

C-Series

CIRCUIT BREAKER

The C-Series hydraulic-magnetic circuit breakers are ideal for applications that require higher amperage and voltage handling capability in a smaller package. They are available in 1-6 poles, 0.02-100amps, UL Recognized up to 480VAC or 150VDC, UL489 Listed up to 240VAC or 125VDC, with choice of time delays, terminal options, actuator styles and colors. The C-Series employs a unique arc chute design which allows for higher interrupting capacities of up to 10,000 amps. New thermoset glass filled polyester half shell construction provides for increased mechanical and electrical strength. The wiping contacts, mechanical linkage with two step actuation, clean contacts providing high, positive contact pressure and longer contact life. Available with American Standard or Metric Threaded Stud terminals, or Saddle Clamp screw terminals. The optional mid-trip handle style actuator allows a visual indication of electrical overload with or without alarm feature.



Resources:

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IGS >

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Product Highlights:

- ♦ Extensive list of Agency Approvals
- ♦ Available with Standard or Metric Stud terminals, or Saddle Clamp screw terminals
- ♦ Optional mid-trip handle style actuator
- ♦ Unique arc chute design which allows for higher interrupting capacities of up to 10,000 amps
- ♦ Exclusive Rockerguard and Push-To-Reset bezel
- ♦ Available with new solid color and two-color Visi-rocker® actuators
- ♦ New thermoset glass filled polyester half shell construction

Typical Applications:

- ♦ Marine
- ♦ Telecom/Datacom
- ♦ Military
- ♦ Renewable Energy
- ♦ Generators & Welders



Carling Technologies™

Innovative Designs. Powerful Solutions.

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Electrical Tables

Table A: Lists UL Recognized & CSA Accepted configurations and performance capabilities as a Component Supplementary Protector

C-SERIES TABLE A: COMPONENT SUPPLEMENTARY PROTECTORS										
CIRCUIT CONFIGURATION	VOLTAGE			CURRENT RATING		SHORT CIRCUIT CAPACITY (AMPS)		APPLICATION CODES		NOTES
	MAX. RATING	FREQUENCY	PHASE	FULL LOAD AMPS	GENERAL PURPOSE AMPS	WITH BACKUP FUSE ¹	WITHOUT BACKUP FUSE	UL	CSA	
SERIES	32	DC	---	0.02 - 100	---	---	5000	TC1, OL1, U2	TC1, OL1, U2	
	48	DC	---	110 - 150	---	---	5000	TC1, OL1, U2	TC1, OL1, U2	
	65	DC	---	0.02 - 70	---	---	5000	TC1,2, OL1,U1	TC1,2, OL1,U1	
	80	DC	---	---	71 - 100	---	5000	TC1,2, OL0,U1	TC1,2, OL0,U1	
				0.02 - 70	---	---	7500	TC1,2, OL1,U1	TC1,2, OL1,U1	
				---	71 - 100	---	7500	TC1,2, OL0,U1	TC1,2, OL0,U1	
	80	DC	---	0.02 - 70	---	---	10,000	TC1,2, OL1,U1	TC1,2, OL1,U1	Must Have Agency Code "L"
				---	71 - 100	---	10,000	TC1,2, OL0,U1	TC1,2, OL0,U1	Must Have Agency Code "L"
	125	DC	---	0.02 - 50	---	---	5000	TC1,2,OL1,U1	TC1,2,OL1,U1	Must Have Agency Code "L"
	125 / 250	DC	---	0.02 - 50	---	---	5000	TC1,2,OL1,U1	TC1,2,OL1,U1	Must Have Agency Code "L"
	250	DC	---	0.02 - 50	---	---	5000	TC1,2,OL1,U1	TC1,2,OL1,U1	Must Have Agency Code "L". 2 Pole Break Required for 250 Volts
	125	50 / 60	1	0.02 - 100	---	---	3000	TC1, OL1, U2	TC1, OL1, U2	Per Pole Rating
				0.02 - 100	---	---	5000	TC1,2,OL1,U1	TC1,2,OL1,U1	Must Have Agency Code "L"
	150	DC	---	---	80 - 100	---	5000	TC1, OL0, U3	---	Must Have Agency Code "L"
	150	DC	---	---	101 - 175	---	5000	TC1, OL0, U3	---	Must Have Agency Code "L" Parallel Pole
	125 / 250	50 / 60	1	0.02 - 100	---	---	3500	TC1, OL1, U2	TC1, OL1, U2	
				0.02 - 50	---	---	3000	TC1,2,OL1,U1	TC1,2,OL1,U1	2 or 3 poles breaking single phase
				51 - 100	---	---	1000	TC1,2,OL1,U1	TC1,2,OL1,U1	2 or 3 poles breaking single phase
	250	50 / 60	1	0.02 - 100	---	---	5000	TC1,2,OL1,U2	TC1,2,OL1,U2	2 or 3 poles breaking single phase, "L" Agency Code
				0.02 - 50	---	---	3500	TC1, OL1, U2	TC1, OL1, U2	Per Pole Rating
				0.02 - 100	---	---	5000	TC1,2,OL1,U1	TC1,2,OL1,U1	Must Have Agency Code "L"
			3	51 - 70	---	5000	---	TC1,2,OL1,C1	TC1,2,OL1,C1	
				---	0.02 - 100	---	3000	TC1, OL0, U2	TC1, OL0, U2	
				0.02 - 70	---	5000	---	TC1,2,OL1,C1	TC1,2,OL1,C1	3 poles breaking 3 phase
	277	50 / 60	1	---	0.02 - 90	---	5000	TC1,2,OL0,U1	TC1,2,OL0,U1	Must Have Agency Code "L"
				0.02 - 50	---	5000	---	TC1,2,OL1,C1	TC1,2,OL1,C1	
	480 / 277	50 / 60	3	0.02 - 30	---	5000	---	TC1,2,OL1,C1	TC1,2,OL1,C1	3 poles breaking 3 phase
				---	31 - 50	5000	---	TC1,2,OL0,C1	TC1,2,OL0,C1	
	480	50 / 60	1	0.02 - 30	---	5000	---	TC1,2,OL1,C1	TC1,2,OL1,C1	2 poles breaking 1 phase
				---	31 - 50	5000	---	TC1,2,OL0,C1	TC1,2,OL0,C1	
DUAL COIL	80	DC	---	0.02 - 50	---	---	7500	TC1,2, OL1,U1	TC1,2, OL1,U1	
	125	50 / 60	1	0.02 - 50	---	---	3000	TC1, OL1, U2	TC1, OL1, U2	Per Pole Rating
	125 / 250	50 / 60	1	0.02 - 50	---	---	3500	TC1, OL1, U2	TC1, OL1, U2	2 or 3 poles breaking single phase
				0.02 - 50	---	---	3000	TC1,2,OL1,U1	TC1,2,OL1,U1	2 or 3 poles breaking single phase
	250	50 / 60	3	0.02 - 50	---	---	3500	TC1, OL1, U2	TC1, OL1, U2	
				0.02 - 50	---	---	3000	TC1, OL0, U2	TC1, OL0, U2	Per Pole Rating
SHUNT	277	50 / 60	1	0.02 - 50	---	5000	---	TC1,2,OL1,C1	TC1,2,OL1,C1	3 poles breaking 3 phase
	80	DC	---	0.02 - 50	---	---	7500	TC1,2, OL1,U1	TC1,2, OL1,U1	
	277	50 / 60	1	0.02 - 50	---	5000	---	TC1,2,OL1,C1	TC1,2,OL1,C1	
	250	50 / 60	3	0.02 - 50	---	5000	---	TC1,2,OL1,C1	TC1,2,OL1,C1	3 poles breaking 3 phase
	480 / 277	50 / 60	3	0.02 - 30	---	5000	---	TC1,2,OL1,C1	TC1,2,OL1,C1	3 poles breaking 3 phase
				---	31 - 50	5000	---	TC1,2,OL0,C1	TC1,2,OL0,C1	
RELAY	480	50 / 60	1	0.02 - 30	---	5000	---	TC1,2,OL1,C1	TC1,2,OL1,C1	2 poles breaking 1 phase
	80	DC	---	---	31 - 50	5000	---	TC1,2,OL0,C1	TC1,2,OL0,C1	
				0.02 - 50	---	---	7500	TC1,2, OL1,U1	TC1,2, OL1,U1	
				0.02 - 70	---	---	---	---	---	
SWITCH ONLY	80	DC	---	0.02 - 70	---	---	---	---	---	
	125	50 / 60	1	0.02 - 100	---	---	---	---	---	
				0.02 - 100	---	---	---	---	---	2 or 3 poles breaking single phase
	250	50 / 60	3	0.02 - 100	---	---	---	---	---	
				0.02 - 70	---	---	---	---	---	
	277	50 / 60	1	0.02 - 50	---	---	---	---	---	
	480 / 277	50 / 60	3	0.02 - 30	---	---	---	---	---	3 poles breaking 3 phase
				---	31 - 50	---	---	---	---	
	80	DC	---	---	71 - 100	---	---	---	---	
				0.02 - 70	---	---	---	---	---	

Notes for Table A:

- 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

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

Electrical Tables

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

C-SERIES TABLE B: 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	50 / 60	1	0.02 - 20	3
			3	0.02 - 20	5
	277 ¹	50 / 60	1	0.02 - 20	3
	480 ²	50 / 60	3	0.02 - 20	5

Notes for Table B:

1 UL recognized and CSA Accepted at 480V refers to 3 & 4 pole versions used in a 3Ø, wye connected circuit or 2-pole version connected with 2 poles breaking. 1Ø and backed up with series fusing as stated above in note 1.

*Series, 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.

C-SERIES TABLE C: COMPONENT SUPPLEMENTARY PROTECTORS													
CIRCUIT CONFIGURATION	VOLTAGE			CURRENT RATING		SHORT CIRCUIT CAPACITY (AMPS)						APPLICATION CODES	
	MAX. RATING	FREQUENCY	PHASE	FULL LOAD AMPS	GENERAL PURPOSE AMPS ¹	UL/CSA		VDE		TUV		UL	CSA
						WITH BACKUP FUSE	WITHOUT BACKUP FUSE	(Inc) WITH BACKUP FUSE	(Icn) WITHOUT BACKUP FUSE	(Inc) WITH BACKUP FUSE	(Icn) WITHOUT BACKUP FUSE		
SERIES	80	DC	---	0.10 - 70	---	---	7500	---	5000	5000	1500	TC1,2, OL1,U1	TC1,2, OL1,U1
			---	71 - 100	71 - 100	---	10,000	---	5000	---	5000	TC1,2, OL0,U1	TC1,2, OL0,U1
	125	DC	---	1 - 50	---	---	5000	---	---	---	5000	TC1,2, OL1,U1	TC1,2, OL1,U1
			---	0.10 - 50	---	---	5000	---	---	---	5000	TC1,2, OL1,U1	TC1,2, OL1,U1
	250	50 / 60	1	0.10 - 70	---	---	5000	3000	1500	3000	1500	TC1,2, OL1,U1	TC1,2, OL1,U1
			1	0.10 - 100	---	---	5000	---	---	5000	5000	TC1,2, OL1,U1	TC1,2, OL1,U1
			3	0.10 - 90	---	---	5000	---	---	5000	5000	TC1,2, OL1,U1	TC1,2, OL1,U1
			3	0.10 - 30	---	5000	---	3000	1500	3000	1500	TC1,2, OL1,C1	TC1,2, OL1,C1
	415	50 / 60	3	0.10 - 30	---	5000	---	5000	2500	3000	1500	TC1,2, OL1,C1	TC1,2, OL1,C1
			3	0.10 - 30	---	5000	---	5000	2500	3000	1500	TC1,2, OL1,C1	TC1,2, OL1,C1
DUAL COIL	80	DC	---	0.10 - 30	---	---	7500	---	1500	5000	1500	TC1,2, OL1,U1	TC1,2, OL1,U1
	250	50 / 60	1 & 3	0.10 - 30	---	---	5000	3000	1500	3000	1500	TC1,2, OL1,U1	TC1,2, OL1,U1
SHUNT	80	DC	---	0.10 - 70	---	---	7500	---	5000	5000	1500	TC1,2, OL1,U1	TC1,2, OL1,U1
	250	50 / 60	1 & 3	0.10 - 70	---	---	5000	3000	1500	3000	1500	TC1,2, OL1,U1	TC1,2, OL1,U1
	415	50 / 60	3	0.10 - 30	---	5000	---	3000	1500	3000	1500	TC1,2, OL1,C1	TC1,2, OL1,C1

Notes for Table C:

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.

Electrical Tables

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

C SERIES TABLE D : 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.
	125	DC	---	0.10 - 100	10,000	Limited to 2 Poles Max from 71 - 100 Amps.
	125 / 250	DC	---	0.10 - 50	5,000	1 - 3 Poles
	120	50 / 60	1	0.10 - 50	5,000	1 or 2 Poles (2 Poles Required for 250 Volts)
				0.10 - 50	10,000	1 - 3 Poles
	120 / 240	50 / 60	1	51 - 70	5,000	1 - 3 Poles
				0.10 - 50	10,000	2 or 3 Poles. 1 Pole of a 3 Pole Unit is Neutral
	240	50 / 60	1	0.10 - 50	10000 ¹	2 or 3 Poles. 1 Pole of a 3 Pole Unit is Neutral
				0.10 - 30	5,000	1 Pole
DUAL COIL	240	50 / 60	1	0.10 - 20	5,000	2 Pole
	277	50 / 60	1	0.10 - 20	10,000	1 Pole
	120	50 / 60	1	0.10 - 30	10,000	---

Notes from Table D:

1 Special catalog number required. Consult factory.

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.

C-SERIES TABLE E: UL1500 (Marine Ignition Protected)								
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	5000	TC1,2,OL1,U1	TC1,2,OL1,U1	---
	65	DC	---	101 - 150	5000	TC1,2,OL1,U1	TC1,2,OL1,U1	---
				0.02 - 100	1500	TC1,2,OL0,U1	TC1,2,OL0,U1	---
	80	DC	---	0.02 - 70	1500	TC1,2,OL1,U1	TC1,2,OL1,U1	---
	125	50 / 60	1	0.02 - 70	5000	TC1,2,OL1,U1	TC1,2,OL1,U1	---
				71 - 100	1500	TC1,2,OL1,U1	TC1,2,OL1,U1	---
				0.02 - 70	1500	TC1,2,OL1,U1	TC1,2,OL1,U1	---
	250	50 / 60	1	71 - 100	1500	TC1,2,OL1,U1	TC1,2,OL1,U1	2 Poles Breaking Single Phase

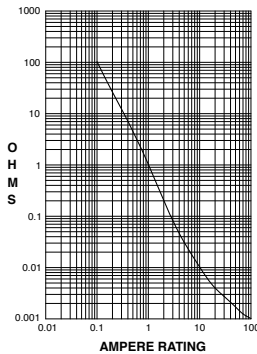
Table F: Lists UL Listed configurations and performance capabilities as Circuit Breakers for use in Communications Equipment (Guide DITT, File E189195), under UL489A.

C-SERIES TABLE F : 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	110 - 250	10,000

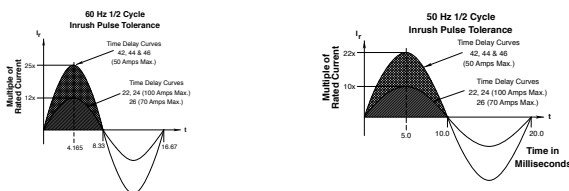
Electrical

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 Rating	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 & TUV 1.0 125 VAC.
Insulation Resistance	Minimum of 100 Megohms at 500 VDC.
Dielectric Strength	UL, CSA: 1960 V 50/60 Hz for one minute between all electrically isolated terminals. C-Series Circuit Breakers comply with the 8mm spacing and 3750V 50/60 Hz dielectric requirements from hazardous voltage to operator accessible surfaces, between adjacent poles and from main circuits to auxiliary circuits per Publications EN 60950 and VDE 0805.
Resistance, Impedance	Values from Line to Load Terminal - based on Series Trip Circuit Breaker.

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



Pulse Tolerance Curves



Mechanical

Endurance	10,000 ON-OFF operations @ 6 per minute; with rated current & voltage.
Trip Free	All C-Series 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 100 Gs, 6ms sawtooth while carrying rated current per Method 213, Test Condition "I". Instantaneous and ultrashort curves tested @ 90% of rated current.
Vibration	Withstands 0.060" excursion from 10-55 Hz & 10 Gs 55-500 Hz, @ rated current per Method 204C, Test Cond. A. Instantaneous & ultrashort curves tested @ 90% of rated current.
Moisture Resistance	Method 106D, i.e., ten 24-hour cycles @ +25°C to +65°C, 80-98% RH.
Salt Spray	Method 101, Condition A (90-95% RH @ 5% NaCl Solution, 96 hrs).
Thermal Shock	Method 107D, Condition A (five cycles @ -55°C to +25°C to +85°C to +25°C).
Operating Temperature	-40°C to +85°C

Agency Certifications:**UL Recognized**

UL Standard 1077 Component Recognition Program
as Protectors, Supplementary
(Guide CCN/QVNU2, File E75596)



UL Standard 508 Motor Controllers, Manual
(Guide CCN/NLRV2, File E135367)



UL Standard 1500 Protectors, Supplementary for
Marine Electrical & Fuel Systems
(Guide PEQZ2, File E75596)
Ignition Protection

**UL Listed**

UL Standard 489 Circuit Breakers, Molded Case,
(Guide DIVQ, File E129899)



UL Standard 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.
R72041016

**VDE Certified**

 EN60934, VDE 0642 under File No.
10537



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

1 Series 2 Actuator 3 Poles 4 Circuit 5 Aux/Alarm Switch 6 Frequency & Delay 7 Current Rating 8 Terminal 9 Actuator Color 10 Mounting Bezel/Barrier 11 Agency Approval

1 SERIES**C****2 ACTUATOR¹**

A Handle, one per pole
B Handle, one per multipole unit
S Mid-Trip Handle, one per pole
T Mid-Trip, one per pole & Alarm Switch

3 POLES²

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

4 CIRCUIT³

A³ Switch Only (no coil) **F⁴** Relay Trip (current)
B Series Trip (current) **G⁴** Relay Trip (voltage)
C Series Trip (voltage) **H^{4,5}** Dual Coil with Shunt Trip
D⁴ Shunt Trip (current) **K^{4,5}** Dual Coil with Relay Trip
E⁴ Shunt Trip (voltage) Voltage Coil

5 AUXILIARY/ALARM SWITCH

0 without Aux Switch
2 S.P.D.T., 0.110 Q.C. Term. **6** S.P.S.T., 0.139 Solder Lug
3 S.P.D.T., 0.139 Solder Lug **8** S.P.S.T., 0.187 Q.C. Term.
4 S.P.D.T., 0.110 Q.C. Term. **9** S.P.D.T., 0.187 Q.C. Term.
 (Gold Contacts)

6 FREQUENCY & DELAY

03³ DC 50/60Hz, Switch Only **30** DC 50/60Hz Instantaneous
10⁷ DC Instantaneous **31** DC 50/60Hz Ultra Short
11 DC Ultra Short **32** DC 50/60Hz Short
12 DC Short **34** DC 50/60Hz Medium
14 DC Medium **36** DC 50/60Hz Long
16 DC Long **42⁸** 50/60Hz Short, Hi-Inrush
20⁷ 50/60Hz Instantaneous **44⁸** 50/60Hz Medium, Hi-Inrush
21 50/60Hz Ultra Short **46⁸** 50/60Hz Long, Hi-Inrush
22 50/60Hz Short **52⁸** DC Short, Hi-Inrush
24 50/60Hz Medium **54⁸** DC Medium, Hi-Inrush
26 50/60Hz Long **56** DC Long, Hi-Inrush

7 CURRENT RATING (AMPERES)

CODE	AMPERES				
020	0.020	235	0.350	430	3.000
025	0.025	240	0.400	435	3.500
030	0.030	245	0.450	440	4.000
035	0.035	250	0.500	445	4.500
040	0.040	255	0.550	450	5.000
045	0.045	260	0.600	455	5.500
050	0.050	265	0.650	460	6.000
055	0.055	270	0.700	465	6.500
060	0.060	275	0.750	470	7.000
065	0.065	280	0.800	475	7.500
070	0.070	285	0.850	480	8.000
075	0.075	290	0.900	485	8.500
080	0.080	295	0.950	490	9.000
085	0.085	410	1.000	495	9.500
090	0.090	512	1.250	610	10.000
095	0.095	415	1.500	710	10.500
210	0.100	517	1.750	611	11.000
215	0.150	420	2.000	711	11.500
220	0.200	522	2.250	612	12.000
225	0.250	425	2.500	712	12.500
230	0.300	527	2.750	613	13.000
				614	14.000
				615	15.000
				616	16.000
				617	17.000
				618	18.000
				620	20.000
				622	22.000
				624	24.000
				625	25.000
				630	30.000
				635	35.000
				640	40.000
				650	50.000
				660⁹	60.000
				670⁹	70.000
				680⁹	80.000
				685⁹	85.000
				690⁹	90.000
				695⁹	95.000
				810⁹	100.000

VOLTAGE COIL (NOMINAL RATED VOLTAGE)⁷

CODE	RATING				
A06	6DC	A32	32DC	J12	12AC
A12	12DC	A48	48DC	J18	18AC
A18	18DC	A65	65DC	J24	24AC
A24	24DC	J06	6AC	J48	48AC
				J65	65AC
				K20	120AC
				L40	240AC

8 TERMINAL¹⁵

1¹⁰	Stud 10-32	6¹²	Stud M6
2¹¹	Screw 10-32	7^{13,15}	0.250 Double Click Connect
3¹²	Stud 1/4-20	9¹⁵	7/16" Clip Terminal
4¹¹	Stud M5 x 0.8	A¹⁴	Plug-In Stud
5¹¹	Screw M5 x 0.8	C^{11,15}	5/16" Clip Terminal

9 ACTUATOR COLOR & LEGEND¹⁶

Actuator Color	I-O	ON-OFF	Dual	Legend Color
White	A	B	1	Black
Black	C	D	2	White
Red	F	G	3	White
Green	H	J	4	White
Blue	K	L	5	White
Yellow	M	N	6	Black
Gray	P	Q	7	Black
Orange	R	S	8	Black
Black (short handle) ¹⁷	T	U	9	White

10 MOUNTING/BARRIERS

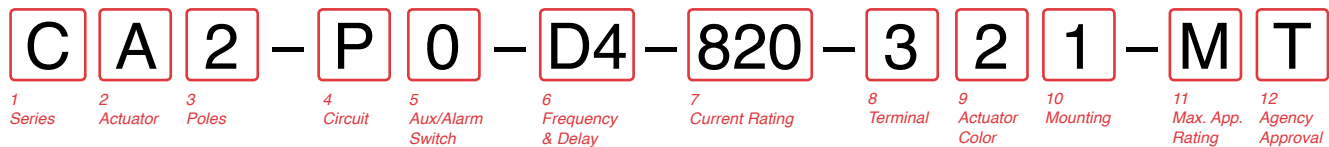
MOUNTING STYLE	BARRIERS	VOLTAGE
Threaded Insert		
1 6-32 x 0.195 inches	no	< 300
A 6-32 X 0.195 inches	yes	< 300
C¹⁸ 6-32 X 0.195 inches	yes	≥ 300
2 ISO M3 x 5mm	no	< 300
B ISO M3 x 5mm	yes	< 300
D¹⁸ ISO M3 x 5mm	yes	≥ 300
Front panel Snap-In, 1.00" [25.4mm] wide bezel		
E¹⁷ with Handleguard	no	< 300

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 Rec. STD 1077, UL Rec. 1500 (ignition protected), CSA Accepted
L	UL489 Construction: UL Recognized, CSA Accepted
R	UL489 Construction: TUV Certified, UL Recognized, CSA Accepted

Notes:

- 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
 S: Handle moves to mid-position only upon electrical trip of the breaker. Available with circuit codes B, C, D, E, F, G, H and K.
 T: Handle moves to mid-position and alarm switch activates only upon electrical trip of the breaker. Available with circuit codes B & C.
- Standard multipole units have all poles identical except when specifying auxiliary switch and/or mixed poles. 4 pole max w/VDE. 5th pole available as Series Trip w/ Voltage Coil only.
- Switch Only circuits, rated up to 50 amps and 6 poles, and only available with VDE Certification when tied to a protected pole (Circuit Code B, C, D or H). 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.
- Circuit Codes D,E,F,G,H & K available with Terminal Codes 1,2,4 & 5 only. Circuit Codes D, F, H & K available up to 50 amps maximum Current Rating.
- Consult factory for available Dual Coil options, as special catalog number is required. Dual Coil Voltage Coils with Shunt Trip Construction trip instantaneously on line voltage. Dual Coil Voltage Coils require 30VA minimum power to trip instantaneously and are rated for intermittent duty only.
- Auxiliary Switch available with Series Trip and Switch Only circuits. On multi-pole breakers, one aux. switch is supplied, mounted in the extreme right pole.
- Voltage coils not rated for continuous duty. Available only with delay codes 10 & 20.
- Available with Circuit Codes B & D only, and up to 50 amps maximum.
- Current Ratings 60 - 70 are available up to four poles maximum. Ratings 71 - 100 are available up to two poles maximum.
- Terminal Code 1 available to 60 amps maximum.
- Terminal Codes 2, 4, 5 and C available to 50 amps maximum.
- Terminal Codes 3, 6 & 9 available to 100 amps maximum.
- Terminal Code 7 available to 25 amps maximum.
- Terminal Code A available to 100 amps maximum.
- Terminal Codes 7, 9 & C are not VDE approved.
- No marking available. Consult factory. VDE/TUV Approval requires dual (I-O, ON-OFF) or I-O markings on all handles.
- Single pole only.
- VDE/TUV: 30 amps max.; UL/CSA: 50 amps max.; Available in 2 - 4 poles only and limited to AC Delays. "General Purpose amps" not rated for "full load amps" or to be used in applications with a motor.



C

C

A

A

A Handle, one per pole
S Mid-Trip Handle, one per pole
T Mid-Trip, one per pole & Alarm Switch

1

1

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

B

B

B Series Trip **P** Series Trip (parallel pole)

0

0

0	without Aux Switch		
2	S.P.D.T., 0.110 Q.C. Term.	6	S.P.S.T., 0.139 Solder Lug
3	S.P.D.T., 0.139 Solder Lug	8	S.P.S.T., 0.187 Q.C. Term.
4	S.P.D.T., 0.110 Q.C. Term. (Gold Contacts)	9	S.P.D.T., 0.187 Q.C. Term.

D'

D'

D1	DC Ultra Short	11	DC Ultra Short
D2	DC Short	12	DC Short
D4	DC Medium	14	DC Medium
D6	DC Long	16	DC Long

CC

CC

CODE	AMPERES				
810	100.00	813	130.00	817	170.00
811	110.00	814	140.00	917	175.00
812	120.00	815	150.00	818	180.00
912	125.00	816	160.00	819	190.00
				820	200.00
				922⁴	225.00
				825⁴	250.00

3

3

3 Stud 1/4-20

6

6 Stud M6

A

A Plug-In Study

1

1

	LEGEND		
	ON-OFF	Dual	Legend Color
White	B	1	Black
Black	D	2	White
Red	G	3	White
Green	J	4	White
Blue	L	5	White
Yellow	N	6	Black
Gray	Q	7	Black
Orange	S	8	Black

Threaded Insert

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

M

M

M 80 DC

A

A

A	Without Approval
J	UL489A Listed, TUV Certified
T	UL489A Listed
K	UL489A Listed, VDE Certified (up to 200 amps)
7	UL489A Listed, TUV Certified (up to 250 amps)

1

- 1 Handle moves to Mid-Position only upon electrical trip of C/B when Actuator S is specified. When Actuator Code T is specified, handle moves to Mid Position and Alarm Switch actuates only upon electrical trip of C/B.
- 2 Standard Handle colors are White, Black, Red & Yellow.
- 3 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 not available on the single pole unit.
- 4 Rating for 101 to 125 amps are available in 1 pole size. Ratings from 110 to 200 amps are available in 2-pole size. For ratings from 225-250 amps, specify 3-pole size.
- 5 Circuit code B only available with 1 pole.
- 6 1 pole only available with terminal codes 3 and 6.
- 7 Delays 11, 12, 14, and 16 are only available with 1 pole.
- 8 Agency code K and 7 not available with 1 pole.
Agency code J only available with 1 pole.

C	1	2	-	P	0	-	D4	-	820	-	3	1	A	-	M	T
1 Series	2 Actuator	3 Poles		4 Circuit	5 Aux/Alarm Switch		6 Frequency & Delay		7 Current Rating		8 Terminal	9 Actuator Color	10 Mounting		11 Max. App. Rating	12 Agency Approval

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
G Curved Rocker, Two Color Visi, Indicate Off, Horizontal Legend
J Curved Rocker, Single Color, Vertical Legend
K Curved Rocker, Single Color, Horizontal Legend
1 Flat Rocker, Two Color Visi, Vertical Legend
2 Flat Rocker, Two Color Visi, Horizontal Legend
3 Flat Rocker, Single Color, Vertical Legend
4 Flat Rocker, Single Color, Horizontal Legend
5 Flat Rocker, Push To Reset, Two Color Visi, Vertical Legend
6 Flat Rocker, Push To Reset, Two Color Visi, Horizontal Legend
7 Flat Rocker, Push To Reset, Single Color, Vertical Legend
8 Flat Rocker, Push To Reset, Single Color, Horizontal Legend

3 POLES²

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

4 CIRCUIT³

B Series Trip **P** Series Trip (parallel pole)

5 AUXILIARY/ALARM SWITCH

0 without Aux Switch **6** S.P.S.T., 0.139 Solder Lug
2 S.P.D.T., 0.110 Q.C. Term. **8** S.P.S.T., 0.187 Q.C. Term.
3 S.P.D.T., 0.139 Solder Lug **9** S.P.D.T., 0.187 Q.C. Term.
4 S.P.D.T., 0.110 Q.C. Term.
 (Gold Contacts)

6 FREQUENCY & DELAY⁵

D1 DC Ultra Short **11** DC Ultra Short
D2 DC Short **12** DC Short
D4 DC Medium **14** DC Medium
D6 DC Long **16** DC Long

7 CURRENT RATING (AMPERES)²

CODE	AMPERES	CODE	AMPERES	CODE	AMPERES	CODE	AMPERES
810	100.00	813	130.00	817	170.00	820	200.00
811	110.00	814	140.00	817	175.00	822	225.00
812	120.00	815	150.00	818	180.00	825	250.00
912	125.00	816	160.00	819	190.00		

8 TERMINAL⁴

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

9 ACTUATOR COLOR

	LEGEND	Dual	Legend Color
White	B ON-OFF	1	Black
Black	D	2	White
Red	G	3	White
Green	J	4	White
Blue	L	5	White
Yellow	N	6	Black
Gray	Q	7	Black
Orange	S	8	Black

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 APPROVAL⁶**

A Without Approval
J UL489A Listed, TUV Certified
T UL489A Listed
7 UL489A Listed, TUV Certified

Notes:

- 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 not available on the single pole unit.
- Ratings for 101 to 125 amps are available in 1-pole size. Ratings from 110 to 200 amps are available in 2-pole size. For ratings from 225-250 amps, specify 3-pole size.
- Circuit code B only available with 1-pole.
- 1 pole only available with terminal codes 3 and 6.
- Delays 11, 12, 14, and 16 are only available with 1 pole.
- Agency code K and 7 not available with 1 pole.
Agency code J only available with 1 pole.

C	A	3	-	B	0	-	14	-	450	-	1	2	1	-	K	G
1 Series	2 Actuator	3 Poles		4 Circuit	5 Aux/Alarm Switch		6 Frequency & Delay		7 Current Rating		8 Terminal	9 Actuator Color	10 Mounting/Barriers		11 Max. App. Rating	12 Agency Approval

1 SERIES C

2 ACTUATOR¹

- A** Handle, one per pole
B Handle, one per multipole unit
S Mid-Trip Handle, one per pole
T Mid-Trip, one per pole & Alarm Switch

3 POLES²

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

4 CIRCUIT

- B** Series Trip (current)

5 AUXILIARY/ALARM SWITCH³

- 0** without Aux Switch
2 S.P.D.T., 0.110 Q.C. Term.
3 S.P.D.T., 0.139 Solder Lug
4 S.P.D.T., 0.110 Q.C. Term. (Gold Contacts)
6 S.P.S.T., 0.139 Solder Lug
8 S.P.S.T., 0.187 Q.C. Term.
9 S.P.D.T., 0.187 Q.C. Term.

6 FREQUENCY & DELAY

- 11** DC Ultra Short
12 DC Short
14 DC Medium
16 DC Long
21 50/60Hz Ultra Short
22 50/60Hz Short
24 50/60Hz Medium
26 50/60Hz Long
42⁴ 50/60Hz Short, Hi-Inrush
44⁴ 50/60Hz Medium, Hi-Inrush
46⁴ 50/60Hz Long, Hi-Inrush
52⁴ DC Short, Hi-Inrush
54⁴ DC Medium, Hi-Inrush
56⁴ DC Long, Hi-Inrush

Notes:

- Actuator Code:
A: Handle tie pin spacer(s) and retainers provided assembled with multi-pole units.
B: Handle located, as viewed from front of breaker in left pole. 2 pole maximum.
S: Handle moves to mid-position only upon electrical trip of the breaker.
T: Handle moves to mid-position and alarm switch activates only upon electrical trip of the breaker.
- 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 / alarm 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. The 3rd pole has the same construction as poles 1 & 2.
- On multi-pole breakers, one auxiliary switch is supplied, mounted in the extreme right pole.
VDE approval on auxiliary switch codes 2, 3 & 4 only.
Auxiliary / Alarm Switch with Independent Circuit ie: separate from breaker circuit, only available with circuit breakers rated 50 amp maximum at 80 VDC, 125 VDC, and 120 VAC. Auxiliary / Alarm Switch with Dependent Circuit ie: same as circuit breaker, is supplied from factory with common terminal of auxiliary / alarm switch connected to line terminal on 120/240 and 240 VAC ratings. Circuit breakers rated 120 VAC 50 amp maximum can be supplied with Auxiliary/Alarm switch common terminal connected to breaker line terminal. Consult factory for special catalog number.
- Available up to 50 amps maximum.
- Current ratings 71 - 100 with VDE approvals are available up to two poles maximum.
- Terminal Codes 9 & C are not VDE approved.
- Terminal Code 1 available to 60 amps maximum.
- Terminal Codes 2, 4, 5 & C available to 50 amps maximum.
- Terminal Codes 3, 6 & 9 available to 100 amps maximum.
- Terminal Code A available to 100 amps maximum.
- VDE and TUV approvals require Dual (I-O, ON-OFF) markings on all handles.
- Barriers supplied on multi-pole units only.

7 CURRENT RATING (AMPERES)⁵

CODE	AMPERES				
210	0.100	295	0.950	470	7.000
215	0.150	410	1.000	475	7.500
220	0.200	512	1.250	480	8.000
225	0.250	415	1.500	485	8.500
230	0.300	517	1.750	490	9.000
235	0.350	420	2.000	495	9.500
240	0.400	522	2.250	610	10.000
245	0.450	425	2.500	710	10.500
250	0.500	527	2.750	611	11.000
255	0.550	430	3.000	711	11.500
260	0.600	435	3.500	612	12.000
265	0.650	440	4.000	712	12.500
270	0.700	445	4.500	613	13.000
275	0.750	450	5.000	614	14.000
280	0.800	455	5.500	615	15.000
285	0.850	460	6.000	616	16.000
290	0.900	465	6.500	617	17.000
				618	18.000
				620	20.000
				622	22.000
				624	24.000
				625	25.000
				630	30.000
				635	35.000
				640	40.000
				660	60.000
				670	70.000
				680	80.000
				685	85.000
				690	90.000
				695	95.000
				810	100.000

8 TERMINAL⁶

- 1⁷** Stud 10-32
2⁸ Screw 10-32
3⁹ Stud 1/4-20
4⁸ Stud M5 x 0.8
5⁸ Screw M5 x 0.8
6⁹ Stud M6
9⁹ 7/16" Clip Terminal
A¹⁰ Plug-In Stud
C⁸ 5/16" Clip Terminal

9 ACTUATOR COLOR & LEGEND¹¹

Actuator Color	ON-OFF	Dual	Legend Color
White	B	1	Black
Black	D	2	White
Red	G	3	White
Green	J	4	White
Blue	L	5	White
Yellow	N	6	Black
Gray	Q	7	Black
Orange	S	8	Black

10 MOUNTING/BARRIERS

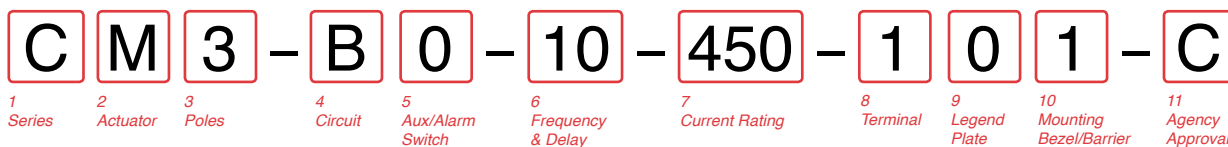
	MOUNTING STYLE	BARRIERS ¹²
	Threaded Insert	
1	6-32 x 0.195 inches	yes
2	ISO M3 x 5mm	yes

11 MAXIMUM APPLICATION RATING

- A** 65 DC
B 125 DC
C 120/240 AC²
D 240 AC
K 120 AC
F 277 AC
M 80 DC

12 AGENCY APPROVAL¹¹

- A** w/o approvals
F UL489 Listed, CSA Certified & VDE Certified
G UL489 Listed & CSA Certified
J UL489 Listed, CSA Certified & TUV Certified

**1 SERIES****C****2 ACTUATOR¹****M** Sealed Toggle, one per pole**3 POLES****1** One **2** Two **3** Three**4 CIRCUIT**

A²	Switch Only (no coil)	F³	Relay Trip (current)
B	Series Trip (current)	G³	Relay Trip (voltage)
C	Series Trip (voltage)	H^{3,4}	Dual Coil with Shunt Trip
D³	Shunt Trip (current)		Voltage Coil
E³	Shunt Trip (voltage)	K^{3,4}	Dual Coil with Relay Trip
			Voltage Coil

5 AUXILIARY/ALARM SWITCH

0	without Aux Switch	6	S.P.D.T., 0.139 Solder Lug
2	S.P.D.T., 0.110 Q.C. Term.	8	S.P.S.T., 0.187 Q.C. Term.
3	S.P.D.T., 0.139 Solder Lug	9	S.P.D.T., 0.187 Q.C. Term.
4	S.P.D.T., 0.110 Q.C. Term. (Gold Contacts)		

6 FREQUENCY & DELAY

03²	DC 50/60Hz, Switch Only	30	DC 50/60Hz Instantaneous
10⁶	DC Instantaneous	31	DC 50/60Hz Ultra Short
11	DC Ultra Short	32	DC 50/60Hz Short
12	DC Short	34	DC 50/60Hz Medium
14	DC Medium	36	DC 50/60Hz Long
16	DC Long	42⁷	50/60Hz Short, Hi-Inrush
20⁶	50/60Hz Instantaneous	44⁷	50/60Hz Medium, Hi-Inrush
21	50/60Hz Ultra Short	46⁷	50/60Hz Long, Hi-Inrush
22	50/60Hz Short	52⁷	DC Short, Hi-Inrush
24	50/60Hz Medium	54⁷	DC Medium, Hi-Inrush
26	50/60Hz Long	56	DC Long, Hi-Inrush

7 CURRENT RATING (AMPERES)⁹

CODE	AMPERES				
020	0.020	235	0.350	430	3.000
025	0.025	240	0.400	435	3.500
030	0.030	245	0.450	440	4.000
035	0.035	250	0.500	445	4.500
040	0.040	255	0.550	450	5.000
045	0.045	260	0.600	455	5.500
050	0.050	265	0.650	460	6.000
055	0.055	270	0.700	465	6.500
060	0.060	275	0.750	470	7.000
065	0.065	280	0.800	475	7.500
070	0.070	285	0.850	480	8.000
075	0.075	290	0.900	485	8.500
080	0.080	295	0.950	490	9.000
085	0.085	410	1.000	495	9.500
090	0.090	512	1.250	610	10.000
095	0.095	415	1.500	710	10.500
210	0.100	517	1.750	611	11.000
215	0.150	420	2.000	711	11.500
220	0.200	522	2.250	612	12.000
225	0.250	425	2.500	712	12.500
230	0.300	527	2.750	613	13.000
				614	14.000
				615	15.000
				616	16.000
				617	17.000
				618	18.000
				620	20.000
				622	22.000
				624	24.000
				625	25.000
				630	30.000
				635	35.000
				640	40.000
				650	50.000
				660⁹	60.000
				670⁹	70.000
				680⁹	80.000
				685⁹	85.000
				690⁹	90.000
				695⁹	95.000
				810⁹	100.000

VOLTAGE COIL (NOMINAL RATED VOLTAGE)⁷

CODE	RATING				
A06	6DC	A32	32DC	J12	12AC
A12	12DC	A48	48DC	J18	18AC
A18	18DC	A65	65DC	J24	24AC
A24	24DC	J06	6AC	J48	48AC
				J65	65AC
				K20	120AC
				L40	240AC

8 TERMINAL

1⁹	Stud 10-32	6¹¹	Stud M6
2¹⁰	Screw 10-32	7¹²	0.250 Double Click Connect
3¹¹	Stud 1/4-20	9¹¹	7/16" Clip Terminal
4¹⁰	Stud M5 x 0.8	A¹³	Plug-In Stud
5¹⁰	Screw M5 x 0.8	C¹⁰	5/16" Clip Terminal

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

Notes:

- Actuator Code M: Handle location as viewed from front of breaker:
2 pole - right pole 3 pole - center pole
- Switch Only circuits, rated up to 50 amps and 3 poles, and only available with VDE.
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.
- Circuit Codes D,E,F,G,H & K available with Terminal Codes 1,2,4 & 5 only.
- Consult factory for available Dual Coil options, as special catalog number is required. Dual Coil Voltage Coils with Shunt Trip Construction trip instantaneously on line voltage. Dual Coil Voltage Coils require 30VA minimum power to trip instantaneously and are rated for intermittent duty only.
- Auxiliary Switch available with Series Trip and Switch Only circuits. On multi-pole breakers, one aux. switch is supplied, mounted in the extreme right pole.
- Voltage coils not rated for continuous duty. Available only with delay codes 10 & 20.
- Available with Circuit Codes B & D only, and up to 50 amps maximum.
- Consult factory for current ratings 71-100, in three pole units, available as special catalog number only.
- Terminal Code 1 available to 60 amps maximum.
- Terminal Codes 2, 4, 5 and C available to 50 amps maximum.
- Terminal Codes 3, 6 & 9 available to 100 amps maximum.
- Terminal Code 7 available to 25 amps maximum.
- Terminal Code A available to 100 amps maximum.

C	C	3	-	B	0	-	14	-	450	-	1	2	1	-	D
1	2	3		4	5		6		7		8	9	10		11
Series	Actuator	Poles		Circuit	Aux/Alarm Switch		Frequency & Delay		Current Rating		Terminal	Actuator Color	Mounting/Barriers		Agency Approval

1 SERIES

C

2 ACTUATOR¹

Two Color Visi-Rocker

- C Indicate ON, vertical legend
D Indicate ON, horizontal legend
E Indicate ON, no legend
F Indicate OFF, vertical legend
G Indicate OFF, horizontal legend
H Indicate OFF, no legend

Push-To-Reset, Visi-Rocker

- N Indicate OFF, vertical legend
O Indicate OFF, horizontal legend
P Indicate OFF, no legend

Single color

- J Vertical legend
K Horizontal legend
L No legend

Push-To-Reset, Single color

- R Vertical legend
U Horizontal legend
V No legend

ROCKER STYLE DESCRIPTIONS					
VERTICAL STYLE	INDICATE "ON"		INDICATE "OFF"		SINGLE COLOR
	CODE "C"	CODE "D"	CODE "J", "K"	CODE "L"	
VERTICAL STYLE					
	CODE "C"	CODE "D"	CODE "J", "K"	CODE "L"	CODE "L"
HORIZONTAL STYLE					
	CODE "C"	CODE "D"	CODE "J", "K"	CODE "L"	CODE "L"

3 POLES²

- 1 One 2 Two 3 Three

4 CIRCUIT

- A³ Switch Only (No Coil)
B Series Trip (Current)
C Series Trip (Voltage)
D⁴ Shunt Trip (Current)
E⁴ Shunt Trip (Voltage)
F⁴ Relay Trip (Current)
G⁴ Relay Trip (Voltage)
H^{4,5} Dual Coil with Shunt Trip
K^{4,5} Dual Coil with Relay Trip

5 AUXILIARY/ALARM SWITCH⁶

- 0 without Aux Switch
2 S.P.D.T., 0.110 Q.C. Term.
3 S.P.D.T., 0.139 Solder Lug
4 S.P.D.T., 0.110 Q.C. Term. (Gold Contacts)
6 S.P.S.T., 0.139 Solder Lug
8 S.P.S.T., 0.187 Q.C. Term.
9 S.P.D.T., 0.187 Q.C. Term.

6 FREQUENCY & DELAY

- 03 DC 50/60Hz, Switch Only
10⁷ DC Instantaneous
11 DC Ultra Short
12 DC Short
14 DC Medium
16 DC Long
20⁷ 50/60Hz Instantaneous
21 50/60Hz Ultra Short
22 50/60Hz Short
24 50/60Hz Medium
26 50/60Hz Long
30 DC 50/60Hz Instantaneous
31 DC 50/60Hz Ultra Short
32 DC 50/60Hz Short
34 DC 50/60Hz Medium
36 DC 50/60Hz Long
42⁸ 50/60Hz Short, Hi-Inrush
44⁸ 50/60Hz Medium, Hi-Inrush
46⁸ 50/60Hz Long, Hi-Inrush
52⁸ DC Short, Hi-Inrush
54⁸ DC Medium, Hi-Inrush
56⁸ DC Long, Hi-Inrush

Notes:

- Push-To-Reset actuators have OFF portion of rocker shrouded.
- Multi-pole breakers have all poles identical except when specifying Aux. switch and/or mixed poles, and have one rocker per breaker. Rocker location as viewed from front panel: 2 pole – left pole; 3 pole – center pole.
- Switch Only circuits, rated up to 50 amps and 3 poles, and only available with VDE Certification when tied to a protected pole (Circuit Code B, C, D or H.). 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.
- Circuit Codes D, E, F, G, H & K available with Terminal Codes 1, 2, 4 & 5 only. Circuit Codes D, F, H & K available up to 50 amps maximum Current Rating.
- Consult factory for available Dual Coil options, as special catalog number is required. Dual Coil Voltage Coils with Shunt Trip Construction trip instantaneously on line voltage. Dual Coil Voltage Coils require 30VA minimum power to trip instantaneously and are rated for intermittent duty only.
- Auxiliary Switch available with Series Trip and Switch Only circuits. On multi-pole breakers, one aux. switch is supplied, mounted in the extreme right pole. Auxiliary switch codes 2, 3 & 4 are VDE approved.
- Voltage coils not rated for continuous duty. Available only with delay codes 10 & 20.
- Available with Circuit Codes B & D only, and up to 50 amps maximum.
- Current Ratings 60-70 are available up to four poles maximum. Ratings 71-100 are available up to two poles maximum.
- Terminal Code 1 available to 60 amps maximum.
- Terminal Codes 2, 4, 5 & C available to 50 amps maximum.
- Terminal Codes 3, 6 & 9 available to 100 amps maximum.
- Terminal Code 7 available to 25 amps maximum.
- Terminal Code A available to 100 amps maximum.
- Terminal Codes 7, 9 & C are not VDE approved.
- Color shown is visi and legend with remainder of rocker black.
- Legend on Push-to-reset bezel/shroud is white when single color rocker is ordered. Dual = ON-OFF/I-O legend with actuator codes C - G, and J, K, N, O, R, & U. None = no legend with actuator codes H, L, P, V. Rockerguard available with actuator codes C - L. Push-to-reset available with actuator codes N, O, P, R, & U. V.
- VDE/TUV approval requires Dual (I-O, ON-OFF) or I-O markings on rocker.
- VDE/TUV: 30 amps max.; UL/CSA: 50 amps max.; Available in 2 - 4 poles only and limited to AC Delays. "General Purpose amps" not rated for "full load amps" or to be used in applications with a motor.

7 CURRENT RATING (AMPERES)

CODE	AMPERES	CODE	AMPERES	CODE	AMPERES	CODE	AMPERES
020	0.020	235	0.350	430	3.000	614	14.000
025	0.025	240	0.400	435	3.500	615	15.000
030	0.030	245	0.450	440	4.000	616	16.000
035	0.035	250	0.500	445	4.500	617	17.000
040	0.040	255	0.550	450	5.000	618	18.000
045	0.045	260	0.600	455	5.500	620	20.000
050	0.050	265	0.650	460	6.000	622	22.000
055	0.055	270	0.700	465	6.500	624	24.000
060	0.060	275	0.750	470	7.000	625	25.000
065	0.065	280	0.800	475	7.500	630	30.000
070	0.070	285	0.850	480	8.000	635	35.000
075	0.075	290	0.900	485	8.500	640	40.000
080	0.080	295	0.950	490	9.000	650	50.000
085	0.085	410	1.000	495	9.500	660 ⁹	60.000
090	0.090	512	1.250	610	10.000	670 ⁹	70.000
095	0.095	415	1.500	710	10.500	680 ⁹	80.000
210	0.100	517	1.750	611	11.000	685 ⁹	85.000
215	0.150	420	2.000	711	11.500	690 ⁹	90.000
220	0.200	522	2.250	612	12.000	695 ⁹	95.000
225	0.250	425	2.500	712	12.500	810 ⁹	100.000
230	0.300	527	2.750	613	13.000		

VOLTAGE COIL (NOMINAL RATED VOLTAGE)⁷

CODE	RATING	CODE	RATING	CODE	RATING	CODE	RATING
A06	6DC	A32	32DC	J12	12AC	J65	65AC
A12	12DC	A48	48DC	J18	18AC	K20	120AC
A18	18DC	A65	65DC	J24	24AC	L40	240AC
A24	24DC	J06	6AC	J48	48AC		

8 TERMINAL

- 1¹⁰ Stud 10-32
2¹¹ Screw 10-32
3¹² Stud 1/4-20
4¹¹ Stud M5 x 0.8
5¹¹ Screw M5 x 0.8
6¹² Stud M6
7¹³ 0.250 Double Quick Connect
9 7/16" Clip Terminal
A¹⁴ Plug-In Stud
C 5/16" Clip Terminal

9 ACTUATOR COLOR & LEGEND^{16,17,18}

Actuator or

Visi-Color

Marking:

Color:	I-O	ON-OFF	Dual/None	Single Color	Rocking/Handle	Visi-Rocker
White	A	B	1	Black	Black	White
Black	C	D	2	White	White	n/a
Red	F	G	3	White	White	Red
Green	H	J	4	White	White	Green
Blue	K	L	5	White	White	Blue
Yellow	M	N	6	Black	Black	Yellow
Gray	P	Q	7	Black	Black	Gray
Orange	R	S	8	Black	Black	Orange

10 MOUNTING/BARRIERS¹

	STANDARD ROCKER BEZEL	BARRIERS	VOLTAGE
1	6-32 x 0.195 inches	no	<300
2	6-32 x 0.195 inches	yes	<300
3 ¹⁹	6-32 x 0.195 inches	yes	≥300
4	ISO M3 x 5mm	no	<300
5	ISO M3 x 5mm	yes	<300
6 ¹⁹	ISO M3 x 5mm	yes	≥300
ROCKERGARD BEZEL			
A	6-32 x 0.195 inches	no	<300
C	6-32 x 0.195 inches	yes	<300
E ¹⁹	6-32 x 0.195 inches	yes	≥300
G	ISO M3 x 5mm	no	<300
J	ISO M3 x 5mm	yes	<300
L ¹⁹	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 ¹⁹	6-32 x 0.195 inches	yes	≥300
H	ISO M3 x 5mm	no	<300
J	ISO M3 x 5mm	yes	<300
M ¹⁹	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 Rec. STD 1077, UL Rec. 1500 (ignition protected), & CSA Accepted
L UL489 Construction: UL Recognized & CSA Accepted
R UL489 Construction: TUV Certified, UL Recognized & CSA Accepted

C	C	3	-	B	0	-	14	-	450	-	1	2	A	-	K	G
1 Series	2 Actuator	3 Poles		4 Circuit	5 Aux/Alarm Switch		6 Frequency & Delay		7 Current Rating		8 Terminal	9 Actuator Color	10 Mounting/Barriers		11 Max. App. Rating	12 Agency Approval

1 SERIES C

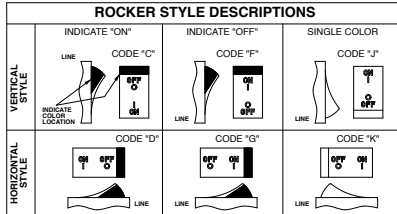
2 ACTUATOR¹

Two Color Visi-Rocker

- C** Indicate ON, vertical legend
D Indicate ON, horizontal legend
F Indicate OFF, vertical legend
G Indicate OFF, horizontal legend

Single color

- J** Vertical legend
K Horizontal legend



3 POLES¹

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

4 CIRCUIT

- B** Series Trip (current)

5 AUXILIARY/ALARM SWITCH²

- | | |
|---|-------------------------------------|
| 0 without Aux Switch | 6 S.P.S.T., 0.139 Solder Lug |
| 2 S.P.D.T., 0.110 Q.C. Term. | 8 S.P.S.T., 0.187 Q.C. Term. |
| 3 S.P.D.T., 0.139 Solder Lug | 9 S.P.D.T., 0.187 Q.C. Term. |
| 4 S.P.D.T., 0.110 Q.C. Term. (Gold Contacts) | |

6 FREQUENCY & DELAY

- | | |
|-------------------------------|---|
| 11 DC Ultra Short | 26 50/60Hz Long |
| 12 DC Short | 42⁸ 50/60Hz Short, Hi-Inrush |
| 14 DC Medium | 44⁸ 50/60Hz Medium, Hi-Inrush |
| 16 DC Long | 46⁸ 50/60Hz Long, Hi-Inrush |
| 21 50/60Hz Ultra Short | 52⁸ DC Short, Hi-Inrush |
| 22 50/60Hz Short | 54⁸ DC Medium, Hi-Inrush |
| 24 50/60Hz Medium | 56 DC Long, Hi-Inrush |

Notes:

- Multi-pole breakers have all breakers identical except when specifying Aux. switch and/or mixed poles, and have one rocker per breaker.
- On multi-pole breakers, one aux. 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 Code 1 available to 60 amps maximum.
- Terminal Codes 2, 4, 5 & C available to 50 amps maximum.
- Terminal Codes 3, 6, 9 & A available to 100 amps maximum.
- Terminal Codes 9 & C are not VDE approved.
- Color shown is visi and legend with remainder of rocker black
- Dual = ON-OFF/I-O legend on actuator.
- VDE and TUV approval requires Dual (I-O, ON-OFF) markings on rocker.
- Rockerguard available with all actuator codes.
- 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				
210	0.100	295	0.950	470	7.000
215	0.150	410	1.000	475	7.500
220	0.200	512	1.250	480	8.000
225	0.250	415	1.500	485	8.500
230	0.300	517	1.750	490	9.000
235	0.350	420	2.000	495	9.500
240	0.400	522	2.250	610	10.000
245	0.450	425	2.500	710	10.500
250	0.500	527	2.750	611	11.000
255	0.550	430	3.000	711	11.500
260	0.600	435	3.500	612	12.000
265	0.650	440	4.000	712	12.500
270	0.700	445	4.500	613	13.000
275	0.750	450	5.000	614	14.000
280	0.800	455	5.500	615	15.000
285	0.850	460	6.000	616	16.000
290	0.900	465	6.500	617	17.000
				618	18.000
				620	20.000
				622	22.000
				624	24.000
				625	25.000
				630	30.000
				635	35.000
				640	40.000
				650	50.000
				660	60.000
				670	70.000
				680	80.000
				685	85.000
				690	90.000
				695	95.000
				810	100.000

8 TERMINAL

- | | |
|--|--|
| 1⁵ Stud 10-32 | 6⁷ Stud M6 |
| 2⁶ Screw 10-32 w/saddle & washer clamps | 9^{7,8} 7/16" Clip Terminal |
| 3⁷ Stud 1/4-20 | A^{7,8} Plug-In Stud |
| 4⁶ Stud M5 x 0.8 | C^{6,8} 5/16" Clip Terminal |
| 5⁶ Screw M5 x 0.8 w/saddle & washer clamps | |

9 ACTUATOR COLOR & LEGEND¹¹

Actuator or

Visi-Color	Marking:		Marking Color:	
Color:	ON-OFF	Dual¹⁰	Single Color	
White	B	1	Rocker/Handle	Visi-Rocker
Black	D	2	Black	White
Red	G	3	White	n/a
Green	J	4	White	Red
Blue	L	5	White	Green
Yellow	N	6	Black	Blue
Gray	Q	7	Black	Yellow
Orange	S	8	Black	Gray
				Orange

10 MOUNTING/BARRIERS¹²

	Standard Rocker Bezel Threaded Insert, 2 per pole	BARRIERS ¹³
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

- A** 65 DC
B 125 DC
C 120/240 AC¹⁴
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 UL489 Listed, CSA Certified & TUV Certified



1 SERIES C

2 ACTUATOR¹

Two Color Visi-Rocker

- 1 Indicate OFF, vertical legend
2 Indicate OFF, horizontal legend

Single color

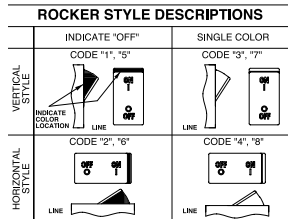
- 3 Vertical legend
4 Horizontal legend

Push-To-Reset, Visi-Rocker

- 5 Indicate OFF, vertical legend
6 Indicate OFF, horizontal legend

Push-To-Reset, Single color

- 7 Vertical legend
8 Horizontal legend



3 POLES²

- 1 One 2 Two 3 Three

4 CIRCUIT

- A³ Switch Only (No Coil)
B Series Trip (Current)
C Series Trip (Voltage)
D⁴ Shunt Trip (Current)
E⁴ Shunt Trip (Voltage)
- F⁴ Relay Trip (Current)
G⁴ Relay Trip (Voltage)
H^{4,5} Dual Coil with Shunt Trip Voltage Coil
K^{4,5} Dual Coil with Relay Trip Voltage Coil

5 AUXILIARY/ALARM SWITCH⁶

- 0 without Aux Switch
2 S.P.D.T., 0.110 Q.C. Term.
3 S.P.D.T., 0.139 Solder Lug
4 S.P.D.T., 0.110 Q.C. Term. (Gold Contacts)
- 6 S.P.S.T., 0.139 Solder Lug
8 S.P.S.T., 0.187 Q.C. Term.
9 S.P.D.T., 0.187 Q.C. Term.

6 FREQUENCY & DELAY

- 03 DC 50/60Hz, Switch Only
10⁷ DC Instantaneous
11 DC Ultra Short
12 DC Short
14 DC Medium
16 DC Long
20⁷ 50/60Hz Instantaneous
21 50/60Hz Ultra Short
22 50/60Hz Short
24 50/60Hz Medium
26 50/60Hz Long
- 30 DC 50/60Hz Instantaneous
31 DC 50/60Hz Ultra Short
32 DC 50/60Hz Short
34 DC 50/60Hz Medium
36 DC 50/60Hz Long
42⁸ 50/60Hz Short, Hi-Inrush
44⁸ 50/60Hz Medium, Hi-Inrush
46⁸ 50/60Hz Long, Hi-Inrush
52⁸ DC Short, Hi-Inrush
54⁸ DC Medium, Hi-Inrush
56⁸ DC Long, Hi-Inrush

Notes:

- Push-to-reset actuators have OFF portion of rocker shrouded.
- Multi-pole breakers have all poles identical except when specifying Aux. switch and/or mixed poles, and have one rocker per breaker. Rocker location as viewed from front panel: 2 pole – left pole; 3 pole – center pole.
- Switch Only circuits, rated up to 50 amps and 3 poles, and only available with VDE Certification when tied to a protected pole (Circuit Code B, C, D or H.). 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. Circuit Codes D,E,F,G,H & K available with Terminal Codes 1,2,4 & 5 only. Circuit Codes D,F,H & K available up to 50 amps maximum Current Rating.
- Consult factory for available Dual Coil options, as special catalog number is required. Dual Coil Voltage Coils with Shunt Trip Construction trip instantaneously on line voltage. Dual Coil Voltage Coils require 30VA minimum power to trip instantaneously and are rated for intermittent duty only.
- Auxiliary Switch available with Series Trip and Switch Only circuits. On multi-pole breakers, one aux. switch is supplied, mounted in the extreme right pole. Auxiliary switch codes 2, 3 & 4 are VDE approved.
- Voltage coils not rated for continuous duty. Available only with delay codes 10 and 20.
- Available with Circuit Codes B & D only, and up to 50 amps maximum.
- Current ratings 60-70 are available up to four poles maximum. Current ratings 71 - 100 are available up to two poles maximum.
- Terminal Code 1 available to 60 amps maximum.
- Terminal Codes 2,4,5 & C available to 50 amps maximum.
- Terminal Codes 3,6 & 9 available to 100 amps maximum.
- Terminal Code 7 available to 25 amps maximum.
- Terminal Code A available to 100 amps maximum.
- Terminal Codes 7, 9 & C are not VDE approved.
- Color shown is visi & legend with remainder of rocker black. Dual = ON-OFF/I-O legend.
- 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.
- VDE/TUV approval requires Dual (I-O, ON-OFF) or I-O markings on rocker.
- VDE/TUV: 30 amps max.; UL/CSA: 50 amps max.; Available in 2 & 3 poles only and limited to AC Delays. "General Purpose amps" not rated for "full load amps" or to be used in applications with a motor.
- Recessed "OFF SIDE" available with actuator codes 1,2,3&4. Legends on rocker are available in ink stamping only.

7 CURRENT RATING (AMPERES)⁹

CODE	AMPERES				
020	0.020	235	0.350	430	3.000
025	0.025	240	0.400	435	3.500
030	0.030	245	0.450	440	4.000
035	0.035	250	0.500	445	4.500
040	0.040	255	0.550	450	5.000
045	0.045	260	0.600	455	5.500
050	0.050	265	0.650	460	6.000
055	0.055	270	0.700	465	6.500
060	0.060	275	0.750	470	7.000
065	0.065	280	0.800	475	7.500
070	0.070	285	0.850	480	8.000
075	0.075	290	0.900	485	8.500
080	0.080	295	0.950	490	9.000
085	0.085	300	1.000	495	9.500
090	0.090	305	1.050	500	10.000
095	0.095	310	1.100	505	10.500
100	0.100	315	1.150	510	11.000
105	0.105	320	1.200	515	11.500
110	0.110	325	1.250	520	12.000
115	0.115	330	1.300	525	12.500
120	0.120	335	1.350	530	13.000
125	0.125	340	1.400	535	13.500
130	0.130	345	1.450	540	14.000
135	0.135	350	1.500	545	14.500
140	0.140	355	1.550	550	15.000
145	0.145	360	1.600	555	15.500
150	0.150	365	1.650	560	16.000
155	0.155	370	1.700	565	16.500
160	0.160	375	1.750	570	17.000
165	0.165	380	1.800	575	17.500
170	0.170	385	1.850	580	18.000
175	0.175	390	1.900	585	18.500
180	0.180	395	1.950	590	19.000
185	0.185	400	2.000	595	19.500
190	0.190	405	2.050	600	20.000
195	0.195	410	2.100	605	20.500
200	0.200	415	2.150	610	21.000
205	0.205	420	2.200	615	21.500
210	0.210	425	2.250	620	22.000
215	0.215	430	2.300	625	22.500
220	0.220	435	2.350	630	23.000
225	0.225	440	2.400	635	23.500
230	0.230	445	2.450	640	24.000
235	0.235	450	2.500	645	24.500
240	0.240	455	2.550	650	25.000
245	0.245	460	2.600	655	25.500
250	0.250	465	2.650	660	26.000
255	0.255	470	2.700	665	26.500
260	0.260	475	2.750	670	27.000
265	0.265	480	2.800	675	27.500
270	0.270	485	2.850	680	28.000
275	0.275	490	2.900	685	28.500
280	0.280	495	2.950	690	29.000
285	0.285	500	3.000	695	29.500
290	0.290	505	3.050	700	30.000
295	0.295	510	3.100	705	30.500
300	0.300	515	3.150	710	31.000
305	0.305	520	3.200	715	31.500
310	0.310	525	3.250	720	32.000
315	0.315	530	3.300	725	32.500
320	0.320	535	3.350	730	33.000
325	0.325	540	3.400	735	33.500
330	0.330	545	3.450	740	34.000
335	0.335	550	3.500	745	34.500
340	0.340	555	3.550	750	35.000
345	0.345	560	3.600	755	35.500
350	0.350	565	3.650	760	36.000
355	0.355	570	3.700	765	36.500
360	0.360	575	3.750	770	37.000
365	0.365	580	3.800	775	37.500
370	0.370	585	3.850	780	38.000
375	0.375	590	3.900	785	38.500
380	0.380	595	3.950	790	39.000
385	0.385	600	4.000	795	39.500
390	0.390	605	4.050	800	40.000
395	0.395	610	4.100	805	40.500
400	0.400	615	4.150	810	41.000
405	0.405	620	4.200	815	41.500
410	0.410	625	4.250	820	42.000
415	0.415	630	4.300	825	42.500
420	0.420	635	4.350	830	43.000
425	0.425	640	4.400	835	43.500
430	0.430	645	4.450	840	44.000
435	0.435	650	4.500	845	44.500
440	0.440	655	4.550	850	45.000
445	0.445	660	4.600	855	45.500
450	0.450	665	4.650	860	46.000
455	0.455	670	4.700	865	46.500
460	0.460	675	4.750	870	47.000
465	0.465	680	4.800	875	47.500
470	0.470	685	4.850	880	48.000
475	0.475	690	4.900	885	48.500
480	0.480	695	4.950	890	49.000
485	0.485	700	5.000	895	49.500
490	0.490	705	5.050	900	50.000
495	0.495	710	5.100	905	50.500
500	0.500	715	5.150	910	51.000
505	0.505	720	5.200	915	51.500
510	0.510	725	5.250	920	52.000
515	0.515	730	5.300	925	52.500
520	0.520	735	5.350	930	53.000
525	0.525	740	5.400	935	53.500
530	0.530	745	5.450	940	54.000
535	0.535	750	5.500	945	54.500
540	0.540	755	5.550	950	55.000
545	0.545	760	5.600	955	55.500
550	0.550	765	5.650	960	56.000
555	0.555	770	5.700	965	56.500
560	0.560	775	5.750	970	57.000
565	0.565	780	5.800	975	57.500
570	0.570	785	5.850	980	58.000
575	0.575	790	5.900	985	58.500
580	0.580	795	5.950	990	59.000
585	0.585	800	6.000	995	59.500
590	0.590	805	6.050	1000	60.000
595	0.595	810	6.100		
600	0.600	815	6.150		
605	0.605	820	6.200		
610	0.610	825	6.250		
615	0.615	830	6.300		
620	0.620	835	6.350		
625	0.625	840	6.400		
630	0.630	845	6.450		
635	0.635	850	6.500		
640	0.640	855	6.550		
645	0.645	860	6.600		
650	0.650	865	6.650		
655	0.655	870	6.700		
660	0.660	875	6.750		
665	0.665	880	6.800		
670	0.670	885	6.850		
675	0.675	890	6.900		
680	0.680	895	6.950		
685	0.685	900	7.000		
690	0.690	905	7.050		
695	0.695	910	7.100		
700	0.700	915	7.150		
705	0.705	920	7.200		
710	0.710	925	7.250		
715	0.715	930	7.300		
720	0.720	935	7.350		
725	0.725	940	7.400		
730	0.730	945	7.450		
735	0.735	950	7.500		
740	0.740	955	7.550		
745	0.745	960	7.600		
750	0.750	965	7.650		
755	0.755	970	7.700		
760	0.760	975	7.750		
765	0.765	980	7.800		
770	0.770	985	7.850		
775	0.775	990	7.900		
780	0.780	995	7.950		
785	0.785	1000	8.000		

VOLTAGE COIL (NOMINAL RATED VOLTAGE)⁷

CODE	RATING				
A06	6DC	A32	32DC	J12	12AC
A12	12DC	A48	48DC	J18	18AC
A18	18DC	A65	65DC	J24	24AC
A24	24DC	J06	6AC	J48	48AC
				J65	65AC
				K20	120AC
				L40	240AC

8 TERMINAL

- 1¹⁰ Stud 10-32
2¹¹ Screw 10-32
3¹² Stud 1/4-20
4¹¹ Stud M5 x 0.8
5¹¹

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

1 Series	2 Actuator	3 Poles	4 Circuit	5 Aux/Alarm Switch	6 Frequency & Delay	7 Current Rating	8 Terminal	9 Actuator Color	10 Mounting/ Barriers	11 Max. App. Rating	12 Agency Approval
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1 SERIES

2 ACTUATOR¹

Two Color Visi-Rocker

- 1 Indicate OFF, vertical legend
2 Indicate OFF, horizontal legend

Single color

- 3 Vertical legend
4 Horizontal legend

Push-To-Reset, Visi-Rocker

- 5 Indicate OFF, vertical legend
6 Indicate OFF horizontal legend

Push-To-Reset, Single color

- 7 Vertical legend
8 Horizontal legend

ROCKER STYLE DESCRIPTIONS		
	INDICATE 'OFF'	SINGLE COLOR
VERTICAL STYLE	CODE "1", "5" INDICATE COLOR LOCATION LINE	CODE "3", "7" LINE
HORIZONTAL STYLE	CODE "2", "6" LINE	CODE "4", "8" LINE

3 POLES²

- 1 One 2 Two 3 Three

4 CIRCUIT

B Series Trip (current)

5 AUXILIARY/ALARM SWITCH²

- | | | | |
|---|---|---|----------------------------|
| 0 | without Aux Switch | | |
| 2 | S.P.D.T., 0.110 Q.C. Term. | 6 | S.P.S.T., 0.139 Solder Lug |
| 3 | S.P.D.T., 0.139 Solder Lug | 8 | S.P.S.T., 0.187 Q.C. Term. |
| 4 | S.P.D.T., 0.110 Q.C. Term.
(Gold Contacts) | 9 | S.P.D.T., 0.187 Q.C. Term. |

6 FREQUENCY & DELAY

- | | | | |
|----|---------------------|-----------------|---------------------------|
| 11 | DC Ultra Short | 26 | 50/60Hz Long |
| 12 | DC Short | 42 ⁴ | 50/60Hz Short, Hi-Inrush |
| 14 | DC Medium | 44 ⁴ | 50/60Hz Medium, Hi-Inrush |
| 16 | DC Long | 46 ⁴ | 50/60Hz Long, Hi-Inrush |
| 21 | 50/60Hz Ultra Short | 52 ⁴ | DC Short, Hi-Inrush |
| 22 | 50/60Hz Short | 54 ⁴ | DC Medium, Hi-Inrush |
| 24 | 50/60Hz Medium | 56 ⁴ | DC Long, Hi-Inrush |

7 CURRENT RATING (AMPERES)⁵

CODE	AMPERES						
210	0.100	295	0.950	470	7.000	618	18.000
215	0.150	410	1.000	475	7.500	620	20.000
220	0.200	512	1.250	480	8.000	622	22.000
225	0.250	415	1.500	485	8.500	624	24.000
230	0.300	517	1.750	490	9.000	625	25.000
235	0.350	420	2.000	495	9.500	630	30.000
240	0.400	522	2.250	610	10.000	635	35.000
245	0.450	425	2.500	710	10.500	640	40.000
250	0.500	527	2.750	611	11.000	650	50.000
255	0.550	430	3.000	711	11.500	660	60.000
260	0.600	435	3.500	612	12.000	670	70.000
265	0.650	440	4.000	712	12.500	680	80.000
270	0.700	445	4.500	613	13.000	685	85.000
275	0.750	450	5.000	614	14.000	690	90.000
280	0.800	455	5.500	615	15.000	695	95.000
285	0.850	460	6.000	616	16.000	810	100.000
290	0.900	465	6.500	617	17.000		

8 TERMINAL

- | | | | |
|----------------|----------------|-------------------|---------------------|
| 17 | Stud 10-32 | 6 ⁹ | Stud M6 |
| 2 ⁸ | Screw 10-32 | 9 ^{9,10} | 7/16" Clip Terminal |
| 3 ⁹ | Stud 1/4-20 | A ⁹ | Plug-In Stud |
| 4 ⁸ | Stud M5 x 0.8 | C ^{8,10} | 5/16" Clip Terminal |
| 5 ⁸ | Screw M5 x 0.8 | | |

9 ACTUATOR COLOR & LEGEND¹²

Actuator or			
Visi-Color	Marking:		Marking Color:
Color:	ON-OFF	Dual ¹¹	Single Color
White	B	1	Rocker/Handle
Black	D	2	White
Red	G	3	White
Green	J	4	White
Blue	L	5	White
Yellow	N	6	Black
Gray	Q	7	Black
Orange	S	8	Black

10 MOUNTING/BARRIERS¹²

	STANDARD ROCKER BEZEL	BARRIERS ¹⁵
	Threaded Insert, 2 per pole	
A	6-32 X 0.195 inches	yes
C	ISO M3 x 5mm	yes
	RECESSED OFF ROCKER¹⁴	
	Threaded Insert, 2 per pole	
E	6-32 x 0.195 inches	yes
F	ISO M3 x 5mm	yes
	PUSH-TO-RESET BEZEL¹³	
	Threaded Insert, 2 per pole	
B	6-32 x 0.195 inches	yes
D	ISO M3 x 5mm	yes

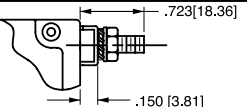
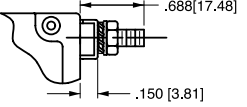
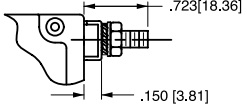
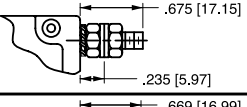
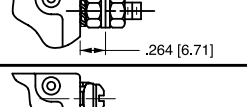
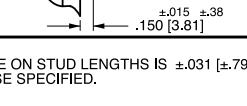
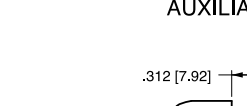
11 MAXIMUM APPLICATION RATING

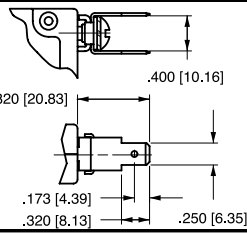
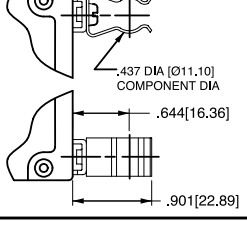
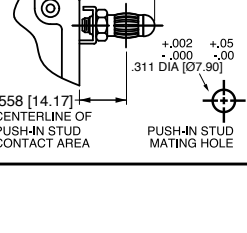
A	65 DC
B	125 DC
C	120/240 AC ¹⁶
D	240 AC
F	277 AC
K	120 AC
M	80 DC

12 AGENCY APPROVAL

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

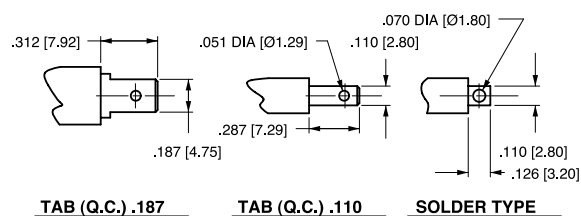
- 1 Notes:
- 2 Push-to-reset actuators have OFF portion of rocker shrouded.
- 3 Multi-pole breakers have all breakers identical except when specifying Aux. switch
- 4 and/or mixed poles, and have one rocker per breaker.
- 5 On multi-pole breakers, one aux. switch is supplied, mounted in the extreme right
- 6 pole.
- 7 Available up to 50 amps maximum.
- 8 Current ratings 71 - 100 with VDE approvals are available up to two poles maximum.
- 9 Terminal Code 1 available to 60 amps maximum.
- 10 Terminal Codes 2, 4, 5 & C available to 50 amps maximum.
- 11 Terminal Codes 3, 6, 9 & A available to 100 amps maximum.
- 12 Terminal Codes 9 & C are not VDE approved.
- 13 Color shown is visi and legend with remainder of rocker black
- 14 Dual = ON-OFF/I-O legend on actuator.
- 15 VDE and TUV approval requires Dual (I-O, ON-OFF) markings on rocker.
- 16 Legend on push-to-reset bezel/shroud is white when single color rocker is ordered.
- 17 Legend on push-to-reset bezel/shroud matches visi-color of rocker with actuator
- 18 codes
- 19 5 & 6.
- 20 Recessed "OFF-SIDE" available with actuator codes 1, 2, 3, & 4. Legends on rocker
- 21 are available in ink stamping only.
- 22 Barriers supplied on multi-pole units only.
- 23 2 & 3 pole circuit breakers required for 120/240 AC rating.

TERMINAL				RATING (AMPS)		
DESCRIPTION	CODE	DIMENSIONAL DETAIL		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					

TERMINAL				RATING (AMPS)		
DESCRIPTION	CODE	DIMENSIONAL DETAIL		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 DETAIL³



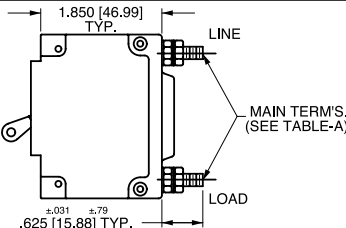
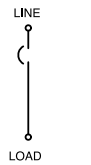
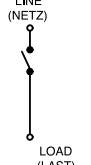
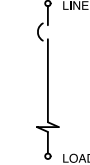
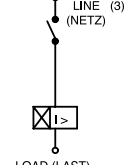
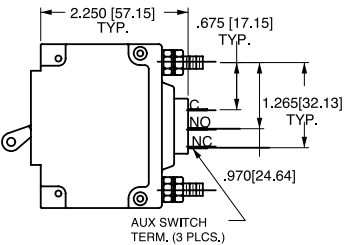
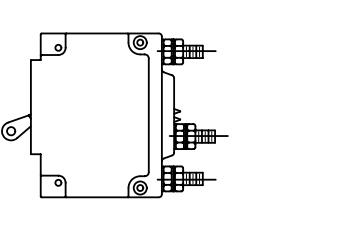
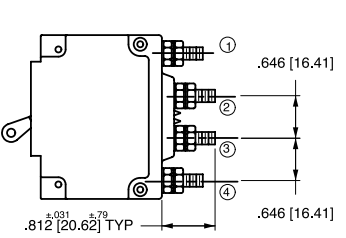
TIGHTENING TORQUE SPECIFICATIONS	
THREAD SIZE	TORQUE
#6-32 [M3] MOUNTING INSERTS	7-9 IN-LBS [0.8-1.0 NM]
#10-32 & M5 THD STUDS	15-20 IN-LBS [1.7-2.3 NM]
#10-32 THD SCREW	15-20 IN-LBS [1.7-2.3 NM]
#1/4-20 & M6 THD STUDS	30-35 IN-LBS [3.4-4.0 NM]

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:

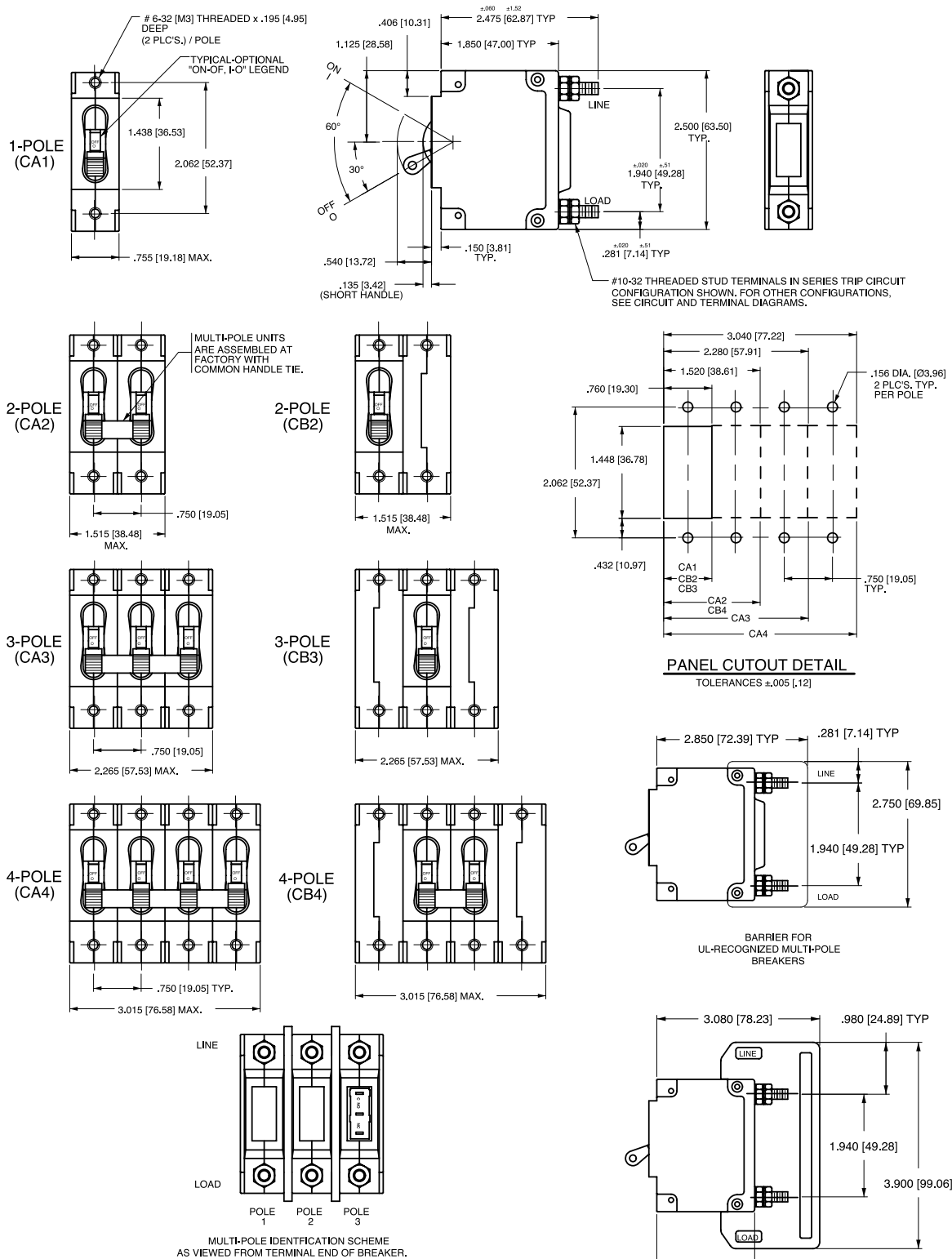
- 1 All dimensions are in inches [millimeters].
- 2 Tolerance $\pm .020$ [.51] unless otherwise specified.
- 3 Available on Series Trip and Switch Only Circuits when called for on multi-pole units. Only one aux. switch is normally supplied, as viewed in multi-pole identification scheme.

	CIRCUIT SCHEMATIC				CIRCUIT CODE	AUX SWITCH CODE	CIRCUIT SCHEMATIC				CIRCUIT CODE	AUX SWITCH CODE
	ANSI		IEC				ANSI		IEC			
	SWITCH ONLY (NO COIL)						SERIES TRIP					
			A	O			B C	O				
	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		HANDLE POSITION	MID TRIP C/B	
	HANDLE POSITION	AUX. SWITCH MODE		STANDARD ALARM SWITCH MODE	REVERSE ALARM SWITCH MODE ⁴
OFF					
ON					
ELECTRICAL TRIP					

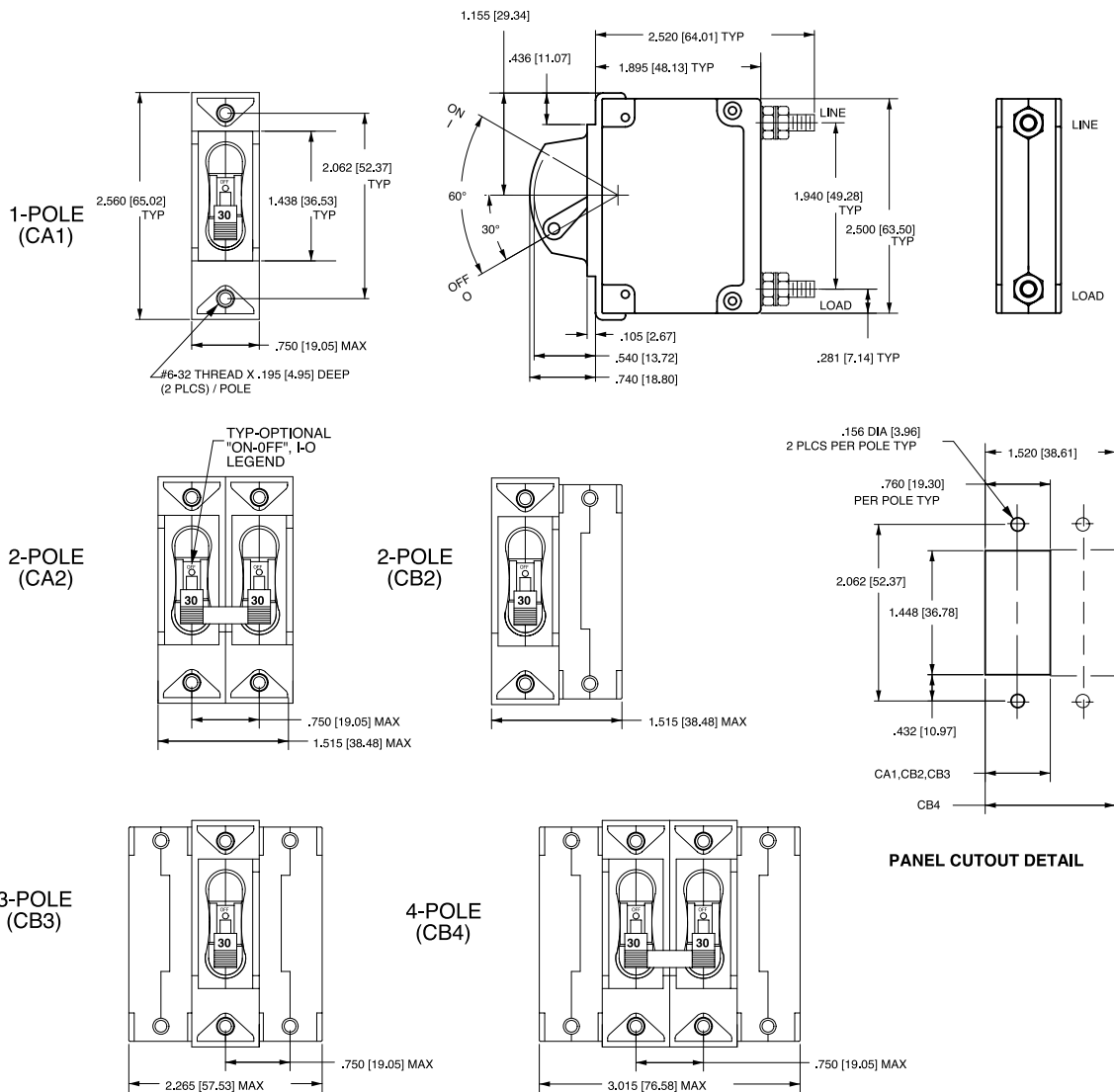
Notes:

- All dimensions are in inches [millimeters].
- Tolerance ± 0.020 [.51] unless otherwise specified.
- Schematic shown represents current trip circuits.
- Available only as special catalog number.

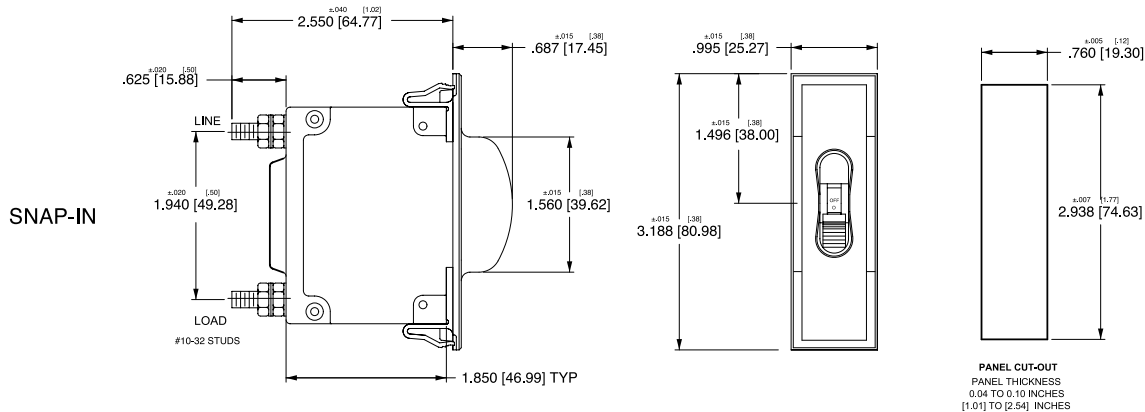


Notes:

- 1 All dimensions are in inches [millimeters].
- 2 Tolerance ±.020 [0.51] unless otherwise specified.



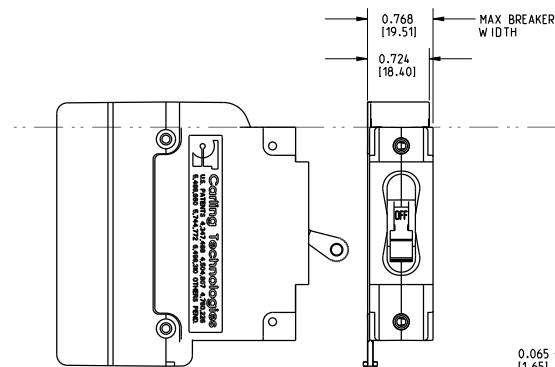
*Handleguard available as special catalog number only



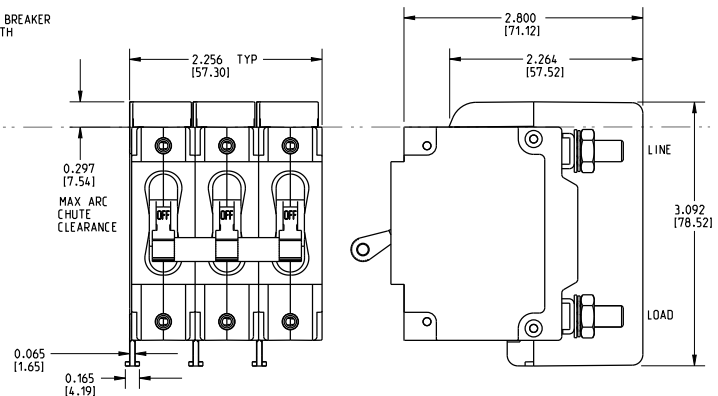
Notes:

- 1 All dimensions are in inches [millimeters].
- 2 Tolerance ± 0.020 [.51] unless otherwise specified.

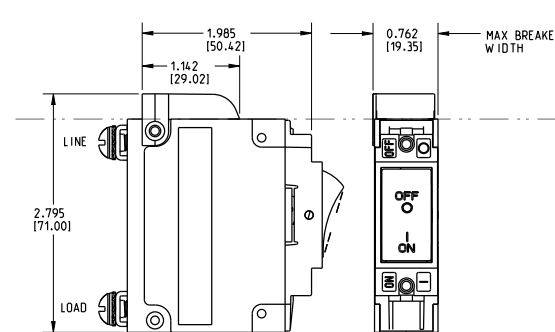
1-POLE (CA1)
w/ ARC CHUTE BARRIER



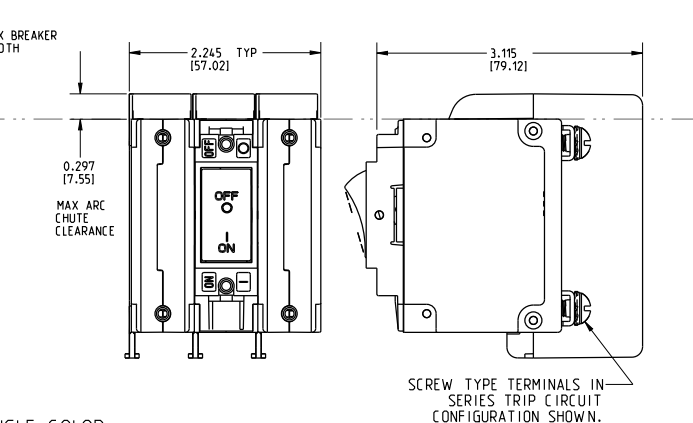
3-POLE (CA3)
w/ ARC CHUTE BARRIER



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

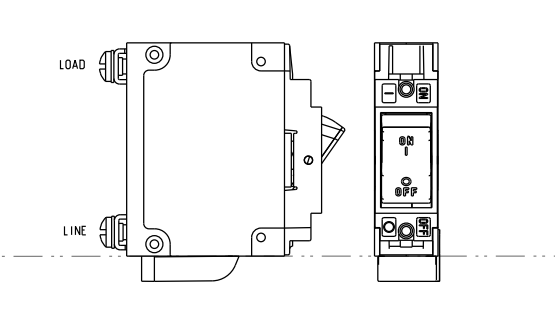


3-POLE (CC3,CD3)
w/ ARC CHUTE BARRIER

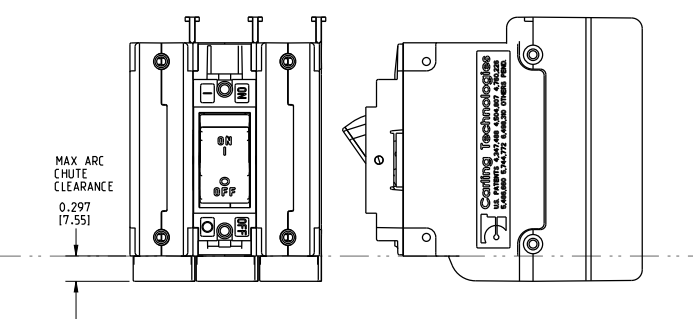


INDICATE "OFF" / SINGLE COLOR

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



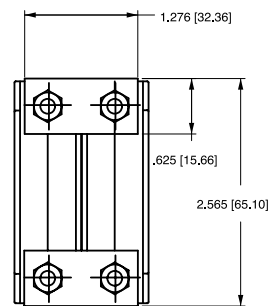
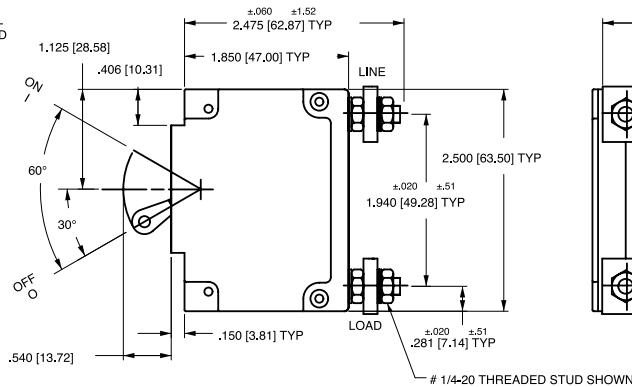
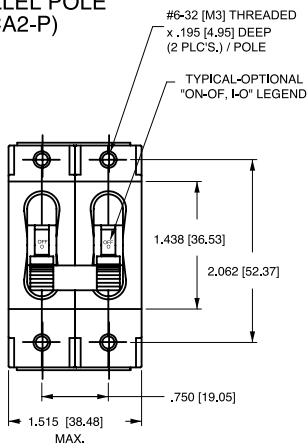
3-POLE (CF3,CG3,C13,C23)
w/ ARC CHUTE BARRIER



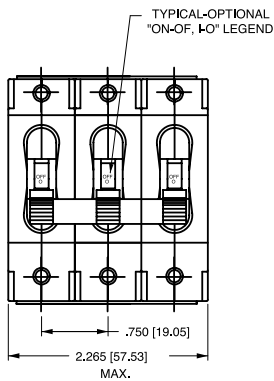
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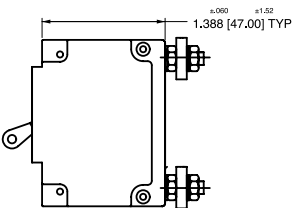
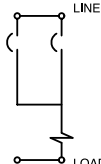
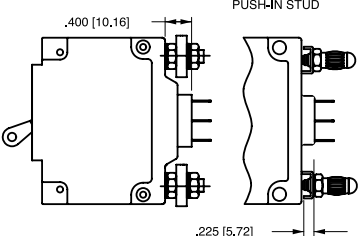
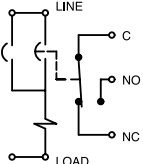
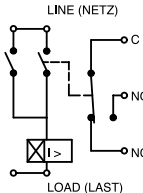
- Only 1-pole and 3-pole configurations shown. Arc chute (w/o barrier) and arc chute barrier also available for 2-pole construction.
- Dimensions apply to all variations shown.
- Notice that line and load terminal orientation for indicate on and indicate off rocker circuit breakers are opposite.
- Screw type terminals shown for Rocker style (CF1, C11, etc) circuit breakers. For other terminal configurations see circuit and terminal diagrams.
- All dimensions are in inches [millimeters].
- Tolerance $\pm .020$ unless otherwise specified.
- Must be ordered under a special catalog number.

PARALLEL POLE
(CA2-P)

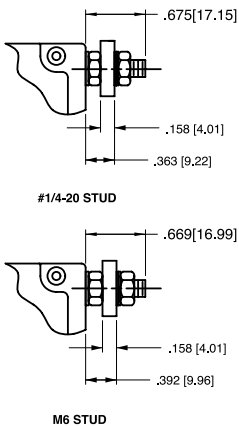
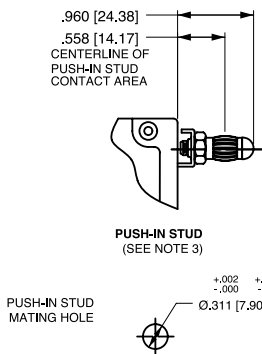


PARALLEL POLE
(CA3-P)



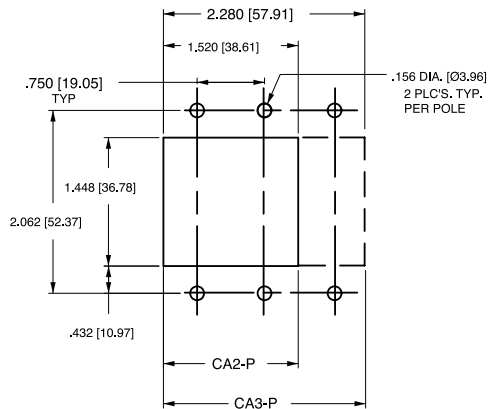
CIRCUIT BREAKER PROFILE		CIRCUIT BREAKER SCHEMATIC (CA2-P SHOWN)		CIRCUIT CODE	AUX SWITCH
		ANSI	IEC		
		SERIES TRIP			
				P	0
		SERIES TRIP WITH AUXILIARY SWITCH			
				P	2 3 4

TERMINAL DETAILS



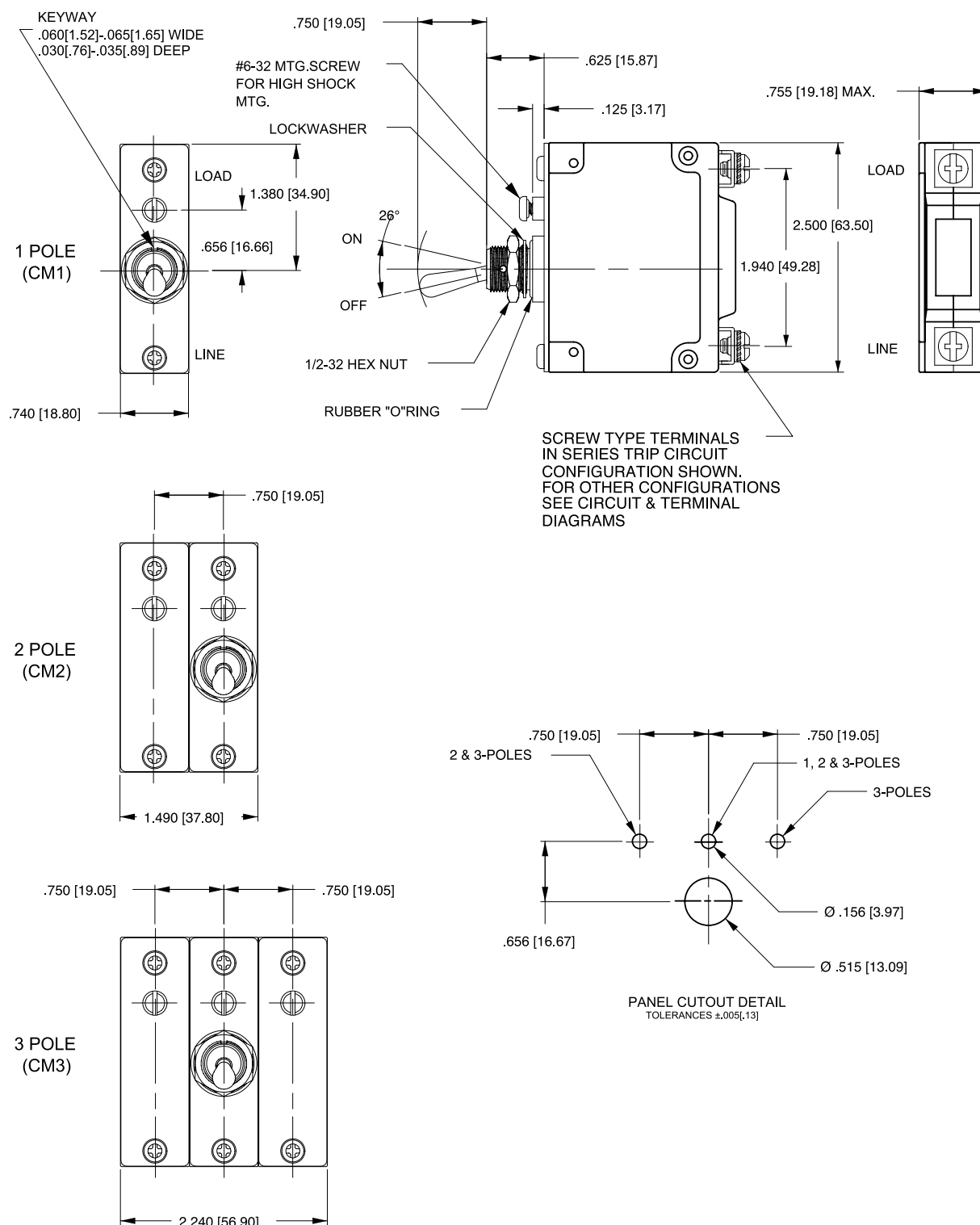
PANEL CUTOUT DETAIL

TOLERANCES $\pm .005$ [.12]



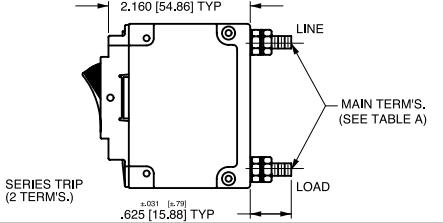
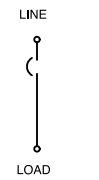
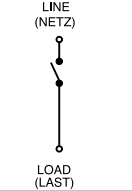
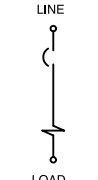
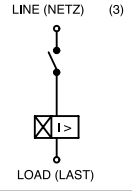
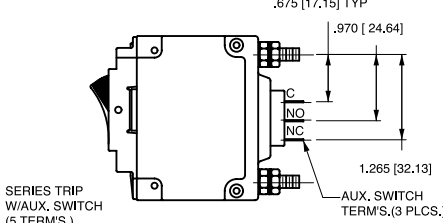
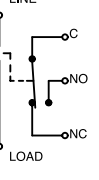
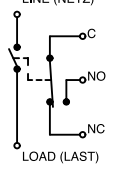
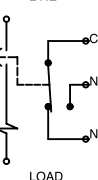
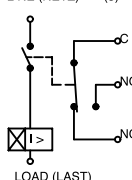
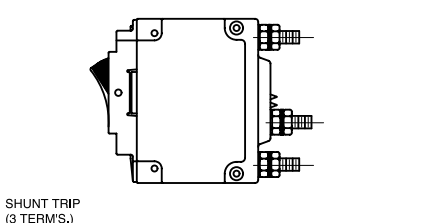
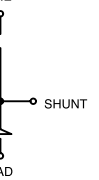
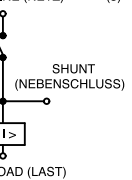
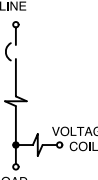
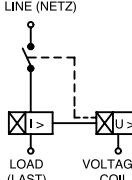
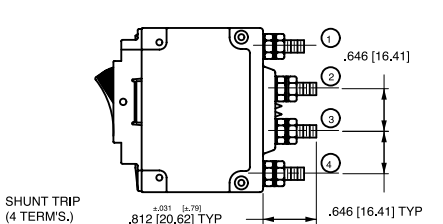
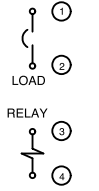
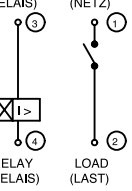
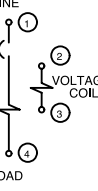
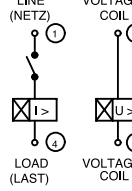
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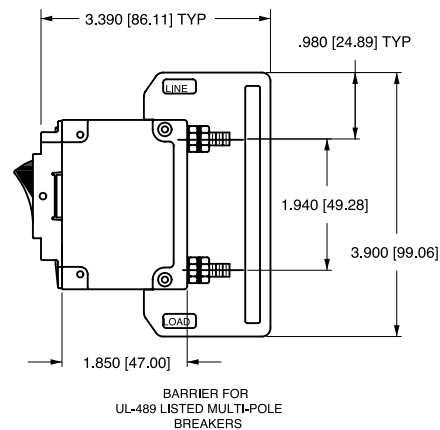
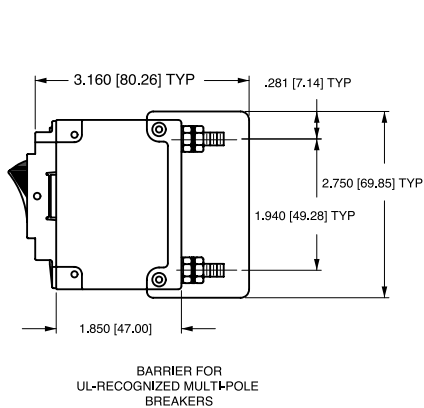
- 1 All dimensions are in inches [millimeters].
2 Tolerance $\pm .020$ [.51] unless otherwise specified.



Notes:

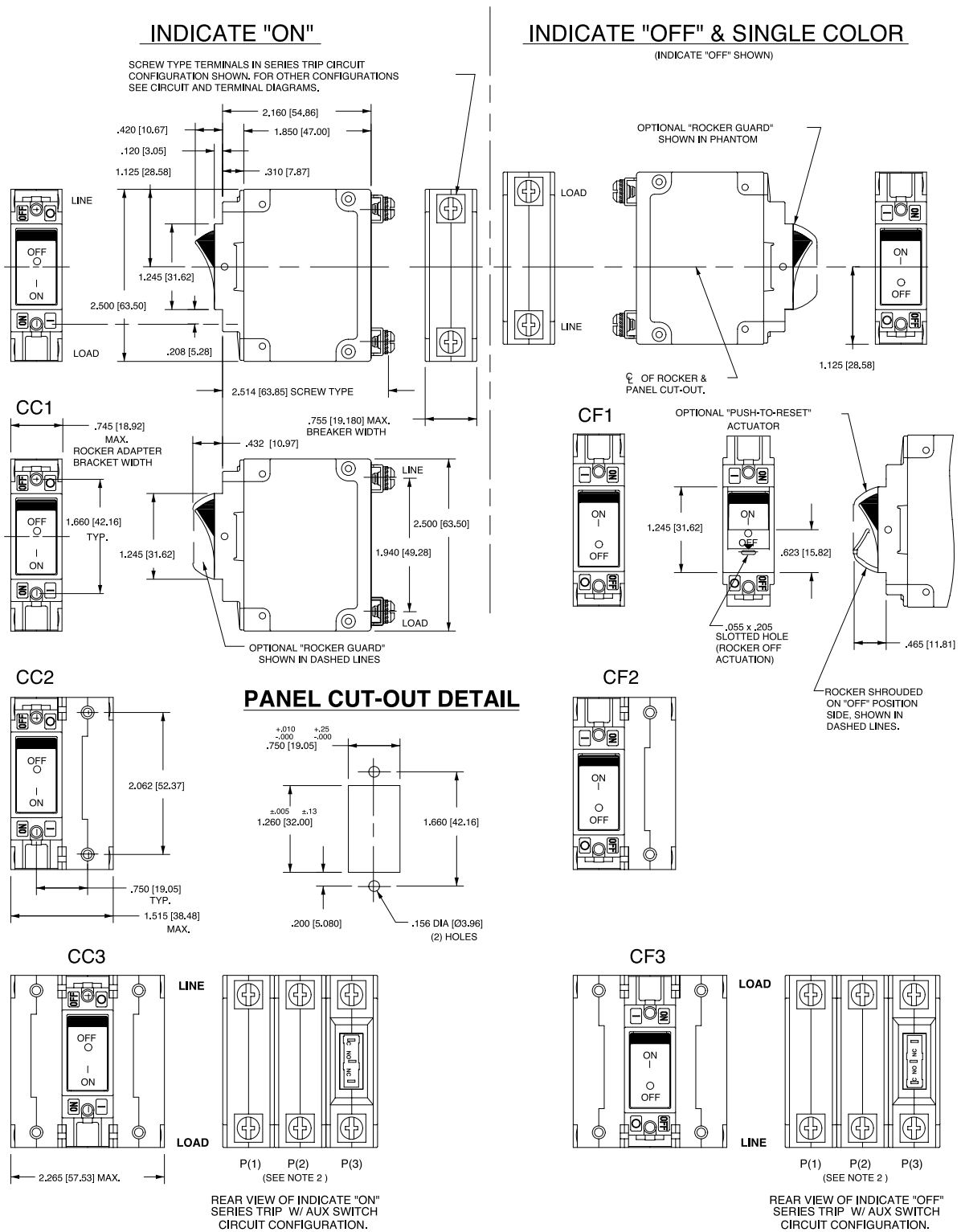
- 1 All dimensions are in inches [millimeters].
- 2 Tolerance ±.020 [.51] unless otherwise specified.

CIRCUIT BREAKER PROFILE	CIRCUIT SCHEMATIC		CIRCUIT CODE	TRIP SWITCH CODE	CIRCUIT SCHEMATIC		CIRCUIT CODE	TRIP SWITCH CODE
	ANSI	IEC			ANSI	IEC		
 SERIES TRIP (2 TERM'S.) 2.160 [54.86] TYP LINE MAIN TERM'S. (SEE TABLE A) LOAD .625 [15.88] TYP	SWITCH ONLY (NO COIL)		A	0	SWITCH TRIP		BC	0
	 LINE LOAD	 LINE (NETZ) LOAD (LAST)			 LINE LOAD	 LINE (NETZ) (3) LOAD (LAST)		
 SERIES TRIP W/AUX. SWITCH (5 TERM'S.) .675 [17.15] TYP .970 [24.64] C NO NC 1.265 [32.13] AUX. SWITCH TERM'S. (3 PLCS.)	SWITCH ONLY (NO COIL) WITH AUXILIARY SWITCH		A	2 3 4	SERIES TRIP WITH AUXILIARY SWITCH		BC	2 3 4
	 LINE LOAD	 LINE (NETZ) LOAD (LAST)			 LINE LOAD	 LINE (NETZ) (3) LOAD (LAST)		
 SHUNT TRIP (3 TERM'S.)	SHUNT TRIP		DE	0	DUAL COIL: SERIES TRIP CURRENT COIL, SHUNT TRIP VOLTAGE COIL		H	0
	 LINE LOAD	 LINE (NETZ) (3) SHUNT (NEBENSCHLUSS) LOAD (LAST)			 LINE LOAD	 LINE (NETZ) LOAD (LAST) VOLTAGE COIL		
 SHUNT TRIP (4 TERM'S.) .646 [16.41] .812 [20.62] TYP .646 [16.41] TYP	RELAY TRIP		FG	0	DUAL COIL: SERIES TRIP CURRENT COIL, RELAY TRIP VOLTAGE COIL		K	0
	 LINE LOAD RELAY	 RELAY (RELAIS) LOAD (LAST)			 LINE LOAD	 LINE (NETZ) LOAD (LAST) VOLTAGE COIL		



Notes:

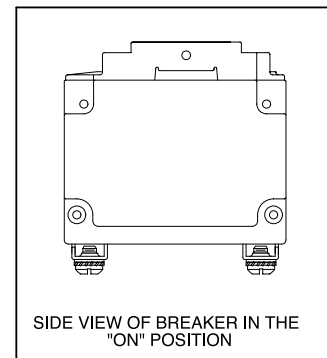
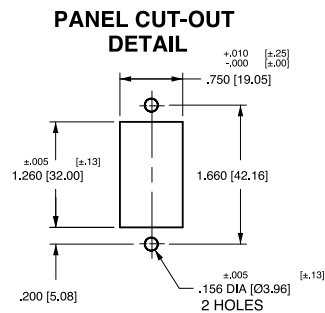
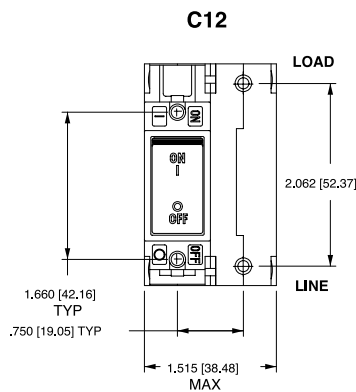
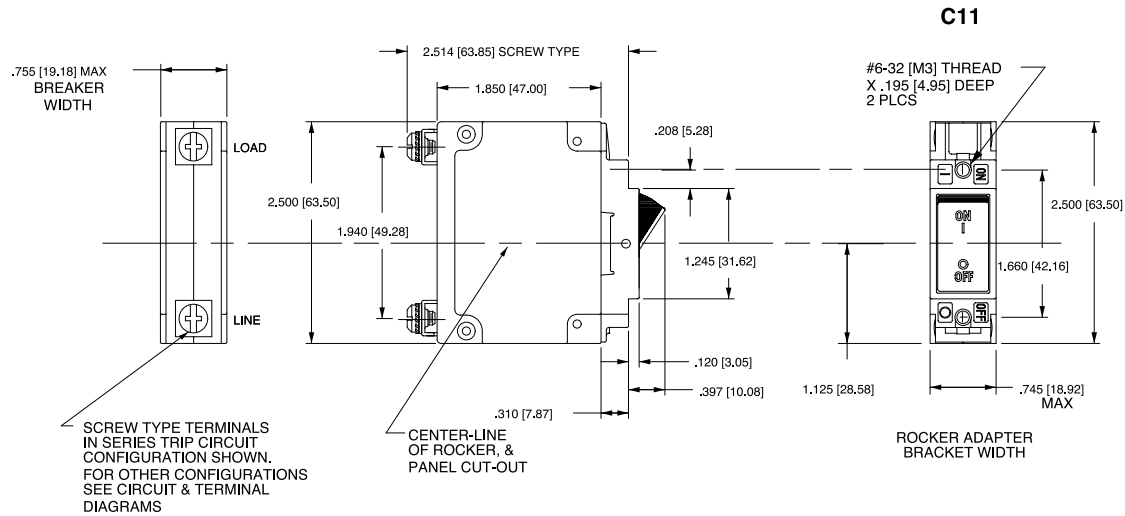
- 1 All dimensions are in inches [millimeters].
- 2 Tolerance $\pm .020$ [.51] unless otherwise specified.
- 3 Schematic shown represents current trip circuit.



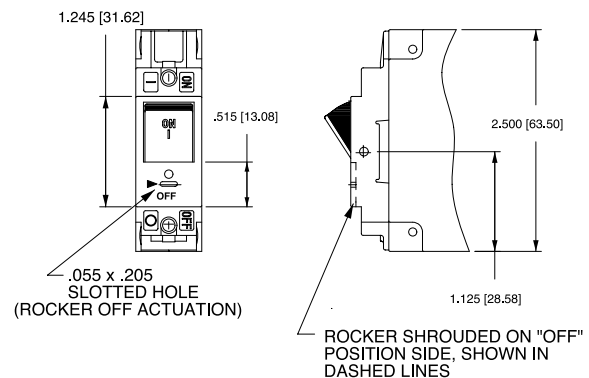
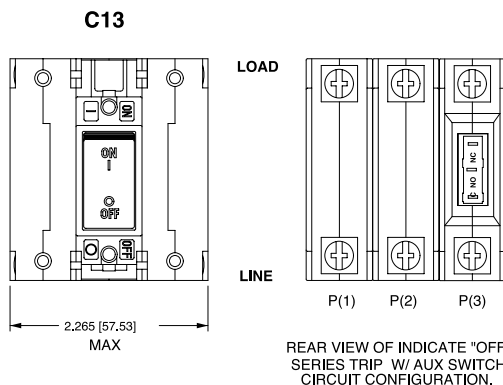
Notes:

- 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 All dimensions are in inches [millimeters].
- 4 Tolerance ±.020 [.51] unless otherwise specified.

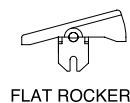
INDICATE "OFF" & SINGLE COLOR



PUSH-TO-RESET ACTUATOR



ACTUATOR SIDE VIEW (SURFACE CONTOURS)



Notes:

- 1 For pole orientation with horizontal legend, rotate front view clockwise 90°.
- 2 All dimensions are in inches [millimeters].
- 3 Tolerance ± 0.020 [.51] unless otherwise specified.

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