



QO Load Center

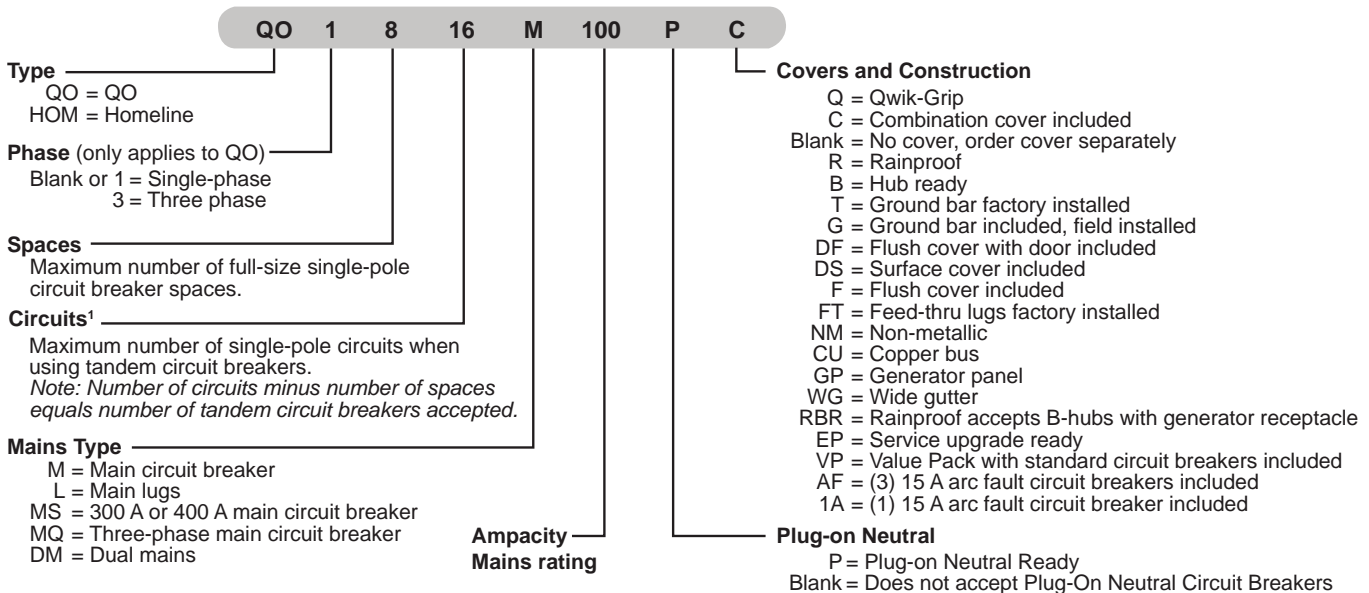
QO™ and Homeline™ Load Center EZ Selector - Selection Assistance

EZ Selector

Steps to select a load center.

- Select product type:
 - Homeline™ 1 inch format (HOM)
 - QO™ 3/4 inch format with plug-on neutral (QO) (P)
 - QO™ 3/4 inch format (QO)
- Select enclosure type: indoor or outdoor (RB = rainproof)
- Select single phase (1) or three phase (3)
- Select type of main:
 - Main circuit Breaker (M)
 - Main lugs (L)
 - Generator panel (GP)
- Select main ampacity rating
- Select pole spaces and max. number of 1-pole, single-phase circuits
- Select cover style:
 - Surface (box mounted on surface)
 - Surface (box mounted on surface, hinged cover included)
 - Flush (box recessed, cover is flush to wall)
- Value pack (VP)
- Select ground bar option:
 - Ground bar factory installed (T)
 - Ground bar included, field installation (G)
- Select special application:
 - Riser panel with gutter
 - Mfg housing, single phase 3-wire, convertible mains
 - Manufactured housing, single phase, 3-wire
 - Manufactured housing, single phase, 2-wire

QO™ and Homeline™ Load Centers — Catalog Number Construction



Additional Information

- See Circuits [1].
- Search our technical FAQs page: <https://www.se.com/us/en/faqs/home/>
- Refer to catalog 1100CT0501.

[1] QO Plug-on neutral load center catalog numbers indicate the number of spaces only. The tables in this document containing QO plug-on neutral load centers list the maximum number of single-pole circuits when using tandem breakers.

QO Standard Plug-On Circuit Breakers

Square D brand QO miniature circuit breakers are plug-on products for use in QO load centers, NQOD and NQ panelboards, NQOD and NQ OEM interiors or Speed-D™ switchboard distribution panels. Bolt-on QOB circuit breakers are for use in NQOD and NQ panelboards or interiors. [1]

The Square D exclusive Qwik-Open™ mechanism, with a trip reaction within 1/60th of a second, is standard on all 1P 15 and 20 A QO circuit breakers.

Table 1.1: Standard QO Plug-On Circuit Breakers

Amperes Rating [2]	1P—120/240 Vac	2P—120/240 Vac Common Trip	2P—240 Vac [3] Common Trip	3P—240 Vac Common Trip
10 k AIR				
10 A	QO110	QO210	—	QO310
15 A	QO115 [4] [5]	QO215 [4]	QO215H	QO315 [4]
20 A	QO120 [4] [5]	QO220 [4]	QO220H	QO320 [4]
25 A	QO125 [4]	QO225 [4]	QO225H OBS	QO325 [4]
30 A	QO130 [4]	QO230 [4]	QO230H	QO330 [4]
35 A	QO135 [4]	QO235 [4]	—	QO335 [4]
40 A	QO140 [4]	QO240 [4]	QO240H	QO340 [4]
45 A	QO145 OBS	QO245 [4]	—	QO345 [4]
50 A	QO150 [4]	QO250 [4]	QO250H OBS	QO350 [4]
60 A	QO160 [4]	QO260 [4]	QO260H OBS	QO360 [4]
70 A	QO170 [4]	QO270 [4]	QO270H OBS	QO370 [4]
80 A	—	QO280 [4]	QO280H OBS	QO380 [4]
90 A	—	QO290 [4]	QO290H OBS	QO390 [4]
100 A	—	QO2100 [4]	QO2100H	QO3100 [4]
110 A	—	QO2110 [4]	—	—
125 A	—	QO2125 [4]	—	—
150 A	—	QO2150 [4] [6] [7]	—	—
175 A	—	QO2175 [4] [6] [7]	—	—
200 A	—	QO2200 [4] [6] [7]	—	—
Molded Case Switch 60 A max.—240 Vac	—	—	QO200	QO300 OBS
Molded Case Switch 100 A max.—240 Vac	—	—	QO2000 OBS	QO3000 OBS
22 k AIR [4]				
15 A	QO115VH [5]	QO215VH [8]	—	QO315VH [8]
20 A	QO120VH [5]	QO220VH [8]	—	QO320VH [8]
25 A	QO125VH OBS	QO225VH [8]	—	QO325VH [8]
30 A	QO130VH	QO230VH [8]	—	QO330VH [8]
40 A	QO140VH	QO240VH [8]	—	QO340VH [8]
50 A	QO150VH	QO250VH [8]	—	QO350VH [8]
60 A	QO160VH	QO260VH [8]	—	QO360VH [8]
70 A	QO170VH	QO270VH [8]	—	QO370VH [8]
80 A	—	QO280VH [8]	—	QO380VH [8]
90 A	—	QO290VH [8]	—	QO390VH [8]
100 A	—	QO2100VH [8] [9]	—	QO3100VH [8]
110 A	—	QO2110VH [8] [9]	—	—
125 A	—	QO2125VH [8] [9]	—	—
150 A	—	QO2150VH [6] [8] [7]	—	—
175 A	—	QO2175VH OBS	—	—
200 A	—	QO2200VH [6] [8] [7]	—	—
42 k AIR [4]				
40 A	—	QOH240 OBS	—	—
45 A	—	QOH245 OBS	—	—
50 A	—	QOH250 OBS	—	—
60 A	—	QOH260 [10]	—	—
70 A	—	QOH270	—	—
80 A	—	QOH280	—	—
90 A	—	QOH290	—	—
100 A	—	QOH2100	—	—
110 A	—	QOH2110 [10]	—	—
125 A	—	QOH2125	—	—
65 k AIR [4]				
15 A	QH115 OBS	QH215 OBS	—	QH315 OBS
20 A	QH120 [5]	QH220	—	QH320 OBS
25 A	QH125 OBS	QH225 OBS	—	QH325 [10]
30 A	QH130 OBS	QH230	—	QH330 OBS

OBS This product is obsolete.

Refer to [page](#) for Interrupting Ratings, Accessories, and Dimensions.



QO 1P
1 Space Required



QO 2P
2 Spaces Required



QO 3P
3 Spaces Required



QO2200 2P 200 A
4 Spaces Required

[1] See Digest Section 1 for load centers, and Section 9 for panelboards and interiors.

[2] 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.

[3] UL Listed 5 k AIR on corner grounded Delta systems.

[4] 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.

[5] UL Listed as SWD (switching duty) rated. Suitable for switching 120 Vac fluorescent lighting loads.

[6] Requires four spaces (1 AWG–300 kcmil Al/Cu.) Suitable for switching 120 Vac fluorescent lighting loads.

[7] Not suitable for use in 3Ø panels. Use only in 1Ø panel rated 150 A or greater.

[8] UL Listed for use ahead of QO, QO-GFI, QO-EPD, QOT, QO-AFI, and QO-PL 10 k AIR circuit breakers to permit their application at 22 kA fault level.

[9] 100 A maximum branch mounted opposite.

[10] Order only. Contact your local Field Office.

Table 1.2: QO/QOB 48 Vdc 5 kA

Ampere Rating	Poles	Suffix
10–60 A	2	5272

QO/QOB Ring Terminal

Table 1.3: QO/QOB Ring Terminal—Factory-Installed Only

Ampere Rating	Poles	Suffix
10–30 A	1, 2, 3	5237
35–60 A	1, 2	5238
35–50 A	3	
70–110 A	2	
60–100 A	3	5273

Wire Sizes for QO/QOB Circuit Breakers

Table 1.4: Wire Sizes for QO/QOB Circuit Breakers

Circuit Breaker Type	Ampere Rating [11]	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	150–200 A	4–300 Al/Cu
	10–30 A	14–8 Al/Cu, (2) 14–10 Cu
	35–70 A	8–2 Al/Cu
QOB-VH	80–125 A	4–2/0 Al/Cu
	110–150 A	4–300 Al/Cu
QOT	15–20 A	12–8 Al 14–8 Cu
QO-AFI, QO-GFI or QO-EPD	15–30 A	12–8 Al 14–8 Cu
	40, 50, 60 A	12–4 Al 14–6 Cu
QO-PL	10–60 A	12–2 Al 14–2 Cu

QOT and QO Tandem Circuit Breakers

QOT tandem circuit breakers have a mounting cam as shown. Installation into a QO load center can only be made in those positions having a mounting pan rail slot. Meets Paragraph 408.54 of the NEC®. UL Listed as Class CTL.



QOT 1P Tandem
1 Space Required

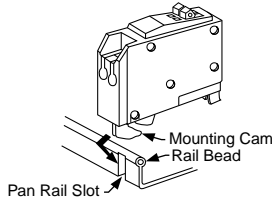


Table 1.5: QOT Tandem Circuit Breakers (CTL)—Not Compatible with Plug-on Neutral Systems

Ampere Rating [11]	Cat. No. [12]
1P—120/240 Vac	
15 A and 15 A	QOT1515
15 A and 20 A	QOT1520
20 A and 20 A	QOT2020
2P—120/240 Vac Common Trip	
Order two QOT1515 or QOT2020 circuit breakers and handle tie QOTHT for common switching of center two poles.	

Table 1.6: QO Tandem Circuit Breakers (non-CTL)—Compatible with Plug-on Neutral Systems


Ampere Rating [11]	Cat. No. [12]
1P—120/240 Vac—1 Space Required	
15 A and 15 A	QO1515
15 A and 20 A	QO1520
20 A and 20 A	QO2020
20 A and 30 A	QO2030
30 A and 20 A	QO3020
Two 1P Individual Trip—120/240 Vac—2 Spaces Required	
15 A and 15 A	Order two QO1515 or QO2020 circuit breakers and handle tie QOTHT
15 A and 20 A	
20 A and 20 A	—
20 A and 30 A	QO20303020 [13]
30 A and 20 A	—

[11] 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.




[12] 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.

[13] Includes two circuit breakers (one QO2030 and one QO3020) and handle tie QOTHT.

QO Miniature Circuit Breakers

QO™ Circuit Breakers																	
																	
Circuit Breaker Type	Plug-on	QO			QO-H	QO-VH			QH			QOT	QO-CAFI	QO-VHCAFI	QO-AFGF	QOVH-AFGF	
	Bolt-on	QOB			QOB-H	—	—	—	QOB-VH			QHB	—	QOB-VHCAFI	QOB-AFGF	QOB-VHAFDF	
	Unit Mount	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Number of Poles	1	2	3	2	1	2	3	1	2, 3 [1]	1, 2	3	1	1, 2	1, 2	1	1	
Current Range (A)	10–70	10–200 [2]	10–100	15–100	15–70	15–125	15–100	15–70	15–150	15–30	15–30	15–30	15–20	15–20	15–20	15–20	
Interrupting Ratings																	
UL/CSA Rating (kA) (50/60 Hz)	120 Vac	10	10	10	10	22	22	22	22	22	65	65	10	10	22	10	22
	120/240 Vac	10	10	10	10	22	22	22	22	22	65	65	10	10	22	—	—
	208Y/120	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	240 Vac [3]	—	—	10	10	—	—	22	—	22 [4]	—	65	—	—	—	—	—
	277 Vac	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
DC Ratings	48 Vdc	—	5 [5]	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60 Vdc	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	65 Vdc	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	125 Vdc	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	250 Vdc	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
IEC 60947-2 (50/60 Hz) [6]	IEC (Icu)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Special Ratings																	
CCC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fed. Specs W-C-375B/GEN	X	—	—	—	X	—	—	—	—	X	—	X	X	—	X	X	
Other Standard	HACR [7] NOM			HACR [7]						—	—	—	HACR [7]	—	HACR [7]	HACR [7]	
Accessories and Modifications																	
Shunt Trip [8]	X	X	X	X	X	X	X	X	X	X [9]	X	X	X	—	—	—	—
Undervoltage Trip	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Auxiliary Switches [8]	X	X	X	X	X	X	X	X	X	X [9]	X	X	X	—	X	—	—
Alarm Switch [8]	X	X	X	X	X	X	X	X	X	X [9]	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
Trip System Type																	
Thermal-magnetic	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	3.5 (89) [1]										4.75 (121)					
	Width	0.75 (19) [1]															
	Depth	2.92 (74) [1]															
Pages											page 7-11						

QO-GFI, QO-EPD, QOU, QOM Miniature Circuit Breakers

		QO Circuit Breakers			QOU Circuit Breakers		QOM1 and QOM2 Main Circuit Breakers	
								
Circuit Breaker Type	Plug-on	QO-GFI	QO-VHGF	QO-EPD QO-EPE	—	—	—	—

[1] For dimensions for QOB2150VH, QOB3110VH, QOB3125VH and QOB3150VH, see page 7-85

[2] 2P 150–200 A requires 4P width.

[3] See the Supplemental Digest, Section 3 for 3Ø corner grounded systems.

[4] 22 kA @ 240 Vac for 3P only.

[5] 2P, 10–60 A only, suffix 5272.

[6] See the Supplemental Digest Section 10 for circuit breakers with IEC ratings.

[7] 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.

[8] Factory-installed option only.

[9] Factory-installed accessories are not available on QOB-VH 2P150 A and 3P 110–150 A.

QO Standard Plug-On Circuit Breakers

Square D brand QO miniature circuit breakers are plug-on products for use in QO load centers, NQOD and NQ panelboards, NQOD and NQ OEM interiors or Speed-D™ switchboard distribution panels. Bolt-on QOB circuit breakers are for use in NQOD and NQ panelboards or interiors. [1]

The Square D exclusive Qwik-Open™ mechanism, with a trip reaction within 1/60th of a second, is standard on all 1P 15 and 20 A QO circuit breakers.

Table 7.1: Standard QO Plug-On Circuit Breakers

Amperes Rating [2]	1P—120/240 Vac	2P—120/240 Vac Common Trip	2P—240 Vac [3] Common Trip	3P—240 Vac Common Trip
10 k AIR				
10 A	QO110	QO210	—	QO310
15 A	QO115 [4] [5]	QO215 [4]	QO215H	QO315 [4]
20 A	QO120 [4] [5]	QO220 [4]	QO220H	QO320 [4]
25 A	QO125 [4]	QO225 [4]	QO225H OBS	QO325 [4]
30 A	QO130 [4]	QO230 [4]	QO230H	QO330 [4]
35 A	QO135 [4]	QO235 [4]	—	QO335 [4]
40 A	QO140 [4]	QO240 [4]	QO240H	QO340 [4]
45 A	QO145 OBS	QO245 [4]	—	QO345 [4]
50 A	QO150 [4]	QO250 [4]	QO250H OBS	QO350 [4]
60 A	QO160 [4]	QO260 [4]	QO260H OBS	QO360 [4]
70 A	QO170 [4]	QO270 [4]	QO270H OBS	QO370 [4]
80 A	—	QO280 [4]	QO280H OBS	QO380 [4]
90 A	—	QO290 [4]	QO290H OBS	QO390 [4]
100 A	—	QO2100 [4]	QO2100H	QO3100 [4]
110 A	—	QO2110 [4]	—	—
125 A	—	QO2125 [4]	—	—
150 A	—	QO2150 [4] [6] [7]	—	—
175 A	—	QO2175 [4] [6] [7]	—	—
200 A	—	QO2200 [4] [6] [7]	—	—
Molded Case Switch 60 A max.—240 Vac	—	—	QO200	QO300 OBS
Molded Case Switch 100 A max.—240 Vac	—	—	QO2000 OBS	QO3000 OBS
22 k AIR [4]				
15 A	QO115VH [5]	QO215VH [8]	—	QO315VH [8]
20 A	QO120VH [5]	QO220VH [8]	—	QO320VH [8]
25 A	QO125VH OBS	QO225VH [8]	—	QO325VH [8]
30 A	QO130VH	QO230VH [8]	—	QO330VH [8]
40 A	QO140VH	QO240VH [8]	—	QO340VH [8]
50 A	QO150VH	QO250VH [8]	—	QO350VH [8]
60 A	QO160VH	QO260VH [8]	—	QO360VH [8]
70 A	QO170VH	QO270VH [8]	—	QO370VH [8]
80 A	—	QO280VH [8]	—	QO380VH [8]
90 A	—	QO290VH [8]	—	QO390VH [8]
100 A	—	QO2100VH [8] [9]	—	QO3100VH [8]
110 A	—	QO2110VH [8] [9]	—	—
125 A	—	QO2125VH [8] [9]	—	—
150 A	—	QO2150VH [6] [8] [7]	—	—
175 A	—	QO2175VH OBS	—	—
200 A	—	QO2200VH [6] [8] [7]	—	—
42 k AIR [4]				
40 A	—	QOH240 OBS	—	—
45 A	—	QOH245 OBS	—	—
50 A	—	QOH250 OBS	—	—
60 A	—	QOH260 [10]	—	—
70 A	—	QOH270	—	—
80 A	—	QOH280	—	—
90 A	—	QOH290	—	—
100 A	—	QOH2100	—	—
110 A	—	QOH2110 [10]	—	—
125 A	—	QOH2125	—	—
65 k AIR [4]				
15 A	QH115 OBS	QH215 OBS	—	QH315 OBS
20 A	QH120 [5]	QH220	—	QH320 OBS
25 A	QH125 OBS	QH225 OBS	—	QH325 [10]
30 A	QH130 OBS	QH230	—	QH330 OBS

OBS This product is obsolete.

Refer to page 7-2 for Interrupting Ratings, Accessories, and Dimensions.



QO 1P
1 Space Required



QO 2P
2 Spaces Required



QO 3P
3 Spaces Required



QO2200 2P 200 A
4 Spaces Required

[1] See Digest Section 1 for load centers, and Section 9 for panelboards and interiors.

[2] 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.

[3] UL Listed 5 k AIR on corner grounded Delta systems.

[4] 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.

[5] UL Listed as SWD (switching duty) rated. Suitable for switching 120 Vac fluorescent lighting loads.

[6] Requires four spaces (1 AWG–300 kcmil Al/Cu.) Suitable for switching 120 Vac fluorescent lighting loads.

[7] Not suitable for use in 3Ø panels. Use only in 1Ø panel rated 150 A or greater.

[8] UL Listed for use ahead of QO, QO-GFI, QO-EPD, QOT, QO-AFI, and QO-PL 10 k AIR circuit breakers to permit their application at 22 kA fault level.

[9] 100 A maximum branch mounted opposite.

[10] Order only. Contact your local Field Office.