

C-Series

Hydraulic-Magnetic Circuit Breaker

PRODUCT WEBPAGE

request sample, configure part



Compact Circuit Breaker with High Amperage and Voltage Capabilities

Compact yet robust, the C-Series hydraulic-magnetic circuit breaker is designed for high amperage and voltage applications. C-Series breakers are available as a one to six pole configuration and are rated up to 100 amps, 480VAC/80VDC or 240VAC/125VDC for UL 489 configurations. Parallel pole options offer ratings from 100-250 amps. The C-Series employs a unique arc chute design which allows for higher interrupting capacities of up to 10,000 amps.

1-6 250 480 125
Poles Amps Max VAC Max VDC Max

Typical Applications

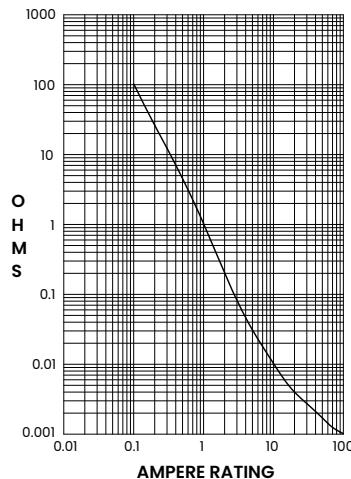
- Marine
- Renewable Energy
- Datacom/Telecom
- Generators & Welders
- Military
- Industrial Automation
- Commercial Food
- Medical Equipment

Tech Spec

Electrical

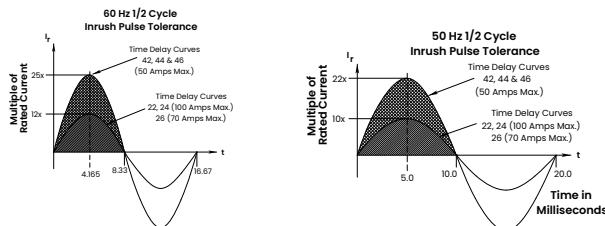
Maximum Voltage	AC, 480 WYE/277 VAC, 50/60 Hz (see Table A.) UL489: AC, 240 VAC. (See Table D.), 50/60 Hz, 125 VDC
Current Ratings	Standard current coils: 0.100, 0.250, 0.500, 0.750, 1.00, 2.50, 5.00, 7.50, 10.0, 15.0, 25.0, 30.0, 35.0, 40.0, 50.0, 60.0, 70.0, 80.0, 90.0 and 100 amps. Other ratings available, see ordering scheme.
Standard Voltage Coils	DC - 6V, 12V; AC - 120V; other ratings available, see ordering scheme.
Auxiliary Switch Rating	SPDT; 10.1 amps - 250VAC, DC Aux.Switch 1.0A, 65 VDC. 0.5A, 80VDC, 1/4 HP, 125VAC, VDE & TUVI. 125 VAC.
Insulation Resistance	Minimum of 100 Megohms at 500 VDC.
Dielectric Strength	UL, CSA: 1960 V 50/60 Hz for one minute between all electrically isolated terminals. C-Series Circuit Breakers comply with the 8mm spacing and 3750V 50/60 Hz dielectric requirements from hazardous voltage to operator accessible surfaces, between adjacent poles and from main circuits to auxiliary circuits per Publications EN 60950 and VDE 0805.
Resistance, Impedance	Values from Line to Load Terminal -based on Series Trip Circuit Breaker.

RESISTANCE, IMPEDANCE VALUES
from Line to Load Terminals
(Values Based on Series Trip Circuit Breaker)



CURRENT (AMPS)	TOLERANCE (%)
0.10 - 5.0	15
5.1 - 20.0	25
20.1 - 50.0	35

Pulse Tolerance Curves



Mechanical

Endurance	10,000 ON-OFF operations @ 6 per minute; with rated current & voltage.
Trip Free	All circuit breakers will trip on overload, even when actuator is forcibly held in the ON position.
Trip Indication	The operating actuator moves positively to the OFF position when an overload causes the breaker to trip. With mid-trip, handle moves to the mid position on electrical trip of the circuit breaker. With mid trip handle with alarm switch, handle moves to the mid position and the alarm switch actuates when the circuit breaker is electrically tripped.

Physical

Number of Poles	1-6 poles ≤ 50A; 1-4 poles @ 51-70A; 1-2 poles 71-100A. UL489 Handle: 1 pole ≤ 100A, 2 pole ≤ 50A; Rocker: 1 pole ≤ 100A
Internal Circuit Config.	Series (with or without auxiliary switch, mid trip & mid trip with alarm switch) Shunt & Relay with current or voltage trip coils, Dual Coil, Switch Only (with or without aux. switch). UL489: Series (with or without auxiliary switch, mid-trip & midtrip with alarm switch).
Weight	Approx.112 grams/pole (3.95 oz).
Standard Colors	Housing: Black

Environmental

Designed and tested in accordance with requirements of specification MIL-PRF-55629 & MIL-STD-202 as follows:

Shock	Withstands 100Gs, 6mssawtooth while carrying rated current per Method 213, Test Condition "I". Instantaneous and ultrashort curves tested @ 90% of rated current.
Vibration	Withstands 0.060" excursion from 10-55 Hz & 10 Gs 55-500 Hz, @ rated current per Method 204C, Test Cond. A. Instantaneous & ultrashort curves tested @ 90% of rated current.
Moisture Resistance	Method 106D, i.e., ten 24-hour cycles @ +25°C to +65°C, 80-98% RH..
Salt Spray	Method 101, Condition A (90-95% RH @ 5% NaCl Solution, 96 hrs).
Thermal Shock	RH @ 5% NaCl Solution, 96 hrs). Thermal Shock Method 107D, Condition A (five cycles @ -55°C to +25°C to +85°C to +25°C).
Operating Temperature	-40° C to +85° C

Tech Specs

Tables

Table A: Lists UL Recognized & CSA Accepted configurations and performance capabilities as a component supplementary protector

Component Supplementary Protectors											
Circuit Configuration	Voltage			Current Rating		Short Circuit Capacity (Amps)		Application Codes		Construction Notes	
	Max. Rating	Frequency	Phase	Full Load Amps	General Purpose Amps	UL / CSA		UL	CSA		
						With Backup Fuse	Without Backup Fuse				
Series	32	DC	---	0.02 - 100	---	5,000	TCI, OLI, U2	TCI, OLI, U2	---		
	48						TCI, 2, OLI, UI	TCI, 2, OLI, UI			
	65						TCI, 2, OLO, UI	TCI, 2, OLO, UI			
	-						TCI, 2, OLI, UI	TCI, 2, OLI, UI			
	80			0.02 - 70	---	7,500	TCI, 2, OLO, UI	TCI, 2, OLO, UI			
	-						TCI, 2, OLI, UI	TCI, 2, OLI, UI			
	125						TCI, 2, OLI, UI	TCI, 2, OLI, UI	Must have Agency "L"		
	125/250						TCI, 2, OLI, UI	TCI, 2, OLI, UI	Must have Agency "L"		
	250			0.02 - 50	---	10,000	TCI, 2, OLI, UI	TCI, 2, OLI, UI	Must have Agency "L"		
	-						TCI, 2, OLO, UI	TCI, 2, OLO, UI	Must have Agency "L", 250 volts requires 2 pole		
	125	50 / 60	1				TCI, 2, OLI, UI	TCI, 2, OLI, UI	Per pole rating		
	150	DC	---				TCI, 2, OLI, UI	TCI, 2, OLI, UI	Must have Agency "L"		
	-	50 / 60	---	80 - 100	---	5,000	TCI, 2, OLO, U3	---	Must have Agency "L" parallel pole		
	101 - 175						TCI, OLI, U2	TCI, OLI, U2	---		
	125/250						TCI, 2, OLI, U2	TCI, 2, OLI, U2	2 or 3 poles breaking single phase		
	-						TCI, 2, OLI, U2	TCI, 2, OLI, U2	2 or 3 poles breaking single phase		
	250			0.02 - 100	---	5,000	TCI, 2, OLI, U2	TCI, 2, OLI, U2	2 or 3 poles breaking single phase, Agency "L"		
	-						TCI, 2, OLI, U2	TCI, 2, OLI, U2	Per pole rating		
	51 - 70						TCI, 2, OLI, U2	TCI, 2, OLI, U2	Must have Agency "L"		
	-						TCI, 2, OLI, CI	TCI, 2, OLI, CI	---		
	277	1	---	0.02 - 100	---	3,000	TCI, 2, OLI, CI	TCI, 2, OLI, CI	---		
	480/277						TCI, 2, OLI, CI	TCI, 2, OLI, CI	3 poles breaking 3 phase		
	480						TCI, 2, OLO, UI	TCI, 2, OLO, UI	Must have Agency "L"		
	-						TCI, 2, OLO, CI	TCI, 2, OLO, CI	---		
Dual Coil	80	DC	---	0.02 - 50	---	7,500	TCI, 2, OLI, U2	TCI, 2, OLI, U2	Per pole rating		
	125	TCI, OLI, U2	TCI, OLI, U2								
	125/250	1	TCI, OLI, U2				TCI, OLI, U2				
	250	3	TCI, OLI, U2				TCI, OLI, U2				
	277	1	TCI, OLI, U2				TCI, OLI, U2				
	-	TCI, OLO, U2	TCI, OLO, U2				Per pole rating				
Shunt	80	DC	---	0.02 - 30	---	5,000	TCI, 2, OLI, CI	TCI, 2, OLI, CI	---		
	277	1	TCI, 2, OLI, CI				TCI, 2, OLI, CI				
	250	3	TCI, 2, OLI, CI				TCI, 2, OLI, CI				
	480/277	50 / 60	TCI, 2, OLO, CI				TCI, 2, OLO, CI				
	480	1	TCI, 2, OLI, CI				TCI, 2, OLI, CI				
	-	TCI, 2, OLO, CI	TCI, 2, OLO, CI								
Relay	80	DC	---	0.02 - 50	---	7,500	TCI, 2, OLI, U2	TCI, 2, OLI, U2	---		
	277	50 / 60	1				TCI, 2, OLI, CI	TCI, 2, OLI, CI			
	250		3				TCI, 2, OLI, CI	TCI, 2, OLI, CI			
Switch Only	65	DC	---	7I - 100	---	---	---	---	---		
	80										
	125										
	125/250										
	250	50 / 60	3	0.02 - 70	---	---	---	---	2 or 3 poles breaking single phase		
	277		1								
	480/277		3								
	480	50 / 60	1	0.02 - 50	---	---	---	---	3 poles breaking 3 phase		
	-										

Notes:

- Requires branch circuit backup with a UL LISTED Type K5 or RK5 fuse rated 15A minimum and no more than 4 times full load amps not to exceed 125A for 50 Amp or less rating and not to exceed 175 for 51 through 100 Amp rating

Tech Specs

Tables

Table B: Lists UL Recognized and CSA Accepted configurations and performance capabilities as a Manual Motor Controller.

Manual Motor Controllers						
Circuit Configuration	Voltage			Current Rating	Horsepower Ratings	
	Max. Rating	Frequency	Phase	Full Load Amps	Max. HP	
Series, Shunt & Relay Switch Only	120 ¹	50 / 60	1	0.02 - 50	7 1/2	
	250 ¹				3	
	277 ¹		3	0.02 - 20	5	
	480 ²		1		3	
			3		5	

Notes:

1. Requires branch circuit backup with a UL Listed Type K5 or RK5 fuse rated 15A Minimum and no more than 4 times full load amps not to exceed 125A for 50 Amp or less rating and not to exceed 175A for 51 through 100A rating.

2. UL Recognized and CSA Certified at 480V refers to 3 and 4 pole versions used in a 3Ø, WYE connected circuit or a 2 pole version with 2 poles breaking 1Ø and backed up with a series fusing as stated in note 1.

* Shunt and Relay Trip - Voltage Coil Construction not current coils

Table C: Lists UL Recognized, CSA Accepted, VDE and TUV Certified configurations and performance capabilities as a Component Supplementary Protector.

Component Supplementary Protectors													
Circuit Configuration	Voltage			Current Rating		Short Circuit Capacity (Amps)						Application Codes	Construction Notes
	Max. Rating	Frequency	Phase	Full Load Amps	General Purpose Amps	With Backup Fuse	Without Backup Fuse	(Inc) With Backup Fuse	(Inc) Without Backup Fuse	(Inc) With Backup Fuse	(Inc) Without Backup Fuse		
Series	80	DC	---	0.10 - 70	---	7,500	5,000	5,000	1,500	TC1,2,OL1,U1	---		
				71 - 100	71 - 100		10,000						
				1 - 50			5,000						
				0.10 - 50			---						
	125			0.10 - 70		5,000	3,000	3,000	1,500	TC1,2,OL1,U1	Agency F, H, J or R		
				0.10 - 100			---						
				0.10 - 90			---						
	250	50 / 60	1	0.10 - 30		5,000 ²	---	3,000	1,500	TC1,2,OL1,C1	Agency J or R		
				0.10 - 30			---						
				0.10 - 30			---						
Dual Coil	80	DC	---	0.10 - 30		7,500	1,500	5,000	5,000	TC1,2,OL1,U1	Rocker		
	250	50 / 60	1 & 3	0.10 - 30			5,000						
	80	DC	---	0.10 - 70			7,500						
	250	50 / 60	1 & 3	0.10 - 70			5,000						
Shunt	415	50 / 60	3	0.10 - 30		5,000 ²	---	3,000	1,500	TC1,2,OL1,C1	Handle, Agency F, H, J or R		

Notes:

1. General Purpose ratings for UL/CSA only.
2. Requires branch circuit backup with a UL LISTED Type K5 or RK5 fuse rated 15A minimum and no more than 4 times full load amps not to exceed 125A for 50 Amp or less rating and not to exceed 175A for 51 through 100 Amp rating.

Table D: Lists UL Listed (489), CSA Certified (C22.2 No. 5.1-M) configuration and performance capabilities as a Molded Case Circuit Breaker.

UL489 Listed Branch Circuit Breakers																	
Circuit Configuration	Voltage			Current Rating	Interrupting Capacity (Amps)			Construction Notes									
	Max. Rating	Frequency	Phase	Full Load Amps	Without Backup Fuse												
Series	80	DC	---	0.10 - 100	50,000 ¹			Limited to 2 Poles Max from 71 - 100 Amps									
				101 - 150	10,000												
				151 - 250													
				0.10 - 100	5,000												
	125 / 250	50 / 60	1	0.10 - 50	10,000			1 or 2 Poles (2 poles required for 250 Volts)									
				51 - 70	5,000												
				0.10 - 50	10,000 ¹												
	120	50 / 60	1	0.10 - 30	5,000			2 or 3 Poles (1 pole of a 3 pole unit is neutral)									
				0.10 - 20	10,000												
				0.10 - 30													
Dual Coil	120			0.10 - 30													

Notes:

- 1 Special catalog number required. Consult factory.

Tech Specs

Tables

Table E: Lists UL Recognized, CSA Accepted configurations and performance capabilities as Protectors, Supplementary for Marine Electrical and Fuel Systems (Guide PEQZ2, File E75596). Ignition Protected per UL 1500. UL Classified Small Craft Electrical Devices, Marine in accordance with ISO 8846 (Guide UZMK, File MQ1515) as Marine Supplementary Protectors.

UL1500 (Marine Ignition Protection)								
Circuit Configuration	Voltage			Current Rating	Interrupting Capacity (Amps)	Application Codes		Construction Notes
	Max Rating	Frequency	Phase	Full Load Amps	Without Backup Fuse	UL	CSA	
Series	48	DC	---	0.02 - 100	5,000	TC1, 2, OL1, UI	TC1, 2, OL1, UI	--- 2 Poles Breaking Single Phase
	65			101 - 150		TC1, 2, OL0, UI	TC1, 2, OL0, UI	
	80			0.02 - 100	1,500	TC1, 2, OL1, UI	TC1, 2, OL1, UI	
	125	50 / 60	1	0.02 - 70		5,000	TC1, 2, OL1, UI	
	250			71 - 100	1,500	TC1, 2, OL1, UI	TC1, 2, OL1, UI	
				0.02 - 70		TC1, 2, OL1, UI	TC1, 2, OL1, UI	
				71 - 100		TC1, 2, OL1, UI	TC1, 2, OL1, UI	

Table F: Lists UL Listed configurations and performance capabilities as Circuit Breakers for use in Communications Equipment (Guide DITT, File E189195), under UL489A.

PARALLEL POLE CONSTRUCTION UL489A Listed for Communications Equipment				
Circuit Configuration	Voltage		Current Rating	Interrupting Capacity (Amps)
	Max. Rating	Frequency	General Purpose Amps	Without Backup Fuse
Series	80	DC	100 - 250	10,000

Time Delay Specs

To view all hydraulic-magnetic circuit breaker time delay values, please visit www.carlingtech.com/sites/default/files/documents/Carling-HM-CB-Time-Delays.pdf

Agency Approvals

UL 1077	Component Recognition Program as Protectors Supplementary (Guide CCN/QVNU2, File E75596)
UL 508	Switches, Industrial Control (Guide CCN/NRNT2, File E148683)
UL 1500	Protectors, Supplementary for Marine Electrical & Fuel Systems (Guide PEQZ2, File E75596) Ignition Protection
UL 489	Circuit Breakers, Molded Case, (Guide DIVQ, File E129899)
UL 489A	Communications Equipment (Guide CCN/DITT, File E189195)
CSA Accepted	Component Supplementary Protector under Class 3215 30, File 047848 0 000 CSA Standard C22.2 No. 235
CSA Certified	Circuit Breaker Model Case (Class 1432 01, File 093910), CSA Standard C22.2 No. 5.1 - M
TUV Certified	EN60934, under License No. R72040875
VDE Certified	EN60934, VDE 0642 under File No. 10537

Ordering Scheme

Handle - UL 1077 Recognized

Sample
Part Number

C A 3 - B 0 - 10 - 450 - 1 2 1 - C

Selection

1 2 3 4 5 6 7 8 9 10 11

1. SERIES

C

2. ACTUATOR

1

- A Handle, one per pole
- B Handle, one per multipole unit

3. POLES

1 One	3 Three	5 Five
2 Two	4 Four	6 Six

4. CIRCUIT

2

- A Switch Only (No Coil)
- B Series Trip (Current)

5. AUXILIARY / ALARM SWITCH

3

- 0 without Aux Switch
- 2 S.P.D.T., 0.110 Q.C. Term.

6. FREQUENCY & DELAY

03 DC 50/60Hz, Switch Only	30 DC, 50/60Hz Instantaneous
10 DC Instantaneous	32 DC, 50/60Hz Short
12 DC Short	34 DC, 50/60Hz Medium
14 DC Medium	36 DC, 50/60Hz Long
16 DC Long	44 4 50/60Hz Medium, High-inrush
20 50/60Hz Instantaneous	46 4 50/60Hz Long, High-inrush
22 50/60Hz Short	54 4 DC, Medium, High-inrush
24 50/60Hz Medium	56 4 DC, Long, High-inrush
26 50/60Hz Long	

Notes:

- 1 Actuator Code:
A: Handle tie pin spacer(s) and retainers provided assembled with multi-pole units. B: Handle location as viewed from front of breaker:
2 pole - left pole 3 pole - center pole 4 pole - two handles at center poles
5 pole - three handles at center poles 6 pole - four handles at center poles
- 2 For .02 to 30 amps, select Current Code 630. For 35 - 50 amps, select Current Code 650. For 55-70 amps, select Current Code 670. For 75-100 amps, select Current Code 810.
- 3 Auxiliary Switch available with Series Trip & Switch Only circuits. On multi-pole breakers, one auxiliary switch is supplied, mounted in the extreme right pole.
- 4 Available with Circuit Code B, and up to 50 amps maximum.
- 5 Current Ratings 60 - 70 are available up to four poles maximum. Ratings 71 - 100 are available up to two poles maximum.
- 6 Terminal Code 1 available to 60 amps maximum.
Terminal Codes 3 and 6 available to 100 amps maximum.
Terminal Code A available to 100 amps maximum.

[Configure Complete Part Number >](#)

[Browse Standard Parts >](#)

7. CURRENT RATING (AMPERES)

5

CODE	AMPERES	220	0.200	470	7.000	625	25.000	660	60.000
250	0.500	475		7.500		630	30.000	670	70.000
410	1.000	610		10.000		635	35.000	680	80.000
425	2.500	615		15.000		640	40.000	690	90.000
450	5.000	620		20.000		650	50.000	810	100.000

8. TERMINAL

6

- 1 Stud 10-32
- 3 Stud 1/4-20
- 6 Stud M6
- A Plug-In Stud

9. ACTUATOR COLOR & LEGEND

Actuator Color	Legend Color
1 White	Black
2 Black	White
3 Red	White
4 Green	White

10. MOUNTING / BARRIERS

MOUNTING STYLE	BARRIERS	VOLTAGE
Threaded Insert		
1 6-32 x 0.195 inches	no	< 300
A 6-32 X 0.195 inches	yes	< 300
C 6-32 X 0.195 inches	yes	≥ 300
2 ISO M3 x 5mm	no	< 300
B ISO M3 x 5mm	yes	< 300
D ISO M3 x 5mm	yes	≥ 300

11. AGENCY APPROVAL

- C UL Recognized, CSA Accepted
- D VDE Certified, UL Recognized, CSA Accepted
- E TUV Certified, UL Recognized, CSA Accepted
- H UL489 Construction: VDE Certified, UL Recognized, CSA Accepted
- I UL Recognized STD 1077, UL Recognized 1500 (ignition protected), CSA Accepted
- L UL489 Construction: UL Recognized, CSA Accepted
- R UL489 Construction: TUV Certified, UL Recognized, CSA Accepted

Ordering Scheme

Handle - UL 489 & UL 489A Listed / Parallel Pole

Sample Part Number C A 2 - P 0 - D4 - 820 - 3 2 1 - M T

Selection 1 2 3 4 5 6 7 8 9 10 11 12

1. SERIES

C

2. ACTUATOR

A Handle, one per pole

3. POLES

- 1** One
- 2** Two
- 3** Three

4. CIRCUIT

P Series Trip (parallel pole)

5 AUXILIARY/ALARM SWITCH

1

- 0** without Aux Switch
- 2** S.P.D.T., 0.110 Q.C. Term.

6. FREQUENCY & DELAY

- D1** DC Ultra Short
- D2** DC Short
- D4** DC Medium
- D6** DC Long

7. CURRENT RATING (AMPERES)

2

CODE	AMPERES	810	100.00	815	150.00	917	175.00	825	250.00
912	125.00	816	160.00	820	200.00				

8. TERMINAL

3

- 3** 1/4-20 threaded Stud
- 6** M6 threaded Stud
- A** Plug-In Stud

9 ACTUATOR COLOR & LEGEND

Actuator Color	Legend Color
1 White	Black
2 Black	White
3 Red	White
4 Green	White

10. MOUNTING

Threaded Insert
1 6-32 x 0.195 inches
2 ISO M3 x 5mm

11. MAXIMUM APPLICATION RATING

M 80 DC

12. AGENCY APPROVAL

4

- A** Without Approval
- G** UL489 Listed
- J** UL489A Listed, TUV Certified
- K** UL489A Listed, VDE Certified
- T** UL489A Listed
- 7** UL489A Listed, TUV Certified

Notes:

- 1 Auxiliary Switch available with Series Trip & Switch Only circuits. On multi-pole breakers, one auxiliary switch is supplied, mounted in the extreme right pole.
- 2 Ratings for 101 to 125 amps are available in 1-pole. Ratings from 110 to 200 amps are available in 2-pole. For ratings from 225-300 amps, specify 3-pole.
- 3 Terminal Codes 3 & 6 are supplied with bus bars connecting the Line and Load Terminals. Terminal Code A, Line and Load Terminals must be connected to a copper bus bar having a minimum cross-section of 0.078 square inches. Terminal Code A is not available on the single pole unit. 1 pole only available with terminal codes 3 and 6.
- 4 Agency codes K and 7 are not available with 1 pole. Agency code J is only available with 1 pole. Agency code G is only available in 2 and 3 pole. Circuit P, ratings 101-150 amps (2 pole) and ratings 151-250 amps (3 pole).

[Configure Complete Part Number >](#)

[Browse Standard Parts >](#)

Ordering Scheme

Handle - UL 489 Listed

Sample
Part Number

C A 3 - B 0 - 14 - 450 - 1 2 1 - K G

Selection

1 2 3 4 5 6 7 8 9 10 11 12

1. SERIES

C

2. ACTUATOR

1

- A Handle, one per pole
- B Handle, one per multipole unit

3. POLES

2

- 1 One
- 2 Two
- 3 Three

4. CIRCUIT

- B Series Trip (Current)

5 AUXILIARY/ALARM SWITCH

3

- 0 without Aux Switch
- 2 S.P.D.T., 0.110 Q.C. Term.

6. FREQUENCY & DELAY

- | | | | |
|----|----------------|----|-------------------------------|
| 12 | DC Short | 26 | 50/60Hz Long |
| 14 | DC Medium | 44 | 4 50/60Hz Medium, High-inrush |
| 16 | DC Long | 46 | 4 50/60Hz Long, High-inrush |
| 22 | 50/60Hz Short | 54 | 4 DC Medium, High-inrush |
| 24 | 50/60Hz Medium | 56 | 4 DC Long, High-inrush |

Notes:

- 1 Actuator Code:
A: Handle tie pin spacer(s) and retainers provided assembled with multipole units.
B: Handle located, as viewed from front of breaker in left pole. 2 pole maximum.
- 2 Standard multipole units have all poles identical except when specifying auxiliary switch and/or mixed poles. 2 & 3 pole circuit breakers required for 120/240 VAC (Maximum application rating code C) applications, have all poles identical except when specifying auxiliary switch which is normally supplied in extreme right pole per figure B. Terminal barriers are required on all multipole breakers. Third pole is for 120/240 VAC applications requiring neutral disconnect.
- 3 On multi-pole breakers, one auxiliary switch is supplied, mounted in the extreme right pole.
- 4 Available up to 50 amps maximum.
- 5 Terminal Code 1 available to 60 amps maximum.
Terminal Codes 3, 6 and A available to 100 amps maximum.
- 6 Barriers supplied on multi-pole units only.

7. CURRENT RATING (AMPERES)

4

CODE	AMPERES	475	7,500	630	30,000	670	70,000
220	0.200	610	10,000	635	35,000	680	80,000
250	0.500	615	15,000	640	40,000	690	90,000
410	1.000	620	20,000	650	50,000	810	100,000
425	2.500	625	25,000	660	60,000		
450	5.000						

8. TERMINAL

5

- 1 Stud 10-32
- 3 Stud 1/4-20
- 6 Stud M6
- A Plug-In Stud

9 ACTUATOR COLOR & LEGEND

Actuator Color	Legend Color
1 White	Black
2 Black	White
3 Red	White
4 Green	White

10. MOUNTING

6

MOUNTING STYLE	BARRIERS
Threaded Insert	
1 6-32 x 0.195 inches	yes
2 ISO M3 x 5mm	yes

11. MAXIMUM APPLICATION RATING

- B 125 DC
- C 120/240 AC
- D 240 AC
- K 120 AC
- F 277 AC
- M 80 DC

12. AGENCY APPROVAL

- A without approvals
- F UL489 Listed, CSA Certified & VDE Certified
- G UL489 Listed & CSA Certified
- J UL489 Listed, CSA Certified & TUV Certified

 Configure Complete Part Number >

 Browse Standard Parts >

Circuit & Terminal Diagrams

Handle

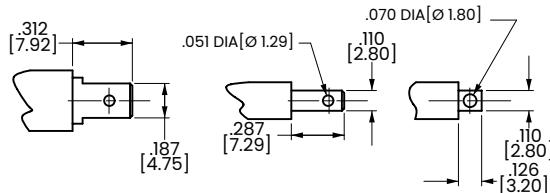
inches [millimeters]

TERMINAL			RATING(AMPS)			
DESCRIPTION	CODE	DIMENSIONAL DETAIL	25	50	100	80
#10-32 STUD	1					
M5 STUD	4					
#1/4-20 STUD	3					
M6 STUD	6					
#1/4-20 STUD	3					
M6 MUD	6					
#10-32 SCREW	2					
M-5 SCREW	5					

TERMINAL			RATING(AMPS)			
DESCRIPTION	CODE	DIMENSIONAL DETAIL	25	50	100	80
.250 DOUBLE Q.C.	7					
7/16" CLIP TERMINALS	9					
PUSH-IN STUD	A					

NOTES: TOLERANCE ON STUD LENGTHS IS $\pm .031$ [$\pm .79$] UNLESS OTHERWISE SPECIFIED.

AUXILIARY / ALARM SWITCH TERMINAL DETAIL³



TAB (Q.C.) .187

TAB (Q.C.) .110

SOLDER TYPE

TIGHTENING TORQUE SPECIFICATIONS	
THREAD SIZE	TORQUE
#6-32[M3] MOUNTING INSERTS	7-9 IN-LBS [0.8-1.0 NM]
#10-32 & M5 THD STUDS	15-20 IN-LBS [1.7-2.3 NM]
#10-32 THD SCREW	15-20 IN-LBS [1.7-2.3 NM]
#1/4-20 & M6 THD STUDS	30-35 IN-LBS [3.4-4.0 NM]

TERMINAL HARDWARE				
TERMINAL DESCRIPTION	CODE	AGENCY APPROVAL	AMPERE RATING	HARDWARE SUPPLIED
#10-32 STUD	1	ALL	.02-50	LOCK WASHER-FLAT WASHER-NUT
M5 STUD	4	ALL	.02-50	LOCK WASHER-FLAT WASHER-NUT
#1/4-20 STUD	3	ALL	.02-80	LOCK WASHER-FLAT WASHER-NUT
			81-100	LOCK WASHER-NUT-(2)FLAT WASHER-NUT
M6 STUD	6	ALL	.02-80	LOCK WASHER-FLAT WASHER-NUT
			81-100	LOCK WASHER-NUT-(2)FLAT WASHER-NUT
#10-32 SCREW	2 & 5	UL RECOGNIZED	.02-50	* SADDLE CLAMP-FLAT WASHER-SCREW
		UL-489 LISTED	.02-50	LOCK WASHER-FLAT WASHER-SCREW
		TUV & VDE CERTIFIED	.02-16	* SADDLE CLAMP-FLAT WASHER-SCREW
		TUV & VDE CERTIFIED	16.1-50	LOCK WASHER-FLAT WASHER-SCREW

* THE SADDLE CLAMP IS FOR DIRECT WIRE CONNECTION USE.
DISCARD SADDLE CLAMP IF WIRE TERMINAL LUG IS USED

Notes:

- 1 Tolerance $\pm .020$ [.51] unless otherwise specified.
- 2 Available on Series Trip and Switch Only Circuits when called for on multi-pole units. Only one auxiliary switch is normally supplied, as viewed in multi-pole identification scheme.

Circuit & Terminal Diagrams

Handle

inches [millimeters]

	CIRCUIT SCHEMATIC				CIRCUIT CODE	CIRCUIT SCHEMATIC				CIRCUIT CODE		
	ANSI		IEC			ANSI		IEC				
	SWITCH ONLY (NO COIL)		LINE (NETZ)			SWITCH ONLY (NO COIL)		LINE (NETZ)				
	LINE	LOAD	MAIN TERM'S (SEE TABLE-A)	LINE	LOAD (LAST)	A	O	LINE	LOAD (LAST)	B C		
	LINE	LOAD	AUX SWITCH TERM. (3 PLCS.)	LINE	LOAD (LAST)	A	2 3 4	LINE (NETZ) (3)	LOAD (LAST)	B C		
	LINE	LOAD	RELAY	RELAY (RELAIS)	LINE (NETZ) (3)	F G	0	LINE (NETZ) (3)	LOAD (LAST)	K O		
				RELAY (RELAIS)	LOAD (LAST)			VOLTAGE COIL	VOLTAGE COIL			

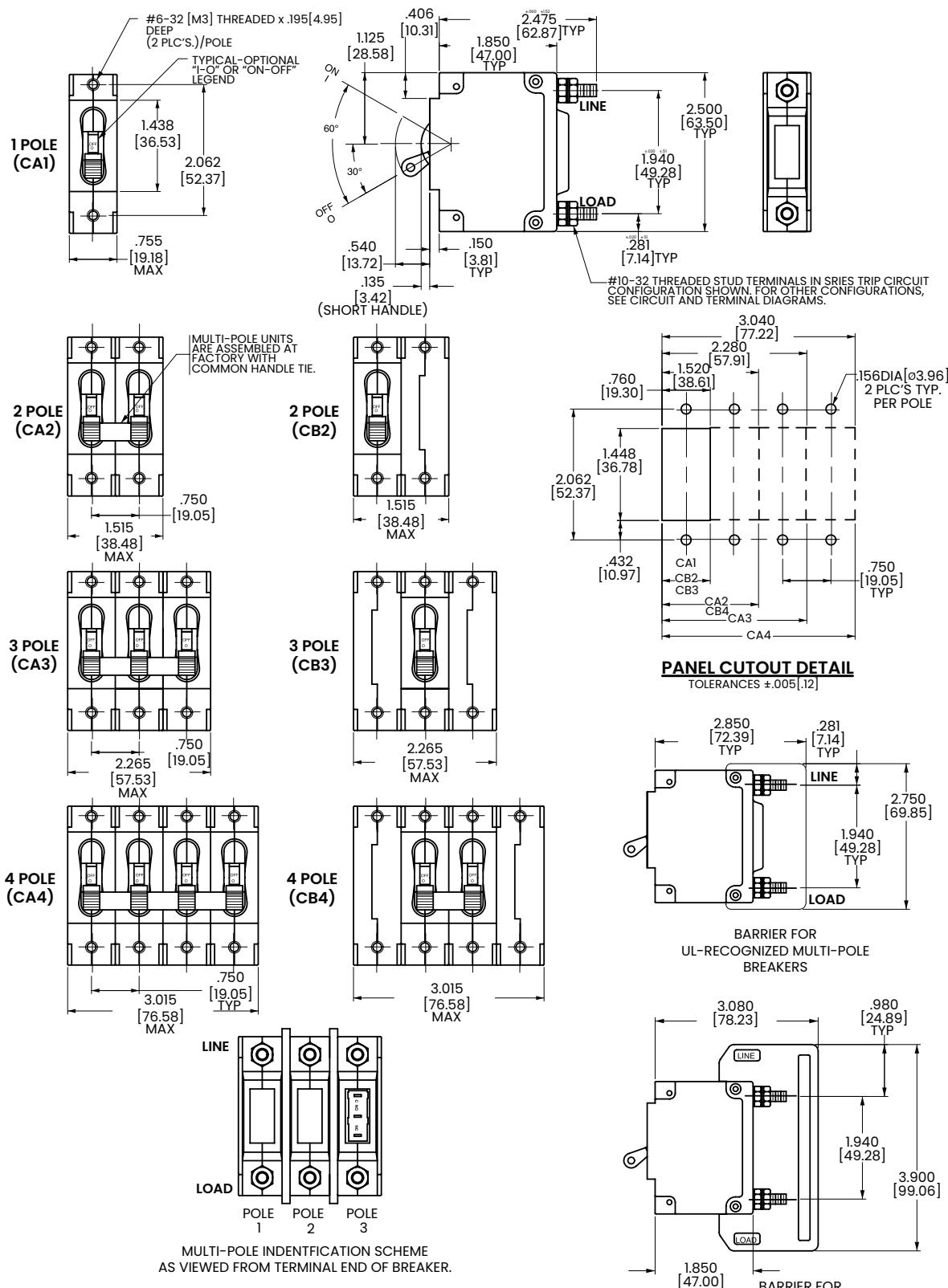
HANDLE POSITION VS. AUX/ALARM SWITCH MODE					
STANDARD C/B		MID TRIP C/B			
CIRCUIT BREAKER MODE	HANDLE POSITION	AUX. SWITCH MODE	HANDLE POSITION	STANDARD ALARM SWITCH MODE	REVERSE ALARM SWITCH MODE 4
OFF					
ON					
ELECTRICAL TRIP					

Notes:

- 1 Tolerance $\pm .020$ [.51] unless otherwise specified.
- 2 Schematic shown represents current trip circuits.
- 3 Available only as special catalog number.

Dimensional Specs

inches [millimeters]



Notes:

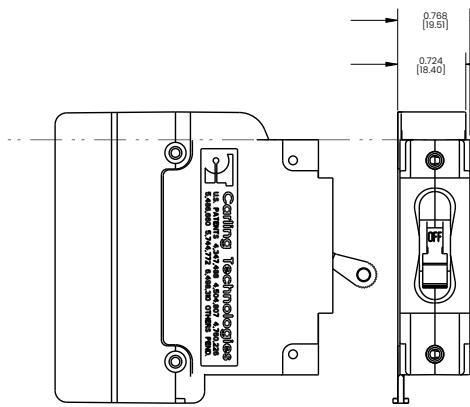
1 Tolerance $\pm .020$ [.51] unless otherwise specified.

Dimensional Specs

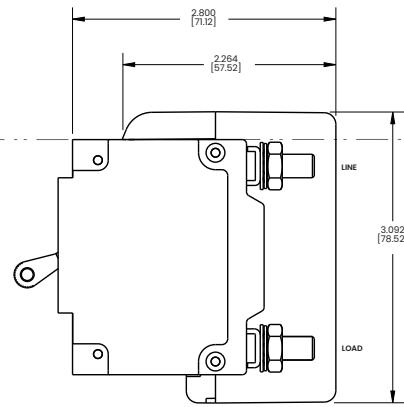
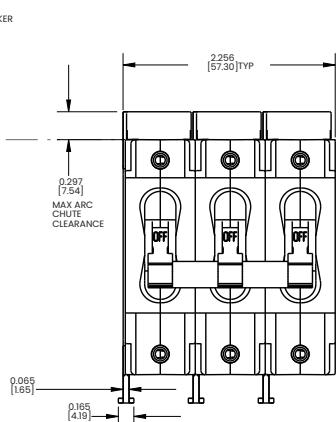
Arc Chute Barrier

inches [millimeters]

1-POLE (CA1)
W/ ARC CHUTE BARRIER

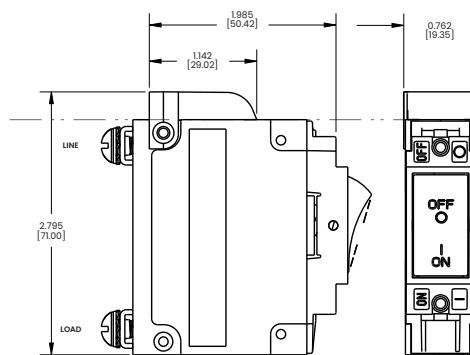


3-POLE (CA3)
W/ ARC CHUTE BARRIER

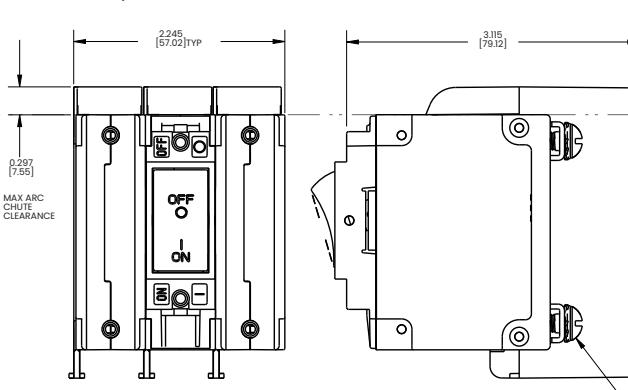


INDICATE "ON"

1-POLE (CC1, CD1)
W/ ARC CHUTE (NO BARRIER)

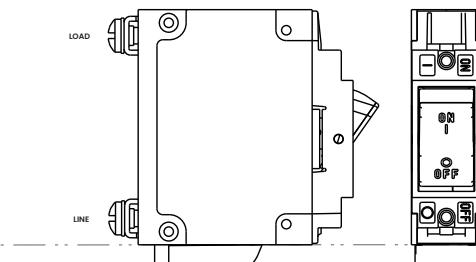


3-POLE (CC3, CD3)
W/ ARC CHUTE BARRIER

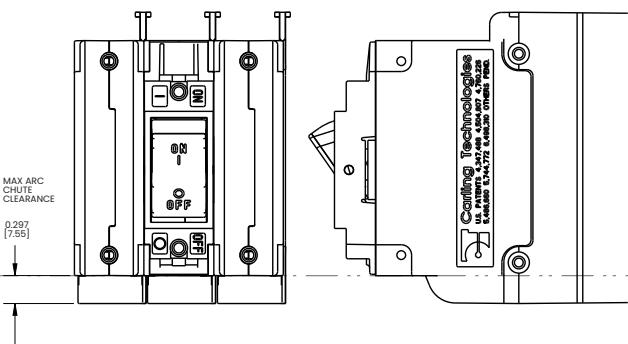


INDICATE "OFF" / SINGLE COLOR

1-POLE (CF1, CG1, CI1, C21)
W/ ARC CHUTE (NO BARRIER)



3-POLE (CF3, CG3, CI3, C23)
W/ ARC CHUTE BARRIER



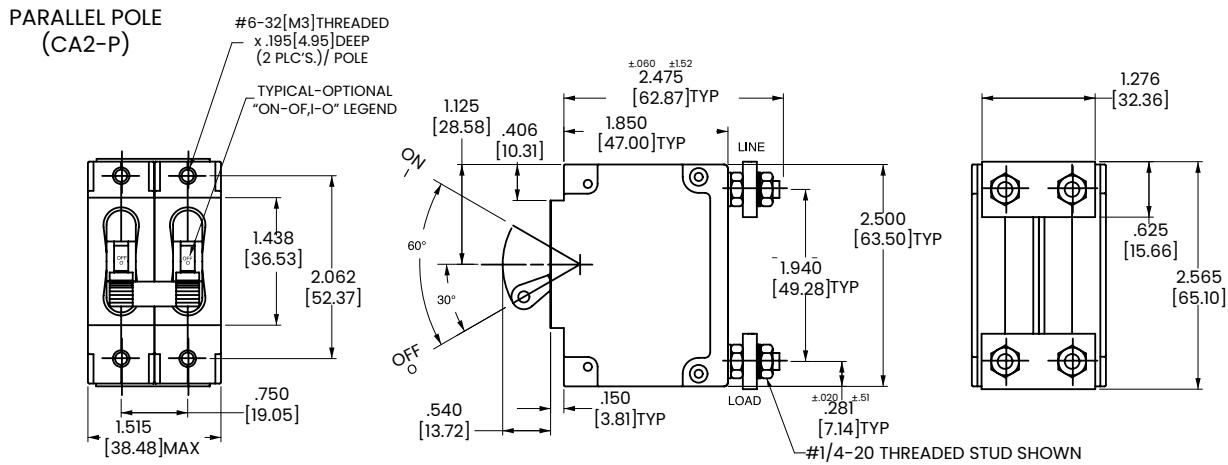
Notes:

- 1 Only 1-pole and 3-pole configurations shown. Arc chute (without barrier) and arc chute barrier also available for 2-pole construction.
- 2 Dimensions apply to all variations shown.
- 3 Notice that line and load terminal orientation for indicate on and indicate off rocker circuit breakers are opposite.
- 4 Screw type terminals shown for Rocker style (CF1, CI1, etc) circuit breakers. For other terminal configurations see circuit and terminal diagrams.
- 5 Tolerance $\pm .020$ unless otherwise specified.
- 6 Must be ordered under a special catalog number.

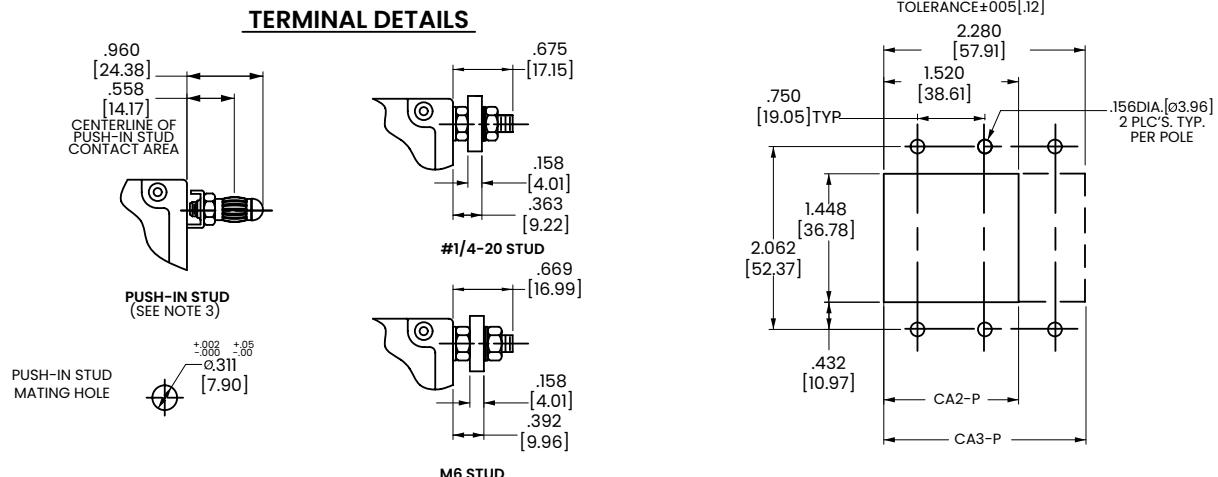
Dimensional Specs

Parallel Pole

inches [millimeters]



PARALLEL POLE (CA3-P)	CIRCUIT BREAKER PROFILE	CIRCUIT SCHEMATIC (CA2-P SHOWN)	CIRCUIT CODE ANSI IEC	ADDITIONAL CODE P 0
	.400 [10.16] PUSH-IN STUD 1.388 [47.00] TYP	SWITCH TRIP		
	.255 [5.72]			



Notes:

1 Tolerance ±.020 [.51] unless otherwise specified.

Ordering Scheme

Sealed Toggle - UL 1077 Recognized

Sample Part Number **C M 3 - B 0 - 10-450 - 1 0 1 - C**

Selection	1	2	3	4	5	6	7	8	9	10	11
-----------	---	---	---	---	---	---	---	---	---	----	----

1. SERIES

C

2. ACTUATOR ¹

M Sealed Toggle, one per pole

3. POLES

1 One	2 Two	3 Three
--------------	--------------	----------------

4. CIRCUIT

A Switch Only (no coil)
B Series Trip (current)

5. AUXILIARY / ALARM SWITCH ²

0 without Aux Switch
2 S.P.D.T., 0.110 Q.C. Term.

6. FREQUENCY & DELAY

03	DC 50/60Hz, Switch Only	30	DC 50/60Hz Instantaneous
10	DC Instantaneous	32	DC 50/60Hz Short
12	DC Short	34	DC 50/60Hz Medium
14	DC Medium	36	DC 50/60Hz Long
16	DC Long	44 ³	50/60Hz Medium, High-inrush
20	50/60Hz Instantaneous	46 ³	50/60Hz Long, High-inrush
22	50/60Hz Short	54 ³	DC Medium, High-inrush
24	50/60Hz Medium	56 ³	DC Long, High-inrush
26	50/60Hz Long		

7. CURRENT RATING (AMPERES) ⁴

CODE	AMPERES						
220	0.200	475	7.500	630	30.000	670	70.000
250	0.500	610	10.000	635	35.000	680	80.000
410	1.000	615	15.000	640	40.000	690	90.000
425	2.500	620	20.000	650	50.000	810	100.000
450	5.000	625	25.000	660	60.000		

8 . TERMINAL ⁵

- | | |
|----------|--------------|
| 1 | Stud 10-32 |
| 3 | Stud 1/4-20 |
| 6 | Stud M6 |
| A | Plug-In Stud |

9. LEGEND PLATE

- | | |
|----------|-----------|
| 0 | No Legend |
|----------|-----------|

10. MOUNTING / BARRIERS

MOUNTING STYLE	BARRIERS
1 Standard Hex Nut	no
A Standard Hex Nut (multi-pole units only)	yes

11 AGENCY APPROVAL

- | | |
|----------|----------------------------------------------------------|
| C | UL Recognized & CSA Accepted |
| I | UL Recognized & CSA Accepted, UL1500 ignition protection |
| L | UL Recognized & CSA Accepted with listed construction |

Notes:

- 1 Actuator Code M: Handle location as viewed from front of breaker:
2 pole - right pole 3 pole - center pole
- 2 Auxiliary Switch available with Series Trip and Switch Only circuits. On multipole breakers, one auxiliary switch is supplied, mounted in the extreme right pole.
- 3 Available with Circuit Code B and up to 50 amps maximum.
- 4 Consult factory for current ratings 71-100, in three pole units, available as special catalog number only.
- 5 Terminal Codes 3, 6 and & A available to 100 amps maximum

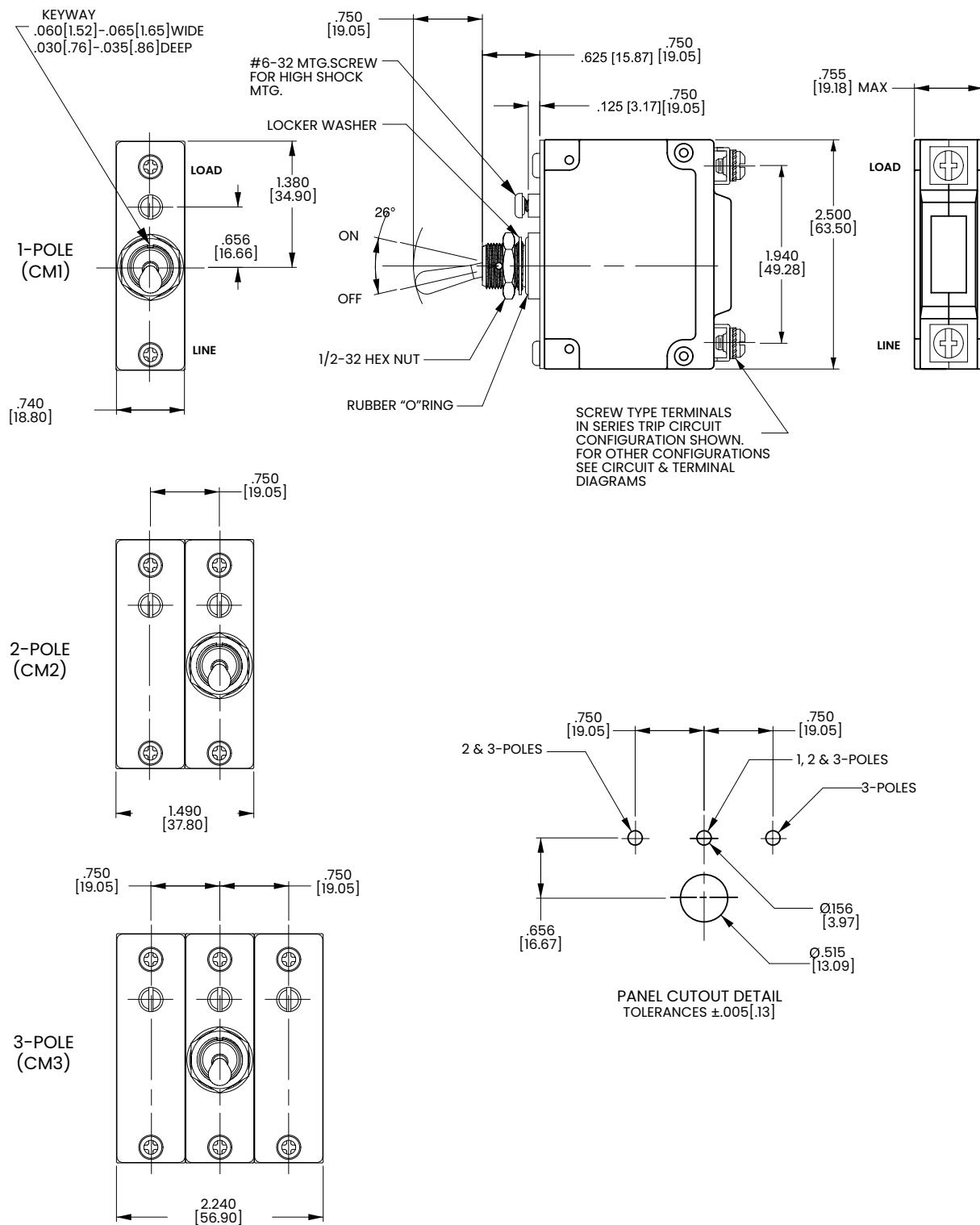
 [Configure Complete Part Number >](#)

 [Browse Standard Parts >](#)

Dimensional Specs

Sealed Toggle

inches [millimeters]



Notes:

1 Tolerance ±.020 [.51] unless otherwise specified.

Ordering Scheme

Rocker - UL 1077 Recognized

Sample
Part Number

C C 3 - B 0 - 14-450 - 1 2 1 - D

Selection

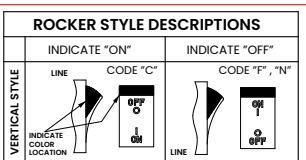
1 2 3 4 5 6 7 8 9 10 11

1. SERIES

C

2. ACTUATOR 1

Two Color Visi-Rocker
C Indicate ON, vertical legend
F Indicate OFF, vertical legend
Push-To-Reset, Visi-Rocker
N Indicate OFF, vertical legend



3. POLES 2

1 One 2 Two 3 Three

4. CIRCUIT

A Switch Only (No Coil)³
B Series Trip (Current)

5. AUXILIARY / ALARM SWITCH 4

0 without Aux Switch
2 S.P.D.T., 0.110 Q.C. Term.

6. FREQUENCY & DELAY

03	DC 50/60Hz, Switch Only	30	DC 50/60Hz Instantaneous
10	DC Instantaneous	32	DC 50/60Hz Short
12	DC Short	34	DC 50/60Hz Medium
14	DC Medium	36	DC 50/60Hz Long
16	DC Long	44 ⁵	50/60Hz Medium, High-inrush
20	50/60Hz Instantaneous	46 ⁵	50/60Hz Long, High-inrush
22	50/60Hz Short	54 ⁵	DC Medium, High-inrush
24	50/60Hz Medium	56 ⁵	DC Long, High-inrush
26	50/60Hz Long		

Notes:

- Push-To-Reset actuators have OFF portion of rocker shrouded.
- Multi-pole breakers have all poles identical except when specifying Auxiliary switch and/or mixed poles, and have one rocker per breaker. Rocker location as viewed from front panel: 2 pole - left pole; 3 pole - center pole.
- Switch Only circuits, rated up to 50 amps and 3 poles. For .02 to 30 amps, select Current Code 630. For 35 - 50 amps, select Current Code 650. For 55-70 amps, select Current Code 670. For 75-100 amps, select Current Code 810.
- Auxiliary Switch available with Series Trip and Switch Only circuits. On multipole breakers, one auxiliary switch is supplied, mounted in the extreme right pole.
- Available with Circuit Code B and up to 50 amps maximum.
- Current Ratings 60-70 are available up to four poles maximum. Ratings 71-100 are available up to two poles maximum.
- Terminal Codes 3, 6 & A available to 100 amps maximum.
- Color shown is visi and legend with remainder of rocker black.

7. CURRENT RATING (AMPERES) 6

CODE	AMPERES	220	475	7.500	630	30.000	670	70.000
250	0.500	610	10.000	635	35.000	680	80.000	
410	1.000	615	15.000	640	40.000	690	90.000	
425	2.500	620	20.000	650	50.000	810	100.000	
450	5.000	625	25.000	660	60.000			

8. TERMINAL 7

- 1 Stud 10-32
 3 Stud 1/4-20
 6 Stud M6
 A Plug-In Stud

9. ACTUATOR COLOR & LEGEND 8

Actuator/Visi-Color	Legend Color
1 White	Black
2 Black	White
3 Red	White
4 Green	White

10 MOUNTING / BARRIERS

	STANDARD ROCKER BEZEL	BARRIERS	VOLTAGE
1	6-32 x 0.195 inches	no	<300
2	6-32 x 0.195 inches	yes	<300
3	6-32 x 0.195 inches	yes	≥300
4	ISO M3 x 5mm	no	<300
5	ISO M3 x 5mm	yes	<300
6	ISO M3 x 5mm	yes	≥300
	ROCKERGUARD BEZEL		
A	6-32 x 0.195 inches	no	<300
C	6-32 x 0.195 inches	yes	<300
E	6-32 x 0.195 inches	yes	≥300
G	ISO M3 x 5mm	no	<300
J	ISO M3 x 5mm	yes	<300
L	ISO M3 x 5mm	yes	≥300
	PUSH-TO-RESET BEZEL		
B	6-32 x 0.195 inches	no	<300
D	6-32 x 0.195 inches	yes	<300
F	6-32 x 0.195 inches	yes	≥300
H	ISO M3 x 5mm	no	<300
J	ISO M3 x 5mm	yes	<300
M	ISO M3 x 5mm	yes	≥300

11 AGENCY APPROVAL

C	UL Recognized & CSA Accepted
D	VDE Certified, UL Recognized & CSA Accepted
E	TUV Certified, UL Recognized & CSA Accepted
H	UL489 Construction: VDE Certified, UL Recognized & CSA Accepted
I	UL Recognized STD 1077, UL Recognized 1500 (ignition protected), & CSA Accepted
L	UL489 Construction: UL Recognized & CSA Accepted
R	UL489 Construction: TUV Certified, UL Recognized & CSA Accepted

Configure Complete Part Number >

Browse Standard Parts >

Ordering Scheme

Rocker - UL 489A Listed / Parallel Pole

Sample Part Number C 1 2 - P 0 - D4 - 820 - 3 2 A - M T

Selection	1	2	3	4	5	6	7	8	9	10	11	12
-----------	---	---	---	---	---	---	---	---	---	----	----	----

1. SERIES

C

2. ACTUATOR

- C** Curved Rocker, Two Color Visi, Indicate On, Vertical Legend
- D** Curved Rocker, Two Color Visi, Indicate On, Horizontal Legend
- F** Curved Rocker, Two Color Visi, Indicate Off, Vertical Legend
- 1** Flat Rocker, Two Color Visi, Vertical Legend
- 2** Flat Rocker, Two Color Visi, Horizontal Legend
- 5** Flat Rocker, Push To Reset, Two Color Visi, Vertical Legend
- 6** Flat Rocker, Push To Reset, Two Color Visi, Horizontal Legend

3. POLES

- 1** One
- 2** Two
- 3** Three

4. CIRCUIT

- P** Series Trip (parallel pole)

5 AUXILIARY/ALARM SWITCH

- 0** without Aux Switch
- 2** S.P.D.T., 0.110 Q.C. Term.

6. FREQUENCY & DELAY

- D1** DC Ultra Short
- D2** DC Short
- D4** DC Medium
- D6** DC Long

7. CURRENT RATING (AMPERES) 1

CODE	AMPERES	810	100.00	815	150.00	917	175.00	825	250.00
912		912	125.00	816	160.00	820	200.00		

8. TERMINAL 2, 3

- 3** Stud 1/4-20
- 6** Stud M6
- A** Plug-In Stud

9 ACTUATOR COLOR & LEGEND

	Actuator Color	Legend Color
1	White	Black
2	Black	White
3	Red	White
4	Green	White

10. MOUNTING

ROCKER / MOUNTING INSERT STYLE	
A	Standard Rocker Bezel - 6-32 Inserts
B	Standard Rocker Bezel - M3 Inserts
C	Rocker Guard Bezel - 6-32 Inserts
D	Rocker Guard Bezel - M3 Inserts
E	Standard Bezel with recessed Off Side Flat Rocker - 6-32 Inserts
F	Standard Bezel with recessed Off Side Flat Rocker - M3 Inserts
G	Push to Reset Bezel - 6-32 Inserts
H	Push to Reset Bezel - M3 Inserts

11. MAXIMUM APPLICATION RATING

- M** 80 DC

12. AGENCY APPROVAL 4

- A** Without Approval
- G** UL489 Listed
- J** UL489A Listed, TUV Certified
- T** UL489A Listed
- 7** UL489A Listed, TUV Certified

Notes:

- 1 Ratings for 101 to 125 amps are available in 1-pole.
Ratings from 110 to 200 amps are available in 2-pole.
For ratings from 225-300 amps, specify 3-pole.
- 2 Breakers with Terminal Codes 3 & 6 are supplied with bus bars connecting the Line and Load Terminals. For Terminal Code A, Line and Load Terminals must be connected to a copper bus bar having a minimum cross-section of 0.078 square inches. Terminal Code A is not available on the single pole unit.
- 3 1 pole only available with terminal codes 3 and 6.
- 4 Agency codes K and 7 are not available with 1 pole.
Agency code J is only available with 1 pole.
Agency code G is only available in 2 and 3 pole.
Circuit P, ratings 101-150 amps (2 pole) and ratings 151-250 amps (3 pole).

 [Configure Complete Part Number >](#)

 [Browse Standard Parts >](#)

Ordering Scheme

Rocker - UL 489 Listed

Sample Part Number C C 3 - B 0 - 23 - 450 - 1 2 A - K G
 Selection 1 2 3 4 5 6 7 8 9 10 11 12

1. SERIES

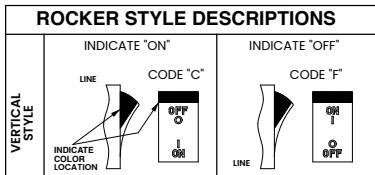
C

2. ACTUATOR

1

Two Color Visi-Rocker

C Indicate ON, vertical legend
 F Indicate OFF, vertical legend



3. POLES

1 One 2 Two 3 Three

4. CIRCUIT

B Series Trip (current)

5 AUXILIARY/ALARM SWITCH

2

0 without Aux Switch
 2 S.P.D.T., 0.110 Q.C. Term.

6. FREQUENCY & DELAY

12	DC Short	26	50/60Hz Long
14	DC Medium	44 ³	50/60Hz Medium, High-inrush
16	DC Long	46 ³	50/60Hz Long, High-inrush
22	50/60Hz Short	54 ³	DC Medium, High-inrush
24	50/60Hz Medium	56 ³	DC Long, High-inrush

Notes:

- 1 Multi-pole breakers have all breakers identical except when specifying Auxiliary switch and/or mixed poles, and have one rocker per breaker.
- 2 On multi-pole breakers, one auxiliary switch is supplied, mounted in the extreme right pole.
- 3 Available up to 50 amps maximum.
- 4 Current ratings 71 - 100 with VDE approvals are available up to two poles maximum.
- 5 Terminal Codes 3, 6 & A available to 100 amps maximum.
- 6 Color shown is visi and legend with remainder of rocker black.
- 7 Dual = ON-OFF/I-O legend on actuator.
- 8 Barriers supplied on multi-pole units only.
- 9 2 & 3 pole circuit breakers required for 120/240 AC rating.

7. CURRENT RATING (AMPERES)

4

CODE	AMPERES	475	7.500	630	30.000	670	70.000
210	0.100	610	10.000	635	35.000	680	80.000
250	0.500	615	15.000	640	40.000	690	90.000
410	1.000	620	20.000	650	50.000	810	100.000
425	2.500	625	25.000	660	60.000		
450	5.000						

8. TERMINAL

5

1	Stud 10-32
3	Stud 1/4-20
6	Stud M6
A	Plug-in Stud

9. ACTUATOR COLOR & LEGEND

6, 7

Actuator Color	Legend Color
1 White	Black
2 Black	White
3 Red	White
4 Green	White

10. MOUNTING / BARRIERS

8

Standard Rocker Bezel	BARRIERS
Threaded Insert, 2 per pole	
A 6-32 X 0.195 inches	yes
C ISO M3 x 5mm	yes
Rockerguard Bezel	
Threaded Insert, 2 per pole	
B 6-32 x 0.195 inches	yes
D ISO M3 x 5mm	yes

11. MAXIMUM APPLICATION RATING

9

B	125 DC
C	120/240 AC
D	240 AC
F	277 AC
K	120 AC
M	80 DC

12. AGENCY APPROVAL

A	without approvals
F	UL 489 Listed, CSA Certified, & VDE Certified
G	UL 489 Listed & CSA Certified
J	UL 489 Listed, CSA Certified & TUV Certified

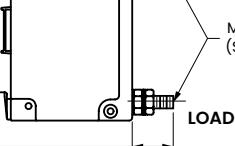
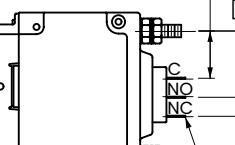
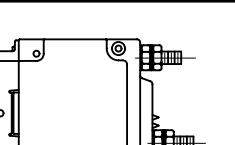
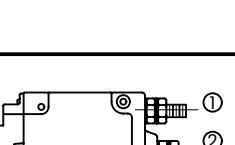
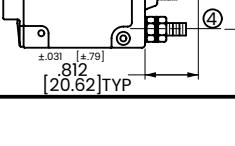
[Configure Complete Part Number >](#)

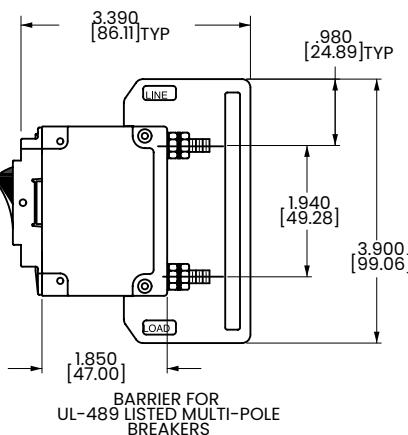
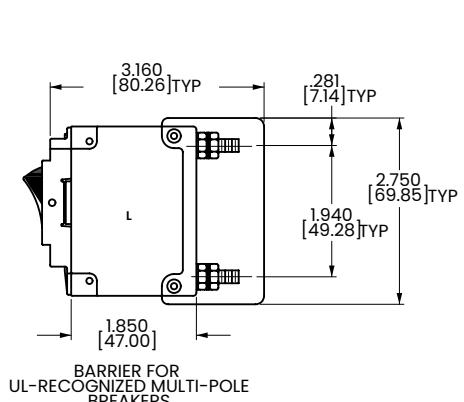
[Browse Standard Parts >](#)

Circuit & Terminal Diagrams

Rocker

inches [millimeters]

CIRCUIT BREAKER PROFILE		CIRCUIT SCHEMATIC		CIRCUIT SCHEMATIC	
		ANSI	IEC	ANSI	IEC
		SWITCH ONLY (NO COIL)		SWITCH TRIP	
	2.160 [54.86] TYP	LINE	LINE(NETZ)	A	0
SERIES TRIP (2 TERM'S.)	$\pm .03$ [$\pm .79$] 625 [5.88] TYP	MAIN TERM'S. (SEE TABLE A)	LOAD	LINE	LINE(NETZ) (3)
	.675 [17.15] TYP	LINE	LINE(NETZ)	A	2 3 4
SERIES TRIP W/AUX. SWITCH (5 TERM'S.)	.970 [24.64]	W/AUX. SWITCH TERM'S.(3 PLCs.)	LOAD	LINE	LINE(NETZ) (3)
	1.265 [32.13]	LINE	LINE(NETZ) (3)	DE	0
SHUNT TRIP (3 TERM'S.)	SHUNT	SHUNT (NEBENSCHLUSS)	LOAD(LAST)	LINE	LINE (NETZ)
	.646 [16.41]	LINE	RELAY (RELAYS)	FG	0
SHUNT TRIP (4 TERM'S.)	LOAD	LINE (NETZ) (3)	RELAY (RELAYS)	VOLTAGE COIL	VOLTAGE COIL
	.646 [16.41] TYP	RELAY	LOAD(LAST)	LOAD(LAST)	VOLTAGE COIL
SHUNT TRIP (4 TERM'S.)	.812 [20.62] TYP	RELAY	LOAD(LAST)	VOLTAGE COIL	VOLTAGE COIL



Notes:

1 Tolerance $\pm .020$ [.51] unless otherwise specified.
 2 Schematic shown represents current trip circuit.

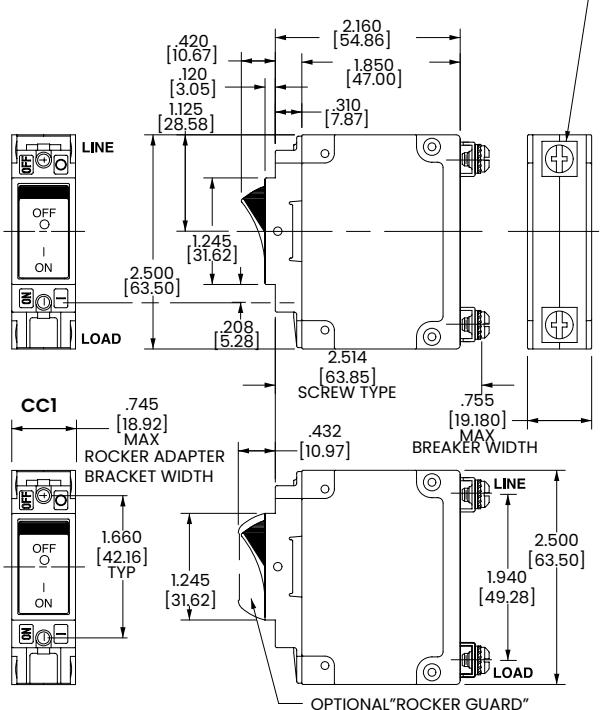
Dimensional Specs

Rocker

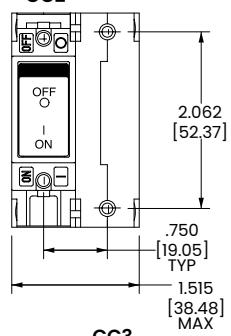
inches [millimeters]

INDICATE "ON"

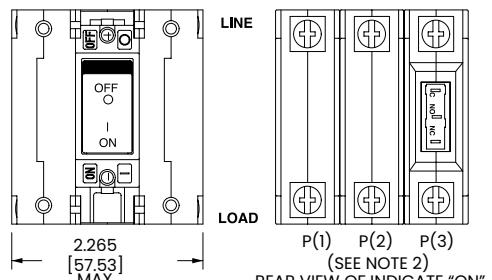
SCREW TYPE TERMINALS IN SERIES TRIP CIRCUIT
CONFIGURATION SHOWN. FOR OTHER CONFIGURATIONS
SEE CIRCUIT AND TERMINAL DIAGRAMS.



CC1



CC3

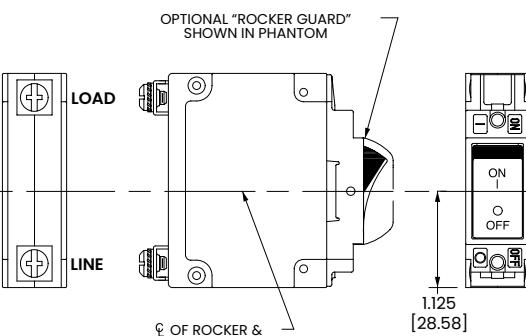


P(1) P(2) P(3)
(SEE NOTE 2)

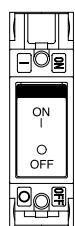
REAR VIEW OF INDICATE "ON"
SERIES TRIP W/ AUX SWITCH
CIRCUIT CONFIGURATION.

INDICATE "OFF" & SINGLE COLOR

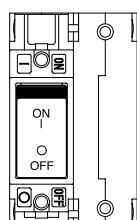
(INDICATE "OFF" SHOWN)



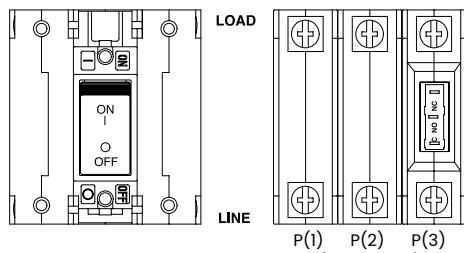
CF1



CF2



CF3



REAR VIEW OF INDICATE "OFF"
SERIES TRIP W/ AUX SWITCH
CIRCUIT CONFIGURATION.

Notes:

- 1 Dimensions apply to all variations shown. Notice that circuit breaker line and load terminal orientation on indicate OFF is opposite of indicate ON.
- 2 For pole orientation with horizontal legend, rotate front view clockwise 90°.
- 3 Tolerance ±.020 [.51] unless otherwise specified.

Ordering Scheme

Flat Rocker - UL 1077 Recognized

Sample Part Number **C 1 2 - B 0 - 10-450 - 1 2 1 - E**

Selection	1	2	3	4	5	6	7	8	9	10	11
-----------	---	---	---	---	---	---	---	---	---	----	----

1. SERIES

C

2. ACTUATOR

Two Color Visi-Rocker

- 1 Indicate OFF, vertical legend
- 2 Indicate OFF, horizontal legend
- Push-To-Reset, Visi-Rocker**
- 5 Indicate OFF, vertical legend
- 6 Indicate OFF, horizontal legend

ROCKER STYLE DESCRIPTIONS	
VERTICAL STYLE	HORIZONTAL STYLE
INDICATE "OFF" 	CODE "1", "5"  CODE "2", "6" 

3. POLES

- 1** One
- 2** Two
- 3** Three

4. CIRCUIT

- A** Switch Only (No Coil) **3**
- B** Series Trip (Current)

5. AUXILIARY / ALARM SWITCH

- 0** without Aux Switch
- 2** S.P.D.T., 0.110 Q.C. Term.

6. FREQUENCY & DELAY

03	DC 50/60Hz, Switch Only	30	DC 50/60Hz Instantaneous
10	DC Instantaneous	32	DC 50/60Hz Short
12	DC Short	34	DC 50/60Hz Medium
14	DC Medium	36	DC 50/60Hz Long
16	DC Long	44 ⁵	50/60Hz Medium, High-inrush
20	50/60Hz Instantaneous	46 ⁵	50/60Hz Long, High-inrush
22	50/60Hz Short	54 ⁵	DC Medium, High-inrush
24	50/60Hz Medium	56 ⁵	DC Long, High-inrush
26	50/60Hz Long		

Notes:

- 1 Push-to-reset actuators have OFF portion of rocker shrouded.
- 2 Multi-pole breakers have all poles identical except when specifying Auxiliary switch and/or mixed poles, and have one rocker per breaker. Rocker location as viewed from front panel: 2 pole – left pole; 3 pole – center pole.
- 3 Switch Only circuits, rated up to 50 amps and 3 poles. For .02 to 30 amps, select Current Code 630. For 35 – 50 amps, select Current Code 650. For 55–70 amps, select Current Code 670. For 75–100 amps, select Current Code 810.
- 4 Auxiliary Switch available with Series Trip and Switch Only circuits. On multipole breakers, one auxiliary switch is supplied, mounted in the extreme right pole.
- 5 Available up to 50 amps maximum.
- 6 Current ratings 60–70 are available up to four poles maximum. Current ratings 71 – 100 are available up to two poles maximum.
- 7 Terminal Codes 3, 6 & A available to 100 amps maximum.
- 8 Color shown is visi & legend with remainder of rocker black. Dual = ON-OFF/I-O legend.
- 9 Legend on Push-to-reset bezel/shroud is white with single color actuator codes 7 & 8. Legend on Push-to-reset bezel/shroud matches visi-color of rocker with actuator codes 5 & 6.

[Configure Complete Part Number >](#)

[Browse Standard Parts >](#)

7. CURRENT RATING (AMPERES)

6

CODE	AMPERES							
220	0.200	475	7.500	630	30.000	670	70.000	
250	0.500	610	10.000	635	35.000	680	80.000	
410	1.000	615	15.000	640	40.000	690	90.000	
425	2.500	620	20.000	650	50.000	810	100.000	
450	5.000	625	25.000	660	60.000			

8. TERMINAL

7

- 1** Stud 10-32
- 3** Stud 1/4-20
- 6** Stud M6
- A** Plug-In Stud

9. ACTUATOR COLOR & LEGEND

8, 9

Actuator Color	Legend Color
1 White	Black
2 Black	White
3 Red	White
4 Green	White

10 MOUNTING / BARRIERS

STANDARD ROCKER BEZEL

1	6-32 x 0.195 inches	BARRIERS	no	VOLTAGE	<300
2	6-32 x 0.195 inches	yes	yes	<300	>300
3	6-32 x 0.195 inches	yes	yes	>300	>300
4	ISO M3 x 5mm	no	no	<300	<300
5	ISO M3 x 5mm	yes	yes	<300	<300
6	ISO M3 x 5mm	yes	yes	>300	>300

RECESSED OFF ROCKER

7	6-32 x 0.195 inches	no	<300
8	6-32 x 0.195 inches	yes	<300
9	6-32 x 0.195 inches	yes	>300
A	ISO M3 x 5mm	no	<300
C	ISO M3 x 5mm	yes	<300
E	ISO M3 x 5mm	yes	>300

PUSH-TO-RESET BEZEL

B	6-32 x 0.195 inches	no	<300
D	6-32 x 0.195 inches	yes	<300
F	6-32 x 0.195 inches	yes	>300
H	ISO M3 x 5mm	no	<300
J	ISO M3 x 5mm	yes	<300
M	ISO M3 x 5mm	yes	>300

11 AGENCY APPROVAL

C UL Recognized & CSA Accepted

E TUV Certified, UL Recognized & CSA Accepted

I UL Recognized STD 1077, UL Recognized 1500 (ignition protected), & CSA Accepted

L UL489 Construction: UL Recognized & CSA Accepted

R UL489 Construction: TUV Certified, UL Recognized & CSA Accepted

Ordering Scheme

Flat Rocker - UL 489 Listed

Sample
Part Number

C 1 2 - B 0 - 24 - 450 - 1 2 A - K G

Selection

1 2 3 4 5 6 7 8 9 10 11 12

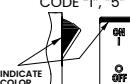
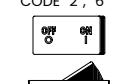
1. SERIES

C

2. ACTUATOR 1

Two Color Visi-Rocker

- 1 Indicate OFF, vertical legend
- 2 Indicate OFF, horizontal legend
- Push-To-Reset, Visi-Rocker**
- 5 Indicate OFF, vertical legend
- 6 Indicate OFF, horizontal legend

ROCKER STYLE DESCRIPTIONS	
VERTICAL STYLE	HORIZONTAL STYLE
CODE "1", "5" 	CODE "2", "6" 

3. POLES 2

- 1 One
- 2 Two
- 3 Three

4. CIRCUIT

- B Series Trip (current)

5 AUXILIARY/ALARM SWITCH 3

- 0 without Aux Switch
- 2 S.P.D.T., 0.110 Q.C. Term.

6. FREQUENCY & DELAY

12 DC Short	26 50/60Hz Long
14 DC Medium	44 4 50/60Hz Medium, High-inrush
16 DC Long	46 4 50/60Hz Long, High-inrush
22 50/60Hz Short	54 4 DC Medium, High-inrush
24 50/60Hz Medium	56 4 DC Long, High-inrush

Notes:

- 1 Push-to-reset actuators have OFF portion of rocker shrouded.
- 2 Multi-pole breakers have all breakers identical except when specifying Auxiliary switch and/or mixed poles, and have one rocker per breaker.
- 3 On multi-pole breakers, one auxiliary switch is supplied, mounted in the extreme right pole.
- 4 Available up to 50 amps maximum.
- 5 Current ratings 60-70 are available up to four poles maximum. Current ratings 71 - 100 are available up to two poles maximum.
- 6 Terminal Codes 3, 6 & A available to 100 amps maximum.
- 7 Color shown is visi and legend with remainder of rocker black.
Dual = ON-OFF/I-O legend on actuator.
- 8 Legend on push-to-reset bezel/shroud is white when single color rocker is ordered. Legend on push-to-reset bezel/shroud matches visi-color of rocker with actuator codes 5 & 6.
- 9 Barriers supplied on multi-pole units only.
- 10 2 & 3 pole circuit breakers required for I20/240 AC rating.

 Configure Complete Part Number >

 Browse Standard Parts >

7. CURRENT RATING (AMPERES) 5

CODE	AMPERES	475	7.500	630	30.000	670	70.000
220	0.200	610	10.000	635	35.000	680	80.000
250	0.500	615	15.000	640	40.000	690	90.000
410	1.000	620	20.000	650	50.000	810	100.000
425	2.500	625	25.000	660	60.000		
450	5.000						

8. TERMINAL 6

- 1 Stud 10-32
- 3 Stud 1/4-20
- 6 Stud M6
- A Plug-in Stud

9 ACTUATOR COLOR & LEGEND 7, 8

Actuator Color	Legend Color
1 White	Black
2 Black	White
3 Red	White
4 Green	White

10. MOUNTING / BARRIERS 9

STANDARD ROCKER BEZEL		BARRIERS
Threaded Insert, 2 per pole		
A 6-32 X 0.195 inches		yes
C ISO M3 x 5mm		yes
RECESSED OFF ROCKER		
Threaded Insert, 2 per pole		
E 6-32 x 0.195 inches		yes
F ISO M3 x 5mm		yes
PUSH-TO-RESET BEZEL		
Threaded Insert, 2 per pole		
B 6-32 x 0.195 inches		yes
D ISO M3 x 5mm		yes

11. MAXIMUM APPLICATION RATING

- B 125 DC
- C 120/240 AC
- D 240 AC
- F 277 AC
- K 120 AC
- M 80 DC

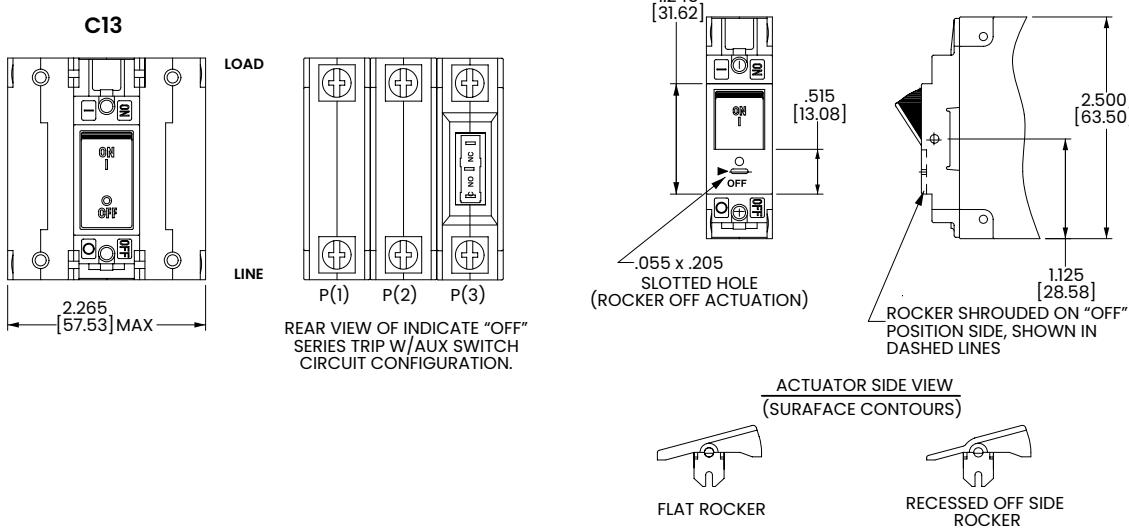
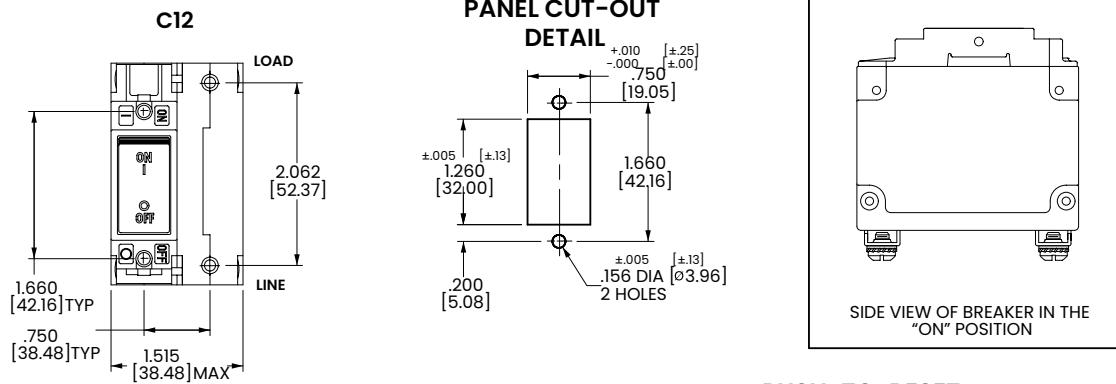
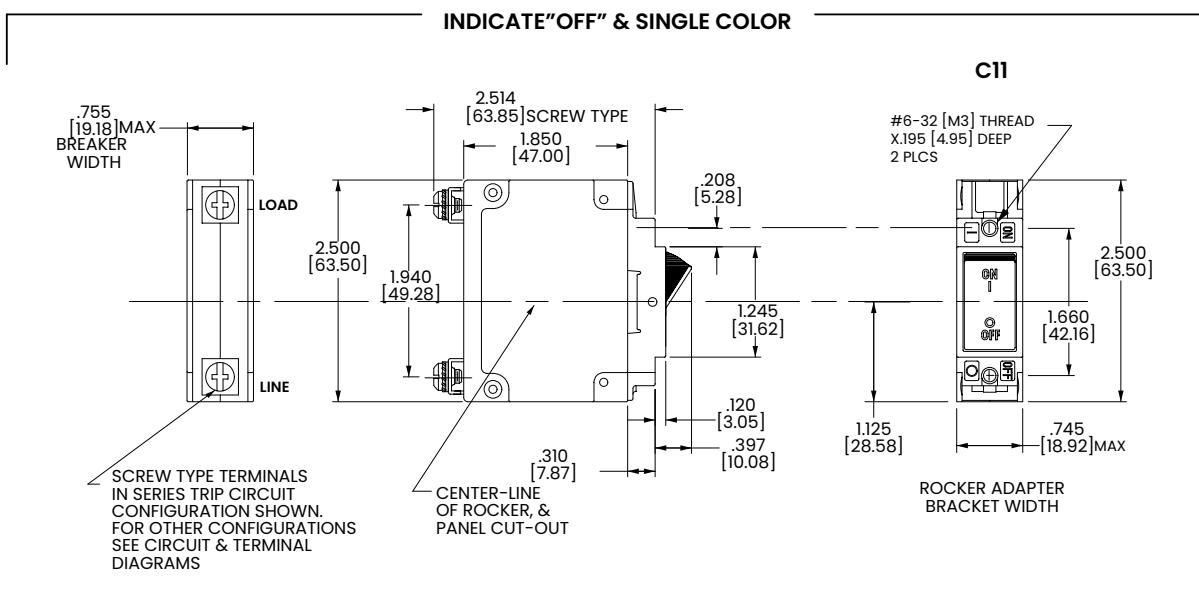
12. AGENCY APPROVAL 10

- A without approvals
- G UL 489 Listed & CSA Certified
- J UL489 Listed, CSA Certified & TUV Certified

Dimensional Specs

Flat Rocker

inches [millimeters]



Notes:

- 1 For pole orientation with horizontal legend, rotate front view clockwise 90°.
- 2 Tolerance ±.020 [.51] unless otherwise specified.