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How to Use This Catalog

The following icons are shown throughout this catalog to indicate features that are specific to a model:



- **24-hour circuits**
- Circuits 24 heures
- Circuitos de 24 horas
- Circuiti 24 h



- **Analog Ammeter**
- Ampèremètre analogique
- Amperímetro analógico
- Amperometro analogico



- **Analog Voltmeter**
- Voltmètre analogique
- Voltímetro analógico
- Amperometro analogico



- **Analog DIN Voltmeter**
- Voltmètre DIN analogique
- Voltímetro DIN analógico
- Voltmetro analogico DIN



- **Digital Multimeter**
- Multimètre numérique
- Multímetro digital
- Multimetro digitale

Regulatory icons are shown under the Regulatory heading:

66 • **IP66— withstands water from heavy seas**

- IP66—résiste à l'eau par grosse mer
- IP66—es resistente al agua de la mar gruesa
- IP66—resistente all'acqua del mare

67 • **IP67— temporary immersion for 30 minutes**

- IP67—Immersion temporaire pendant 30 minutes
- IP67—immersión temporal de 30 minutos
- IP67—resistente ad immersioni temporanee per 30 minuti

IP • **Meets ignition protection requirements**

- Répond aux exigences de protection contre l'inflammation
- Cumple con los requisitos de protección del encendido
- Conforme ai requisiti di protezione contro l'innescio

CE • **CE marked**

- Marqué CE
- Marcado CE
- Marchi CE

Tin-plated copper (250% more conductive than brass)

- Cuivre étamé (250% plus conducteur que le laiton)
- Cobre hojalatado (250% más conductivo que el latón)
- Rame stagnato (250% più conduttivo dell'ottone)

The camera icon is shown in the tables to indicate the products that are pictured:



- **Pictured products**
- Produits illustrés
- Imágenes de los productos
- Prodotti raffigurati

New and updated products are indicated by the following:

NEW

- **New products**
- Nouveaux produits
- Productos nuevos
- Nuovi prodotti

UPDATED

- **Updated products**
- Produits mis à jour
- Productos actualizados
- Prodotti aggiornati

The following Rating Symbols are shown throughout this catalog:

I_c

- **Amperage Continuous Rating**
- Ampérage continu
- Amperaje continuo
- Amperaggio continuo

I₁₀

- **Amperage Cranking Rating (10 Seconds)**
- Ampérage au lancement (10 secondes)
- Amperaje de potencia de rotación (10 segundos)
- Amperaggio alla rotazione del motorino di avviamento (10 secondi)

I₃

- **Amperage Intermittent Rating (3 Seconds)**
- Ampérage intermittent (3 secondes)
- Amperaje de potencia intermitente (3 segundos)
- Amperaggio intermittente (3 secondi)

I₃₀₀

- **Amperage Intermittent Rating (5 Minutes)**
- Ampérage intermittent (5 min.)
- Amperaje de potencia intermitente (5 min.)
- Amperaggio intermittente (5 min)

I_{ic}

- **Amperage Interrupting Capacity**
- Ampérage pouvoir de coupure
- Amperaje potencia de interrupción
- Amperaggio capacità di apertura

I_{mxo}

- **Amperage Maximum Operating**
- Ampérage maximum de fonctionnement
- Amperaje máximo de funcionamiento
- Amperaggio al funzionamento a pieno carico

I_{oc}

- **Amperage Operating Current**
- Courant de fonctionnement en ampères
- Corriente operativa de amperaje
- Amperaggio corrente operativ

I_{tr}

- **Amperage Trip Reference**
- Référence de déclenchement en ampères
- Referencia de disparo de amperaje
- Riferimento di attivazione amperaggio

C_s

- **Switching Cycles**
- Périodicité de démarrage
- Ciclos de commutación
- Cicli di commutazione

T_{mxo}

- **Temperature Maximum Operating**
- Température maximum de fonctionnement
- Temperatura máxima en funcionamiento
- Temperatura massima di esercizio

T_{mno}

- **Temperature Minimum Operating**
- Température minimum de fonctionnement
- Temperatura mínima en funcionamiento
- Temperatura minima di esercizio

V_{mxo}

- **Voltage Maximum Operating**
- Tension maximum de fonctionnement
- Voltaje máximo en funcionamiento
- Tensione massima di esercizio

V_{mno}

- **Voltage Minimum Operating**
- Tension minimum de fonctionnement
- Voltaje mínimo de funcionamiento
- Tensione minima di esercizio

• 24-hour circuits are “ON” all of the time

Circuits 24 heures allumés en permanence

Los circuitos de 24 horas están siempre “ENCENDIDOS”

I circuiti 24 h sono costantemente inseriti

• 24-hour circuits are connected directly to a battery bank

Circuits 24 heures branchés directement à un groupe de batteries

Los circuitos de 24 horas están directamente conectados a un conjunto de baterías

I circuiti 24 h sono direttamente collegati ad un gruppo di batterie

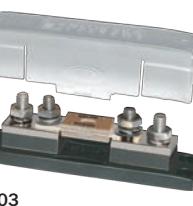
• 24-hour circuits are centrally located and labeled

Circuits 24 heures en position centrale et étiquetés

Los circuitos de 24 horas se encuentran en una zona céntrica y están etiquetados

I circuiti 24 h sono alleggiati centralmente ed etichettati

New Products

<p>Battery Management Panels Simultaneously switches two isolated battery banks</p> <p>360 PANEL SYSTEM—page 5, 7</p>	 <p>1141</p>	<p>Remote Control Panels Provides switching of up to three ML-Series Remote Battery Switches or ML-Series Automatic Charging Relays</p> <p>360 PANEL SYSTEM—page 8</p>	 <p>1147</p>
<p>Thermal Circuit Breaker Mounting Panels —185-Series —Medium Duty Push Button Reset-Only Provides a method of mounting medium to high-amperage thermal circuit breakers</p> <p>360 PANEL SYSTEM—page 9</p>	 <p>1477</p>	<p>Push Button Reset-Only Circuit Breaker and Rocker Switch Panels —with backlighting Provides circuit protection and switching in a compact and economical panel</p> <p>360 PANEL SYSTEM—pages 10–11</p>	 <p>1151</p>
<p>C-Series 240 Volt AC Circuit Breaker Panels Provides both source selection and circuit protection for boats with 240V AC systems</p> <p>360 PANEL SYSTEM—page 15</p>	 <p>1168</p>	<p>RCBO Mounting Panels Provides a method of mounting DIN Rail circuit breakers</p> <p>360 PANEL SYSTEM—page 15</p>	 <p>1174</p>
<p>E-Series and HD-Series Battery Switches —Selector (3 Position) Switches battery banks to all loads (No Combine Function)</p> <p>DC MAIN—page 27–28</p>	 <p>11001</p>	<p>ML-Series Heavy Duty Automatic Charging Relays (Magnetic Latching) —with manual control Automatically manages the charging of two large battery banks</p> <p>DC MAIN—page 36</p>	 <p>7623</p>
<p>ML-Series Remote Control Contura Switches Provides remote management of multiple battery bank switching and ACR control from a convenient location</p> <p>DC MAIN—page 37</p>	 <p>2145</p>	<p>Push Button Reset-Only Circuit Breakers—with screw terminals Provides economical circuit protection when switching is provided elsewhere</p> <p>DC MAIN—page 38</p>	 <p>2132</p>
<p>Medium Duty Push Button Reset-Only Circuit Breakers Provides medium duty circuit protection when switching is provided elsewhere</p> <p>DC MAIN—page 39</p>	 <p>2142</p>	<p>Terminal Fuse Block (MRBF) —double terminal Easily and economically satisfies the ABYC 7" circuit protection rule for circuit protection up to 300 Amps</p> <p>DC MAIN—page 44</p>	 <p>2151</p>
<p>ANL and Class T Fuse Blocks New, low cost design meets a wide range of fusing requirements for high-amperage loads</p> <p>DC MAIN—page 46, 47</p>	 <p>5503</p>	<p>WeatherDeck™ Waterproof Circuit Breaker Panels—8 position Provides push-to-reset circuit protection for open-cockpit and flybridge applications</p> <p>DC BRANCH—page 49</p>	 <p>4378</p>
<p>PowerBar Common BusBar Provides compact high-ampere busing with 3/8" terminal studs</p> <p>CONNECTORS—page 100</p>	 <p>2019</p>	<p>Seamless Copper Lugs, Splices, and Crimp Tool —Heavy Duty and Professional Duty Meets the demanding requirements of marine, industrial, and heavy-duty truck environments</p> <p>CONNECTORS—page 102</p>	 <p>2290</p>

360 Panel System

In response to customer requests for a more versatile panel, Blue Sea Systems has developed the 360 Panel System. This unique approach to panels offers significant advantages over traditional flat aluminum panels—flexibility, broadest range of functionality, and advanced design features. This panel system meets both the visual and functional demands of the most discerning boaters.



360 Panel System Table of Contents



DC MAIN

- Battery Management (pages 5–8)
- Power Distribution and Circuit Protection (page 9)



DC BRANCH

- Power Distribution and Circuit Protection (pages 10–13)



AC MAIN

- Source Selection (pages 14–15)
- Power Distribution and Circuit Protection (page 16)



AC BRANCH AND AC/DC

- Power Distribution and Circuit Protection (pages 16–17)



METERING, GAUGES, AND ACCESSORIES

- Metering (page 18)
- Gauges (page 19)
- Accessories (pages 20–21)



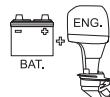
CUSTOM

- Custom Panels (pages 22–23)

Battery Management

Single Battery Bank Management Panels

ON-OFF Battery Switch combined with DC distribution provides control of key functions



Component References

- ON-OFF Battery Switch 6006200* (page 26)
- A-Series Flat Rocker Circuit Breakers (page 54)
- C-Series Flat Rocker Circuit Breakers (page 43)
- Push Button Reset-Only Circuit Breakers (page 38)
- ON-OFF (SPST) Rocker Switches (page 20)
- Square Format Label Set 4218 included* (pages 84–85)

Model Specific Features (see table below)

Backlit label positions

"ON" indicating LEDs installed in all circuit positions

24-hour circuits

Panel Specifications

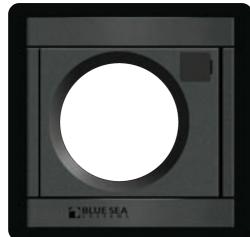
V_{mox}	Voltage Maximum Operating	See table below
I_{tr}	Amperage Trip Reference	See table below

Battery Switch Specifications

I_{10}	Cranking Rating: 10 sec.	1,500 Amps
I_{300}	Intermittent Rating: 5 min.	500 Amps
I_c	Continuous Rating	300 Amps



1400



1139



1140



1400



1401



1402



1403

PN	Specific Features	DC V_{mox}	Flat Rocker Circuit Breakers		Push Button Reset-Only Circuit Breakers		ON-OFF (SPST) Rocker Switches	Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
			C-Series	A-Series	MAIN 100A (I_{tr})	BRANCH 15A (I_{tr})					
1139	-	-	-	-	-	-	-	4.88 (123.83)	4.75 (120.65)	0.50 (0.23)	0.50 (0.23)
1140	-	48	-	-	-	-	-	4.88 (123.83)	4.75 (120.65)	2.50 (63.50)	1.15 (0.52)
1400		24	-	-	-	-	8	4.88 (123.83)	7.75 (196.85)	3.50 (88.90)	3.20 (81.28)
1401		12	-	-	-	4	-	4.88 (123.83)	7.75 (196.85)	3.50 (88.90)	3.20 (81.28)
1402		12	1	-	-	-	3	4.88 (123.83)	7.75 (196.85)	3.50 (88.90)	3.20 (81.28)
1403		12†	1	3	-	-	-	4.88 (123.83)	7.75 (196.85)	3.25 (82.55)	3.20 (81.28)

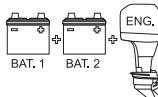
NEW

* Not included with 1139 | † Owner upgradable to 24 Volts DC with 4113, 12 to 24 Volt Conversion Kit (page 20)

Battery Management

Dual Battery Bank Management Panels

ON-OFF Battery Switches offer complete control of two battery banks



Features

- Isolates the Engine circuit from the House circuit
- Allows independent battery discharge
- Allows emergency cross connect between isolated battery banks
- Protects electronics from sags and spikes caused by engine cranking

Component References

- ON-OFF Battery Switch 6006200 (page 26)
- A-Series Flat Rocker Circuit Breakers (page 54)
- C-Series Flat Rocker Circuit Breakers (page 43)
- Square Format Label Set 4218 included (pages 84–85)

Model Specific Features See table below

Backlit label positions

“ON” indicating LEDs installed in all circuit positions

Panel Specifications

$V_{m\text{xo}}$ Voltage Maximum Operating See table below
 I_{tr} Amperage Trip Reference See table below

Battery Switch Specifications

I_{10} Cranking Rating: 10 sec. 1,500 Amps
 I_{300} Intermittent Rating: 5 min. 500 Amps
 I_c Continuous Rating 300 Amps



1404



1405



1405



1407



1406

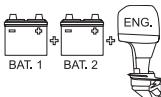
PN	Specific Features	DC $V_{m\text{xo}}$	C-Series Flat Rocker Circuit Breakers	A-Series Flat Rocker Circuit Breakers	Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
				MAIN 100A (I_{tr})				
1404		12*		1	3	13.63 (346.08)	4.75 (120.65)	3.50 (88.90)
1405		12*		1	3	4.88 (123.83)	10.75 (273.05)	3.50 (88.90)
1406	-	48		-	-	13.63 (346.08)	4.75 (120.65)	2.50 (63.50)
1407	-	48		-	-	4.88 (123.83)	10.75 (273.05)	2.50 (63.50)

* Owner upgradable to 24 Volts DC with 4113 - 12 to 24 Volt Conversion Kit (page 20)

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

Battery Management

Dual Battery Bank Management Panels



Dual Circuit Plus™ Battery Switch combined with DC distribution simplifies switching of two battery banks and provides control of key functions

Component References

- Dual Circuit Plus™ Battery Switch 6011200* (page 26)
- A-Series Flat Rocker Circuit Breakers (page 54)
- C-Series Flat Rocker Circuit Breakers (page 43)
- Push Button Reset-Only Circuit Breakers (page 38)
- ON-OFF (SPST) Rocker Switches (page 20)
- Square Format Label Set 4218 included* (pages 84–85)

Model Specific Features (see table below)

BL Backlit label positions

● “ON” indicating LEDs installed in all circuit positions

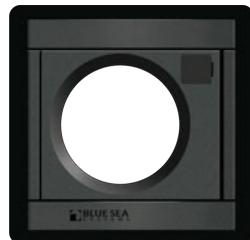
⌚ 24-hour circuits

Panel Specifications

V_{mxo}	Voltage Maximum Operating	See table below
I_{tr}	Amperage Trip Reference	See table below

Battery Switch Specifications

I₁₀	Cranking Rating: 10 sec.	1,000 Amps
I₃₀₀	Intermittent Rating: 5 min.	450 Amps
I_c	Continuous Rating:	300 Amps



1139



1141



1411



1408



1409



1410



1411

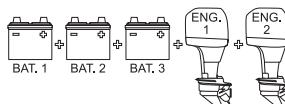
PN	Specific Features	DC V _{mxo}	C-Series Flat Rocker Circuit Breakers	A-Series Flat Rocker Circuit Breakers	Push Button Reset-Only Circuit Breakers		ON-OFF (SPST) Rocker Switches	Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
					MAIN 100A (I _{tr})	BRANCH 15A (I _{tr})					
1139	-	12	-	-	-	-	-	4.88 (123.83)	4.75 (120.65)	0.50 (12.70)	0.50 (0.23)
1141	-	32	-	-	-	-	-	4.88 (123.83)	4.75 (120.65)	2.50 (63.50)	1.30 (0.59)
1408	BL ⚡ ⌚	12	1	-	-	3	-	4.88 (123.83)	7.75 (196.85)	3.50 (88.90)	3.20 (1.45)
1409	BL ⚡	12†	1	3	-	-	-	4.88 (123.83)	7.75 (196.85)	3.25 (82.55)	3.20 (1.45)
1410	-	12	-	-	4	-	4	4.88 (123.83)	7.75 (196.85)	3.50 (88.90)	3.20 (1.45)
1411	BL ⌚	24	-	-	-	8	-	4.88 (123.83)	7.75 (196.85)	3.50 (88.90)	3.20 (1.45)

NEW

* Not included with 1139 | † Owner upgradable to 24 Volts DC with 4113 - 12 to 24 Volt Conversion Kit (page 20)

Battery Management

Triple Battery Bank Management Panel



Dual Circuit Plus™ Battery Switches simplify switching of three battery banks and combine DC functions into one compact panel

Features

- Allows independent battery discharge
- Allows emergency cross connect between isolated battery banks
- 24-hour circuits
- Backlit label positions
- "ON" indicating LEDs installed

Component References

- Dual Circuit Plus™ Battery Switches 6011200 (page 26)
- A-Series Flat Rocker Circuit Breakers (page 54)
- Push Button Reset-Only Circuit Breakers (page 38)
- Square Format Label Set 4218 included (pages 84–85)

Panel Specifications

V_{mxo} Voltage Maximum Operating

See table below

I_{tr} Amperage Trip Reference

See table below

Battery Switch Specifications

I₁₀ Cranking Rating: 10 sec.

1,000 Amps

I₃₀₀ Intermittent Rating: 5 min.

450 Amps

I_c Continuous Rating

300 Amps



1412

PN	DC V _{mxo}	A-Series Flat Rocker Circuit Breakers		Push Button Reset-Only Circuit Breakers	Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
		BRANCH 15A (I _{tr})	BRANCH 15A (I _{tr})					
1412	12*	4	8		9.25 (234.95)	7.75 (196.85)	3.50 (88.90)	6.12 (2.78)

Remote Control Panels

Provides switching of up to three ML-Series Remote Battery Switches or ML-Series Automatic Charging Relays

- Lockout slides reduce the risk of accidental switching
- 1147 for use with two ML-Series Switches (pages 32–33) and one ML-Series Automatic Charging Relay (page 36)
- 1148 for use with ML-Series Switches (pages 32–33)
- Includes labels illustrated only
- Over 500 individual labels available (pages 86–87)

Component Reference

- ML-Series Remote Control Contura Switches (page 37)

Specifications

V_{mxo} Voltage Maximum Operating See table below



1147

PN	Included Switch PN	DC V _{mxo}	Function		Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
			Battery Banks	ACR				
2147	2145/2146	24	2	1	4.88 (123.83)	4.75 (120.65)	2.00 (50.80)	1.10 (0.50)
2148	2145	24	3	-	4.88 (123.83)	4.75 (120.65)	2.00 (50.80)	1.10 (0.50)



1148

* Owner upgradable to 24 Volts DC with 4113, 12 to 24 Volt Conversion Kit (page 20)

Power Distribution and Circuit Protection

Thermal Circuit Breaker Mounting Panels

Provides an easy method for mounting medium and high amperage thermal circuit breakers

Component References

- Medium Duty Push Button Reset-Only Circuit Breakers (page 39)
- 185-Series Circuit Breakers (page 40)



1150 (circuit breakers not included)



1477 (circuit breaker not included)

PN	Accepts Medium Duty Push Button Reset-Only Circuit Breakers	Accepts Panel Mount 185-Series Circuit Breakers	Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
1149	1	-	4.88 (123.83)	4.75 (120.65)	0.50 (12.70)	0.60 (0.27)
1150	2	-	4.88 (123.83)	4.75 (120.65)	0.50 (12.70)	0.60 (0.27)
1477	-	1	4.88 (123.83)	4.75 (120.65)	0.50 (12.70)	0.50 (0.23)

NEW

High-Amp C-Series Circuit Breaker Panels

Provides over current protection for loads up to 300 Amperes, such as bow thrusters and anchor windlasses

Features

- Can function as a Main power switch
- Backlit label positions
- "ON" indicating LEDs installed

Component References

- C-Series Flat Rocker Circuit Breakers (page 43)
- Square Format Label Set 4218 included (pages 84–85)

Specifications

V _{mxo}	Voltage Maximum Operating	See table below
I _{tr}	Amperage Trip Reference	See table below



1490



1491



1492



1493

PN	Poles	DC V _{mxo}	C-Series Flat Rocker Circuit Breakers				Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
			MAIN 50A (I _{tr})	MAIN 150A (I _{tr})	MAIN 200A (I _{tr})	MAIN 300A (I _{tr})				
1490	1	12*	1	-	-	-	4.88 (123.83)	4.75 (120.65)	3.00 (76.20)	1.20 (0.54)
1491	2	12*	-	1	-	-	4.88 (123.83)	4.75 (120.65)	3.00 (76.20)	1.50 (0.68)
1492	2	12*	-	-	1	-	4.88 (123.83)	4.75 (120.65)	3.00 (76.20)	1.50 (0.68)
1493	3	12*	-	-	-	1	4.88 (123.83)	4.75 (120.65)	3.00 (76.20)	1.80 (0.82)

* Owner upgradable to 24 Volts DC with 4113 - 12 to 24 Volt Conversion Kit (page 20)

Power Distribution and Circuit Protection

Push Button Reset-Only Branch Circuit Breaker Panels

Provides an economical solution for 24-hour circuit protection or circuits that are switched elsewhere

Features

- Backlit label positions
- 24-hour circuits



1450



1452



1454



1451



1453

Component References

- Push Button Reset-Only Circuit Breakers (page 38)
- Square Format Label Set 4205 included (pages 84–85)

Specifications

- V_{mxo} Voltage Maximum Operating See table below
 I_{tr} Amperage Trip Reference See table below

PN	DC V_{mxo}	Push Button Reset-Only Circuit Breakers		Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
		BRANCH 15A (I_{tr})					
1450	24	8	4.88 (123.83)	4.75 (120.65)	3.50 (88.90)	1.30 (0.60)	
1451	24	16	9.25 (234.95)	4.75 (120.65)	3.50 (88.90)	3.50 (1.60)	
1452	24	16	4.88 (123.83)	7.75 (196.85)	3.50 (88.90)	2.50 (1.13)	
1453	24	24	13.63 (346.08)	4.75 (120.65)	3.50 (88.90)	4.50 (2.04)	
1454	24	24	4.88 (123.83)	10.75 (273.05)	3.50 (88.90)	4.20 (1.91)	

Push Button Reset-Only Branch Circuit Breaker and Rocker Switch Panels

Provides circuit protection and switching in a compact and economical panel

Features

- Panels with meters include a toggle switch to monitor voltage on up to three battery banks
- Available with or without label backlighting

Component References

- ON-OFF (SPST) Rocker Switches (page 20)
- Square Format Label Set 4205 included (pages 84–85)
- Push Button Reset-Only Circuit Breakers (page 38)

Model Specific Features (see table to right)

- Analog Voltmeter (page 90)
- Analog Ammeter (page 90)
- Backlit label positions—select models only
- Circuit labels are not backlit (page 20)

Specifications

- V_{mxo} Voltage Maximum Operating See table to right
 I_{tr} Amperage Trip Reference See table to right



1151*/1455



1152*/1460



1153/1462*



1154*/1456



1155*/1459



1156*/1457



1157*/1468

* Circuit label positions are backlit

Power Distribution and Circuit Protection



1158*/1458



1159*/1464



1160*/1466



1161*/1469



1162*/1470



1163*/1465



1164*/1463



1165*/1461



1166*/1471



1167*/1467

PN*	PN	Specific Features 	DC V _{mxxo}	Push Button Circuit Breakers		ON-OFF (SPST) Rocker Switches	Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
				BRANCH 10A (I _{tr})	4					
1151*	1455	-	12	4	4	4.88 (123.83)	4.75 (120.65)	3.50 (88.90)	1.20 (0.54)	
1158*	1458	8-16V/8003	12	4	4	9.25 (234.95)	4.75 (120.65)	3.50 (88.90)	2.90 (1.32)	
1155*	1459	8-16V/8003	12	4	4	4.88 (123.83)	7.75 (196.85)	3.50 (88.90)	2.40 (1.09)	
1154*	1456	-	12	8	8	9.25 (234.95)	4.75 (120.65)	3.50 (88.90)	3.00 (1.36)	
1156*	1457	-	12	8	8	4.88 (123.83)	7.75 (196.85)	3.50 (88.90)	2.40 (1.09)	
1153*	1462	8-16V/8003	12	8	8	13.63 (346.08)	4.75 (120.65)	3.50 (88.90)	3.60 (1.63)	
1164*	1463	8-16V/8003	12	8	8	4.88 (123.83)	10.75 (273.05)	3.50 (88.90)	3.30 (1.50)	
1152*	1460	-	12	12	12	13.63 (346.08)	4.75 (120.65)	3.50 (88.90)	3.90 (1.77)	
1165*	1461	-	12	12	12	4.88 (123.83)	10.75 (273.05)	3.50 (88.90)	3.50 (1.59)	
1159*	1464	8-16V/8003	12	12	12	9.25 (234.95)	7.75 (196.85)	3.50 (88.90)	4.40 (2.00)	
1163*	1465	-	12	16	16	9.25 (234.95)	7.75 (196.85)	3.50 (88.90)	4.50 (2.04)	
1160*	1466	8-16V/8003 0-50A/8022	12	16	16	13.63 (346.08)	7.75 (196.85)	3.50 (88.90)	5.70 (2.59)	
1167*	1467	8-16V/8003 0-50A/8022	12	16	16	9.25 (234.95)	10.75 (273.05)	3.50 (88.90)	5.30 (2.40)	
1162*	1470	8-16V/8003	12	20	20	13.63 (346.08)	7.75 (196.85)	3.50 (88.90)	5.80 (2.63)	
1166*	1471	8-16V/8003	12	20	20	9.25 (234.95)	10.75 (273.05)	3.50 (88.90)	5.70 (2.59)	
1157*	1468	-	12	24	24	13.63 (346.08)	7.75 (196.85)	3.50 (88.90)	6.00 (2.72)	
1161*	1469	-	12	24	24	9.25 (234.95)	10.75 (273.05)	3.50 (88.90)	5.70 (2.59)	

NEW

* Circuit label positions are backlit

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

Power Distribution and Circuit Protection

12 Volt Main and Branch Circuit Breaker Panels

Toggle or rocker circuit breakers provide DC Branch circuit protection and switching

Features

- “ON” indicating LEDs installed in all circuit positions
- Backlit label positions
- Panels with meters include toggle switch to monitor voltage or up to three battery banks
- Available with Flat Rocker or Black Toggle Circuit Breakers
- Owner upgradable to 24 Volts DC with 4113 - 12 to 24 Volt Conversion Kit (page 20)

Component References

- A-Series Flat Rocker and Black Toggle Circuit Breakers (page 54)
- C-Series Flat Rocker Circuit Breakers (page 43)
- Square Format Label Set 4205 included (pages 84–85)

Model Specific Features (see table to right)

-  Analog Voltmeter and  Analog Ammeter (pages 90–91)
 Digital Multimeter (pages 92–93)

Specifications

V_{mox} Voltage Maximum Operating
I_{tr} Amperage Trip Reference

See table to right
See table to right



1216/1116*



1225/1125*



1200/1100*



1222/1122*



1220/1120*



1224/1124*



1201/1101*



1217/1117*



1221

* Toggle actuator model not shown

Power Distribution and Circuit Protection



1223/1123*



1227/1127*



1226



1121



1126

Rocker Panel PN	Toggle Panel PN	DC V _{mxo}	Specific Features	C-Series Circuit Breakers	A-Series Circuit Breakers	Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
				METERS DC Function/PN	MAIN 100A (I _{tr})				
1216	1116	12	-	-	4	4.88 (123.83)	4.75 (120.65)	3.00 (76.20)	1.30 (0.59) 1.30 (0.59)
1200	1100	12	-	-	8	4.88 (123.83)	7.75 (196.85)	3.00 (76.20)	2.70 (1.22) 2.40 (1.09)
1225	1125	12	-	-	8	9.25 (234.95)	4.75 (120.65)	3.00 (76.20)	3.76 (1.71) 3.76 (1.71)
1224	1124	12 [†]	8-16V/8003 A 0-50A/8022	-	8	9.25 (234.95)	7.75 (196.85)	3.00 (76.20)	6.12 (2.78) 5.70 (2.59)
1227	1127	12	I _{2.5} M Digital Multimeter/8248	-	8	4.88 (123.83)	10.75 (273.05)	4.00 (101.60)	4.94 (2.24) 4.90 (2.22)
1223	1123	12	-	-	12	4.88 (123.83)	10.75 (273.05)	3.00 (76.20)	4.94 (2.24) 5.30 (2.40)
1217	1117	12	I _{2.5} M Digital Multimeter/8248	-	12	9.25 (234.95)	7.75 (196.85)	4.00 (101.60)	6.12 (2.78) 6.10 (2.77)
1222	1122	12	-	-	16	9.25 (234.95)	7.75 (196.85)	3.00 (76.20)	6.12 (2.78) 6.20 (2.81)
1201	1101	12 [†]	8-16V/8003 A 0-50A/8022	-	16	13.63 (346.08)	7.75 (196.85)	3.00 (76.20)	7.80 (3.54) 7.80 (3.54)
1221	-	12	I _{2.5} M Digital Multimeter/8248	1	19	13.63 (346.08)	7.75 (196.85)	4.00 (101.60)	10.08 (4.57) -
-	1121	12	I _{2.5} M Digital Multimeter/8248	-	20	13.63 (346.08)	7.75 (196.85)	4.00 (101.60)	- 8.60 (3.90)
1220	1120	12	-	-	24	13.63 (346.08)	7.75 (196.85)	3.00 (76.20)	10.08 (4.57) 8.80 (3.99)
1226	-	12	I _{2.5} M Digital Multimeter/8248	1	31	13.63 (346.08)	10.75 (273.05)	4.00 (101.60)	13.62 (6.18) -
-	1126	12	I _{2.5} M Digital Multimeter/8248	-	32	13.63 (346.08)	10.75 (273.05)	4.00 (101.60)	- 12.00 (5.44)

* Toggle actuator model not shown | † Owner upgradable to 24 Volts with 8240 - 18-32V DC Analog Voltmeter (page 90) in addition to 4113 - 12 to 24 Volt Conversion Kit (page 20)

Source Selection and Circuit Protection

Rotary Switch Source Selection Panels

Provides a compact and intuitive solution for safely managing multiple AC sources

Features

- Backlit label positions
- Red "Reverse Polarity" LEDs installed
- Green "Power Available" LEDs installed

Component Reference

- Rotary Switch Source Selectors (pages 66–68)

Specifications

V_{mxo}	Voltage Maximum Operating	See table below
I_{mxo}	Amperage Maximum Operating	See table below



1481/1484



1486/1483/1487



1489/1480



1482/1485/1488

Panel PN	Included Rotary Switch PN	Function		AC V_{mxo}	AC I_{mxo}	Maximum Wire Size (AWG)	Minimum Wire Size (AWG)	Width in (mm)	Height in (mm)	Depth in (mm)	Panel Weight lb (kg)
		Sources	Poles								
1481	9009	2	2	120	30	10	14	4.88 (123.83)	4.75 (120.65)	1.91 (48.51)	1.20 (0.54)
1483	9011	2	2	120	65	6	12	4.88 (123.83)	4.75 (120.65)	2.41 (61.21)	3.50 (1.59)
1482	9010	3	2	120	30	10	14	4.88 (123.83)	4.75 (120.65)	2.41 (61.21)	1.20 (0.54)
1484	9009	2	2	230†	30	10	14	4.88 (123.83)	4.75 (120.65)	1.91 (48.51)	1.20 (0.54)
1486	9011	2	2	230†	65	6	12	4.88 (123.83)	4.75 (120.65)	2.41 (61.21)	3.50 (1.59)
1485	9010	3	2	230†	30	10	14	4.88 (123.83)	4.75 (120.65)	2.41 (61.21)	1.20 (0.54)
1487	9019	2	3	240	65	6	12	4.88 (123.83)	4.75 (120.65)	3.65 (92.71)	3.50 (1.59)
1489	6337	2	4	240	30	10	14	4.88 (123.83)	4.75 (120.65)	2.98 (75.69)	1.20 (0.54)
1480	9093	2	4	240	65	6	12	4.88 (123.83)	4.75 (120.65)	4.50 (114.30)	3.50 (1.59)
1488	9077	3	3	240	65	6	12	4.88 (123.83)	4.75 (120.65)	5.50 (139.70)	3.50 (1.59)

A-Series Circuit Breaker Source Selection Panels

Provides both source selection and circuit protection for multiple AC sources

Features

- Backlit label positions
- Red "Reverse Polarity" LEDs installed
- Green "Power Available" LEDs installed
- Lockout slides prevent connecting multiple AC sources simultaneously

Component References

- A-Series Black Toggle Circuit Breakers (page 60)
- A-Series Raised Rocker Circuit Breakers (page 61)
- Square Format Label Set 4206 included (pages 84–85)

Specifications

V_{mxo}	Voltage Maximum Operating	See table below
I_{tr}	Amperage Trip Reference	See table below



1208/1231



1131/1108



1209†/1232†



1132†/1109†

Rocker Panel PN	Toggle Panel PN	AC V_{mxo}	A-Series Circuit Breakers				Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
			MAIN 16A (I_{tr})	MAIN 30A (I_{tr})	MAIN 32A (I_{tr})	MAIN 50A (I_{tr})				
1208	1108	120	-	2	-	-	4.88 (123.83)	4.75 (120.65)	3.00 (76.20)	1.30 (0.59) 1.30 (0.59)
1231	1131	120	-	-	-	2	4.88 (123.83)	4.75 (120.65)	3.00 (76.20)	1.30 (0.59) 1.30 (0.59)
1209	1109	230†	2	-	-	-	4.88 (123.83)	4.75 (120.65)	3.00 (76.20)	1.30 (0.59) 1.30 (0.59)
1232	1132	230†	-	-	2	-	4.88 (123.83)	4.75 (120.65)	3.00 (76.20)	1.30 (0.59) 1.30 (0.59)

† 230 Volt (typical of Europe)

Source Selection and Circuit Protection

C-Series 240 Volt AC Circuit Breaker Panels

Provides both source selection and circuit protection for boats with 240 Volt AC systems

Features

- Flexible 360 Panel System configuration provides spare rocker apertures which may be used for single-pole 120 Volt AC or double-pole 240 Volt AC Branch circuits
- Source Selection Panels include lockout slides to prevent connecting two AC sources simultaneously

Component References

- C-Series Raised Rocker Circuit Breakers—tripole (page 63)
- C-Series Flat Rocker Circuit Breakers—tripole (page 43)
- Square Format Label Set 4206 included (pages 84–85)

Model Specific Features (see table below)

Analog DIN Voltmeter (page 89)

Digital Multimeter (page 93)

Specifications

V_{mxo} Voltage Maximum Operating See table below
I_{tr} Amperage Trip Reference See table below



1168



1169



1172

PN	Description	AC V _{mxo}	Specific Features	C-Series Flat Rocker Circuit Breakers		C-Series Raised Rocker Circuit Breakers		Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
				MAIN 50A (I _{tr})	MAIN 50A (I _{tr})	MAIN 50A (I _{tr})	MAIN 50A (I _{tr})				
1168	Main	240	-	1	-	-	-	4.88 (123.83)	4.75 (120.65)	3.00 (76.20)	1.80 (0.82)
1169	Main	240	0–250V/1057	1	-	-	-	4.88 (123.83)	13.75 (349.25)	3.00 (76.20)	4.90 (2.22)
1170	Main	240	M Digital Multimeter/8247	1	-	-	-	4.88 (123.83)	13.75 (349.25)	4.00 (101.60)	5.35 (2.43)
1171	Source Selection	240	0–250V/1057	-	-	2	2	4.88 (123.83)	13.75 (349.25)	3.00 (76.20)	7.20 (3.26)
1172	Source Selection	240	M Digital Multimeter/8247	-	-	2	2	4.88 (123.83)	13.75 (349.25)	4.00 (101.60)	7.65 (3.47)

Residual Current Circuit Breaker (RCBO) Panels

Reduces the risk of fire and shock hazards caused by defects in boat appliances and circuit wiring

Features

- Backlit label positions*
- "ON" indicating LED*

Component References

- Residual Current Circuit Breakers* (page 63)

Specifications

V_{mxo} Voltage Maximum Operating See table below

I_{tr} Amperage Trip Reference See table below



1173† (circuit breaker not included)



1174† (circuit breaker not included)



1500



1502

PN	DIN Rail Apertures	Poles	AC V _{mxo}	GFCI	ELCI	Leakage Trip Amperage	Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
				BRANCH 15A (I _{tr})	MAIN 30A (I _{tr})					
1173	1	-	-	-	-	-	4.88 (123.83)	4.75 (120.65)	0.50 (12.70)	0.70 (0.32)
1174	2	-	-	-	-	-	4.88 (123.83)	4.75 (120.65)	0.50 (12.70)	0.70 (0.32)
1500	-	1	120	1	-	5mA	4.88 (123.83)	4.75 (120.65)	3.02 (76.71)	0.93 (0.42)
1502	-	2	120	-	1	30mA	4.88 (123.83)	4.75 (120.65)	3.02 (76.71)	1.10 (0.50)

NEW

* Not included with 1173 or 1174 | † DIN Rail mounting bracket included

Power Distribution and Circuit Protection

A-Series Main and Branch Circuit Breaker Panels

Toggle or rocker circuit breakers provide AC Main or AC Branch circuit protection and switching

Features

- Backlit label positions
- “ON” indicating LEDs installed in all circuit positions
- Panels with AC Main include “REVERSE POLARITY” LED

Model Specific Feature (see table below)

Analog Voltmeter (page 91)

Component References

- A-Series Black Toggle Circuit Breakers (pages 60, 72)
- A-Series Flat Rocker Circuit Breakers (pages 61, 73)
- Square Format Label Set 4206 included (pages 84–85)

Specifications

V_{mxo} Voltage Maximum Operating

See table below

I_{tr} Amperage Trip Reference

See table below



1210/1211[†]



1214/1215[†]/1114/1115[†]



1230/1233[†]



1228/1229[†]



1202/1203[†]/1102/1103[†]



1206/1207[†]/1106/1107[†]



1128/1129[†]



1110/1111[†]



1130/1133[†]

Rocker Panel PN	Toggle Panel PN	Specific Feature	AC V_{mxo}	A-Series Circuit Breakers				Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
				MAIN 16A (I_{tr})	MAIN 30A (I_{tr})	BRANCH 8A (I_{tr})	BRANCH 15A (I_{tr})				
1210	1110	-	120	-	-	-	4	4.88 (123.83)	4.75 (120.65)	3.00 (76.20)	1.30 (0.59) 1.30 (0.59)
1228	1128	-	120	-	-	-	8	4.88 (123.83)	7.75 (196.85)	3.00 (76.20)	3.20 (1.45) 2.70 (1.22)
1214	1114	-	120	-	1	-	2	4.88 (123.83)	4.75 (120.65)	3.00 (76.20)	1.30 (0.59) 1.30 (0.59)
1206	1106	0–150V/9353	120	-	1	-	2	4.88 (123.83)	7.75 (196.85)	3.00 (76.20)	1.80 (0.82) 3.20 (1.45)
1230	1130	-	120	-	1	-	6	9.25 (234.95)	4.75 (120.65)	3.00 (76.20)	3.76 (1.71) 3.76 (1.71)
1202	1102	-	120	-	1	-	6	4.88 (123.83)	7.75 (196.85)	3.00 (76.20)	2.70 (1.22) 2.40 (1.09)
1211	1111	-	230 [†]	-	-	4	-	4.88 (123.83)	4.75 (120.65)	3.00 (76.20)	1.30 (0.59) 1.30 (0.59)
1229	1129	-	230 [†]	-	-	8	-	4.88 (123.83)	7.75 (196.85)	3.00 (76.20)	3.20 (1.45) 2.70 (1.22)
1215	1115	-	230 [†]	1	-	2	-	4.88 (123.83)	4.75 (120.65)	3.00 (76.20)	1.30 (0.59) 1.30 (0.59)
1207	1107	0–250V/9354	230 [†]	1	-	2	-	4.88 (123.83)	7.75 (196.85)	3.00 (76.20)	1.80 (0.82) 3.20 (1.45)
1233	1133	-	230 [†]	1	-	6	-	9.25 (234.95)	4.75 (120.65)	3.00 (76.20)	3.85 (1.75) 3.85 (1.75)
1203	1103	-	230 [†]	1	-	6	-	4.88 (123.83)	7.75 (196.85)	3.00 (76.20)	2.70 (1.22) 3.20 (1.45)

[†] 230 Volt (typical of Europe)

Power Distribution and Circuit Protection

Combination AC/DC Circuit Breaker Panels

Combines all AC and DC switching, circuit protection, source selection and monitoring into a single power distribution panel

Features

- "ON" indicating LEDs installed in all circuit positions
- Backlit label positions
- Panels with meters include toggle switch to monitor voltage on up to three battery banks
- Available with Flat Rocker or Black Toggle Circuit Breakers
- Panels with sources include lockout slides to prevent connecting multiple AC sources simultaneously
- Owner upgradable to 24 Volts DC with 4113 - 12 to 24 Volt Conversion Kit (page 20)

Component References

- A-Series Black Toggle Circuit Breakers (page 60, 72)
- A-Series (page 61, 63) and C-Series (page 43) Flat Rocker Circuit Breakers
- Insulating Rear Covers (page 20)

Model Specific Features

- Analog Voltmeter and Analog Ammeter (pages 90–91)
 Digital Multimeter (pages 92–93)

Specifications

V_{mox}	Voltage Maximum Operating	See table below
I_{tr}	Amperage Trip Reference	See table below



1204/1205*/1104/1105*



1218/1219*/1118/1119*



1212/1213*/1112/1113*

Specific Features / METERS		
Group	DC Function/PN	AC Function/PN
A	8-16V/8003 0-100A/8017	0-150A/9353
	Multimeter/8248	Multimeter/8247
B	8-16V/8003 0-100A/8017	0-150V/9353
	8-16V/8003 0-100A/8017	0-50A/9630
D	8-16V/8003 0-100A/8017	0-250V/9354
	8-16V/8003 0-100A/8017	0-250V/9354
E	8-16V/8003 0-100A/8017	0-50A/9630
	8-16V/8003 0-100A/8017	0-250V/9354

Rocker Panel PN	Toggle Panel PN	Meter Group	DC V_{mox}	AC V_{mox}	AC Sources	AC Circuit Breakers				DC Circuit Breakers				Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)				
						MAIN (I_{tr})		BRANCH (I_{tr})		MAIN (I_{tr})		BRANCH (I_{tr})									
						16A	30A	32A	50A	8A	15A	100A	15A								
1204	-	A	12 †	120	-	-	1	-	-	-	6	1	15	13.63 (346.08)	10.75 (273.05)	4.00 (101.60)	11.90 (5.40)				
	-	1104	A	12 †	120	-	-	1	-	-	-	6	-	16	13.63 (346.08)	10.75 (273.05)	4.00 (101.60)	11.90 (5.40)			
1218	-	B	12	120	-	-	1	-	-	-	6	1	19	13.63 (346.08)	10.75 (273.05)	4.00 (101.60)	13.62 (6.18)				
	-	1118	B	12	120	-	-	1	-	-	-	6	-	20	13.63 (346.08)	10.75 (273.05)	4.00 (101.60)	12.20 (5.53)			
1212	-	C	12 †	120	3	-	2	-	2	-	8	1	15	18.00 (457.20)	10.75 (273.05)	4.00 (101.60)	17.80 (8.07)				
	-	1112	C	12 †	120	3	-	2	-	2	-	8	-	16	18.00 (457.20)	10.75 (273.05)	4.00 (101.60)	17.80 (8.07)			
1205	-	D	12 †	230*	-	1	-	-	-	6	-	1	15	13.63 (346.08)	10.75 (273.05)	4.00 (101.60)	11.90 (5.40)				
	-	1105	D	12 †	230*	-	1	-	-	6	-	-	16	13.63 (346.08)	10.75 (273.05)	4.00 (101.60)	11.90 (5.40)				
1219	-	B	12	230*	-	1	-	-	-	6	-	1	19	13.63 (346.08)	10.75 (273.05)	4.00 (101.60)	13.62 (6.18)				
	-	1119	B	12	230*	-	1	-	-	6	-	-	20	13.63 (346.08)	10.75 (273.05)	4.00 (101.60)	12.20 (5.53)				
1213	-	E	12 †	230*	3	2	-	2	-	8	-	1	15	18.00 (457.20)	10.75 (273.05)	4.00 (101.60)	17.80 (8.07)				
	-	1113	E	12 †	230*	3	2	-	2	-	8	-	16	18.00 (457.20)	10.75 (273.05)	4.00 (101.60)	18.00 (8.16)				

* 230 Volt (typical of Europe) | † Owner upgradable to 24 Volts DC with 8240 - 18-32V Analog Voltmeter (page 90) in addition to 4113 - 12 to 24 Volt Conversion Kit (page 20)

Metering

DC Analog Voltmeter Panel

Provides monitoring of multiple battery banks

- Standard 2-3/4" Voltmeter (page 90)
- 3 position switch to monitor voltage on up to three battery banks

Specifications

V_{mox} Voltage Maximum Operating 16 Volts DC



1473

DC Digital Voltmeter Panel

Provides monitoring of multiple battery banks

- Standard 2-3/4" Digital Voltmeter (page 92)
- 3 position switch to monitor voltage on up to three battery banks

Specifications

V_{mox} Voltage Maximum Operating 60 Volts DC



1474

Meter Mounting Panels

Provides an easy method of mounting meters

For a full selection of meters see pages 89–93

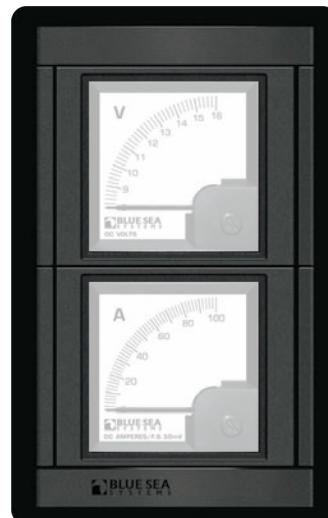
PN	Function	Width in (mm)	Height in (mm)	Weight lb (kg)
1475	Accepts 2-3/4" Analog or Digital Meter	4.88 (123.83)	4.75 (120.65)	0.60 (15.24)
1476	Accepts two 2-3/4" Analog or Digital Meters	4.88 (123.83)	7.75 (196.85)	1.05 (26.67)
1516	Accepts Analog DIN Meter	4.88 (123.83)	4.75 (120.65)	0.50 (12.70)
1517	Accepts two Analog DIN Meters	4.88 (123.83)	7.75 (196.85)	0.80 (20.32)



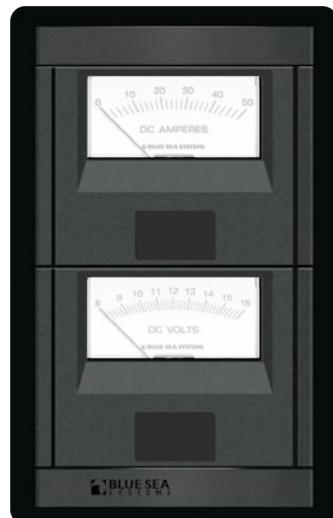
1475 (meter not included)



1516 (meter not included)



1517 (meters not included)



1476 (meters not included)

Gauges

2 Inch Round Gauges **Faria**

Provides monitoring of key functions required for boat operation

NOT AVAILABLE IN RETAIL PACKAGING

- Water-tight, fog-resistant, anti-scratch glass face
- Edge-lit
- Will fit panels up to 0.8" thickness

Specifications

V_{mxo}	Voltage Maximum Operating	See table below
T_{mxo}	Temperature Maximum Operating	158°F (70°C)
T_{mno}	Temperature Minimum Operating	-4°F (-20°C)
I_{oc} (with edgelight)	Amperage Operating Current	180mA
I_{oc} (without edgelight)	Amperage Operating Current	<100mA
Gauge diameter		2.00" (50.80mm)
Mounting hole diameter		2.06" (52.40mm)
Back clamp nuts torque		5-7 in-lb

Regulatory

- CE Marked



1022B



1023B



1024B



1026B*



1027B



1028B†



1029B



1030B

PN	Function	DC V_{mxo}	Required Sender	Depth in (mm)	Weight lb (kg)
1020B	Fuel Level E-1/2-F	16	-	1.75 (44.45)	0.33 (0.15)
1021B	Potable Water Level E-1/2-F	16	-	1.75 (44.45)	0.33 (0.15)
1022B	Engine Temp 100-250°F	16	1042B	1.75 (44.45)	0.33 (0.15)
1023B	Oil Pressure 0-80 PSI/Bar	16	1043B	1.75 (44.45)	0.33 (0.15)
1024B	Water Pressure 0-30 PSI/kPa	16	-	2.10 (53.54)	0.69 (0.31)
1025B	Voltmeter 10-16 Volts	16	-	1.75 (44.45)	0.33 (0.15)
1026B*	Hour Meter—10,000 hrs	32	-	2.40 (60.96)	0.37 (0.17)
1027B	Battery Condition Indicator	16	-	3.00 (76.20)	0.37 (0.17)
1028B	DC Ammeter 60-0-60 Amps	16	Internal shunt	1.75 (44.45)	0.33 (0.15)
1029B	Clock—Quartz Analog	16	-	2.70 (68.58)	0.37 (0.17)
1030B	Tank Level	16	-	1.75 (44.45)	0.33 (0.15)

Gauge Senders - For use with engine temperature and oil pressure gauges

PN	Function	For Use With
1042B	Engine Temperature 1/8"	1022B
1043B	Oil Pressure 1/8" 80 PSI	1023B

Gauge Panels

Provides an easy method of mounting 2 Inch Round Gauges

Features

- Tank gauges include ON-OFF-ON (SPST) Rocker Switch to monitor two tanks (page 20)

Specifications

V_{mxo} Voltage Maximum Operating See table below



1510



1511



1512



1514

Panel PN	Included Gauge PN	Function	DC V_{mxo}	Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
1510	-	-	-	4.88 (123.83)	4.75 (120.65)	0.50 (12.70)	0.50 (0.23)
1511	1021B	Potable Water Level E-1/2-F	16	4.88 (123.83)	4.75 (120.65)	1.75 (44.45)	0.75 (0.34)
1512	1020B	Fuel Level E-1/2-F	16	4.88 (123.83)	4.75 (120.65)	1.75 (44.45)	0.75 (0.34)
1513	1030B	Tank Level E-1/2-F	16	4.88 (123.83)	4.75 (120.65)	1.75 (44.45)	0.75 (0.34)
1514	1025B	Voltmeter 10-16 Volts	16	4.88 (123.83)	4.75 (120.65)	1.75 (44.45)	0.75 (0.34)

* Gauge is not edge-lit | † Internal shunt

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

Accessories

360 Panel 12 to 24 Volt Conversion Kit

Converts indicator LEDs from 12 Volt systems to 24 Volt systems

- Requires one kit per 12 Volt DC circuit breaker module
- Includes wire harness and panel identification label

PN	Function	Weight lb (kg)
4113	Converts 12 to 24 Volt DC	0.05 (0.02)



Push Button Reset-Only Circuit Breaker with Rocker Switch Panel Backlight Board

Provides label position backlighting

Specifications

V_{mox} Voltage Maximum Operating 24 Volts DC

PN	Function	Weight lb (kg)
4121	Enables Backlighting	0.07 (0.03)



360 Panel Insulating Rear Covers

Provides electrical insulation for exposed panel backs

- Isolation of 360 panel AC components and circuits from DC system elements
- Meets ABYC safety requirements for panels with combined AC and DC loads
- Provides mechanical protection for panel backs protruding into lockers
- Modular design consists of FIVE interlocking pieces—SIDES, TOP, and ENDS
- Interlocking companion pieces can be stacked to accommodate large components
- Cover breakouts allow wire access in any direction

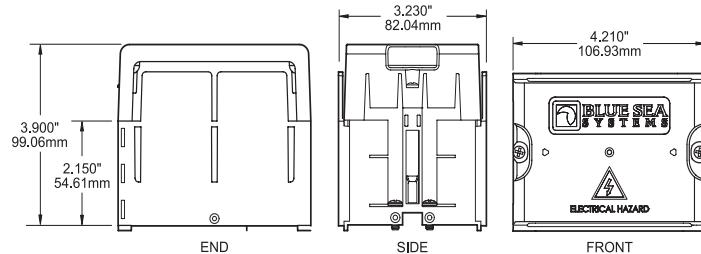
Specifications

Material UL94-VO (Flame Retardant) Polycarbonate

Hardware 2 qty. #6 Phillips-drive machine screws

4 qty. #8-32 x 0.5" Phillips-drive machine screws with lock washers

PN	Description	Weight lb (kg)
1331	1 module	0.56 (0.25)
1341	2 module	0.79 (0.36)
1342	3 module	0.90 (0.41)
1343	4 module	1.10 (0.50)



360 Panel Rocker Switches

Provides switching options for applications requiring specific pole and throw configurations

Specifications

I_{mox} Amperage Maximum Operating

Terminal Type Quick Connect Tab
Terminal Size 0.187" (4.80mm)

Single Pole

See table below

Double Pole

See table below

6.00" (152.00mm) Wire Leads
n/a

PN	Pole/Throw	Illustration	Action () = Momentary	I _{mox} Amperage Maximum Operating			
				12 Volts DC	24 Volts DC	125 Volts AC	250 Volts AC
7480	SPST	1	ON-OFF	10 Amps	10 Amps	10 Amps	10 Amps
7481	SPST	1	(ON)-OFF	10 Amps	10 Amps	12 Amps	6 Amps
7482	SPDT	2	ON-OFF-ON	10 Amps	8 Amps	8 Amps	8 Amps
7483	SPDT	2	ON-OFF-(ON)	10 Amps	8 Amps	8 Amps	8 Amps
7484	SPDT	2	(ON)-OFF-(ON)	10 Amps	8 Amps	8 Amps	8 Amps
7485	SPDT	4	(ON)-OFF-(ON)	10 Amps	8 Amps	8 Amps	8 Amps
7490	DPST	1	ON-OFF	5 Amps	5 Amps	8 Amps	4 Amps
7491	DPDT	3	ON-ON	5 Amps	5 Amps	8 Amps	4 Amps
7493	DPDT	3	ON-(ON)	5 Amps	5 Amps	8 Amps	4 Amps
7492	DPDT	2	ON-OFF-ON	5 Amps	5 Amps	8 Amps	4 Amps
7494	DPDT	2	ON-OFF-(ON)	5 Amps	5 Amps	8 Amps	4 Amps
7495	DPDT	2	(ON)-OFF-(ON)	5 Amps	5 Amps	8 Amps	4 Amps



Accessories

360 Panel Plugs

Covers flat rocker circuit breaker and rocker switch apertures for future use

PN	Function	Weight lb (kg)
4116	Plugs empty Flat Rocker Circuit Breaker aperture	0.03 (0.01)
4117	Plugs empty Rocker Switch aperture	0.03 (0.01)



4116 4117

360 Panel Adapters

Provides a method of mounting alternative switch and circuit breakers in the flat rocker aperture

PN	Function	Weight lb (kg)
4111	Adapts Push Button Reset-Only Circuit Breaker (page 38)	0.03 (0.01)
4112	Adapts A-Series Toggle Circuit Breaker (page 54) and Panel Switch (page 79)	0.03 (0.01)
4119	Adapts Rocker Switch (page 20)	0.03 (0.01)



4111 4112 4119

12 Volt DC Socket Panel

Integrates 12 Volt DC Sockets with 360 Panel System

Component Reference

- 12 Volt DC Sockets (page 80)

Specifications

V _{mxo} Voltage Maximum Operating	15 Volts DC
I _{mxo} Amperage Maximum Operating	15 Amps

PN	Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
1472	4.88 (123.83)	4.75 (120.65)	1.50 (38.10)	0.70 (0.32)



1472

Blank 360 Panel

Provides a 360 Panel System platform for mounting equipment, switching, and monitoring functions

- Suitable for mounting accessories and for pad printing

PN	Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
1518	4.88 (123.83)	4.75 (120.65)	0.50 (12.7)	0.5 (0.23)

Pad Printed Boat



Push Button Starter



Phone Jack



1518

Examples of user-customized blank panels

Custom Panels

Custom panels are available for OEMs and through authorized distributors

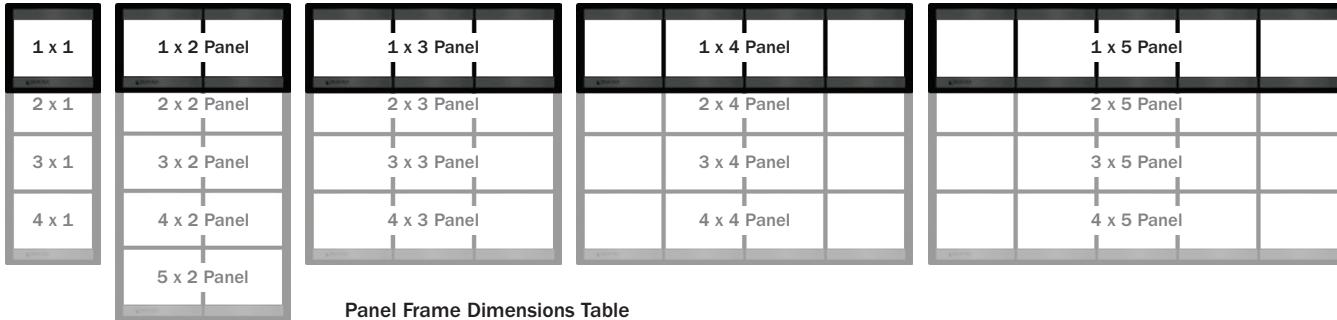
To modify a stock panel, or to create a fully custom panel, contact your custom 360 Panel System authorized distributor. A complete list of authorized distributors can be found at www.bluesea.com.



3 x 3 Panel shown

Configure and order your customized panel in three easy steps

Step 1—Select a panel frame from the icons and the Panel Frame Dimensions Table below.



Panel Frame Dimensions Table

Rows	Columns	Panel Height in (mm)	Panel Width in (mm)	Cutout Height in (mm)	Cutout Width in (mm)
1	1	4.75 (120.65)	4.88 (123.83)	3.31 (84.07)	4.38 (111.13)
1	2	4.75 (120.65)	9.25 (234.95)	3.31 (84.07)	8.75 (222.25)
1	3	4.75 (120.65)	13.63 (346.08)	3.31 (84.07)	13.13 (333.38)
1	4	4.75 (120.65)	18.00 (457.20)	3.31 (84.07)	17.50 (444.50)
1	5	4.75 (120.65)	22.38 (568.33)	3.31 (84.07)	21.88 (555.63)
2	1	7.75 (196.85)	4.88 (123.83)	6.31 (160.27)	4.38 (111.13)
2	2	7.75 (196.85)	9.25 (234.95)	6.31 (160.27)	8.75 (222.25)
2	3	7.75 (196.85)	13.63 (346.08)	6.31 (160.27)	13.13 (333.38)
2	4	7.75 (196.85)	18.00 (457.20)	6.31 (160.27)	17.50 (444.50)
2	5	7.75 (196.85)	22.38 (568.33)	6.31 (160.27)	21.88 (555.63)
3	1	10.75 (273.05)	4.88 (123.83)	9.31 (236.47)	4.38 (111.13)
3	2	10.75 (273.05)	9.25 (234.95)	9.31 (236.47)	8.75 (222.25)
3	3	10.75 (273.05)	13.63 (346.08)	9.31 (236.47)	13.13 (333.38)
3	4	10.75 (273.05)	18.00 (457.20)	9.31 (236.47)	17.50 (444.50)
3	5	10.75 (273.05)	22.38 (568.33)	9.31 (236.47)	21.88 (555.63)
4	1	13.75 (349.25)	4.88 (123.83)	12.31 (312.67)	4.38 (111.13)
4	2	13.75 (349.25)	9.25 (234.95)	12.31 (312.67)	8.75 (222.25)
4	3	13.75 (349.25)	13.63 (346.08)	12.31 (312.67)	13.13 (333.38)
4	4	13.75 (349.25)	18.00 (457.20)	12.31 (312.67)	17.50 (444.50)
4	5	13.75 (349.25)	22.38 (568.33)	12.31 (312.67)	21.88 (555.63)
5	2	16.75 (425.45)	9.25 (234.95)	15.31 (388.87)	8.75 (222.25)

Custom Panels

Step 2—Select the panel function from the list of modules below.



Digital and Analog Meters
(pages 90–93)



DIN Meters (page 89)



Vessel Systems Monitor
Available Q1 2009



2 Inch Gauges (page 19)



m-Series Battery Switches (page 26)



Push Button Circuit Breakers (page 38)



Push Button Circuit Breakers
with Rocker Switches (page 20, 38)



Battery Management (page 37)



Flat Rocker Circuit Breakers
(pages 43, 54, 61, 63)



Toggle Circuit Breakers
(pages 54, 60)



Circuit Breaker Source Selection
Raised Rocker Style (pages 61, 63)



Circuit Breaker Source Selection
Toggle Style (page 60)



Medium Duty Push Button Reset-Only
Circuit Breakers (page 39)



185-Series Thermal Circuit Breakers
(page 40)



120/240 Volt Circuit Breaker
(page 63)



Residual Current Circuit Breaker
(page 63)



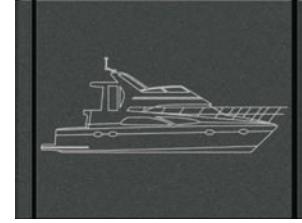
Rotary Switch Source Selection
(pages 66–68)



12 Volt DC Sockets (page 80)



Blank Panel (page 21)



Pad Printed Panel (page 21)

Step 3—Complete the Custom 360 Panel Worksheet located at www.bluesea.com and submit it to an authorized distributor.

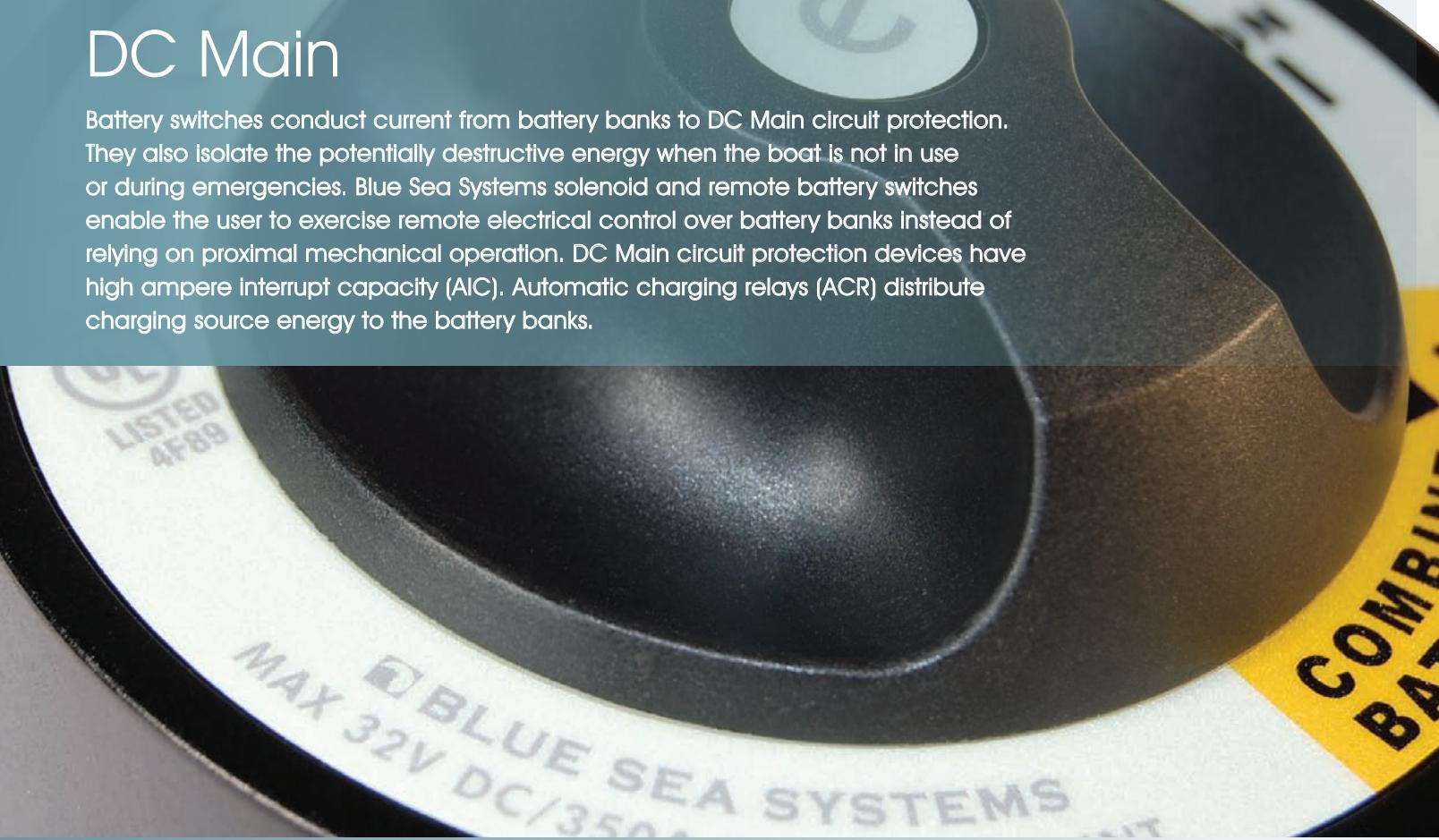
For a complete list of authorized 360 Panel System distributors, please go to www.bluesea.com

Panel Layout Grid Worksheet Example

Module Name		Module #	
Analog Meter	2	DC Circuit Breakers + Rocker Switches	7
		10A 0532	Access Lights
		10A 0328	Night Lights
		10A 0185	Fire Alarm
		10A 0266	Holding Tank Alarm
			Label Text
			Label Number
			Current Rating

DC Main

Battery switches conduct current from battery banks to DC Main circuit protection. They also isolate the potentially destructive energy when the boat is not in use or during emergencies. Blue Sea Systems solenoid and remote battery switches enable the user to exercise remote electrical control over battery banks instead of relying on proximal mechanical operation. DC Main circuit protection devices have high ampere interrupt capacity (AIC). Automatic charging relays (ACR) distribute charging source energy to the battery banks.



DC Main Table of Contents



BATTERY SWITCHES
pages 25–28



BATTERY MANAGEMENT PANELS
pages 29–30



SOLENOID SWITCHES
pages 31–32



REMOTE BATTERY SWITCHES
page 33



AUTOMATIC CHARGING RELAYS
pages 34–36



BATTERY MANAGEMENT SOLUTIONS
page 37



CIRCUIT BREAKERS
pages 38–43



FUSE BLOCKS AND FUSES
pages 44–47

Introduction—Battery Switches

Battery Switches

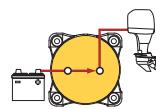
Purpose

Battery switches isolate the potentially destructive energy in the battery banks when the boat is not in use or during emergencies. ABYC 11.7.1.2.1. A battery switch shall be installed in the positive conductor(s) from each battery or battery bank with a CCA rating greater than 800 Amperes.

Battery Switch Ratings. The UL standard for marine battery switches is UL 1107. This standard rates switches for 5 minute and 1 hour time periods. These ratings are not useful for the boater using a switch in the engine starting circuit where current durations may be 10 seconds or less. For this reason, Blue Sea Systems has created an additional test, consisting of a high amperage load during a cranking period of 10 seconds. This is representative of the load imposed on a battery switch in the starting circuit under very difficult starting conditions. Blue Sea Systems battery switches, in addition to being tested to UL 1107, are also tested to this cranking amperage. When determining the proper size battery switch, consult your engine manufacturer for the amperage requirements of your engine starting motor.

Battery Switch Operation Diagrams

SINGLE CIRCUIT—switches a single battery to a single load group



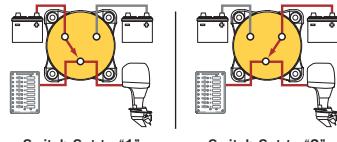
Switch Set to "ON"

SELECTOR 4 Position—switches or combines battery banks to all loads



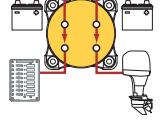
Switch Set to "1" Switch Set to "2" Switch Set to "1+2"

SELECTOR 3 Position—switches battery banks to all loads



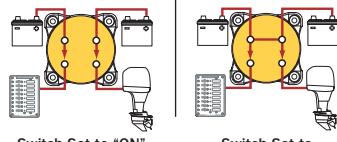
Switch Set to "1" Switch Set to "2"

DUAL CIRCUIT™—simultaneously switches two isolated battery banks (No Combine Function)

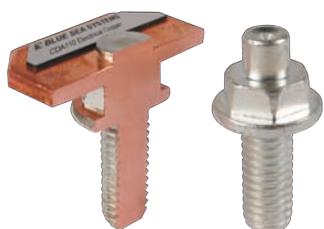


Switch Set to "ON"

DUAL CIRCUIT PLUS™—simultaneously switches two isolated battery banks



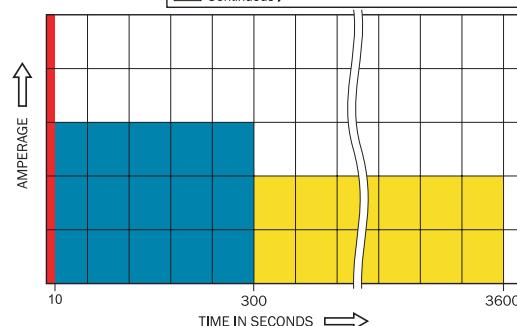
Switch Set to "ON" Switch Set to "COMBINE BATTERIES"



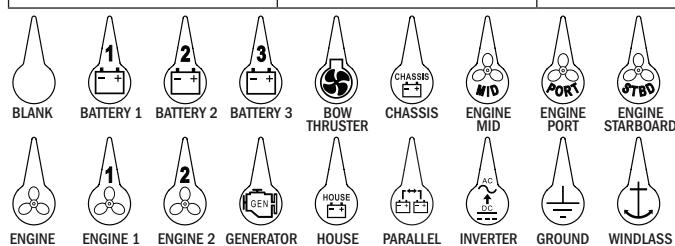
Blue Sea Systems One-Piece Terminal Stud Design

Battery Switch Testing

Red: Cranking
Blue: Intermittent
Yellow: Continuous
UL 1107 Standard



M-Series	E-Series	HD-Series
Outboards and small inboards	Inboards and diesel engines	Large diesel engines
300 Amps	350 Amps	500–600 Amps
6006	6005	9003C
6007	9001C	3000
11001	11003	3002
6010	5510C	
6011	5511C	



7902 ICON Circuit Identification Label Kit (Sold Separately) page 83

Battery Switches

M-Series Battery Switches (mini)

300 Ampere Continuous Rating for outboards and small gasoline or diesel engines

Common Features

- Tin-plated copper studs for maximum conductivity and corrosion resistance
- Studs accept 3/8" (M10) ring terminals
- Blue Sea Systems one-piece terminal stud design never loosens over time
- 7/8" (22.22mm) stud length accepts multiple cable terminals
- Isolating cover with three snap-in side pieces protects rear contacts and allows wire access in any direction
- Case design allows surface, rear, or front panel mounting options
- Label with international legends—6 ICON label set included for circuit identification*

Key to Specific Features

- Removable key remains positively retained
- Removable knob remains positively retained and tactile indicator conveys position by feel
- Make-before-break contact design allows switching between battery banks without power interruption

Specifications

	6005-6007	6010-6011
6005200-6007200	6005200-6007200	6010200-6011200
I₁₀ Cranking Rating: 10 sec.	1,500 Amps	1,000 Amps [†]
I₃₀₀ Intermittent Rating: 5 min.	500 Amps	450 Amps [†]
I_c Continuous Rating	300 Amps	300 Amps [†]
V_{mxo} Voltage Maximum Operating	48 Volts DC	32 Volts DC
Terminal Stud Size	3/8"-16 (M10)	3/8"-16 (M10)
Terminal Stud Torque	140 in-lb (15.82 N·m) max.	140 in-lb (15.82 N·m) max.
Mounting Holes:	Accept #10 Screw	Accept #10 Screw
Cable Size to Meet Ratings [‡]	4/0 AWG (95mm ²)	4/0 AWG (95mm ²)
Cable Clearance For 4/0 Cables	1.12" (28.4mm)	1.12" (28.4mm)

Regulatory

- CE marked, ISO 8846
- UL Listed - UL 1107 electric power switches
- Meets American Boat and Yacht Council (ABYC) requirements
- Meets UL 1500 and SAE J1171 external ignition protection requirements



6011



6006200



Available with or without removable cover pieces



6005*



6006



6007



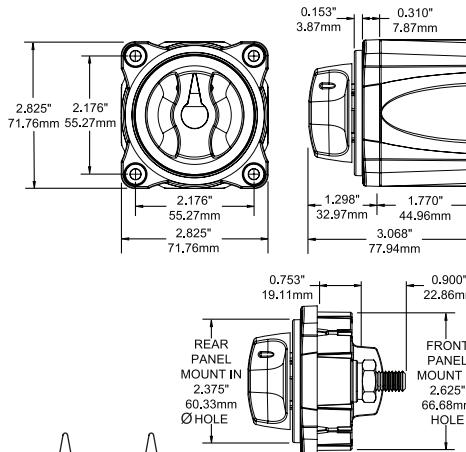
6010



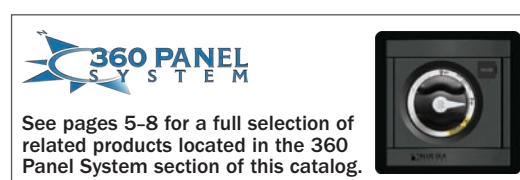
6011



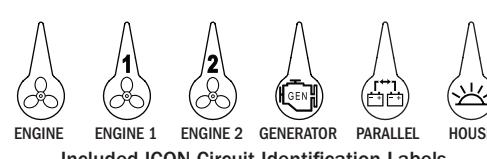
9159



Additional ICON Circuit Identification Label Kit 7902 available (page 83)



See pages 5-8 for a full selection of related products located in the 360 Panel System section of this catalog.



Included ICON Circuit Identification Labels

* 6005 includes illustrated ON-OFF label only | † Per Circuit | ‡ Reducing cable size will reduce current rating

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

Battery Switches

E-Series Battery Switches

350 Ampere Continuous Rating for inboard gasoline and diesel engines

Common Features

- Tin-plated copper studs for maximum conductivity and corrosion resistance
- Studs accept 3/8" (M10) ring terminals
- 7/8" (22.22mm) stud length accepts multiple cable terminals
- Blue Sea Systems one-piece terminal stud design never loosens over time
- Case design allows surface or rear panel mounting options
- Fits most Perko and Guest low amperage battery switch hole patterns
- Label with international legends
- Tactile indicator conveys knob position by feel

Key to Specific Features

- Alternator Field Disconnect (AFD)
- Make-before-break contact design allows switching between battery banks without power interruption

Specifications

	9001E-9004E	5510E-5511E
	9001E200-9004E200	5510E200-5511E200
I₁₀	1,000	1,000
I₃₀₀	2,000	525
I_c	600	350
V_{mxo}	350	350
Voltage Maximum Operating	48 Volts DC	32 Volts DC
Terminal Stud Size	3/8"-16 (M10)	3/8"-16 (M10)
Terminal Stud Torque	140 in-lb (15.82 N·m) max.	140 in-lb (15.82 N·m) max.
Mounting Holes	Accept 1/4" (M6) Screw	Accept 1/4" (M6) Screw
Cable Size to Meet Ratings [†]	4/0 AWG (95mm ²)	4/0 AWG (95mm ²)
Cable Clearance For 4/0 Cables	1.10" (27.9mm)	1.10" (27.9mm)

Regulatory

- CE marked, ISO 8846
- UL Listed - UL 1107 electric power switches
- Meets American Boat and Yacht Council (ABYC) requirements
- Meets UL 1500 and SAE J1171 external ignition protection requirements



5511E200



9003E



9001E



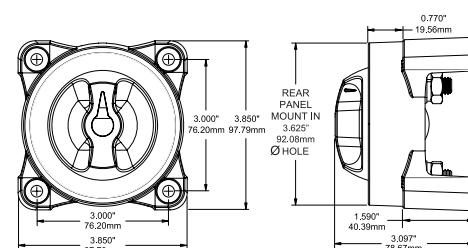
11001



5510E



5511E



Switch PN	Specific Features	Name	Switch Positions	Battery Inputs	Battery Combine	Weight lb (kg)
Red	Black					
9003E	9003E200	-	SINGLE CIRCUIT	2	1	0.95 (0.43)
9004E	9004E200		SINGLE CIRCUIT	2	1	0.95 (0.43)
9001E	9001E200	 	SELECTOR—4 Position	4	2	Yes 1.15 (0.52)
9002E	9002E200	 	SELECTOR—4 Position	4	2	Yes 1.15 (0.52)
11001	-		SELECTOR—3 Position	3	2	- 1.15 (0.53)
5510E	5510E200		DUAL CIRCUIT™	2	2	- 1.16 (0.53)
5511E	5511E200	 	DUAL CIRCUIT PLUS™	3	2	Yes 1.16 (0.53)

NEW

ICON Circuit Identification Label Kit 7902 available (page 83)

Alternator Field Disconnect (AFD) protects the diodes in the alternator in the event of the switch being switched to the OFF position while the engine is running.

If the AFD is not used to protect the alternator, an LED can be connected to the AFD terminals to indicate when the battery switch is in any position but "OFF":

- "ON" for the Single Circuit
- "1", "2", or "1+2" for the Selector—4 Position
- "1" or "2" for the Selector—3 Position

* Per Circuit | † Reducing cable size will reduce current rating

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

Battery Switches

HD-Series Battery Switches (Heavy Duty)

Up to 600 Ampere Continuous Rating for large diesel engines

Features

- Label with international legends
- Tactile indicator conveys knob position by feel
- Accepts up to 4/0 AWG (95mm²) battery cables
- Case design allows surface or rear panel mounting
- 7/8" (22.22mm) stud length accepts multiple cable terminals
- Blue Sea Systems one-piece terminal stud design never loosens over time
- M12 tin-plated copper studs for maximum conductivity and corrosion resistance, accepts 1/2" (M12) ring terminals

Key to Specific Features

- Alternator Field Disconnect (AFD)
- Make-before-break contact design allow switching between battery banks without power interruption
- Two studs for load connections permit up to four load cables to be connected

Specifications

	3000-3001	3002-3003, 11003
I ₁₀	Cranking Rating: 10 sec.	2,750 Amps
I ₃₀₀	Intermittent Rating: 5 min.	900 Amps
I _c	Continuous Rating	600 Amps
V _{mxo}	Voltage Maximum Operating	48 Volts DC
Terminal Stud Size	1/2" (M12)	1/2" (M12)
Terminal Stud Torque	220 in-lb (24.86 N·m) max.	220 in-lb (24.86 N·m) max.
Mounting Holes	Accept 1/4" (6M) Screw	Accept 1/4" (6M) Screw
Cable Size to Meet Ratings*	4/0 AWG (95mm ²)	4/0 AWG (95mm ²)
Cable Quantity to Meet Ratings*	Two Cables [†]	Two Cables/Terminal
Cable Clearance For 4/0 Cables	1.10" (27.9mm)	1.10" (27.9mm)

Regulatory

- marked, ISO 8846
- UL Listed - UL 1107 electric power switches
- Meets American Boat and Yacht Council (ABYC) requirements
- Meets UL 1500 and SAE J1171 external ignition protection requirements



3000-3001 Two studs for load connections



3000

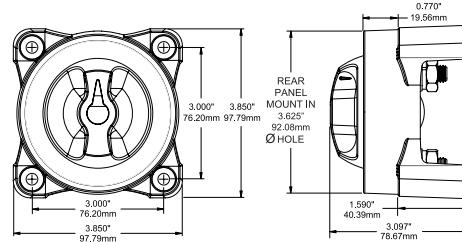
3002

11003

PN	Specific Features	Name	Switch Positions	Battery Inputs	Battery Combine	Weight lb (kg)
3000		SINGLE CIRCUIT	2	1	-	1.30 (0.59)
3001		SINGLE CIRCUIT	2	1	-	1.30 (0.59)
3002		SELECTOR—4 Position	4	2	Yes	1.25 (0.57)
3003	 	SELECTOR—4 Position	4	2	Yes	1.25 (0.57)
11003		SELECTOR—3 Position	3	2	-	1.25 (0.57)

NEW

ICON Circuit Identification Label Kit 7902 available (page 83)



Alternator Field Disconnect (AFD) protects the diodes in the alternator in the event of the switch being switched to the OFF position while the engine is running.

If the AFD is not used to protect the alternator, an LED can be connected to the AFD terminals to indicate when the battery switch is in any position but "OFF":

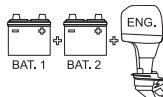
- "ON" for the Single Circuit
- "1", "2", or "1+2" for the Selector—4 Position
- "1" or "2" for the Selector—3 Position

* Reducing specifications will reduce current ratings | † Two cables on battery terminal, one cable on each common terminal

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

Battery Management

Dual Battery Bank Management Panels



Offers full switching options that can easily cover the mounting hole left by a medium case battery switch

Features

- Enables a failed Start battery to be isolated from the electrical system and both House and Start loads to be operated from the remaining battery bank
- Isolates Engine circuit from House circuit
- Allows independent battery discharge
- Allows emergency cross connect between isolated battery banks
- Protects electronics from sags and spikes caused by engine cranking
- The addition of an Automatic Charging Relay (ACR) automates charging two battery banks (pages 34–36)



8280

Component References

- m-Series ON-OFF Battery Switches 6006 (page 26)
- C-Series Flat Rocker Circuit Breakers (page 43)

Panel Specifications

V_{mxo} Voltage Maximum Operating See table below
I_{tr} Amperage Trip Reference See table below

Battery Switch Specifications

I₁₀ Cranking Rating: 10 sec. 1,500 Amps
I₃₀₀ Intermittent Rating: 5 min. 500 Amps
I_c Continuous Rating 300 Amps

Regulatory

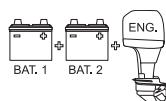
IP Meets UL 1500 and SAE J1171 external ignition protection requirements

Panel PN	DC V _{mxo}	C-Series Flat Rocker Circuit Breaker	Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
8280	48	-	6.25 (158.75)	7.50 (190.50)	2.25 (57.15)	3.20 (1.45)
8080	32	1	5.25 (133.35)	6.50 (165.10)	3.00 (76.20)	2.20 (1.00)



8080

Dual Battery Bank Main Distribution Panels



Single Dual Circuit Plus™ battery switch offers simplified switching combined with main and 24-hour circuit protection

Features

- Provides DC Main circuit protection in addition to high ampere load protection
- Isolates the Engine circuit from the House circuit
- Allows independent battery discharge
- Provides 24 hour circuit protection
- Allows emergency cross connect between isolated battery banks
- Protects electronics from sags and spikes caused by engine cranking
- Addition of an Automatic Charging Relay (ACR) automates charging both battery banks (pages 34–36)

Component References

- Square Format Label Set 4218 and 24-Hour Round Label Set 4140 (pages 83–85)
- C-Series Flat Rocker Circuit Breakers (page 43)
- Push Button Reset-Only Circuit Breakers (page 38)
- "ON" indicating LED installed in all circuit positions (page 80)

Panel Specifications

V_{mxo} Voltage Maximum Operating See table below See table below
I_{tr} Amperage Trip Reference See table below See table below

Battery Switch Specifications

I₁₀ Cranking Rating: 10 sec. 1,000 Amps 1,000 Amps
I₃₀₀ Intermittent Rating: 5 min. 450 Amps 525 Amps
I_c Continuous Rating 300 Amps 350 Amps



8686



8690

Regulatory

IP Meets UL 1500 and SAE J1171 external ignition protection requirements

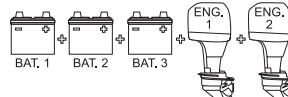
PN	DC V _{mxo}	Battery Switch	C-Series Flat Rocker Circuit Breakers	Push Button Reset-Only Circuit Breakers	Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
			MAIN 100A (I _{tr})	BRANCH 15A (I _{tr})				
8686	24	m-Series, 6011	1	2	4.50 (114.30)	7.50 (190.50)	3.25 (82.55)	1.85 (0.84)
8690	24	c-Series, 5511C	1	2	5.25 (133.35)	8.00 (203.20)	3.50 (88.90)	2.64 (1.20)

† up to 48 Volts DC | ‡ up to 32 Volts DC

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

Battery Management

Triple Battery Bank Main Distribution Panels



Two Dual Circuit Plus™ Battery Switches offer simplified switching combined with main and 24-hour circuit protection

Features

- Provides DC Main circuit protection in addition to high ampere load protection
- Isolates the Engine circuit from the House circuit reducing the chance of fully discharging both battery banks
- Allows independent battery discharge
- Provides 24-hour circuit protection
- Allows emergency cross connect between isolated battery banks
- Protects electronics from sags and spikes caused by engine cranking
- The addition of two Automatic Charging Relays (ACR) automates charging three battery banks (pages 34–36)

Model Specific Features

- M-Series DUAL CIRCUIT PLUS™ Battery Switches 6011 (page 26)
- C-Series DUAL CIRCUIT PLUS™ Battery Switches 5511C (page 27)

Component References

- Square Format Label Set 4218 and 24-Hour Round Label Set 4140 (pages 83–85)
- C-Series Flat Rocker Circuit Breakers (page 43)
- Push Button Reset-Only Circuit Breakers (page 38)
- "ON" indicating LED installed in all circuit positions (page 80)

Panel Specifications

V _{mxo} Voltage Maximum Operating	See table below	See table below
I _{tr} Amperage Trip Reference	See table below	See table below

Battery Switch Specifications

	8689	8693
I ₁₀ Cranking Rating: 10 sec.	1,000 Amps	1,000 Amps
I ₃₀₀ Intermittent Rating: 5 min.	450 Amps	525 Amps
I _c Continuous Rating	300 Amps	350 Amps

Regulatory

Meets UL 1500 and SAE J1171 external ignition protection requirements



8689



8693

PN	Specific Features	DC V _{mxo}	C-Series Flat Rocker Circuit Breaker	Push Button Reset-Only Circuit Breakers	Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
			100A (I _{tr})	15A (I _{tr})				
8689	M-Series	24	1	3	7.25 (184.15)	8.00 (203.20)	3.25 (82.55)	3.46 (1.57)
8693	C-Series	24	1	4	10.50 (266.70)	8.00 (203.20)	3.50 (88.90)	4.42 (2.00)

Solenoid Switches

L-Series Solenoid Switch with Coil Economizer

450 Ampere compact solenoid offers remote switching for applications with limited space and no requirement for manual control



Features

- Hermetically sealed contacts/vaporproof
- Can function as a remote battery switch
- Activated by an ON-OFF switch mounted anywhere
- Integrated coil control minimizes heating and amperage draw
- Mount in a dry location

Specifications

Main Power Contacts

I_{10}	Cranking Rating: 10 sec.	1,500 Amps*
I_{300}	Intermittent Rating: 5 min.	See table below
I_c	Continuous Rating	See table below
V_{mox}	Voltage Maximum Operating	60 Volts DC
C_s	Switching Cycles	1,000,000 Cycles
Terminal Stud Size		5/16" (M8)
Contact Form		SPST-NO

Coil Circuit

Input Voltage	9–36 Volts DC
I_{oc} (inrush, 130ms) Amperage Operating Current	3.80 Amps
I_{oh} (holding) Amperage Operating Current	0.13 Amps (12V), 0.07 Amps (24V)

Regulatory

- CE marked, UL Recognized—UL 508 industrial control equipment

Meets SAE J1171 external ignition protection requirements

See page 77–79 for ON-OFF Switches



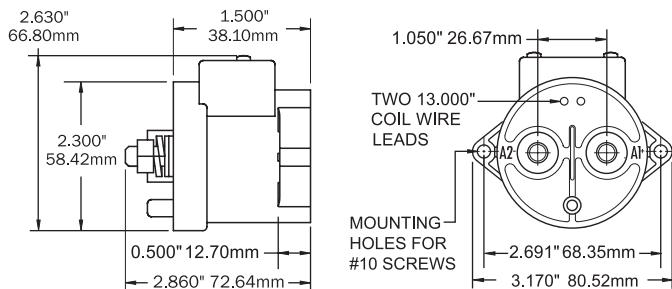
9012



See Selection of ON-OFF switches
pages 77–79

Wire Size	I_{300} Intermittent Rating 5 min.	I_c Continuous Rating (UL 1107)
1/0	275 Amps	250 Amps
2/0	400 Amps	300 Amps
2x (2/0)	600 Amps	450 Amps

PN	Description	Volts	Weight lb (kg)
9012	Solenoid Switch	12/24	1.00 (0.45)



Solenoid Switches

ML-Series Heavy Duty Solenoid Switch (Magnetic Latching)

500 Ampere Magnetic Latching Solenoid allows high-amp switching under load where manual control is not required

Features

- 500 Ampere continuous rating—solenoid switch for engine, inverter, house loads, and emergency battery combine
- Magnetic latching draws no current in “ON” or “OFF” state, only draws current when changing state of switch
- Retail packaging includes ML-Series Remote Control Contura Switch 2145 (page 37)
- Silver alloy contacts provide high reliability for switching live loads
- LED output to remotely indicate switch state (requires optional LED, page 80)
- 3/8"-16 tin-plated copper studs for maximum conductivity and corrosion resistance
- 7/8" (22mm) stud length accepts multiple cable terminals
- Label recesses for circuit identification

Specifications

I_{10}	Cranking Rating: 10 sec.	2,500 Amps
I_{300}	Intermittent Rating: 5 min.	See table below
I_c	Continuous Rating	See table below
V_{mxo}	Voltage Maximum Operating	32 Volts DC
C_s	Switching Cycles	100,000 Cycles
I_{oc} (control circuit—momentary)	Amperage Operating Current	100mA when changing state
Live Current Switching		300A@12V DC—10,000 Cycles
Control Circuit Voltage		10.1 to 16.5V (12V models), 20.2 to 32.9V (24V models)
Terminal Stud Size		3/8"-16 (M10)
Terminal Stud Torque		140 in-lb (15.5 N·m)
Ring Terminal Size		3/8" (M10)
Terminal Ring Diameter Clearance		1.12" (28.4mm)

Regulatory

Meets ISO 8846 ignition protection, and SAE J1171 external ignition protection requirements

IP66— withstands water from heavy seas

Wire Size	I_{300} Intermittent Rating 5 min.	I_c Continuous Rating
2/0	400 Amps	225 Amps
4/0	400 Amps	300 Amps
2x (4/0)	700 Amps	500 Amps

PN	Coil Volts	Cable End	Package	Weight lb (kg)
7701	12	Stripped Wire	Retail	1.69 (0.77)
7701100B	12	Deutsch DTM	Bulk/Not for retail	1.69 (0.77)
7703	24	Stripped Wire	Retail	1.69 (0.77)
7703100B	24	Deutsch DTM	Bulk/Not for retail	1.69 (0.77)

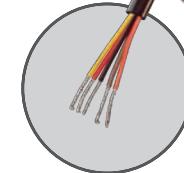
NEW



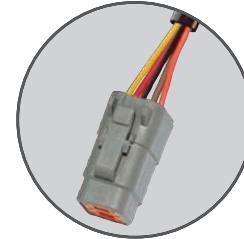
See ML-Series Remote Control Contura Switch on page 37



7701

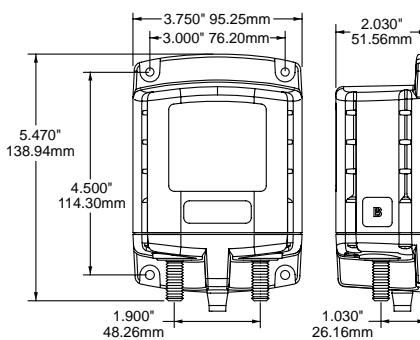


Stripped Wires
—provided on retail units



Deutsch DTM Connectors
—provided on bulk units
Other connector plugs are available for high volume OEM applications.

Please contact Blue Sea Systems for details.



Remote Battery Switches

ML-Series Heavy Duty Remote Battery Switch (Magnetic Latching)

500 Ampere Magnetic Latching Remote Battery Switch allows high-amp switching under load manually or from remote locations



Features

- 500 Ampere continuous rating—remote battery switch for engine, inverter, house loads, and emergency battery combine
- Manual override knob provides an added level of safety allowing control with or without power, and offering “LOCKED OFF” capability for servicing
- Magnetic latching draws no current in “ON” or “OFF” state, only draws current when changing state of switch
- Retail packaging includes ML-Series Remote Control Contura Switch 2145 (page 37)
- Silver alloy contacts provide high reliability for switching live loads
- LED output to remotely indicate switch state (requires optional LED, page 80)
- 3/8"-16 tin-plated copper studs for maximum conductivity and corrosion resistance
- 7/8" (22mm) stud length accepts multiple cable terminals
- Label recesses for circuit identification

Specifications

I₁₀	Cranking Rating: 10 sec.	2,500 Amps
I₃₀₀	Intermittent Rating: 5 min.	See table below
I_c	Continuous Rating	See table below
V_{mxo}	Voltage Maximum Operating	32 Volts DC
C_s	Switching Cycles	100,000 Cycles
I_{oc} (control circuit—momentary)	Amperage Operating Current	100mA when changing state
Live Current Switching		300A@12V DC—10,000 Cycles
Control Circuit Voltage		10.1 to 16.5V (12V models), 20.2 to 32.9V (24V models)
Terminal Stud Size		3/8"-16 (M10)
Terminal Stud Torque		140 in-lb (15.5 N·m)
Ring Terminal Size		3/8" (M10)
Terminal Ring Diameter Clearance		1.12" (28.4mm)

Regulatory

- IP Meets ISO 8846 ignition protection, and SAE J1171 external ignition protection requirements
- IP66—withstanding water from heavy seas

Wire Size	I ₃₀₀ Intermittent Rating 5 min.	I _c Continuous Rating
2/0	400 Amps	225 Amps
4/0	400 Amps	300 Amps
2x (4/0)	700 Amps	500 Amps

PN	Coil Volts	Cable End	Package	Weight lb (kg)
7700	12	Stripped Wire	Retail	1.75 (0.79)
7700100B	12	Deutsch DTM	Bulk/Not for retail	1.75 (0.79)
7702	24	Stripped Wire	Retail	1.75 (0.79)
7702100B	24	Deutsch DTM	Bulk/Not for retail	1.75 (0.79)

NEW



See ML-Series Remote Control Contura Switch on page 37

2145

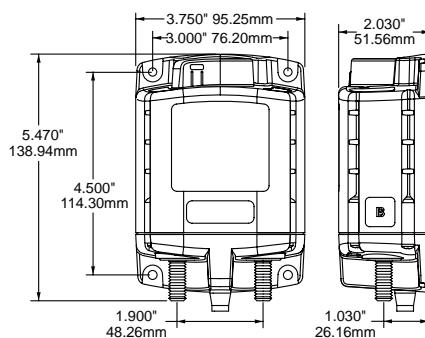


Stripped Wires
— provided on retail units



Deutsch DTM Connectors
— provided on bulk units
Other connector plugs are available for high volume OEM applications.

Please contact Blue Sea Systems for details.



Automatic Charging Relays

Charge Management

Purpose

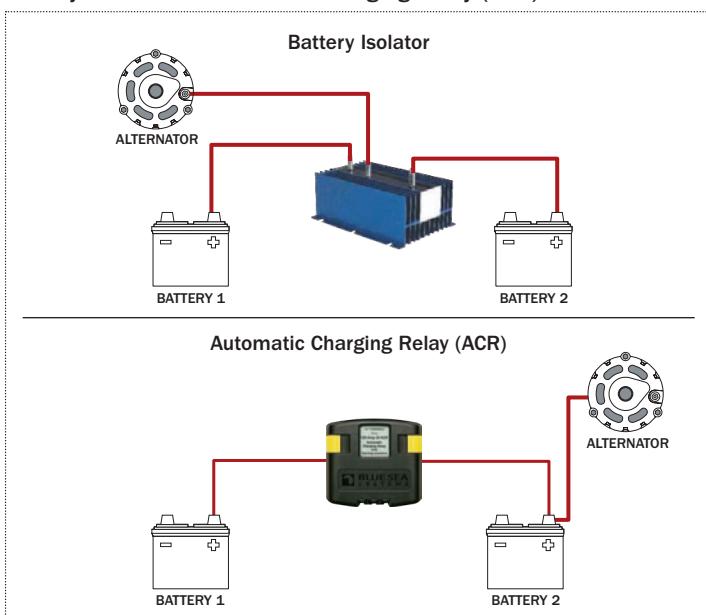
In multiple battery bank systems, Charge Management Devices (CMDs) connect two battery banks when charging, while keeping the battery banks isolated from each other when not charging. Thus, if one battery bank is depleted, there will be a charged battery bank for engine starting. Battery Isolators and Automatic Charging Relays (ACRs) are the two main charge management devices used on boats.

Considerations

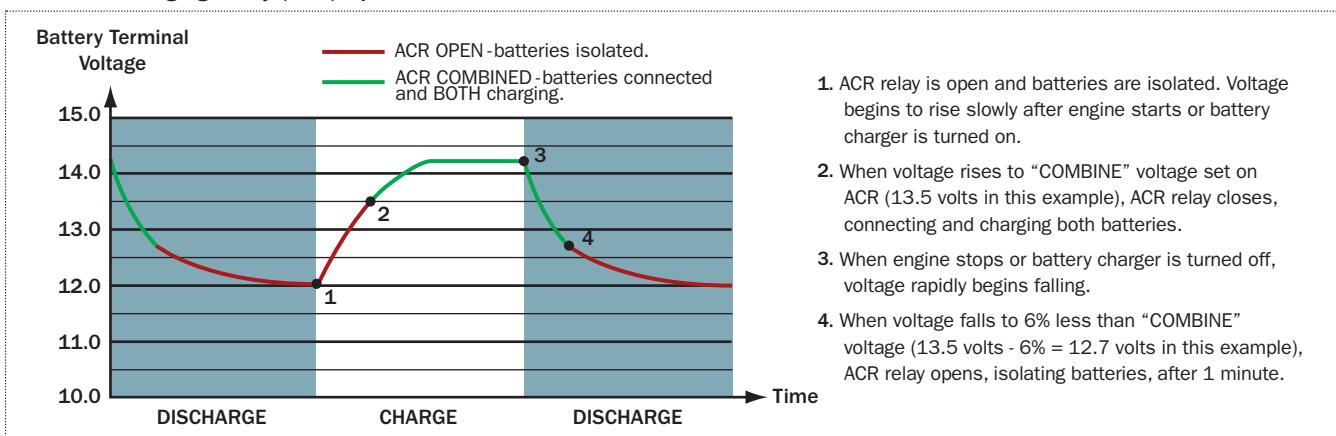
Battery Isolators. These devices are electrical one-way check valves that allow current flow to, but not from, the battery. Their disadvantage is that the diodes used to achieve this cause a voltage drop that consumes charging energy, creates heat, and causes batteries to be undercharged. Alternators with external voltage sensing can correct for the undercharging problem, but voltage drop and the heat generated remain a problem.

Automatic Charging Relays. The more popular method for achieving the same goal as isolators. ACRs use a relay combined with a circuit that senses when a charging source is being applied to either battery. When a charge is being applied, the ACR closes. When the circuit senses that a charge is not being applied, the ACR disconnects the two batteries from each other.

Battery Isolator vs. Automatic Charging Relay (ACR)



Automatic Charging Relay (ACR) Operation



Considerations when Selecting an Automatic Charging Relay

Current Management. Automatic Charging Relays (ACRs) can potentially be exposed to very high currents if the engine is cranked while the ACR is closed, paralleling the battery banks. This can occur when an alternate charge source causes the ACR to close. Blue Sea Systems uses two methods to overcome this. The L-Series and ML-Series ACRs have high amperage contacts rated for engine starting and SI-Series ACRs momentarily open the relay, isolating the two batteries during a starting event.

Manual Override. This allows the ACR to be manually opened, set to automatic, or manually combined from a remote location.

Start Isolation. Temporary isolation of house loads from the engine circuit during engine cranking to protect sensitive electronics.

Automatic Charging Relays

SI-Series Automatic Charging Relay (Start Isolation)

Automatically manages the charging of two battery banks and isolates batteries during starting to protect sensitive electronics



Features

- 120 Ampere continuous rating—supports high-output alternators
- LED light indicates when batteries are combined and blinks when the undervoltage or starting isolation feature is engaged
- Side and bottom knockouts for power cable connections
- Clip-on cover protects terminal connections
- 1/4" x .031" male quick connect terminals for ground, optional remote LED (page 80), and starting isolation
- 7/8" (22.22mm) stud length to accept multiple cable terminals
- Start Isolation (SI)—Can be configured for temporary isolation of House loads from Engine circuit during engine cranking to protect sensitive electronics
- 12/24 volt auto ranging voltage input
- Hermetically sealed contacts/vaporproof
- Remote LED output indicates relay state away from ACR (requires optional LED, page 80)
- Senses charging on two battery banks



7610

Specifications

	12 Volts DC	24 Volts DC
I ₃₀₀	Intermittent Rating: 5 min.	210 Amps
I _c	Continuous Rating	120 Amps
I _{oc} (Combine)	Amperage Operating Current	175mA
I _{oc} (Open)	Amperage Operating Current	15mA
Maximum Cable Size	1/0 AWG	1/0 AWG
Terminal Stud Size	3/8"-16 (M10)	3/8"-16 (M10)
Maximum Torque	140 in-lbs	140 in-lbs

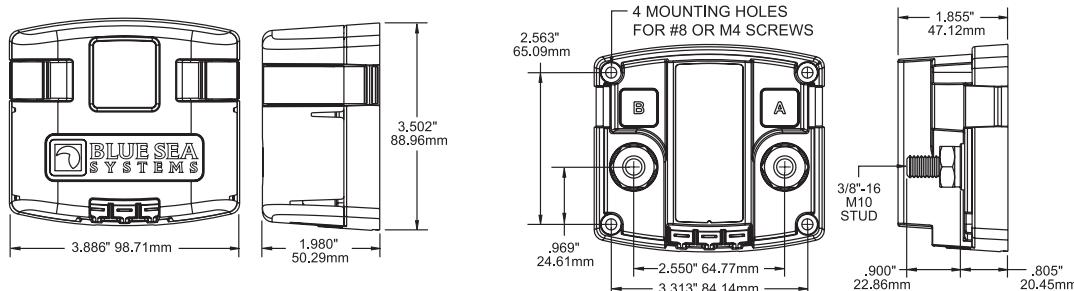
Relay Contact Position

Combine	(30 sec.)	13.6 Volts	27.2 Volts
	(2 min.)	13.0 Volts	26.0 Volts
Open	(10 sec.)	12.35 Volts	24.7 Volts
	(30 sec.)	12.75 Volts	25.5 Volts
Open High		16.0 Volts	30.0 Volts

Regulatory

- CE Marked
- IP Meets ISO 8846, UL 1500, and SAE J1171 external ignition protection requirements
- 67 IP67—temporary immersion for 30 minutes

PN	Volts	Weight lb (kg)
7610	12/24	1.26 (0.57)



Automatic Charging Relays

ML-Series Heavy Duty Automatic Charging Relays (Magnetic Latching)

Automatically manages the charging of two large battery banks and offers optional manual override for emergency battery paralleling



Features

- 500 Ampere continuous rating
- Magnetic Latch (ML)—ACR draws very low current (<10 mA to monitor terminal voltage) in the “ON” or “OFF” states, and draws moderate current for very short time when changing state
- Start Isolation (SI)—Can be configured for temporary isolation of House loads from Engine circuit during engine cranking to protect sensitive electronics
- Engine Isolation (EI)—Can be configured for isolation of two engines while both are running to protect engine electronics and maximize alternator output
- Senses charging on two battery banks
- Supports high-output alternators up to 500 Amps
- LED output to remotely indicate when batteries are combined, isolated, in voltage lockout, in Start or Engine isolation (requires optional LED, page 80)
- 3/8"-16 tin-plated copper studs for maximum conductivity and corrosion resistance
- 7/8" (22mm) stud length accepts multiple cable terminals
- Label recesses for circuit identification
- Silver alloy contacts provide high reliability for switching live loads
- Retail packaging includes ML-Series Remote Control Contura Switch 2146 (page 37)

Specifications

I₁₀	Cranking Rating: 10 sec.	2,500 Amps
I₃₀₀	Intermittent Rating: 5 min.	See table below
I_c	Continuous Rating	See table below
C_s	Switching Cycles	100,000 Cycles
I_{oc} (control circuit—momentary) Amperage Operating Current		<40 mA when changing state

Relay Contact Position

-Combine (30 sec.)	13.5V DC@12 Volts 27.0V DC@24 Volts
-Combine (90 sec.)	13.0V DC@12 Volts 26.0V DC@24 Volts
-Open (10 sec.)	12.35V DC@12 Volts 24.7V DC@24 Volts
-Open (30 sec.)	12.75V DC@12 Volts 25.5V DC@24 Volts
-Open High	16.2V DC@12 Volts 32.4V DC@24 Volts
Live Current Switching	300A@12V DC—10,000 Cycles
Terminal Stud Size	3/8"-16 (M10)
Terminal Stud Torque	140 in-lb (15.5 N·m)
Ring Terminal Size	3/8" (M10)
Terminal Ring Diameter Clearance	1.18" (28.4mm)

Regulatory

IP Meets ISO 8846 ignition protection, and SAE J1171 external ignition protection requirements

66 IP66—withstanding water from heavy seas

Wire Size	I ₃₀₀ Intermittent Rating 5 min.	I _c Continuous Rating
2/0	400 Amps	225 Amps
4/0	400 Amps	300 Amps
2x (4/0)	700 Amps	500 Amps



See ML-Series Remote Control Contura Switch on page 37

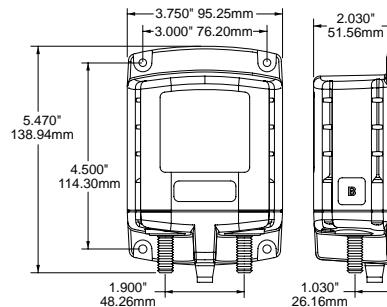


Stripped Wires
—provided on retail units



Deutsch DTM Connectors
—provided on bulk units
Other connector plugs are available for high volume OEM applications.

Please contact Blue Sea Systems for details.



NEW

Battery Management Solutions

ML-Series Remote Control Contura Switches

Provides remote management of ML-Series Remote Battery Switches, ML-Series Solenoid Switches, or ML-Series Automatic Charging Relays

- Vibration, shock, thermoshock, moisture and salt spray resistant

Specifications

T _{mxo}	Temperature Maximum Operating	85°C
T _{mno}	Temperature Minimum Operating	-40°C
I _{mxo}	Amperage Maximum Operating	20 Amps@12 Volts DC
I _{mno}	Amperage Maximum Operating	15 Amps@24 Volts DC
I _{oc} (LED)	Amperage Operating Current	18mA
Lighting		LED rated 100,000 hours half-life
Seals		Internal and external gasket panel seal
Mounting Hole		1.45" x 0.83" (36.83mm x 21.08mm)

Model Specific Feature

- Lockout slide reduces the risk of accidental switching

Regulatory

- Meets UL 1500 and ISO 8846 external ignition protection requirements
- IP67—temporary immersion for 30 minutes

PN	Specific Feature	Pole/Throw	Action	Weight lb (kg)
2145		SPDT	(ON) OFF (ON)	0.10 (0.05)
2146	-	SPDT	ON-OFF-ON	0.10 (0.05)

() = Momentary

See page 78 for a full selection of Contura Switches



See page 8 for a full selection of related products located in the 360 Panel System section of this catalog.

Add A Battery (Dual Circuit System)

Simplifies switching and automates charging for a complete two battery bank solution

5511C, Dual Circuit Plus™ Battery Switch (page 27)

- Simplifies battery switching
- Isolates engine and house circuits
- Combines battery banks for emergency starting



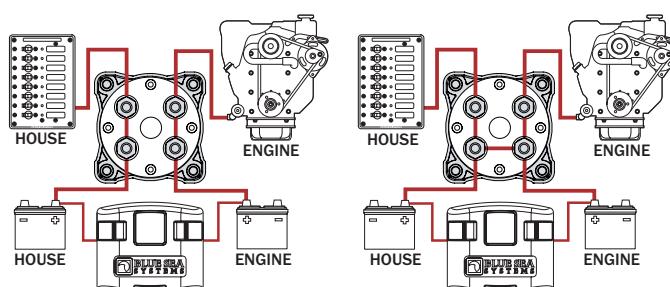
7610, 120 Amp SI* Automatic Charging Relay (page 35)

- Automatically combines battery banks during charging
- Isolates battery banks when discharging and when starting engines

Regulatory

- CE Marked
- Meets UL 1500 and SAE J1171 external ignition protection requirements
- IP67—temporary immersion for 30 minutes (7610 ONLY)

PN	Weight lb (kg)
7650	2.36 (1.07)



Switch Set to
"ON"
Batteries Isolated

Switch Set to
"COMBINE BATTERIES"
Batteries Combined



7650

* Starting Isolation

Circuit Breakers

Push Button Reset-Only Circuit Breakers

Provides economical circuit protection for 3 to 40 Ampere loads when switching is provided elsewhere

Features

- Branch circuit breakers (can also be used for 24-hour circuit protection)
- Quick connect terminal style circuit breakers are incorporated into Blue Sea Systems WeatherDeck™ Waterproof Circuit Breaker Panels (pages 49, 51), Battery Bank Main Distribution Panels (pages 29–30), and 360 Distribution Panels (pages 5, 7–8, 10–11)
- Compact design enables high density circuit protection configurations
- Push-to-reset operation
- “Trip Free” design cannot be held “ON” during fault current condition
- Optional Push Button Waterproof Boot protects circuit breaker in wet environments, replaces dress nut mounting on circuit breakers, and resists discoloration and cracking

Specifications

I _c Interrupting Capacity	3,000 Amps@14.7 Volts DC 2,500 Amps@28 Volts DC
V _{mvo} Voltage Maximum Operating	32 Volts DC 250 Volts AC
I _{tr} Amperage Trip Reference	See table below
T _{mno} Temperature Minimum Operating	-10°C
T _{mxo} Temperature Maximum Operating	60°C
Type	Thermal trip, manual push button reset-only
Terminals	#8 Screw Terminals or 1/4" Male Quick Connect Terminals
Screw Terminal Torque	15 in-lb max.
Trip Time Delay	See www.blueseal.com
Mounting	3/8"-27 UNS
Weight	0.06lb (0.03kg)

Regulatory

- CE marked
- UL Recognized—UL 1077—UL/cUL (USA and Canada), TUV certified
- IP Meets UL 1500 and ISO 8846 external ignition protection requirements

See page 106 for ABYC Interrupting Capacity Requirements.

Screw Terminals PN	Quick Connect Terminals PN	DC I _{tr}
2129	7050	3
2130	7052	5
2131	7053	7
2132	7054	10
2133	7056	15
2134	7057	20
2135	7058	25
2136	7059	30
2137	7061	40
NEW		



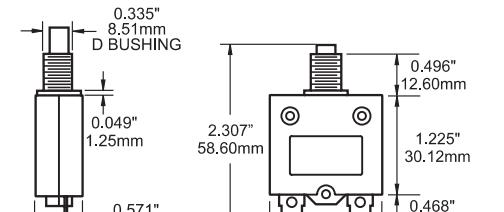
See pages 5, 7–8, 10–11 for a full selection of related products located in the 360 Panel System section of this catalog.



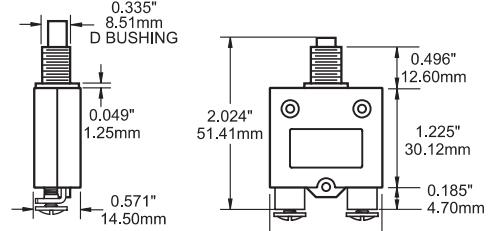
7054



2132



1/4" Male Quick Connect Terminals



#8 Screw Terminals



4135

4136

4137

Push Button Reset-Only Circuit Breaker Waterproof Boots

Protects push button circuit breakers in wet environments

Features

- Incorporated into Blue Sea Systems waterproof circuit breaker panels (pages 49, 51)
- Protects circuit breaker in wet environments, and resists discoloration and cracking
- Replaces dress nut mounting on circuit breakers

Specifications

Weight (pkg. of 5)	0.04lb (0.02kg)
Thread Material	Nickel-Plated Brass
Thread	3/8"-27

Regulatory

67 IP67—temporary immersion for 30 minutes

PN	Color
4135	Clear
4136	White
4137	Black

Circuit Breakers

Medium Duty Push Button Reset-Only Circuit Breakers

Provides medium duty circuit protection for 15 to 60 Ampere loads when switching is provided elsewhere

Features

- Weatherproof
- Can be used as Main, Branch or 24-hour circuit protection
- Compact design enables high density circuit protection configurations
- Push to reset operation
- “Trip Free” design cannot be held “ON” during fault current condition
- Captive star lock washers meet requirements for anti-rotation and eliminate handling of small, easily dropped parts

Specifications

I _c	Interrupting Capacity	5,000 Amps@32 Volts DC 3,000 Amps@120 Volts AC
V _{mxo}	Voltage Maximum Operating	32 Volts DC 120 Volts AC
I _{tr}	Amperage Trip Reference	See table below
T _{mno}	Temperature Minimum Operating	-54°C
T _{mxo}	Temperature Maximum Operating	74°C
Type		Thermal trip, manual push button reset-only
Terminal Stud		#10-32 Stainless Steel
Terminal Stud Torque		30 in-lb max.
Trip Time Delay		See www.bluesea.com
Mounting		Accepts #10 Screws
Weight		0.15lb (0.68kg)

Regulatory

- SAE J1428
- SAE J553
- UL 1077

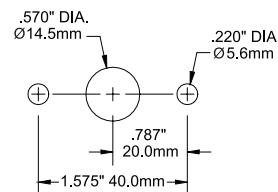
IP Meets UL 1500 external ignition protection requirements

See page 106 for ABYC Interrupting Capacity Requirements.

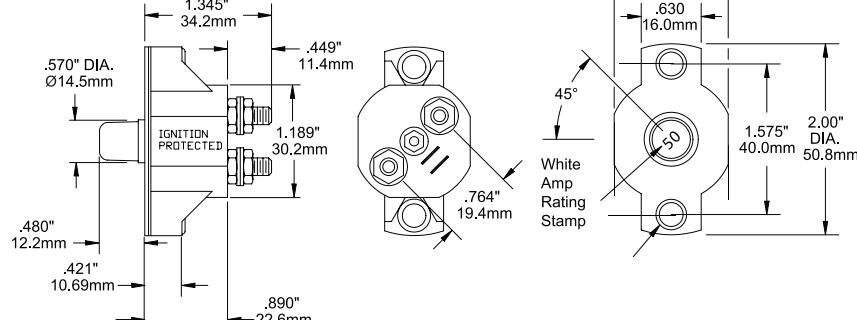


2142

Circuit Breaker PN	DC I _{tr}
2138	15
2139	20
2140	30
2141	40
2142	50
2143	60
NEW	



Cut Out Dimensions



Circuit Breakers

185-Series Circuit Breakers

Provides medium duty circuit protection for 25 to 150 Ampere loads when switching and circuit protection are both required

Specifications

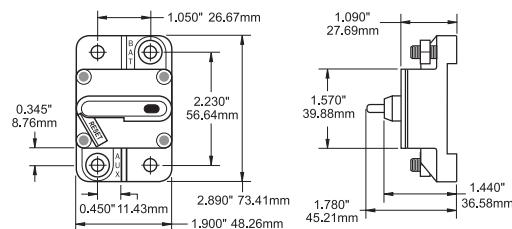
I_{ic}	Interrupting Capacity	3,000 Amps@42 Volts DC
V_{mxo}	Voltage Maximum Operating	42 Volts DC
I_{tr}	Amperage Trip Reference	See table below
T_{mno}	Temperature Minimum Operating	-25°C
T_{mxo}	Temperature Maximum Operating	82°C
Type		Thermally Responsive Bi-Metal Blade
Class		Type III—Switchable/Manual Reset—Trip Free
Terminal Stud		1/4"-28
Terminal Stud Torque		50 in-lb
Trip Time Delay		See www.bluesea.com
Mounting Hole		Accepts 1/4" Screw
Weight	Panel Mount	0.25 lb (0.11 kg)
	Surface Mount	0.30 lb (0.14 kg)

Regulatory

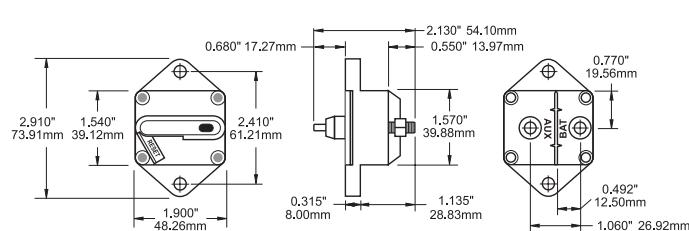
- CE marked
- IP Meets SAE J1171 external ignition protection requirements
- IP67—temporary immersion for 30 minutes

See page 106 for ABYC Interrupting Capacity Requirements.

Panel Mount PN	Surface Mount PN	DC I _{tr}
7008	7108	25
7009	7109	30
7010	7110	35
7005	7105	40
7000	7100	50
7011	7111	60
7012	7112	70
7014	7114	80
7006	7106	90
7002	7102	100
7007	7107	110
7013	7113	120
7015	7115	135
7004	7104	150



Surface Mount Dimensions



Panel Mount Dimensions

185-Series Circuit Breaker Mounting System

Provides gasket for mounting 185-Series Thermal Circuit Breakers (panel mount)

Features

- Self trimming molded rubber bezel

PN	Function	Height in (mm)	Width in (mm)	Weight lb (kg)
7198	Trim Bezel	3.34 (84.71)	2.44 (61.90)	0.04 (0.02)



Circuit Breaker not included

7198

Circuit Breakers

187-Series Circuit Breakers

Provides heavy duty circuit protection for 25 to 150 Ampere loads when switching and circuit protection are both required

Features

- Single lever operation—clearly visible
- Self-trimming case eliminates need for mounting panels or trim bezels
- Round case for easy installation with standard sized hole saw (panel mount models)
- Large clearance around terminal studs accepts up to 1/0 AWG lugs
- Recessed mounting holes for clean appearance
- Robust 5/16"-18 terminals provide high torque connections

Specifications

I_{ic}	Interrupting Capacity	5,000 Amps@12 Volts DC 3,000 Amps@24 Volts DC 1,500 Amps@42 Volts DC
V_{mxo}	Voltage Maximum Operating	48 Volts DC
I_{tr}	Amperage Maximum Operating	See table below
T_{mno}	Temperature Minimum Operating	-40°C
T_{mxo}	Temperature Maximum Operating	85°C
Type		Thermally Responsive Bi-Metal Blade
Class		Type III—Switchable/Manual Reset—Trip Free
Terminal Stud		5/16"-18
Terminal Stud Torque		75 in-lb max.
Trip Time Delay		See www.bluesea.com
Mounting Hole		Accepts #10 (M5) Screw
Weight	Panel Mount	0.50 lb (0.23 kg)
	Surface Mount	0.58 lb (0.26 kg)

Regulatory

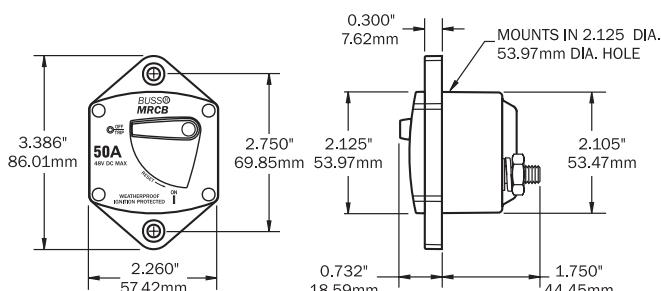
- CE marked

IP Meets SAE J1171 external ignition protection requirements

66 IP66—withstanding water from heavy seas

See page 106 for ABYC Interrupting Capacity Requirements.

Panel Mount PN	Surface Mount PN	DC I _{tr}
7035	7135	25
7036	7136	30
7037	7137	35
7038	7138	40
7039	7139	50
7040	7140	60
7041	7141	70
7042	7142	80
7043	7143	90
7044	7144	100
7045	7145	110
7046	7146	120
7047	7147	135
7048	7148	150



Panel Mount Dimensions



7044



Surface Mount Dimensions

Circuit Breakers

C-Series Toggle Circuit Breakers

Combines switching and circuit protection into a single device

Features

- Large frame provides stud termination for 5–300 Ampere loads
- Provides over current protection for inverters, bow thrusters, and windlasses
- Offers high interrupt capacity—suitable for main circuit protection
- “Trip Free”—cannot be held closed after trip

Specifications

I_{ic}	Interrupting Capacity
V_{mox}	Voltage Maximum Operating
I_{tr}	Amperage Trip Reference
T_{mno}	Temperature Minimum Operating
T_{mox}	Temperature Maximum Operating
C_s	Switching Cycles

Type	Magnetic Hydraulic—Trip free
Terminal Stud	1/4"-20 Tin-Plated Brass
Terminal Stud Torque	35 in-lb max.
Trip Time Delay	See www.bluesea.com
Mounting Screw	#6-32 Stainless Steel
Mounting Screw Torque	6–8 in-lb Recommended

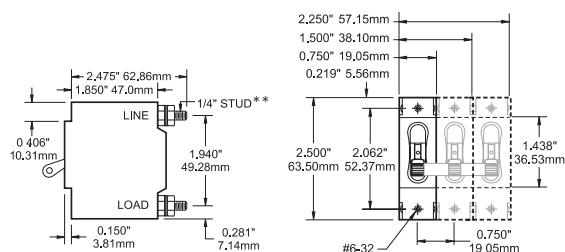
Regulatory

- Meets SAE J1171, UL 1500, and ISO 8846 external ignition protection requirements—7250I only

Interrupting Capacity (see ABYC Requirements page 106)

C-Series Toggle Circuit Breakers

		UL 1077 - UL/CSA (US/Canada)	EN60934 - TUV (Europe)
Poles	V_{mox}	I_{tr}	I_{ic}
1	80V DC	5–100A	10,000A
	125V AC	5–100A	5,000A
	250V AC	5–100A	5,000A
1 PN 7250I	48V DC	100A	5,000A
	125V AC	100A	1,500A
2 and 3	65V DC	150–300A	5,000A†



7250

7267



Cutout Dimensions

7270

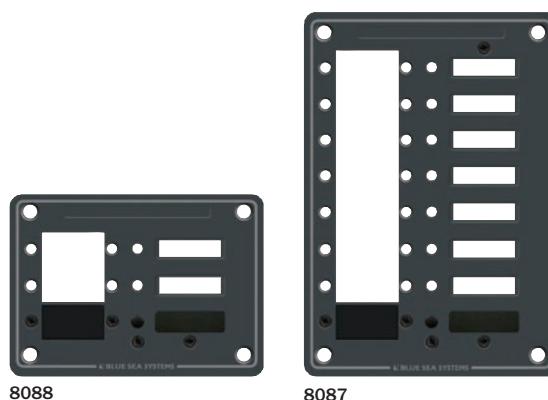
PN	Regulatory	Color	Poles	DC I_{tr}	Weight lb (kg)
7350	-	White	1*	5	0.28 (0.13)
7351	-	White	1*	10	0.28 (0.13)
7352	-	White	1*	15	0.28 (0.13)
7353	-	White	1*	20	0.28 (0.13)
7354	-	White	1*	25	0.28 (0.13)
7355	-	White	1*	30	0.28 (0.13)
7244	-	White	1*	50	0.36 (0.17)
7246	-	White	1*	60	0.36 (0.17)
7248	-	White	1*	80	0.36 (0.17)
7250		White	1*	100	0.36 (0.17)
7250I		Red	1*	100	0.36 (0.17)
7267	-	White	2†	150	0.64 (0.31)
7268	-	White	2†	175	0.64 (0.31)
7269	-	White	2†	200	0.64 (0.31)
7270	-	White	3†	250	0.93 (0.46)
7271	-	White	3†	300	0.93 (0.46)

C-Series Toggle Circuit Breaker Mounting Panels

Accepts C-Series Toggle circuit breakers

- Accepts Blue Sea Systems Large Format Labels (pages 84–87)
- Accepts Blue Sea Systems “ON” indicating LEDs (page 80)
- Panel plugs can be inserted to fill blank positions
- Panel Plug Kit 8089 included—Circuit Breaker Mounting Screws, panel plug, LED plug, and blank label

PN	Position	Width in (mm)	Height in (mm)	Weight lb (kg)
8088	3	5.25 (133.35)	3.75 (95.25)	0.24 (0.11)
8087	8	5.25 (133.35)	7.50 (190.50)	0.40 (0.18)
2147	3	3.75 (95.25)	5.25 (133.35)	0.24 (0.11)
8089	Panel Plug Kit			



* Single pole circuit breakers are AC/DC rated | † Paralleled poles have 5/16" stud on bus | ‡ No agency approvals

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

Circuit Breakers

C-Series Flat Rocker Circuit Breakers

Combines switching and circuit protection into a single device

Features

- Large frame provides stud termination for 5–300 Ampere loads
- Rocker actuator is flush in the “ON” position, reducing the risk of accidental switching
- Color actuator indicates “OFF” position
- Provides over current protection for inverters, bow thrusters, and windlasses
- “Trip Free”—cannot be held closed after trip

Specifications

I_{ic} Interrupting Capacity

See Interrupt Capacity table below

V_{mxo} Voltage Maximum Operating

See Interrupt Capacity table below

I_{tr} Amperage Trip Reference

See tables below

T_{mno} Temperature Minimum Operating

-40°C

T_{mxo} Temperature Maximum Operating

85°C

C_s Switching Cycles

10,000 @ rated amperage and voltage

Type

Magnetic Hydraulic—Trip free

Terminal Stud

1/4"-20 Tin-Plated Brass

Terminal Stud Torque

35 in-lb max.

Trip Time Delay

See www.bluesea.com

Mounting Screw

#6-32 Stainless Steel

Mounting Screw Torque

6–8 in-lb Recommended

Regulatory

IP Single-pole breakers meet SAE J1171, UL 1500 and ISO 8846

external ignition protection requirements



7540



7551

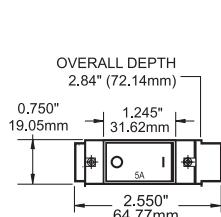


7554

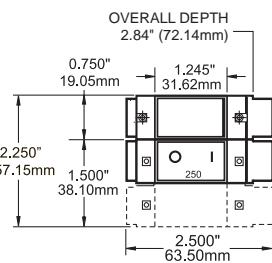
Interrupting Capacity (see ABYC Requirements page 106)

C-Series Flat Rocker Circuit Breakers			
		UL 1077 - UL/CSA (US/Canada)	EN60934 - TUV (Europe)
Poles	V _{mxo}	I _{tr}	I _{ic}
1 IP	32V DC	5–100A	5,000A
	125V AC	5–100A	3,000A
	240V AC	5–50A	3,500A
2 and 3	48V DC	150–300A	5,000A
	48V DC	150–200A	5,000A

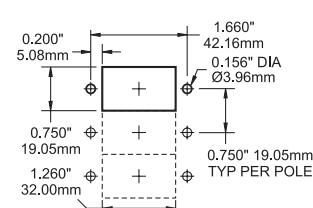
PN	Poles	Regulatory	DC I _{tr}	Weight lb (kg)
7540	1*	IP	5	0.28 (0.13)
7541	1*	IP	10	0.28 (0.13)
7542	1*	IP	15	0.28 (0.13)
7543	1*	IP	20	0.28 (0.13)
7544	1*	IP	25	0.28 (0.13)
7545	1*	IP	30	0.28 (0.13)
7546	1*	IP	50	0.28 (0.13)
7547	1*	IP	60	0.36 (0.17)
7548	1*	IP	80	0.36 (0.17)
7549	1*	IP	100	0.36 (0.17)
7475	2†	-	150	0.64 (0.31)
7551	2†	-	175	0.64 (0.31)
7476	2†	-	200	0.64 (0.31)
7477	3†	-	250	0.93 (0.46)
7554	3†	-	300	0.93 (0.46)



Single Pole



Double and Triple Pole



Cutout Dimensions

* Single pole circuit breakers are AC/DC rated | † Paralleled poles have 5/16" stud on bus

Fuse Blocks and Fuses

Terminal Fuse Blocks (MRBF—Marine Rated Battery Fuse)

Easily and economically satisfies ABYC 7" circuit protection rule by mounting on a 3/8" battery post, battery switch or busbar

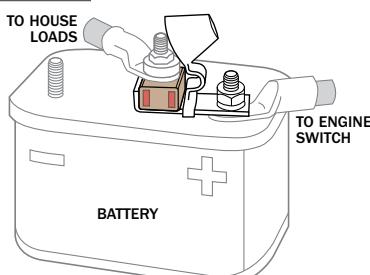
- New isolated stud design uses standard M8 hardware and permits stacking of terminals
- Compact, high-amp fuse—Appropriate for DC Main, inverter, windlass, and bow thruster circuit protection
- Provides high current protection in tight space constraints
- Weatherproof—suitable for small open-cockpit boats and other harsh environments
- Insulating cap prevents accidental shorts
- Accepts 5/16" or 3/8" ring terminals

Specifications

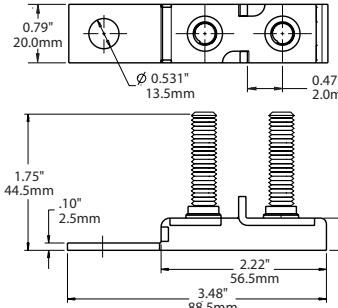
V_{mvo} Voltage Maximum Operating	58 Volts DC
I_{mvo} Amperage Maximum Operating	300 Amps DC
Maximum Torque	75 in-lbs
Terminal Stud Size	M8 (5/16")
Terminal Fuses Available	30–300 Amps

PN	Terminal Stud	Mounting Hole	Weight lb (kg)
5191	1 Terminal Stud	3/8"	0.16 (0.07)
2151	2 Terminal Studs	3/8"	0.29 (7.37)

UPDATED NEW

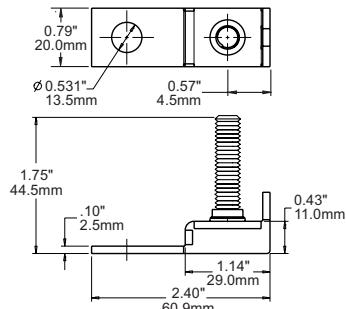


Installation Example

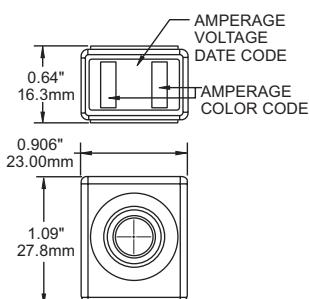


2151

2151 (fuses not included)



5191



Terminal Fuses (MRBF—Marine Rated Battery Fuse)*

Use with Terminal Fuse Block for many applications with 30 to 300 Ampere loads

- High Interrupt Rating satisfies ABYC requirements for DC Main circuit protection on large battery banks
- Clear window—visual indication of blown condition
- Color coded for each amperage

Specifications

I_{ic} Interrupting Capacity	10,000 Amps@14 Volts DC 5,000 Amps@32 Volts DC 2,000 Amps@58 Volts DC
V_{mvo} Voltage Maximum Operating	58 Volts DC
I_{tr} Amperage Trip Reference	See table below
Fuse Hole Opening	M8 (5/16")
Trip Time Delay	See www.bluesea.com

Regulatory

- IP Meets SAE J1171 external ignition protection requirements
- 66 IP66—withstanding water from heavy seas

ABYC E-11.12.1.1.1. Each ungrounded conductor connected to a battery charger, alternator, or other charging source, shall be provided with over current protection within a distance of seven inches (175mm) of the point of connection to the DC electrical system or to the battery.

PN	DC I _{tr}	Color	Weight lb (kg)
5175	30	LT Green	0.06 (0.03)
5176	40	LT Blue	0.06 (0.03)
5177	50	Red	0.06 (0.03)
5178	60	Gold	0.06 (0.03)
5180	75	Brown	0.06 (0.03)
5181	80	Lime	0.06 (0.03)
5182	90	Purple	0.06 (0.03)
5183	100	Yellow	0.06 (0.03)

PN	DC I _{tr}	Color	Weight lb (kg)
5184	125	Green	0.06 (0.03)
5185	150	Orange	0.06 (0.03)
5186	175	White	0.06 (0.03)
5187	200	Blue	0.06 (0.03)
5188	225	Tan	0.06 (0.03)
5189	250	Pink	0.06 (0.03)
5190	300	Gray	0.06 (0.03)

* For use only with Terminal Fuse Block

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

Fuse Blocks and Fuses

SEA Fuse Blocks

Provides an economical system for 100 to 300 Ampere fusing

- Accepts 5/16" (M8) ring terminals
- Insulating cover satisfies ABYC/USCG insulation requirements
- Cover breakouts allow wire access in any direction
- Insert molded studs ensure secure fuse mounting
- Stainless steel studs provide resistance to corrosion and allow high torque for excellent electrical contact
- UL 94-V0 base resists high heat

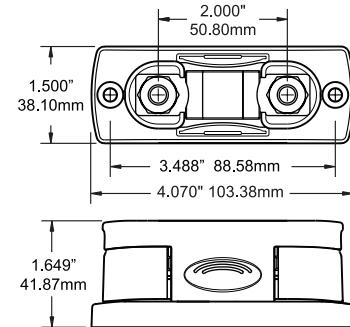
Specifications

V_{mxo} Voltage Maximum Operating	32 Volts DC
I_{mxo} Amperage Maximum Operating	300 Amps
Maximum Torque	110 in-lb (12.40 N-m)
Terminal Stud Size	5/16"-18 (M8)
Mounting holes	Accept #10 (M5) Screws
Cable Size	14 AWG to 2/0 AWG
SEA Fuses available	100–300 Amps



5001 (fuse not included)

PN	Cover	Weight lb (kg)
5000	-	0.17 (0.1)
5001	Yes	0.35 (0.2)



SEA Fuses

Use with SEA Fuse Blocks to create an economical system for 100 to 300 Ampere circuit protection

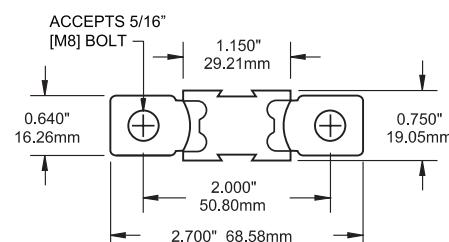
Specifications

I_{ic} Interrupting Capacity	2,000 Amps
V_{mxo} Voltage Maximum Operating	32 Volts DC
I_{tr} Amperage Trip Reference	See table below
Trip Time Delay	See www.bluesea.com

PN	DC I _{tr}	Weight lb (kg)
5101	100	0.06 (0.03)
5102	125	0.06 (0.03)
5103	150	0.06 (0.03)
5104	175	0.06 (0.03)
5105	200	0.06 (0.03)
5106	225	0.06 (0.03)
5107	250	0.06 (0.03)
5108	300	0.06 (0.03)



5106



Fuse Blocks and Fuses

ANL Fuse Blocks

Accepts a wide range of ANL fuse amperages for a versatile fusing system

- Accepts 5/16" (M8) ring terminals
- Insulating cover satisfies ABYC/USCG insulation requirements
- Cover breakouts allow wire access in any direction
- Insert molded studs ensure secure fuse mounting
- Stainless steel studs provide resistance to corrosion and high torque for excellent electrical contact
- UL 94-V0 base resists high heat
- Swing out design allows replacement of the fuse without removing fasteners

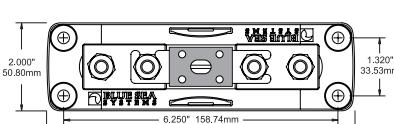
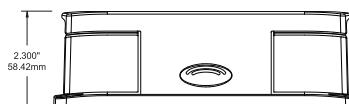
Specifications

	5503	5004/5005
V _{mxo} Voltage Maximum Operating	32 Volts DC	32 Volts DC
I _{mxo} Amperage Maximum Operating	750 Amps	300 Amps
Maximum Torque	107 in-lb (12.09 N-m)	110 in-lb (12.40 N-m)
Terminal Stud Size	5/16"-18 (M8)	5/16"-18 (M8)
Mounting holes	Accept 1/4" Screw	Accept #10 (M5) Screw
Cable Size	Up to 4/0 AWG	Up to 2/0 AWG
Fuse Mounting Blocks	Tin-Plated Copper	Tin-Plated Copper
ANL Fuses Available	35–750 Amps	35–300 Amps

PN	Cover	Weight lb (kg)
5503	Yes	1.45 (0.66)
5004	No	0.18 (0.08)
5005	Yes	0.35 (0.16)

NEW

Note: 5503 replaces 5003 (New design reduces cost, maintains performance and improves insulating cover)



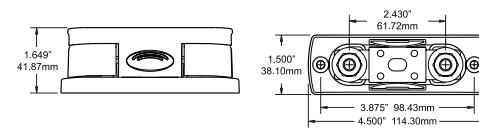
5503



5503 (fuse not included)



5005 (fuse not included)



5005

ANL Fuses

Use with ANL Fuse Blocks for many applications with 35–750 Ampere loads

Common Features

- 6,000 Ampere Interrupt Rating satisfies ABYC requirements for main DC circuit protection on large battery banks
- Silver-plated connector blades for corrosion resistance
- Visible indication of blown fuse condition

Regulatory

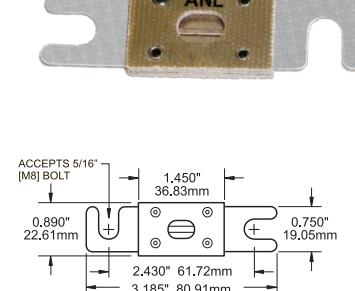
IP Meets ISO 8846 and SAE J1171 external ignition protection requirements (35–500 Amps only)

Specifications

I _{ic} Interrupting Capacity	5,000 Amps
V _{mxo} Voltage Maximum Operating	32 Volts DC
I _{tr} Amperage Trip Reference	See table below
Trip Time Delay	See www.bluesea.com

PN	Regulatory	DC I _{tr}	Weight lb (kg)
5164	IP	35	0.05 (0.02)
5165	IP	40	0.05 (0.02)
5122	IP	50	0.05 (0.02)
5123	IP	60	0.05 (0.02)
5124	IP	80	0.05 (0.02)
5125	IP	100	0.05 (0.02)
5126	IP	130	0.05 (0.02)
5127	IP	150	0.06 (0.03)
5128	IP	175	0.06 (0.03)
5129	IP	200	0.06 (0.03)
5130	IP	225	0.06 (0.03)

PN	Regulatory	DC I _{tr}	Weight lb (kg)
5131	IP	250	0.07 (0.04)
5132	IP	275	0.07 (0.04)
5133	IP	300	0.07 (0.04)
5134	IP	325	0.07 (0.04)
5135	IP	350	0.07 (0.04)
5136	IP	400	0.08 (0.04)
5137	IP	500	0.08 (0.04)
5161	-	600	0.08 (0.04)
5162	-	675	0.08 (0.04)
5163	-	750	0.08 (0.04)



Fuse Blocks and Fuses

Class T Fuse Block

Allows use of Class T fuses for high speed circuit protection of electronic equipment

- Accepts 3/8" (M10) ring terminals
- Insulating cover satisfies ABYC/USCG insulation requirements
- Cover breakouts allow wire access in any direction
- Insert molded studs ensure secure fuse mounting
- Stainless steel studs provide resistance to corrosion and high torque for excellent electrical contact
- UL 94-VO base resists high heat

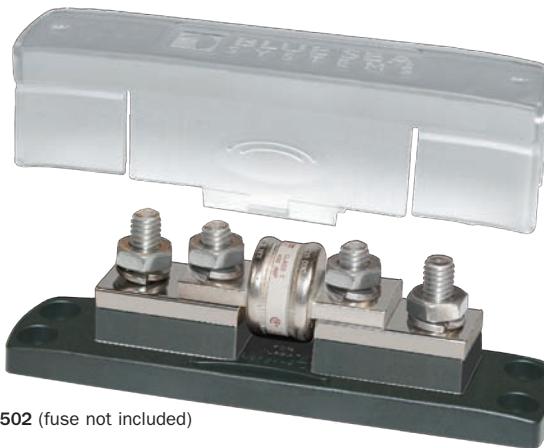
Specifications

V_{mxo}	Voltage Maximum Operating	160 Volts DC
I_{mxo}	Amperage Maximum Operating	400 Amps
Maximum Torque		190 in-lb (21.47 N-m)
Terminal Stud Size		3/8"-16 (M10)
Mounting holes		Accept 1/4" Screws
Cable Size		Up to 4/0 AWG
Fuse Mounting Blocks		Tin-Plated Copper
Class T Fuses available		225–400 Amps

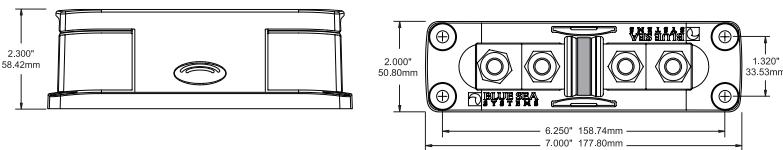
PN	Weight lb (kg)
5502	1.55 (0.70)

NEW

Note: 5502 replaces 5002 (New design reduces cost, maintains performance and improves insulating cover)



5502 (fuse not included)



Class T Fuses

Use with Class T Fuse Blocks for circuit protection of devices including inverters

- 20,000 Ampere Interrupt Rating
- Extremely fast short-circuit response
- Recommended by most inverter manufacturers

Specifications

I_{ic}	Interrupting Capacity	20,000 Amps
V_{mxo}	Voltage Maximum Operating	160 Volts DC
I_{tr}	Amperage Trip Reference	See table below
Trip Time Delay		See www.bluesea.com

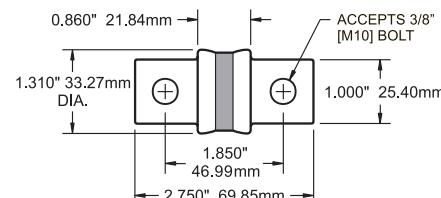
Regulatory

- UL listed to standard 248-15
- DC tested to UL standard 198L

PN	DC I_{tr}	Weight lb (kg)
5117	225	0.30 (0.14)
5118	250	0.30 (0.14)
5119	300	0.30 (0.14)
5120	350	0.30 (0.14)
5121	400	0.30 (0.14)



5118



ANL Fuses vs. Class T Fuses

What is the difference between an ANL and a Class T fuse?

These two fuses are the most common high amperage fuses used in marine applications and there are significant differences between the two:

ANL Fuse Advantages:

- Lower cost than Class T fuses
- Available in a wider amperage range than Class T Fuses
- Single mounting hole dimension allows all ANL Fuses to be used with the same fuse block
- Fusible link window gives visual indication of fuse being blown
- Ignition protected—safe for installation aboard gasoline powered boats



Class T Fuse Advantages:

- The only UL 248-15 listed fuse commonly available in the marine industry
- Very fast response to short circuits protects high amperage electronic equipment such as inverters



DC Branch

The DC Branch circuit distributes current from a single-cable high-amperage DC Main circuit to multiple circuits which carry lower amperages through smaller wires. DC Branch circuits typically carry currents below 50 Amperes to the load devices.



DC Branch Table of Contents



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pages 49–51



DISTRIBUTION PANELS
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CIRCUIT BREAKERS
page 54



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FUSES
page 56

Waterproof Panels

WeatherDeck™ Waterproof Circuit Breaker Panels

Provides push-to-reset circuit protection for open-cockpit and flybridge applications

Features

- Designed for 12 or 24 Volt systems
- Switch guards reduce the risk of accidental switching
- Independent label backlighting allows switching and dimming
- Backlighting is compatible with Digital Dimmers (page 82)
- Panels can be mounted in four different orientations
- UV stabilized weather-resistant faceplate snaps on and off providing access to components and concealing mounting screws

Component References

- ON-OFF Toggle Switch (page 77)
- Push Button, Thermal Trip, Manual Reset-Only (page 38)
- Square Format Label Set 4215 included (pages 84–85)
- Rugged UV stabilized waterproof boots (page 77)

Specifications

V_{mxo}	Voltage Maximum Operating	24 Volts DC
I_{mxo}	Amperage Maximum Operating	15 Amps@12 Volts DC (per circuit) 9 Amps@24 Volts DC (per circuit)
I_{oc} (Backlight) Amperage Operating Current		10mA/Illuminated Circuit
Panel Cumulative Rating		45 Amps
Switch Rating		15 Amps Maximum
Backlighting Voltage		12 Volts DC Nominal
Backlighting Amperage Draw		10mA/Illuminated Circuit
Circuit Breaker Rating		15 Amps

Regulatory

67 IP67—temporary immersion for 30 minutes



4376



Cover OFF

PN	Color	Circuits	Width in (mm)	Height in (mm)	Depth in (mm)	Width Mounting Centers in (mm)	Height Mounting Centers in (mm)	Weight lb (kg)
4374	Gray	4	4.25 (107.95)	4.30 (109.22)	3.50 (88.90)	3.69 (93.73)	3.74 (95.00)	0.97 (0.44)
4376	Gray	6	4.25 (107.95)	6.00 (152.40)	3.50 (88.90)	3.69 (93.73)	5.44 (138.18)	1.36 (0.62)
4378	Gray	8	4.25 (107.95)	7.70 (195.58)	3.50 (88.90)	3.69 (93.73)	7.14 (181.36)	1.83 (0.83)
4384	White	4	4.25 (107.95)	4.30 (109.22)	3.50 (88.90)	3.69 (93.73)	3.74 (95.00)	0.97 (0.44)
4386	White	6	4.25 (107.95)	6.00 (152.40)	3.50 (88.90)	3.69 (93.73)	5.44 (138.18)	1.36 (0.62)
4388	White	8	4.25 (107.95)	7.70 (195.58)	3.50 (88.90)	3.69 (93.73)	7.14 (181.36)	1.83 (0.83)

NEW



4384

4374



4386

4376



4388

4378

Waterproof Panels

WeatherDeck™ Waterproof Fuse Panels

Employs contemporary design and uses automotive-style ATO/ATC fuses for open-cockpit and flybridge applications

Features

- Designed for 12 Volt systems
- Bi-colored LEDs illuminate circuit labels to quickly identify "OFF" (Red), "ON" (Green), or "Blown" (No color) circuits
- Independent label backlighting circuit for remote switching and dimming
- Backlighting is compatible with all Digital Dimmers (page 82)
- UV stabilized, weather resistant faceplate snaps on and off providing access to components and concealing mounting screws
- Switch guards reduce the risk of accidental switching

Component References

- ON-OFF Toggle (page 77)
- ATO/ATC Blade-Type (page 56)
- UV stabilized waterproof boots (page 77)
- LEDs (page 80)
- Square Format Label Set 4215 included (pages 84–85)

Specifications

V _{mxo}	Voltage Maximum Operating	12 Volts DC
I _{mxo}	Amperage Maximum Operating	15 Amps (per circuit)
I _{oc} (Backlight)	Amperage Operating Current	10mA/Illuminated Circuit
Panel Cumulative Rating		2 Position—30 Amps 4 Position—60 Amps 6 Position—90 Amps 8 Position—100 Amps
Switch Rating		15 Amperes maximum
Backlighting Voltage		12 Volts DC Nominal
Fuses Available		1–40 Amps

Regulatory

67 IP67—temporary immersion for 30 minutes



4306



Cover OFF

PN	Circuits	Color	Width in (mm)	Height in (mm)	Depth in (mm)	Width Mounting Centers in (mm)	Height Mounting Centers in (mm)	Weight lb (kg)
4302	2	Gray	3.88 (98.55)	2.60 (66.04)	2.50 (63.50)	3.31 (84.07)	2.04 (51.82)	0.52 (0.24)
4304	4	Gray	3.88 (98.55)	4.30 (109.22)	2.50 (63.50)	3.31 (84.07)	3.74 (95.00)	0.90 (0.41)
4306	6	Gray	3.88 (98.55)	6.00 (152.40)	2.50 (63.50)	3.31 (84.07)	5.44 (138.18)	1.15 (0.52)
4308	8	Gray	3.88 (98.55)	7.70 (195.58)	2.50 (63.50)	3.31 (84.07)	7.14 (181.36)	1.55 (0.70)
4312	2	White	3.88 (98.55)	2.60 (66.04)	2.50 (63.50)	3.31 (84.07)	2.04 (51.82)	0.52 (0.24)
4314	4	White	3.88 (98.55)	4.30 (109.22)	2.50 (63.50)	3.31 (84.07)	3.74 (95.00)	0.90 (0.41)
4316	6	White	3.88 (98.55)	6.00 (152.40)	2.50 (63.50)	3.31 (84.07)	5.44 (138.18)	1.15 (0.52)
4318	8	White	3.88 (98.55)	7.70 (195.58)	2.50 (63.50)	3.31 (84.07)	7.14 (181.36)	1.55 (0.70)



4312

4302



4314

4304



4316

4306



4318

4308

Waterproof Panels

Contura Switch Waterproof Panels

Designed for open-cockpit and flybridge applications using switches to compliment existing controls commonly used on many boats

Features

- Designed for 12 or 24 Volt systems
- Watertight mounting gasket
- "ON" indicating LEDs embedded in all switches

NOTE: Labels are not backlit

Component References

- ON-OFF Contura switches[†] (page 78)
- Small Format Label Set included* (page 83)
- Push Button Reset-Only Circuit Breakers (page 38)
- AGC/MDL Fuse Holders (page 77)

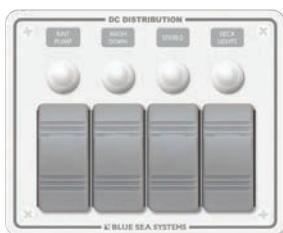
Regulatory

Rated IP66— withstands water from heavy seas

Meets UL 1500 and ISO 8846 ignition protection requirements (See table below)

Specifications

V_{mxo}	Voltage Maximum Operating	24 Volts DC
I_{oc} (Switch LED)	Amperage Operating Current	18 Milliamperes each
Switch Rating	20 Amps@12 Volts DC	15 Amps@24 Volts DC
Circuit Breaker Rating	15 Amps	
Fuse Holder Rating	20 Amps maximum	(15A fuses included)
Panel Cumulative Rating	45 Amps	



8272



8271



8374



8373



8262



8054*



8053*



8263†

8261

PN	Regulatory	AGC/MDL Fuse Holders	Push Button Circuit Breakers	Color	Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
8274		-	3	White	4.50 (114.30)	3.75 (95.25)	3.25 (82.55)	0.75 (0.34)
8272		-	4	White	5.25 (133.35)	4.25 (107.95)	3.25 (82.55)	0.90 (0.41)
8273		-	6	White	4.50 (114.30)	7.50 (190.50)	3.25 (82.55)	1.35 (0.61)
8271		-	8	White	9.37 (238.00)	4.25 (107.95)	3.25 (82.55)	1.75 (0.79)
8374		-	3	Black	4.50 (114.30)	3.75 (95.25)	3.25 (82.55)	0.75 (0.34)
8372		-	4	Black	5.25 (133.35)	4.25 (107.95)	3.25 (82.55)	0.90 (0.41)
8373		-	6	Black	4.50 (114.30)	7.50 (190.50)	3.25 (82.55)	1.35 (0.61)
8371		-	8	Black	9.37 (238.00)	4.25 (107.95)	3.25 (82.55)	1.75 (0.79)
8054*	-	3	-	Gray	5.25 (133.35)	3.75 (95.25)	3.00 (76.20)	0.70 (0.32)
8053*	-	6	-	Gray	5.25 (133.35)	7.50 (190.50)	3.00 (76.20)	1.20 (0.54)
8262	-	4	-	Gray	5.25 (133.35)	3.75 (95.25)	3.00 (76.20)	0.75 (0.34)
8261	-	8	-	Gray	9.37 (238.00)	3.75 (95.25)	3.00 (76.20)	1.40 (0.64)
8263†	-	1	-	Gray	2.25 (57.15)	3.75 (95.25)	3.00 (76.20)	0.25 (0.11)

* 8054 and 8053 include Large Format Label Set 8030 (pages 84–85) | † 8263 Bilge Pump Control Panel—(ON)-OFF-ON Contura Switch (page 78)

Power Distribution and Circuit Protection

A-Series Circuit Breaker Panels

Traditional metal panels provide main and branch switching and circuit protection

Features

- All positive, negative, and grounding buses installed
- Backlit label positions
- All 12V DC panels are owner upgradable to 24V DC using 8240 or 8243 meters
- Panels with meters include a toggle switch to monitor voltage on up to three battery banks
- Countersunk mounting holes throughout

Model Specific Features (see table to right)

-  Analog Voltmeters and  Analog Ammeters (page 90)
 Digital Multimeter (page 92)



8025



8096



8385



8375



8023



8401



8081



See pages 10-13 for a full selection of related products located in the 360 Panel System section of this catalog.



8403



8377



8068



8264



8378



8379

Component References

- “ON” indicating LEDs installed in all circuit positions (page 80)
- A-Series Toggle Circuit Breakers (page 54)
- C-Series Toggle Circuit Breakers (page 42)
- Large Format Label Set 8030 included (pages 84-85)
- Over 500 individual labels available (pages 86-87)

Specifications

V_{mxo}	Voltage Maximum Operating	See table to right
I_{mxo}	Amperage Maximum Operating	See table to right
I_{tr}	Amperage Trip Reference	See table to right

Power Distribution and Circuit Protection



8402

8082

8376

8380



8381

8382

PN	Specific Features METERS Function/PN	DC V _{mxo}	DC I _{mxo}	C-Series Circuit Breakers		Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)				
				A-Series Circuit Breakers									
				MAIN 100A (I _{tr})	BRANCH 15A (I _{tr})								
8025	-	24	100	-	3	5.25 (133.35)	3.75 (95.25)	2.50 (63.50)	1.15 (0.52)				
8401	Digital Multimeter/8248	24	100	-	5	5.25 (133.35)	7.50 (190.50)	4.00 (101.6)	3.45 (1.56)				
8081	8-16V/8028, 0-50A/8041	12*	50	-	5	5.25 (133.35)	7.50 (190.50)	2.50 (63.50)	2.25 (1.02)				
8096	-	24	100	-	6	10.50 (266.70)	3.75 (95.25)	2.50 (63.50)	2.25 (1.02)				
8023	-	24	100	-	5	5.25 (133.35)	7.50 (190.50)	2.50 (63.50)	1.95 (0.88)				
8385	-	24	100	-	6	10.50 (266.70)	4.50 (114.30)	2.50 (63.50)	2.70 (1.22)				
8402	Digital Multimeter/8248	24	100	-	7	5.25 (133.35)	11.25 (285.75)	4.00 (101.6)	4.21 (1.91)				
8082	8-16V/8028, 0-100A/8250	12*	50	-	7	5.25 (133.35)	11.25 (285.75)	2.50 (63.50)	3.35 (1.52)				
8375	-	24	100	-	10	14.75 (374.65)	4.50 (114.30)	2.50 (63.50)	5.84 (2.65)				
8376	-	24	100	-	10	5.25 (133.35)	11.25 (285.75)	2.50 (63.50)	2.76 (1.25)				
8403	Digital Multimeter/8248	24	100	-	10	10.50 (266.70)	7.50 (190.50)	4.00 (101.6)	5.15 (2.34)				
8068	8-16V/8028, 0-50A/8041	12*	50	-	10	10.50 (266.70)	7.50 (190.50)	3.00 (76.20)	4.20 (1.91)				
8377	-	24	100	-	10	10.50 (266.70)	7.50 (190.50)	2.50 (63.50)	3.68 (1.67)				
8378	8-16V/8003, 0-100A/8017	12*	100	-	15	14.75 (374.65)	7.50 (190.50)	2.50 (63.50)	7.80 (3.54)				
8264	-	24	100	-	15	14.75 (374.65)	7.50 (190.50)	2.50 (63.50)	7.45 (3.38)				
8379	Digital Multimeter/8248	24	100	1	14	14.75 (374.65)	7.50 (190.50)	4.00 (101.6)	8.40 (3.81)				
8380	8-16V/8028, 0-100A/8250	12*	100	1	16	10.50 (266.70)	11.25 (285.75)	3.00 (76.20)	8.25 (3.74)				
8381	8-16V/8003, 0-100A/8017	12*	100	1	23	14.75 (374.65)	11.25 (285.75)	3.00 (76.20)	8.60 (3.89)				
8382	Digital Multimeter/8248	24	100	1	26	14.75 (374.65)	11.25 (285.75)	4.00 (101.6)	10.80 (4.92)				

* Owner upgradable to 24 Volts DC with 8240 or 8243 - 18-32V DC Analog Voltmeters (page 90)

Circuit Breakers

A-Series Toggle Circuit Breakers (Single Pole)

Combines switching and circuit protection into a single device

- For use with A-Series Toggle Circuit Breaker Mounting Panel (page 72)

Specifications

I_c	Interrupting Capacity	See Interrupt Capacity table below
V_{mxo}	Voltage Maximum Operating	See Interrupt Capacity table below
I_{tr}	Amperage Trip Reference	See tables
T_{mno}	Temperature Minimum Operating	-40°C
T_{mxo}	Temperature Maximum Operating	85°C
C_s	Switching Cycles	10,000@rated amps and volts
Type		Magnetic Hydraulic—Trip free
Terminal Screw		#10-32 Stainless Steel
Terminal Screw Torque		14–15 in-lb Recommended
Trip Time Delay		See www.bluesea.com
Mounting Screw		#6-32 Stainless Steel
Mounting Screw Torque		6–8 in-lb Recommended
Weight		0.17lb (0.08kg)

Regulatory

- CE marked, TUV certified, CSA certified
 - UL 1077 recognized

See page 60 for double pole A-Series Toggle Circuit Breakers

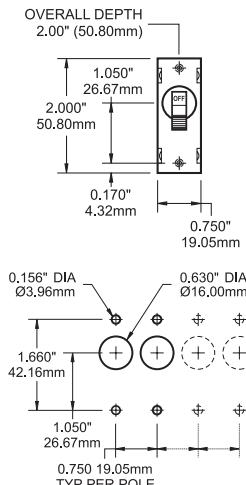
Interrupting Capacity (see ABYC Requirements page 106)

A-Series Toggle Circuit Breakers			
		UL 1077 - UL/CSA (US/Canada)	EN60934 - TUV (Europe)
V _{mzo}	I _{tr}	I _{ic}	I _{ic}
65V DC	5–50A	7,500A	-
120V AC	5–50A	3,000A	-
250V AC	5–50A	3,000A	1,500A

PN	Color	DC I_{tr}
7200	Black	5
7201	Red	5
7202	White	5
7347	Black	8
7299	White	8
7204	Black	10
7205	Red	10
7206	White	10
7208	Black	15
7209	Red	15
7210	White	15
7212	Black	20
7213	Red	20
7214	White	20
7216	Black	25
7217	Red	25
7218	White	25
7220	Black	30
7221	Red	30
7222	White	30
7224	Black	40
7225	Red	40
7226	White	40
7228	Black	50
7229	Red	50
7230	White	50



7202



Cutout Dimensions

A-Series Flat and Restricted Off Rocker Circuit Breakers (Single Pole)

Combines switching and circuit protection into a single device

- Color actuator indicates “OFF” position
 - 2 different actuator styles reduce the risk of accidentally switching 24-hour circuits
 - International ON/OFF symbols support vertical or horizontal mounting

Specifications

I_{ic}	Interrupting Capacity	See Interrupt Capacity table below
V_{mxo}	Voltage Maximum Operating	See Interrupt Capacity table below
I_{tr}	Amperage Trip Reference	See tables
T_{mno}	Temperature Minimum Operating	-40°C
T_{mxo}	Temperature Maximum Operating	85°C
C_s	Switching Cycles	10,000@rated amps and volts
Type		Magnetic Hydraulic—Trip free
Terminal Screw		#10-32 Stainless Steel
Terminal Screw Torque		14–15 in-lb Recommended (load terminal is 30° angled)
Trip Time Delay		See www.bluesea.com
Mounting Screw		#6-32 Stainless Steel
Mounting Screw Torque		6–8 in-lb Recommended
Weight		0.16lb (0.07kg)

Regulatory

- CE marked, TUV certified, CSA certified
 - UL 1077 recognized

See page 61 for double pole A-Series Rocker Circuit Breakers

Interrupting Capacity (see ABYC Requirements page 106)

A-Series Flat and Restricted Off Rocker Circuit Breakers			
		UL 1077 - UL/CSA (US/Canada)	EN60934 - TUV (Europe)
V _{mvo}	I _{tr}	I _{ic}	I _{ic}
32V DC	5-50A	5,000A	-
120V AC	5-50A	3,000A	-
250V AC	5-50A	1,500A	1,500A

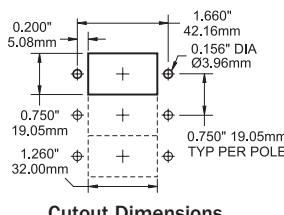
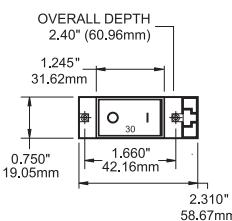


7425



7403

PN	Actuator	DC I_{tr}
7400	Flat	5
7425	Restricted Off	5
7401	Flat	8
7426	Restricted Off	8
7402	Flat	10
7427	Restricted Off	10
7403	Flat	15
7428	Restricted Off	15
7404	Flat	20
7429	Restricted Off	20
7405	Flat	25
7430	Restricted Off	25
7406	Flat	30
7431	Restricted Off	30
7407	Flat	40
7432	Restricted Off	40
7408	Flat	50
7433	Restricted Off	50



Fuse Blocks

ST Blade Fuse Blocks (Screw Terminal)

Compact ATO/ATC fuse block consolidates branch circuits and eliminates the tangle of inline fuses for electronics and other appliances

- Can be used for 24-hour circuits
- Clear insulating cover with label recesses accepts Small Format Labels (page 83)
- Cover satisfies ABYC/USCG insulation requirements
- Cover provides storage for two spare fuses
- Accepts ring terminals
- Easy to open, push button latch provides easy access to fuses
- Tin-plated copper buses and fuse clips
- Positive distribution bus with #10-32 stud
- Fuse Blocks with covers include 20 write-on circuit labels

Component References

- ATO/ATC Fuses (page 56)

Specifications

V_{mxo} Voltage Maximum Operating	32 Volts DC
I_{mxo} Amperage Maximum Operating	30 Amps DC (per circuit)
I_{mxo} Amperage Maximum Operating Screw Terminal	100 Amps DC (per block) #8-32 Screws with Captive Star Lock washer

Mounting Screw	#8 (M4)
ATO/ATC Fuses available	1—30 Amps (page 56)



5026

PN	Cover	Circuits	Negative Bus	Weight lb (kg)
5025	Yes	6	#10-32 stud	0.55 (0.25)
5026	Yes	12	#10-32 stud	0.75 (0.34)
5028	Yes	6	No	0.42 (0.19)
5029	Yes	12	No	0.68 (0.31)

PN	Cover	Circuits	Negative Bus	Weight lb (kg)
5030	No	6	#10-32 stud	0.47 (0.21)
5031	No	12	#10-32 stud	0.65 (0.29)
5033	No	6	No	0.42 (0.19)
5034	No	12	No	0.59 (0.27)



5028



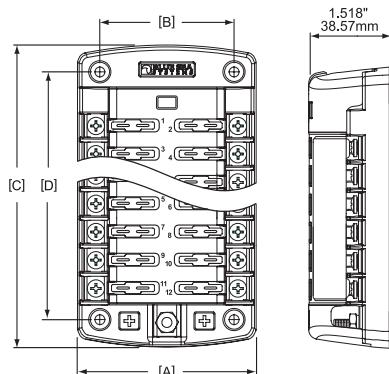
5030



5029



5031



PN	[A] Width in (mm)	[B] Mounting Centers in (mm)	[C] Height in (mm)	[D] Mounting Centers in (mm)
5028/5033	3.32 (84.20)	2.50 (63.50)	3.65 (92.76)	2.64 (67.03)
5025/5030	3.32 (84.20)	2.50 (63.50)	4.89 (124.31)	3.88 (95.58)
5029/5034	3.32 (84.20)	2.50 (63.50)	5.23 (132.84)	4.22 (107.11)
5026/5031	3.32 (84.20)	2.50 (63.50)	6.47 (164.39)	5.46 (138.66)

Fuse Blocks and Fuses

ST Glass Fuse Blocks (Screw Terminal)

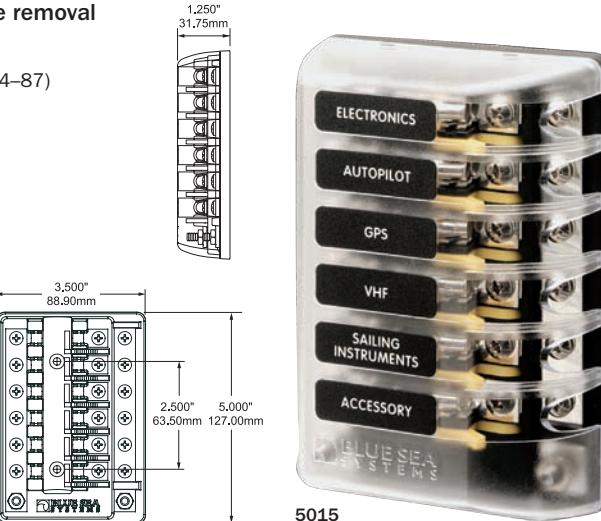
Innovative design allows for labeling, spare fuse storage and easy fuse removal

- Can be used for 24-hour circuits
- Clear insulating cover with label recesses accepts Large Format Labels (pages 84–87)
- Cover satisfies ABYC/USCG insulation requirements
- Tin-plated phosphor bronze fuse clips are encapsulated, cannot be sprung, and will not injure hands
- Integrated fuse ejector lever
- Store spare fuses behind labels
- Tin-plated copper negative busbar on model 5015

Specifications

V_{mxo} Voltage Maximum Operating	32 Volts DC
I_{mxo} Amperage Maximum Operating	30 Amps (per circuit)
I_{mxo} Amperage Maximum Operating	100 Amps (per block)
Fuse Type	AGC/MDL Fuses
Screw Terminal	#8-32 with Captive Star Lock washer
Mounting Holes	#8 Screws

PN	Circuits	Negative Bus	Weight lb (kg)
5015	6	#10-32 stud	0.55 (0.25)
5018	6	No	0.48 (0.22)



ATO/ATC Fuses

Delivers fast-acting protection ideal for electronic devices

- Tin-plated connector blades for corrosion resistance
- Visible indication of blown condition
- Sold in packages of 2

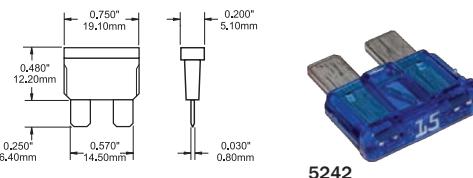
Specifications

I_c Interrupting Capacity	1,000 Amps
V_{mxo} Voltage Maximum Operating	32 Volts DC
I_{tr} Amperage Trip Reference	See table to right
Blow Time Delay	See www.bluesea.com
Weight per package	0.03lb (0.01kg)

See page 55 for ST Blade Fuse Blocks

See page 50 for WeatherDeck™ Waterproof Fuse Panels

PN	DC I _{tr}
5235	1
5236	2
5237	3
5238	4
5239	5
5240	7.5
5241	10
5242	15
5243	20
5244	25
5245	30



MAXI™ Fuse Block

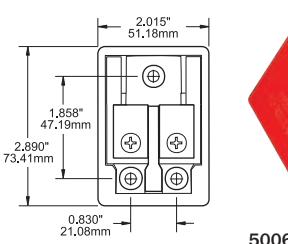
Screw termination accepts a variety of wire sizes from 18 to 4 AWG

- Snap-on terminal cover insulates all conductive parts, satisfying ABYC/USCG requirements
- Accepts wire sizes 18–4 AWG from sides or bottom
- Terminal screws compress fuse blades within blocks for low resistance connections

Specifications

V_{mxo} Voltage Maximum Operating	32 Volts DC
I_{mxo} Amperage Maximum Operating	80 Amps
Fuse Type	MAXI™ Fuses
MAXI™ Fuses available	30–80 Amps
Weight per package	0.25lb (0.11kg)
Mounting Holes	#10 Screws

PN	I _{mxo}
5006	80



MAXI™ Fuses

Provides economical circuit protection for 30 to 80 Ampere circuits

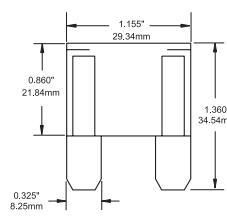
- Silver-plated connector blades for corrosion resistance
- Visible indication of blown condition
- Sold individually

Specifications

I_c Interrupting Capacity	1,000 Amps DC
V_{mxo} Voltage Maximum Operating	32 Volts DC
I_{tr} Amperage Trip Reference	See table to right
Blow Time Delay	See www.bluesea.com
Weight per package	0.04lb (0.02kg)

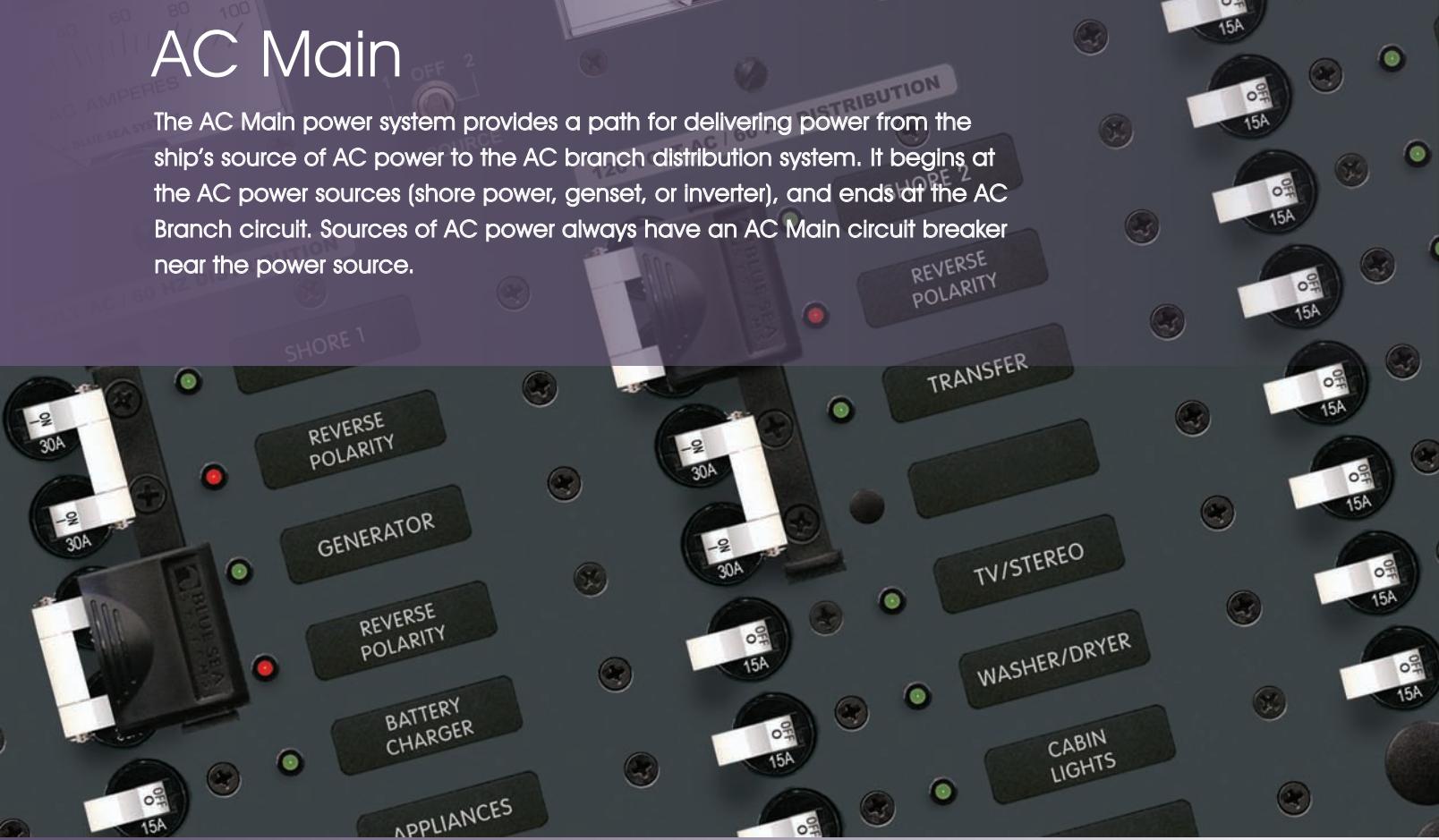
See MAXI™ Fuse Block above

PN	DC I _{tr}
5138	30
5139	40
5140	50
5141	60
5142	70
5143	80



AC Main

The AC Main power system provides a path for delivering power from the ship's source of AC power to the AC branch distribution system. It begins at the AC power sources (shore power, genset, or inverter), and ends at the AC Branch circuit. Sources of AC power always have an AC Main circuit breaker near the power source.



AC Main Table of Contents

		
A-SERIES CIRCUIT BREAKER PANELS pages 58–59	240 VOLT C-SERIES TOGGLE CIRCUIT BREAKER PANEL page 58	A-SERIES TOGGLE CIRCUIT BREAKERS page 60
		
A-SERIES RAISED AND FLAT ROCKER CIRCUIT BREAKERS page 61	C-SERIES TOGGLE CIRCUIT BREAKERS page 62	C-SERIES RAISED AND FLAT ROCKER CIRCUIT BREAKERS page 63
		
RESIDUAL CURRENT CIRCUIT BREAKERS (ELCI/RCBO) page 63	A-SERIES SOURCE SELECTION CIRCUIT BREAKER PANELS pages 64–65	ROTARY SWITCHES AND PANELS pages 66–68

Power Distribution and Circuit Protection

A-Series Circuit Breaker Panels

Traditional metal panels provide main and branch switching and circuit protection

Features

- All hot, neutral, and safety ground buses installed, fully pre-wired
- Countersunk mounting holes throughout
- Maximum panel amperage—50 Amperes
- Backlit label positions

Model Specific Features (See table to right)

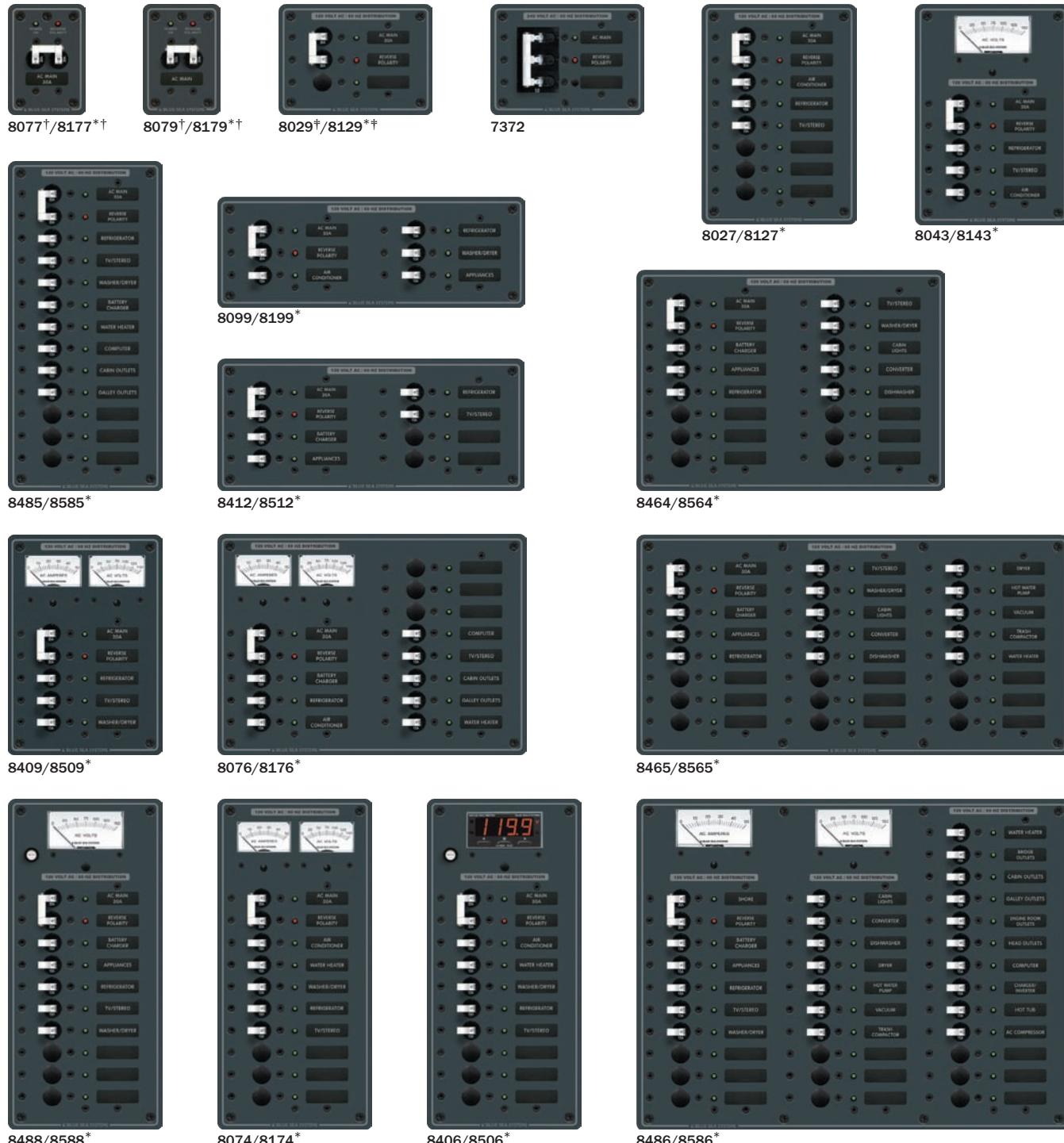
Analog Voltmeters and Analog Ammeters (page 91)
 Digital Multimeter (page 93)

Component References

- Red reverse polarity indication LED (page 80)
- “ON” indicating LEDs installed in all circuit positions (page 80)
- A-Series Toggle Circuit Breakers (pages 60, 72)
- Large Format Label Set 8031 included[†] (pages 84–85)
- Over 500 individual labels available (pages 86–87)

Specifications

V_{mxo} Voltage Maximum Operating See table to right
I_{tr} Amperage Trip Reference See table to right



* 230 Volt (typical of Europe) | † Include a set of ten source selection labels | ‡ Include labels illustrated only

Power Distribution and Circuit Protection



8405/8505*



8407/8507*



8471/8571*

AC Main

PN	Specific Features METERS Function/PN	AC V _{mxo}	A-Series Circuit Breakers						Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)				
			MAIN (I _{tr})		BRANCH (I _{tr})											
			16A	30A	32A	50A	8A	15A								
7372†	-	240	-	-	-	1†	-	-	5.25 (133.35)	3.75 (95.25)	3.00 (76.20)	1.38 (0.63)				
8077	-	120	-	1	-	-	-	-	2.63 (66.80)	3.75 (95.25)	2.50 (63.50)	3.75 (95.25)				
8079	-	120	-	-	-	1	-	-	2.63 (66.80)	3.75 (95.25)	2.50 (63.50)	3.75 (95.25)				
8029	-	120	-	1	-	-	-	-	5.25 (133.35)	3.75 (95.25)	2.50 (63.50)	1.05 (0.48)				
8043	0-150V/9353	120	-	1	-	-	-	-	5.25 (133.35)	7.50 (190.50)	2.50 (63.50)	2.00 (0.91)				
8409	0-150V/8244, 0-50A/8246	120	-	1	-	-	-	-	5.25 (133.35)	7.50 (190.50)	3.00 (76.20)	4.06 (1.84)				
8405	Digital Multimeter/8247	120	-	1	-	-	-	-	5.25 (133.35)	7.50 (190.50)	4.00 (101.60)	2.94 (1.33)				
8099	-	120	-	1	-	-	-	-	10.50 (266.70)	3.75 (95.25)	2.50 (63.50)	2.22 (1.00)				
8027	-	120	-	1	-	-	-	-	5.25 (133.35)	7.50 (190.50)	2.50 (63.50)	2.00 (0.91)				
8412	-	120	-	1	-	-	-	-	10.50 (266.70)	4.50 (114.30)	2.50 (63.50)	1.90 (0.86)				
8488	0-150V/9353	120	-	1	-	-	-	-	5.25 (133.35)	11.25 (285.75)	2.50 (63.50)	3.00 (1.36)				
8074	0-150V/8244, 0-50A/8246	120	-	1	-	-	-	-	5.25 (133.35)	11.25 (285.75)	3.00 (76.20)	3.28 (1.49)				
8406	Digital Multimeter/8247	120	-	1	-	-	-	-	5.25 (133.35)	11.25 (285.75)	4.00 (101.60)	3.18 (1.44)				
8076	0-150V/8244, 0-50A/8246	120	-	1	-	-	-	-	10.50 (266.70)	7.50 (190.50)	3.00 (76.20)	4.24 (1.92)				
8407	Digital Multimeter/8247	120	-	1	-	-	-	-	10.50 (266.70)	7.50 (190.50)	4.00 (101.60)	4.78 (2.17)				
8485	-	120	-	1	-	-	-	-	5.25 (133.35)	11.25 (285.75)	2.50 (63.50)	2.81 (1.27)				
8464	-	120	-	1	-	-	-	-	10.50 (266.70)	7.50 (190.50)	2.50 (63.50)	3.74 (1.70)				
8471	0-150V/9353, 0-50A/9630	120	-	1	-	-	-	-	14.75 (374.65)	7.50 (190.50)	3.00 (76.20)	5.96 (2.70)				
8465	-	120	-	1	-	-	-	-	14.75 (374.65)	7.50 (190.50)	2.50 (63.50)	5.25 (2.38)				
8486	0-150V/9353, 0-50A/9630	120	-	1	-	-	-	-	14.75 (374.65)	11.25 (285.75)	3.00 (76.20)	8.94 (4.05)				
8177	-	230*	1	-	-	-	-	-	2.63 (66.80)	3.75 (95.25)	2.50 (63.50)	3.75 (95.25)				
8179	-	230*	-	-	1	-	-	-	2.63 (66.80)	3.75 (95.25)	2.50 (63.50)	3.75 (95.25)				
8129	-	230*	1	-	-	-	-	-	5.25 (133.35)	3.75 (95.25)	2.50 (63.50)	1.05 (0.48)				
8143	0-250V/9354	230*	1	-	-	-	3	-	5.25 (133.35)	7.50 (190.50)	2.50 (63.50)	2.00 (0.91)				
8509	0-250V/8245, 0-50A/8246	230*	1	-	-	-	3	-	5.25 (133.35)	7.50 (190.50)	3.00 (76.20)	4.06 (1.84)				
8505	Digital Multimeter/8247	230*	1	-	-	-	3	-	5.25 (133.35)	7.50 (190.50)	3.00 (76.20)	2.94 (1.33)				
8199	-	230*	1	-	-	-	4	-	10.50 (266.70)	3.75 (95.25)	2.50 (63.50)	2.22 (1.00)				
8127	-	230*	1	-	-	-	3	-	5.25 (133.35)	7.50 (190.50)	2.50 (63.50)	2.00 (0.91)				
8512	-	230*	1	-	-	-	4	-	10.50 (266.70)	4.50 (114.30)	2.50 (63.50)	1.90 (0.86)				
8588	0-250V/9354	230*	1	-	-	-	5	-	5.25 (133.35)	11.25 (285.75)	2.50 (63.50)	3.00 (1.36)				
8174	0-250V/8245, 0-50A/8246	230*	1	-	-	-	5	-	5.25 (133.35)	11.25 (285.75)	3.00 (76.20)	3.28 (1.49)				
8506	Digital Multimeter/8247	230*	1	-	-	-	5	-	5.25 (133.35)	11.25 (285.75)	3.00 (76.20)	3.18 (1.44)				
8176	0-250V/8245, 0-50A/8246	230*	1	-	-	-	8	-	10.50 (266.70)	7.50 (190.50)	3.00 (76.20)	4.24 (1.92)				
8507	Digital Multimeter/8247	230*	1	-	-	-	8	-	10.50 (266.70)	7.50 (190.50)	4.00 (101.60)	4.78 (2.17)				
8585	-	230*	1	-	-	-	8	-	5.25 (133.35)	11.25 (285.75)	2.50 (63.50)	2.81 (1.27)				
8564	-	230*	1	-	-	-	8	-	10.50 (266.70)	7.50 (190.50)	2.50 (63.50)	3.74 (1.70)				
8571	0-250V/9354, 0-50A/9630	230*	1	-	-	-	13	-	14.75 (374.65)	7.50 (190.50)	3.00 (76.20)	5.96 (2.70)				
8565	-	230*	1	-	-	-	13	-	14.75 (374.65)	7.50 (190.50)	2.50 (63.50)	5.25 (2.38)				
8586	0-250V/9354, 0-50A/9630	230*	1	-	-	-	22	-	14.75 (374.65)	11.25 (285.75)	3.00 (76.20)	8.94 (4.05)				



See page 16 for a full selection of related products located in the 360 Panel System section of this catalog.

* 230 Volt (typical of Europe) | † C-Series Toggle Circuit Breaker (page 62)

Circuit Breakers

A-Series Toggle Circuit Breakers (Double Pole)

Combines switching and circuit protection into a single device

- Frequently used for 120 Volt AC Main circuit protection
- The industry standard circuit breaker for Blue Sea Systems electrical panels
- "Trip Free" design cannot be held "ON" during fault current condition
- For circuit breaker mounting panel 8173 (see below)

Specifications

I_{ic}	Interrupting Capacity	See Interrupting Capacity table below
V_{mox}	Voltage Maximum Operating	See Interrupting Capacity table below
I_{tr}	Amperage Trip Reference	See tables below
T_{mno}	Temperature Minimum Operating	-40°C
T_{mox}	Temperature Maximum Operating	85°C
C_s	Switching Cycles	10,000@rated amps and volts
Type		Magnetic Hydraulic—Trip free
Terminal Screw		#10-32 Stainless Steel
Terminal Screw Torque		14–15 in-lb Recommended
Trip Time Delay		See www.bluesea.com
Mounting Screw		#6-32 Stainless Steel
Mounting Screw Torque		6–8 in-lb Recommended
Weight	0.30lb (0.14kg)	

Regulatory

- CE marked, TUV certified, CSA certified
- UL 1077 recognized

See page 72 for single pole A-Series Toggle Circuit Breakers

Interrupting Capacity (see ABYC Requirements page 107)

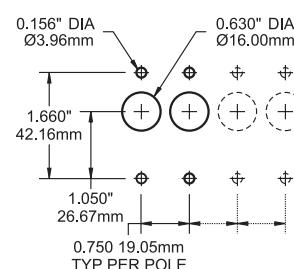
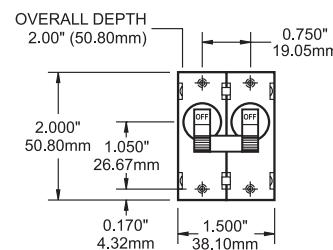
A-Series Toggle Circuit Breakers			
		UL 1077 - UL/CSA (US/Canada)	EN60934 - TUV (Europe)
V_{mox}	I_{tr}	I_{ic}	I_{ic}
65V DC	10–50 Amps	7,500 Amps	-
120V AC	10–50 Amps	3,000 Amps	-
240V AC	10–50 Amps	3,000 Amps	-
250V AC	10–50 Amps	3,000 Amps	1,500 Amps

PN	Color	Poles	AC I_{tr}
7232	Black	2	10
7233	White	2	10
7234	Black	2	15
7235	White	2	15
7348	Black	2	16
7294	White	2	16
7236	Black	2	20
7260	White	2	20

PN	Color	Poles	AC I_{tr}
7237	Black	2	30
7238	White	2	30
7349	Black	2	32
7295	White	2	32
7239	Black	2	40
7240	White	2	40
7241	Black	2	50
7242	White	2	50



7233



Panel Cutout

A-Series Toggle Circuit Breaker Mounting Panel (Double Pole)

Simplifies mounting of A-Series Double Pole Circuit Breakers

- Slate gray matches standard panel color

Specifications

Dimensions 2.63" (66.80mm) x 3.75" (95.25mm)

PN	Description	Weight lb (kg)
8173	Mounting Panel—Double Pole	0.08 (0.04)



8173

Circuit Breakers

A-Series Raised and Flat Rocker Circuit Breakers (Double Pole)

Combines switching and circuit protection into a single device

- Frequently used for 120 Volt AC Main circuit protection
- White actuator indicates "OFF" position
- Two different styles available
- Flat rocker actuator is flush in the "ON" position
- International "ON" and "OFF" symbols support vertical or horizontal mounting

Specifications

I_{ic}	Interrupting Capacity	See Interrupting Capacity Table below
V_{mxo}	Voltage Maximum Operating	See Interrupting Capacity Table below
I_{tr}	Amperage Trip Reference	See tables below
T_{mno}	Temperature Minimum Operating	-40°C
T_{mxo}	Temperature Maximum Operating	85°C
C_s	Switching Cycles:	10,000@rated amps and volts
Type		Magnetic Hydraulic—Trip free
Terminal Screw		#10-32 Stainless Steel
Terminal Screw Torque		14–15 in-lb Recommended
Trip Time Delay		See www.blueseac.com
Mounting Screw		#6-32 Stainless Steel
Mounting Screw Torque		6–8 in-lb Recommended
Weight		0.38lb (0.17kg)

Regulatory

- CE marked, TUV certified, CSA certified
- UL 1077 recognized

See page 73 for single pole Flat and Restricted Off Rocker Circuit Breakers

Interrupting Capacity (see ABYC Requirements page 107)

A-Series Raised and Flat Rocker Circuit Breakers

		UL 1077 - UL/CSA (US/Canada)	EN60934 - TUV (Europe)
V_{mxo}	I_{tr}	I_{ic}	I_{ic}
32V DC	10–50 Amps	5,000 Amps	-
240V AC	10–50 Amps	3,000 Amps	-
240V AC	10–50 Amps	3,000 Amps	1,500 Amps

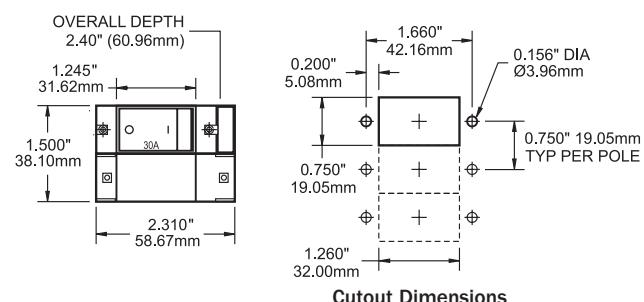
PN	Actuator	Poles	AC I_{tr}
7570	Raised	2	10
7410	Flat	2	10
7571	Raised	2	15
7411	Flat	2	15
7572	Raised	2	16
7412	Flat	2	16
7573	Raised	2	20
7413	Flat	2	20
7574	Raised	2	30
7414	Flat	2	30
7575	Raised	2	32
7415	Flat	2	32
7576	Raised	2	40
7416	Flat	2	40
7577	Raised	2	50
7417	Flat	2	50



7574



7411



Cutout Dimensions

Circuit Breakers

C-Series Toggle Circuit Breakers (Double Pole and Triple Pole)

Combines switching and circuit protection into a single device

- Frequently used for 120/240 Volt AC circuit protection
- Double pole can be used as 120 Volt AC main circuit breaker to switch hot and neutral
- Triple pole can be used as 240 Volt AC main circuit breaker to switch both lines (hots) and neutral
- Double and triple pole circuit breakers will trip all poles if any one pole trips

Specifications

I_{ic}	Interrupting Capacity	See Interrupting Capacity table below
V_{mox}	Voltage Maximum Operating	See Interrupting Capacity table below
I_{tr}	Amperage Trip Reference	See tables below
T_{mno}	Temperature Minimum Operating	-40°C
T_{mox}	Temperature Maximum Operating	85°C
C_s	Switching Cycles	10,000@rated amps and volts
Type		Magnetic Hydraulic—Trip free
Terminal Studs		1/4"-20 Tin-Plated Brass
Terminal Screw Torque		35 in-lb max.
Trip Time Delay		See www.bluesea.com
Mounting Screw		#6-32 Stainless Steel
Mounting Screw Torque		6–8 in-lb Recommended

Regulatory

- VDE certified, CSA certified
- UL 1077 recognized

See page 42 for single pole C-Series Toggle Circuit Breakers



7251



7287

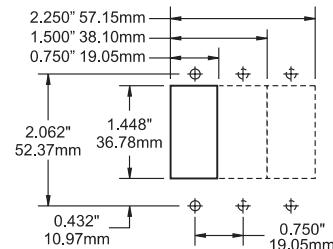
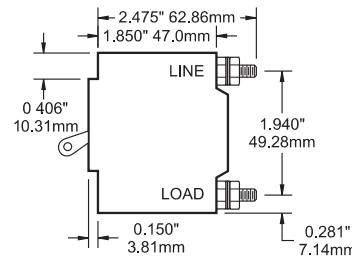
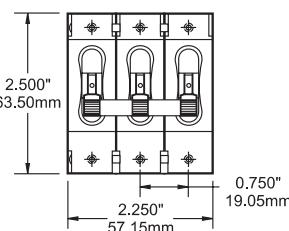
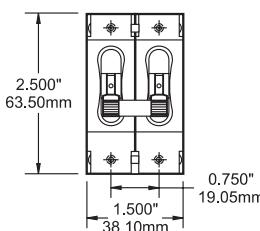
Interrupting Capacity (see ABYC Requirements page 107)

C-Series Toggle Circuit Breakers

		UL 1077 - UL/CSA (US/Canada)	EN60934 - TUV (Europe)
V_{mox}	I_{tr}	I_{ic}	I_{ic}
125/250V AC	30–100A	5,000A	5,000A
250V AC	30–100A	5,000A	5,000A

PN	Color	Poles	AC I_{tr}	Weight lb (kg)
7365	White	2	30	0.60 (0.27)
7251	White	2	50	0.60 (0.27)
7254	White	2	60	0.60 (0.27)
7256	White	2	80	0.60 (0.27)
7258	White	2	100	0.60 (0.27)

PN	Color	Poles	AC I_{tr}	Weight lb (kg)
7287	White	3	50	0.90 (0.41)
7288	White	3	60	0.90 (0.41)
7289	White	3	80	0.90 (0.41)
7290	White	3	100	0.90 (0.41)



Cutout Dimensions

C-Series Toggle Circuit Breaker Mounting Panels

Simplifies mounting C-Series Toggle Circuit Breakers

- See page 42 for a complete listing of C-Series Toggle Circuit Breaker Mounting Panels

PN	Position	Width in (mm)	Height in (mm)	Weight lb (kg)
8088	3	5.25 (133.35)	3.75 (95.25)	0.24 (0.11)



8088

Circuit Breakers

C-Series Raised and Flat Rocker Circuit Breakers (Double Pole and Triple Pole)

Combines switching and circuit protection into a single device

- Frequently used for 120/240 Volt AC circuit protection
- Double pole can be used as 120 Volt AC main circuit breaker to switch hot and neutral
- Triple pole can be used as 240 Volt AC main circuit breaker to switch both lines (hots) and neutral
- Double and triple pole circuit breakers will trip all poles if any one pole trips

Specifications

I_{ic} Interrupting Capacity	See Interrupting Capacity table below
V_{mxo} Voltage Maximum Operating	See Interrupting Capacity table below
I_{tr} Amperage Trip Reference	See tables below
T_{mno} Temperature Minimum Operating	-40°C
T_{mxo} Temperature Maximum Operating	85°C
C_s Switching Cycles:	10,000@rated amps and volts
Type	Magnetic Hydraulic—Trip free
Terminal Studs	1/4"-20 Tin-Plated Brass
Terminal Stud Torque	35 in-lb max.
Trip Time Delay	See www.bluesea.com
Mounting Screw	#6-32 Stainless Steel
Mounting Screw Torque	6–8 in-lb Recommended

Regulatory

- TUV certified, CSA certified
- UL 1077 recognized

See page 43 for single pole C-Series Rocker Circuit Breakers

Interrupting Capacity (see ABYC Requirements page 107)

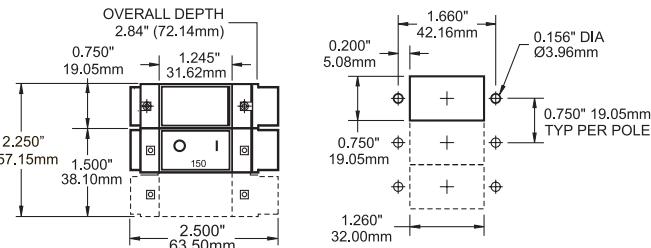
C-Series Raised and Flat Rocker Circuit Breakers			
		UL 1077 - UL/CSA (US/Canada)	EN60934 - TUV (Europe)
V_{mxo}	I_{tr}	I_{ic}	I_{ic}
240V AC	30–100A	5,000A	5,000A



7580



7568



Cutout Dimensions

PN	Actuator	Poles	AC I _{tr}
7580	Raised	2	30
7581	Raised	2	50
7582	Raised	2	60
7583	Raised	2	80
7584	Raised	2	100
7585	Raised	3	50
7586	Raised	3	60
7587	Raised	3	80
7588	Raised	3	100

PN	Actuator	Poles	AC I _{tr}
7560	Flat	2	30
7561	Flat	2	50
7562	Flat	2	60
7563	Flat	2	80
7564	Flat	2	100
7565	Flat	3	50
7566	Flat	3	60
7567	Flat	3	80
7568	Flat	3	100

Residual Current Circuit Breakers (ELCI/RCBO)

Residual Current Devices (RCDs) respond to leakage of electrical current outside of the intended circuit path. When the RCD function is combined with overload and short circuit protection, the device is often referred to as an RCBO. In the USA, a device that trips on leakages of nominally 5mA and meets certain standards is called a Ground Fault Circuit Interrupter (GFCI). A device meeting the same standards but with a trip level of 30mA is called an Electrical Leakage Circuit Interrupter (ELCI). The devices below provide GFCI or ELCI functions and circuit protection in panel mounted breakers.

Features

- Trips on short circuit, overload, or leakage to ground
- Front panel mount—installed in a power distribution panel

Specifications

I_{ic} Interrupting Capacity	5,000 Amps AC
V_{mxo} Voltage Maximum Operating	240 Volts AC
I_{tr} Amperage Trip Reference	See table below
T_{mno} Temperature Minimum Operating	-35°C
T_{mxo} Temperature Maximum Operating	66°C
C_s Switching Cycles:	10,000@rated amps and volts
Type	Magnetic Hydraulic—Trip free
Terminal Screw	#10-32 x 5/16 Stainless Steel
Terminal Screw Torque	14–15 in-lb Recommended
Trip Time Delay	See www.bluesea.com
Mounting Screw	#6-32 Stainless Steel
Mounting Screw Torque	6–8 in-lb Recommended

Regulatory

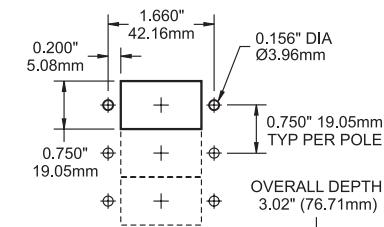
- 3100 GFCI—UL 489, UL 943 Class A, and CSA certified
- 3102 ELCI—UL 489, UL 943 Class B, and CSA certified



3100



3102



Cutout Dimensions

PN	Description	Poles	AC (I _{tr})		Leakage Trip Amperage	Weight lb (kg)
			Main	Branch		
3100	GFCI/RCBO	1	-	15A	5mA	0.38 (0.17)
3102	ELCI/RCBO	2	30A	-	30mA	0.45 (0.20)

Source Selection and Circuit Protection

A-Series Source Selection Circuit Breaker Panels

Traditional metal panels economically provide circuit protection, switching and control of multiple AC sources

Features

- All hot, neutral, and safety ground buses installed, fully pre-wired
- Industry standard height and width
- Countersunk mounting holes throughout
- Maximum panel amperage—50 Amperes
- Lockout slides prevent connecting multiple AC sources simultaneously
- Backlit label positions

Model Specific Features (See table to right)

- Analog Voltmeters and Analog Ammeters (page 91)
Digital Multimeter (page 93)

Component References

- Red reverse polarity indication LED (page 80)
- “ON” indicating LEDs installed in all circuit positions (page 80)
- A-Series Toggle Circuit Breakers (page 60, 72)
- Large Format Label Set 8031 included[†] (pages 84–85)
- Over 500 individual labels available (pages 86–87)

Specifications

V_{mvo}	Voltage Maximum Operating	See table to right
I_{tr}	Amperage Trip Reference	See table to right



8467/8567*



8032†/8132†*



8061†/8161†*



8466/8566*



8498†/8598†*



8489/8589*



8468/8568*



8462/8562*



8458



8459/8559*



8473/8573*



8475/8575*

* 230 Volt (typical of Europe) | † Panels with only AC Main circuit breakers include a set of 10 source selection labels

Source Selection and Circuit Protection



8496/8596*



8494/8594*

AC Main

PN	Specific Features	AC V _{mxo}	Sources	A-Series Circuit Breakers						Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)	
				MAIN (I _{tr})			BRANCH (I _{tr})							
	METERS Function/PN	16A	30A	32A	50A	8A	15A							
8032†	-	120	2	-	2	-	-	-	-	5.25 (133.35)	3.75 (95.25)	3.00 (76.20)	1.35 (0.61)	
8061†	-	120	2	-	-	-	2	-	-	5.25 (133.35)	3.75 (95.25)	3.00 (76.20)	1.84 (0.83)	
8498†	-	120	3	-	3	-	1	-	-	10.50 (266.70)	4.50 (114.30)	3.00 (76.20)	1.90 (0.86)	
8467	-	120	2	-	2	-	-	-	2	5.25 (133.35)	7.50 (190.50)	3.00 (76.20)	2.15 (0.98)	
8499	-	120	2	-	2	-	-	-	2	10.50 (266.70)	4.50 (114.30)	3.00 (76.20)	1.90 (0.86)	
8489	0-150V/9353	120	2	-	2	-	-	-	3	5.25 (133.35)	11.25 (285.75)	3.00 (76.20)	3.00 (1.36)	
8459	-	120	2	-	2	-	-	-	6	14.75 (374.65)	4.50 (114.30)	3.00 (76.20)	3.15 (1.43)	
8466	-	120	2	-	2	-	-	-	6	5.25 (133.35)	11.25 (285.75)	3.00 (76.20)	2.81 (1.27)	
8462	0-150V/9353	120	2	-	2	-	-	-	6	10.50 (266.70)	7.50 (190.50)	3.00 (76.20)	3.80 (1.72)	
8468	-	120	2	-	2	-	-	-	8	10.50 (266.70)	7.50 (190.50)	3.00 (76.20)	3.75 (1.70)	
8473	0-150V/9353, 0-50A/9630	120	2	-	2	-	-	-	11	14.75 (374.65)	7.50 (190.50)	3.00 (76.20)	6.00 (2.72)	
8475	Digital Multimeter/8247	120	2	-	2	-	-	-	11	14.75 (374.65)	7.50 (190.50)	4.00 (101.60)	5.30 (2.40)	
8458	0-150V/9353, 0-50A/9630	120	3	-	3	-	1	-	12	10.50 (266.70)	13.75 (349.25)	3.00 (76.20)	9.10 (4.12)	
8494	0-150V/9353, 0-50A/9630	120	3	-	3	-	1	-	16	14.75 (374.65)	11.25 (285.75)	3.00 (76.20)	9.00 (4.08)	
8496	Digital Multimeter/8247	120	3	-	3	-	1	-	19	14.75 (374.65)	11.25 (285.75)	4.00 (101.60)	10.10 (4.58)	
8132†	-	230*	2	2	-	-	-	-	-	5.25 (133.35)	3.75 (95.25)	3.00 (76.20)	1.35 (0.61)	
8161†	-	230*	2	-	-	2	-	-	-	5.25 (133.35)	3.75 (95.25)	3.00 (76.20)	1.84 (0.83)	
8598†	-	230*	3	3	-	1	-	-	-	10.50 (266.70)	4.50 (114.30)	3.00 (76.20)	1.90 (0.86)	
8567	-	230*	2	2	-	-	-	2	-	5.25 (133.35)	7.50 (190.50)	3.00 (76.20)	2.15 (0.98)	
8599	-	230*	2	2	-	-	-	2	-	10.50 (266.70)	4.50 (114.30)	3.00 (76.20)	1.90 (0.86)	
8589	0-250V/9354	230*	2	2	-	-	-	3	-	5.25 (133.35)	11.25 (285.75)	3.00 (76.20)	3.00 (1.36)	
8559	-	230*	2	2	-	-	-	6	-	14.75 (374.65)	4.50 (114.30)	3.00 (76.20)	3.15 (1.43)	
8566	-	230*	2	2	-	-	-	6	-	5.25 (133.35)	11.25 (285.75)	3.00 (76.20)	2.81 (1.27)	
8562	0-250V/9354	230*	2	2	-	-	-	6	-	10.50 (266.70)	7.50 (190.50)	2.50 (63.50)	3.80 (1.72)	
8568	-	230*	2	2	-	-	-	8	-	10.50 (266.70)	7.50 (190.50)	3.00 (76.20)	3.75 (1.70)	
8573	0-250V/9354, 0-50A/9630	230*	2	2	-	-	-	11	-	14.75 (374.65)	7.50 (190.50)	3.00 (76.20)	6.00 (2.72)	
8575	Digital Multimeter/8247	230*	2	2	-	-	-	11	-	14.75 (374.65)	7.50 (190.50)	4.00 (101.60)	5.30 (2.40)	
8594	0-250V/9354, 0-50A/9630	230*	3	3	-	1	-	16	-	14.75 (374.65)	11.25 (285.75)	3.00 (76.20)	9.00 (4.08)	
8596	Digital Multimeter/8247	230*	3	3	-	1	-	19	-	14.75 (374.65)	11.25 (285.75)	4.00 (101.60)	10.10 (4.58)	



* 230 Volt (typical of Europe) | † Includes set of 10 source selection labels only

Rotary Switch Source Selection

Rotary Switches and Panels

Compact and intuitive solution for safely managing AC sources when circuit protection is provided elsewhere

Features (switches)

- Mounts in panels up to 0.16" (4.00mm) thick
- Heavy duty industrial rated switch
- Intuitive function—one hand operation

Regulatory

- CE marked, UL listed

Features (panels)

- Red "Reverse Polarity" LED indicators
- Green "Power Available" LED indicators

Specifications

V_{mxo} Voltage Maximum Operating See table below

I_{mxo} Amperage Maximum Operating See table below



Rotary Switches

Rotary Switch PN	Function		AC V_{mxo}	AC I_{mxo}	Maximum Wire Size (AWG)	Minimum Wire Size (AWG)	Width in (mm)	Height in (mm)	Depth in (mm)
	Sources	Poles							
9009	2	2	600	30	10	14	1.89 (48.00)	1.89 (48.00)	1.91 (48.51)
9011	2	2	600	65	6	12	2.52 (64.00)	2.52 (64.00)	2.41 (61.21)
9019	2	3	600	65	6	12	2.52 (64.00)	2.52 (64.00)	3.65 (92.71)
6337	3	4	600	30	10	14	1.89 (48.00)	1.89 (48.00)	2.98 (75.69)
9093	3	4	600	65	6	12	2.52 (64.00)	2.52 (64.00)	4.50 (114.30)
9010	3	2	600	30	10	14	1.89 (48.00)	1.89 (48.00)	2.41 (61.21)
9077	3	3	600	65	6	12	2.52 (64.00)	2.52 (64.00)	5.50 (139.70)

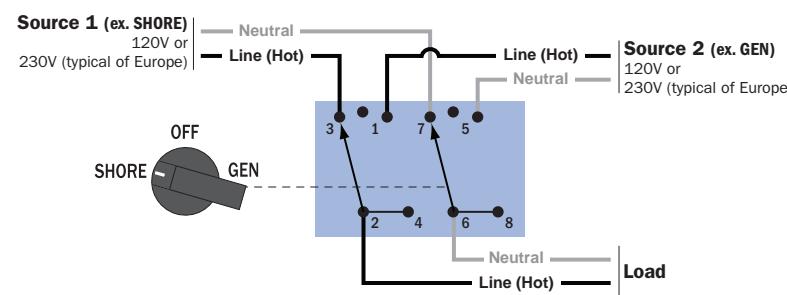
Rotary Switch Panels

Panel PN	Included Rotary Switch PN	Function		AC V_{mxo}	AC I_{mxo}	Maximum Wire Size (AWG)	Minimum Wire Size (AWG)	Width in (mm)	Height in (mm)	Depth in (mm)
		Sources	Poles							
8367	9009	2	2	120	30	10	14	5.25 (133.35)	3.75 (95.25)	1.91 (48.51)
8365	9011	2	2	120	65	6	12	5.25 (133.35)	3.75 (95.25)	2.41 (61.21)
8366	9010	3	2	120	30	10	14	5.25 (133.35)	3.75 (95.25)	2.41 (61.21)
8359	9009	2	2	230*	30	10	14	5.25 (133.35)	3.75 (95.25)	1.91 (48.51)
8357	9011	2	2	230*	65	6	12	5.25 (133.35)	3.75 (95.25)	2.41 (61.21)
8358	9010	3	2	230*	30	10	14	5.25 (133.35)	3.75 (95.25)	2.41 (61.21)
8363	9019	2	3	240	65	6	12	5.25 (133.35)	3.75 (95.25)	3.65 (92.71)
8386	6337	2	4	240	30	6	12	5.25 (133.35)	3.75 (95.25)	2.98 (75.69)
8369	9093	2	4	240	65	6	12	5.25 (133.35)	3.75 (95.25)	4.50 (114.30)
8361	9077	3	3	240	65	6	12	5.25 (133.35)	3.75 (95.25)	5.50 (139.70)

30 Ampere 2 Positions + OFF, 2 Pole

Rotary Switch

- Switches 2—120 or 230* Volt AC sources
- Allows connecting one of two different AC sources to one circuit



* 230 Volt (typical of Europe)

Rotary Switch Source Selection

65 Ampere 2 Positions + OFF, 2 Pole

Rotary Switch

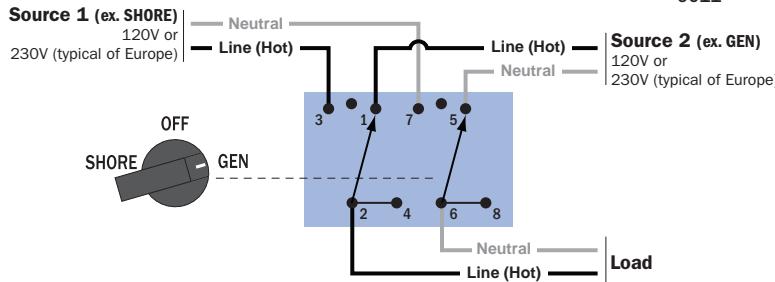
- Switches 2—120 or 230* Volt AC sources
- Allows connecting one of two different AC sources to one circuit



9011



8365



30 Ampere 3 Positions + OFF, 2 Pole

Rotary Switch

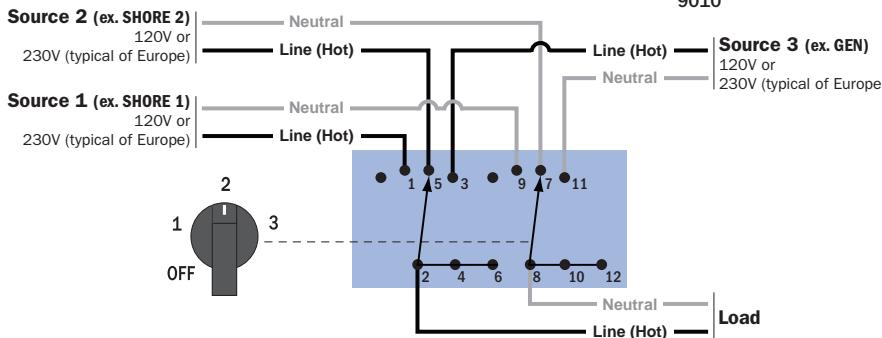
- Switches 3—120 or 230* Volt AC sources
- Allows connecting one of three different AC sources to one circuit



9010



8366



65 Ampere 2 Positions + OFF, 3 Pole

Rotary Switch

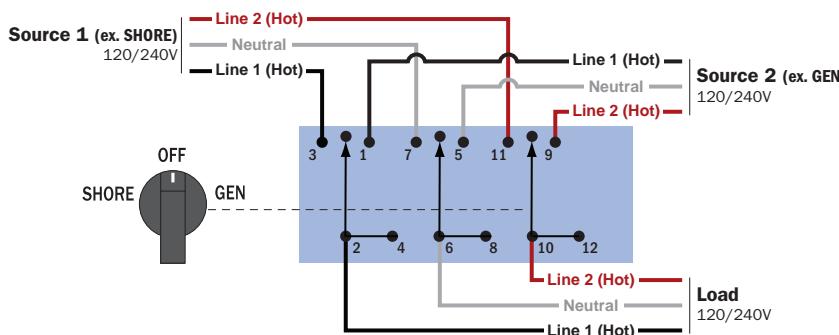
- Switches 2—120/240 Volt AC sources
- Switches both lines (hots) and neutral
- Allows connecting one of two different AC sources to one circuit



9019



8363



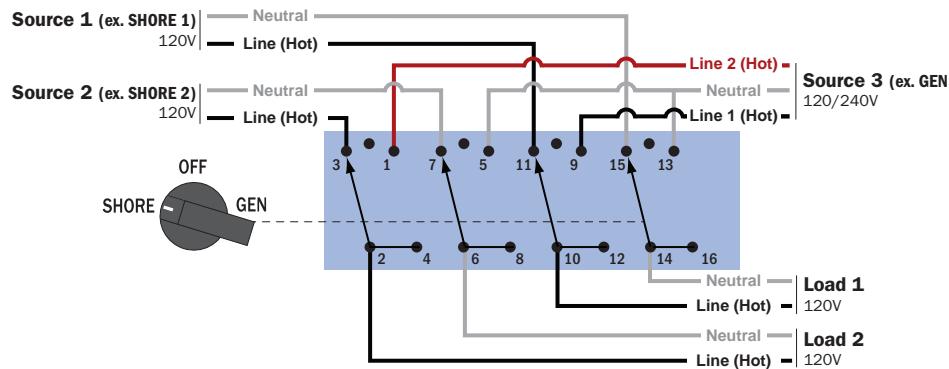
* 230 Volt (typical of Europe)

Rotary Switch Source Selection

30 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 (hots) and neutral
- Allows connecting one of three different AC sources to one circuit



6337

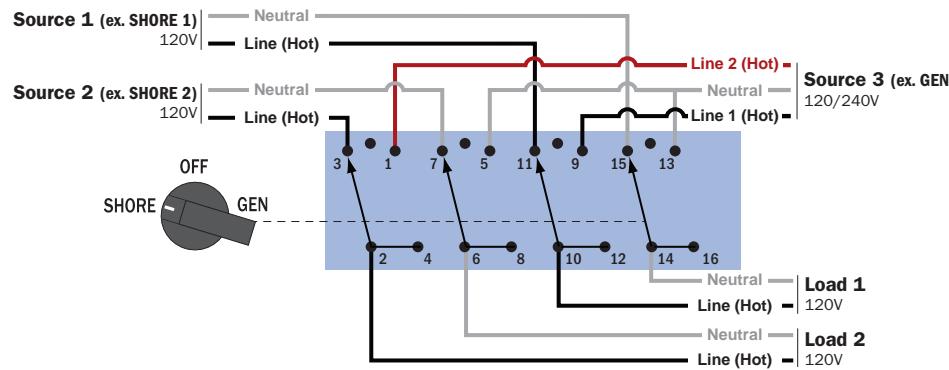


8386

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 (hots) and neutral
- Allows connecting one of three different AC sources to one circuit



9093

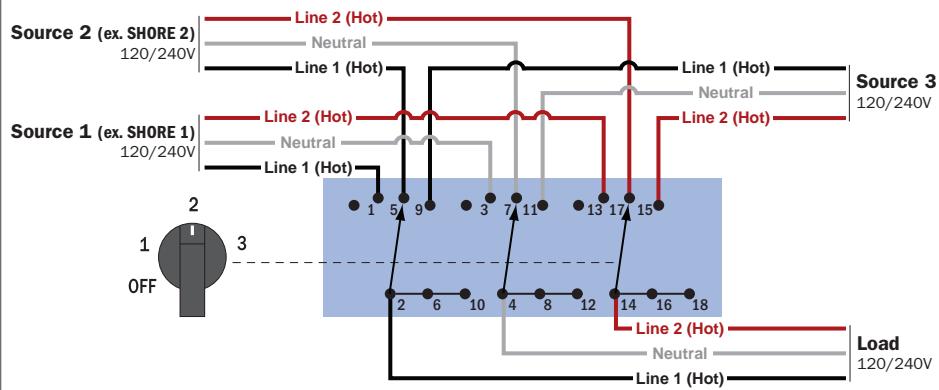


8369

65 Ampere 3 Positions + OFF, 3 Pole

Rotary Switch

- Switches 3—120/240 Volt AC sources
- Switches both lines (hot) and neutral
- Allows connecting one of three different AC sources to one circuit



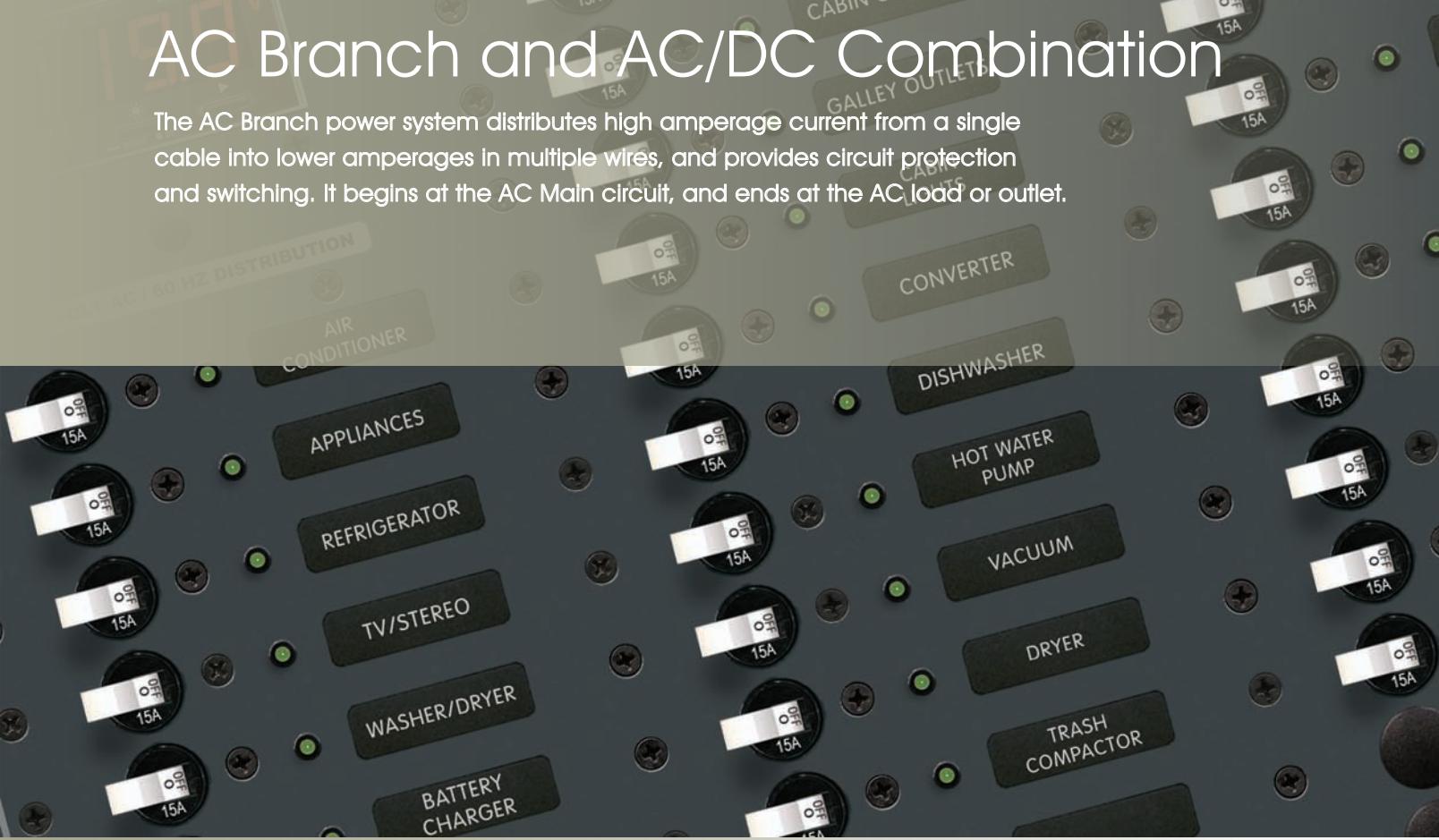
9077



8361

AC Branch and AC/DC Combination

The AC Branch power system distributes high amperage current from a single cable into lower amperages in multiple wires, and provides circuit protection and switching. It begins at the AC Main circuit, and ends at the AC load or outlet.



AC Branch Table of Contents



A-SERIES CIRCUIT BREAKER PANELS
pages 70–71



A-SERIES TOGGLE CIRCUIT BREAKERS
page 72



A-SERIES FLAT AND RESTRICTED OFF
ROCKER CIRCUIT BREAKERS
page 73



C-SERIES TOGGLE CIRCUIT BREAKERS
page 73



COMBINATION AC/DC CIRCUIT
BREAKER PANELS
pages 74–75

Power Distribution and Circuit Protection

A-Series Circuit Breaker Panels

Traditional metal panels provide branch switching and circuit protection while complimenting the look of many factory installed panels

Features

- All hot, neutral, and safety ground buses installed, fully pre-wired
- Countersunk mounting holes throughout
- Maximum amperage—100 Amperes per bus
- Backlit label positions

Model Specific Features (See table to right)

Analog Voltmeters (page 91)

Digital Multimeter (page 93)

Component References

- “ON” indicating LEDs installed in all circuit positions (page 80)
- A-Series Toggle Circuit Breakers (page 72)
- Large Format Label Set 8031 included (pages 84–85)
- Over 500 individual labels available (pages 86–87)

Specifications

V_{mxo} Voltage Maximum Operating See table to right

I_{tr} Amperage Trip Reference See table to right



8058/8158*



8097/8197*



8460/8560*



8411/8511*



8059/8159*



8461/8561*



8479/8579*



8265/8165*



See page 16 for a full selection of related products located in the 360 Panel System section of this catalog.

* 230 Volt (typical of Europe)

Power Distribution and Circuit Protection



8480/8580*



8478/8578*



8484/8584*

AC Branch

Use the table below to select AC Distribution Panels with AC Branch Circuit Breakers where a single AC electrical source is brought to the panel and AC Main Circuit Protection has been provided elsewhere.

PN	AC V _{mvo}	Specific Features METERS AC Function/PN	Total Circuit Breaker Positions	Installed A-Series Circuit Breakers		Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)				
				BRANCH (I _{tr})									
				8A	15A								
8058	120	-	3	-	3	5.25 (133.35)	3.75 (95.25)	2.50 (63.50)	1.20 (0.54)				
8097	120	-	6	-	6	10.50 (266.70)	3.75 (95.25)	2.50 (63.50)	2.22 (1.00)				
8059	120	-	8	-	5	5.25 (133.35)	7.50 (190.50)	2.50 (63.50)	2.00 (0.91)				
8411	120	-	8	-	6	10.50 (266.70)	4.50 (114.30)	2.50 (63.50)	1.90 (0.86)				
8478	120	0-150V/9353	10	-	7	5.25 (133.35)	11.25 (285.75)	2.50 (63.50)	3.00 (1.36)				
8460	120	-	12	-	10	14.75 (374.64)	4.50 (114.30)	2.50 (63.50)	3.15 (1.43)				
8479	120	0-150V/9353	13	-	10	10.50 (266.70)	7.50 (190.50)	2.50 (63.50)	4.05 (1.84)				
8480	120	-	13	-	10	5.25 (133.35)	11.25 (285.75)	2.50 (63.50)	2.81 (1.27)				
8461	120	-	16	-	10	10.50 (266.70)	7.50 (190.50)	2.50 (63.50)	3.74 (1.70)				
8265	120	-	24	-	15	14.75 (374.64)	7.50 (190.50)	2.50 (63.50)	5.12 (3.32)				
8484	120	Digital Multimeter/8247	36	-	27	14.75 (374.64)	11.25 (285.75)	4.00 (101.60)	10.00 (4.54)				
8158	230*	-	3	3	-	5.25 (133.35)	3.75 (95.25)	2.50 (63.50)	1.20 (0.54)				
8197	230*	-	6	6	-	10.50 (266.70)	3.75 (95.25)	2.50 (63.50)	2.22 (1.00)				
8159	230*	-	8	5	-	5.25 (133.35)	7.50 (190.50)	2.50 (63.50)	2.00 (0.91)				
8511	230*	-	8	6	-	10.50 (266.70)	4.50 (114.30)	2.50 (63.50)	1.90 (0.86)				
8578	230*	0-250V/9354	10	7	-	5.25 (133.35)	11.25 (285.75)	2.50 (63.50)	3.00 (1.36)				
8560	230*	-	12	10	-	14.75 (374.64)	4.50 (114.30)	3.00 (76.20)	3.15 (1.43)				
8579	230*	0-250V/9354	13	10	-	10.50 (266.70)	7.50 (190.50)	2.50 (63.50)	4.05 (1.84)				
8580	230*	-	13	10	-	5.25 (133.35)	11.25 (285.75)	2.50 (63.50)	2.81 (1.27)				
8561	230*	-	16	10	-	10.50 (266.70)	7.50 (190.50)	2.50 (63.50)	3.74 (1.70)				
8165	230*	-	24	15	-	14.75 (374.64)	7.50 (190.50)	2.50 (63.50)	5.12 (3.32)				
8584	230*	Digital Multimeter/8247	36	27	-	14.75 (374.64)	11.25 (285.75)	4.00 (101.60)	10.00 (4.54)				

* 230 Volt (typical of Europe)

Circuit Breakers

A-Series Toggle Circuit Breakers (single Pole)

Combines switching and circuit protection into a single device

- Used with A-Series Toggle Circuit Breaker Mounting Panel (see below)

Specifications

I_{ic}	Interrupting Capacity	See Interrupting Capacity table below
V_{mox}	Voltage Maximum Operating	See Interrupting Capacity table below
I_{tr}	Amperage Trip Reference	See tables
T_{mno}	Temperature Minimum Operating	-40°C
T_{mox}	Temperature Maximum Operating	85°C
C_s	Switching Cycles	10,000@rated amps and volts
Type		Magnetic Hydraulic—Trip free
Terminal Screw		#10-32 Stainless Steel
Terminal Screw Torque		14–15 in-lb Recommended
Trip Time Delay		See www.bluesea.com
Mounting Screw		#6-32 Stainless Steel
Mounting Screw Torque		6–8 in-lb Recommended
Weight		0.17lb (0.08kg)

Regulatory

- CE marked, TUV certified, CSA certified
- UL 1077 recognized

See page 60 for double pole A-Series Toggle Circuit Breakers

Interrupting Capacity (see ABYC Requirements page 107)

A-Series Toggle Circuit Breakers			
		UL 1077 - UL/CSA (US/Canada)	EN60934 - TUV (Europe)
V_{mox}	I_{tr}	I_{ic}	I_{ic}
65V DC	5–50A	7,500A	-
120V AC	5–50A	3,000A	-
250V AC	5–50A	3,000A	1,500A

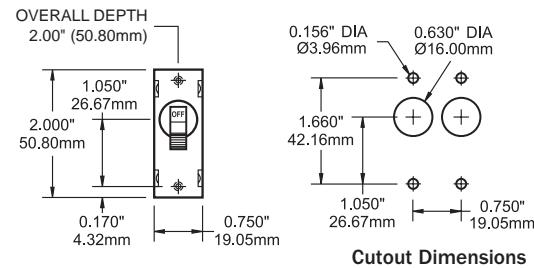
PN	Color	AC I_{tr}
7200	Black	5
7201	Red	5
7202	White	5
7347	Black	8
7299	White	8
7204	Black	10
7205	Red	10
7206	White	10
7208	Black	15
7209	Red	15
7210	White	15
7212	Black	20
7213	Red	20
7214	White	20
7216	Black	25
7217	Red	25
7218	White	25
7220	Black	30
7221	Red	30
7222	White	30
7224	Black	40
7225	Red	40
7226	White	40
7228	Black	50
7229	Red	50
7230	White	50



7200



7202



A-Series Toggle Circuit Breaker Mounting Panel (single Pole)

Simplifies mounting a single pole A-Series Toggle Circuit Breaker

- Mounts A-Series Toggle Circuit Breaker single pole (see above) or Panel Switch (page 79)

PN	Width in (mm)	Height in (mm)	Weight lb (kg)
8072	2.63 (66.80)	3.75 (95.25)	0.08 (0.04)



8072

Circuit Breakers

A-Series Flat and Restricted Off Rocker Circuit Breakers (Single Pole)

Combines switching and circuit protection into a single device

- Color actuator indicates "OFF" position
- Two different actuator styles available
- Flat rocker actuator is flush in the "ON" position
- International "ON" and "OFF" symbols support vertical or horizontal mounting

Specifications

I_{ic}	Interrupting Capacity	See Interrupting Capacity table below
V_{mxo}	Voltage Maximum Operating	See Interrupting Capacity table below
I_{tr}	Amperage Trip Reference	See tables
T_{mno}	Temperature Minimum Operating	-40°C
T_{mox}	Temperature Maximum Operating	85°C
C_s	Switching Cycles	10,000@rated amps and volts
Type		Magnetic Hydraulic—Trip free
Terminal Screw		#10-32 Stainless Steel
Terminal Screw Torque		14–15 in-lb Recommended (load terminal is 30° angled)
Trip Time Delay		See www.bluesea.com
Mounting Screw		#6-32 Stainless Steel
Mounting Screw Torque		6–8 in-lb Recommended
Weight		0.16lb (0.07kg)

Regulatory

- CE marked, TUV certified, CSA certified
- UL 1077 recognized

See page 61 for double pole A-Series Flat and Raised Rocker Circuit Breakers

Interrupting Capacity (see ABYC Requirements page 107)

A-Series Flat and Restricted Off Rocker Circuit Breakers			
		UL 1077 - UL/CSA (US/Canada)	EN60934 - TUV (Europe)
V_{mxo}	I_{tr}	I_{ic}	I_{ic}
32V DC	5–50A	5,000A	-
125V AC	5–50A	3,000A	-
250V AC	5–50A	1,500A	1,500A

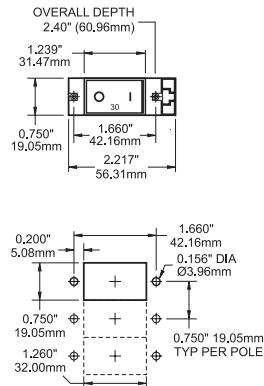


7403



7425

PN	Actuator	AC I_{tr}
7400	Flat	5
7425	Restricted Off	5
7401	Flat	8
7426	Restricted Off	8
7402	Flat	10
7427	Restricted Off	10
7403	Flat	15
7428	Restricted Off	15
7404	Flat	20
7429	Restricted Off	20
7405	Flat	25
7430	Restricted Off	25
7406	Flat	30
7431	Restricted Off	30
7407	Flat	40
7432	Restricted Off	40
7408	Flat	50
7433	Restricted Off	50



Cutout Dimensions

C-Series Toggle Circuit Breakers (Single Pole)

Combines switching and circuit protection into a single device

Specifications

I_{ic}	Interrupting Capacity	See Interrupting Capacity table below
V_{mxo}	Voltage Maximum Operating	See Interrupting Capacity table below
I_{tr}	Amperage Trip Reference	See tables
T_{mno}	Temperature Minimum Operating	-40°C
T_{mox}	Temperature Maximum Operating	85°C
C_s	Switching Cycles	10,000@rated amps and volts
Type		Magnetic Hydraulic—Trip free
Terminal Stud		1/4"-20 Tin-Plated Brass
Terminal Stud Torque		35 in-lb max.
Trip Time Delay		See www.bluesea.com
Mounting Screw		#6-32 Stainless Steel
Mounting Screw Torque		6–8 in-lb Recommended

Regulatory

- UL 1077 recognized, TUV certified

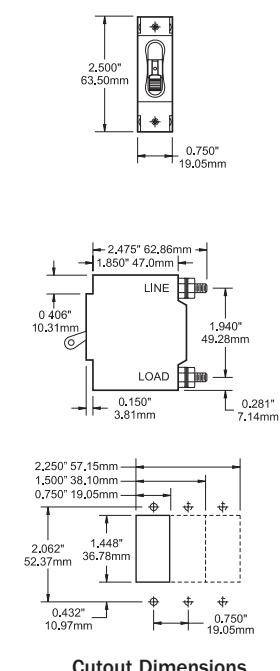
See page 62 for double and triple pole C-Series Toggle Circuit Breakers

Interrupting Capacity (see ABYC Requirements page 107)

C-Series Circuit Breakers Single Pole			
		UL 1077 - UL/CSA (US/Canada)	EN60934 - TUV (Europe)
V_{mxo}	I_{tr}	I_{ic}	I_{ic}
80V DC	5–100A	10,000A	-
125V AC	5–100A	5,000A	-
250V AC	5–100A	5,000A	5,000A



7250



Cutout Dimensions

Power Distribution and Circuit Protection

AC/DC Combination Circuit Breaker Panels

Traditional metal panels incorporate AC and DC switching, circuit protection, source selection and monitoring into a single distribution panel

Features

- All AC and DC buses installed, fully pre-wired
- Countersunk mounting holes throughout
- Maximum panel amperage—100 Amperes DC/50 Amperes AC
- Backlit label positions

Model Specific Features (See table to right)

- Analog Voltmeters and Analog Ammeters (pages 90–91)
 Digital Multimeter (pages 92–93)

Component References

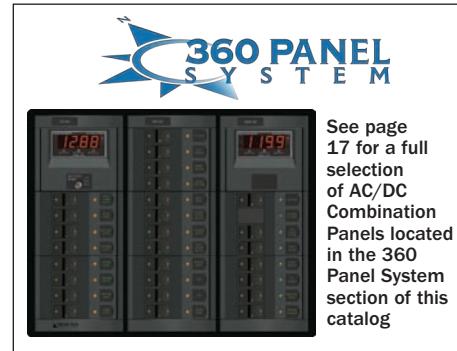
- Ready for installation of optional AC Isolation Cover (page 81)
- “ON” indicating LEDs installed in all circuit positions (page 80)
- Owner upgradable to 24 Volt DC with 8240, 18–32 Volt DC Voltmeter (page 90)
- A-Series Toggle Circuit Breakers (pages 60, 72)
- C-Series Toggle Circuit Breakers (page 42)
- Large Format Label Sets 8030 and 8031 included (pages 84–85)
- Over 500 individual labels available (pages 86–87)

Specifications

V_{mox}	Voltage Maximum Operating	See table to right
I_{tr}	Amperage Trip Reference	See table to right



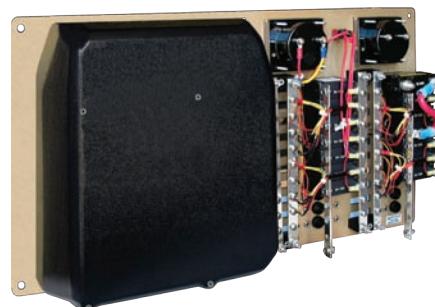
8095/8195*



See page 17 for a full selection of AC/DC Combination Panels located in the 360 Panel System section of this catalog



8086/8186*



PN 4031 Circuit Breaker Isolating Cover (page 81) Installed on PN 8086 AC/DC Toggle Style Circuit Breaker Panel

Combined AC/DC panels require an AC Insulating Cover (page 81) to meet ABYC Standards. ABYC E11.11.1. In the case of systems with a combined AC and DC panel, the panel shall be designed so that when the panel is open there is no access to energized AC parts without the use of tools.

* 230 Volt (typical of Europe)

Power Distribution and Circuit Protection

AC/DC Combination



8084/8184*



8085/8185*



8408/8508*

Specific Features		
METER Group	DC Function/PN	AC Function/PN
A	8-16V/8003	0-150A/9353 0-50A/9630
B	8-16V/8003 0-100A/8017	0-150A/9353
C	12.5 Multimeter/8248	12.5 Multimeter/8247
D	8-16V/8003 0-100A/8017	0-150V/9353 0-50A/9630
E	8-16V/8003	0-250A/9354 0-50A/9630
F	8-16V/8003 0-100A/8017	0-250A/9354
G	8-16V/8003 0-100A/8017	0-250V/9354 0-50A/9630

PN	Description	AC V _{mxo}	DC V _{mxo}	METER Group	Installed AC Circuit Breakers					Installed DC Circuit Breakers		Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)			
					MAIN (I _{tr})		BRANCH (I _{tr})		MAIN (I _{tr})		BRANCH (I _{tr})							
					16A	32A	8A	30A	50A	15A	100A	15A						
8085	AC 2 Sources + 12 Pos. DC Main + 7 Positions	120	12 [†]	A	-	-	-	2	-	9	1	4	14.75 (374.65)	10.00 (254.00)	3.00 (76.20)	8.75 (3.97)		
8084	AC Main + 6 Positions DC Main + 15 Positions	120	12 [†]	B	-	-	-	1	-	3	1	9	14.75 (374.65)	10.00 (254.00)	3.00 (76.20)	8.75 (3.97)		
8408	AC Main + 6 Positions DC Main + 18 positions	120	24	C	-	-	-	1	-	3	1	12	15.75 (400.05)	10.00 (254.00)	4.00 (101.60)	8.73 (3.96)		
8086	AC 3 Sources + 12 Pos. DC Main + 19 Positions	120	12 [†]	D	-	-	-	3	1	6	1	13	19.50 (495.30)	11.50 (292.10)	3.00 (76.20)	12.45 (5.65)		
8095	AC Main + 8 Positions DC Main + 29 Positions	120	12 [†]	D	-	-	-	1	-	5	1	20	19.50 (495.30)	11.50 (292.10)	3.00 (76.20)	12.45 (5.65)		
8185	AC 2 Sources + 12 Pos. DC Main + 7 Positions	230*	12 [†]	E	2	-	9	-	-	-	1	4	14.75 (374.65)	10.00 (254.0)	3.00 (76.20)	8.75 (3.97)		
8184	AC Main + 6 Positions DC Main + 15 Positions	230*	12 [†]	F	1	-	3	-	-	-	1	9	14.75 (374.65)	10.00 (254.00)	3.00 (76.20)	8.75 (3.97)		
8508	AC Main + 6 Positions DC Main + 18 positions	230*	24	C	1	-	3	-	-	-	1	12	15.75 (400.05)	10.00 (254.00)	4.00 (101.60)	8.73 (3.96)		
8186	AC 3 Sources + 12 Pos. DC Main + 19 Positions	230*	12 [†]	G	3	1	6	-	-	-	1	13	19.50 (495.30)	11.50 (292.10)	3.00 (76.20)	12.45 (5.65)		
8195	AC Main + 8 Positions DC Main + 29 Positions	230*	12 [†]	G	1	-	5	-	-	-	1	20	19.50 (495.30)	11.50 (292.10)	3.00 (76.20)	12.45 (5.65)		

* 230 Volt (typical of Europe) | † Owner upgradable to 24 Volts DC with 8240 - 18-32V DC Analog Voltmeters (page 90)

Accessories

Accessories are available for all above-deck waterproof panels and below-deck panels.



Accessories Table of Contents



WEATHERDECK™ WATERPROOF
PANEL ACCESSORIES
page 77



CONTURA WATERPROOF CIRCUIT
BREAKER PANEL ACCESSORIES
page 78



PANEL ACCESSORIES
pages 79-81



12 VOLT DC SOCKET-PLUG SYSTEM
page 80



DIGITAL DIMMERS
page 82

REFRIGERATOR

BAIT
PUMP

BAIT
PUMP

LABELS
pages 83-87

Waterproof Accessories

WeatherDeck™ Toggle Switches (Single Pole)

Available in a variety of switch and pole configurations to meet specific circuit requirements

- Specifically manufactured for use in WeatherDeck™ Waterproof Panels (pages 49–50)
- Nickel-plated brass and phenolic non-corrosive construction

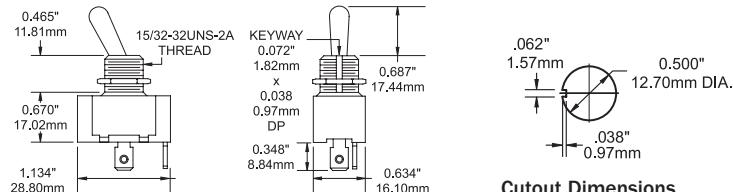
Specifications

I_{mxo} Amperage Maximum Operating 10 Amps @ 250 Volts AC
15 Amps @ 125 Volts AC
15 Amps @ 12 Volts DC

Terminal Size 0.25" (6.35mm)
Terminal Type Quick Connect Tab

PN	Pole/Throw	Action	Weight lb (kg)
4150	SPST	OFF-ON	0.10 (0.05)
4151	SPST	OFF-(ON)	0.10 (0.05)
4152	SPDT	ON-OFF-ON	0.10 (0.05)
4153	SPDT	(ON)-OFF-ON	0.10 (0.05)
4154	SPDT	(ON)-OFF-(ON)	0.10 (0.05)

() = Momentary



4150



Cutout Dimensions

WeatherDeck™ Toggle Switch (Double Pole)

Often used for combining navigation lights and anchor lights with shared switch

- For use in WeatherDeck™ Waterproof Panels (pages 49–50)
- Nickel-plated brass and phenolic non-corrosive construction

Specifications

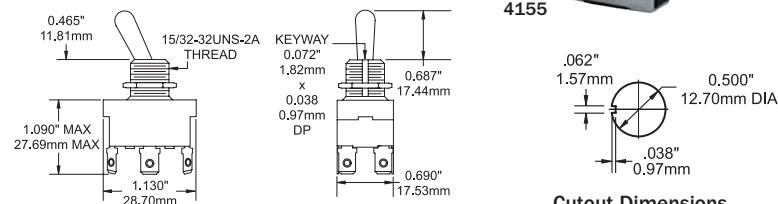
V_{mxo} Voltage Maximum Operating 30 Volts DC

I_{mxo} Amperage Maximum Operating 5A

Terminal Size 0.25" (6.35mm)

Terminal Type Quick Connect Tab

PN	Pole/Throw	Action	Weight lb (kg)
4155	DPDT	ON-OFF-ON	0.10 (0.05)



4155



Cutout Dimensions

WeatherDeck™ Toggle Switch Boots

Replaces boots found on all WeatherDeck™ panels

- For mounting on WeatherDeck™ Waterproof Panel Switches
- UV resistant material resists discoloration and cracking
- Rated IP67—temporary immersion for 30 minutes

Specifications

Case Material UV Resistant Silicone Rubber

Thread Material Nickel Plated Brass

Thread 15/32"-32UNS-2A

PN	Description	Weight lb (kg)
4138	Black Toggle Switch Waterproof Boot	0.04 (0.02)



4138

Water Resistant Fuse Holder

Replaces fuse holder found on Contura Waterproof Fuse Panels

- Easy to open
- Rated IP66 on front—withstanding water from heavy seas

Specifications

V_{mxo} Voltage Maximum Operating 32 Volts DC

I_{mxo} Amperage Maximum Operating 20 Amps

Mounting Hole 0.50" (12.70mm)

PN	Description	Weight lb (kg)
5021	Water Resistant Fuse Holder	0.02 (0.01)



5021

Waterproof Accessories

Water Resistant Contura Switches

Specifically manufactured for use in Blue Sea Systems Contura Waterproof Panels*

- Vibration, shock, thermoshock, moisture and salt spray resistant

Regulatory

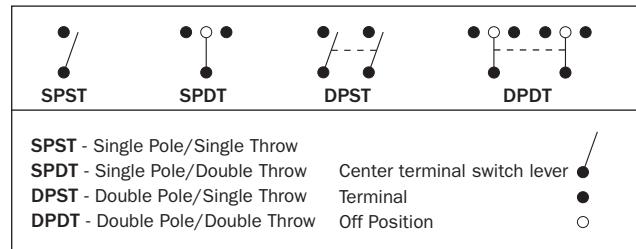
Meets UL 1500 and ISO 8846 external ignition protection requirements

Specifications

I_{max}	Amperage Maximum Operating	20 Amps @ 12 Volts DC 15 Amps @ 24 Volts DC
I_{oc} (LED)	Amperage Operating Current	18 Milliamperes
Lighted Seals		LED rated 100,000 hours 1/2 life Internal and external gasket panel seal
Temperature Rating		-40°C to 85°C
Mounting Hole		1.45" x 0.83" (36.83mm x 21.08mm)

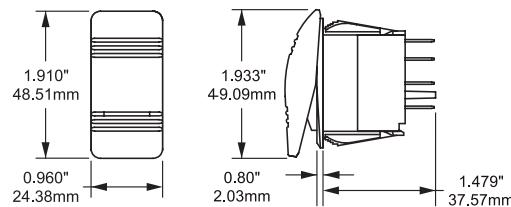
PN Gray	PN Black	Pole/Throw	Action	Embedded LEDs	Weight lb (kg)
8230	8282	SPST	OFF-ON	1	0.09 (0.04)
8231	8292	SPST	OFF-(ON)	0	0.09 (0.04)
8232	8283	SPDT	ON-OFF-ON	2	0.09 (0.04)
8233	8284	SPDT	(ON)-OFF-ON	1	0.09 (0.04)
8234	8285	SPDT	(ON)-OFF-(ON)	0	0.09 (0.04)
8218	8287	DPST	OFF-ON	1	0.09 (0.04)
8219	8288	DPST	OFF-(ON)	0	0.09 (0.04)
8220	8286	DPDT	ON-OFF-ON	2	0.09 (0.04)
8221	8289	DPDT	(ON)-OFF-ON	1	0.09 (0.04)
8222	8290	DPDT	(ON)-OFF-(ON)	0	0.09 (0.04)
8275	-	DPDT	ON-ON	2	0.25 (0.11)

() = Momentary



See page 37 for ML-Series Remote Battery and ACR (SPDT) Switches

See page 51 for Contura Waterproof Panels



Contura Switch Actuators

Directly replaces actuators found on all Blue Sea Systems Contura Waterproof Panels

- Mounts on any Blue Sea Systems Water Resistant Contura Switch

PN Gray	PN Black	Number of Lenses	Embedded LEDs	Weight lb (kg)
8299	8296	-	-	0.03 (0.01)
8297	8294	1	1	0.03 (0.01)
8298	8295	2	2	0.03 (0.01)
8293		Actuator Removal Tool		0.04 (0.02)

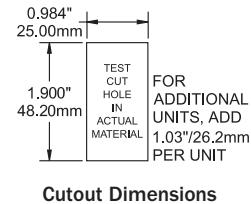


Contura Switch Mounting Panels

Modular design permits easy assembly in groups of varying sizes and numbers

- Mounting panels available in 1, 3, and 6 fixed position models
- Designed for mounting in 6 different panel thicknesses:
0.06" (1.57mm) 0.09" (2.36mm) 0.13" (3.17mm)
0.19" (4.75mm) 0.25" (6.35mm) 0.38" (9.52mm)

PN	Description	Width in (mm)	Height in (mm)
8267	End Mounting Panel	1.19 (30.23)	2.30 (58.42)
8266	Center Mounting Panel	1.03 (26.16)	2.30 (58.42)
8268	1 Position Mounting Panel	1.34 (34.04)	2.30 (58.42)
8259	3 Position Mounting Panel	3.40 (86.36)	2.30 (58.42)
8260	6 Position Mounting Panel	6.49 (164.85)	2.30 (58.42)

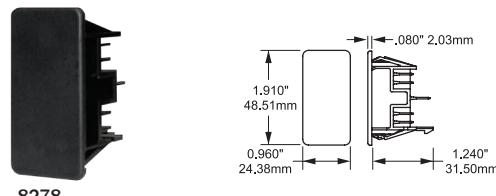


Contura Switch Mounting Panel Plug

Covers Contura Switch mounting hole for future switch installation

- For use with Contura Switch Mounting Panels (see above)

PN	Description	Weight lb (kg)
8278	Mounting Panel Plug	0.06 (0.03)



* Use of standard Contura Switches will not maintain the integrity of the Contura Waterproof Panels.

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

Panel Accessories

Panel Switches

Mounts in an A-Series toggle circuit breaker aperture to provide multiple throw and switch configurations when circuit protection is provided elsewhere

- Perfect for generator starters, bilge pumps, horns, wipers, engine controls and any other application that requires switching action other than ON-OFF or different pole configuration separate from circuit protection
- Panel switches mount in Blue Sea Systems A-Series Toggle Circuit Breaker Panels
- For use with A-Series Toggle Circuit Breaker Mounting Panel (page 72)
- Supplied with mounting adapter for standard 5/8" circuit breaker mounting hole
- Nickel-plated brass and phenolic non-corrosive construction

Specifications

I_{maxo} Amperage Maximum Operating

Toggle Switches

10A @ 250V AC

15A @ 125V AC

15A @ 32V DC

Push Button Switch

3A @ 250V AC

6A @ 125V AC

6A @ 32V DC

Terminal Size

Terminal Type

Actuator Color

PN	Type	Pole/Throw	Action	Weight lb (kg)
8200	Push Button	SPST	OFF-(ON)	0.07 (0.03)
8204	Toggle	SPST	OFF-ON	0.08 (0.04)
8205	Toggle	SPST	OFF-(ON)	0.08 (0.04)
8206	Toggle	SPDT	ON-OFF-ON	0.08 (0.04)
8207	Toggle	SPDT	(ON)-OFF-ON	0.08 (0.04)
8208	Toggle	SPDT	(ON)-OFF-(ON)	0.08 (0.04)
8209	Toggle	DPST*	OFF-ON-(ON) OFF-OFF-(ON)	0.08 (0.04)
8210	Toggle	DPST	OFF-ON	0.08 (0.04)
8211	Toggle	DPDT	ON-OFF-ON	0.08 (0.04)
8212	Toggle	DPDT	(ON)-OFF-ON	0.08 (0.04)

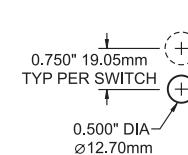
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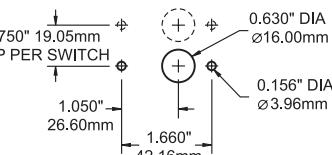
8200



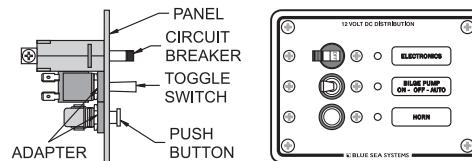
8204



Cutout Dimensions
Without Adapter



Cutout Dimensions
With Adapter



Panel Switch Mounting Diagram

Circuit Breaker Mounting Screws

Fits all A-Series and C-Series circuit breakers

- Sold in packages of 6

PN	Description	Weight lb (kg)
8035	6-32 x 1/4" Flat Head	0.03 (0.01)



8035

Toggle Circuit Breaker Panel Plug

Black plug fits standard A-Series toggle circuit breaker apertures

PN	Description	Weight lb (kg)
8037	Toggle Circuit Breaker Plug	0.03 (0.01)



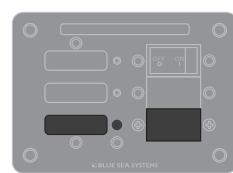
8037

Rocker Circuit Breaker Panel Plug

Black plug fits Rocker circuit breaker aperture

- Includes plug mounting hardware, circuit breaker panel plug, LED plug and blank label

PN	Description	Weight lb (kg)
4110	Rocker Circuit Breaker Plug	0.03 (0.01)



4110

Push Button Reset-Only Circuit Breaker Adapter

Provides a method of mounting Push Button Reset-Only Circuit Breakers into the magnetic circuit breaker aperture

- Adapts Push Button Reset-Only Circuit Breaker (page 38)

PN	Description	Weight lb (kg)
4111	Circuit Breaker Panel Adapter	0.03 (0.01)



4111

* Progressive Two Circuit Switch - maintains circuit one while momentarily switching circuit two

Panel Accessories

Label Backlight System

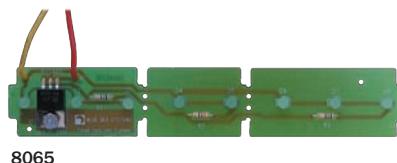
Adds label backlighting to Blue Sea Systems traditional metal circuit breaker panels

- Designed for 12 or 24 Volt systems
- Connects to sources via two 20 AWG wire leads
- Reverse polarity protection built-in
- 8065 snaps apart for 5 or 3 positions

Specifications

V_{mxo} Voltage Maximum Operating 24 Volts DC
I_{oc} Amperage Operating Current <7 mA per label

PN	Description	Weight lb (kg)
8065	8/5/3 Positions	0.08 (0.04)
8384	4 Positions	0.05 (0.02)
8069	10 Positions	0.09 (0.04)
8383	13 Positions	0.11 (0.05)



8065

LED Indicator Lights

Directly replaces all LEDs used in Blue Sea Systems traditional metal circuit breaker panels

- Simple push-in installation mounts in any thickness material
- Useful as general indicator and alarm lights



Specifications

V_{mxo} Voltage Maximum Operating See table to right
I_{oc} Amperage Operating Current See table to right
Mounting Hole Size 11/64" (4.36mm)
Power Consumption 5 mW

PN	Color	V _{mxo}	I _{oc}	Weight lb (kg)
8033	Amber	24V DC	5 mA DC	0.03 (0.01)
8171	Red	24V DC	5 mA DC	0.03 (0.01)
8172	Green	24V DC	5 mA DC	0.03 (0.01)
8169	Amber	120V AC	0.5 mA AC	0.03 (0.01)
8066	Red	120V AC	0.5 mA AC	0.03 (0.01)
8034	Green	120V AC	0.5 mA AC	0.03 (0.01)
8167	Amber	230V AC	0.25 mA AC	0.03 (0.01)
8166	Red	230V AC	0.25 mA AC	0.03 (0.01)
8134	Green	230V AC	0.25 mA AC	0.03 (0.01)

12 Volt Socket-Plug System

Corrosion resistant materials to ensure solid contact and low voltage drop

- Designed to withstand the rigors of wet environments and constant vibration
- Large contact surfaces for good electrical connection
- Twist lock system—plug locks securely into socket
- Internal strain relief and cord seal
- Nickel plated copper alloy used for all current carrying components
- Plug has a sealing ring around the shaft to keep out spray and make it seat firmly in the outlet
- Plug features an LED ON-indicating light, moisture proof sealing ring, strain relief and built-in 10A fuse
- Front panel, rear panel, or surface mount
- Socket features a watertight cap, easy installation and interlocks with plug
- 1012 and 1013 Heavy duty 18 gauge wire
- 1012 Cord reaches up to 6 feet



Specifications

V_{mxo} Voltage Maximum Operating 15 Volts DC
I_{mxo} Amperage Maximum Operating 15 Amps DC (socket)
I_{mxo} Amperage Maximum Operating 10 Amps DC (plug)



1012

PN	Description	Weight lb (kg)
1010	Plug	0.08 (0.04)
1011	Socket	0.10 (0.05)
1012	Single Plug with Single Socket Extension	0.54 (0.24)
1013	Single Plug with Dual Socket Extensions	0.50 (0.23)
1014	Mounting Bracket for Socket (1011)*	0.07 (0.03)
1015	Plug and Socket Set - Includes 1010 and 1011	0.20 (0.09)



1014

1013



See pages 20-21 for a full selection of related products located in the 360 Panel System section of this catalog.

Panel Accessories

Toggle Guard

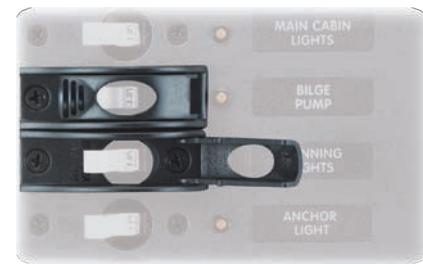
Protects toggle circuit breakers from accidental switching

- Fits all A-Series single pole toggle circuit breakers (page 72)
- Fits all panel switches (page 79)
- Can be used on any brand of circuit breaker panel (not including 360 Panel System) using standard toggle type circuit breakers
- Uses circuit breaker mounting screw holes
- Includes 2 mounting screws

Specifications

Mounting Hole Size #6 Flat Head Screw

PN	Description	Weight lb (kg)
4100	Toggle Guard	0.05 (0.02)



4100 (2 shown)

AC A-Series Circuit Breaker Lockout Slide

Enables safe management of multiple AC sources which use double pole circuit breakers

- Allows only 1 double pole AC circuit breaker to be activated at a time
- Guarantees that AC power from 2 or 3 sources (shore power, genset, or inverter) will not be mixed
- Fits all double pole A-Series Toggle Circuit Breakers (page 60)
- Uses circuit breaker mounting screw holes
- Includes mounting screws

Specifications

Mounting Screw Size #6 Flat Head Screw

PN	Poles	AC Sources	Weight lb (kg)
4125	2	2	0.04 (0.02)
4126	2	3	0.06 (0.03)



4125



4126

AC C-Series Toggle Circuit Breaker Lockout Slide

Enables safe management of multiple AC sources which use double or triple pole circuit breakers

- Allows only 1 of a pair of double pole or triple pole AC circuit breakers to be activated at a time
- Guarantees that AC power from 2 sources (shore power, genset, or inverter) will not be mixed
- Fits all double or triple pole C-Series Toggle Circuit Breakers (page 62)
- Uses circuit breaker mounting screw holes
- Requires no special panel modification
- Includes mounting screws

Specifications

Mounting Screw Size #6 Flat Head Screw

PN	Poles	Positions	Weight lb (kg)
4130	2	2	0.06 (0.03)
4131	3	2	0.17 (0.08)



4130



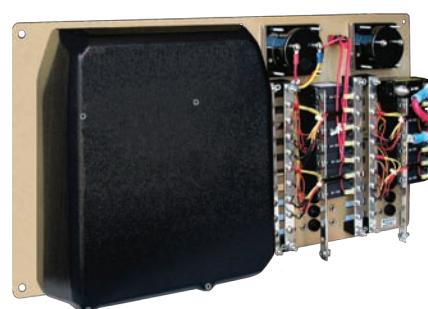
4131

AC Insulating Covers

Provides electrical insulation for many of Blue Sea Systems traditional metal circuit breaker panels

- Provides electrical insulation for exposed panel backs
- Provides mechanical protection for panel backs protruding into lockers
- Lightweight material is easily drilled for wire entrance and exit
- Meet ABYC safety requirements for panels with combined AC and DC loads
- PN 4029 and 4031—Used only for Blue Sea Systems toggle circuit breaker panels

PN	Description	Weight lb (kg)
4026	Cover for 5-1/4" x 3-3/4"	0.12 (0.05)
4027	Cover for 5-1/4" x 7-1/2"	0.20 (0.09)
4028	Cover for 10-1/2" x 7-1/2"	0.50 (0.23)
4029	Cover for 1 Column x 8 Position + Meter	0.24 (0.11)
4031	Cover for 2 Column x 10 Position + Meter	0.38 (0.17)



4031 installed on 8086
AC/DC Circuit Breaker Panel
(pages 74-75)

Dimmers

Accessories

Digital Dimmers

Provides continuous voltage control from 0 to 100% of input voltage

- Last setting memory—Power returns to previous setting with optional ON/OFF switch
- Supports multiple switch locations
- Water resistant, sealed housings
- Requires SPDT momentary (ON)–OFF–(ON) switch such as PN 8216, 8291 (see below) or 8208 (page 79)

Specifications

	7501	7502	7503	7505
V_{mxo} Voltage Maximum Operating	32V DC	32V DC	32V DC	32V DC
I_c Amperage Continuous	2 Amps	5 Amps	10 Amps	20 Amps
T_{mno} Temperature Minimum Operating	-20°C	-20°C	-20°C	-20°C
T_{mxo} Temperature Maximum Operating	+85°C	+85°C	+85°C	+85°C
I_{oc} (0% output) Amperage Operating Current	5mA (0.005A)	5mA (0.005A)	5mA (0.005A)	5mA (0.005A)
Surge Rating: 10 sec	5 Amps	10 Amps	25 Amps	50 Amps
Internal Overcurrent Protection	10 Amps	20 Amps	50 Amps	70 Amps

See page 79 for Momentary (ON)–OFF–(ON) Panel Switch 8208

PN	Width in (mm)	Height in (mm)	Depth in (mm)	Weight lb (kg)
7501	1.67 (42.42)	2.05 (52.07)	1.50 (38.10)	0.28 (0.13)
7502	2.16 (54.86)	3.06 (77.72)	1.60 (40.64)	0.40 (0.18)
7503	2.16 (54.86)	3.06 (77.72)	1.60 (40.64)	0.58 (0.26)
7505	2.16 (54.86)	3.06 (77.72)	1.60 (40.64)	0.56 (0.25)



Water Resistant Contura Dimmer Switches

Pre-labeled momentary switches are an ideal control switch for Blue Sea Systems dimmers

- Mounts in Blue Sea Systems Contura waterproof panels (page 51)
- Legend—BRIGHT and DIM
- Contura Switch Mounting Panels (page 78)
- For use with Digital Dimmers (see above)
- Ignition Protected - safe for installation aboard gasoline powered boats

Specifications

V_{mxo} Voltage Maximum Operating	20 Amps @ 12 Volts DC 15 Amps @ 24 Volts DC
Terminal Size	0.25" (6.35mm)
Terminal Type	Quick Connect Tab
Seals	Internal and External Gasket Panel Seal
Temperature Rating	-40°C to 85°C
Mounting Hole	1.45" (36.83mm) x 0.83" (21.08mm)

PN	Color	Pole/Throw	Action
8216	Gray	Single/Double	(ON)-OFF-(ON)
8291	Black	Single/Double	(ON)-OFF-(ON)

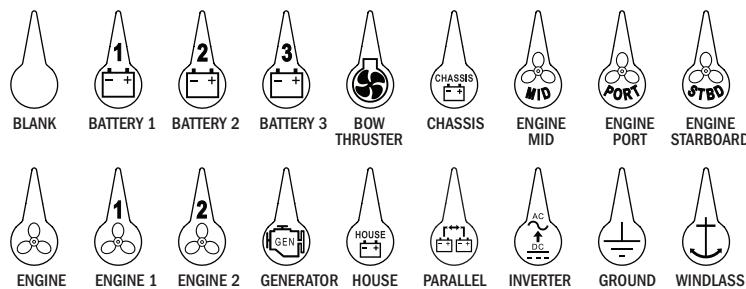


Labels

ICON Circuit Identification Label Kit

Used on any m-Series, e-Series and HD-Series battery switches (pages 26–28)

- Reinforced, weatherproof material



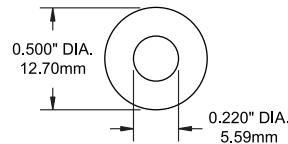
PN	Color	Description	Quantity
7902	White	ICON Circuit Identification Labels	18 Labels

24-Hour Round Label

Fits around any Blue Sea Systems panel LED

- Reinforced, weatherproof material
- Sold in packages of 12
- Can be used on any standard panel
- Included with Battery Main Distribution Panels (pages 29–30)

PN	Color	Description
4140	Black	24 Hour Round Label



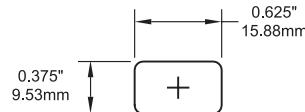
Small Format Labels

Used with most Blue Sea Systems Contura Waterproof Panels (page 51) or ST Blade Fuse Block (page 55)

- Reinforced, weatherproof material

PN	Color	Description	Quantity
8214	Black	Small Format Labels	60 Labels
8217	Gray	Small Format Labels	60 Labels

BAIT
PUMP



Small Format Label Sets (8214 and 8217)

(BLANK)	BATTERY CHARGER	CHART PLOTTER	GAS ALARM	OUTLETS	STROBE LIGHT
12 VOLT DC	BILGE	DECK LIGHTS	GPS	RADIO	TRICOLOR LIGHT
24 VOLT DC	BILGE PUMP	DEPTH SOUNDER	HORN	RADAR	TRIM TABS
ACCESSORY	BLOWER	DOWN RIGGER	IGNITION	REFRIGERATION	VHF
AERATOR	BOW LIGHT	ELECTRONICS	INSTR. LIGHTS	RUNNING LIGHTS	WASH DOWN
ANCHOR LIGHT	CABIN	FAN	INVERTER	SEARCH LIGHT	WATER PRESSURE
AUTO PILOT	CABIN LIGHTS	FISH FINDER	KNOT METER	SPARE	WATER PUMP
BAIT PUMP	CB RADIO	FISHING LIGHT	LIGHTS	SPREADER LIGHTS	WINCHES
BAITWELL	CELLULAR PHONE	FLOOD LIGHTS	LIVEWELL	STEAMING LIGHT	WINDLASS
BATTERY	CHARGER INVERTER	FUEL PUMP	NAV LIGHTS	STEREO	WIPERS

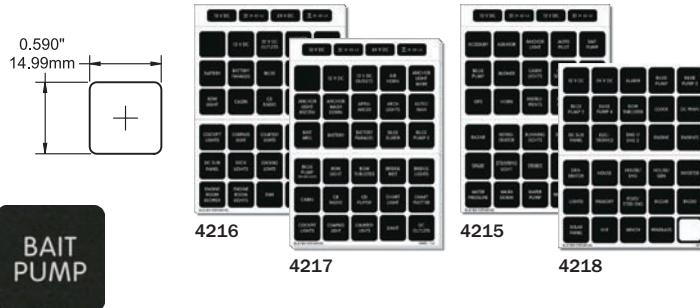
Square Format Labels

Used with 360 Panel Systems (pages 4–23), Battery Management Panels (pages 29–30) and WeatherDeck™ Panels (pages 49–50)

- Reinforced, weatherproof material
- Available for purchase in sets or individually (pages 86–87)
- For a list of labels included, see page 85

To purchase individual labels online go to www.bluesea.com.

PN	Color	Description	Quantity
4215	Black	DC Labels	30 Labels
4218	Black	DC Labels	30 Labels
4216	Black	DC Labels	60 Labels
4217	Black	DC Labels	120 Labels
4205	Black	DC Panel Basic	30 Labels
4206	Black	AC Panel Basic	30 Labels
4207	Black	DC Panel Extended	120 Labels
4208	Black	AC Panel Extended	120 Labels
6522	Black	AC Panel Extended (French)	120 Labels
6523	Black	DC Panel Extended (French)	120 Labels
6524	Black	AC Panel Extended (Italian)	120 Labels
6525	Black	DC Panel Extended (Italian)	120 Labels



Note: 6522/6524 are based on 4208 and 6523/6525 are based on 4207

Large Format Labels

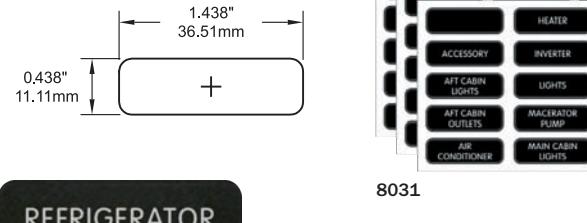
Used on Traditional Metal Panels, ST Glass Fuse Block and selected Contura Waterproof Panels

- Reinforced, weatherproof material
- Used on Contura Waterproof Fuse Panels 8053, 8054 (page 51)
- Available for purchase in sets or individually (page 86–87)
- For a list of labels included, see page 85

To purchase individual labels online go to www.bluesea.com.

PN	Color	Description	Quantity
8031	Black	AC Panel Basic	30 Labels
8067	Black	AC Panel Extended	120 Labels
8030	Black	DC Panel Basic	30 Labels
8039	Black	DC Panel Extended	120 Labels
6398	Black	AC Panel Extended (French)	120 Labels
6399	Black	DC Panel Extended (French)	120 Labels

Note: 6398 is based on 8067 and 6399 is based on 8039



Labels

Square and Large Format Panel Label Sets

DC Label Set (4215)		DC Label Set (4218)		DC Panel Basic (4205 and 8030)		AC Panel Basic (4206 and 8031)	
ACCESSORY	RADAR	12 VOLT DC	GENERATOR	ACCESSORY	LIGHTS	(BLANK)	HEATER
AERATOR	REFRIGERATOR	24 VOLT DC	HOUSE	ANCHOR LIGHT	MACERATOR PUMP	ACCESSORY	INVERTER
ANCHOR LIGHT	RUNNING LIGHTS	ALARM	HOUSE/ENG	AUTOPilot	MAIN CABIN LIGHTS	AFT CABIN LIGHTS	LIGHTS
AUTOPilot	SEARCH LIGHT	BILGE PUMP	HOUSE/GEN	BILGE PUMP	RADAR	AFT CABIN OUTLETS	MACERATOR PUMP
BAIT PUMP	SPARE	BILGE PUMP 2	INVERTER	BLOWER	REFRIGERATOR	AIR CONDITIONER	MAIN CABIN LIGHTS
BILGE PUMP	SPREADER LIGHTS	BILGE PUMP 3	LIGHTS	COMPASS LIGHT	RUNNING LIGHTS	AIR CONDITIONER 2	MAIN CABIN OUTLETS
BLOWER	STEAMING LIGHT	BILGE PUMP 4	MEMORY	DEPTH SOUNDER	SAILING INSTRUMENTS	APPLIANCES	MICROWAVE
CABIN LIGHTS	STEREO	BOW THRUSTER	PORT/STBD ENG	ELECTRONICS	SPREADER LIGHTS	BATTERY CHARGER	OUTLETS
DEPTH SOUNDER	TRIM TABS	CLOCK	RADAR	ENGINE INSTRUMENTS	STEREO	CABIN OUTLETS	REFRIGERATOR
ELECTRONICS	VHF	DC MAIN	RADIO	FAN	STEAMING LIGHT	COMPUTER	SPARE
GPS	WASH DOWN	DC SUB PANEL	SOLAR PANEL	FOREDECK LIGHT	STEREO	ENTERTAINMENT CENTER	STOVE
HORN	WATER PRESSURE	ELECTRONICS	VHF	FWD CABIN LIGHTS	STROBE LIGHT	FWD CABIN LIGHTS	TV/STEREO
INSTRUMENTS	WATER PUMP	ENGINE	WINCH	GPS	TRICOLOR LIGHT	FWD CABIN OUTLETS	VCR
KNOTMETER	WINDLASS	ENGINES	WINDLASS	HORN	VHF	GALLEY	WASHER/DRYER
NAV LIGHTS	WIPERS	ENG 1/ENG 2	Blank (Write On)	KNOTMETER	WATER PRESSURE	GALLEY OUTLETS	WATER HEATER

DC Label Set (4216)							
(BLANK)	BILGE PUMP ON-OFF-AUTO	COURTESY LIGHTS	ENGINE ROOM LIGHTS	GAS ALARM	OUTLETS	TROLLING MOTOR	
12 VOLT DC	BOW LIGHT	DAVIT	FAN	GPS/PLOTTER	PUMPOUT	WASHDOWN	
12 VOLT DC OUTLETS	CABIN	DC OUTLETS	FISH FINDER	HEAD	RADIO	WATER MAKER	
ANCHOR WASH DOWN	CB RADIO	DC SUB PANEL	FISHING LIGHT	IGNITION	SEAWATER WASH DOWN	WINCHES	
BAITWELL	CELLULAR PHONE	DECK LIGHTS	FISHWELL PUMP	INSTRUMENT LIGHTS	SHOWER SUMP PUMP	WIPER PORT	
BATTERY	CHART LIGHT	DOCKING LIGHTS	FLOOD LIGHTS	LIGHTS	SSB	WIPER STBD	
BATTERY PARALLEL	CHART PLOTTER	DOWN RIGGER	FRESH WATER PUMP	LIVEWELL	STERN LIGHT		
BILGE	COCKPIT LIGHTS	ELECTRIC HATCH	FUEL PUMP	MACERATOR PUMP	STROBE LIGHT		
BILGE PUMP 2	COMPASS LIGHT	ENGINE ROOM BLOWER	GALLEY OUTLETS	NAV LIGHT ANCHOR-OFF-NAV	TRICOLOR LIGHT		

DC Label Set (4217)							
(BLANK)	BOW THRUSTER	DISCHARGE PUMP	FISHWELL PUMP	HEAD	ON-OFF	TRANSFER	
12 VOLT DC	BRIDGE INSTRUMENTS	DOCKING LIGHT PORT	FLOOD LIGHTS	HEATER	OUTLETS	TRICOLOR LIGHT	
12 VOLT DC OUTLETS	BRIDGE LIGHTS	DOCKING LIGHT STBD	FLYBRIDGE	IGNITION	PUMPOUT	TROLLING MOTOR	
24 VOLT DC	CABIN	DOCKING LIGHTS	FLYBRIDGE ELECTRONICS	INSTRUMENT LIGHTS	RADIO	WASHDOWN PUMP	
AIR HORN	CB RADIO	DOWN RIGGER	FLYBRIDGE LIGHTS	INTERCOM HAILER	ROD LOCKER	WASHDOWN	
ANCHOR LIGHT MAIN	CD PLAYER	ELECTRIC HATCH	FOG LIGHTS	LAZARETTE LIGHTS	RUDDER ANGLE INDICATOR	WINCHES	
ANCHOR LIGHT MIZZEN	CHART LIGHT	ENGINE HATCH	FOREDECK LIGHT	LIGHTER	RUDER ANGLE INDICATOR	WIND GENERATOR	
ANCHOR WASH DOWN	CHART PLOTTER	ENGINE INSTRUMENTS	FRESH WATER PUMP	LIGHTS	SAILING CONTROLS	WIND INSTRUMENTS	
APPLIANCES	COCKPIT LIGHTS	ENGINE ROOM BLOWER	FRESH WATER WASH DOWN	LIVEWELL	SAILING INSTRUMENTS	WINDSHIELD WASHER	
ARCH LIGHTS	COMPASS LIGHT	ENGINE ROOM LIGHTS	FUEL PUMP	LOCKER LIGHTS	SALT WATER PUMP	WIPER CENTER	
AUTO/MAN	COURTESY LIGHTS	ENGINE SHUTDOWN	FUEL TRANSFER	LPG CONTROL	SEAWATER WASH DOWN	WIPER PORT	
BAITWELL	DAVIT	ENTRY STEP	FURLER JIB	MAIN	SHOWER SUMP PUMP	WIPER STBD	
BATTERY	DC OUTLETS	FAN	FURLER MAINSAIL	MAST LIGHTS	SOLAR PANEL		
BATTERY PARALLEL	DC SUB PANEL	FAN 2	GALLEY	MASTHEAD LIGHT	SSB		
BILGE ALARM	DECK LIGHTS	FIRE ALARM	GAS ALARM	MIZZEN FLOOD	START-STOP		
BILGE PUMP 2	DEFROSTER	FIRE EXT	GPS/PLOTTER	NAVIGATION ELECTRONICS	STERN LIGHT		
BILGE PUMP ON-OFF-AUTO	DEPTH/SPEED	FISH FINDER	HAILER	NAVIGATION INSTRUMENTS	STROBE LIGHT		
BOW LIGHT	DIMMER	FISHING LIGHT	HAM RADIO	NAV LIGHT ANCHOR OFF NAV	SUMP PUMP		

DC Panel Extended Label Sets (4207 and 8039)							
(BLANK)	CHART LIGHT	DOCKING LIGHTS	HAM RADIO	LOG	SATELLITE DISH	VIDEO PLOTTER	
12 VOLT DC	CHART PLOTTER	EMERGENCY LIGHTS	HEAD	LORAN	SEARCHLIGHT	WATER ALARM	
12 VOLT DC OUTLETS	COCKPIT LIGHTS	ENGINE ROOM BILGE ALARM	HEAD LIGHTS	MAIN CABIN	SEAWATER TEMP	WATER MAKER	
AFT CABIN	COLOR SOUNDER	ENGINE ROOM LIGHTS	HEAD LIGHTS 2	MAP LIGHT	SEAWATER WASH DOWN	WATER PUMP	
AFT HEAD	COMM ELECTRONICS	ENGINE ROOM PANEL MAIN	HEATER 2	MAST LIGHTS	SECURITY SYSTEM	WEATHER FAX	
ALARM SYSTEM	DC LIGHTS	ENGINE ALARM	HELM ELECTRONICS	NAV STATION ELECTRONICS	SHOWER SUMP PUMP	WEATHER INSTRUMENT	
ANCHOR WASH DOWN	DC MAIN	EXTERIOR LIGHTS	HELM GAUGES	NAV STATION GAUGES	SONAR	WINCHES	
BAIT PUMP	DC OUTLETS	FAN 2	HELM INSTRUMENTS	NAV STATION INSTRUMENTS	SPEED/LOG	WIND INSTRUMENTS	
BILGE ALARM	DC REFRIGERATOR	FIRE ALARM	HIGH WATER ALARM	NAV STATION LIGHTS	SSB	WINDEX LIGHT	
BILGE PUMP 2	DC SUB PANEL	FISHING LIGHT	HOLDING TANK	NAVIGATION ELECTRONICS	SUB PANEL	WIPER PORT	
BRIDGE INSTRUMENTS	DECK LIGHTS	FLOOD LIGHTS	HOLDING TANK ALARM	NAVIGATION INSTRUMENTS	SUMP PUMP	WIPER STBD	
CABIN 2 LIGHTS	DECK LIGHTS AFT	FLYBRIDGE ELECTRONICS	HOLDING TANK PUMP	NAVIGATION LIGHTS	TELEPHONE SYSTEM	WIPERS	
CABIN 3 LIGHTS	DECK LIGHTS FWD	FLYBRIDGE LIGHTS	INSTRUMENT LIGHTS	RACK LIGHTS	TRACK LIGHTS		
CABIN 4 LIGHTS	DEPTH RECORDER	FRESH WATER PUMP	INSTRUMENTS	RADIO	TRANSFER PUMP		
CABIN FANS	DEPTH/SPEED	FRESH WATER WASH DOWN	INTERCOM	SALOON	TRIM TABS		
CABIN LIGHTS	DESALINATOR	GALLEY LIGHTS	INTERIOR LIGHTS	SALOON LIGHTS	TV		
CB RADIO	DIMMER	GPS/PLOTTER	LIGHTS 2	SAT/COM	TV/VCR		
CELLULAR PHONE	DINING AREA LIGHTS	HAILER	LIVEWELL	SAT/NAV	UTILITY		

AC Panel Extended Label Sets (4208 and 8067)							
(BLANK)	BRIDGE LIGHTS	COMPARTMENT LIGHT	FLOOD LIGHTS	HEATER 2	NAV STATION LIGHTS	SHORE POWER	
120 VOLT AC OUTLETS	BRIDGE OUTLETS	COOKTOP	FREEZER	HEATER 3	OUTLETS 2	STEREO	
120 VOLTS AC / 60 Hz	CABIN	DECK LIGHTS	FURNACE	HEATER 4	OUTLETS 3	STOVE/MICROWAVE	
AC COMPRESSOR	CABIN 2	DIMMER	GALLEY APPLIANCES	HOOD FAN	OUTLETS 4	SUB PANEL	
AC FAN	CABIN 2 LIGHTS	DINING AREA LIGHTS	GALLEY LIGHTS	ICEMAKER	OUTLETS DECK	TELEPHONE SYSTEM	
AC MAIN	CABIN 2 OUTLETS	DINING AREA OUTLETS	GARBAGE DISPOSAL	INTERIOR LIGHTS	OUTLETS EXTERIOR	TRACK LIGHTS	
AC PANEL	CABIN 3	DISHWASHER	GENERATOR 1	INVERTER OUTLET	OUTLETS INTERIOR	TRASH COMPACTOR	
AC POWER	CABIN 3 LIGHTS	DISPOSAL	GFI OUTLET	ISOLATION TRANSFORMER	RACK OUTLETS	TV	
AC REFRIGERATOR	CABIN 3 OUTLETS	DRYER	HALLWAY LIGHTS	LAZARETTE LIGHTS	RANGE	UPS SYSTEM	
AC SUB PANEL	CABIN 4	EMERGENCY LIGHTS	HEAD 2 OUTLETS	LECTRASAN	REFRIGERATOR/FREEZER	VACUUM	
AFT CABIN	CABIN 4 LIGHTS	ENGINE ROOM LIGHTS	HEAD 3 OUTLETS	LIGHTS 2	REVERSE POLARITY	VIDEO SYSTEM	
AFT HEAD	CABIN 4 OUTLETS	ENGINE ROOM OUTLETS	HEAD 4 OUTLETS	LIGHTS 3	SALOON	WASHER	
AIR CONDITIONER 3	CABIN HEATER	EXHAUST FAN	HEAD LIGHTS	LIGHTS 4	SALOON HEATER	WATER MAKER	
AIR CONDITIONER 4	CABIN LIGHTS	EXTERIOR LIGHTS	HEAD LIGHTS 2	LIGHTS AFT	SALOON LIGHTS		
ALARM SYSTEM	CCTV	FAN	HEAD LIGHTS 3	LIGHTS FWD	SALOON OUTLETS		
AMPLIFIER	CHARGER/INVERTER	FAN 2	HEAD OUTLETS	MAIN	SATELLITE DISH		
AUDIO/VIDEO SYSTEM	COCKPIT LIGHTS	FAN 3	HEADLIGHTS	MAIN CABIN	SHIP		
BATTERY CHARGER 2	COCKPIT REFRIGERATOR	FAN 4			SHORE		

Labels

Accessories

Individual Square and Large Format Panel Labels

To order individual labels, please indicate the Part No. (6520 or 8063) and the Label No.

		Example: Square Format 6520-0044		BAIT PUMP	Large Format 8063-0356	REFRIGERATOR	
Label No.	Label Text	Label No.	Label Text	Label No.	Label Text	Label No.	Label Text
0001	LABEL #1	0485	BEDROOM SLIDEOUT	0125	DECK LIGHTS AFT	0576	FLOAT SWITCH
0002	LABEL #2	0055	BILGE	0126	DECK LIGHTS FWD	0190	FLOOD LIGHTS
0003	(BLANK)	0056	BILGE ALARM	0127	DECK LIGHTS PORT	0191	FLOSCAN
0005	12 VOLT DC	0057	BILGE ALARM 2	0128	DECK LIGHTS STBD	0192	FLYBRIDGE
0004	12 VOLT DC OUTLETS	0058	BILGE ALARM 3	0129	DEFROSTER	0193	FLYBRIDGE ELECTRONICS
0499	12 VOLT OUTLETS INSIDE	0059	BILGE ALARM 4	0130	DEPTH RECORDER	0194	FLYBRIDGE LIGHTS
0500	12 VOLT OUTLETS OUTSIDE	0060	BILGE LIGHTS	0131	DEPTH SOUNDER	0195	FLYBRIDGE OUTLETS
0502	120 VOLT / 60 HZ SHORE POWER	0061	BILGE PUMP	0132	DEPTH/SPEED	0196	FOG LIGHTS
0007	120 VOLT AC / 60 HZ	0062	BILGE PUMP 2	0133	DESALINATOR	0197	FOREDECK LIGHT
0006	120 VOLT AC OUTLETS	0063	BILGE PUMP 3	0134	DIMMER	0539	FORWARD BILGE
0516	120/240V 60 HZ	0064	BILGE PUMP 4	0135	DINING AREA LIGHTS	0198	FREEZER
0517	120/240V 60 HZ SHORE POWER	0453	BILGE PUMP ON-OFF-AUTO	0136	DINING AREA OUTLETS	0199	FRESH WATER
0526	230 VOLTS AC 50 HZ	0559	BLANK WHITE WRITABLE	0137	DISCHARGE PUMP	0200	FRESH WATER PUMP
0010	24 VOLT DC	0065	BLOWER	0567	DISCHARGE PUMP 2	0201	FRESH WATER PUMP 2
0009	24 VOLT DC OUTLET	0066	BOAT DAVIT	0568	DISCHARGE PUMP 3	0202	FRESH WATER PUMP 3
0008	240 VOLTS AC	0067	BOOM LIGHT	0138	DISHWASHER	0203	FRESH WATER PUMP 4
0460	240 VOLTS AC / 60 HZ	0068	BOW LIGHT	0139	DISPOSAL	0204	FRESH WATER WASH DOWN
0515	250 VOLT 50HZ SHORE POWER	0069	BOW THRUSTER	0140	DIVE COMPRESSOR	0482	FRONT SLIDEOUT
0468	250 VOLTS AC / 50 HZ	0070	BRIDGE	0141	DOCKING LIGHT PORT	0561	FUEL GAUGE
0462	AC BUS 1	0071	BRIDGE INSTRUMENTS	0142	DOCKING LIGHT STBD	0205	FUEL PRIMER PUMP
0011	AC COMPRESSOR	0072	BRIDGE LIGHTS	0143	DOCKING LIGHTS	0206	FUEL PUMP
0012	AC FAN	0073	BRIDGE OUTLETS	0144	DOWN RIGGER	0207	FUEL PUMP 2
0013	AC MAIN	0074	CABIN	0145	DRYER	0208	FUEL PUMP 3
0014	AC PANEL	0075	CABIN 2	0146	DUMP VALVES	0209	FUEL PUMP 4
0015	AC POWER	0501	CABIN 2 FAN	0566	ECU	0210	FUEL TANK HEATER
0016	AC REFRIGERATOR	0076	CABIN 2 LIGHTS	0147	ELECTRIC HATCH	0211	FUEL TRANSFER
0017	AC SUB PANEL	0077	CABIN 2 OUTLETS	0469	ELECTRONIC CONTROL UNIT	0507	FUME DETECTOR
0532	ACCENT LIGHT	0078	CABIN 3	0148	ELECTRONICS	0212	FURLER JIB
0018	ACCESSORY	0079	CABIN 3 LIGHTS	0149	EMERGENCY BACKUP SYS	0213	FURLER MAINSAIL
0019	ADF	0080	CABIN 3 OUTLETS	0150	EMERGENCY LIGHTS	0214	FURLER SPINNAKER
0020	AERATOR	0081	CABIN 4	0151	EMERGENCY PUMPS	0215	FURNACE
0021	AFT CABIN	0082	CABIN 4 LIGHTS	0547	ENG 1/ENG 2	0216	FWD CABIN
0022	AFT CABIN LIGHTS	0083	CABIN 4 OUTLETS	0545	ENGINE	0217	FWD CABIN LIGHTS
0023	AFT CABIN OUTLETS	0084	CABIN FAN	0158	ENGINE ALARM	0218	FWD CABIN OUTLETS
0536	AFT CABIN SUMP	0085	CABIN HEATER	0159	ENGINE BLOCK HEATER	0529	FWD DISCHARGE PUMP
0530	AFT DISCHARGE PUMP	0086	CABIN LIGHTS	0160	ENGINE CONTROL PORT	0528	FWD HEAD
0024	AFT HEAD	0087	CABIN OUTLETS	0161	ENGINE CONTROL STBD	0219	GALLEY
0025	AIR COMPRESSOR	0088	CABLEMASTER	0162	ENGINE CONTROLS	0220	GALLEY APPLIANCES
0026	AIR CONDITIONER	0089	CASSETTE PLAYER	0163	ENGINE DRIVEN REFRIG	0221	GALLEY DRAIN
0027	AIR CONDITIONER 2	0090	CB RADIO	0164	ENGINE EXHAUST FAN	0222	GALLEY FAN
0028	AIR CONDITIONER 3	0091	CCTV	0165	ENGINE HATCH	0223	GALLEY LIGHTS
0029	AIR CONDITIONER 4	0092	CD PLAYER	0166	ENGINE HEATER PORT	0224	GALLEY OUTLETS
0030	AIR CONDITIONER PUMP	0093	CELLULAR PHONE	0167	ENGINE HEATER STBD	0490	GALVANIC ISOLATOR
0031	AIR HORN	0537	CENTER LIVELWELL	0168	ENGINE INSTRUMENTS	0225	GARBAGE DISPOSAL
0573	AIS	0094	CHARGER/INVERTER	0169	ENGINE OIL PAN PUMP	0226	GAS ALARM
0544	ALARM	0095	CHART LIGHT	0152	ENGINE ROOM BILGE ALARM	0227	GENERAL PURPOSE
0032	ALARM SYSTEM	0096	CHART PLOTTER	0153	ENGINE ROOM BLOWER	0523	GENERATOR
0461	ALTERNATOR	0097	CHOKE	0154	ENGINE ROOM HEATER	0228	GENERATOR 1
0033	ALTERNATOR DISCONNECT	0098	CIRCULATOR PUMP	0155	ENGINE ROOM LIGHTS	0229	GENERATOR 2
0034	AMPLIFIER	0508	CLOCK	0156	ENGINE ROOM OUTLETS	0454	GENERATOR OFF ON START
0035	ANCHOR LIGHT	0099	CLOSET LIGHT	0157	ENGINE ROOM PANEL MAIN	0230	GENERATOR ROOM BLOWER
0036	ANCHOR LIGHT MAIN	0575	CO DETECTOR	0170	ENGINE SHUTDOWN	0466	GENERATOR RUNNING
0037	ANCHOR LIGHT MIZZEN	0100	COCKPIT LIGHTS	0171	ENGINE TEMP	0455	GENERATOR STOP
0038	ANCHOR WASH DOWN	0101	COCKPIT REFRIG	0546	ENGINES	0578	GFCI
0039	APPLIANCES	0102	COLOR SOUNDER	0172	ENTERTAINMENT CENTER	0231	GFI OUTLET
0040	ARCH LIGHTS	0103	COMM ELECTRONICS	0173	ENTRANCE DOOR	0232	GPS
0041	AUDIO/VIDEO SYSTEM	0104	COMPARTMENT HEATER	0174	ENTRY STEP	0233	GPS/LORAN
0525	AUTO FILL	0105	COMPARTMENT LIGHT	0175	EXHAUST FAN	0234	GPS/PLOTTER
0042	AUTO/MAN	0106	COMPASS LIGHT	0176	EXHAUST TEMP	0510	GUN LOCKS
0555	AUTO/MAN	0107	COMPUTER	0177	EXTERIOR	0235	GYRO COMPASS
0524	AUTOMATIC CHARGING RELAY	0514	COMPUTER DISPLAY	0178	EXTERIOR LIGHTS	0236	HAILER
0043	AUTOPilot	0108	CONDENSER PUMP	0179	FAN	0237	HALLWAY LIGHTS
0044	BAIT PUMP	0109	CONSOLE LIGHT	0180	FAN 2	0238	HALON FIRE SYSTEM
0045	BAITWELL	0110	CONVERTER	0181	FAN 3	0239	HAM RADIO
0046	BALLAST CONTROLS	0111	COOKING GRILL	0182	FAN 4	0240	HEAD
0047	BALLAST PUMP	0112	COOKTOP	0183	FAX	0241	HEAD 2
0048	BAR	0113	COOLING PUMP	0184	FILLING PUMP	0242	HEAD 2 FAN
0481	BATHROOM	0114	COURTESY LIGHTS	0185	FIRE ALARM	0243	HEAD 2 OUTLETS
0049	BATTERY	0115	CREW LIGHTS	0186	FIRE EXT	0244	HEAD 3
0473	BATTERY 1	0116	CREW QUARTERS	0187	FIRE HORN	0245	HEAD 3 FAN
0474	BATTERY 2	0117	DAVIT	0459	FISH FINDER	0246	HEAD 3 OUTLETS
0050	BATTERY CHARGER	0118	DC LIGHTS	0538	FISHBOX DRAIN	0247	HEAD 4
0051	BATTERY CHARGER 2	0119	DC MAIN	0188	FISHBOX ICEMAKER	0248	HEAD 4 FAN
0052	BATTERY COMPARTMENT	0120	DC OUTLETS	0520	FISHBOX PUMP	0249	HEAD 4 OUTLETS
0053	BATTERY PARALLEL	0121	DC REFRIGERATOR	0521	FISHBOX REFRIGERATOR	0250	HEAD FAN
0560	BATTERY SWITCH	0122	DC SUB PANEL	0189	FISHING LIGHT	0251	HEAD LIGHTS
0054	BEACON	0123	DECK	0487	FISHWELL PUMP	0252	HEAD LIGHTS 2
0480	BEDROOM	0124	DECK LIGHTS	0488	FISHWELL PUMP 2	0253	HEAD LIGHTS 3

Labels

Individual Square and Large Format Panel Labels, Continued

Label No.	Label Text	Label No.	Label Text	Label No.	Label Text	Label No.	Label Text
0254	HEAD LIGHTS 4	0314	MAIN SAIL FURLING	0370	SAT/COM	0432	VHF
0255	HEAD OUTLETS	0315	MAP LIGHT	0371	SAT/NAV	0511	VHF 1
0256	HEADLIGHTS	0572	MARINE SANITATION DEVICE	0372	SATELLITE DISH	0512	VHF 2
0257	HEATER	0316	MAST LIGHTS	0373	SCRUBBER	0433	VIDEO PLOTTER
0519	HEATER & AIR CONDITIONER	0317	MASTHEAD LIGHT	0374	SEARCHLIGHT	0434	VIDEO SYSTEM
0258	HEATER 2	0551	MEMORY	0375	SEARCHLIGHT HAND HELD	0543	WASHDOWN
0259	HEATER 3	0574	MERCATHODE	0376	SEARCHLIGHT REMOTE	0513	WASHDOWN PUMP
0260	HEATER 4	0318	MICROWAVE	0377	SEAWATER TEMP	0435	WASHER
0261	HELM ELECTRONICS	0319	MINI DISC PLAYER	0378	SEAWATER WASH DOWN	0436	WASHER/DRYER
0262	HELM GAUGES	0320	MIZZEN FLOOD	0379	SECURITY SYSTEM	0437	WATER ALARM
0263	HELM INSTRUMENTS	0456	NAV LIGHT ANCHOR OFF NAV	0380	SHIP	0562	WATER GAUGE
0264	HIGH WATER ALARM	0321	NAV STATION ELECTRONICS	0381	SHORE	0438	WATER HEATER
0265	HOLDING TANK	0322	NAV STATION GAUGES	0463	SHORE 1	0439	WATER LEVEL
0266	HOLDING TANK ALARM	0323	NAV STATION INSTRUMENTS	0464	SHORE 2	0440	WATER MAKER
0267	HOLDING TANK PUMP	0324	NAV STATION LIGHTS	0382	SHORE CORD REEL	0441	WATER PRESSURE
0268	HOOD FAN	0325	NAVIGATION ELECTRONICS	0383	SHORE POWER	0442	WATER PUMP
0269	HOOD LIGHT	0326	NAVIGATION INSTRUMENTS	0384	SHORE POWER CORD	0443	WEATHER FAX
0270	HORN	0327	NAVIGATION LIGHTS	0385	SHOWER SUMP PUMP	0444	WEATHER INSTRUMENT
0475	HOT TUB	0565	NETWORK	0386	SINK DRAIN	0571	WIFI
0271	HOT WATER PUMP	0328	NIGHT LIGHTS	0486	SLIDEOUT	0553	WINCH
0548	HOUSE	0329	OFF	0387	SOLAR PANEL	0445	WINCHES
0549	HOUSE/ENG	0331	OIL CHANGE PUMP	0388	SONAR	0477	WIND GENERATOR
0550	HOUSE/GEN	0563	OIL GAUGE	0542	SONAR/ACC	0446	WIND INSTRUMENTS
0272	HYDRAULIC ALARM	0332	ON	0389	SPARE	0522	WIND SHIELD VENT
0273	HYDRAULIC SYSTEM	0330	ON-OFF	0390	SPEED/LOG	0447	WINDEX LIGHT
0274	HYDRAULIC TANK ALARM	0333	OUTLETS	0391	SPREADER LIGHTS	0448	WINDLASS
0570	HYDRAULIC VALVE	0334	OUTLETS 2	0392	SPREADER LT MIZZEN	0449	WINDSHIELD WASHER
0275	ICE MAKER	0335	OUTLETS 3	0393	SSB	0472	WIPER CENTER
0276	IGNITION	0336	OUTLETS 4	0394	STABILIZER	0450	WIPER PORT
0277	IGNITION PORT	0505	OUTLETS AFT	0558	STAIR LIGHT	0451	WIPER STBD
0278	IGNITION STBD	0337	OUTLETS DECK	0395	STARBOARD	0452	WIPERS
0279	INSTRUMENT LIGHTS	0506	OUTLETS ENGINE ROOM	0396	START	0557	WIRELESS
0280	INSTRUMENTS	0338	OUTLETS EXTERIOR	0398	START PORT		
0281	INTERCOM	0503	OUTLETS FORWARD	0399	START STBD		
0282	INTERCOM HAILER	0339	OUTLETS INTERIOR	0397	START-STOP		
0283	INTERCOM/TELEPHONE	0504	OUTLETS PILOT HOUSE	0541	STBD FISHBOX		
0284	INTERIOR LIGHTS	0458	PANEL LIGHTS	0533	STBD LIVEWELL		
0556	INTERNET	0496	PILOT HOUSE FAN	0400	STBD THRUSTER		
0285	INVERTER	0340	PORT	0401	STEAMING LIGHT		
0467	INVERTER 2	0540	PORT FISHBOX	0569	STEERING VALVE		
0476	INVERTER AC BUS	0534	PORT LIVEWELL	0402	STEP LIGHT		
0471	INVERTER AC SUPPLY	0341	PORT THRUSTER	0403	STEREO		
0470	INVERTER DC SUPPLY	0552	PORT/STBD ENG	0577	STEREO MEMORY		
0286	INVERTER OUTLET	0342	POWER	0404	STERN LIGHT		
0287	ISOLATION TRANSFORMER	0343	POWER WASHER	0509	STERN THRUSTER		
0479	KITCHEN	0457	PRE-HEAT	0405	STOP		
0484	KITCHEN SLIDEOUT	0344	PRIMARY WINCHES	0406	STOVE		
0288	KNOTMETER	0345	PRINTER	0407	STOVE/MICROWAVE		
0289	LAZARETTE LIGHTS	0346	PUMP	0408	STROBE LIGHT		
0290	LECTRASAN	0497	PUMP BLACK WATER	0409	SUB PANEL		
0291	LIGHTER	0498	PUMP GRAY WATER	0410	SUMP PUMP		
0292	LIGHTS	0554	PUMPOUT	0411	SUMP PUMP 2		
0293	LIGHTS 2	0347	RACK LIGHTS	0412	SYNCHRO		
0294	LIGHTS 3	0348	RACK OUTLETS	0564	TANK GAUGE		
0295	LIGHTS 4	0349	RADAR	0413	TAPE DECK		
0296	LIGHTS AFT	0350	RADAR ARCH LIGHTS	0414	TELEPHONE SYSTEM		
0494	LIGHTS AFT CABIN	0351	RADIO	0415	TEST		
0297	LIGHTS FWD	0352	RANGE	0416	TOWING LIGHTS		
0493	LIGHTS MASTER CABIN	0579	RCBO	0417	TRACK LIGHTS		
0495	LIGHTS PANTRY	0353	RDF	0465	TRANSFER		
0492	LIGHTS PILOTHOUSE	0483	REAR SLIDEOUT	0418	TRANSFER PUMP		
0298	LIGHTS PORT	0354	RECEIVER	0419	TRANSFORMER		
0491	LIGHTS SETTEE	0355	RECEPTACLE	0518	TRANSFORMER SECONDARY		
0299	LIGHTS STBD	0356	REFRIGERATOR	0420	TRASH COMPACTOR		
0300	LIVEWELL	0357	REFRIGERATOR PUMP	0478	TRAVEL LOCKS		
0301	LIVEWELL INPUT	0358	REFRIGERATOR/FREEZER	0421	TRICOLOR LIGHT		
0302	LIVEWELL OUTPUT	0359	REGULATOR	0422	TRIM TABS		
0303	LOCKER LIGHTS	0360	REVERSE POLARITY	0527	TROLLING MOTOR		
0304	LOG	0361	ROD LOCKER	0423	TV		
0305	LORAN	0489	RUDDER ANGLE INDICATOR	0424	TV ANTENNA		
0306	LPG CONTROL	0362	RUNNING LIGHTS	0425	TV/STEREO		
0307	LUBE OIL PUMP	0363	SAILING CONTROLS	0426	TV/VCR		
0308	MACERATOR PUMP	0364	SAILING INSTRUMENTS	0535	UNDERWATER LIGHT		
0309	MAIN	0365	SALOON	0427	UPS SYSTEM		
0310	MAIN BREAKER	0366	SALOON HEATER	0428	UTILITY		
0311	MAIN CABIN	0367	SALOON LIGHTS	0429	VACUUM		
0312	MAIN CABIN LIGHTS	0368	SALOON OUTLETS	0430	VACUUM PUMP		
0313	MAIN CABIN OUTLETS	0369	SALT WATER PUMP	0431	VCR		

Metering and Accessories

Meters are used to monitor a boat's DC and AC electrical systems. Meters help the boater avoid overloads of shore cords, determine the proper time to charge battery banks, and know when alternators and chargers are not functioning properly. Analog meters are highly readable, DIN meters follow European style, and Blue Sea Systems digital multimeters combine various meter functions into one convenient and splash-proof package.



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SHUNTS AND TRANSFORMERS
page 95

Analog DIN Meters

DC DIN Meters

Easy to read European style analog DC meters

Common Features

- Standard European 72mm design
- White matte dial with black printed scale and knife-edge pointer
- Back-lit meter face (separate 12 or 24V DC backlight connections)
- Terminal cover included to prevent accidental short circuit
- Includes appropriate external DC shunt (page 95), when required

Specifications

I_{oc} (Meter)	Amperage Operating Current	1 mA at full scale
I_{oc} (Backlight)	Amperage Operating Current	16 mA@12V DC 20 mA@24V DC



1050



1051



1052

PN	Function	Shunt Type	Connection	Weight lb (kg)
1050	Voltmeter 8–16V	-	2 wire to DC positive (+) and negative (-)	0.33 (0.15)
1051	Voltmeter 18–32V	-	2 wire to DC positive (+) and negative (-)	0.33 (0.15)
1052	Ammeter 0–25A	Internal	2 wire - no other power required	0.33 (0.15)
1053	Ammeter 0–50A	External—50 mV at full scale	2 wire from shunt - no other power required	0.53 (0.24)
1054	Ammeter 0–100A	External—50 mV at full scale	2 wire from shunt - no other power required	0.53 (0.24)
1055	Ammeter 0–150A	External—50 mV at full scale	2 wire from shunt - no other power required	0.53 (0.24)



1053



1054



1055

AC DIN Meters

Easy to read European style analog AC meters

Common Features

- Standard European 72mm design
- White matte dial with black printed scale and knife-edge pointer
- Back-lit meter face (separate 12 or 24V DC backlight connections)
- Terminal cover included to prevent accidental short circuit
- Includes appropriate external AC Current Transformer (page 95), when required

Specifications

I_{oc} (Meter)	Amperage Operating Current	50 mA AC at full scale (Ammeter only)
I_{oc} (Backlight)	Amperage Operating Current	16 mA@12V DC 20 mA@24V DC

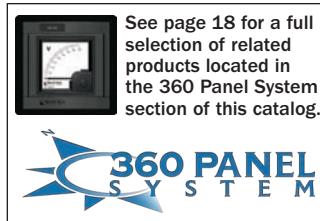
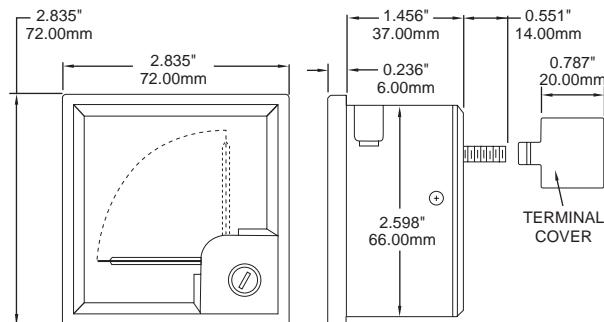


1056



1057

PN	Function	Connection	Weight lb (kg)
1056	Voltmeter 0–150V	2 wire to AC hot and neutral	0.33 (0.15)
1057	Voltmeter 0–250V	2 wire to AC hot and neutral	0.33 (0.15)
1058	Ammeter 0–50A	2 wire from coil slipped over wire to be measured	0.43 (0.19)



See page 18 for a full selection of related products located in the 360 Panel System section of this catalog.



1058

Analog Meters

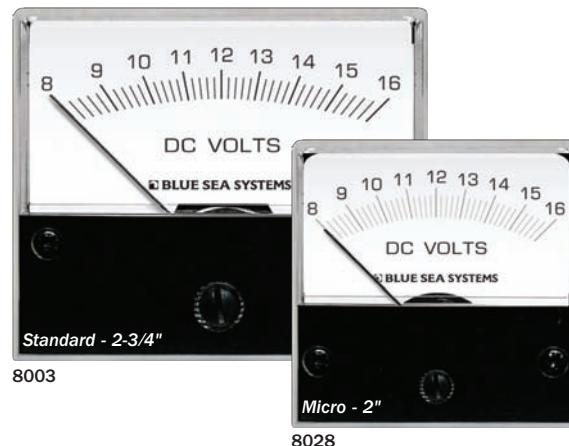
DC Analog Meters

Standard and Micro size meters with backlighting for low light conditions

- Includes appropriate external DC shunt (page 95), when required
- Back-lit meter face (separate 12 or 24V DC backlight connections)

Specifications

I_{oc} (Meter)	Amperage Operating Current	1 mA at full scale
I_{oc} (Backlight)	Amperage Operating Current	16 mA@12V DC 20 mA@24V DC



8003

8028

PN	Function	Shunt Type	Connection	Meter Face Size	Weight lb (kg)
8003	Voltmeter 8–16V DC	-	2 wire to DC positive (+) and negative (-)	2-3/4"	0.25 (0.11)
8240	Voltmeter 18–32V DC	-	2 wire to DC positive (+) and negative (-)	2-3/4"	0.25 (0.11)
8028	Micro Voltmeter 8–16V DC	-	2 wire to DC positive (+) and negative (-)	2"	0.19 (0.09)
8243	Micro Voltmeter 18–32V DC	-	2 wire to DC positive (+) and negative (-)	2"	0.19 (0.09)
8005	Ammeter 0–25A DC	Internal	2 wire - no other power required	2-3/4"	0.25 (0.11)
8022	Ammeter 0–50A DC	External—50 mV at meter full scale	2 wire from shunt - no other power required	2-3/4"	0.60 (0.27)
8016	Ammeter 0–75A DC	External—50 mV at meter full scale	2 wire from shunt - no other power required	2-3/4"	0.60 (0.27)
8017	Ammeter 0–100A DC	External—50 mV at meter full scale	2 wire from shunt - no other power required	2-3/4"	0.60 (0.27)
8018	Ammeter 0–150A DC	External—50 mV at meter full scale	2 wire from shunt - no other power required	2-3/4"	0.60 (0.27)
8019	Ammeter 0–200A DC	External—50 mV at meter full scale	2 wire from shunt - no other power required	2-3/4"	0.60 (0.27)
8038	Micro Ammeter 0–15A DC	Internal	2 wire - no other power required	2"	0.20 (0.09)
8041	Micro Ammeter 0–50A DC	External—50 mV at meter full scale	2 wire from shunt - no other power required	2"	0.40 (0.18)
8250	Micro Ammeter 0–100A DC	External—50 mV at meter full scale	2 wire from shunt - no other power required	2"	0.40 (0.18)
8252*	Zero Center Ammeter 50–0–50A DC	External—50 mV at meter full scale	2 wire from shunt - no other power required	2-3/4"	0.58 (0.26)
8253*	Zero Center Ammeter 100–0–100A DC	External—50 mV at meter full scale	2 wire from shunt - no other power required	2-3/4"	0.58 (0.26)
8254*	Zero Center Micro Ammeter 50–0–50A DC	External—50 mV at meter full scale	2 wire from shunt - no other power required	2"	0.40 (0.18)



8240



8243



8253



8254



8005



8038



8022



8041

* Meters read both discharge and charge current

Analog Meters

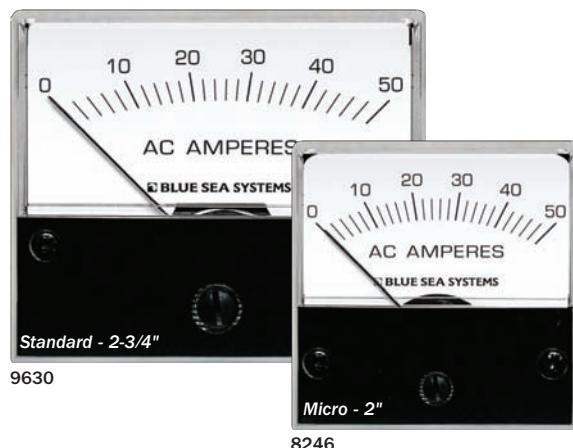
AC Analog Meters

Standard and Micro size meters with backlighting for low light conditions

- Includes appropriate external AC Current Transformer (page 95), when required
- Back-lit meter face (separate 12 or 24V DC backlight connections)

Specifications

I_{oc} (Meter)	Amperage Operating Current	50 mA AC at full scale (Ammeter only)
I_{oc} (Backlight)	Amperage Operating Current	16 mA@12V DC 20 mA@24V DC



PN	Function	Connection	Meter Face Size	Weight lb (kg)
9353	Voltmeter 0-150V AC	2 wire to AC hot and neutral	2-3/4"	0.25 (0.11)
9354	Voltmeter 0-250V AC	2 wire to AC hot and neutral	2-3/4"	0.26 (0.12)
8244	Micro Voltmeter 0-150V AC	2 wire to AC hot and neutral	2"	0.19 (0.09)
8245	Micro Voltmeter 0-250V AC	2 wire to AC hot and neutral	2"	0.19 (0.09)
9630	Ammeter 0-50A AC	2 wire from coil slipped over wire to be measured	2-3/4"	0.30 (0.14)
8258	Ammeter 0-100A AC	2 wire from coil slipped over wire to be measured	2-3/4"	0.32 (0.15)
8246	Micro Ammeter 0-50A AC	2 wire from coil slipped over wire to be measured	2"	0.26 (0.12)



9353



8244



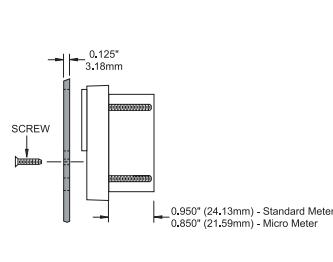
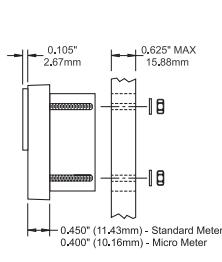
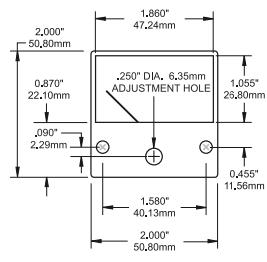
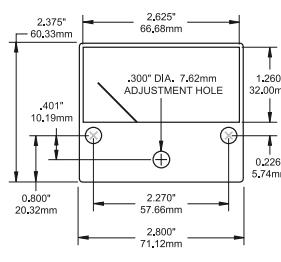
9354



8245



8258



Digital Meters

DC Digital Meters

Allows easy monitoring of key DC functions

- Large, bright LED characters
- Three levels of brightness
- Splash-proof case
- Easy to surface mount in a 2" round hole

Specifications

Input Voltage Supply	8-32V DC
Input Voltage Measurement	0-60V DC*
Minimum Power Consumption	0.010 Watt†
Maximum Power Consumption	0.027 Watt†
Display Character Size	9/16" (14.29mm)
Dimensions	Width 2.90" (73.66mm) Height 2.43" (61.72mm) Depth 3.40" (86.36mm)



8248



8251



8235



8236

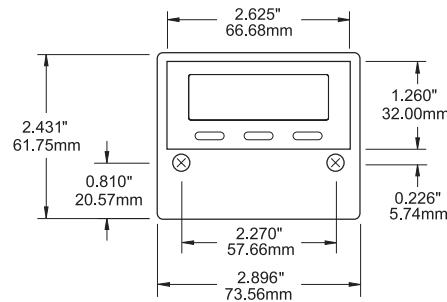
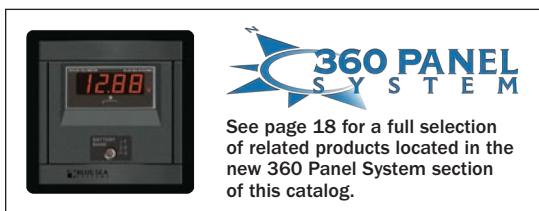
PN	Description	Amperage Display	Voltage Display	Sleep Mode	Audio/Visual Alarms	Included Shunt	Weight lb (kg)
8248	DC Multimeter with Alarm	-500 to +500	0-60	Programmable	High and low voltage High and low voltage	500A Shunt 8255 (page 95)	1.12 (0.51)
8251	DC Voltmeter with Alarm	-	0-60	Programmable	High and low voltage	-	0.45 (0.20)
8235	DC Voltmeter	-	0-60	Manual	-	-	0.45 (0.20)
8236	DC Ammeter	-500 to +500	-	Manual	-	500A Shunt 8255 (page 95)	1.11 (0.50)

Current Measurement

Shunt: 500A/50mV
Range: ±500A DC
Resolution (0.0-99.9): 0.1A DC
Resolution (100-500): 1.0A DC
Accuracy (% of Reading): ±0.5%†

Voltage Measurement

Range: 0-60V DC
Resolution: 0.01V DC
Accuracy (% of Reading) ±0.5%†



* Applicable for 12, 24, 32, 36, and 42 Volt DC systems | † Variable with voltage, display intensity, segments illuminated and sleep mode | ‡ ±1 least digit of resolution

Digital Meters

AC Digital Meters

Allows easy monitoring of key AC functions

- Large, bright LED characters
- Three levels of brightness
- Splash-proof case
- Easy to surface mount in a 2" round hole

Specifications

Input Voltage	80–249V AC*
Minimum Power Consumption	0.010 Watt†
Maximum Power Consumption	0.027 Watt†
Display Character Size	9/16" (14.29mm)
Dimensions	Width 2.90" (73.66mm) Height 2.43" (61.72mm) Depth 3.40" (86.36mm)



8239



8238



8237

PN	Description	Amperage Display	Voltage Display	Power Display	Frequency Display	Sleep Mode	Audio/Visual Alarms	Included Current Transformer	Weight lb (kg)
8247	AC Multimeter with Alarm	0–150	80–249	0–35 kW	40–90 Hz	Programmable	High and low voltage, high current	8256 (page 95)	0.78 (0.35)
8239	AC Frequency Meter	-	-	-	40–90 Hz	Manual	-	-	0.72 (0.35)
8237	AC Voltmeter	-	80–249	-	-	Manual	-	-	0.72 (0.35)
8238	AC Ammeter	0–150	-	-	-	Manual	-	-	0.78 (0.35)

Current Measurement

Current Transformer: 150A/50mA
Range 1 (Resolution 0.01A): 0.00–9.99A AC (RMS)
Range 2 (Resolution 0.10A): 10–150A AC (RMS)
Accuracy (% of Reading): $\pm 1.0\%^*$

Frequency Measurement

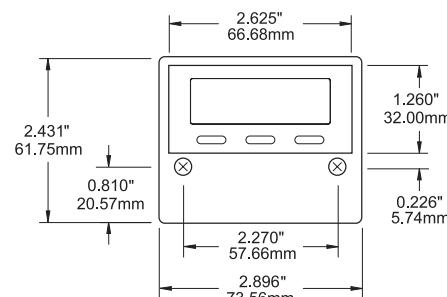
Range: 40–90Hz
Resolution: 0.1Hz
Accuracy (% of Reading): $\pm 1.0\%^*$
(Calibrated with sine wave input)

Voltage Measurement

Range: 80–249V AC
Resolution: 0.1V AC
Accuracy (% of Reading)
90–249V AC (RMS): $\pm 1.0\%^*$
80–90V AC (RMS): $\pm 5.0\%^*$

Power Measurement

Range 1 (Resolution 10W): 0.00–9990W
Range 2 (Resolution 0.01kW): 10–35kW
Accuracy (% of Reading): $\pm 5.0\%^*$



* Applicable for 120–240 Volt AC single phase systems | † Variable with voltage, display intensity, segments illuminated and sleep mode | ± 1 least digit of resolution

Metering

120/240V AC Digital Meter Panel

Intended for use with AC Digital Multimeter PN 8247 (page 93) for monitoring 120/240V AC Systems

- Monitor Line 1 or Line 2 to Neutral and Line 1 to Line 2 voltages
- Includes two additional Current Transformers 8256 (page 95) and mounting screws

PN	Description	Width in (mm)	Height in (mm)	Weight lb (kg)
8410	120/240V AC Digital Meter Panel	5.25 (133.35)	3.75 (95.25)	0.85 (0.39)



8410

DC Analog Voltmeter Panel

Enables voltage monitoring on up to 3 battery banks with one analog meter

- Includes standard 2-3/4" 8003 DC Analog Voltmeter (page 90)
- Displays voltage from 8–16 Volts DC
- 3 position switch for multiple battery banks

Specifications

V_{mox} Voltage Maximum Operating 16 Volts DC Maximum

PN	Description	Width in (mm)	Height in (mm)	Weight lb (kg)
8015	DC Analog Voltmeter Panel	5.25 (133.35)	3.75 (95.25)	0.49 (0.22)



8015

DC Digital Voltmeter Panel

Enables voltage monitoring on up to 3 battery banks with one digital meter

- Includes 8235 DC Digital Voltmeter (page 92)
- 4 digit LED display—Displays voltage from 0–60 Volts DC
- 3 position switch for multiple battery banks

Specifications

V_{mox} Voltage Maximum Operating 60 Volts DC Maximum

PN	Description	Width in (mm)	Height in (mm)	Weight lb (kg)
8051	DC Digital Voltmeter Panel	5.25 (133.35)	3.75 (95.25)	0.64 (0.29)



8051

Meter Mounting Panels

Provides easy mounting of standard analog and digital meters

- Panel mounts standard 2-3/4" Analog or Digital Meters (pages 90–93)
- Includes mounting screws and center adjustment hole plug

PN	Description	Width in (mm)	Height in (mm)	Weight lb (kg)
8013	Meter Mounting Panel For (1) 2-3/4"	5.25 (133.35)	3.75 (95.25)	0.25 (0.11)
8014	Meter Mounting Panel For (2) 2-3/4"	5.25 (133.35)	7.50 (190.50)	0.36 (0.16)



8013

Mini Clamp Multimeter

Compact and feature-rich AC/DC Multimeter eases diagnosis of marine electrical problems

- Clamp allows measurement of AC and DC current in wires without disturbing the circuits or contacting live terminals
- Compact size allows comfortable one hand operation, portability, and access to confined areas
- Auto range simplifies operation by automatically selecting the range that best fits the data
- Additional functions include: Data Hold, Overload Display, and Auto Power-Off
- True RMS AC measurement is accurate for normal sine wave and modified sine wave inverter output

Specifications

AC Amperes (Current)	0.01–400 Amps
AC Voltage	0.001–600 Volts
DC Amperes (Current)	0.01–400 Amps
DC Voltage	0.001–600 Volts
Resistance/Continuity Alarm	0.1–40MΩ
Measurement Resolution	4300 counts

Regulatory

- CE Marked
- CAT II, 600 Volts

PN	Description	Weight lb (kg)
8110	Mini Clamp Multimeter	0.47 (0.21)



8110

(Includes test leads and carrying case)

Shunts and Transformers

DC Shunts

For use with DC Ammeters (pages 89, 90, 92)

- For continuous operation, it is recommended that shunts not be run at more than two-thirds (66%) the rated current under normal conditions

Specifications

Shunt Type	Resistive
Full Scale	50 mV
I_{mxo} Amperage Maximum Operating	66% of Rated Current
I_{300} Amperage Intermittent Rating (5 min.)	100%—Full scale rating
I_3 Amperage Intermittent Rating (3 seconds)	300%—Full scale rating

PN	Description	Ratio	Weight lb (kg)
9228	Analog Ammeter Shunt	50A DC/50mV DC	0.20 (0.09)
9229	Analog Ammeter Shunt	75A DC/50mV DC	0.20 (0.09)
9230	Analog Ammeter Shunt	100A DC/50mV DC	0.20 (0.09)
9231	Analog Ammeter Shunt	150A DC/50mV DC	0.20 (0.09)
9233	Analog Ammeter Shunt	200A DC/50mV DC	0.71 (0.32)
8255	Digital Ammeter Shunt	500A DC/50mV DC	0.71 (0.32)



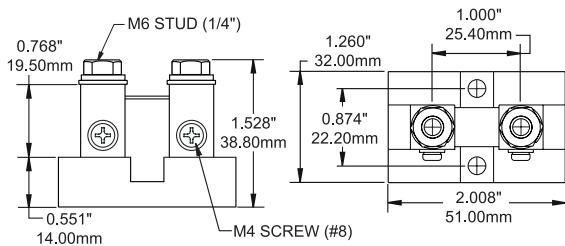
9228



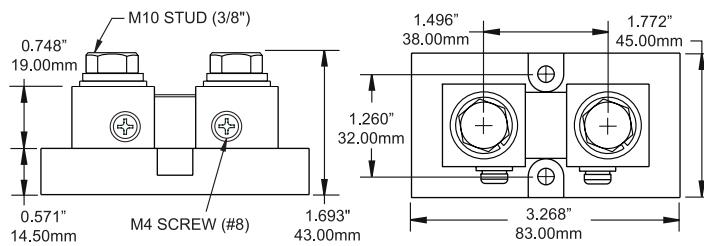
9233



8255



9228 - 9231



9233 and 8255

AC Current Transformers

For use with AC Ammeters (pages 89, 91, 93)

Specifications

Dimensions	0.60" (15.24mm) Inside Diameter 1.38" (35.05mm) Outside Diameter
------------	---------------------------------------------------------------------



8073

PN	Description	Ratio	Weight lb (kg)
8073	Analog Ammeter Transformer	50A AC/50mA AC	0.10 (0.05)
8257	Analog Ammeter Transformer	100A AC/50mA AC	0.20 (0.09)
8256	Digital Ammeter Transformer	150A AC/50mA AC	0.20 (0.09)

BusBars, Connectors, and Insulators

BusBars and PowerPosts provide a safe and convenient way to insulate circuit wires and connect them together. Feed Through Connectors and CableClams enable the boater to safely pass wires through a bulkhead or deck. Insulated continuously-energized non-grounded conductors protect against accidental short circuits and shock hazards.



BusBars, Connectors, and Insulators Table of Contents



BUSBARS
pages 97–100



TERMINAL BLOCKS
page 101



CONNECTORS
page 102–103



POWERPOSTS
page 104



CABLECLAMS
page 105

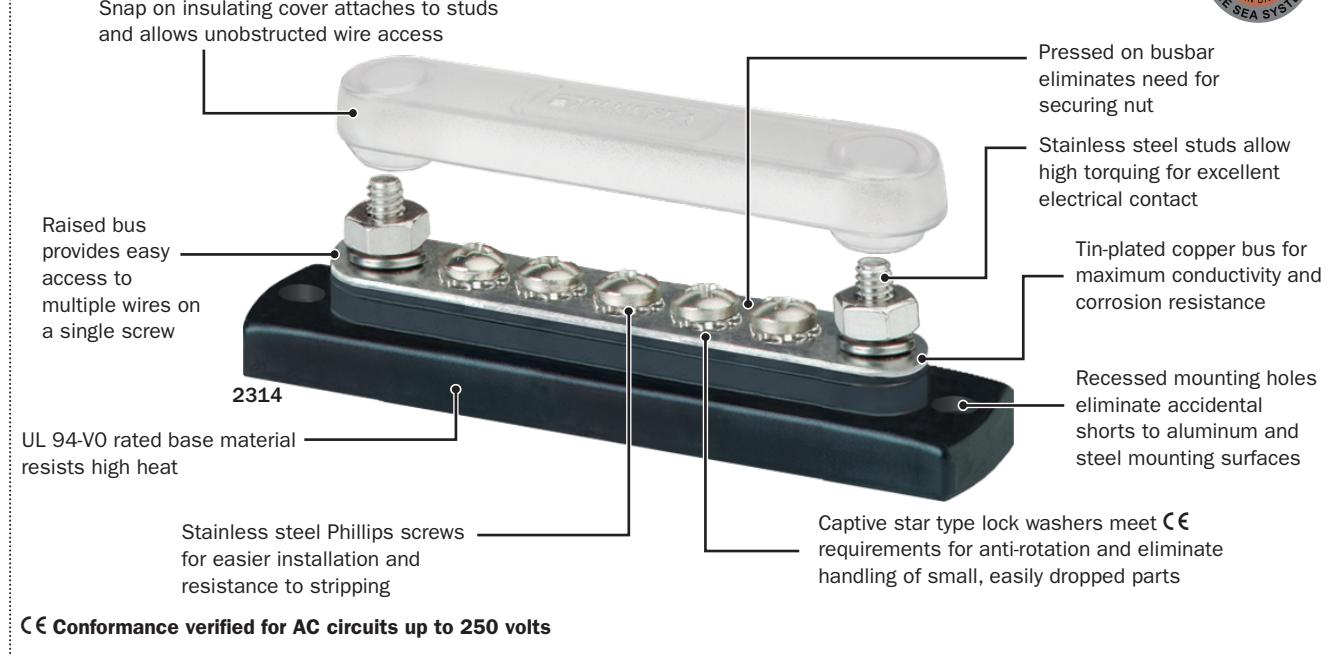


CABLECAPS
page 105

BusBars

Connectors

The Industry Standard for Electrical BusBars



CE Conformance verified for AC circuits up to 250 volts

MiniBus 100 Ampere Common BusBars

Provides convenient busing for limited space applications



Specifications

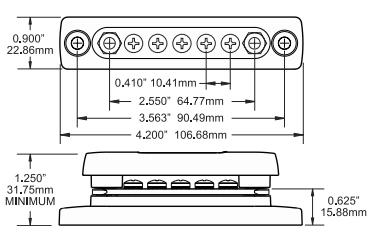
I _c	Continuous Rating	100 Amperes AC/DC
V _{mox}	Voltage Maximum Operating	300 Volts AC/48 Volts DC
Mounting Holes		Accepts #10 (M5) Screws*
Bus Material		Tin-Plated Copper CDA 110/UNS11000

Regulatory

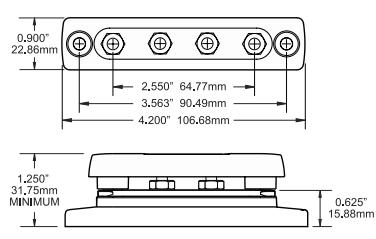
•CE certified (2304 and 2305 Only)



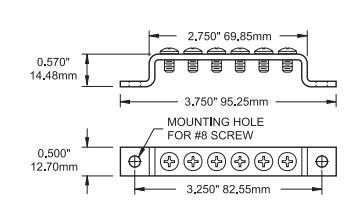
PN	Cover	Terminal Screw	Terminal Stud	Weight lb (kg)
2304	-	5 x #8-32	2 x #10-32	0.15 (0.07)
2314	Yes	5 x #8-32	2 x #10-32	0.17 (0.08)
2305	-	-	4 x #10-32	0.15 (0.07)
2315	Yes	-	4 x #10-32	0.17 (0.08)
2306	-	6 x #8-32	-	0.10 (0.05)
2713	Cover For MiniBus 2304 and 2305			0.05 (0.02)



2304 and 2314



2305 and 2315



2306

* 2306 Mounting Holes Accept #8 Screws

DualBus 100 Ampere Common BusBars

Combines negative and positive buses on one block

Specifications

I_c	Continuous Rating	100 Amperes AC/DC
V_{mvo}	Voltage Maximum Operating	300 Volts AC/48 Volts DC
Mounting Holes		Accept #10 (M5) Screws
Bus Material		Tin-Plated Copper CDA 110/UNS11000



2709



2701



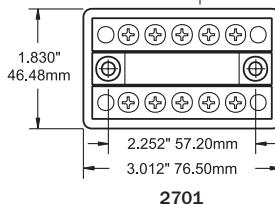
2710



2702

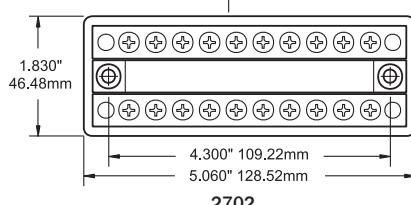
PN	Screw Terminal	Weight lb (kg)
2701	5 x #8-32	0.20 (0.09)
2702	10 x #8-32	0.30 (0.14)
2709	Cover For DualBus 2701	0.05 (0.02)
2710	Cover For DualBus 2702	0.05 (0.02)

OVERALL HEIGHT
APPROX. 0.58" (14.7mm)



2701

OVERALL HEIGHT
APPROX. 0.58" (14.7mm)



2702

DualBus Plus 150 Ampere Common BusBars

Secure, clear polycarbonate cover snaps on easily to meet USCG and ABYC insulation requirements

- Combines negative and positive buses on one block
- Cover release button

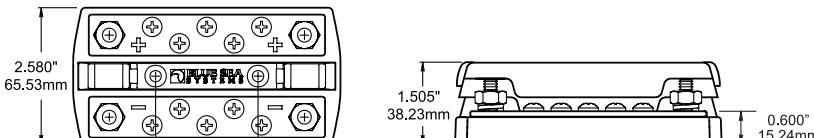
Specifications

I_c	Continuous Rating	130 Amperes AC/150 Amperes DC
V_{mvo}	Voltage Maximum Operating	300 Volts AC/48 Volts DC
Mounting Holes		Accept #10 (M5) Screws
Bus Material		Tin-Plated Copper CDA 110/UNS11000



2722

PN	Terminal Screw	Terminal Stud	Weight lb (kg)
2722	5 x #10-32	1/4"-20 Stud	0.66 (0.30)
2723	5 x #10-32	5/16" Stud	0.61 (0.28)



2722 and 2723

BusBars

150 Ampere Common BusBars

Insert molded stainless steel stud eliminates need for securing nut and allows high torquing for excellent electrical contact



- The industry standard busbar for positive distribution
- The industry standard busbar for the collection of negative or AC ground circuits

Specifications

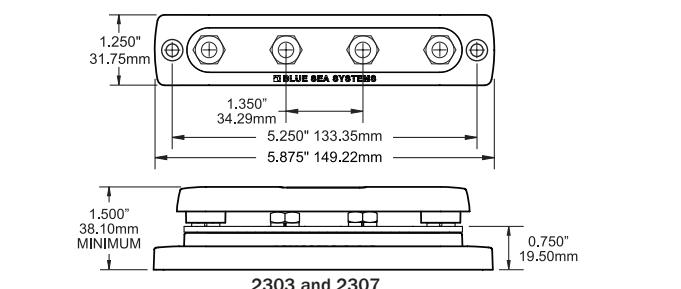
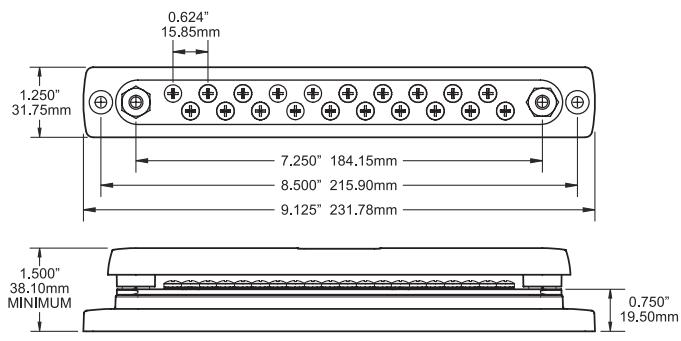
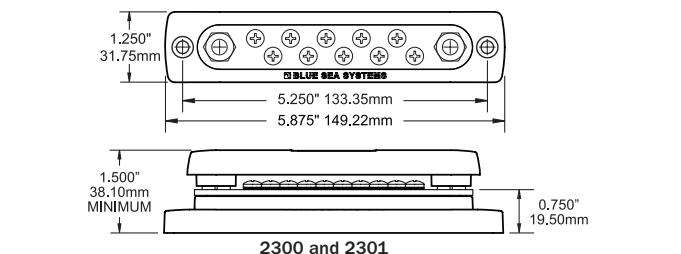
I_c	Continuous Rating	130 Amperes AC/150 Amperes DC
V_{mxo}	Voltage Maximum Operating	300 Volts AC/48 Volts DC
Mounting Holes		Accepts #10 (M5) Screws
Bus Material		Tin-Plated Copper CDA 110/UNS11000

Regulatory

- CE certified

PN	Cover	Terminal Screw	Terminal Stud	Weight lb (kg)
2301	-	10 x #8-32	2 x 1/4"-20	0.34 (0.15)
2300	Yes	10 x #8-32	2 x 1/4"-20	0.37 (0.16)
2302	-	20 x #8-32	2 x 1/4"-20	0.53 (0.24)
2312	Yes	20 x #8-32	2 x 1/4"-20	0.58 (0.26)
2303	-	-	4 x 1/4"-20	0.35 (0.16)
2307	Yes	-	4 x 1/4"-20	0.38 (0.17)
2715	Cover For BusBar 2301 and 2303			0.07 (0.03)
2716	Cover For BusBar 2302			0.13 (0.06)

Note: 2715 replaces 2706 / 2716 replaces 2707



BusBars

Connectors

MaxiBus 250 Ampere Common BusBars

Designed for heavy duty positive or negative busing

Specifications

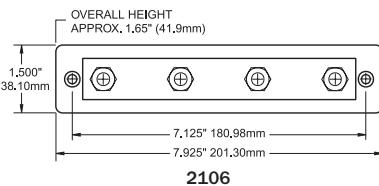
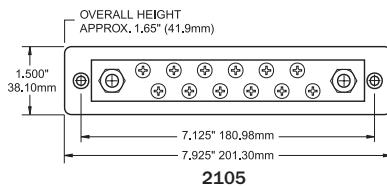
I_c Continuous Rating	250 Amps AC/250 Amps DC
V_{mxo} Voltage Maximum Operating	300 Volts AC/48 Volts DC
Mounting Holes	Accepts #10 (M5) Screws
Bus Material	Tin-Plated Copper CDA 110/UNS11000

Regulatory

- CE certified



PN	Terminal Studs	Terminal Screws	Weight lb (kg)
2105	2 x 5/16"-18	12 x #10-32	0.80 (0.36)
2106	4 x 5/16"-18	-	0.90 (0.41)
2711	Cover For 2105 and 2106		0.06 (0.03)



PowerBar 600 Ampere Common BusBars

Highest ampere rated busbar with 3/8" terminal studs

Specifications

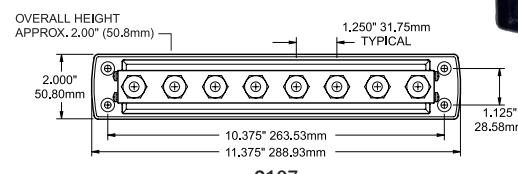
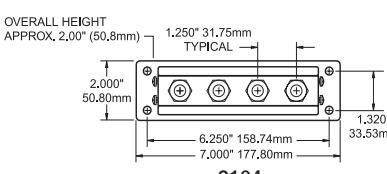
I_c Continuous Rating	545 Amps AC/600 Amps DC
V_{mxo} Voltage Maximum Operating	300 Volts AC/48 Volts DC
Mounting Holes	2104—Accepts 1/4" Screws 2107—Accepts #10 (M5) Screws
Bus Material	Tin-Plated Copper CDA 110/ UNS11000

Regulatory

- CE certified



PN	Terminal Studs	Terminal Screws	Weight lb (kg)
2104	4 x 3/8"-16	4 x #8-32	1.75 (0.79)
2107	8 x 3/8"-16	4 x #8-32	2.75 (1.25)
2708	Cover For 2104		0.25 (0.11)



PowerBar Common BusBar

Provides compact high-ampere busing with 3/8"

terminal studs

Specifications

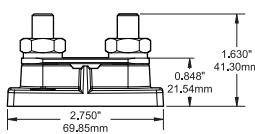
I_c Continuous Rating	Amperage rating is determined by wire amperage capacity connected to the PowerBar up to 600 Amps
V_{mxo} Voltage Maximum Operating	48 Volts DC
Mounting Holes	Accepts #10 (M5) Screws
Bus Material	Tin-Plated Copper CDA 110/UNS11000

Regulatory

- CE certified

PN	Terminal Studs	Weight lb (kg)
2019	2 x 3/8"-16	0.36 (0.16)

NEW

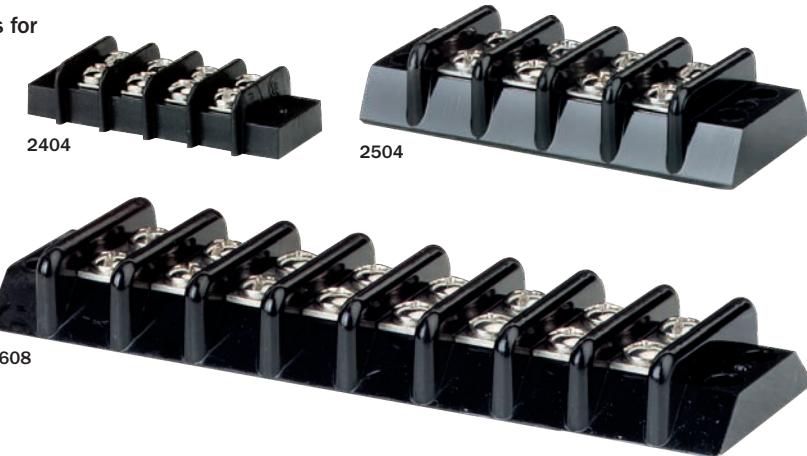


Terminal Blocks

20/30/65 Ampere Terminal Blocks

Employs fully insulated independent terminal blocks for applications where circuits must be isolated

- Closed back design completely insulates power from the mounting surface
- Each screw pair is one isolated circuit
- Jumpers allow creation of common circuits (9216, 9217, and 9218—see below)



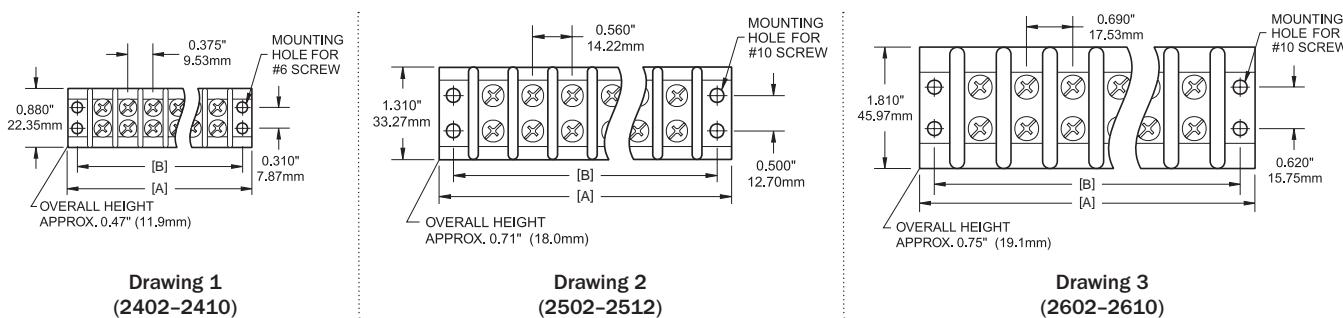
Specifications

I_c Continuous Rating	See table below
V_{mxo} Voltage Maximum Operating	See table below
Bus Material	Nickel-Plated Brass
Mounting Holes	See drawings below

Regulatory

- CE Certified

PN	Circuits	AC/DC I _c	AC/DC V _{mxo}	Terminal Screw	Drawing Number	[A] Length in (mm)	[B] Mounting Centers in (mm)	Weight lb (kg)
2402	2	20	300	#6	1	1.41 (35.81)	1.13 (28.70)	0.05 (0.02)
2404	4	20	300	#6	1	2.16 (54.86)	1.88 (47.75)	0.06 (0.03)
2406	6	20	300	#6	1	2.91 (73.91)	2.63 (66.80)	0.08 (0.04)
2408	8	20	300	#6	1	3.66 (92.96)	3.38 (85.85)	0.10 (0.05)
2410	10	20	300	#6	1	4.41 (112.01)	4.13 (104.90)	0.11 (0.05)
2502	2	30	600	#8	2	2.10 (53.34)	1.69 (42.93)	0.11 (0.05)
2504	4	30	600	#8	2	3.22 (87.79)	2.81 (71.37)	0.15 (0.07)
2506	6	30	600	#8	2	4.34 (110.24)	3.93 (99.82)	0.21 (0.10)
2508	8	30	600	#8	2	5.46 (138.68)	5.05 (128.27)	0.27 (0.12)
2510	10	30	600	#8	2	6.58 (167.13)	6.17 (156.72)	0.33 (0.15)
2512	12	30	600	#8	2	7.70 (195.58)	7.29 (185.17)	0.35 (0.16)
2602	2	65	600	#10	3	2.50 (63.49)	2.06 (52.32)	0.15 (0.07)
2604	4	65	600	#10	3	3.88 (98.55)	3.44 (87.38)	0.25 (0.11)
2606	6	65	600	#10	3	5.26 (133.61)	4.82 (122.43)	0.34 (0.16)
2608	8	65	600	#10	3	6.64 (168.67)	6.20 (157.48)	0.43 (0.20)
2610	10	65	600	#10	3	8.02 (203.73)	7.58 (192.53)	0.52 (0.24)



Terminal Block Jumpers

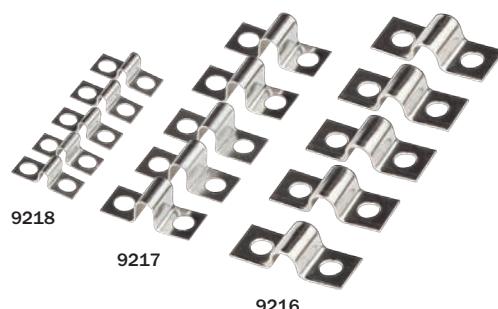
Combines independent circuits on a terminal block

- Jumpers allow creation of common circuits on independent connectors
- 9218—Fits 20 Ampere terminal blocks (2400 Series—see above)
- 9217—Fits 30 Ampere terminal blocks (2500 Series—see above)
- 9216—Fits 65 Ampere terminal blocks (2600 Series—see above)

Specifications

Bus Material	Nickel-Plated Brass
Continuous Amperage	Equivalent to matching block

PN	Description	Weight lb (kg)
9218	Terminal Block Jumpers for 2400 Series	0.03 (0.01)
9217	Terminal Block Jumpers for 2500 Series	0.04 (0.02)
9216	Terminal Block Jumpers for 2600 Series	0.05 (0.03)



Lugs and Splices

Seamless Copper Lugs and Splices

Designed for the demanding environment of the heavy truck, industrial and marine applications. The tin-plated copper lugs and splices are significantly heavier than those currently found in the marine industry. Products are offered in Heavy Duty for small projects and Professional Duty for OEMs, yards, and marine professionals.

Common Features:

- Flared Wire Barrel—for easy cable insertion
- Seamless Pad and Barrel—to provide ultimate performance in strength and conductivity
- Tin Plated Pure Copper—for maximum conductivity and corrosion resistance
- Lugs have closed end—to keep the cable clean, dry, and corrosion free

Regulatory

 UL 486 listed/CSA certified

Lugs

PN Heavy Duty* (2 PK)	PN Heavy Duty* (10 PK)	PN Professional** (10 PK)	Cable Size	Terminal Size
2210	2244	-	8	#10
2211	2245	-	8	1/4
2212	2246	-	8	5/16
2213	2247	-	8	3/8
2214	2248	-	8	1/2
2215	2249	-	6	#10
2216	2250	-	6	1/4
2217	2251	-	6	5/16
2218	2252	-	6	3/8
2219	2253	-	6	1/2
2220	2254	-	4	#10
2221	2255	-	4	1/4
2222	2256	-	4	5/16
2223	2257	-	4	3/8
2224	2258	-	4	1/2
2225	2259	2278	2	1/4
2226	2260	2279	2	5/16
2227	2261	2280	2	3/8
2228	2262	2281	2	1/2
2229	2263	2282	1	1/4
2230	2264	2283	1	5/16
2231	2265	2284	1	3/8
2232	2266	2285	1	1/2
2233	2267	2286	1/0	1/4
2234	2268	2287	1/0	5/16
2235	2269	2288	1/0	3/8
2236	2270	2289	1/0	1/2
2237	2271	2290	2/0	1/4
2238	2272	2291	2/0	5/16
2239	2273	2292	2/0	3/8
2240	2274	2293	2/0	1/2
2241	2275	2294	4/0	5/16
2242	2276	2295	4/0	3/8
2243	2277	2296	4/0	1/2



Heavy Duty Lug
requires a single crimp



Professional Duty Lug
requires a double crimp

Splices

PN Heavy Duty* (2 PK)	PN Heavy Duty* (10 PK)	Cable Size
2320	2330	8
2321	2331	6
2322	2332	4
2323	2333	2
2324	2334	1
2325	2335	1/0
2326	2336	2/0
2327	2337	4/0



Heavy Duty Splice
requires a single crimp

Crimp Tool

PN	Length in (mm)	Weight lb (kg)
2338B	25.00 (635.00)	5.90 (2.68)

NEW



2338B

* Heavy duty lugs and splices require a single crimp | ** Professional duty lugs require a double crimp

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

Terminal Feed Through Connectors

Terminal Feed Through Connectors

Eliminates chafe and provides strain relief when passing high current through hulls, decks and bulkheads

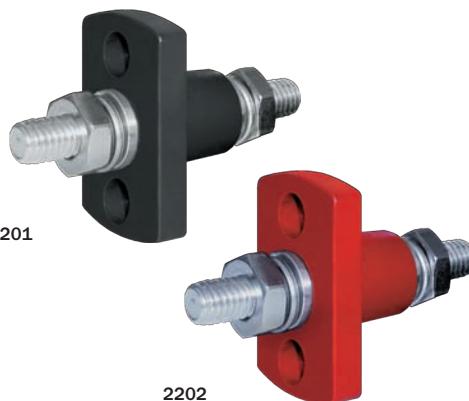
- Protects large cables that are subject to chafing when passed through holes
- The large terminals have a mounting face that can be gasketed or bedded to provide a water tight installation

Specifications

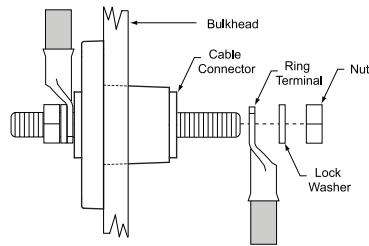
V_{mox}	Voltage Maximum Operating	48 Volts DC
I_{mox}	Amperage Maximum Operating	See table below
Stud Material		Tin-Plated Copper Alloy
Mounting Holes		Accepts #10 (M5) Screws

Regulatory

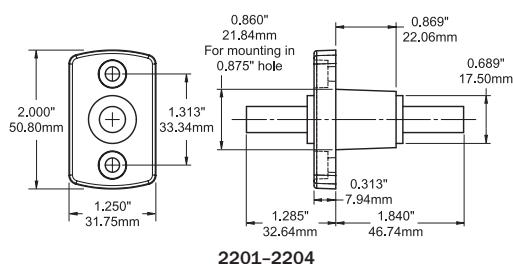
66 Rated IP66— withstands water from heavy seas



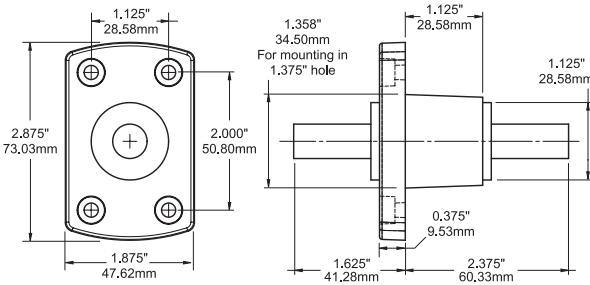
PN	Size	Description	I_{mox}	Color	Weight lb (kg)
2201	Small	5/16"-18 Stud	250	Black	0.30 (0.14)
2202	Small	5/16"-18 Stud	250	Red	0.30 (0.14)
2203	Small	3/8"-16 Stud	250	Black	0.30 (0.14)
2204	Small	3/8"-16 Stud	250	Red	0.30 (0.14)
2205	Large	3/8"-16 Stud	400	Black	0.62 (0.28)
2206	Large	3/8"-16 Stud	400	Red	0.62 (0.28)
2207	Large	1/2"-13 Stud	400	Black	0.62 (0.28)
2208	Large	1/2"-13 Stud	400	Red	0.62 (0.28)



Mounting Diagram



2201-2204



2205-2208

PowerPost Connectors

PowerPost Cable Connectors

Insulated single stainless steel stud terminates multiple large conductors

- Connects high amperage cables securely
- Includes insulator

Specifications

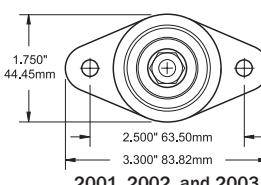
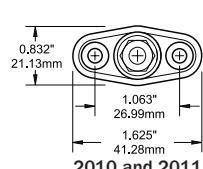
I_c Continuous Rating: Not rated—amperage flows between terminals stacked on post and is determined by wire and terminals used.

V_{mxo} Voltage Maximum Operating: 48 Volts DC
Mounting Holes Accepts #8 Screws (2010/2011)
Accepts 1/4" Screws (2001/2002/2003)

Regulatory

- CE Certified

PN	Terminal Stud	Weight lb (kg)
2010	#10-32 x 5/8"	0.06 (0.03)
2011	1/4" x 3/4"	0.10 (0.05)
2001	1/4" x 1-1/16"	0.20 (0.09)
2002	5/16" x 7/8"	0.25 (0.11)
2003	3/8" x 7/8"	0.27 (0.12)



PowerPost Plus Cable Connectors

Enables connection of multiple smaller wires in spaces where a traditional busbar may not fit

- 150 Ampere bus allows small wire connections at high amperage cable connections
- Includes insulator

Specifications

I_c Continuous Rating: 150 Amps AC/DC

V_{mxo} Voltage Maximum Operating: 48 Volts DC
Mounting Holes Accepts 1/4" Screws
Bus Material Tin-Plated Copper

Regulatory

- CE Certified

PN	Terminal Stud	Terminal Screws	Weight lb (kg)
2101	1/4" x 1"	8 x #8-32	0.29 (0.13)
2102	5/16" x 3/4"	8 x #8-32	0.30 (0.14)
2103	3/8" x 3/4"	8 x #8-32	0.34 (0.15)



Dual PowerPost Cable Connectors

Provides a termination point for extending the length of outboard harnesses or other conductors

- 2016/2017 are designed for connecting high amp conductors
- 2018 is designed for outboard engine installation when factory cables need to be extended
- Includes insulators

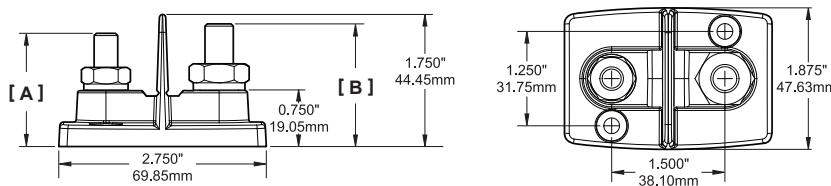
Specifications

I_c Continuous Rating: Not rated—amperage flows between terminals stacked on post and is determined by wire and terminals used.

V_{mxo} Voltage Maximum Operating: 48 Volts DC
Mounting Holes Accepts #10 (M5) Screws

PN	Description	Stud Height A in (mm)	Stud Height B in (mm)	Weight lb (kg)
2016	2 x 5/16" Studs with Insulators	1.50 (38.1)	1.50 (38.1)	0.27 (0.12)
2017	2 x 3/8" Studs with Insulators	1.63 (41.3)	1.63 (41.3)	0.27 (0.12)
2018	1 x 5/16" Stud, 1 x 3/8" Stud with Insulators	1.50 (38.1)	1.63 (41.3)	0.27 (0.12)

UPDATED



2017

CableClams and Insulators

CableClams

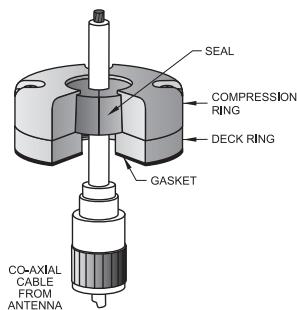
Provides a waterproof pass-through for antenna cables without requiring removal of the factory installed connector

- Perfect for antenna installation
- Save the expense of removing and replacing connectors
- Avoid poor connections from removing factory connectors
- Use 1001 for GPS antenna cables, 1002 for VHF antenna cables, 1003 for Radar antenna cables

Specifications

Ring Material	UV-Stabilized Thermoplastic
Seal Material	UV-Stabilized Buna-N Rubber
Screws	Stainless Steel

PN	Connector Opening in (mm)	Weight lb (kg)
1001	0.68 (17.27)	0.15 (0.07)
1002	0.83 (20.95)	0.20 (0.09)
1003	1.39 (35.18)	0.30 (0.14)



CableClam Drawing

Rotating CableCap Insulators

Insulates battery terminals which have integral wing nut posts

- Top rotates 360 degrees to allow cable entry from any angle

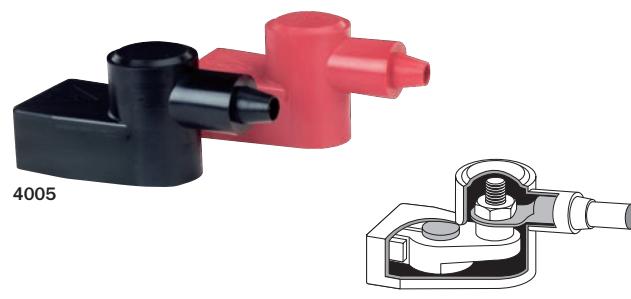
PN	Cable Size	Color	Package	Weight lb (kg)
4001	All	Red/Black	Pair/Retail	0.25 (0.11)
9030B	All	Black	Bulk/Not for retail	0.10 (0.45)
9031B	All	Red	Bulk/Not for retail	0.10 (0.45)



Standard CableCap Insulators

Insulates battery terminals which have added adapter terminals

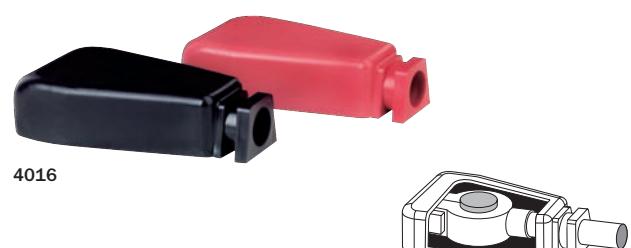
PN	Cable Size	Color	Package	Weight lb (kg)
4005	4, 2, 1	Red/Black	Pair/Retail	0.22 (0.10)
4006	1/0, 2/0	Red/Black	Pair/Retail	0.22 (0.10)
9038B	4, 2, 1	Black	Bulk/Not for retail	0.07 (0.03)
9039B	4, 2, 1	Red	Bulk/Not for retail	0.07 (0.03)
9040B	1/0, 2/0	Black	Bulk/Not for retail	0.07 (0.03)
9041B	1/0, 2/0	Red	Bulk/Not for retail	0.07 (0.03)



Automotive CableCap Insulators

Insulates battery terminals which have standard automotive posts

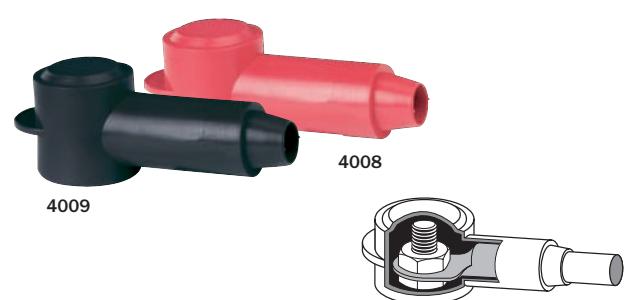
PN	Cable Size	Color	Package	Weight lb (kg)
4016	4, 2, 1	Red/Black	Pair/Retail	0.18 (0.08)
4017	1/0, 2/0	Red/Black	Pair/Retail	0.18 (0.08)
9176B	1/0, 2/0	Red	Bulk/Not for retail	0.07 (0.03)
9177B	1/0, 2/0	Black	Bulk/Not for retail	0.07 (0.03)



Stud CableCap Insulators

Insulates single stud on alternators, starters, windlasses and high amperage termination points

PN	Cable Size	Color	Package	Weight lb (kg)
4008	18-10	Red	Retail/3	0.05 (0.02)
4009	18-10	Black	Retail/3	0.05 (0.02)
4010	8-4	Red	Retail/2	0.05 (0.02)
4011	8-4	Black	Retail/2	0.05 (0.02)
4012	2-2/0	Red	Retail/1	0.07 (0.03)
4013	2-2/0	Black	Retail/1	0.07 (0.03)
4014	3/0-4/0	Red	Retail/1	0.07 (0.03)
4015	3/0-4/0	Black	Retail/1	0.07 (0.03)



DC Appendix

Appendix

DC Main Circuit Protection and Branch Circuit Protection

Purpose

Fuses and circuit breakers are used to protect wire insulation from melting and starting fires in the event of over currents or short circuits which cause more amperage to flow in a wire than that wire is rated to carry. It is important to note that, except for those wires that are intended to carry starting currents, every positive wire in the DC Main Power Distribution System must be protected by a fuse or circuit breaker.

Considerations for DC Main Circuit Protection

Mounting Placement—distance from power source. The DC Main circuit protection system uses circuit breakers or fuses to protect the wires of the DC Main distribution system. The American Boat and Yacht Council (ABYC) publishes voluntary standards for the type and placement of the fuse or circuit breaker to be used as a DC Main circuit protection device. Note: Wire intended to carry engine starting currents between the batteries, the switch, and the starter is not required to have main circuit protection devices installed. Maximum mounting placement dimensions for a fuse or circuit breaker are 7" if the conductor is not housed in a sheath or enclosure in addition to the wire insulation, 40" if the conductor is housed in a sheath or enclosure in addition to the wire insulation, and 72" if the conductor is connected directly to the battery and housed in a sheath or enclosure in addition to the wire insulation.

Selecting DC Main Circuit Protection. The principal attribute of a DC Main circuit protection device is its Ampere Interrupt Capacity (AIC) rating. Specifications listed in the ABYC standards determine the AIC a DC Main circuit protection device must have. The required AIC rating is determined by the total CCA of the batteries connected to the circuit. See the tables below for the required AIC ratings.

ABYC Interrupt Rating Table

Total Connected Battery Cold Cranking Amperes (CCA) *	Ampere Interrupt Capacity	
12 VOLTS AND 24 VOLTS		
The white boxes identify two batteries, of the same size, placed in parallel configuration.	DC MAIN	DC BRANCH
 OR 	650 CCA or Less	1,500 AIC
	651-1,100 CCA	3,000 AIC
	Over 1,100 CCA	5,000 AIC
32 VOLTS		
	1,250 CCA or Less	3,000 AIC
	Over 1,250 CCA	5,000 AIC

* Battery cold cranking performance rating at -17.8°C (0°F): The discharge load in amperes that a battery at -17.8°C (0°F) can deliver for 30 seconds, and maintain a voltage of 1.2 Volts per cell or higher, (e.g. 7.2 Volts for a 12 Volt battery). The CCA for the battery icons in this chart is an approximation and could be slightly higher or lower. Consult the battery manufacturer's specifications for precise CCA ratings.

ABYC standard E-11 requires the use of circuit breakers that can be reused and reset and that they be applied as per the table above. The standard does not strictly require that fuses be applied in the same way, but it is an issue to consider, especially with high amperage fuses used to protect panel feeders or inverters. Fuses under 10 Ampere rating generally have such a high internal resistance they prevent fault currents from reaching 1000 Amperes in 12 Volt circuits. The apparent contradiction when using these fuses for bilge pumps and other circuits directly off the battery is less of an issue than it might seem. If a fuse blows, and the case appears to be cracked or metal has been ejected, the fuse holder should be replaced.

ABYC Ampacity[†] Rating Table

AWG Wire Size	Allowable amperage for conductors under 50 Volts						Reference Data				
	Temperature Rating of Conductor Insulation										
	75°C (167°F)	90°C (194°F)	105°C (221°F)	Outside	Inside	Outside	Outside	Inside	Metric (Sq mm)	AWG CM Area	SAE CM Area
18	10	7.5	20	16.4	20	17	0.8	1,600	1,537	6.385	
16	15	11.3	25	20.5	25	21.3	1	2,600	2,336	4.016	
14	20	15	30	24.6	35	29.8	2	4,100	3,702	2.525	
12	25	18.8	40	32.8	45	38.3	3	6,500	5,833	1.588	
10	40	30	55	45.1	60	51	5	10,500	9,343	0.9989	
8	65	48.8	70	57.4	80	68	8	16,800	14,810	0.6282	
6	95	71.3	100	82	120	102	13	26,600	24,538	0.3951	
4	125	93.8	135	110	160	136	19	42,000	37,360	0.2485	
2	170	127	180	147	210	178	32	66,500	62,450	0.1563	
1	195	146	210	172	245	208	40	83,690	77,790	0.1239	
0	230	172	245	200	285	242	50	105,600	98,980	0.09827	
2/0	265	198	285	233	330	280	62	133,100	125,100	0.07793	
3/0	310	232	330	270	385	327	81	167,800	158,600	0.06180	
4/0	380	270	385	315	445	378	103	211,600	205,500	0.04901	

Wire selection for DC applications on boats is usually based on voltage drop requirements. However, there is a maximum continuous current that the wire can withstand without overheating. Higher grade marine wires are rated for service up to 105°C (221°F)—the ABYC wire capacity table for 105°C is most frequently quoted. The 105°C table accurately reflects the capacity of single conductors exposed to freely circulating cooling air. However, other factors, such as covering bundles of wire in outer jackets to form a cable, or use of conduits or structural voids to protect wires, can reduce the cooling and reduce the safe capacity of the wire.

A more conservative strategy is to use the 105°C wire, but treat it according to the 75°C table above when selecting circuit protection unless the wire is openly exposed for cooling.

See the Blue Sea Systems Circuit Wizard on our website at www.bluesea.com for more assistance with wire and circuit protection.

[†] Thermally limited amperage capacity

AC Appendix

AC Main Power Distribution and Circuit Protection

Purpose

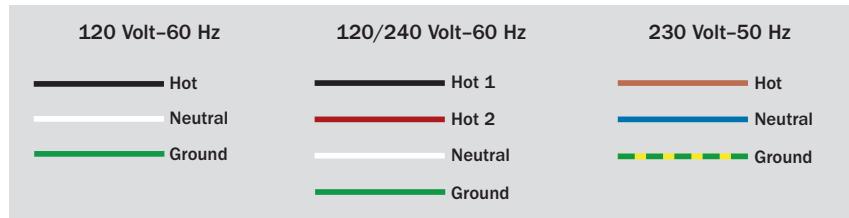
- Provide a path for delivering power from the ship's sources of AC power to the AC branch distribution system
- Provide a path for returning fault currents to ground via the green safety ground wire
- Provide a means for disconnecting AC power when the boat is not in use or in emergencies
- Provide 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

Considerations for AC Main Circuit Protection

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. Before selecting components for an AC system, several important distinctions about AC power must be considered.

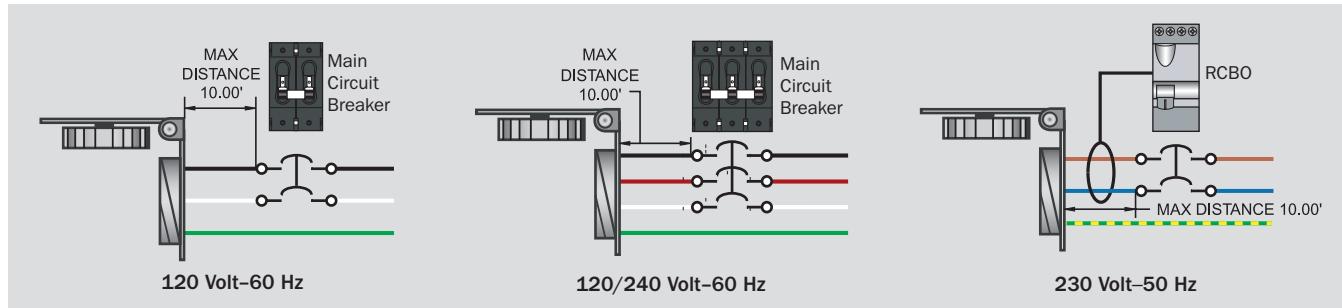
Direct Current (DC) vs. Alternating Current (AC). In DC systems, current flow is in one direction - from the point of higher voltage (electrical pressure) to lower voltage. In AC systems, the voltage reverses 60 times each second (50 times each second in Europe and other parts of the world), called "cycles" 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, (120V AC and 240V AC at 60 Hz or 230V AC at 50 Hz 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 Configurations of AC Main Circuit Breakers. Sources of AC power, whether shore power or on-board generators and inverters, should always have a circuit breaker near the power source. This circuit breaker is designated the AC main circuit breaker. The AC main circuit breaker should always have a pole for each of the hot and neutral wires in the circuit assuring that circuit protection functions are not compromised in reverse polarity situations. Therefore 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.

Physical Configurations of AC Main Circuit Breakers



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.
- 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.

ABYC Interrupt Rating 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

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

Quick Guide to Fuses and Fuse Blocks

Fuses and Fuse Blocks

◀ DC Amperage Range ▶



AGC/MDL Fuse—Appropriate for small electronic devices
Interrupting Capacity (I_{ic}): 1,000A DC Maximum Voltage (V_{mvo}): 32V DC



ST Glass Fuse Block (6 Circuit Models Available)—Uses AGC/MDL Fuses
Maximum Voltage (V_{mvo}): 32V DC Maximum Amperage (I_{mvo}) per circuit: 30A DC Maximum Amperage (I_{mvo}) per block: 100A DC

Page 56



ATO/ATC Fuse—Appropriate for small electronic devices
Interrupting Capacity (I_{ic}): 1,000A DC Maximum Voltage (V_{mvo}): 32V DC

◀ 130 ▶

Available amperages (I_{tr})
1, 2, 3, 4, 5, 7.5, 10, 15, 20, 25, 30



ST Blade Fuse Block (6 and 12 Circuit Models Available)—Uses ATO/ATC Fuses
Maximum Voltage (V_{mvo}): 32V DC Maximum Amperage (I_{mvo}) per circuit: 30A DC Maximum Amperage (I_{mvo}) per block: 100A DC

Page 55



MAXI™ Fuse—Economical high amp branch circuit protection
Interrupting Capacity (I_{ic}): 1,000A DC Maximum Voltage (V_{mvo}): 32V DC

◀ 30-80A ▶

Available amperages (I_{tr})
30, 40, 50, 60, 70, 80



MAXI™ Fuse Block—Uses MAXI™ Fuses
Maximum Voltage (V_{mvo}): 32V DC Maximum Amperage (I_{mvo}): 80A DC

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SEA Fuse—Appropriate for DC Main circuit protection with smaller battery banks or DC Branch circuits
Interrupting Capacity (I_{ic}): 2,000A DC Maximum Voltage (V_{mvo}): 32V DC

Page 45

◀ 100-300A ▶

Available amperages (I_{tr})
100, 125, 150, 175, 200, 225, 250, 300



SEA Fuse Block—Uses SEA Fuses
Maximum Voltage (V_{mvo}): 32V DC Maximum Amperage (I_{mvo}): 300A DC

Page 45



Terminal Fuse—Appropriate for DC Main circuit protection at the battery post, battery switch, or terminal block
Interrupting Capacity (I_{ic}): 10,000A@14V DC/5,000A@32V DC/2,000A@58V DC Maximum Voltage (V_{mvo}): 58V DC

IP Meets Ignition Protection requirements

Page 44

◀ 30-300A ▶

Available amperages (I_{tr})
30, 40, 50, 60, 75, 80, 90, 100, 125, 150, 175, 200, 225, 250, 300



Terminal Fuse Block—Uses Terminal Fuses
Maximum Voltage (V_{mvo}): 58V DC Maximum Amperage (I_{mvo}): 300A DC

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Class T Fuse—Appropriate for inverters and high amp equipment
Interrupting Capacity (I_{ic}): 20,000A DC Maximum Voltage (V_{mvo}): 160V DC

Page 47

◀ 100-300A ▶

Available amperages (I_{tr})
225, 250, 300, 350, 400



Class T Fuse Block—Uses Class T Fuses
Maximum Voltage (V_{mvo}): 160V DC Maximum Amperage (I_{mvo}): 400A DC

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ANL Fuse—Appropriate for DC Main circuit protection
Interrupting Capacity (I_{ic}): 5,000A DC Maximum Voltage (V_{mvo}): 32V DC
IP 35–500 Ampere Fuses meet Ignition Protection requirements

Page 46

◀ 35-750A ▶

Available amperages (I_{tr})
35, 40, 50, 60, 80, 100, 130, 150, 175, 200, 225, 250, 275, 300, 325, 350, 400, 500, 600, 675, 750



ANL Fuse Block—Uses ANL Fuses
Maximum Voltage (V_{mvo}): 32V DC Maximum Amperage (I_{mvo}): 300A DC

Page 46



ANL Heavy Duty Fuse Block—Uses ANL Fuses
Maximum Voltage (V_{mvo}): 32V DC Maximum Amperage (I_{mvo}): 750A DC

Quick Guide to Circuit Breakers

Thermal Circuit Breakers

AC Amperage Range DC Amperage Range



Page 38

Push Button Reset-Only—Appropriate for 24-hour circuit protection
Interrupting Capacity (I_{ic}): 3,000A@14.7V DC/2,500A@28V DC Maximum Voltage (V_{moxo}): 32V DC

Meets Ignition Protection requirements

Available amperages (I_{tr})
3, 5, 7, 10, 15, 20, 25, 30, 40

3-40



Page 39

Medium Duty Push Button Reset-Only—Appropriate for 24-hour circuit protection
Interrupting Capacity (I_{ic}): 5,000A@32V DC Maximum Voltage (V_{moxo}): 32V DC

Meets Ignition Protection requirements

Available amperages (I_{tr})
15, 20, 30, 40, 50, 60

15-60



Page 40

185-Series—Appropriate for DC Main circuit protection with battery banks under 1,100 CCA
Interrupting Capacity (I_{ic}): 3,000A DC@48V DC Maximum Voltage (V_{moxo}): 42V DC

Meets Ignition Protection requirements

Available amperages (I_{tr})
25, 30, 35, 40, 50, 60, 70, 80, 90, 100, 110, 120, 135, 150

25-150



Page 41

187-Series—Appropriate for DC Main circuit protection with battery banks over 1,100 CCA
Interrupting Capacity (I_{ic}): 5,000A@12V DC / 3,000A@24V DC/1,500A@42 DC Maximum Voltage (V_{moxo}): 48V DC

Meets Ignition Protection requirements

Available amperages (I_{tr})
25, 30, 35, 40, 50, 60, 70, 80, 90, 100, 110, 120, 135, 150

25-150

Magnetic Hydraulic Circuit Breakers



Page 63

Residual Current Circuit Breaker (ELCI/RCBO), 1 and 2 Pole—Appropriate for ground fault and overcurrent trip protection
Interrupting Capacity (I_{ic}): 5,000A AC Maximum Voltage (V_{moxo}): 240V AC

Available amperages (I_{tr})
15, 30

15-30



Page 54, 72

A-Series Toggle, 1 Pole—Appropriate for AC and DC Branch circuit protection
Interrupting Capacity (I_{ic}): 7,500A@65V DC/3,000A@120V AC/3,000A@250V AC

Maximum Voltage (V_{moxo}): 65V DC/250V AC

Available amperages (I_{tr})
5, 8, 10, 15, 20, 25, 30, 40, 50

5-50



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A-Series Toggle, 2 Pole—Appropriate for 120V AC Main or 240V AC Branch circuit protection
Interrupting Capacity (I_{ic}): 3,000A@120V AC/3,000A@250V AC Maximum Voltage (V_{moxo}): 250V AC

Available amperages (I_{tr})
10, 15, 16, 20, 30, 32, 40, 50

10-50



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A-Series Flat and Restricted OFF Rocker, 1 Pole—Appropriate for AC and DC Branch and 24-hour circuit protection
Interrupting Capacity (I_{ic}): 5,000A@32V DC/3,000A@120V AC/1,500A@250V AC Maximum Voltage (V_{moxo}): 32V DC/250V AC

Available amperages (I_{tr})
5, 8, 10, 15, 20, 25, 30, 40, 50

5-50A



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A-Series Flat and Raised Rocker, 2 Pole—Appropriate for 120V AC Main or 240V AC Branch circuit protection
Interrupting Capacity (I_{ic}): 3,000A@240V AC Maximum Voltage (V_{moxo}): 240V AC

Available amperages (I_{tr})
10, 15, 16, 20, 30, 32, 40, 50

10-50A



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C-Series Toggle, 1 Pole—Appropriate for DC Main and AC and DC high load circuit protection
Interrupting Capacity: 10,000A@80V DC/5,000A@250V AC Maximum Voltage (V_{moxo}): 80V DC/250V AC

100 Ampere Circuit Breaker (7250I) meets Ignition Protection requirements

Available amperages (I_{tr})
5, 10, 15, 20, 25, 30, 50, 60, 80, 100

5-100A



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C-Series Toggle, 2 and 3 Parallel Pole—Appropriate for DC high load circuit protection
Interrupting Capacity (I_{ic}): 5,000A@65V DC Maximum Voltage (V_{moxo}): 65V DC

Available amperages (I_{tr})
150, 175, 200, 250, 300

150-300

30-100A



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C-Series Toggle, 2 and 3 Pole—Appropriate for 240V AC Main and AC high load circuit protection
Interrupting Capacity (I_{ic}): 5,000A@250V AC Maximum Voltage (V_{moxo}): 250V AC

Available amperages (I_{tr})
30, 50, 60, 80, 100

30-100A



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C-Series Flat Rocker, 1 Pole—Appropriate for DC Main and AC and DC high load circuit protection
Interrupting Capacity (I_{ic}): 5,000A@32V DC/3,500A@240V AC Maximum Voltage (V_{moxo}): 32V DC/240V AC

Meets Ignition Protection requirements

Available amperages (I_{tr})
5, 10, 15, 20, 25, 30, 50, 60, 80, 100

5-100A



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C-Series Flat Rocker, 2 and 3 Parallel Pole—Appropriate for DC high load circuit protection
Interrupting Capacity (I_{ic}): 5,000A@48V DC Maximum Voltage (V_{moxo}): 48V DC

Available amperages (I_{tr})
150, 175, 200, 250, 300

150-300

30-100A



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C-Series Flat and Raised Rocker, 2 and 3 Pole—Appropriate for 240V AC Main and AC high load circuit protection
Interrupting Capacity (I_{ic}): 5,000A@240V AC Maximum Voltage (V_{moxo}): 240V AC

Available amperages (I_{tr})
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30-100A

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