

QO® miniature circuit breakers are plug-on products for use in QO load centers, NQOD panelboards, NQOD OEM interiors or Speed-D® switchboard distribution panels. Bolt-on QOB circuit breakers are for use in NQOD panelboards or interiors. ▲ The QO exclusive Qwik-Open® mechanism, with a trip reaction within 1/60th of a second, is standard on all 1P 15A and 20 A QO circuit breakers.



Table 7.1: Plug-On Circuit Breakers

Ampere Rating ■	1P—120/240 Vac		2P—120/240 Vac Common Trip		2P—240 Vac ▲ Common Trip		3P—240 Vac Common Trip	
	Cat. No.	\$ Price	Cat. No.	\$ Price	Cat. No.	\$ Price	Cat. No.	\$ Price
10 k AIR								
10 A	QO110	29.10	QO210	67.00	—	—	QO310	248.00
15 A	QO115★▼	29.10	QO215★	67.00	QO215H	200.00	QO315★	248.00
20 A	QO120★▼	29.10	QO220★	67.00	QO220H	200.00	QO320★	248.00
25 A	QO125★	29.10	QO225★	67.00	QO225H	200.00	QO325★	248.00
30 A	QO130★	29.10	QO230★	67.00	QO230H	200.00	QO330★	248.00
35 A	QO135★	29.10	QO235★	67.00	—	—	QO335★	248.00
40 A	QO140★	29.10	QO240★	67.00	QO240H	200.00	QO340★	248.00
45 A	QO145★	29.10	QO245★	67.00	—	—	QO345★	248.00
50 A	QO150★	29.10	QO250★	67.00	QO250H	200.00	QO350★	248.00
60 A	QO160★	29.10	QO260★	67.00	QO260H	200.00	QO360★	248.00
70 A	QO170★	67.00	QO270★	134.00	QO270H	224.00	QO370★	315.00
80 A	—	—	QO280★	189.00	QO280H	315.00	QO380★	366.00
90 A	—	—	QO290★	189.00	QO290H	315.00	QO390★	366.00
100 A	—	—	QO2100★	189.00	QO2100H	315.00	QO3100★	366.00
110 A	—	—	QO2110★	428.00	—	—	—	—
125 A	—	—	QO2125★	428.00	—	—	—	—
150 A	—	—	QO2150★△□	491.00	—	—	—	—
175 A	—	—	QO2175★△□	491.00	—	—	—	—
200 A	—	—	QO2200★△□	491.00	—	—	—	—
Molded Case Switch 60 A max.—240 Vac		—	—	—	QO200	70.00	QO300	248.00
Molded Case Switch 100 A max.—240 Vac		—	—	—	QO2000★	200.00	QO3000★	366.00
22 k AIR★								
15 A	QO115VH▼	63.00	QO215VH□	146.00	—	—	QO315VH□	371.00
20 A	QO120VH▼	63.00	QO220VH□	146.00	—	—	QO320VH□	371.00
25 A	QO125VH	73.00	QO225VH□	146.00	—	—	QO325VH□	371.00
30 A	QO130VH	73.00	QO230VH□	146.00	—	—	QO330VH□	371.00
40 A	—	—	QO240VH□	146.00	—	—	QO340VH□	371.00
50 A	—	—	QO250VH□	146.00	—	—	QO350VH□	371.00
60 A	—	—	QO260VH□	146.00	—	—	QO360VH□	371.00
70 A	—	—	QO270VH□	224.00	—	—	QO370VH□	477.00
80 A	—	—	QO280VH□	315.00	—	—	QO380VH□	530.00
90 A	—	—	QO290VH□	315.00	—	—	QO390VH□	530.00
100 A	—	—	QO2100VH□◇	315.00	—	—	QO3100VH□	530.00
110 A	—	—	QO2110VH□◇	1034.00	—	—	—	—
125 A	—	—	QO2125VH□◇	1034.00	—	—	—	—
150 A	—	—	QO2150VH△□◇	1061.00	—	—	—	—
175 A	—	—	QO2175VH△□◇	1061.00	—	—	—	—
200 A	—	—	QO2200VH△□◇	1061.00	—	—	—	—
42 k AIR★								
40 A	—	—	QOH240★	317.00	—	—	—	—
45 A	—	—	QOH245★	317.00	—	—	—	—
50 A	—	—	QOH250★	317.00	—	—	—	—
60 A	—	—	QOH260★	317.00	—	—	—	—
70 A	—	—	QOH270	528.00	—	—	—	—
80 A	—	—	QOH280	651.00	—	—	—	—
90 A	—	—	QOH290	651.00	—	—	—	—
100 A	—	—	QOH2100	651.00	—	—	—	—
110 A	—	—	QOH2110★	1389.00	—	—	—	—
125 A	—	—	QOH2125	1389.00	—	—	—	—
65 k AIR★								
15 A	QH115▼	117.00	QH215	293.00	—	—	QH315★	507.00
20 A	QH120▼	117.00	QH220	293.00	—	—	QH320	507.00
25 A	QH125★	117.00	QH225★	293.00	—	—	QH325★	507.00
30 A	QH130	117.00	QH230	293.00	—	—	QH330	507.00

Table 7.2: QO-QOB Ring Terminal

(20% \$ Price Adder)—Factory Installed Only

Ampere Rating	Poles	Suffix
10–30 A	1, 2, 3	5237
35–60 A	1,2	5238
70–110 A	2	—
60–100 A	3	5273

Table 7.3: Wire Sizes■

Circuit Breaker Type	Ampere Rating	Wire Size (AWG/kcmil)
QO 1P	10–30 A	14–8 Al/Cu
	10–30 A	(2) 14–10 Cu
	35–70 A	8–2 Al/Cu
QO 2P	10–30 A	14–8 Al/Cu
	10–30 A	(2) 14–10 Cu
	35–70 A	8–2 Al/Cu
	80–125 A	4–2/0 Al/Cu
QO 3P	10–30 A	14–8 Al/Cu, (2) 14–10 Cu
	35–70 A	8–2 Al/Cu
QOB-VH	110–150 A	4–300 Al/Cu
	15–20 A	12–8 Al 14–8 Cu
QO-AFI, QO-GFI & QO-EPD	15–30 A	12–8 Al 14–8 Cu
QO-PL	40, 50, 60 A	12–4 Al 14–6 Cu
	10–60 A	12–2 Al 14–2 Cu

Table 7.4: QOT Tandem Circuit Breakers

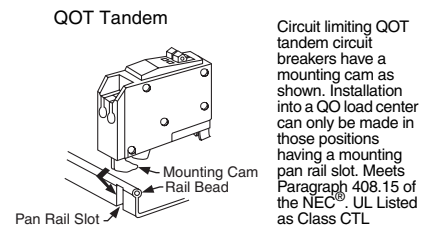
Ampere Rating■	Cat. No.★	\$ Price
1P—120/240 Vac		
15 A & 15 A	QOT1515	58.00
15 A & 20 A	QOT1520	58.00
20 A & 20 A	QOT2020	58.00
2P—120/240 Vac		

Order two QOT1515 or QOT2020 circuit breakers and handle tie QOTHT for common switching of center two poles.

Table 7.5: Replacement Tandem Circuit Breakers

For Use in Old Style Non-Class CTL QO Load Centers—10 k AIR

Ampere Rating■	Cat. No.★	\$ Price
1P—120/240 Vac—1 Space Required		
15 A & 15 A	QO1515	73.00
15 A & 20 A	QO1520	73.00
20 A & 20 A	QO2020	73.00
20 A & 30 A	QO2030	73.00
30 A & 20 A	QO3020	73.00
Two 1P Individual Trip—120/240 Vac—2 Spaces Required		
15 A & 15 A	—	—
15 A & 20 A	—	—
20 A & 20 A	—	—
20 A & 30 A	QO20303020▼	134.00
30 A & 20 A	—	—



- ▲ See Digest Section 1 for load centers, and Section 9 for panelboards and interiors.
 - 10–30 A circuit breakers are suitable for use with 60°C or 75°C conductors. 35–125 A circuit breakers are suitable for use with 75°C conductors.
 - ◆ UL Listed 5 k AIR on corner grounded Delta systems.
 - ★ UL Listed as HACR type for use with air conditioning, heating and refrigeration equipment having motor group combinations and marked for use with HACR type circuit breakers.
 - ▼ UL Listed as SWD (switching duty) rated. Suitable for switching 120 Vac fluorescent lighting loads.
 - △ Requires four spaces (1 AWG–300 kcmil Al/Cu.) Suitable for switching 120 Vac fluorescent lighting loads.
 - UL Listed for use ahead of QO, QO-GFI, QO-EPD, QO-AFI, QOT, QOCAFI, and QO-PL 10 k AIR circuit breakers to permit their application at 22 kA fault level.
 - ◇ 100 A maximum branch mounted opposite.
 - ☆ Order only. Contact your local Field Office.
 - ▽ Includes two circuit breakers (one QO2030 and one QO3020) and handle tie QOTHT.
 - Not suitable for use in 3Ø panels. Use only in 1Ø panel rated 150 A or greater.
- Interrupting Ratings Page 7-2
Accessories Page 7-12
Dimensions Page 7-54



Circuit Breaker Type	HOM Circuit Breakers							QO® Circuit Breakers																					
	Plug-on	HOM	HOM-AFI	HOM-GFI	HOM-EPD	HOMT	QO	QO-H	QO-VH	QO-VH	QH	QOT	QO-CAFI	QO-VHAFI	QO-GFI	QO-VHGF	QO-EPD QO-EPE												
	Bolt-on	—	—	—	—	—	QOB	QOB-H	—	—	QOB-VH	QHB	—	QOB-CAFI	QOB-VHAFI	QOB-GFI	QOB-VHGF	QOB-EPD QOB-EPE											
Unit Mount	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—											
Number of Poles	1	2	1	1	2	1	1	2	3	2	1	2	3	1	2,3▲	1,2	3	1	1	1	2	3	1	1	2	3			
Current Range	15-50	15-200♦	15-20	15-20	15-50	15-20	15-50	15-50■	10-70	10-200♦	10-100	15-100	15-30	15-125	15-100	15-30	15-150	15-30	15-30	15-30	15-20	15-30	15-30	15-60	15-50	15-30	15-30	15-60	15-50

Interrupting Ratings																															
UL/CSA Rating (kA) (50/60 Hz)	120 Vac	10	10	10	10	10	10	10	10	10	10	10	10	22	22	22	22	22	22	65	65	10	10	22	10	10	—	22	10	10	—
	120/240 Vac	10	10	—	—	10	—	10	10	10	10	10	10	22	22	22	22	22	22	65	65	10	—	—	—	10	—	—	—	10	—
	208Y/120	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	240 Vac ★	—	—	—	—	—	—	—	—	—	—	10	10	—	—	—	22	—	22▼	—	65	—	—	—	—	—	—	—	—	—	10
	277 Vac	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
DC Ratings	480Y/277 Vac	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	48 Vdc	—	—	—	—	—	—	—	—	5Δ	5 Δ	5 Δ	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	60 Vdc	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	65 Vdc	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	125 Vdc	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
IEC 60947-2 (50/60 Hz) □	IEC (Icu)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Special Ratings																															
Fed. Specs W-C-375B/GEN		X	X	X	X	X	X	X	X	X	X	—	—	—	X	—	—	—	—	X	—	X	X	—	—	X	—	—	—	X	—
Other Standard	HACR ◊ NOM	HACR ◊							HACR★ NOM			HACR ★					—	—	—	HACR ★	—	NOM	—	—	NOM						

Accessories and Modifications																															
Shunt Trip ▽		—	—	—	—	—	—	—	—	—	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Undervoltage Trip		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Auxiliary Switches ▽		—	—	—	—	—	—	—	—	X	X	X	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	X	X	X	
Handle Operators		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Handle Padlock Attachment		X	X	X	—	—	—	—	X*	X	X	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	X	X	X	X	X	X	X	X	X	X	
Molded Case Switch		—	—	—	—	—	—	—	—	X	X	X	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Dimensions (1P Unit Mount)																													
Dimensions (1P Unit Mount) in. (mm)	Height	3.13 (79)							3.5 (89) ▲							4.75 (121)			4.12 (103)										
	Width	1.00 (25)							0.75 (19) ▲							2.92 (74) ▲													
	Depth	2.98 (76)																											
Pages		Page 1-13														Pages 7-10, 7-11													

- ▲ See page 7-54 for dimensions for: QOB2150VH, QOB3110VH, QOB3125VH and QOB3150VH.
- HOMT tandem is 30 A maximum. HOMT quad tandem has 20 A maximum on outside poles, and 50 A maximum on the inside poles.
- ◆ AFI, EPD and GFI products are rated 60 Hz only.
- ★ See the Supplemental Digest for 3Ø corner grounded systems.
- ▼ 22 kA @ 240 Vac for 3P only.
- Δ 1P and 2P, 10-70 A and 3P 10-60 A only.
- See the Supplemental Digest for circuit breakers with IEC ratings.
- ◊ HACR on HOM 1P 15-50 A and 2P 15-100 A
- ★ HACR on QO, QOB 1P 10-70 A, 2P 15-100 A, 3P 10-100 A; QOB-VH 1P 15-70 A, 2P 15-125 A, 3P 15-100 A
- ▽ Factory-installed option only
- ◆ Factory-installed accessories are not available on QOB-VH 2P150 A and 3P 110-150 A
- * Handle padlock attachment available for HOMT quad tandem only.
- ◇ 2P 150-200 A requires 4P width.

7 MINIATURE AND MOLDED CASE CIRCUIT BREAKERS

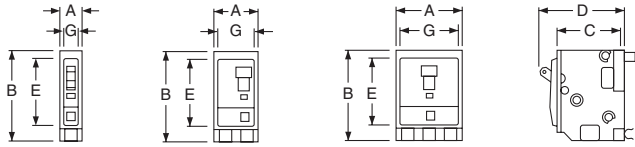


Figure 1 Figure 2 Figure 3 QO, QOB

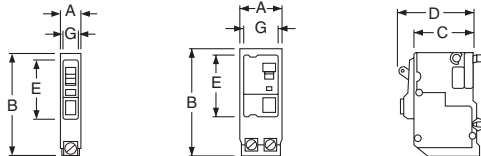


Figure 4 Figure 5 QO-GFI, QO-PL QO-EPD

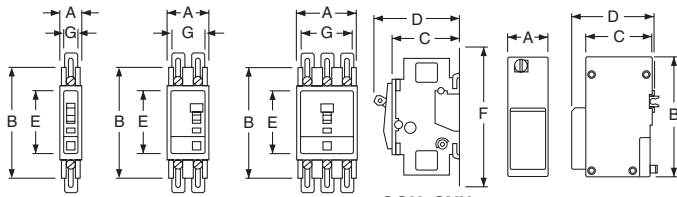


Figure 6 Figure 7 Figure 8 QOU, QYU Low Ampere Figure 9 QO-PLPS

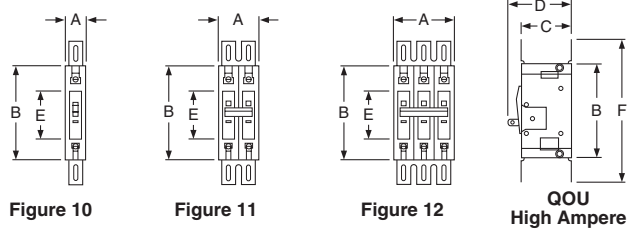


Figure 10 Figure 11 Figure 12 QOU High Ampere

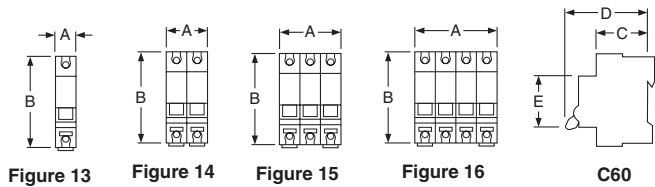


Figure 13 Figure 14 Figure 15 Figure 16 C60

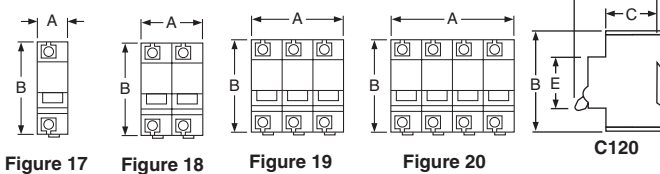


Figure 17 Figure 18 Figure 19 Figure 20 C120

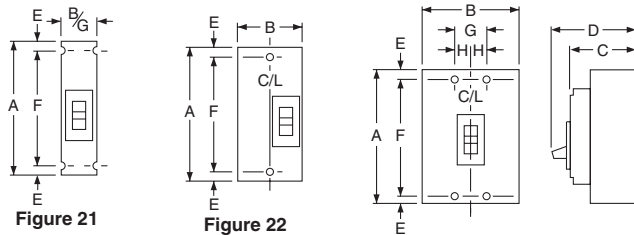


Figure 21 Figure 22 Figure 23

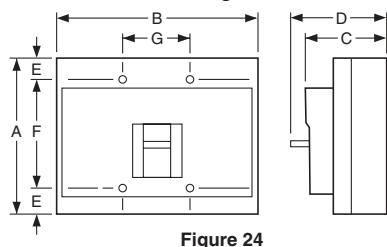


Figure 24

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.