3077	Main Only	2.63 (66.68)	3.75 (95.25)	0.51 (0.23)	-	1	-	-
8079	3079	Main Only	2.63 (66.68)	3.75 (95.25)	0.51 (0.23)	-	-	-	1

230 VOLT		AC Main Only Toggle Circuit Breaker Panels (Typical of Europe)							
PN	PN	Description	Width in" (mm)	Height in" (mm)	Weight Lb (Kg)	Installed Double Pole Circuit Breakers			
						16A	30A	32A	50A
8177	3177	Main Only	2.63 (66.68)	3.75 (95.25)	0.51 (0.23)	1	-	-	-
8179	3179	Main Only	2.63 (66.68)	3.75 (95.25)	0.51 (0.23)	-	-	1	-

▶ See page 76-83 For full selection of AC Circuit Breaker Panels.

### AC Main Only Rocker Circuit Breaker Panels

- Red reverse polarity indicating LED
- Safety ground screw on panel back
- Rocker actuator gives modern appearance to electrical distribution panels
- Dual color rocker gives clear visual indication of handle position
- “Trip Free” design cannot be held “ON” during fault current condition

**Specifications**

Circuit Breaker Type: Magnetic Hydraulic - Trip free  
 Panel Material: Heavy 1/8" aluminum 5052 alloy  
 Primary Finish: Mil-C-5541C or equivalent immersion undercoating for lifetime corrosion resistance  
 Final Panel Finish: 2-part polyurethane slate gray finish  
 Circuit Breakers: Double Pole AC/DC Magnetic Rocker Circuit Breaker (See pages 64 and 73)  
 Ratings: 65 Volts DC  
 277 Volts AC Maximum  
 Delay: See [www.blueseas.com](http://www.blueseas.com)  
 CE marked

Main Only



8604/8605/8606\*/8607\*

\* 230 Volt (typical for European applications)

120 VOLT		AC Main Only Rocker Circuit Breaker Panels							
PN	Description	Width in" (mm)	Height in" (mm)	Weight Lb (Kg)	Installed Double Pole Circuit Breakers				
					16A	30A	32A	50A	
8604	Main Only	3.75 (95.25)	2.63 (66.68)	0.51 (0.23)	-	1	-	-	
8605	Main Only	3.75 (95.25)	2.63 (66.68)	0.51 (0.23)	-	-	-	1	

230 VOLT		AC Main Only Rocker Circuit Breaker Panels (Typical of Europe)							
PN	Description	Width in" (mm)	Height in" (mm)	Weight Lb (Kg)	Installed Double Pole Circuit Breakers				
					16A	30A	32A	50A	
8606	Main Only	3.75 (95.25)	2.63 (66.68)	0.51 (0.23)	1	-	-	-	
8607	Main Only	3.75 (95.25)	2.63 (66.68)	0.51 (0.23)	-	-	1	-	

AC MAIN POWER DISTRIBUTION AND CIRCUIT PROTECTION

▶ Available with white or black circuit breakers installed.

### Source Selection Toggle Circuit Breaker Panels

- Provides source selection and circuit protection in one unit
- Pairs of double pole AC main circuit breakers with lockout slide
- All hot, neutral and safety ground buses installed, fully pre-wired
- Allows connecting one of multiple different AC sources to one circuit
- Prevents connecting both AC sources simultaneously
- Red reverse polarity LED indicators
- Green power available LED indicators
- Label backlighting pre-installed

2 Sources



8032/8061/8132\*/8161\*  
3032/3061/3132\*/3161\*

3 Sources - Horizontal



8498/8598\* 3498/3598\*

3 Sources - Vertical



8495/8595\* 3495/3595\*

\* 230 Volt  
(typical for European applications)

120 VOLT		AC Toggle Source Selection Panels							
PN	PN	Description	Height in" (mm)	Width in" (mm)	Weight Lb (Kg)	Installed Double Pole Circuit Breakers			
						16A	30A	32A	50A
8032	3032	2 Sources	3.75 (95.25)	5.25 (133.35)	1.84 (0.83)	-	2	-	-
8061	3061	2 Sources	3.75 (95.25)	5.25 (133.35)	1.84 (0.83)	-	-	-	2
8498	3498	3 Sources - Horizontal	4.50 (114.30)	10.50 (266.70)	3.68 (1.67)	-	3	-	1
8495	3495	3 Sources - Vertical	7.50 (190.50)	5.25 (133.35)	3.68 (1.67)	-	3	-	1

230 VOLT		AC Toggle Source Selection Panels (Typical of Europe)							
PN	PN	Description	Height in" (mm)	Width in" (mm)	Weight Lb (Kg)	Installed Double Pole Circuit Breakers			
						16A	30A	32A	50A
8132	3132	2 Sources	3.75 (95.25)	5.25 (133.35)	1.84 (0.83)	2	-	-	-
8161	3161	2 Sources	3.75 (95.25)	5.25 (133.35)	1.84 (0.83)	-	-	2	-
8598	3598	3 Sources - Horizontal	4.50 (114.30)	10.50 (266.70)	3.68 (1.67)	3	-	1	-
8595	3595	3 Sources - Vertical	7.50 (190.50)	5.25 (133.35)	3.68 (1.67)	3	-	1	-

▶ See pages 78, 79, 84 for full sized panels with embedded lockout systems.

2 Sources



8600/8602\*

\* 230 Volt (typical for European applications)

### Source Selection Rocker Circuit Breaker Panels

- Provides source selection and circuit protection in one unit
- Two double pole AC main circuit breakers with lockout slide
- All hot, neutral and safety ground buses installed, fully pre-wired
- Allows connecting one of two different AC sources to one circuit
- Prevents connecting both AC sources simultaneously
- Red reverse polarity LED indicator
- Green power available LED indicators
- Label backlighting pre-installed

120 VOLT		AC Rocker Source Selection Panels						
	Description	Height in" (mm)	Width in" (mm)	Weight Lb (Kg)	Installed Double Pole Circuit Breakers			
					16A	30A	32A	50A
8600	2 Sources	4.25 (107.95)	5.25 (133.35)	1.84 (0.83)	-	2	-	-

230 VOLT		AC Rocker Source Selection Panels (Typical of Europe)						
	Description	Height in" (mm)	Width in" (mm)	Weight Lb (Kg)	Installed Double Pole Circuit Breakers			
					16A	30A	32A	50A
8602	2 Sources	4.25 (107.95)	5.25 (133.35)	1.84 (0.83)	2	-	-	-

Specifications subject to change. See www.blueseas.com for current information.



### 32 Ampere 2 Positions + OFF, 2 Pole

#### Rotary Switch

- Switches 2 - 120 or 230 Volt AC Sources
- Compact solution when circuit protection is provided elsewhere
- Allows connecting one of two different AC sources to one circuit
- Mounts in panels up to 0.16" (4.00mm) thick
- Heavy duty industrial rated switch
- Intuitive function - One hand operation
- UL listed

#### Rotary Switch Panel

- **8367** Switches 2 - 120 Volt AC Sources
- **8359** Switches 2 - 230 Volt AC Sources
- Includes 9009 heavy duty industrial rated switch
- Two-part polyurethane slate gray finish
- Heavy 1/8" aluminum 5052 alloy
- Red reverse polarity LED indicators
- Green power available LED indicators

#### Specifications

Maximum Amperage 32 Amperes AC  
 Maximum Voltage 600 Volts AC

PN	Description	Voltage	Mounting Depth in" (mm)	Width in" (mm)	Height in" (mm)
9009	Rotary Switch	600V Max.	1.91 (48.60)	1.89 (48.00)	1.89 (48.00)
8367	Switch Panel	120V	1.91 (48.60)	5.25 (133.35)	3.75 (95.25)
8359	Switch Panel	230V	1.91 (48.60)	5.25 (133.35)	3.75 (95.25)



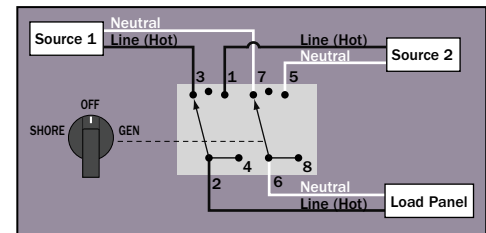
9009 Front



9009 Side



8367/8359



AC MAIN POWER DISTRIBUTION AND CIRCUIT PROTECTION

### 65 Ampere 2 Positions + OFF, 2 Pole

#### Rotary Switch

- Switches 2 - 120 or 230 Volt AC Sources
- Compact solution when circuit protection is provided elsewhere
- Allows connecting one of two different AC sources to one circuit
- Mounts in panels up to 0.16" (4.00mm) thick
- Heavy duty industrial rated switch
- Intuitive function - One hand operation
- UL listed

#### Rotary Switch Panel

- **8365** Switches 2 - 120 Volt AC Sources
- **8357** Switches 2 - 230 Volt AC Sources
- Includes 9011 heavy duty industrial rated switch
- Two-part polyurethane slate gray finish
- Heavy 1/8" aluminum 5052 alloy
- Red reverse polarity LED indicators
- Green power available LED indicators

#### Specifications

Maximum Amperage 65 Amperes AC  
 Maximum Voltage 600 Volts AC

PN	Description	Voltage	Mounting Depth in" (mm)	Width in" (mm)	Height in" (mm)
9011	Rotary Switch	600V Max.	2.41 (61.21)	2.52 (64.00)	2.52 (64.00)
8365	Switch Panel	120V	2.41 (61.21)	5.25 (133.35)	3.75 (95.25)
8357	Switch Panel	230V	2.41 (61.21)	5.25 (133.35)	3.75 (95.25)



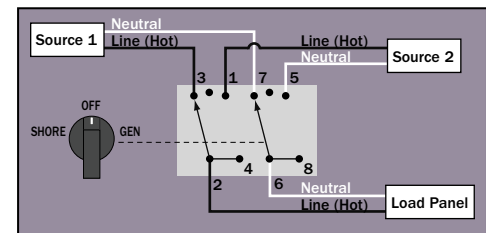
9011 Front



9011 Side



8365/8357





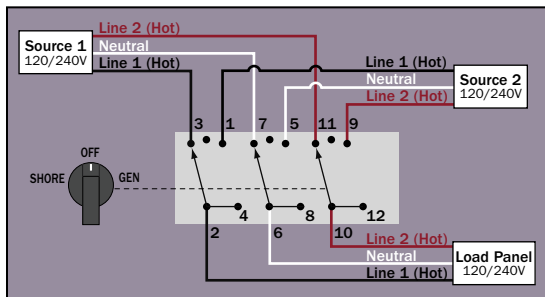
9019 Front



9019 Side



8363



### 65 Ampere 2 Positions + OFF, 3 Pole

#### Rotary Switch

- Switches 2 - 120/240 Volt AC Sources
- Switches both lines (hot) and neutral
- Compact solution when circuit protection is provided elsewhere
- Allows connecting one of two different AC sources to one circuit
- Mounts in panels up to 0.16" (4.00mm) thick
- Heavy duty industrial rated switch
- Intuitive function - One hand operation
- UL listed

#### Rotary Switch Panel

- Switches 2 - 120/240 Volt AC Sources
- Includes 9019 heavy duty industrial rated switch
- Two-part polyurethane slate gray finish
- Heavy 1/8" aluminum 5052 alloy
- Red reverse polarity LED indicators
- Green power available LED indicators

#### Specifications

Maximum Amperage 65 Amperes AC  
 Maximum Voltage 600 Volts AC

PN	Description	Voltage	Mounting Depth in" (mm)	Width in" (mm)	Height in" (mm)
9019	Rotary Switch	600V Max.	3.65 (92.78)	2.52 (64.00)	2.52 (64.00)
8363	Switch Panel	120/240V	3.65 (92.78)	5.25 (133.35)	3.75 (95.25)

**NEW PRODUCT**



6337 Front



6337 Side



9093 Front



9093 Side

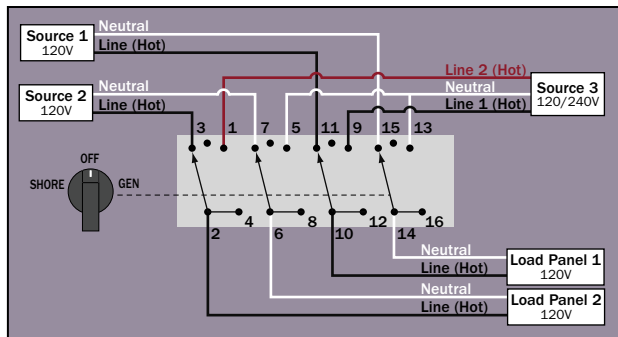
**NEW PRODUCT**



8386



8369



### 30 and 65 Ampere 2 Positions + OFF, 4 Pole

#### Rotary Switch

- Switches between 2 - 120 Volt AC shore power sources and 1 - 240 Volt AC source to 2 - 120 Volt AC load groups
- Switches both lines (hot) and neutral
- Compact solution when circuit protection is provided elsewhere
- Allows connecting one of two different AC sources to one circuit
- Mounts in panels up to 0.16" (4.00mm) thick
- Heavy duty industrial rated switch
- Intuitive function - One hand operation
- UL listed

#### Rotary Switch Panel

- Switches between 2 - 120 Volt AC shore power sources and 1 - 240 Volt AC source to 2 - 120 Volt AC load groups
- **8386** - Includes 6337 heavy duty industrial rated switch
- **8369** - Includes 9093 heavy duty industrial rated switch
- Two-part polyurethane slate gray finish
- Heavy 1/8" aluminum 5052 alloy
- Red reverse polarity LED indicators
- Green power available LED indicators

#### Specifications

Maximum Amperage **6337/8386** - 30 Amperes AC  
**9093/8369** - 65 Amperes AC  
 Maximum Voltage 600 Volts AC

PN	Description	Voltage	Mounting Depth in" (mm)	Width in" (mm)	Height in" (mm)
6337	Rotary Switch	600V Max.	2.98 (75.69)	1.89 (48.00)	1.89 (48.00)
9093	Rotary Switch	600V Max.	4.50 (114.30)	2.52 (64.00)	2.52 (64.00)
8386	Switch Panel	120V	2.98 (75.69)	5.25 (133.35)	3.75 (95.25)
8369	Switch Panel	120V	4.50 (114.30)	5.25 (133.35)	3.75 (95.25)

**NEW PRODUCT**

### 32 Ampere 3 Positions + OFF, 2 Pole

#### Rotary Switch

- Switches 3 - 120 or 230 Volt AC Sources
- Compact solution when circuit protection is provided elsewhere
- Allows connecting three different AC sources to one circuit
- Mounts in panels up to 0.16" (4.00mm) thick
- Heavy duty industrial rated switch
- Intuitive function - One hand operation
- UL listed



9010 Front



9010 Side

#### Rotary Switch Panel

- **8366** - Switches 3 - 120 Volt AC Sources
- **8358** - Switches 3 - 230 Volt AC Sources
- Includes 9010 heavy duty industrial rated switch
- Two-part polyurethane slate gray finish
- Heavy 1/8" aluminum 5052 alloy
- Red reverse polarity LED indicators
- Green power available LED indicators

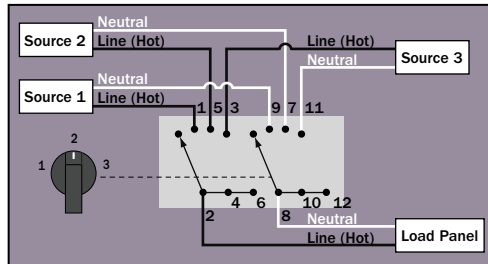


8366/8358

#### Specifications

Maximum Amperage 32 Amperes AC  
Maximum Voltage 600 Volts AC

PN	Description	Voltage	Mounting Depth in" (mm)	Width in" (mm)	Height in" (mm)
9010	Rotary Switch	600V Max.	2.41 (61.21)	1.89 (48.00)	1.89 (48.00)
8366	Switch Panel	120V	2.41 (61.21)	5.25 (133.35)	3.75 (95.25)
8358	Switch Panel	230V	2.41 (61.21)	5.25 (133.35)	3.75 (95.25)



### 65 Ampere 3 Positions + OFF, 3 Pole

#### Rotary Switch

- Switches 3 - 120/240 Volt AC Sources
- Switches both lines (hot) and neutral
- Compact solution when circuit protection is provided elsewhere
- Allows connecting one of three different AC sources to one circuit
- Mounts in panels up to 0.16" (4.00mm) thick
- Heavy duty industrial rated switch
- Intuitive function - One hand operation
- UL listed



9077 Front



9077 Side

#### Rotary Switch Panel

- Switches 3 - 120/240 Volt AC Sources
- Includes 9077 heavy duty industrial rated switch
- Two-part polyurethane slate gray finish
- Heavy 1/8" aluminum 5052 alloy
- Red reverse polarity LED indicators
- Green power available LED indicators



8361

#### Specifications

Maximum Amperage 65 Amperes AC  
Maximum Voltage 600 Volts AC

PN	Description	Voltage	Mounting Depth in" (mm)	Width in" (mm)	Height in" (mm)
9077	Rotary Switch	600V Max.	5.50 (139.70)	2.52 (64.00)	2.52 (64.00)
8361	Switch Panel	120/240V	5.50 (139.70)	5.25 (133.35)	3.75 (95.25)

