

# 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.



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## A-Series Circuit Breaker Panels

Traditional metal panels provide branch switching and circuit protection while complementing 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\*

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 $V_{m\max}$	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)

Specifications subject to change. See [www.blueseas.com](http://www.blueseas.com) for current information.

## 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

<b>I<sub>ic</sub></b> Interrupting Capacity	See Interrupting Capacity table below
<b>V<sub>mxo</sub></b> Voltage Maximum Operating	See Interrupting Capacity table below
<b>I<sub>tr</sub></b> Amperage Trip Reference	See tables
<b>T<sub>mno</sub></b> Temperature Minimum Operating	-40°C
<b>T<sub>mxo</sub></b> Temperature Maximum Operating	85°C
<b>C<sub>s</sub></b> 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 <a href="http://www.blueseasystems.com">www.blueseasystems.com</a>
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 <sub>mxo</sub>	I <sub>tr</sub>	I <sub>ic</sub>	I <sub>ic</sub>
65V DC	5–50A	7,500A	-
120V AC	5–50A	3,000A	-
250V AC	5–50A	3,000A	1,500A

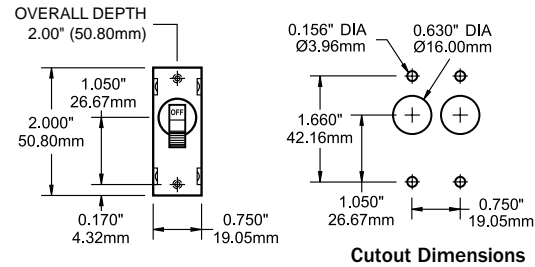
PN	Color	AC I <sub>tr</sub>
7200	Black	5
7201	Red	5
7202	White	5
7347	Black	8
7299	White	8
7204	Black	10
7205	Red	10
7206	White	10
7208	Black	15
7209	Red	15
7210	White	15
7212	Black	20
7213	Red	20
7214	White	20
7216	Black	25
7217	Red	25
7218	White	25
7220	Black	30
7221	Red	30
7222	White	30
7224	Black	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

<b>I<sub>ic</sub></b> Interrupting Capacity	See Interrupting Capacity table below
<b>V<sub>mxo</sub></b> Voltage Maximum Operating	See Interrupting Capacity table below
<b>I<sub>tr</sub></b> Amperage Trip Reference	See tables
<b>T<sub>mno</sub></b> Temperature Minimum Operating	-40°C
<b>T<sub>mxo</sub></b> Temperature Maximum Operating	85°C
<b>C<sub>s</sub></b> 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 <a href="http://www.blueseas.com">www.blueseas.com</a>
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 <sub>mxo</sub>	I <sub>tr</sub>	I <sub>ic</sub>	I <sub>ic</sub>
32V DC	5–50A	5,000A	-
125V AC	5–50A	3,000A	-
250V AC	5–50A	1,500A	1,500A

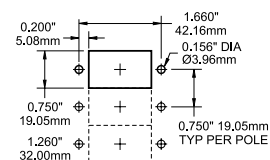
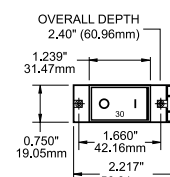
PN	Actuator	AC I <sub>tr</sub>
7400	Flat	5
7425	Restricted Off	5
7401	Flat	8
7426	Restricted Off	8
7402	Flat	10
7427	Restricted Off	10
7403	Flat	15
7428	Restricted Off	15
7404	Flat	20
7429	Restricted Off	20
7405	Flat	25
7430	Restricted Off	25
7406	Flat	30
7431	Restricted Off	30
7407	Flat	40
7432	Restricted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



7403



7425



Cutout Dimensions

## C-Series Toggle Circuit Breakers (Single Pole)

Combines switching and circuit protection into a single device

### Specifications

<b>I<sub>ic</sub></b> Interrupting Capacity	See Interrupting Capacity table below
<b>V<sub>mxo</sub></b> Voltage Maximum Operating	See Interrupting Capacity table below
<b>I<sub>tr</sub></b> Amperage Trip Reference	See tables
<b>T<sub>mno</sub></b> Temperature Minimum Operating	-40°C
<b>T<sub>mxo</sub></b> Temperature Maximum Operating	85°C
<b>C<sub>s</sub></b> 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 <a href="http://www.blueseas.com">www.blueseas.com</a>
Mounting Screw	#6-32 Stainless Steel
Mounting Screw Torque	6–8 in-lb Recommended

### Regulatory

- UL 1077 recognized, TUV certified

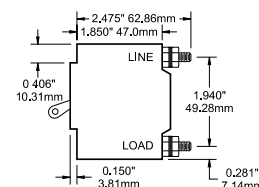
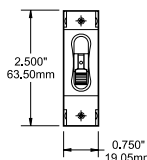
See page 62 for double and triple pole C-Series Toggle Circuit Breakers

Interrupting Capacity (see ABYC Requirements page 107)

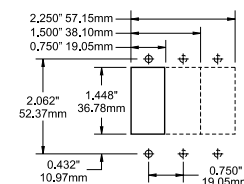
C-Series Circuit Breakers Single Pole			
		UL 1077 - UL/CSA (US/Canada)	EN60934 - TUV (Europe)
V <sub>mxo</sub>	I <sub>tr</sub>	I <sub>ic</sub>	I <sub>ic</sub>
80V DC	5–100A	10,000A	-
125V AC	5–100A	5,000A	-
250V AC	5–100A	5,000A	5,000A



7250



PN	AC I <sub>tr</sub>	Weight lb (kg)
7350	5	0.28 (0.13)
7351	10	0.28 (0.13)
7352	15	0.28 (0.13)
7353	20	0.28 (0.13)
7354	25	0.28 (0.13)
7355	30	0.28 (0.13)
7244	50	0.36 (0.17)
7246	60	0.36 (0.17)
7248	80	0.36 (0.17)
7250	100	0.36 (0.17)



Cutout Dimensions




## 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

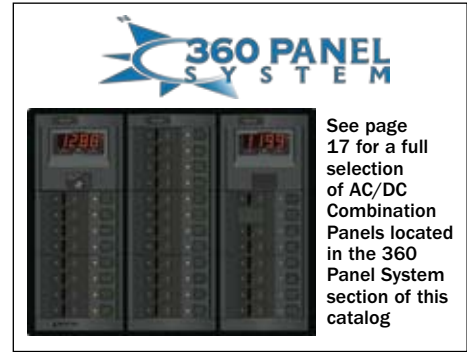
- Ready for installation of optional AC Isolation Cover (page 81)
- “ON” indicating LEDs installed in all circuit positions (page 80)
- Owner upgradable to 24 Volt DC with 8240, 18–32 Volt DC Voltmeter (page 90)
- A-Series Toggle Circuit Breakers (pages 60, 72)
- C-Series Toggle Circuit Breakers (page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

### Specifications

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



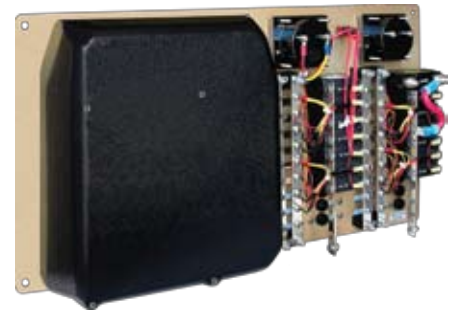
8095/8195\*



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 E11.11.1.1. 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	0-150A/9353
	0-100A/8017	
C	Multimeter/8248	Multimeter/8247
D	8-16V/8003	0-150V/9353
	0-100A/8017	0-50A/9630
E	8-16V/8003	0-250A/9354
	0-100A/8017	0-50A/9630
F	8-16V/8003	0-250A/9354
	0-100A/8017	
G	8-16V/8003	0-250V/9354
	0-100A/8017	0-50A/9630

PN	Description	AC $V_{mx0}$	DC $V_{mx0}$	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 ( $I_{tr}$ )	100A	15A				
					16A	32A	8A	30A	50A	15A						
8085	AC 2 Sources + 12 Pos. DC Main + 7 Positions	120	12 <sup>†</sup>	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 <sup>†</sup>	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 <sup>†</sup>	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 <sup>†</sup>	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 <sup>†</sup>	E	2	-	9	-	-	-	1	4	14.75 (374.65)	10.00 (254.00)	3.00 (76.20)	8.75 (3.97)
8184	AC Main + 6 Positions DC Main + 15 Positions	230*	12 <sup>†</sup>	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 <sup>†</sup>	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 <sup>†</sup>	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) | <sup>†</sup> Owner upgradable to 24 Volts DC with 8240 - 18-32V DC Analog Voltmeters (page 90)