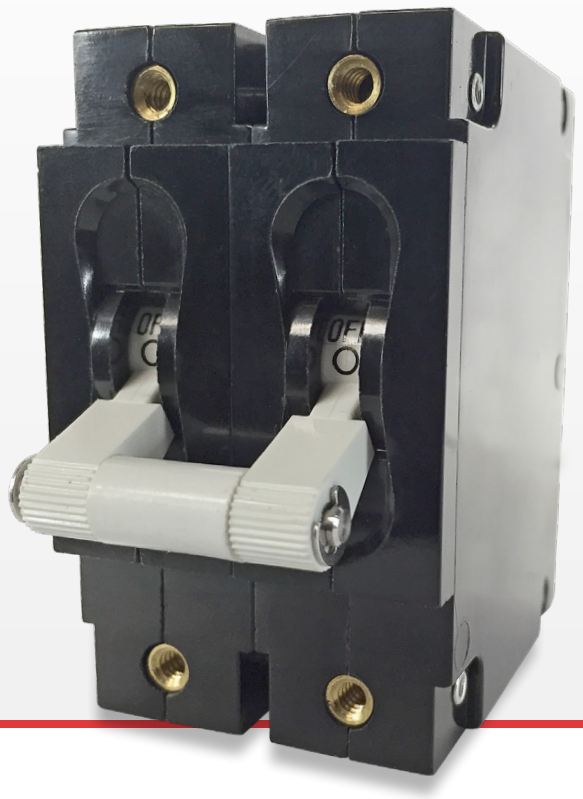
Littelfuse® | Carling Technologies®
A Littelfuse® Brand

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

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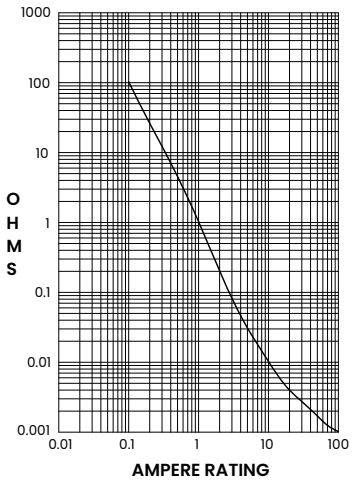
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Tech Spec

Electrical

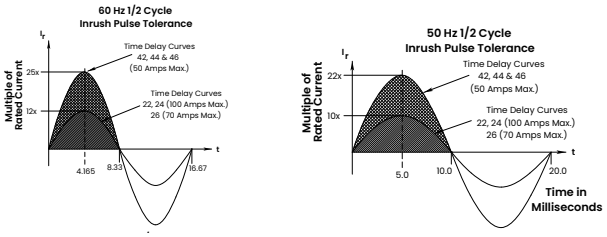
Maximum Voltage	AC, 480 WYE/277 VAC, 50/60 Hz (see Table A.) UL489: AC,240 VAC. (See Table D),50/60 Hz, 125 VDC
Current Ratings	Standard current coils: 0.100, 0.250, 0.500, 0.750, 1.00, 2.50, 5.00, 7.50, 10.0, 15.0, 25.0, 30.0, 35.0, 40.0, 50.0, 60.0, 70.0, 80.0, 90.0 and 100 amps. Other ratings available, 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 & TUV1.0 125 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.

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 pernMethod 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

*Manufacturer reserves the right to change product specification without prior notice.

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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
						UL / CSA				
	Max. Rating	Frequency	Phase	Full Load Amps	General Purpose Amps	With Backup Fuse	Without Backup Fuse	UL	CSA	
Series	32	DC	---	0.02 - 100	---	---	5,000	TC1, OL1, U2	TC1, OL1, U2	---
	48			110 - 150						
	65			0.02 - 70				TC1, 2, OL1, U1	TC1, 2, OL1, U1	
				-	71 - 100			TC1, 2, OL0, U1	TC1, 2, OL0, U1	
	80			0.02 - 70	---		7,500	TC1, 2, OL1, U1	TC1, 2, OL1, U1	
				---	71 - 100			TC1, 2, OL0, U1	TC1, 2, OL0, U1	
				0.02 - 70	---		10,000	TC1, 2, OL1, U1	TC1, 2, OL1, U1	Must have Agency "L"
				---	71 - 100			TC1, 2, OL0, U1	TC1, 2, OL0, U1	
	125			0.02 - 50	---		5,000	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
	125	50 / 60	1	0.02 - 100			3,000	TC1, OL1, U2	TC1, OL1, U2	Per pole rating
	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"
										Must have Agency "L" parallel pole
	125/250	50 / 60	1	0.02 - 100	---		3,500	TC1, OL1, U2	TC1, OL1, U2	---
				0.02 - 50			3,000	TC1, 2, OL1, U1	TC1, 2, OL1, U1	2 or 3 poles breaking single phase
				51 - 100			1,000	TC1, 2, OL1, U1	TC1, 2, OL1, U1	2 or 3 poles breaking single phase
				0.02 - 100			5,000	TC1, 2, OL1, U2	TC1, 2, OL1, U2	2 or 3 poles breaking single phase. Agency "L"
	250			0.02 - 50			3,500	TC1, 2, OL1, U2	TC1, 2, OL1, U2	Per pole rating
				0.02 - 100			5,000	TC1, 2, OL1, U1	TC1, 2, OL1, U1	Must have Agency "L"
				51 - 70		5,000	---	TC1, 2, OL1, C1	TC1, 2, OL1, C1	---
			3	---	0.02 - 100	---	3,000	TC1, 2, OL0, U2	TC1, 2, OL0, U2	
				0.02 - 70	---	5,000	---	TC1, 2, OL1, C1	TC1, 2, OL1, C1	3 poles breaking 3 phase
				---	0.02 - 90	---	5,000	TC1, 2, OL0, U1	TC1, 2, OL0, U1	Must have Agency "L"
	277		1	0.02 - 50	---	5,000	--	TC1, 2, OL1, C1	TC1, 2, OL1, C1	---
	480/277		3	0.02 - 30				TC1, 2, OL1, C1	TC1, 2, OL1, C1	3 poles breaking 3 phase
				---				TC1, 2, OL0, C1	TC1, 2, OL0, C1	---
	480		1	0.02 - 30				TC1, 2, OL1, C1	TC1, 2, OL1, C1	2 poles breaking 1 phase
				---				TC1, 2, OL0, C1	TC1, 2, OL0, C1	---
Dual Coil	80	DC	---	0.02 - 50		---	7,500	TC1, 2, OL1, U1	TC1, 2, OL1, U1	
	125	50 / 60	1				3,000	TC1, OL1, U2	TC1, OL1, U2	Per pole rating
	125/250						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
	250		3				3,500	TC1, OL1, U2	TC1, OL1, U2	---
							3,000	TC1, OL0, U2	TC1, OL0, U2	Per pole rating
	277		1			5,000	---	TC1, 2, OL1, C1	TC1, 2, OL1, C1	---
								TC1, 2, OL1, C1	TC1, 2, OL1, C1	3 poles breaking 3 phase
Shunt	80	DC	---			---	7,500	TC1, 2, OL1, U1	TC1, 2, OL1, U1	---
	277	50 / 60	1			5,000	---	TC1, 2, OL1, C1	TC1, 2, OL1, C1	
	250		3					TC1, 2, OL1, C1	TC1, 2, OL1, C1	3 poles breaking 3 phase
	480/277			0.02 - 30				TC1, 2, OL1, C1	TC1, 2, OL1, C1	3 poles breaking 3 phase
				---	31 - 50			TC1, 2, OL0, C1	TC1, 2, OL0, C1	---
	480		1	0.02 - 30	---			TC1, 2, OL1, C1	TC1, 2, OL1, C1	2 poles breaking 1 phase
				---	31 - 50			TC1, 2, OL0, C1	TC1, 2, OL0, C1	
Relay	80	DC	---	0.02 - 50		---	7,500	TC1, 2, OL1, U1	TC1, 2, OL1, U1	---
	277	50 / 60	1			5,000	---	TC1, 2, OL1, C1	TC1, 2, OL1, C1	
	250		3					TC1, 2, OL1, C1	TC1, 2, OL1, C1	3 poles breaking 3 phase
Switch Only	65	DC	---	71 - 100		---	---	---	---	---

	80			71 - 100						
				---	---					
	125	50 / 60	1	0.02 - 100						
	125/250									2 or 3 poles breaking single phase
	250		3	0.02 - 70						---
	277		1	0.02 - 50						
	480/277		3	0.02 - 30						3 poles breaking 3 phase
				---	31 - 50					---

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 175 for 51 through 100 Amp rating

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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]			0.02 - 20	3
			3		5
	277 [1]		1		3
	480 [2]		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
						UL / CSA		VDE		TUV			
	Max. Rating	Frequency	Phase	Full Load Amps	General Purpose Amps [1]	With Backup Fuse	Without Backup Fuse	(Inc) With Backup Fuse	(Icn) Without Backup Fuse	(Inc) With Backup Fuse	(Icn) Without Backup Fuse	UL / CSA	
Series	80	DC	---	0.10 - 70	---	---	7,500	---	5,000	5,000	1,500	TC1,2,OL1,U1	---
				71 - 100	71 - 100		10,000			---	5,000	TC1,2,OL0,U1	Agency F, H, J or R
	125			1 - 50	---		5,000		---			TC1,2,OL1,U1	Agency J or R
	250			0.10 - 50			5,000					TC1,2,OL1,U1	2P, Agency J or R
		50 / 60	1	0.10 - 70				3,000	1,500	3,000	1,500		---
				0.10 - 100				---	---	5,000	5,000		Agency J or R
			3	0.10 - 90									
	415			0.10 - 30		5,000 [2]	---	3,000	1,500	3,000	1,500	TC1,2,OL1,C1	Rocker
								5,000	2,500				Handle, Agency F, H, J or R
Dual Coil	80	DC	---	0.10 - 30		---	7,500	---	1,500	5,000		TC1,2,OL1,U1	---
	250	50 / 60	1 & 3				5,000	3,000		3,000			
Shunt	80	DC	---	0.10 - 70			7,500	---	5,000	5,000		TC1,2,OL1,U1	---
	250	50 / 60	1 & 3				5,000	3,000	1,500	3,000		TC1,2,OL1,U1	---
	415		3	0.10 - 30		5,000 [2]	---	5,000	2,500			TC1,2,OL1,C1	Rocker
													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 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 [1]	Limited to 2 Poles Max from 71 - 100 Amps
				101 - 150	10,000	2 Poles - Parallel Poles
				151 - 250		3 Poles - Parallel Poles
	125			0.10 - 100	5,000	1 - 3 Poles
	125 / 250			0.10 - 50		1 or 2 Poles (2 poles required for 250 Volts)
	120	50 / 60	1		10,000	1 - 3 Poles
				51 - 70	5,000	
	120 / 240			0.10 - 50		2 or 3 Poles (1 pole of a 3 pole unit is neutral)
					10,000 [1]	
	240			0.10 - 30	5,000	1 Pole
				0.10 - 20	10,000	2 Poles
	277					1-2 Poles
Dual Coil	120			0.10 - 30		---

Notes:
1 Special catalog number required. Consult factory.

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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, U1	TC1, 2, OL1, U1	---
				101 - 150				
	65			0.02 - 100	1,500	TC1, 2, OL0, U1	TC1, 2, OL0, U1	
	80			0.02 - 70		TC1, 2, OL1, U1	TC1, 2, OL1, U1	
	125	50 / 60	1		5,000	TC1, 2, OL1, U1	TC1, 2, OL1, U1	
				71 - 100	1,500			
	250			0.02 - 70		TC1, 2, OL1, U1	TC1, 2, OL1, U1	
				71 - 100				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

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

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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 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

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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 >

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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	CODE	AMPERES	CODE	AMPERES	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 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

Downloaded from Arrow.com.

Circuit & Terminal Diagrams Handle

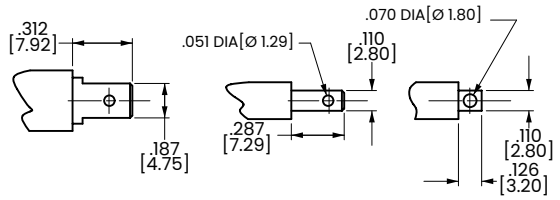
inches [millimeters]

TERMINAL			RATING(AMPS)			
DESCRIPTION	CODE	DIMENSIONAL DETAIL	25	50	100	80
#10-32 STUD	1	.723 [18.36], .150 [3.81]	■	■		
M5 STUD	4	.688 [17.48], .150 [3.81]	■	■		
#1/4-20 STUD	3	.723 [18.36], .150 [3.81]	■	■	■	
M6 STUD	6					
#1/4-20 STUD	3	.675 [17.15], .235 [5.97]				■
M6 MUD	6	.669 [16.99], .264 [6.71]				■
#10-32 SCREW	2	±.015 ±.38 .150 [3.81]	■	■		
M-5 SCREW	5					

TERMINAL			RATING(AMPS)			
DESCRIPTION	CODE	DIMENSIONAL DETAIL	25	50	100	80
.250 DOUBLE Q.C.	7	.400 [10.16], .820 [20.83], .320 [8.13], .173 [4.39], .250 [6.35]	■			
7/16" CLIP TERMINALS	9	.437 DIA [Ø11.10] COMPONENT DIA, .644 [16.36], .901 [22.89]	■	■		
PUSH-IN STUD	A	.960 [24.38], +.002 -.000 +.05 -.00 .311 DIA[Ø7.90], .558 [14.17], CENTERLINE OF PUSH-IN STUD CONTACT AREA, PUSH-IN STUD MATING HOLE	■	■	■	■

NOTES: TOLERANCE ON STUD LENGTHS IS ±.031 [±.79] UNLESS OTHERWISE SPECIFIED.

AUXILIARY / ALARM SWITCH TERMINAL DETAIL[3]



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

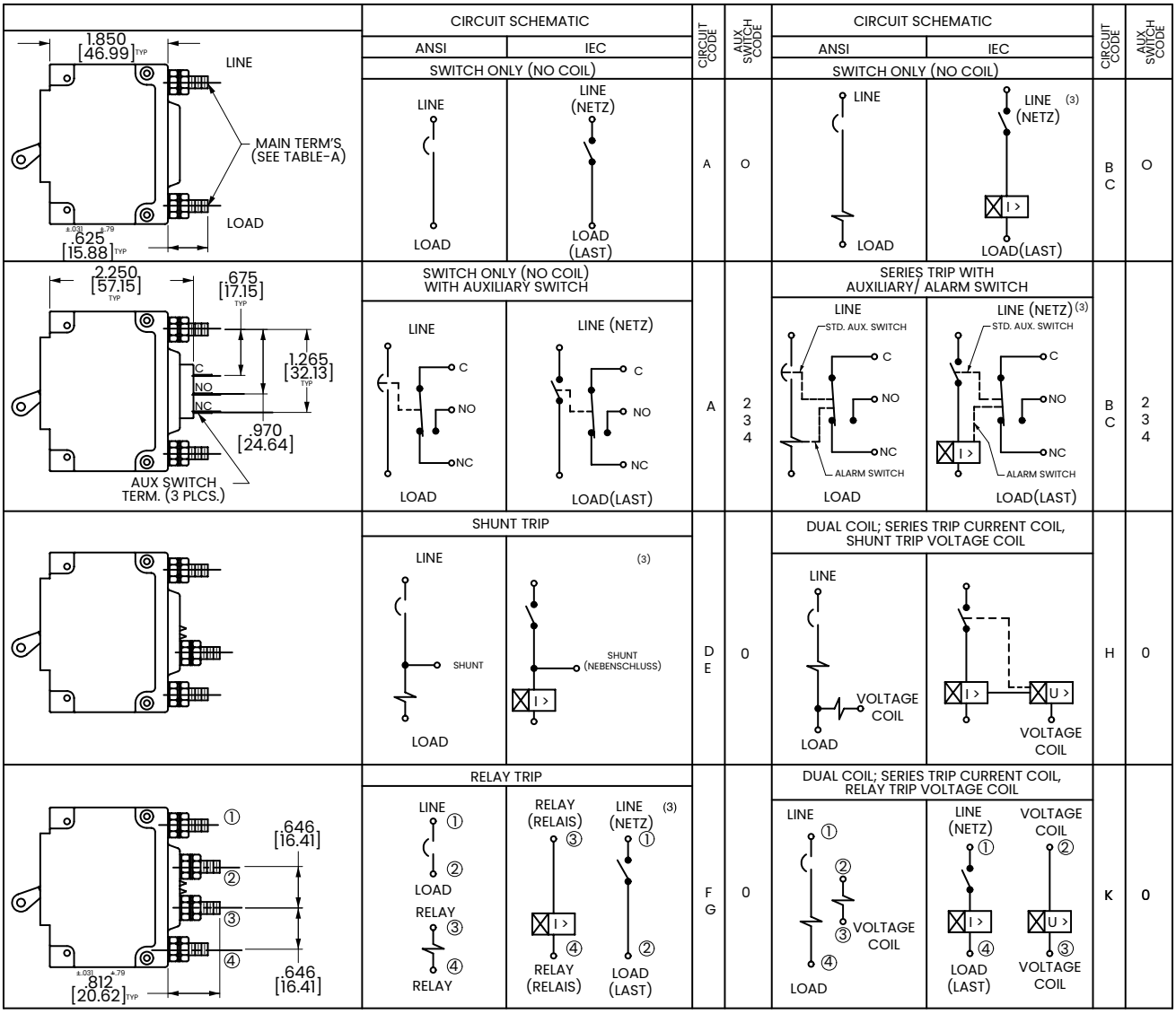
Notes:
1 Tolerance ±.020 [.51] unless otherwise specified.
2 Available on Series Trip and Switch Only Circuits when called for on multi-pole units. Only one auxiliary switch is normally supplied, as viewed in mulit-pole identification scheme.

Downloaded from Arrow.com.

Circuit & Terminal Diagrams

Handle

inches [millimeters]



HANDLE POSITION VS. AUX/ALARM SWITCH MODE

CIRCUIT BREAKER MODE	STANDARD C/B HANDLE POSITION	STANDARD C/B AUX. SWITCH MODE	MID TRIP C/B HANDLE POSITION	MID TRIP C/B STANDARD ALARM SWITCH MODE	MID TRIP C/B REVERSE ALARM SWITCH MODE 4
OFF	30° OFF O	NC NO C	30° OFF O	NC NO C	NC NO C
ON	ON 30°	NC NO C	ON 30°	NC NO C	NC NO C
ELECTRICAL TRIP	30° OFF O	NC NO C	90°	NC NO C	NC NO C

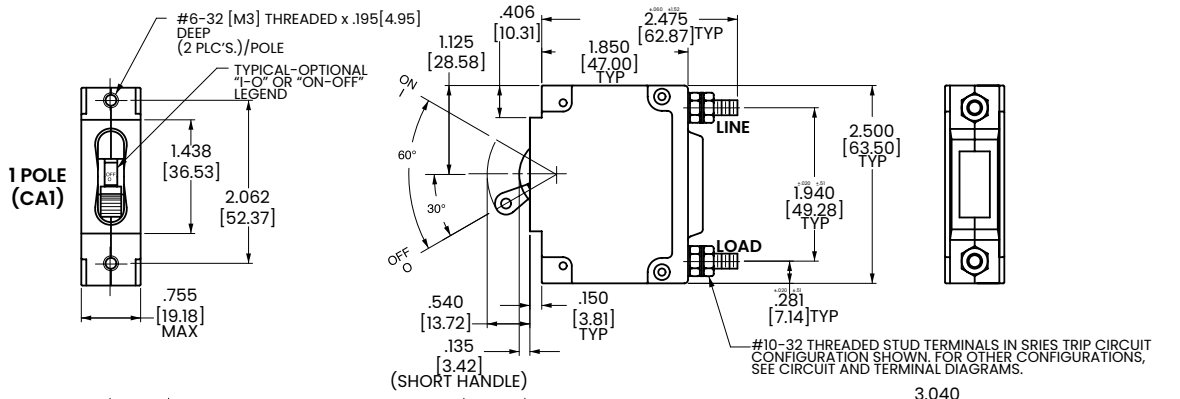
Notes:
1 Tolerance ±.020 [.51] unless otherwise specified.
2 Schematic shown represents current trip `circuits.
3 Available only as special catalog number.

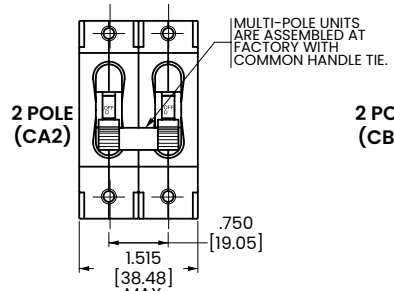
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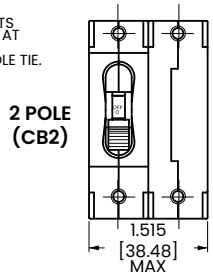
Dimensional Specs

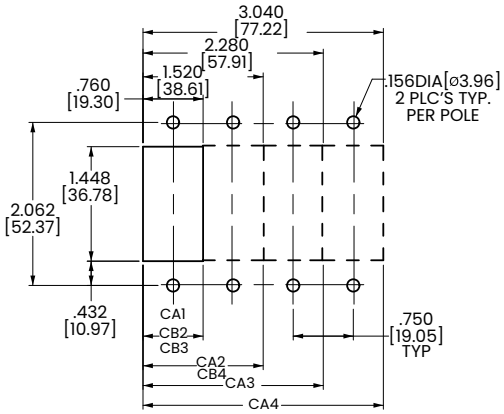
Handle

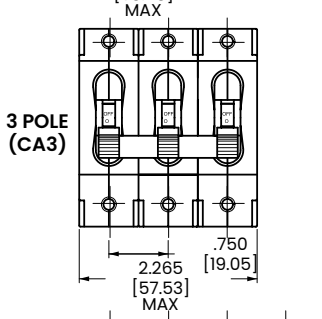
inches [millimeters]

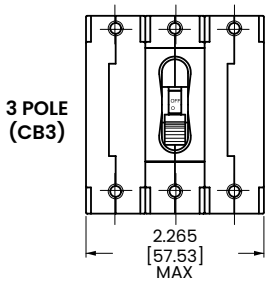






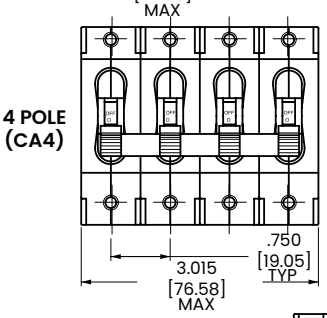


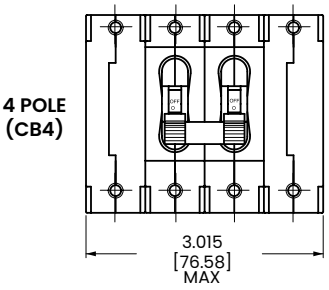


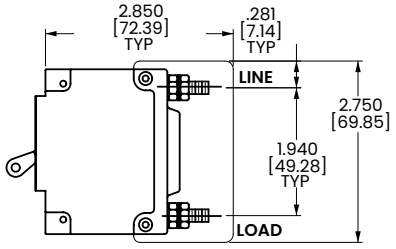


PANEL CUTOUT DETAIL

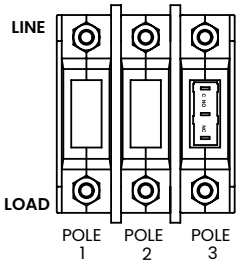
TOLERANCES ±.005[.12]



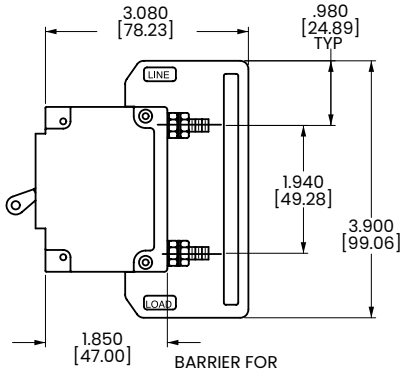




BARRIER FOR UL-RECOGNIZED MULTI-POLE BREAKERS



MULTI-POLE INDENTFICATION SCHEME AS VIEWED FROM TERMINAL END OF BREAKER.



BARRIER FOR UL-489 LISTED MULTI-POLE BREAKERS

Notes:

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

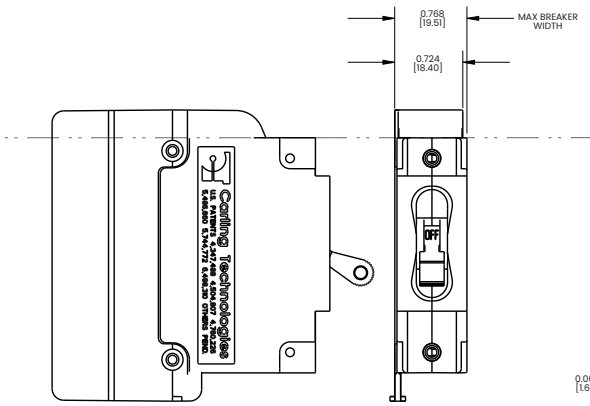
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Dimensional Specs

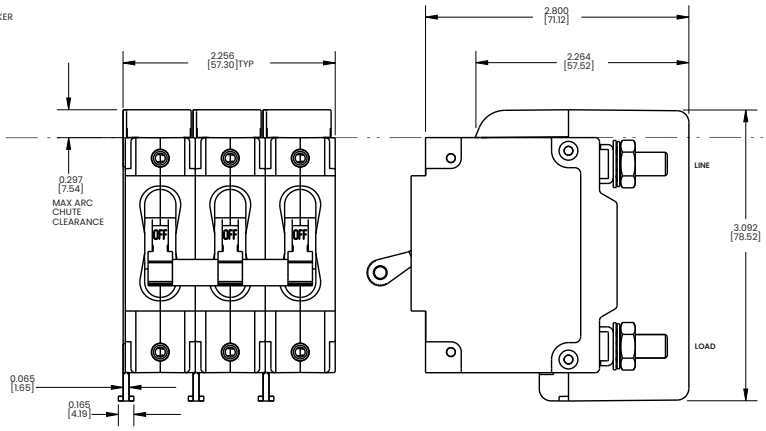
Arc Chute Barrier

inches [millimeters]

1-POLE (CA1)
W/ ARC CHUTE BARRIER

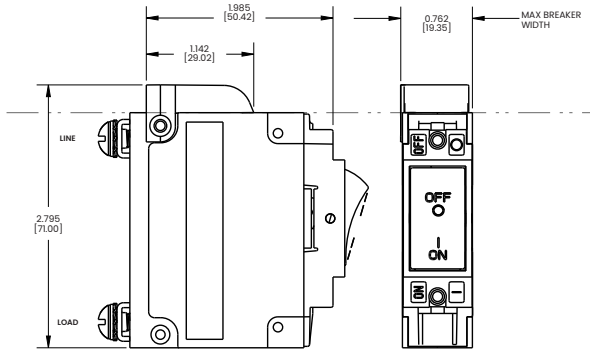


3-POLE (CA3)
W/ ARC CHUTE BARRIER

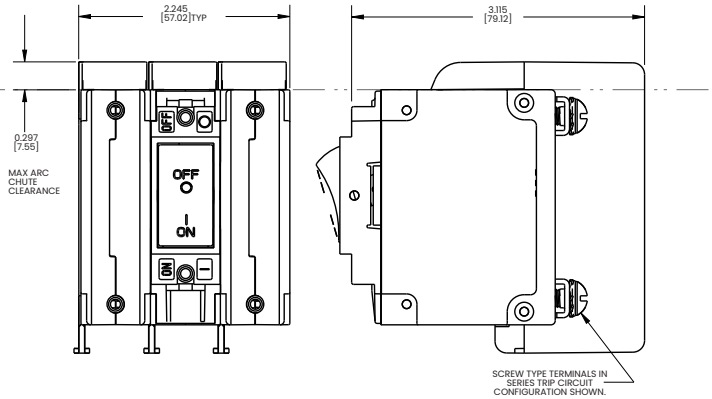


INDICATE "ON"

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

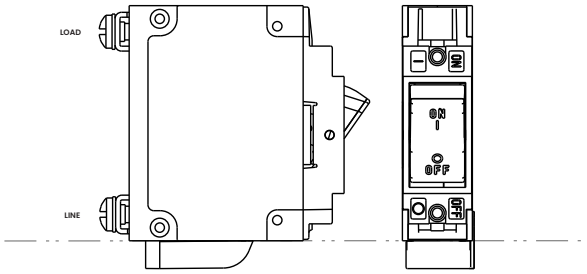


3-POLE (CC3, CD3)
W/ ARC CHUTE BARRIER

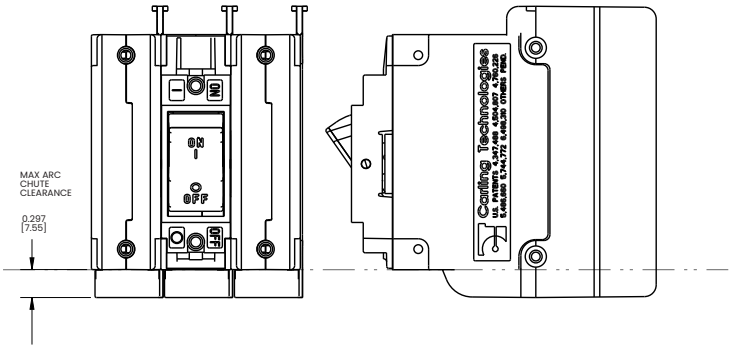


INDICATE "OFF"/ SINGLE COLOR

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



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



Notes:

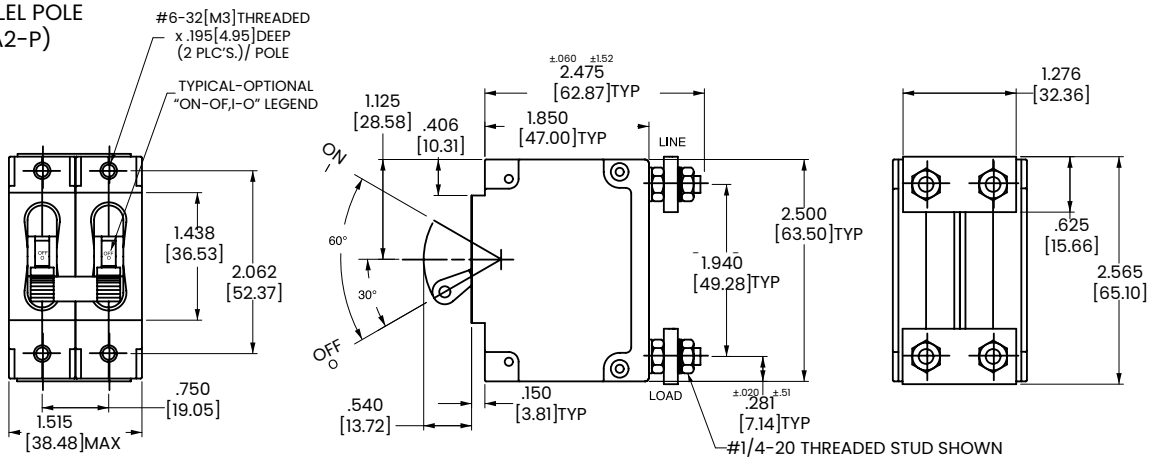
1 Only 1-pole and 3-pole configurations shown. Arc chute (without barrier) and arc chute barrier also available for 2-pole construction.
2 Dimensions apply to all variations shown.
3 Notice that line and load terminal orientation for indicate on and indicate off rocker circuit breakers are opposite.
4 Screw type terminals shown for Rocker style (CF1, C11, etc) circuit breakers. For other terminal configurations see circuit and terminal diagrams.
5 Tolerance ± .020 unless otherwise specified.
6 Must be ordered under a special catalog number.

Downloaded from Arrow.com.

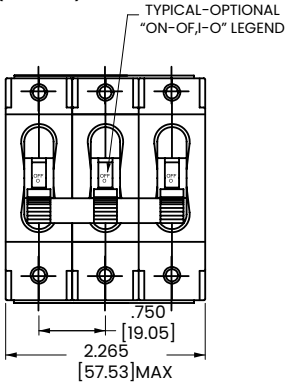
Dimensional Specs Parallel Pole

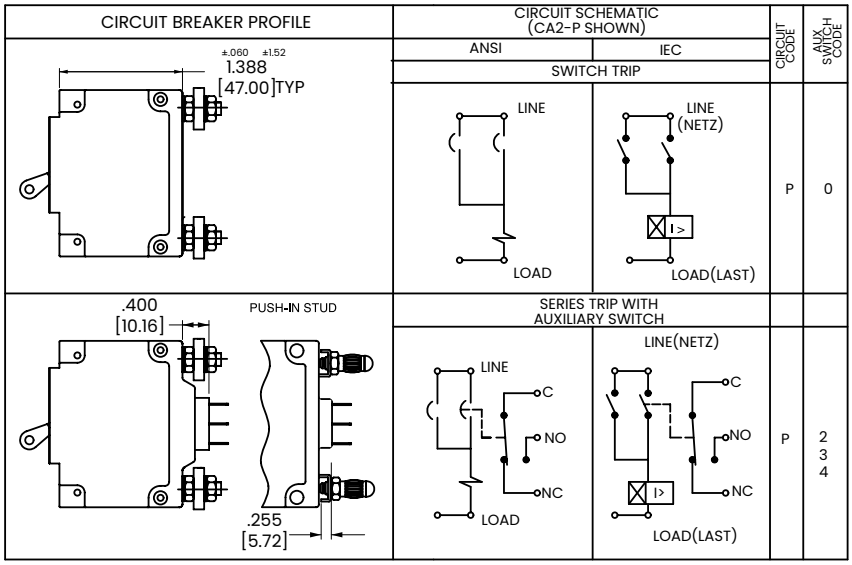
inches [millimeters]

PARALLEL POLE
(CA2-P)

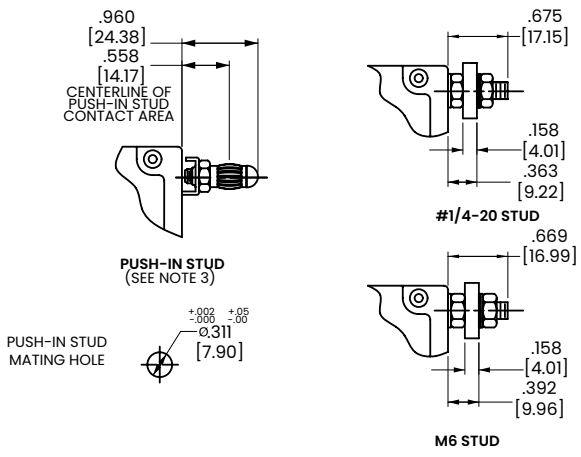


PARALLEL POLE
(CA3-P)



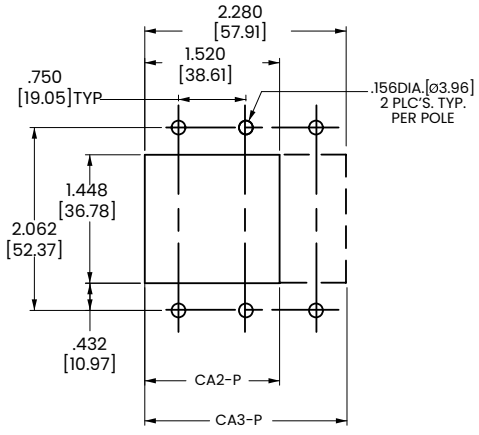


TERMINAL DETAILS



PANEL CUT-OUT DETAIL

TOLERANCE±005[.12]



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

Downloaded from Arrow.com.

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

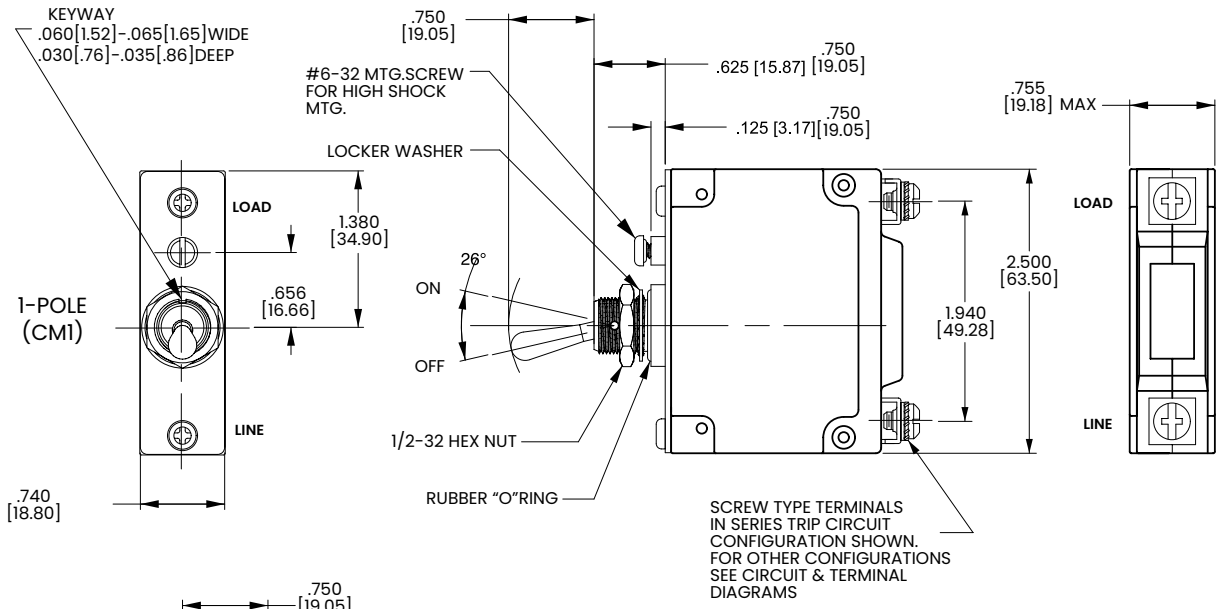
Configure Complete Part Number > Browse Standard Parts >

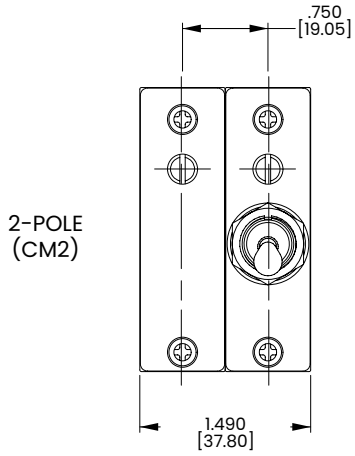
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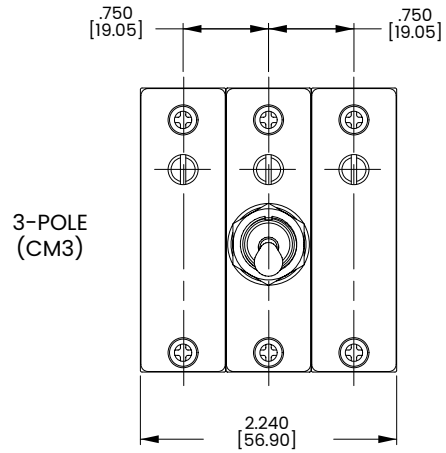
Dimensional Specs

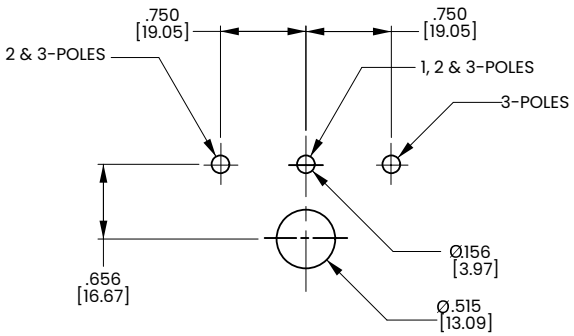
Sealed Toggle

inches [millimeters]









PANEL CUTOUT DETAIL
TOLERANCES ±.005[.13]

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

Downloaded from Arrow.com.

Ordering Scheme

Rocker - UL 1077 Recognized

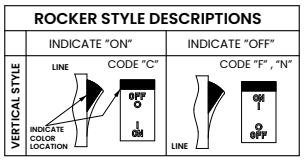
Sample Part Number	C	C	3	-	B	0	-	14	-	450	-	1	2	1	-	D
Selection	1	2	3		4	5		6		7		8	9	10		11

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:
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) [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]

	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

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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	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 >

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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

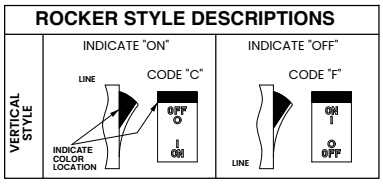
1. SERIES

C

2. ACTUATOR [1]

Two Color Visi-Rocker
C Indicate ON, vertical legend
F Indicate OFF, vertical legend

ROCKER STYLE DESCRIPTIONS



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

7. CURRENT RATING (AMPERES) [4]

CODE	AMPERES							
210	0.100	**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. 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]

		BARRIERS
	Standard Rocker Bezel 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

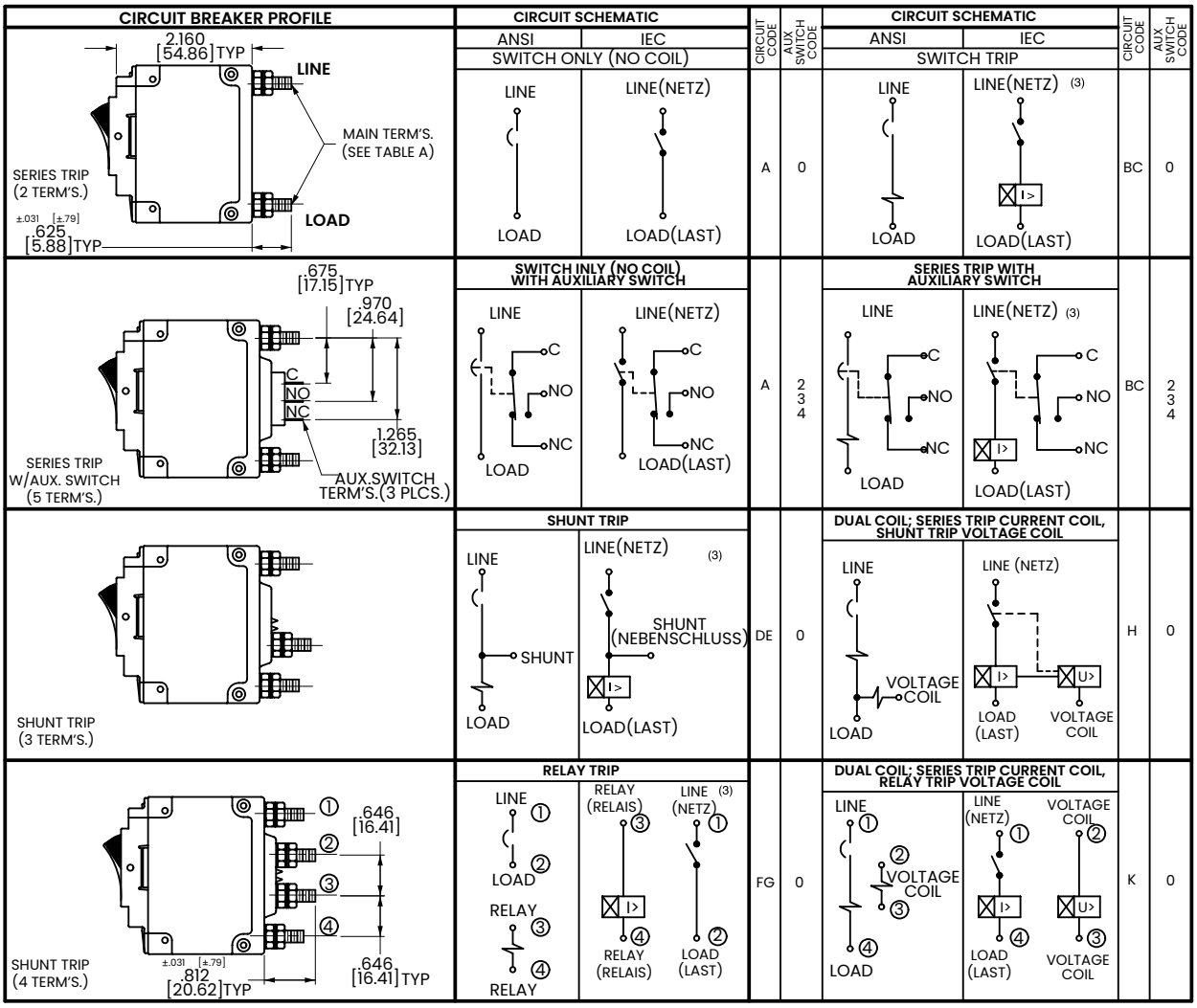
Notes:
1 Multi-pole breakers have all breakers identical except when specifying Auxiliary switch and/or mixed poles, and have one rocker per breaker.
2 On multi-pole breakers, one auxiliary switch is supplied, mounted in the extreme right pole.
3 Available up to 50 amps maximum.
4 Current ratings 71 - 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.

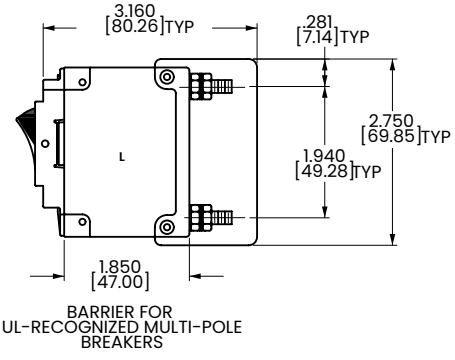
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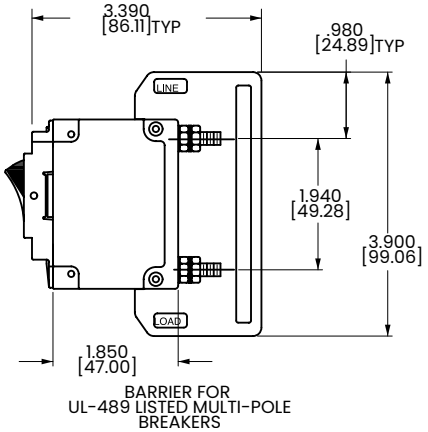
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Circuit & Terminal Diagrams Rocker

inches [millimeters]





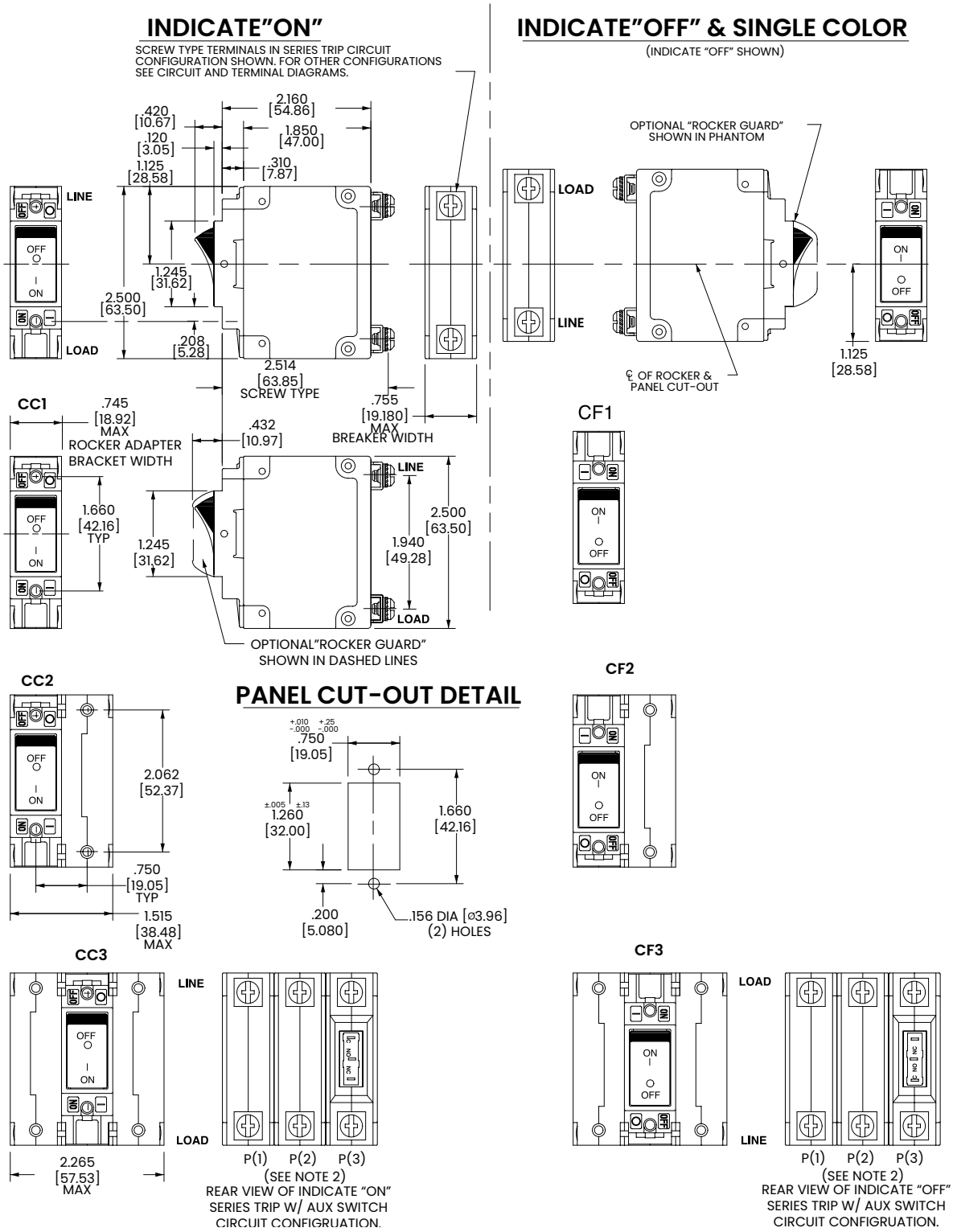


Notes:
1 Tolerance ±.020 [.51] unless otherwise specified.
2 Schematic shown represents current trip circuit.

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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.

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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

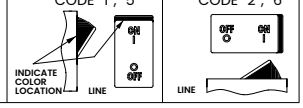
C

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"	CODE "1", "5"	CODE "2", "6"



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:
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
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

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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

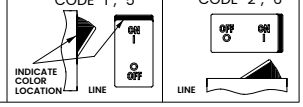
C

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
INDICATE "OFF"	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

7. CURRENT RATING (AMPERES) [5]

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 [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

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 >

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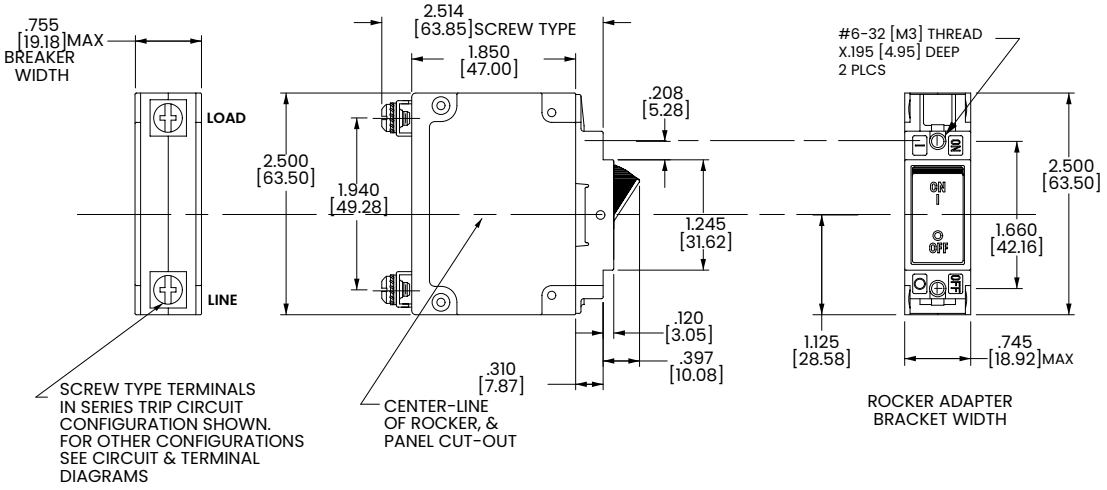
Dimensional Specs

Flat Rocker

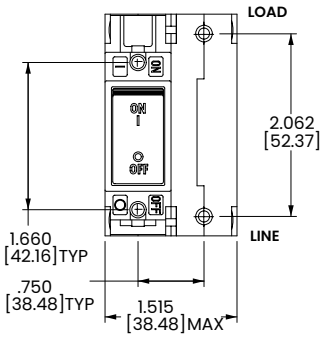
inches [millimeters]

INDICATE"OFF" & SINGLE COLOR

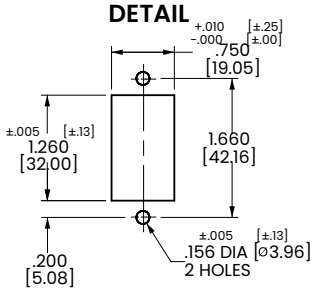
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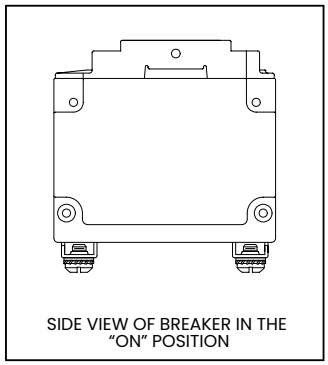


C12



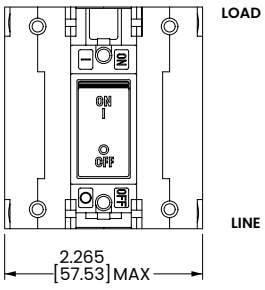
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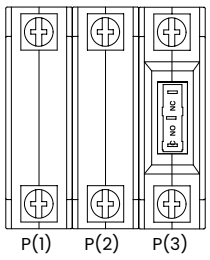




SIDE VIEW OF BREAKER IN THE
"ON" POSITION

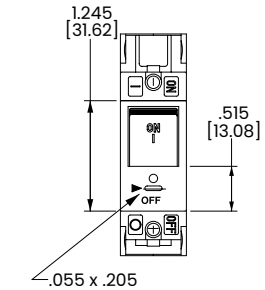
C13

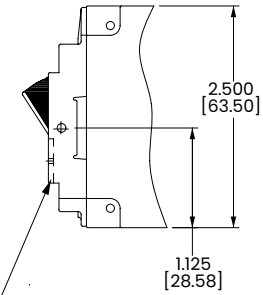




REAR VIEW OF INDICATE "OFF"
SERIES TRIP W/AUX SWITCH
CIRCUIT CONFIGURATION.

PUSH-TO-RESET ACTUATOR





ROCKER SHROUDED ON "OFF"
POSITION SIDE, SHOWN IN
DASHED LINES

ACTUATOR SIDE VIEW
(SURAFACE CONTOURS)



FLAT ROCKER

RECESSED OFF SIDE
ROCKER

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

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