

400 A L-Frame



Circuit Breaker Type		Q4	LA	LH
Number of Poles		2, 3	2, 3	2, 3
Current Range		250–400	125–400	125–400
<b>Interrupting Ratings</b>				
UL/CSA/NOM Rating (kA RMS) (50/60 Hz)	240 Vac	25	42	65
	480Y/277 Vac	—	30	35
	480 Vac	—	30	35
	600Y/347 Vac	—	22	25
	600 Vac	—	22	25
DC Ratings	250 Vdc	—	10	50
	500 Vdc▲	—	—	20
IEC 60947-2 (kA RMS) Icu/Ics■	240 Vac	—	—	—
	415 Vac	—	20/5	20/5
<b>Special Ratings</b>				
CCC		—	—	—
Fed. Specs W-C-375B/GEN		X	X	X
HACR (2P, 3P)		—	X	X
<b>Connections/Terminations</b>				
Unit Mount		X	X	X
I-Line™		X	X	X
Rear Connection		X	X	X
Drawout		—	—	—
Optional Lugs		X	X	X
<b>Accessories and Modifications</b>				
Shunt Trip		X	X	X
Undervoltage Trip		X	X	X
Auxiliary Switches		X	X	X
Alarm Switch		X	X	X
Motor Operator		X	X	X
Handle Operators		X	X	X
Mechanical Interlocks (3P)		—	X♦	X♦
Handle Padlock Attachment		X	X	X
Cylinder Lock (3P)		X	X	X
Optional GF Protection		—	—	—
<b>Trip System Type</b>				
Thermal-magnetic		X	X	X
Instantaneous-only (MCP)		—	X	X
Molded Case Switch (Automatic)		—	—	X
Electronic		—	—	—
<b>Enclosures (Pages DE3-56–DE3-58)</b>				
General Purpose (NEMA 1)		X	X	X
Raintight (NEMA 3R)		X	X	X
Dust-tight (NEMA 12)		X	X	X
Watertight (NEMA 4, 4X, 5)		X	X	X
Explosion Proof (NEMA 7, 9)		—	—	—
Dimensions (3P Unit Mount) in. (mm)	Height	11 (279)		
	Width	6 (152)		
	Depth	5.84 (148)		
Pages (Unit Mount)/(I-Line)		DE3-61 / Section DE5		

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

- ▲ Ungrounded UPS systems only. See page DE3-35.
- Dual CSA/UL and IEC ratings and CE markings on circuit breakers.
- ♦ Requires circuit breaker with WB suffix .

# QO™ and QOU Miniature Circuit Breakers

## QO™ Miniature Circuit Breakers

Class 730, 731, 733 / Refer to Catalog 0730CT9801

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 15 A and 20 A QO circuit breakers.

### 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.	Cat. No.	Cat. No.	Cat. No.
<b>10 k AIR</b>				
10 A	QO110	QO210	—	QO310
15 A	QO115◆★	QO215◆	QO215H	QO315◆
20 A	QO120◆★	QO220◆	QO220H	QO320◆
25 A	QO125◆	QO225◆	QO225H	QO325◆
30 A	QO130◆	QO230◆	QO230H	QO330◆
35 A	QO135◆	QO235◆	—	QO335◆
40 A	QO140◆	QO240◆	QO240H	QO340◆
45 A	QO145◆	QO245◆	—	QO345◆
50 A	QO150◆	QO250◆	QO250H	QO350◆
60 A	QO160◆	QO260◆	QO260H	QO360◆
70 A	QO170◆	QO270◆	QO270H	QO370◆
80 A	—	QO280◆	QO280H	QO380◆
90 A	—	QO290◆	QO290H	QO390◆
100 A	—	QO2100◆	QO2100H	QO3100◆
110 A	—	QO2110◆	—	—
125 A	—	QO2125◆	—	—
150 A	—	QO2150◆▼▽	—	—
175 A	—	QO2175◆▼▽	—	—
200 A	—	QO2200◆▼▽	—	—
Molded Case Switch 60 A max.—240 Vac		—	QO200	QO300
Molded Case Switch 100 A max.—240 Vac		—	QO2000◆	QO3000◆
<b>22 k AIR◆</b>				
15 A	QO115VH★	QO215VH△	—	QO315VH△
20 A	QO120VH★	QO220VH△	—	QO320VH△
25 A	QO125VH	QO225VH△	—	QO325VH△
30 A	QO130VH	QO230VH△	—	QO330VH△
40 A	—	QO240VH△	—	QO340VH△
50 A	—	QO250VH△	—	QO350VH△
60 A	—	QO260VH△	—	QO360VH△
70 A	—	QO270VH△	—	QO370VH△
80 A	—	QO280VH△	—	QO380VH△
90 A	—	QO290VH△	—	QO390VH△
100 A	—	QO2100VH△□	—	QO3100VH△
110 A	—	QO2110VH△□	—	—
125 A	—	QO2125VH△□	—	—
150 A	—	QO2150VH△▼▽	—	—
175 A	—	QO2175VH△▼▽	—	—
200 A	—	QO2200VH△▼▽	—	—
<b>42 k AIR◆</b>				
40 A	—	QOH240◆	—	—
45 A	—	QOH245◆	—	—
50 A	—	QOH250◆	—	—
60 A	—	QOH260◆	—	—
70 A	—	QOH270	—	—
80 A	—	QOH280	—	—
90 A	—	QOH290	—	—
100 A	—	QOH2100	—	—
110 A	—	QOH2110◆	—	—
125 A	—	QOH2125	—	—
<b>65 k AIR◆</b>				
15 A	QH115★	QH215	—	QH315◆
20 A	QH120★	QH220	—	QH320
25 A	QH125◆	QH225◆	—	QH325◆
30 A	QH130	QH230	—	QH330

### 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
35–50 A	3	
70–110 A	2	5273
60–100 A	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
QO 2P	35–70 A	8–2 Al/Cu
	10–30 A	14–8 Al/Cu
	10–30 A	(2) 14–10 Cu
	35–70 A	8–2 Al/Cu
QO 3P	80–125 A	4–2/0 Al/Cu
	150–200 A	4–300 Al/Cu
	10–30 A	14–8 Al/Cu, (2) 14–10 Cu
QOB-VH	110–150 A	4–300 Al/Cu
QOT	15–20 A	12–8 Al 14–8 Cu
QO-AFI, QO-GFI & QO-EPD	15–30 A	12–8 Al 14–8 Cu
	40, 50, 60 A	8–2 Al/Cu
QO-PL	10–60 A	12–2 Al 14–2 Cu

### Replacement Tandem Circuit Breakers

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

Ampere Rating	Cat. No.◆	\$ Price
<b>1P—120/240 Vac—1 Space Required</b>		
15 & 15 A	QO1515	
15 A & 20 A	QO1520	
20 A & 20 A	QO2020	
20 A & 30 A	QO2030	
30 A & 20 A	QO3020	
<b>Two 1P Individual Trip—120/240 Vac—2 Spaces Required</b>		
15 A & 15 A	—	Order Two QO1515 or QO2020 circuit breakers and handle tie QOTHT for common switching of center two poles.
15 A & 20 A	—	
20 A & 20 A	—	
20 A & 30 A	QO20303020★	
30 A & 20 A	—	



QO 1P  
1 Space Required



QOT 1P Tandem  
1 Space Required



QO 2P  
2 Spaces Required



QO2200 2P 200 A  
4 Spaces Required



QO 3P  
3 Spaces Required

- ▲ See Section 1 for load centers, and Section 5 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 con Delta systems.
  - ◆ CSA/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.
  - ★ CSA/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.
  - △ CSA/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.
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1P  
QO-AFI

### QO™ Arc-Fault Circuit Breaker

QO arc-fault circuit breakers provide branch feeder protection for series and parallel-type arcing as required by the NEC and local code adoption, and comply with UL1699.



1P  
QO-GFI



2P  
QO-GFI

### QO Arc Fault Circuit Breakers▲

Circuit Breaker Type	Ampere Rating	1P 120 Vac	
		10 k AIR	22 k AIR
		1 Space Required	1 Space Required
		Cat. No.	Cat. No.
Combination Arc-fault Interrupter	15 A	QO115CAFI	QO115VHCAFI
	20 A	QO120CAFI	QO120VHCAFI

### QO-GFI

Qwik-Gard™ circuit breakers provide overload and short circuit protection, combined with Class A ground fault protection. Class A denotes a ground fault circuit interrupter that will trip when a fault current to ground is 6 mA or more, for people protection. Do not connect to more than 250 feet of load conductor for the total one-way run to prevent nuisance tripping.



3P  
QO-GFI

### QO-GFI Circuit Breakers

Ampere Rating (A)	Qwik-Gard Circuit Breakers With Ground Fault Circuit Interrupter		
	1P 120 Vac		2P Common Trip 120/240 Vac
	10 k AIR	22 k AIR	10 k AIR
	1 Space Required	1 Space Required	2 Spaces Required
Cat. No.			
15	QO115GFI	QO115VHGFI	QO215GFI
20	QO120GFI	QO120VHGFI	QO220GFI
25	QO125GFI	QO125VHGFI	QO225GFI
30	QO130GFI	QO130VHGFI	QO230GFI
40	—	—	QO240GFI
50	—	—	QO250GFI
60	—	—	QO260GFI★



Two-wire  
QO-SWN

### QO-EPD/EPE

QO-EPD/EPE circuit breakers provide overload and short circuit protection combined with Class B ground fault protection. They are designed to provide ground fault protection of equipment at a 30 milliampere level (EPD) or 100 milliamp level (EPE). They are not designed to protect people from electrical shock.



Three-wire  
QO-SWN

### QO-EPD Circuit Breakers

Ampere Rating (A)	1P 120 Vac	2P Common Trip 120/240 Vac	3P Common Trip 240 Vac	
	10 k AIR	10 k AIR	10 k AIR	
	1 Space Required	2 Spaces Required	3 Spaces Required	
	Cat. No.			
15	QO115EPD	QO215EPD	QO315EPD▼	QO315EPE▼
20	QO120EPD	QO220EPD	QO320EPD▼	QO320EPE▼
25	QO125EPD	QO225EPD	—	—
30	QO130EPD	QO230EPD	QO330EPD▼	QO330EPE▼
40	—	QO240EPD	QO340EPD▼	QO340EPE▼
50	—	QO250EPD	QO350EPD▼	QO350EPE▼
60	—	QO260EPD★	—	—

### QO-SWN

Switch Neutral Common Trip 2008 NEC™ 514.11

### QO-SWN Circuit Breakers

Ampere Rating	2 Wire 120 Vac		3 Wire 120/240 Vac	
	10 k AIR		10 k AIR	
	2 Spaces Required		3 Spaces Required	
		Cat. No.	Cat. No.	
10 A	QO210SWN		—	
15 A	QO215SWN		QO315SWN	
20 A	QO220SWN		QO320SWN	
25 A	QO225SWN		—	
30 A	QO230SWN		QO330SWN	
40 A	QO240SWN		QO340SWN	
50 A	QO250SWN		QO350SWN	



QO-K Key Operated

HID circuit breakers are for use on circuits feeding fluorescent and high intensity discharge (HID) lighting systems such as mercury vapor, metal halide, or high pressure sodium. These circuit breakers are physically interchangeable with QO circuit breakers.

### QO-HID Circuit Breakers

Ampere Rating	1P 120/240 Vac		2P Common Trip 120/240 Vac		3P Common Trip 240 Vac		
	10 k AIR		10 k AIR		10 k AIR		
	1 Space Required		2 Spaces Required		3 Spaces Required		
		Cat. No.	\$ Price	Cat. No.	\$ Price	Cat. No.	\$ Price
15 A	QO115HID■		QO215HID		QO315HID		
20 A	QO120HID■		QO220HID		QO320HID		
25 A	QO125HID		QO225HID		QO325HID		
30 A	QO130HID		QO230HID		QO330HID		
40 A	QO140HID		QO240HID		—		
50 A	QO150HID		QO250HID		—		

### QO-K

Key operated QO circuit breakers are available in single-pole construction and can be mounted in any single-pole space which will accept a standard QO. These circuit breakers can be turned ON or OFF or to RESET with a special key (catalog number QOK10) included with the circuit breaker. These circuit breakers are UL Listed and available as shown in the table.

### QO-K Circuit Breakers

120 Vac—10 k AIR (1 Space Required)	
Ampere Rating	Cat. No.
10 A	QO110K
15 A	QO115K
20 A	QO120K
30 A	QO130K

### QO-HM

High magnetic trip circuit breakers are recommended for applications where high initial inrush may occur and for individual dimmer applications.

### QO-HM Circuit Breakers

Ampere Rating	1P Cat. No.
120 Vac—10 k AIR	
15 A	QO115HM▲■
20 A	QO120HM▲■

### Non-automatic (Standard) Miniature Switches

Miniature non-automatic switches have the same physical packaging as miniature circuit breakers, but open only when the handle is switched to the OFF position.

Non-automatic switches provide no overcurrent protection or short circuit protection. They must not be used on systems that have an available fault current greater than the values listed in the table.

Non-automatic switches are UL Listed per UL 1087 and are CSA certified.

### QO, 240 Vac 10 kA

Ampere Rating	2P	3P
	Cat. No.	Cat. No.
60 A	QO200	QO300
100 A	QO2000	QO3000

- ▲ CSA/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.
- CSA/UL Listed as SWD (switching duty) rated. Suitable for switching 120 Vac fluorescent lighting loads.
- ◆ 10–30 A circuit breakers are suitable for use with 60° C or 75° C conductors. 35–60 A circuit breakers are suitable for use with 75° C conductors.
- ★ Suitable only for feeding 240 Vac and 208 Vac two-wire loads. Does not contain load neutral connection.
- ▼ See note in Instruction Bulletin when using in an enclosure with a QO403 or QON prefix.

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### QO-HID

# QO™ and QOU Miniature Circuit Breakers

## QO™ Circuit Breaker Accessories

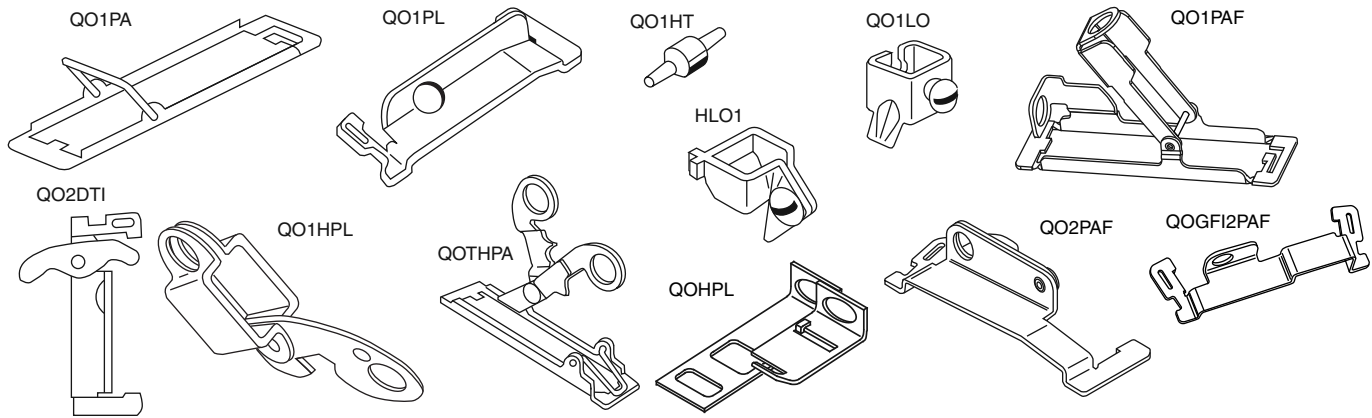
Class 1130 / Refer to Catalog 0730CT9801

### Accessories for Use with QO™ and QOB Miniature Circuit Breakers

Handle Attachments	Description	Cat. No.
Handle Tie:	Converts any two adjacent 120/240 Vac 1P QO circuit breakers to independent trip 2P Converts any two adjacent 120/240 Vac 1P side-by-side QOT circuit breakers to independent trip 2P Handle tie and lock-off for three 1P QO, QOB circuit breakers	QO1HT QOTHT QO3HT
Handle Clamp:	Clamp for holding QO 1P handle in ON or OFF position Clamp for holding QO or Q1 1P, 2P or 3P circuit breaker handles in ON or OFF position	QO1LO HLO1
Handle Padlock Attachment: for Padlocking in ON or OFF position	For padlocking 1P QO circuit breaker in ON or OFF position Loose attachment Fixed attachment For padlocking 1P side-by-side QOT circuit breaker in ON or OFF position For padlocking 2P and 3P QO-GFI, QO-EPD, and QO-EPE in either ON or OFF position, fixed attachment. For 2P and 3P QO and Q1 standard circuit breakers which require padlocking in either ON or OFF position. Loose attachment Fixed attachment	QOHPL QO1PA QOTHPA GFI2PA  QO1HPL QO1PL
Handle Padlock Attachment: for Padlocking in OFF position	For padlocking 1P QO circuit breaker in OFF position only, fixed attachment. For padlocking 2P and 3P QO circuit breakers in OFF position only, fixed attachment. For padlocking 1P QO-GFI, QO-AFI, QO-CAFI, and QO-EPD circuit breakers in OFF position only, fixed attachment. For padlocking 2P and 3P QO-GFI, QO-EPD, and QO-EPE circuit breakers in OFF position only, fixed attachment.	QO1PAF QO2PAF QOGFI1PAF QOGFI2PAF
Sub-Feed Lugs	60 A 2P plug-on – 2 spaces required (6–2 Al/Cu) 125 A 2P plug-on – 2 spaces required (12–2/0 Al/Cu) 225 A 2P plug-on – 4 spaces required (4–300 Al/Cu) 125 A 3P plug-on – 3 spaces required (12–2/0 Al/Cu)	QO60SL QO2125SL QO225SL▲ QO3125SL
Mechanical Interlock Attachment	For interlocking the handles of two 2P or one 2P and one 1P QO and Q1 circuit breakers mounted side-by-side so that only one circuit breaker can be ON at a time (Not QOU)	QO2DTI
With Retaining Kit:	QO2DTI mechanical interlock attachment with retaining kits for securing two adjacent back-fed circuit breakers in dual power supply applications. Can be used with (2) 2Ps or (1) 2P and (1) 1P QO circuit breakers in QO816L100 load centers.	QO2DTIM

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

DE3 CIRCUIT BREAKERS



### Factory-Installed Accessories for Use with QO and QOB Miniature Circuit Breakers

Factory-installed electrical accessories take up an additional pole space on QO™, QO-GFI, QO-EPD, QO-SWN and QOU circuit breakers. All AC electrical accessories shown below are rated for 50/60 Hz. Accessories are not available for QOB-VH (2P 150 A and 3P 110–150 A) circuit breakers or QO, QOU molded case switches. QO circuit breakers will accept only one accessory per circuit breaker. Undervoltage trip is not available on miniature circuit breakers. Factory-installed accessories are not available for QO-AFI or QO-CAFI Arc Fault Circuit Breakers or on QO2150, QO2175, or QO2200 circuit breakers.

### Factory-Installed Accessories

Accessory	Description	Rated Voltage	Coil Burden	Cat. No. Suffix	Accessory	Description	Contact Comb.	Max. Voltage	Max. Load	Cat. No. Suffix	
Shunt Trip	Trips the circuit breaker from a remote location by means of a trip coil energized from a separate circuit. A 120 Vac shunt trip will operate at 55% or more of rated voltage. All other shunt trips will operate at 75% or more of rated voltage. <b>Application</b> • For use with momentary or maintained push button. • Not available on QO-GFI, QO-EPD, QO-AFI, QOCAFI. • Shunt trip terminals accept (2) 14–12 AWG Cu.	AC/DC	12 24	60 VA 168 VA	-1042	Auxiliary Switches	Monitors circuit breaker contact status and provides a remote signal indicating the circuit breaker contacts are OPEN or CLOSED. <b>Application</b> • Auxiliary switch terminals accept (2) 14–12 AWG Cu leads.	1A 1B	AC 120 AC 120	5 A	-1200
		AC	120 208 240	72 VA 228 VA 288 VA	-1021					5 A	-1201
					Alarm Switches	Used with control circuits and is actuated only when the circuit breaker has tripped. Standard construction includes a normally-open contact. <b>Application</b> • Alarm switch terminals accept (2) 14–12 AWG Cu leads.	1A	AC 120	5 A	-2100	