

**Multi 9 C60N UL 489 Listed 240 V Miniature Circuit Breakers**

- UL 489 Listed and CSA 22.2 No.5.1 for branch circuit protection
- Eliminates concerns and uncertainty of using a UL 1077 device where a UL 489 device is required
- Replaces fuses in low-ampere range; 17 ratings up to 35 A

- 10 k AIR (1P @ 120 Vac; 2P and 3P @ 240 Vac)
- 60 Vdc for 1P and 125 Vdc for 2P (on C-curve circuit breakers only, see table below)
- Increased installation flexibility with standard box lugs or optional ring terminals
- Allows easy front-mounting and rear wiring when using ring terminals
- A wide range of electrical and mechanical accessories
- Suitable for reverse feeding
- Trip-free mechanism
- Positive indication of contact disconnect

Trip Curve	Use	Magnetic Release
C	For typical loads	7–10 x ampere rating (7–14 for DC)
D	For high inrush	10–14 x ampere rating

**Table 7.27: UL 489 Circuit Breakers (120/240 V)**

Rating (A)	C Curve—7–10 Times Ampere Rating (7–14 DC)						D Curve—10–14 Times Ampere Rating					
	1P▲		2P■		3P		1P		2P		3P	
	Cat. No.	\$ Price	Cat. No.	\$ Price	Cat. No.	\$ Price	Cat. No.	\$ Price	Cat. No.	\$ Price	Cat. No.	\$ Price
<b>Box Lug/Box Lug</b>												
0.5	60100	125.00	60134	269.00	—	—	60117	125.00	60151	269.00	—	—
1	60101	125.00	60135	269.00	60168	387.00	60118	125.00	60152	269.00	60184	387.00
1.5	60102	125.00	60136	269.00	60169	387.00	60119	125.00	60153	269.00	60185	387.00
2	60103	125.00	60137	269.00	60170	387.00	60120	125.00	60154	269.00	60186	387.00
3	60104	125.00	60138	269.00	60171	387.00	60121	125.00	60155	269.00	60187	387.00
4	60105	125.00	60139	269.00	60172	387.00	60122	125.00	60156	269.00	60188	387.00
5	60106	125.00	60140	269.00	60173	387.00	60123	125.00	60157	269.00	60189	387.00
6	60107	114.00	60141	246.00	60174	356.00	60124	114.00	60158	246.00	60190	356.00
7	60108	114.00	60142	246.00	60175	356.00	60125	114.00	60159	246.00	60191	356.00
8	60109	114.00	60143	246.00	60176	356.00	60126	114.00	60160	246.00	60192	356.00
10	60110	114.00	60144	246.00	60177	356.00	60127	114.00	60161	246.00	60193	356.00
13	60111	114.00	60145	246.00	60178	356.00	60128	114.00	60162	246.00	60194	356.00
15	60112	114.00	60146	246.00	60179	356.00	60129	114.00	60163	246.00	60195	356.00
20	60113	114.00	60147	246.00	60180	356.00	60130	114.00	60164	246.00	60196	356.00
25	60114	114.00	60148	246.00	60181	356.00	60131	114.00	60165	246.00	60197	356.00
30	60115	120.00	60149	257.00	60182	372.00	60132	120.00	60166	257.00	60198	372.00
35	60116	120.00	60150	257.00	60183	372.00	60133	120.00	60167	257.00	60199	372.00
<b>Ring Tongue/Ring Tongue</b>												
0.5	60200	131.00	60234	282.00	—	—	60217	131.00	60251	282.00	—	—
1	60201	131.00	60235	282.00	60268	410.00	60218	131.00	60252	282.00	60284	410.00
1.5	60202	131.00	60236	282.00	60269	410.00	60219	131.00	60253	282.00	60285	410.00
2	60203	131.00	60237	282.00	60270	410.00	60220	131.00	60254	282.00	60286	410.00
3	60204	131.00	60238	282.00	60271	410.00	60221	131.00	60255	282.00	60287	410.00
4	60205	131.00	60239	282.00	60272	410.00	60222	131.00	60256	282.00	60288	410.00
5	60206	131.00	60240	282.00	60273	410.00	60223	131.00	60257	282.00	60289	410.00
6	60207	122.00	60241	261.00	60274	378.00	60224	122.00	60258	261.00	60290	378.00
7	60208	122.00	60242	261.00	60275	378.00	60225	122.00	60259	261.00	60291	378.00
8	60209	122.00	60243	261.00	60276	378.00	60226	122.00	60260	261.00	60292	378.00
10	60210	122.00	60244	261.00	60277	378.00	60227	122.00	60261	261.00	60293	378.00
13	60211	122.00	60245	261.00	60278	378.00	60228	122.00	60262	261.00	60294	378.00
15	60212	122.00	60246	261.00	60279	378.00	60229	122.00	60263	261.00	60295	378.00
20	60213	122.00	60247	261.00	60280	378.00	60230	122.00	60264	261.00	60296	378.00
25	60214	122.00	60248	261.00	60281	378.00	60231	122.00	60265	261.00	60297	378.00
30	60215	126.00	60249	273.00	60282	395.00	60232	126.00	60266	273.00	60298	395.00
35	60216	126.00	60250	273.00	60283	395.00	60233	126.00	60267	273.00	60299	395.00
<b>Box Lug/Ring Tongue</b>												
0.5	60300	129.00	60334	279.00	—	—	60317	129.00	60351	279.00	—	—
1	60301	129.00	60335	279.00	60368	404.00	60318	129.00	60352	279.00	60384	404.00
1.5	60302	129.00	60336	279.00	60369	404.00	60319	129.00	60353	279.00	60385	404.00
2	60303	129.00	60337	279.00	60370	404.00	60320	129.00	60354	279.00	60386	404.00
3	60304	129.00	60338	279.00	60371	404.00	60321	129.00	60355	279.00	60387	404.00
4	60305	129.00	60339	279.00	60372	404.00	60322	129.00	60356	279.00	60388	404.00
5	60306	129.00	60340	279.00	60373	404.00	60323	129.00	60357	279.00	60389	404.00
6	60307	120.00	60341	257.00	60374	372.00	60324	120.00	60358	257.00	60390	372.00
7	60308	120.00	60342	257.00	60375	372.00	60325	120.00	60359	257.00	60391	372.00
8	60309	120.00	60343	257.00	60376	372.00	60326	120.00	60360	257.00	60392	372.00
10	60310	120.00	60344	257.00	60377	372.00	60327	120.00	60361	257.00	60393	372.00
13	60311	120.00	60345	257.00	60378	372.00	60328	120.00	60362	257.00	60394	372.00
15	60312	120.00	60346	257.00	60379	372.00	60329	120.00	60363	257.00	60395	372.00
20	60313	120.00	60347	257.00	60380	372.00	60330	120.00	60364	257.00	60396	372.00
25	60314	120.00	60348	257.00	60381	372.00	60331	120.00	60365	257.00	60397	372.00
30	60315	125.00	60349	269.00	60382	387.00	60332	125.00	60366	269.00	60398	387.00
35	60316	125.00	60350	269.00	60383	387.00	60333	125.00	60367	269.00	60399	387.00

- ▲ 1P dual rated 120 Vac/60 Vdc.
- 2P dual rated 240 Vac/125 Vdc.

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 DIN Mounting Rail . . . . . Section 18



1P C60N  
2P C60N



3P C60N



Box Lug C60N



Ring Tongue C60N



Box/Ring C60N

7 MINIATURE AND MOLDED CASE CIRCUIT BREAKERS



1P  
UL489 C60



2P  
UL489 C60



3P  
UL489 C60

**Multi 9 C60 UL 489 Listed 480V Miniature Circuit Breakers**

- UL 489 Listed, CSA C22.2 No. 5.1; Also IEC 60947-2; CE marked
- 480Y/277 Vac @ 10 kA (2P and 3P), 277 Vac @ 10 kA (1P)
- 0.5 A through 20 A
- 1P, 2P, 3P, 18 mm wide per pole

- UL 486B Listed single-barrel lug: (2) 18–10 AWG (1-25 mm<sup>2</sup>) cables, Cu only
- Optional ring tongue terminals
- A wide range of electrical and mechanical accessories
- Suitable for reverse feeding
- Trip-free mechanism
- Positive indication of contact disconnect

Trip Curve	Use	Magnetic Release
C	For typical loads	7–10 x ampere rating (7–14 for DC)
D	For high inrush	10–14 x ampere rating

**Table 7.28: UL 489 Circuit Breakers (480Y/277 Vac)**

Rating (A)	C Curve—7–10 Times Ampere Rating (7–14 DC)						D Curve—10–14 Times Ampere Rating					
	1P		2P		3P		1P		2P		3P	
	Cat. No.	\$ Price	Cat. No.	\$ Price	Cat. No.	\$ Price	Cat. No.	\$ Price	Cat. No.	\$ Price	Cat. No.	\$ Price
<b>Single-Barrel Wire Lug</b>												
0.5	MGN61300	168.00	—	—	—	—	MGN61333	168.00	—	—	—	—
1	MGN61301	168.00	MGN61312	357.00	MGN61323	519.00	MGN61334	168.00	MGN61345	357.00	MGN61356	519.00
2	MGN61302	168.00	MGN61313	357.00	MGN61324	519.00	MGN61335	168.00	MGN61346	357.00	MGN61357	519.00
3	MGN61303	168.00	MGN61314	357.00	MGN61325	519.00	MGN61336	168.00	MGN61347	357.00	MGN61358	519.00
4	MGN61304	168.00	MGN61315	357.00	MGN61326	519.00	MGN61337	168.00	MGN61348	357.00	MGN61359	519.00
5	MGN61305	168.00	MGN61316	357.00	MGN61327	519.00	MGN61338	168.00	MGN61349	357.00	MGN61360	519.00
6	MGN61306	168.00	MGN61317	357.00	MGN61328	519.00	MGN61339	168.00	MGN61350	357.00	MGN61361	519.00
8	MGN61307	168.00	MGN61318	357.00	MGN61329	519.00	MGN61340	168.00	MGN61351	357.00	MGN61362	519.00
10	MGN61308	168.00	MGN61319	357.00	MGN61330	519.00	MGN61341	168.00	MGN61352	357.00	MGN61363	519.00
15	MGN61309	168.00	MGN61320	357.00	MGN61331	519.00	MGN61342	168.00	MGN61353	357.00	MGN61364	519.00
20	MGN61310	168.00	MGN61321	357.00	MGN61332	519.00	MGN61343	168.00	MGN61354	357.00	MGN61365	519.00
<b>Ring Tongue Terminal</b>												
0.5	MGN61366	168.00	—	—	—	—	MGN61399	168.00	—	—	—	—
1	MGN61367	168.00	MGN61378	357.00	MGN61389	519.00	MGN61400	168.00	MGN61411	357.00	MGN61422	519.00
2	MGN61368	168.00	MGN61379	357.00	MGN61390	519.00	MGN61401	168.00	MGN61412	357.00	MGN61423	519.00
3	MGN61369	168.00	MGN61380	357.00	MGN61391	519.00	MGN61402	168.00	MGN61413	357.00	MGN61424	519.00
4	MGN61370	168.00	MGN61381	357.00	MGN61392	519.00	MGN61403	168.00	MGN61414	357.00	MGN61425	519.00
5	MGN61371	168.00	MGN61382	357.00	MGN61393	519.00	MGN61404	168.00	MGN61415	357.00	MGN61426	519.00
6	MGN61372	168.00	MGN61383	357.00	MGN61394	519.00	MGN61405	168.00	MGN61416	357.00	MGN61427	519.00
8	MGN61373	168.00	MGN61384	357.00	MGN61395	519.00	MGN61406	168.00	MGN61417	357.00	MGN61428	519.00
10	MGN61374	168.00	MGN61385	357.00	MGN61396	519.00	MGN61407	168.00	MGN61418	357.00	MGN61429	519.00
15	MGN61375	168.00	MGN61386	357.00	MGN61397	519.00	MGN61408	168.00	MGN61419	357.00	MGN61430	519.00
20	MGN61376	168.00	MGN61387	357.00	MGN61398	519.00	MGN61409	168.00	MGN61420	357.00	MGN61431	519.00

**Multi 9 C60N UL 489A Listed Miniature Circuit Breakers for DC Telecommunication Applications**

A limited range of C60N products are UL Listed as UL 489A circuit breakers for protection of DC telecommunications circuits

**Table 7.29: UL 489A Circuit Breakers for DC Telecommunications Applications (1P, 2 Modules, C curve)**

Rating (A)	Cat. No.	\$Price	Rating (A)	Cat. No.	\$Price
0.5	60406	120.00	10	60414	101.00
1	60407	101.00	13	60415	101.00
2	60408	101.00	15	60416	101.00
3	60409	101.00	20	60417	101.00
4	60410	101.00	30	60418	101.00
5	60411	101.00	40	60419	111.00
6	60412	101.00	50	60420	117.00
8	60413	101.00	60	60421	123.00

Interrupting Rating..... Page 7-3  
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Dimensions..... Page 7-54

7 MINIATURE AND MOLDED CASE CIRCUIT BREAKERS

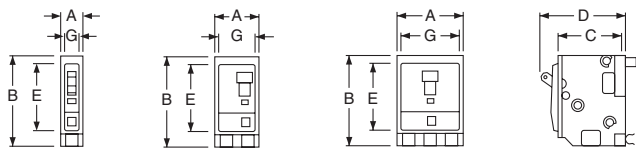


Figure 1 Figure 2 Figure 3 QO, QOB

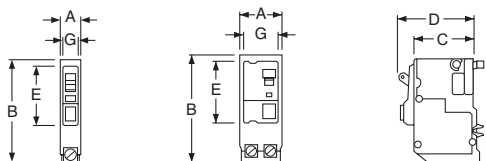


Figure 4 Figure 5 QO-GFI, QO-PL QO-EPD

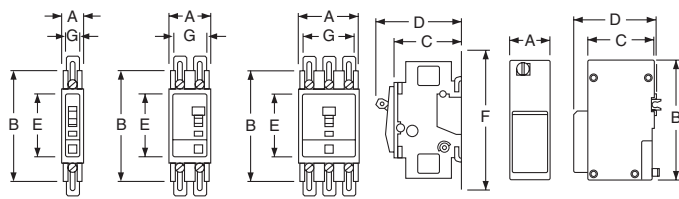


Figure 6 Figure 7 Figure 8 QOU, QYU Low Ampere QO-PLPS

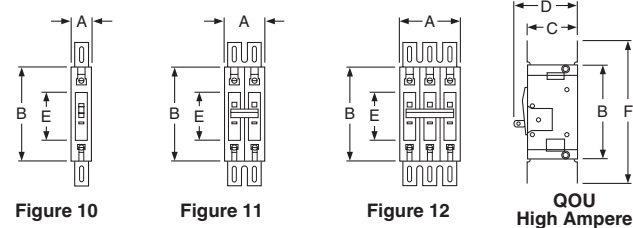


Figure 10 Figure 11 Figure 12 QOU High Ampere

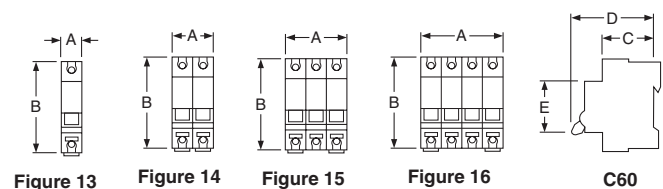


Figure 13 Figure 14 Figure 15 Figure 16 C60

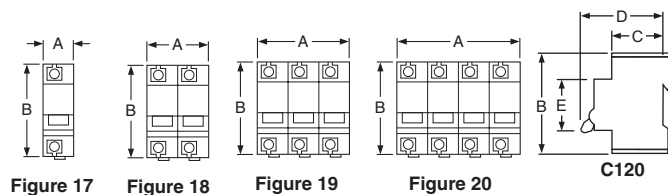


Figure 17 Figure 18 Figure 19 Figure 20 C120

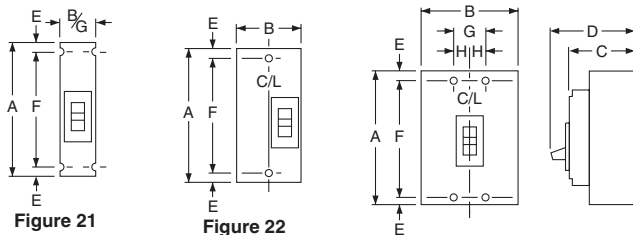


Figure 21 Figure 22 Figure 23

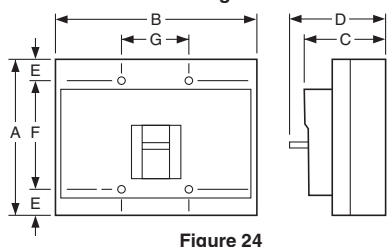


Figure 24

Table 7.140: QO®, QOU, Multi 9™ Circuit Breakers

Circuit Breaker Cat. No. Prefix	Poles	Fig. No.	Dimensions—Inches						
			A	B	C	D	E	F	G
QO, QOB	1	1	0.75	3.00▲	2.31	2.91	2.25	—	0.59
	2	2	1.50	3.00▲	2.31	2.91	2.25	—	1.34
	3	3	2.25	3.00▲	2.31	2.91	2.25	—	2.09
QOB-VH 150 A QOB-VH 110–150 A	2	2	3.0	5.72	2.53	4.90	3.78	—	2.85
	3	3	4.50	5.72	2.53	4.90	3.78	—	4.35
QO-PL QO-GFI QO-EPD	1	4	0.75	4.12■	2.31	2.91	2.25	—	0.59
	2	5	1.50	4.12■	2.31	2.91	2.25	—	1.34
	3	5	2.25	4.12■	2.31	2.91	2.25	—	2.09
QOU QYU Low Ampere	1	6	0.75	4.05♦	2.38	2.98	2.25	5.00★	0.62
	2	7	1.50	4.05♦	2.38	2.98	2.25	5.00★	1.37
	3	8	2.25	4.05★	2.38	2.98	2.25	5.00△	2.12
QOU High Ampere	1	10	0.75	4.45	2.37	2.96	2.25	6.78	—
	2	11	1.50	4.45	2.37	2.96	2.25	6.78	—
	3	12	2.25	4.45	2.37	2.96	2.25	6.78	—
Multi 9™ C60N	1	13	0.71	3.19	1.73	2.76	1.77	—	—
	2	14	1.42	3.19	1.73	2.76	1.77	—	—
	3	15	2.13	3.19	1.73	2.76	1.77	—	—
	4	16	2.84	3.19	1.73	2.76	1.77	—	—
QO-PLPS Power Supply	2	9	1.45	4.35	2.42	3.11	—	—	—

- ▲ 35–70 A is 3.12 in; 80–100 A 2P and 70–100 A 3P are 3.50 in.
- QO-PL is 4.55 in.
- ♦ 80–100 A 1P and 80–125 A 2P are 4.45 in
- ★ 80–100 A 1P and 80–125 A 2P are 6.78 in.
- ▼ 70–100 A 4.45 in.
- △ 70–100 A is 6.78 in.

Table 7.141: QB, QD, QG, QJ, Q4, FA, FI, KA, KC, KI, LA, LC, LI, LE, LX, LXI, MA Circuit Breakers

Circuit Breaker Cat. No. Prefix	Poles	Fig. No.	Dimensions—Inches							
			A	B	C	D	E	F	G	H
QB, QD, QG, QJ	2	22	6.47	3.00	3.02	3.93	□	4.25	—	—
	3	23	6.47	4.50	3.02	3.93	□	4.25	1.50	0.75
FAL, FHL	1	21	6.00	1.50	3.16	4.13	0.44	5.13	1.50	—
	2	22	6.00	3.00	3.16	4.13	0.44	5.13	—	—
	3	23	6.00	4.50	3.16	4.13	0.44	5.13	1.50	0.75
FIL, KAL, KCL, KHL, KIL	2 & 3	23	8.00	4.50	3.66	4.75	0.44	7.13	1.50	0.75
Q4L, LAL, LHL	2 & 3	23	11.00	6.00	4.06	5.84	0.88	9.25	2.00	1.00
LIL, LEL, LXL, LXIL, LCL	2 & 3	24	11.86	7.50	5.48	6.74	0.55	10.75	2.50	—
MAL, MHL	2 & 3	23	14.00	9.00	4.53	6.50	1.66	10.69	3.00	1.50

□ Dimensions E are 1.59 in at ON end and 0.63 in at OFF end.

Table 7.142: Shipping Weights ♦

Frame Size	Approx. Shipping Weight (Lbs.)	Frame Size	Approx. Shipping Weight (Lbs.)
FAL, FHL 1P	2	KIL	9
FAL, FHL 2P	3	LAL, LHL	15
FAL, FHL 3P	5	LEL, LIL, LXL, LXIL, LCL	25
FIL	8	Q4L	15
QB, QD, QG, QJ	4	MAL, MHL	34
KAL, KHL	7		

♦ All weights are for 3P circuit breakers unless otherwise noted.

		QOU Circuit Breakers			QOM1 and QOM2 Main Circuit Breakers		Multi 9™ Circuit Breakers and Supplementary Protectors						EDB Circuit Breakers											
																								
Circuit Breaker Type	Plug-on	—			—		—						—											
	Bolt-on	—			—		QOM1-VH		QOM2-VH		—						New!		EDB		EGB		EJB	
	Unit Mount	QOU			QYU▲		—		—		UL 489 C60N		UL1077 C60N■		C60H-DC		—		—		—			
Number of Poles	1	2	3	1	2	2	1	2	3	1	2	3,4	1	2	1	2,3	1	2,3	1	2,3	1	2,3		
Current Range	10-100	10-125	10-100	10-30	50-125	100-225	0.5-35	0.5-35	0.5-35	0.5-63	1-63	1-63	0.5-40	0.5-40	15-70	15-125	15-70	15-125	15-70	15-125	15-70	15-125		
Interrupting Ratings																								
UL/CSA Rating (kA RMS) (50/60 Hz)	120 Vac	10	10	10	—	22	22	10	—	—	10	10	10	—	—	25	25	65	65	100	100			
	120/240 Vac	10	10	10	—	22	22	5	10	10	10	10	10	—	—	18	25	35	65	65	100			
	240 Vac◆	—	—	10	—	—	—	5	10	10	10	10	10	—	—	18	25	35	65	65	100			
	277 Vac	—	—	—	5	—	—	—	—	—	5	5	5	—	—	18	18	35	35	65	65			
	480Y/277 Vac	—	—	—	—	—	—	10	10	10	—	5	5	—	—	—	18	—	35	—	65			
DC Ratings	48 Vdc	5★	5★	5★	—	—	—	—	—	10	10	—	5	5	—	—	—	—	—	—	—			
	60 Vdc	5▼	5▼	5▼	—	—	—	—	—	10	10	—	5	5	—	—	—	—	—	—				
	65 Vdc	—	—	—	—	—	—	—	—	10	10	—	5	5	—	—	—	—	—	—				
	125 Vdc	—	—	—	—	—	—	—	10	—	—	10	—	5	5	—	—	—	—	—				
	250 Vdc	—	—	—	—	—	—	—	—	—	—	—	—	5	5	—	—	—	—	—				
	500 Vdc	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5⦿	—	—	—	—				
IEC 60947-2 (50/60 Hz) Icu	240 Vac	—	—	—	—	—	20	20	20	10	10	10	20	10	20	—	—	—	—	—				
	415 Vac	—	—	—	—	—	—	10	10	—	5	5	—	—	10	—	—	—	—					
Special Ratings																								
Fed. Specs W-C-375B/GEN	X	X	X	X	X	X	X	X	X	—	—	—	—	—	X	X	X	X	X	X				
Other Standard	HACR Δ			—	—	—	—	—	—	□	—	—	—	—	HACR									
Accessories and Modifications																								
Shunt Trip	X◇	X◇	X◇	X◇	—	X◇	X	X	X	X	X	X	X	X	X◇	X◇	X◇	X◇	X◇	X◇				
Undervoltage Trip	—	—	—	—	—	—	X	X	X	X	X	X	X	X	—	—	—	—	—					
Auxiliary Switches	X◇	X◇	X◇	X◇	—	—	X	X	X	X	X	X	X	X	X◇	X◇	X◇	X◇	X◇	X◇				
Alarm Switch	X◇	X◇	X◇	X◇	—	—	X	X	X	X	X	X	X	X	X◇	X◇	X◇	X◇	X◇	X◇				
Handle Operators	—	—	—	—	—	—	X	X	X	X	X	X	X	X	—	—	—	—	—					
Handle Padlock Attachment	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Trip System Type																								
Thermal-magnetic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Molded Case Switch	—	X	X	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—						
Dimensions (1P Unit Mount)																								
Dimensions (1P Unit Mount) in. (mm)	Height	4.05 (103)			5.09 (129)★		5.60 (142)★		4.21 (107)▽			3.19 (81)		3.19 (81)		5.66 (144)								
	Width	0.75 (19)			5.00 (127)★		5.07 (129)★		0.71 (18)			0.71 (18)		0.71 (18)   1.42 (36)		0.98 (25)								
	Depth	2.92 (74)			3.47 (88)★		3.60 (91)★		2.76 (70)			2.76 (70)		2.56 (65)		4.05 (103)								
Pages	Pages 7-14				Pages 1-2				Pages 7-16 through 7-19						Page 9-17									

Note: All circuit breakers on this chart are UL Listed and CSA Certified unless otherwise noted.

- ▲ QYU is a UL 1077 supplementary protector.
- C60N are recognized components per UL 1077.
- ◆ For information regarding 3Ø corner grounded systems see the Supplemental Digest.
- ★ 1P and 2P, 10-70 A and 3P 10-60 A only.
- ▼ QOU is UL Listed for 60 Vdc per pole 80-100 A, 1P; 80-125 A, 2P; and 70-100 A, 3P.
- Δ HACR on QOU 1P and 3P 15-100 A, 2P 15-125 A;
- UL 489A for DC Telecom applications (1-pole only).
- ◇ Factory-installed option only
- ★ QOM1 and QOM2 dimensions are for 2-pole unit.
- ▽ 480 V C60 height is 5.56 in. (141 mm).
- ⦿ 2 poles must be wired in series for 500 Vdc.