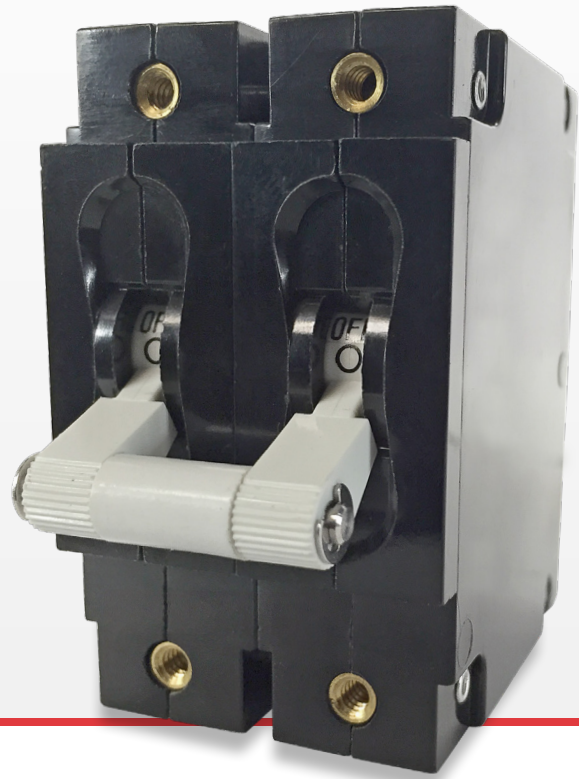


# C-Series

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.

<b>1-6</b>	<b>250</b>	<b>480</b>	<b>125</b>
Poles	Amps Max	VAC Max	VDC Max

## Typical Applications

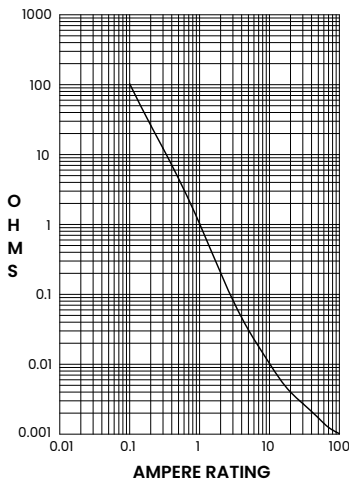
- Marine
- Renewable Energy
- Military
- Commercial Food
- Datacom/Telecom
- Generators & Welders
- Industrial Automation
- Medical Equipment

# Tech Spec

## Electrical

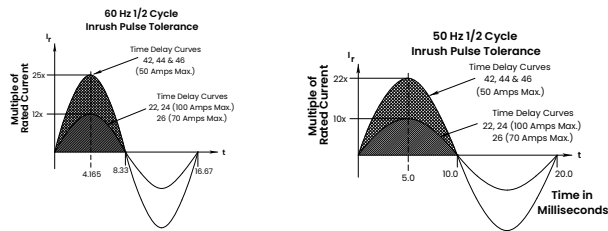
Maximum Voltage	AC, 480 WYE/277 VAC, 50/60 Hz (see Table A.) UL489: AC,240 VAC. (See Table D),50/60 Hz, 125 VDC
Current Ratings	Standard current coils: 0.100, 0.250, 0.500, 0.750, 1.00, 2.50, 5.00, 7.50, 10.0, 15.0, 25.0, 30.0, 35.0, 40.0, 50.0, 60.0, 70.0, 80.0, 90.0 and 100 amps. Other ratings available, 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 & TVU1.0 125 VAC.
Insulation Resistance	Minimum of 100 Megohms at 500 VDC.
Dielectric Strength	UL, CSA: 1960 V 50/60 Hz for oneminute 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.
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 perMethod 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	TC1, OL1, U2	TC1, OL1, U2	---												
	48			110 - 150				TC1, 2, OL1, U1	TC1, 2, OL1, U1													
	65			0.02 - 70				71 - 100	TC1, 2, OL0, U1		TC1, 2, OL0, U1											
				-				---	TC1, 2, OL1, U1		TC1, 2, OL1, U1											
	80			0.02 - 70				---	7,500		TC1, 2, OL1, U1	TC1, 2, OL1, U1										
				---				71 - 100	10,000		TC1, 2, OL1, U1	TC1, 2, OL1, U1										
				0.02 - 70				---	5,000		TC1, 2, OL0, U1	TC1, 2, OL0, U1										
	125			50 / 60				1	0.02 - 50		---	---	---	TC1, 2, OL1, U1	TC1, 2, OL1, U1	Must have Agency "L"						
	125/250													TC1, 2, OL1, U1	TC1, 2, OL1, U1	Must have Agency "L"						
	250													TC1, 2, OL1, U1	TC1, 2, OL1, U1	Must have Agency "L". 250 volts requires 2 pole						
														---	---	Per pole rating						
	125													50 / 60	1	0.02 - 100	---	---	---	3,000	TC1, OL1, U2	TC1, OL1, U2
	150	DC	---		---	---	80 - 100			---				---	5,000	TC1, 2, OL1, U1	TC1, 2, OL1, U1	Must have Agency "L"				
																101 - 175	TC1, 2, OL0, U3	---	Must have Agency "L"			
	125/250	50 / 60	1		0.02 - 100	---	---			---				---	3,500	TC1, OL1, U2	TC1, OL1, U2	---				
															3,000	TC1, 2, OL1, U1	TC1, 2, OL1, U1	2 or 3 poles breaking single phase				
															1,000	TC1, 2, OL1, U1	TC1, 2, OL1, U1	2 or 3 poles breaking single phase				
															5,000	TC1, 2, OL1, U2	TC1, 2, OL1, U2	2 or 3 poles breaking single phase. Agency "L"				
															3,500	TC1, 2, OL1, U2	TC1, 2, OL1, U2	Per pole rating				
				5,000				TC1, 2, OL1, U1	TC1, 2, OL1, U1		Must have Agency "L"											
				250				50 / 60	3		0.02 - 100	---	---		---	5,000	---	TC1, 2, OL1, C1	TC1, 2, OL1, C1	---		
																	0.02 - 70	---	3,000	TC1, 2, OL0, U2	TC1, 2, OL0, U2	---
																	---	0.02 - 90	---	5,000	---	5,000
				480/277				50 / 60	1		0.02 - 50	---	---		---	5,000	---	TC1, 2, OL1, C1	TC1, 2, OL1, C1	Must have Agency "L"		
0.02 - 30																	---	---	TC1, 2, OL1, C1	TC1, 2, OL1, C1	3 poles breaking 3 phase	
---																	---	---	TC1, 2, OL0, C1	TC1, 2, OL0, C1	---	
0.02 - 30	---	---	TC1, 2, OL1, C1		TC1, 2, OL1, C1	2 poles breaking 1 phase																
480	50 / 60	1	0.02 - 30	---	---	---	5,000	---	TC1, 2, OL0, C1	TC1, 2, OL0, C1	---											
								---	---	---	TC1, 2, OL1, C1	TC1, 2, OL1, C1	3 poles breaking 3 phase									
Dual Coil	50 / 60	1	0.02 - 50	---	---	---	---	7,500	TC1, 2, OL1, U1	TC1, 2, OL1, U1	---											
								3,000	TC1, OL1, U2	TC1, OL1, U2	Per pole rating											
								3,500	TC1, OL1, U2	TC1, OL1, U2	2 or 3 poles breaking single phase											
								3,000	TC1, 2, OL1, U1	TC1, 2, OL1, U1	2 or 3 poles breaking single phase											
								3,500	TC1, OL1, U2	TC1, OL1, U2	---											
								3,000	TC1, OL0, U2	TC1, OL0, U2	Per pole rating											
277	50 / 60	3	0.02 - 50	---	---	---	5,000	---	TC1, 2, OL1, C1	TC1, 2, OL1, C1	3 poles breaking 3 phase											
								---	---	---	TC1, 2, OL1, C1	TC1, 2, OL1, C1	---									
								---	---	---	TC1, 2, OL0, C1	TC1, 2, OL0, C1	3 poles breaking 3 phase									
								---	---	---	TC1, 2, OL1, C1	TC1, 2, OL1, C1	3 poles breaking 3 phase									
Shunt	50 / 60	3	0.02 - 30	---	31 - 50	---	5,000	---	TC1, 2, OL1, C1	TC1, 2, OL1, C1	3 poles breaking 3 phase											
								---	---	---	TC1, 2, OL1, C1	TC1, 2, OL1, C1	3 poles breaking 3 phase									
								---	---	---	TC1, 2, OL0, C1	TC1, 2, OL0, C1	---									
								---	---	---	TC1, 2, OL1, C1	TC1, 2, OL1, C1	2 poles breaking 1 phase									
Relay	50 / 60	1	0.02 - 50	---	---	---	5,000	---	7,500	TC1, 2, OL1, U1	TC1, 2, OL1, U1											
								---	---	---	TC1, 2, OL1, C1	TC1, 2, OL1, C1	---									
								---	---	---	TC1, 2, OL1, C1	TC1, 2, OL1, C1	3 poles breaking 3 phase									
Switch Only	50 / 60	1	0.02 - 100	---	---	---	---	---	---	---	---											
								65	---	---	---	---	---									
								80	---	---	---	---	---									
								125	---	---	---	---	---									
								125/250	---	---	---	---	---									
								250	---	---	---	---	---									
480/277	50 / 60	3	0.02 - 70	---	---	---	---	---	---	---	---											
								---	---	---	---	---										
								---	---	---	---	---										
480/277	50 / 60	1	0.02 - 50	---	---	---	---	---	---	---	---											
								---	---	---	---	---										
480/277	50 / 60	3	0.02 - 30	---	---	---	---	---	---	---	---											
								---	---	---	---	---										

**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 <sup>1</sup>	50 / 60	1	0.02 - 50	7 1/2
	250 <sup>1</sup>				3
	277 <sup>1</sup>		3	0.02 - 20	5
	480 <sup>2</sup>		1		3
		3		5	

**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 175A for 51 through 100A rating. 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 <sup>1</sup>	UL / CSA		VDE		TUV		UL / CSA				
						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,UI	---	
				71 - 100	71 - 100			10,000		---				---	5,000	TC1,2,OL0,UI
	125			50 / 60	1	1 - 50	---	---	---	---	---	---	5,000	---	TC1,2,OL1,UI	Agency J or R
	0.10 - 50					0.10 - 70										3,000
	250	50 / 60	3	0.10 - 100	---	---	---	---	---	---	5,000	5,000	---	TC1,2,OL1,UI	Agency J or R	
				0.10 - 90											0.10 - 30	5,000 <sup>2</sup>
	415	50 / 60	3	0.10 - 30	---	---	---	---	5,000	2,500	3,000	---	1,500	TC1,2,OL1,C1	Rocker	
				0.10 - 30					5,000	2,500	3,000	---			TC1,2,OL1,UI	Handle, Agency F, H, J or R
	Dual Coil	80	DC	---	0.10 - 30	---	---	---	7,500	---	1,500	5,000	1,500	TC1,2,OL1,UI	---	
		250	50 / 60	1 & 3					5,000	3,000	1,500	3,000				
Shunt	80	DC	---	0.10 - 70	---	---	---	7,500	---	5,000	5,000	1,500	TC1,2,OL1,UI	---		
	250	50 / 60	1 & 3					5,000	3,000	1,500	3,000					
	415	50 / 60	3	0.10 - 30	---	---	---	---	5,000	2,500	3,000	---	1,500	TC1,2,OL1,C1	Rocker	
									5,000	2,500	3,000	---			Handle, Agency F, H, J or R	

**Notes:**

- General Purpose ratings for UL/CSA only.
- 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.

**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 <sup>1</sup>	Limited to 2 Poles Max from 71 - 100 Amps	
				101 - 150	10,000		2 Poles - Parallel Poles
				151 - 250	10,000		3 Poles - Parallel Poles
	125	50 / 60	1	0.10 - 100	5,000	1 - 3 Poles	
				125 / 250	10,000	1 or 2 Poles (2 poles required for 250 Volts)	
	120	50 / 60	1	0.10 - 50	10,000	1 - 3 Poles	
				51 - 70	5,000		
	120 / 240	50 / 60	1	0.10 - 50	10,000 <sup>1</sup>	2 or 3 Poles (1 pole of a 3 pole unit is neutral)	
				0.10 - 30	5,000		
	240	50 / 60	1	0.10 - 30	5,000	1 Pole	
0.10 - 20				10,000	2 Poles		
277	50 / 60	1	0.10 - 20	10,000	1-2 Poles		
			0.10 - 30	10,000	---		
Dual Coil	120	50 / 60	1	0.10 - 30	10,000	---	

**Notes:**

- 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 PEQ22, 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 Full Load Amps	Interrupting Capacity (Amps) Without Backup Fuse	Application Codes		Construction Notes	
	Max Rating	Frequency	Phase			UL	CSA		
Series	48	DC	---	0.02 - 100	5,000	TCI, 2, OLI, UI	TCI, 2, OLI, UI	---	
	65			101 - 150					
	80			0.02 - 100	1,500	TCI, 2, OLO, UI	TCI, 2, OLO, UI		
	125	50 / 60	1	0.02 - 70		5,000	TCI, 2, OLI, UI		TCI, 2, OLI, UI
				71 - 100	1,500		TCI, 2, OLI, UI		TCI, 2, OLI, UI
				250		0.02 - 70	1,500		TCI, 2, OLI, UI
					71 - 100	TCI, 2, OLI, UI			TCI, 2, OLI, UI
									2 Poles Breaking Single Phase

**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](http://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 PEQ22, 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 <sup>1</sup>

- 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 <sup>2</sup>

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

## 5. AUXILIARY / ALARM SWITCH <sup>3</sup>

- 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 <sup>4</sup> 50/60Hz Medium, High-inrush |
| 20 50/60Hz Instantaneous   | 46 <sup>4</sup> 50/60Hz Long, High-inrush   |
| 22 50/60Hz Short           | 54 <sup>4</sup> DC, Medium, High-inrush     |
| 24 50/60Hz Medium          | 56 <sup>4</sup> 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  
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.
- 2 Auxiliary Switch available with Series Trip & Switch Only circuits. On multi-pole 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 Current Ratings 60 - 70 are available up to four poles maximum. Ratings 71 - 100 are available up to two poles maximum.
- 5 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) <sup>5</sup>

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 <sup>6</sup>

- 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 Threaded Insert	BARRIERS	VOLTAGE
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 <sup>1</sup>

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) <sup>2</sup>

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

## 8. TERMINAL <sup>3</sup>

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 <sup>4</sup>

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:

- Auxiliary Switch available with Series Trip & Switch Only circuits. On multi-pole breakers, one auxiliary switch is supplied, mounted in the extreme right pole.
- 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.
- 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.
- 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.

[Configure Complete Part Number >](#)

[Browse Standard Parts >](#)

## 7. CURRENT RATING (AMPERES) 4

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

## 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 Threaded Insert	BARRIERS
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



# Circuit & Terminal Diagrams Handle

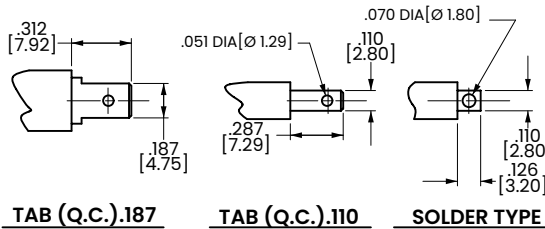
inches [millimeters]

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

DESCRIPTION	CODE	DIMENSIONAL DETAIL	RATING (AMPS)		
			25	50	100
.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 DETAIL<sup>3</sup>



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	AUX. SWITCH CODE	CIRCUIT SCHEMATIC		CIRCUIT CODE	AUX. SWITCH CODE
	ANSI	IEC			ANSI	IEC		
	SWITCH ONLY (NO COIL)							
			A	0			B C	0
	SWITCH ONLY (NO COIL) WITH AUXILIARY SWITCH		A	2 3 4	SERIES TRIP WITH AUXILIARY/ALARM SWITCH		B C	2 3 4
	SHUNT TRIP		D E	0	DUAL COIL; SERIES TRIP CURRENT COIL, SHUNT TRIP VOLTAGE COIL		H	0
	RELAY TRIP		F G	0	DUAL COIL; SERIES TRIP CURRENT COIL, RELAY TRIP VOLTAGE COIL		K	0

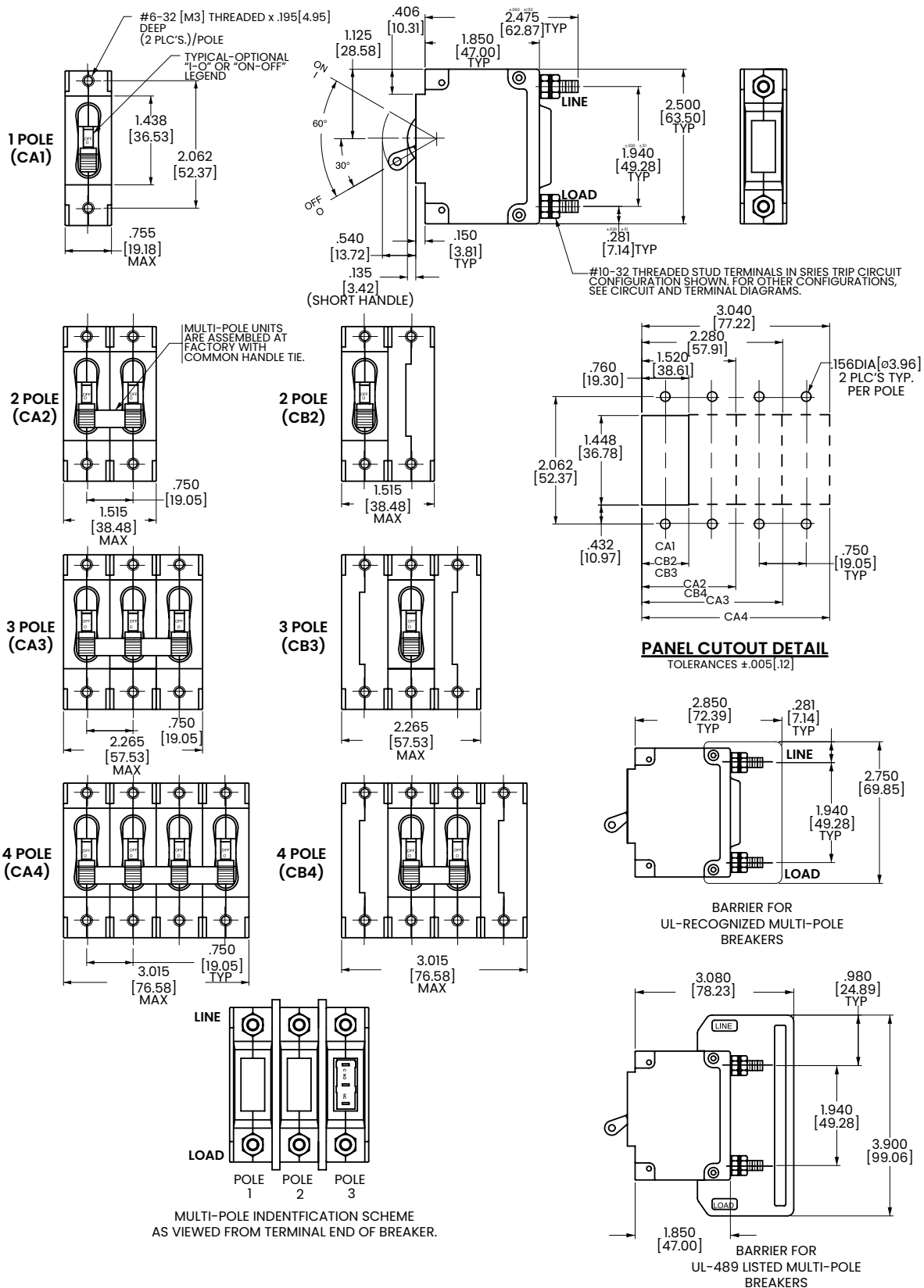
HANDLE POSITION VS. AUX/ALARM SWITCH MODE					
CIRCUIT BREAKER MODE	STANDARD C/B		MID TRIP C/B		
	HANDLE POSITION	AUX. SWITCH MODE	HANDLE POSITION	STANDARD ALARM SWITCH MODE	REVERSE ALARM SWITCH MODE 4
OFF					
ON					
ELECTRICAL TRIP					

Notes:

- 1 Tolerance  $\pm 0.020$  [.51] unless otherwise specified.
- 2 Schematic shown represents current trip circuits.
- 3 Available only as special catalog number.

# Dimensional Specs Handle

inches [millimeters]

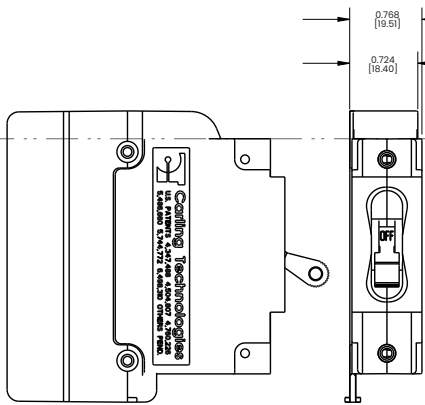


Notes:  
1 Tolerance ±.020 [0.51] unless otherwise specified.

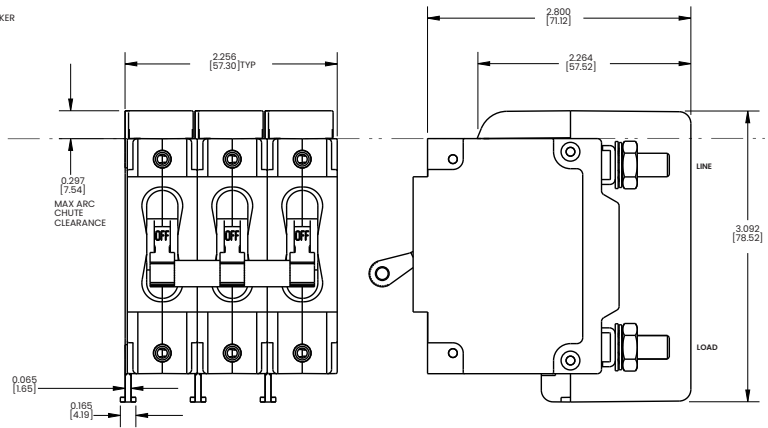
# Dimensional Specs Arc Chute Barrier

inches [millimeters]

1-POLE (CA1)  
W/ ARC CHUTE BARRIER

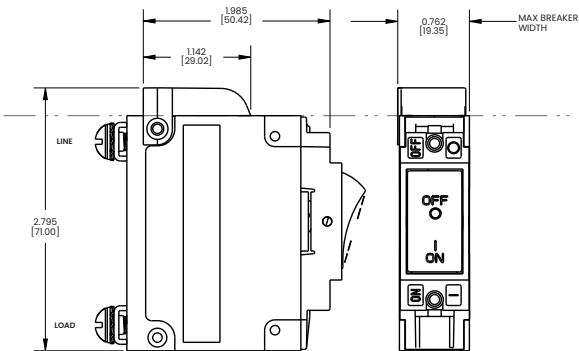


3-POLE (CA3)  
W/ ARC CHUTE BARRIER

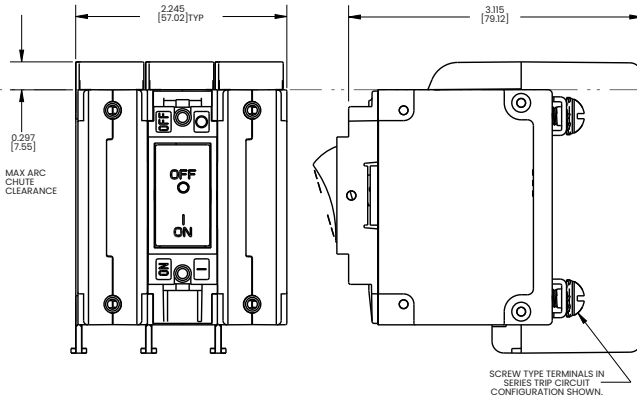


INDICATE "ON"

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

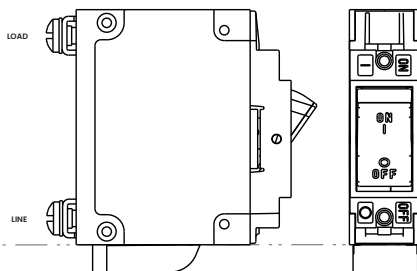


3-POLE (CC3, CD3)  
W/ ARC CHUTE BARRIER

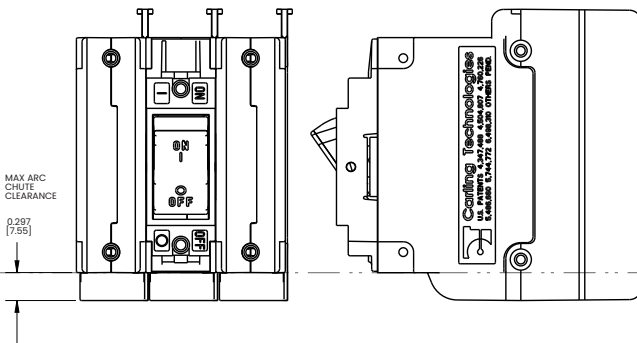


INDICATE "OFF" / SINGLE COLOR

1-POLE (CF1, CG1, C11, C21)  
W/ ARC CHUTE (NO BARRIER)



3-POLE (CF3, CG3, C13, C23)  
W/ ARC CHUTE BARRIER

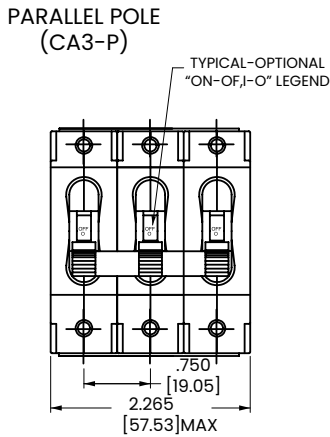
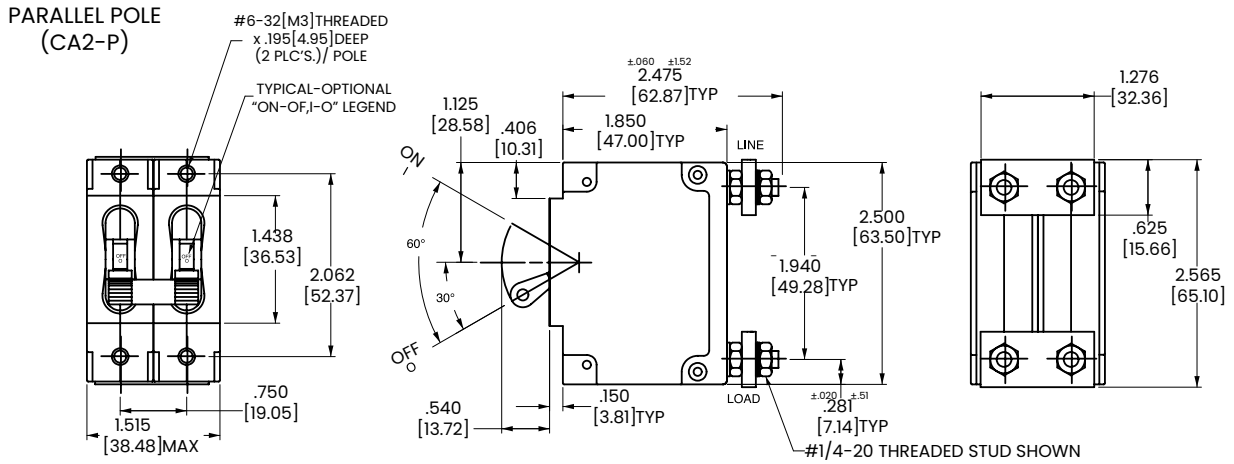


**Notes:**

- 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, C11, 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.

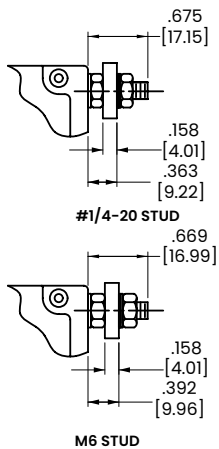
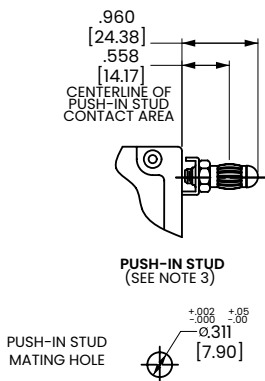
# Dimensional Specs Parallel Pole

inches [millimeters]



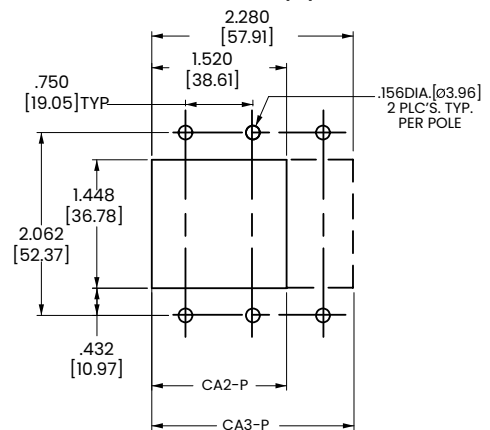
CIRCUIT BREAKER PROFILE	CIRCUIT SCHEMATIC (CA2-P SHOWN)		CIRCUIT CODE	SAFETY CODE
	ANSI	IEC		
<p>Dimensions: .400 [10.16], 1.388 [47.00] TYP</p>	<p>SWITCH TRIP</p>		P	0
<p>Dimensions: .400 [10.16], .255 [5.72]</p> <p>PUSH-IN STUD</p>	<p>SERIES TRIP WITH AUXILIARY SWITCH</p>		P	2 3 4

## TERMINAL DETAILS



## PANEL CUT-OUT DETAIL

TOLERANCE  $\pm .005$  [.12]



### Notes:

1 Tolerance  $\pm .020$  [.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 <sup>1</sup>

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 <sup>2</sup>

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 <sup>3</sup> 50/60Hz Medium, High-inrush
20 50/60Hz Instantaneous	46 <sup>3</sup> 50/60Hz Long, High-inrush
22 50/60Hz Short	54 <sup>3</sup> DC Medium, High-inrush
24 50/60Hz Medium	56 <sup>3</sup> DC Long, High-inrush
26 50/60Hz Long	

## 7. CURRENT RATING (AMPERES) <sup>4</sup>

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 <sup>5</sup>

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:

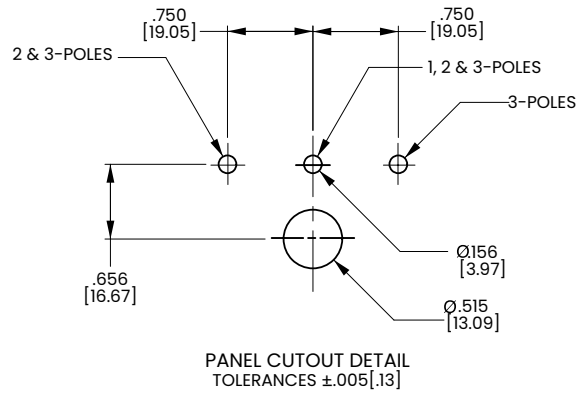
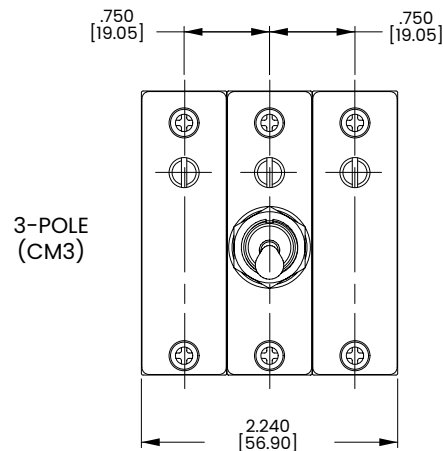
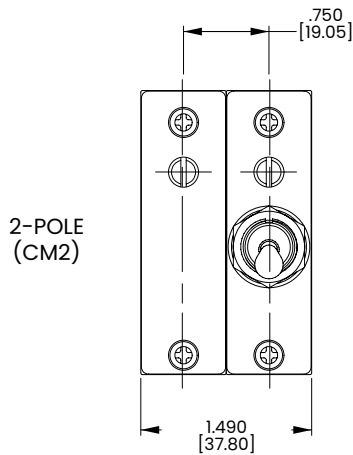
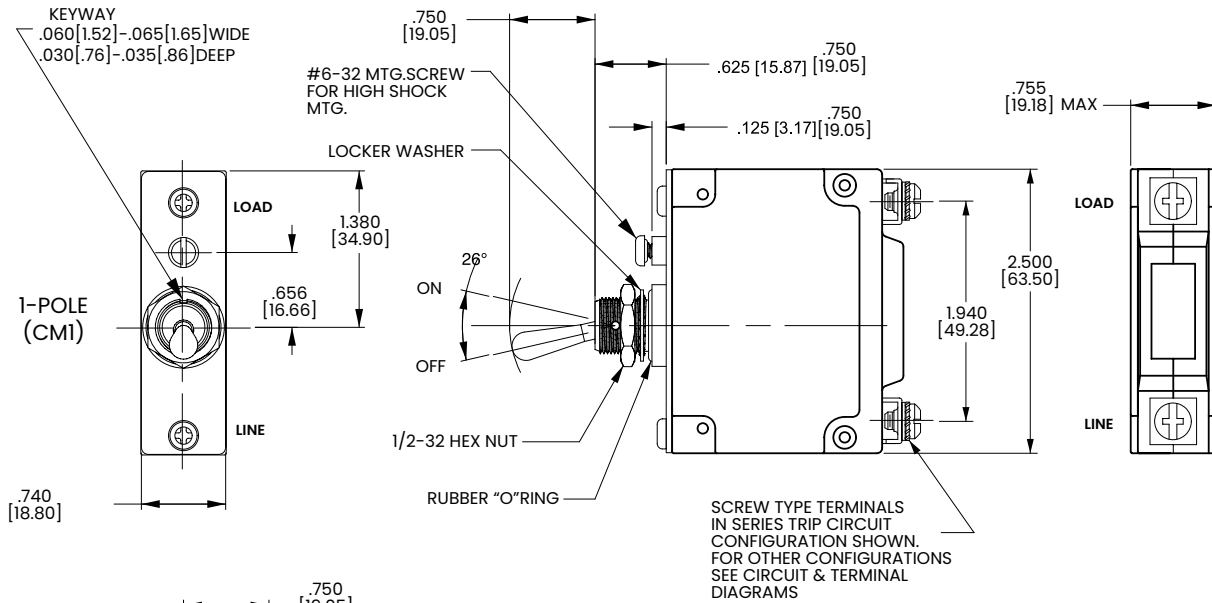
- Actuator Code M: Handle location as viewed from front of breaker:  
2 pole - right pole 3 pole - center pole
- Auxiliary Switch available with Series Trip and Switch Only circuits. On multipole breakers, one auxiliary switch is supplied, mounted in the extreme right pole.
- Available with Circuit Code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

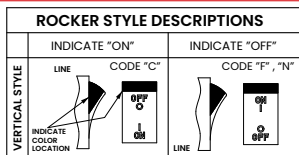
Selection 1 2 3 4 5 6 7 8 9 10 11

## 1. SERIES

C

## 2. ACTUATOR <sup>1</sup>

**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 <sup>2</sup>

1 One                      2 Two                      3 Three

## 4. CIRCUIT

**A** Switch Only (No Coil) <sup>3</sup>  
**B** Series Trip (Current)

## 5. AUXILIARY / ALARM SWITCH <sup>4</sup>

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

## 6. FREQUENCY & DELAY

<b>03</b> DC 50/60Hz, Switch Only	<b>30</b> DC 50/60Hz Instantaneous
<b>10</b> DC Instantaneous	<b>32</b> DC 50/60Hz Short
<b>12</b> DC Short	<b>34</b> DC 50/60Hz Medium
<b>14</b> DC Medium	<b>36</b> DC 50/60Hz Long
<b>16</b> DC Long	<b>44</b> <sup>5</sup> 50/60Hz Medium, High-inrush
<b>20</b> 50/60Hz Instantaneous	<b>46</b> <sup>5</sup> 50/60Hz Long, High-inrush
<b>22</b> 50/60Hz Short	<b>54</b> <sup>5</sup> DC Medium, High-inrush
<b>24</b> 50/60Hz Medium	<b>56</b> <sup>5</sup> DC Long, High-inrush
<b>26</b> 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 with Circuit Code B and up to 50 amps maximum.
- 6 Current Ratings 60-70 are available up to four poles maximum. 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 and legend with remainder of rocker black.

[Configure Complete Part Number >](#)

[Browse Standard Parts >](#)

## 7. CURRENT RATING (AMPERES) <sup>6</sup>

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

## 8. TERMINAL <sup>7</sup>

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

## 9. ACTUATOR COLOR & LEGEND <sup>8</sup>

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

## 10 MOUNTING / BARRIERS

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

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					
<b>810</b>	100.00	<b>815</b>	150.00	<b>917</b>	175.00	<b>825</b> 250.00
<b>912</b>	125.00	<b>816</b>	160.00	<b>820</b>	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
<b>1</b>	White	Black
<b>2</b>	Black	White
<b>3</b>	Red	White
<b>4</b>	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

**ROCKER STYLE DESCRIPTIONS**

VERTICAL STYLE	INDICATE "ON" CODE "C"	INDICATE "OFF" CODE "F"
LINE		
INDICATE COLOR LOCATION		

### 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

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

- Notes:
- Multi-pole breakers have all breakers identical except when specifying Auxiliary switch and/or mixed poles, and have one rocker per breaker.
  - On multi-pole breakers, one auxiliary switch is supplied, mounted in the extreme right pole.
  - Available up to 50 amps maximum.
  - Current ratings 71 - 100 with VDE approvals 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.
  - Dual = ON-OFF/I-O legend on actuator.
  - Barriers supplied on multi-pole units only.
  - 2 & 3 pole circuit breakers required for 120/240 AC rating.

### 7. CURRENT RATING (AMPERES) 4

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

- ### 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
<b>1</b>	White	Black
<b>2</b>	Black	White
<b>3</b>	Red	White
<b>4</b>	Green	White

### 10. MOUNTING / BARRIERS 8

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

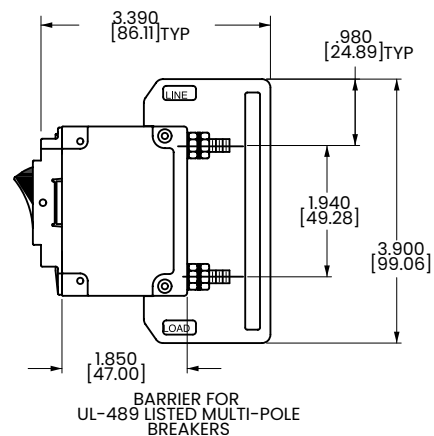
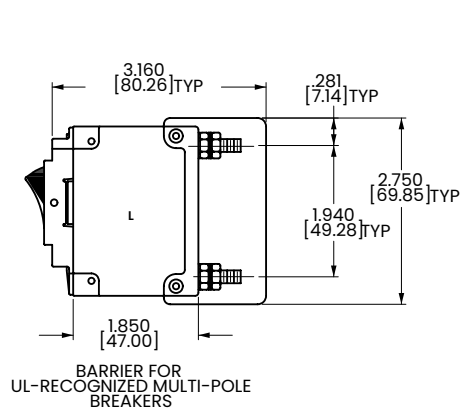
- ### 12. AGENCY APPROVAL
- A** without approvals
  - F** UL 489 Listed, CSA Certified, & VDE Certified
  - G** UL 489 Listed & CSA Certified
  - J** UL 489 Listed, CSA Certified & TUV Certified

[Configure Complete Part Number >](#)    [Browse Standard Parts >](#)

# Circuit & Terminal Diagrams Rocker

inches [millimeters]

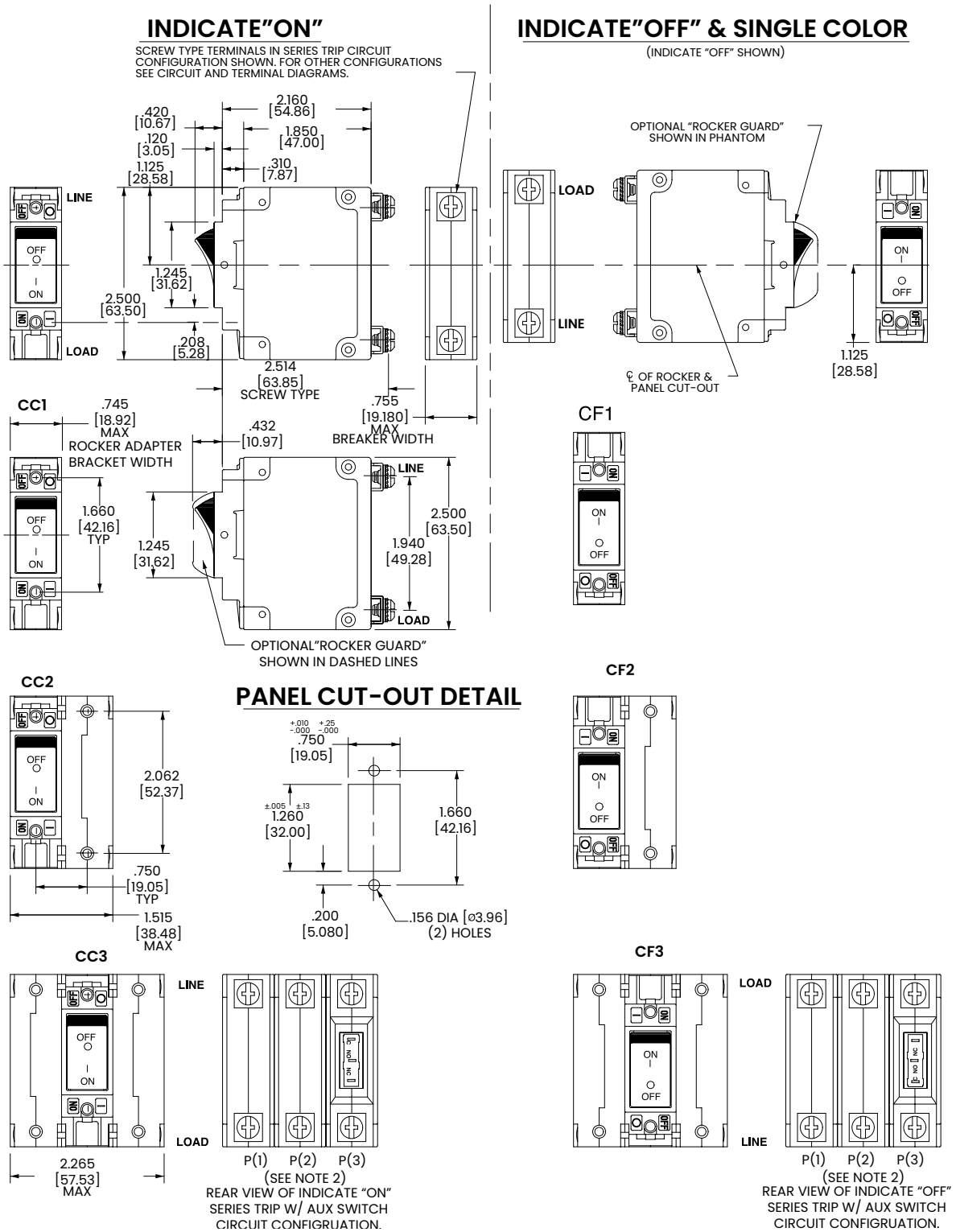
CIRCUIT BREAKER PROFILE	CIRCUIT SCHEMATIC		CIRCUIT CODE	AUX SWITCH CODE	CIRCUIT SCHEMATIC		CIRCUIT CODE	AUX SWITCH CODE
	ANSI	IEC			ANSI	IEC		
<p>SERIES TRIP (2 TERM'S.)  <math>\pm 0.031</math> [±.79]            625 [5.88] TYP</p>	SWITCH ONLY (NO COIL) LINE LOAD LINE (NETZ) LOAD (LAST)		A	0	SWITCH TRIP LINE LOAD LINE (NETZ) (3) LOAD (LAST)		BC	0
<p>SERIES TRIP W/AUX. SWITCH (5 TERM'S.)            675 [17.15] TYP            970 [24.64]            1265 [32.13]            AUX. SWITCH TERM'S. (3 PLCS.)</p>	SWITCH ONLY (NO COIL) WITH AUXILIARY SWITCH LINE LOAD LINE (NETZ) LOAD (LAST)		A	2 3 4	SERIES TRIP WITH AUXILIARY SWITCH LINE LOAD LINE (NETZ) (3) LOAD (LAST)		BC	2 3 4
<p>SHUNT TRIP (3 TERM'S.)</p>	SHUNT TRIP LINE SHUNT LOAD LINE (NETZ) (3) SHUNT (NEBENSCHLUSS) LOAD (LAST)		DE	0	DUAL COIL: SERIES TRIP CURRENT COIL, SHUNT TRIP VOLTAGE COIL LINE SHUNT LOAD LINE (NETZ) SHUNT TRIP VOLTAGE COIL LOAD (LAST) VOLTAGE COIL		H	0
<p>SHUNT TRIP (4 TERM'S.)  <math>\pm 0.031</math> [±.79]            812 [20.62] TYP            646 [16.41] TYP</p>	RELAY TRIP LINE LOAD RELAY RELAY LINE (NETZ) (3) RELAY (RELAIS) LOAD (LAST)		FG	0	DUAL COIL: SERIES TRIP CURRENT COIL, RELAY TRIP VOLTAGE COIL LINE LOAD RELAY RELAY LINE (NETZ) (3) RELAY (RELAIS) LOAD (LAST) VOLTAGE COIL VOLTAGE COIL		K	0



- Notes:
- 1 Tolerance  $\pm 0.020$  [.51] unless otherwise specified.
  - 2 Schematic shown represents current trip circuit.

# Dimensional Specs Rocker

inches [millimeters]



**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

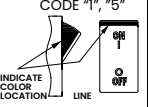
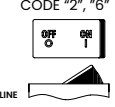


C

## 2. ACTUATOR 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
INDICATE "OFF"	 <p>CODE "1", "5"</p>	 <p>CODE "2", "6"</p>
INDICATE COLOR LOCATION		

## 3. POLES 2

1 One 2 Two 3 Three

## 4. CIRCUIT

- A Switch Only (No Coil) <sup>3</sup>
- 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 <sup>5</sup> 50/60Hz Medium, High-inrush
20 50/60Hz Instantaneous	46 <sup>5</sup> 50/60Hz Long, High-inrush
22 50/60Hz Short	54 <sup>5</sup> DC Medium, High-inrush
24 50/60Hz Medium	56 <sup>5</sup> 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	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
	<b>RECESSED OFF ROCKER</b>		
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
	<b>PUSH-TO-RESET BEZEL</b>		
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

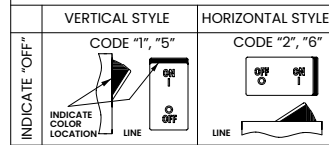
C

## 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



## 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 120/240 AC rating.

[Configure Complete Part Number >](#)

[Browse Standard Parts >](#)

## 7. CURRENT RATING (AMPERES) 5

CODE	AMPERES				
220	0.200	475	7.500	630	30.000
250	0.500	610	10.000	635	35.000
410	1.000	615	15.000	640	40.000
425	2.500	620	20.000	650	50.000
450	5.000	625	25.000	660	60.000
				670	70.000
				680	80.000
				690	90.000
				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 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 Threaded Insert, 2 per pole	BARRIERS
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

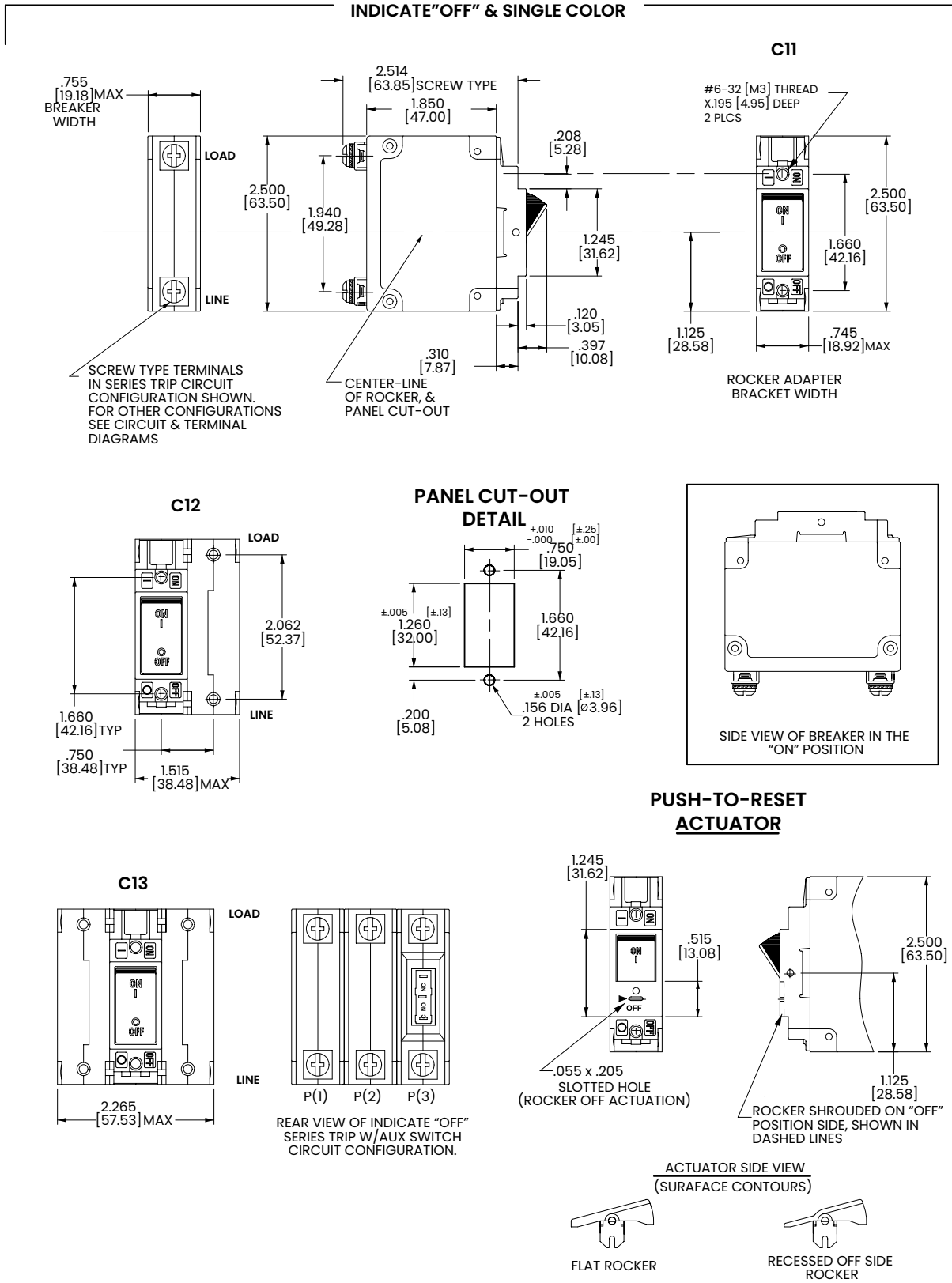
- B 125 DC
- C 120/240 AC
- D 240 AC
- F 277 AC
- K 120 AC
- M 80 DC

## 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.