

QO[®] Circuit Breaker Load Centers

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QO® Circuit Breaker Load Centers Application Data

Type



Circuit breaker load centers for use on ac systems. Underwriters Laboratories Inc. Listed under File E-6294 (Panelboards). Federal Specifications W-P-115c, Type 1, Class 2. QO, QOT, QO-PL, QO-GFI, (UL Class A Ground Fault Protection) and QO-EPD (30 mA Equipment Ground Fault Protection) branch circuit breakers.

Services

120Vac 1Ø2W 120/240Vac 1Ø3W 240Vac Delta 3Ø3W 208Y/120Vac 3Ø4W 240/120Vac Delta 3Ø4W

240Vac Corner Grounded Delta 3Ø3W

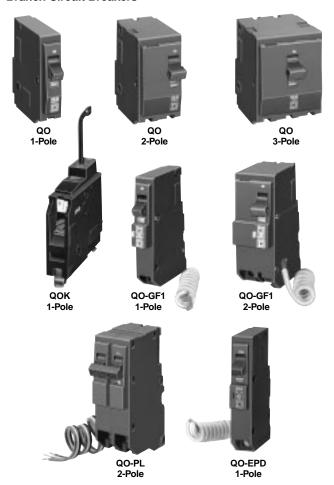
Ratings

Main Lugs 1Ø 30-400A 3Ø 60-400A

Main Circuit Breaker 1Ø 100-400A

3Ø 100-400A

Branch Circuit Breakers



10,000 AIR	
QO	1-Pole 10-70A 2-Pole 10-125A 3-Pole 10-100A
QOT	1-Pole 15-20A
QO-EPD	1-Pole 15-30A 2-Pole 15-30A
QO-GFI	1-Pole 15-30A 2-Pole 15-60A
QO-HID	1-Pole 15-50A 2-Pole 15-50A 3-Pole 15-30A
QO-PL	1-Pole 10-20A, 30A 2-Pole 10-60A 3-Pole 15-60A
QO-SWN	2-Wire 10-50A 3-Wire 10-50A
QOK	1-Pole 10-30A
Q1	2-Pole 150A ■†

22,000 AIR	
QO-VHGFI	1-Pole 15-30A
QO-VH	1-Pole 15-30A 2-Pole 15-125A 3-Pole 15-100A
QOB-VH	2-Pole 150A▲ 3-Pole 110-150A▲
42,000 AIR	
QOH	2-Pole 40-125A
65,000 AIR	
QH	1-Pole 15-30A 2-Pole 15-30A 3-Pole 15-30A

- For use with 150-225A load centers only.
 ▲ For use with 300A and 400A load centers only. Requires PK3CA mounting kit. Order separately.

 † Breaker takes 8 pole spaces – 4 on each side of interior.

Indoor Enclosures NEMA Type 1



- Welded sheet steel with knockouts at top, bottom, back and sides.
- Finish: Gray baked enamel, electrodeposited over cleaned phosphatized steel.
- Most 100A-225A indoor enclosures are 14.25" wide. (See Dimension Page 18.)
- 300A and 400A indoor enclosures are 20" wide.

Indoor Covers



- Doors to cover circuit breaker handles, except on 2–4, 6–12, and 8–16 circuit models.
- Shutter type twistouts.
- Flush and service covers available, merchandised separately.
- Flush covers have automatic flush adjustment.
- Field installed door lock provisions available on most covers.
- QOFP filler plates available for all covers.
- Triple lead cover screws for fast cover installation.

Rainproof Enclosures, NEMA Type 3R



- Complete enclosure includes interior trim and door.
- Welded, galvannealed steel.
- Finish: Gray baked enamel, electrodeposited over cleaned, phosphatized, galvannealed steel.
- RB devices have provisions for interchangeable bolt-on hub.

Bolt-on Hubs



- Hubs available from 3/4" to 4" conduit size.
- No gasket required with hubs from 3/4" to 21/2" when used on "RB" type load centers.
- 3" to 4" hubs for field cut openings.



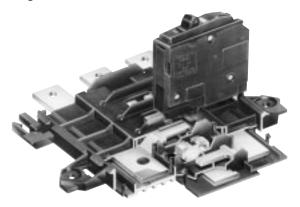
QO® Circuit Breaker Load Centers Application Data

Class CTL



- UL Listed Class CTL load centers.
- Interior breaker mounting rails have slots to accept tandem circuit breakers.
- Meets paragraph 384-15 of the NEC.

Phasing

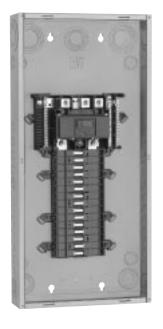


- · Load centers have distributed phase bussing.
- Most branch breakers can be mounted in any position.

Line Lugs

- All lugs suitable for 75°C copper or aluminum wires. (See Technical Information Pages 12-17).
- Main lugs and main circuit breaker load centers have wire binding screw tightening values on wiring diagrams and breaker labels.

Neutral Assemblies





- All lugs suitable for copper or aluminum wire. (See Technical Information Pages 12-17).
- Branch neutral terminals suitable for #14 to #4 AWG copper and #12 to #4 AWG aluminum wire.
- Three #14 to 1/0 AWG copper and #14 to #6 AWG aluminum terminals provided on 12-42 circuits, 100-225A load centers.
- Suitable lug provided on neutrals for termination of grounding conductor.
- All unused neutral terminals may be used to terminate bare or green equipment grounding conductors when load center is used as service equipment – as follows:

one or two #14 through #12 copper, one or two #12 through #10 aluminum.

QO® Circuit Breaker Load Centers 2 Through 16 Circuit, 30 Through 100 Amperes, Fixed Mains Application Data

UL Listed

- Suitable for use as service equipment.
- 75°C wire rating. (See Technical Information Pages 12-17)

Short Circuit Current Rating

 Main lugs up to 10,000 Amperes. (See Technical Information Pages 12-17)

Interior

- Tin plated aluminum bus.
- Tin plated copper bus available option on 6-12 and 8-16 circuit load centers.

Mains

- Factory installed main lugs.
- Top mains positioning only.
- Top or bottom feed.
- Backfed main breaker can be field-installed in 6-12 and 8-16 load centers using PK2MB retaining kit.

Cover

- Flush or surface cover included with load centers.
- Cover with door available option on 6-12 and 8-16 circuit load centers.





QO® Circuit Breaker Load Centers Single Phase, 12 Through 42 Circuit, 100 Through 225 Amperes, Convertible Mains Application Data

UL Listed

- Suitable for use as service equipment.
- 75°C wire rating. (See Technical Information Pages 12-17).

Short Circuit Current Rating

- Main lugs up to 65,000 Amperes. (Depends on lowest interrupting rating of branch breakers installed.)
- Main breaker 22,000 AIR standard.
- 22,000 AIR main breaker kits (Refer to Page 7 Main Breaker Kits).
 - (See Technical Information Pages 12-17).

Interior

- Shielded, one-piece tin plated copper bus.
- Removable interior with single, captive mounting screw.
- Split branch neutral with up to 50% more terminations than required.
- Multiple mounting locations for equipment ground bar kits left, right, and bottom.
- Main lugs load centers have equipment ground bar kits included (not factory installed.)

Mains





Main Breaker

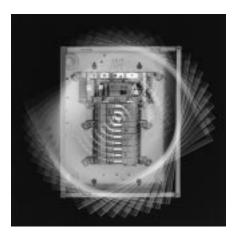
Main Lug

Factory installed main lugs convertible to main breaker

Load Center	Main Breaker
Amperage	Kit Amperage
125	50–125
150	150
200	150-200
225	150-225

Factory installed main breaker convertible to main lugs

Main Breaker	Main Lug	Load Center
Amperage	Kit Amperage	Amperage
100 125 150 200 225	125 125 225 225 225 225	100 125 150 200 225



Top or bottom mains positioning. Rotate entire load center 180 degrees. (See Technical Information Pages 12-17).

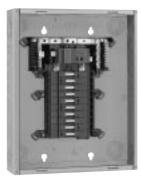


QO® Circuit Breaker Load Centers Single Phase, 12 Through 42 Circuit, 100 Through 225 Amperes, Convertible Mains **Application Data**

Covers



- Flush and surface covers merchandised separately.
- Flush covers have spring loaded interior trim for automatic flush adjustment.
- Positive action, easy open door latch.



QO120M100

Main Lugs Kits:

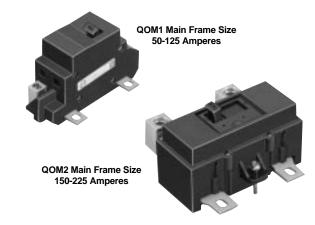
• Field installable in main breaker or main lugs load centers.



- QOL125 kit for use in 100 through 125 Ampere load
- QOL225 kit for use in 150 through 225 Ampere load centers.

Main Breaker Kits:

- Field installable in main lugs or main breaker load centers.
- 22,000 AIR main breaker kit 50 thorugh 225 Amperes series rated with 10,000 AIR branch circuit breakers.



Field Installable Main Circuit Breaker (Convertible Load Centers Only)

	•		• •
Main ●	Use With	22,000 AIR	Lug Wire Sizet
Circuit Breaker Amp Rating	Convertible Load Center Mains Rating	Main Circuit Breaker	AWG/kcmil Al or Cu
QOM1 Frame Size	9		
50	100-125	QOM50VH	
60	100-125	QOM60VH	
70	100-125	QOM70VH	
80	100-125	QOM80VH	#4-2/0
90	100-125	QOM90VH	#4-2/0
100	100-125	QOM100VH	
110	125	QOM110VH	
125	125	QOM125VH	
QOM2 Frame Size	e♦		
100	150-225	QOM2100VH	
125	150-225	QOM2125VH	
150	150 150-225		#4-300
175 200-225		QOM2175VH	#4-300
200	200-225	QOM2200VH	
225	225	QOM2225VH	



Do not exceed the load center mains rating.
 Wire range listed for QOM circuit breaker kits is the wire range of that circuit breaker. To find out maximum wire size permitted in a particular load center per UL, see Main Wire Size on Pages 12-16.

Add effective 1021 for shurt trip.

[♦] Add suffix 1021 for shunt trip.

QO® Circuit Breaker Load Centers Special Purpose Application Data

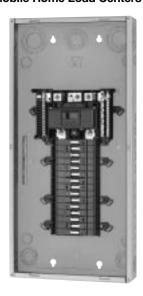
Main Lugs Recreational Vehicle Load Centers



QO2L30TTS

- UL Listed and CSA Certified.
- Available single phase, 2 and 3 wire.
- Factory installed equipment ground bar.
- · Covers included with load centers.

Main Breaker Mobile Home Load Centers



- Combination flush/surface cover included with load centers.
- Factory installed equipment gorund bar.
- Top or bottom feed on incoming service by rotating complete load center 180 degrees.

Main Circuit Breaker with Feed-thru Lugs



QO1816M200FTRB

- · Available rainproof enclosure only.
- 125, 150 and 200 Ampere mains rating.
- 125, 150 and 200 Ampere sub-feed lugs.
- Space for up to 8 single pole circuit breakers.

Generator Panel



- Connects utility and standby power to installed branch circuits.
- Includes two factory-installed 2-pole main circuit breakers tied together with mechanical interlock.
- 30A and 60A main breaker versions.
- Supply up to 8 branch circuits using tandem circuit breakers.
- Available indoor enclosure only.
- · Cover with door included.



QO® Circuit Breaker Load Centers Three Phase, 3 Through 42 Circuits, 60 Through 225 Amperes Application Data

UL Listed

- Suitable for use as service equipment.
- 75°C wire rating. (See Technical Information Page 15).

Short Circuit Current Rating

- Main lugs up to 65,000 Amperes. (Depends on lowest interrupting rating of branch breakers installed).
- Main circuit breaker up to 225A 22,000 Amperes standard

 optional up to 65,000 Amperes for 100A to 225A main breakers.
- Main circuit breaker 300A and 400A up to 42,000 Amperes. (See Technical Information Page 15).

Mains

- · Factory installed main lugs or main circuit breaker.
- Main neutral terminal located next to phase terminals on 125 through 225 Ampere main circuit breaker devices.
- Top or bottom feed. (See Technical Information Page 15).
- Fully convertible from main circuit breaker to fixed main lugs. (100 through 225 Amp).
- 100 Ampere maximum back fed main QO circuit breaker. Requires use of retaining kit PK3MB.

Cover

- Flush and surface covers merchandised separately.
- Flush covers have spring loaded interior trim for automatic flush adjustment.
- Positive action, easy open door latch.

Interior

- Shielded one piece plated copper bus. 100 through 225 Ampere.
- Removable interior with single, captive mounting screw, 100 through 225 Ampere. (Indoor only).
- Main lugs load centers have equipment ground bar kits included (not factory installed).

Branch Neutral Termination

- Suitable for copper or aluminum wire.
- Terminals suitable for #14 to #4 AWG copper and #12 to #4 AWG aluminum wire.
- Positioned on both sides of mains compartment.
- Slot/square drive wire binding screws.
- Three (3) #14 to 1/0 AWG neutral terminations standard.



Q0330L200G



QO330M150

Main Lugs Kits

- Field installable in main circuit breaker or main lugs load centers.
- QOL125 kit for use in 100 through 125 Ampere load centers.
- QOL225 kit for use in 150 through 225 Ampere load centers.

Main Circuit Breakers

- Field installable in main circuit breaker load centers.
- 22,000 AIR main circuit breakers series rated with 10,000 AIR branch circuit breakers.
- Series rated up to 65,000 AIR main circuit breakers 100A-225A series with 10,000 AIR branch circuit breakers in 30 circuit or larger main breaker load centers.
- Back-fed QO-VH main circuit breaker may be field-installed in main lugs and main breaker load centers. Requires PK3MB retaining kit



QOL3225

KDL Circuit Breaker 100-225 Amperes

- 27 circuit, 100 Ampere main breaker load center includes factory-installed back-fed QO-VH main breaker.
- 30 through 42 circuit main breaker load centers include integral KDL circuit breaker.

Amperage	25,000 AIR▲	65,000 AIR
100	KDL32100	KGL32100
110	KDL32110	KGL32110
125	KDL32125	KGL32125
150	KDL32150	KGL32150
175	KDL32175	KGL32175
200	KDL32200	KGL32200
225	KDL32225	KGL32225

▲ When used as main breaker in load center, short circuit current rating is 22,000 Amperes.



QO® Circuit Breaker Load Centers 12 Through 42 Circuit, 300 Through 400 Amperes Application Data

UL Listed

- Suitable for use as service equipment.
- 75°C wire rating. (See Technical Information).

Short Circuit Current Rating:

- Main lugs up to 65,000 Amperes.
- Main breaker 42,000 AIR. (See Technical Information Pages 12-17).

Mains

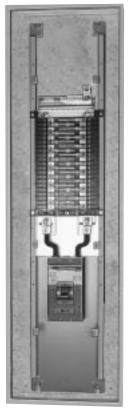
- Factory installed main lugs and main breaker.
- Multiple wire terminals per phase and neutral.
- Top or bottom mains positioning. (See Technical Information Pages 12-17).

Cover

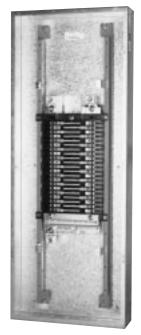
• Flush and surface covers merchandised separately.

Interior

- Available in single and three phase construction.
- 12-42 circuit load centers have single row bus construction.
- Interiors accept QO and 110–150 Ampere max. QOB-VH circuit breakers. QOB-VH circuit breakers require connector kit PK3CA.
- Tin plated aluminum bus.
- Neutral assemblies positioned opposite mains compartment.



QON42MS400 and MH68



QON42LS400 and MH53

QO® Circuit Breaker Load Centers Accessories **Application Data**

Grounding Bar Kits

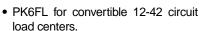


- Field installable in all load centers.
- Wire size of terminals. (See Technical Information, Page 17).
- Suitable for copper or aluminum wire.
- Available with #1-4/0 lug PK15GTA-L, PK18GTA-L and PK23GTA-L. (See Technical Information Page 17).

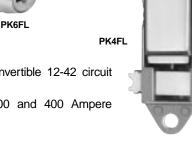
Flush Lock Kits

- · Available for indoor load centers.
- Two keys provided with each lock kit.

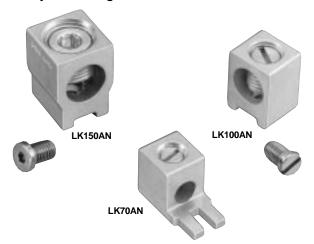




• PK4FL for 300 and 400 Ampere load centers.



Auxiliary Neutral Lugs

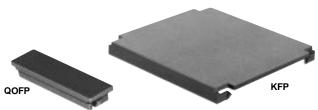


- UL Listed for copper or aluminum wire.
- · Field installable on neutral assembly.

LK70AN #12-2Al or #14-4 Cu

LK100AN #6-#2/0 AWG LK150AN #2-3/0

Cover Filler Plates



- Fast to install snap-in type.
- QOFP branch circuit.
- QOM1FP 70 through 125 Ampere single phase main breaker.
- QOM2FP 150 through 225 Ampere single phase main breaker.
- KFP 100 through 225 Ampere three phase main circuit breaker.

SURGEBREAKER™ Secondary Surge Arrester



- QO2175SB UL Listed Secondary Surge Arrester.
- Easy plug-on installation for QO load centers.
- LED indicates operational status.
- Plug-on design requires two pole spaces.



QO® Circuit Breaker Load Centers Single Phase Technical Information

Single Phase Three Wire 120/240Vac Main Lugs - Indoor

Main	Load Center	Load Center	UL Listed	Max. UL Short	Si	Wire ze	Wire Bending		Top or Bottom	UL Listed for			
Rating in Amperes	Catalog Number	Cover Catalog Number	Service Equipment	Circuit Rating ♦	AWG.	/kcmil Cu	Space Dimension (IN.)	Box No.	Mains Position	Grounded "B" Phase System			
Fixed Mains	ixed Mains - Factory Installed Main Lugs												
30	QO2L30S	INCLUDED	NO	10,000	#12-10	#14-10	1.6	1	TOP	NO			
70	QO2-4L70F/S	INCLUDED	В	10,000	#12-3	#14-4	3.0	2	TOP	NO			
100	Q06-12L100F/S Q06-12L100DF/S Q06-12L100DFCU/SC	INCLUDED INCLUDED INCLUDED	B,C B,C B,C	10,000 10,000 10,000	#8 #8 #8	3-1	4.5 4.5 4.5	3 3 3	TOP TOP TOP	NO			
100	QO8-16L100F/S QO8-16L100DF/S QO8-16L100DFCU/SC	INCLUDED INCLUDED INCLUDED	B,C B,C B,C	10,000 10,000 10,000	#8 #8 #8	3-1	4.5 4.5 4.5	3 3 3	TOP TOP TOP	NO			
Convertible QOM1 Main	Mains - Factory Installed Main Frame Size - Convertible to M	Lugs ain Breaker - Cop	per Bus										
125	QO112L125G QO112-24L125G QO116L125G QO116-24L125G QO120L125G QO120-24L125G QO124L125G	QOC16UF/S QOC16UF/S QOC24UF/S QOC24UF/S QOC24UF/S QOC24UF/S QOC24UF/S	B,C B,C B,C B,C B B	65,000□▲ 65,000□▲ 65,000□▲ 65,000□▲ 65,000□▲ 65,000□▲ 65,000□▲	#4- #4- #4- #4-	-2/0 -2/0 -2/0 -2/0 -2/0 -2/0 -2/0	6.0 6.0 6.0 6.0 6.0 6.0 6.0	5A 5A 6 6 6 6	BOTH BOTH BOTH BOTH BOTH BOTH BOTH	YES			
	Mains - Factory Installed Main Frame Size - Convertible to M		per Bus		•				•				
150	QO120-30L150G QO124L150G QO130L150G	QOC30UF/S QOC30UF/S QOC30UF/S	B,C B,C B,C	65,000□▲ 65,000□▲ 65,000□▲	#4- #4- #4-	250 250 250	8.5 8.5 8.5	8 8 8	BOTH BOTH BOTH	YES			
200	QO112L200G QO130L200G QO130-40L200G	QOC30UF/S QOC30UF/S QOC30UF/S	B,C B,C B,C	65,000□▲ 65,000□▲ 65,000□▲	#4-250 #4-250 #4-250		8.5 8.5 8.5	8 8 8	BOTH BOTH BOTH	YES			
225	QO142L225G	QOC42UF/S	В	65,000□▲	#4-	300	10.3	10	вотн	YES			
Fixed Mains	- Factory Installed Main Lugs												
	QON12LS400 (Interior) MH50	MHC50VF/S	С	65,000●	(1)1/0 (2)1/0	0-750 0-300	15.1	19	вотн	YES			
400	QON30LS400 (Interior) MH50 (Box)	MHC50VF/S	NO	65,000●		0-750 0-300	15.1	19	вотн	YES			
	QON42LS400 (Interior) MH53 (Box)	MHC53VF/S	NO	65,000●		0-750 0-300	14.4	21	вотн	YES			

[◆] Short circuit current rating depends on lowest AIR rating of main or branch circuit breaker installed.

22,000 rms symmetrical Amperes maximum when supplied by integral Square D type QOMVH main breaker with 22,000 rms symmetrical Amperes minimum interrupting rating and when all QO installed branch circuit breakers have 10,000 rms symmetrical amperes minimum interrupting rating.

□ UL Listed 5000 rms symmetrical Amps. short circuit current rating when used in 3Ø 240Vac grounded "B" phase systems when used as main lugs load center only. Use 240Vac circuit breakers only.

● UL Listed 5000 rms symmetrical Amps. short circuit current rating when used in 3Ø 240Vac grounded "B" phase systems. Use 240Vac circuit breakers only.

B UL Listed suitable for use as service equipment (neutral bonded at the time of installation) with field installed service disconnect.

C UL Listed suitable for use as service equipment (neutral bonded at the time of installation) when not more than six service disconnecting means are provided and when not used as a lighting and appliance branch circuit panelboard.

QO® Circuit Breaker Load Centers Single Phase Technical Information

Single Phase Three Wire 120/240Vac Main Breaker - Indoor

Main Rating in Amperes	Load Center Catalog Number	Load Center Cover Catalog Number	UL Listed Service Equipment	Max. UL Short Circuit Rating ♦	Ma Wire AWG,	Size	Wire Bending Space Dimension (IN.)	Box No.	Top or Bottom Mains Posi- tion	UL Listed for Grounded "B" Phase Systems		
Convertible QOM1 Mai	 e Mains - Factory Install n Frame Size - Converti	led Main Circuit Br ble to Main Lugs o	eaker r Lower Amp				(,		1			
100	QO112M100 QO116M100 QO120M100 QO124M100	QOC12UF/S QOC20U100F/S QOC20U100F/S QOC24UF/S	A,B A,B A	22,000 2 2,000 2 2,000 2 2,000 2	#4 #4 #4	-1 -1	4.5 6.0 4.5 6.0	4 5 5 6	BOTH BOTH BOTH BOTH	NO		
125	QO124M125	QOC24UF/S	Α	22,000■	#4-	2/0	6.0	6	вотн	NO		
	Convertible Mains - Factory Installed Main Circuit Breaker QOM2 Main Frame Size - Convertible to Main Lugs or Lower Amperage Main Breaker - Copper Bus											
150	QO120-30M150 QO124M150 QO130M150	QOC30UF/S QOC30UF/S QOC30UF/S	A,B A,B A,B	22,000■ 22,000■ 22,000■	#4-: #4-: #4-:	250	8.5 8.5 8.5	8 8 8	BOTH BOTH BOTH	NO		
200	QO120-40M200 QO124M200 QO130M200 QO130-40M200 QO140M200	QOC30UF/S QOC30UF/S QOC30UF/S QOC30UF/S QOC40UF/S	A,B A,B A,B A,B A,B	22,000 = 22,000 = 22,000 = 22,000 = 22,000 =	#4-: #4-: #4-: #4-:	250 250 250	8.5 8.5 8.5 8.5 8.5	8 8 8 8	BOTH BOTH BOTH BOTH BOTH	NO		
225	QO140M225	QOC42UF/S	A,B	22,000■	#4-	300	10.3	10	вотн	NO		
Fixed Mai	ns - Factory Installed	Main Circuit Bre	aker						•			
300	QON42MS300 (Interior) MH68 (Box)	MHC68VF/S	А	42,000●		-500 1-3/0	14.5	20	вотн	YES		
400	QON42MS400 (Interior) MH68 (Box)	MHC68VF/S	А	42,000●		-600 -250	14.5	20	вотн	YES		

 [♦] Short circuit current rating depends on lowest AIR rating of main or branch circuit breaker installed.
 ₱ 22,000 rms symmetrical Amperes maximum when supplied by integral Square D type QOM-VH main breaker with 22,000 rms symmetrical Amperes minimum interrupting rating and when all QO installed branch circuit breakers have 10,0000 rms symmetrical Amperes minimum interrupting rating. 65,000 rms symmetrical Amperes maximum when main lugs kits are installed.
 ♦ UL Listed 5000 rms symmetrical Amps. short circuit current rating when used in 3Ø 240Vac grounded "B" phase systems. Use 240Vac circuit breakers only.
 A UL Listed suitable for use as service equipment (neutral bonded at the time of installation) with factory installed service disconnect.
 B UL Listed suitable for use as service equipment (neutral bonded at the time of installation) with field installed main lugs when not more than six disconnecting means are provided and when not used as a lighting and appliance branch circuit panelboard. See NEC Section 384-14.

QO® Circuit Breaker Load Centers Single Phase **Technical Information**

Single Phase Three Wire 120/240Vac Main Lugs - Rainproof

Main Rating in Amperes	Load Center Catalog Number			Service Snort Circuit		ain : Size :/kcmil	Wire Bending Space Dimension (IN.)	Box No.	Top or Bottom Mains	UL Listed for Grounded "B" Phase Systems
	·		Equipment	Rating♦	Al	Cu	Dimension (iiv.)		Position	T nase Systems
Fixed Mains	- Factory Installed M	lain Lugs				1				
30	QO2L40RB	INCLUDED	В	10,000	#12-6	#14-6	3.0	1R	TOP	NO
70	QO2-4L70RB	INCLUDED	В	10,000	#12-3	#14-4	3.0	1R	TOP	NO
100	QO6-12L100RB QO6-12L100TRB QO6-12L100RBCU	INCLUDED INCLUDED INCLUDED	B,C B,C B,C	10,000 10,000 10,000	#8	3-1 3-1 3-1	4.5 4.5 4.5	2R 2R 2R	TOP TOP TOP	NO
100	QO8-16L100RB QO8-16L100RBCU	INCLUDED INCLUDED	B,C B,C	10,000 10,000		3-1 3-1	4.5 4.5	2R 2R	TOP TOP	NO
Convertible QOM1 Main	Mains - Factory Insta Frame Size - Conver	alled Main Lugs tible to Main Brea	ıker - Copper	Bus						
125	Q0112L125GRB Q0112-24L125GRB Q0116-24L125GRB Q0124L125GRB	INCLUDED INCLUDED INCLUDED INCLUDED	B,C B,C B,C B	65,000□▲ 65,000□▲ 65,000□▲ 65,000□▲	#4 #4	-2/0 -2/0 -2/0 -2/0	6.0 6.0 6.0 6.0	3R 3R 4R 4R	TOP TOP TOP TOP	YES
	Mains - Factory Insta Frame Size - Conver		ıker - Copper	Bus					•	
150	QO130L150GRB	INCLUDED	B,C	65,000□▲	#4-	250	8.6	6R	TOP	YES
200	QO112L200GRB QO130L200GRB QO130-40L200GRB	INCLUDED INCLUDED INCLUDED	B,C B,C B,C	65,000□▲ 65,000□▲ 65,000□▲	#4-	250 250 250	8.6 8.6 8.6	5R 6R 6R	TOP TOP TOP	YES
225	QO142L225GRB	INCLUDED	В	65,000□▲	#4-	300	12.9	8R	TOP	YES
	ase Three Wire 12 aker - Rainproof	20/240Vac								
Main Rating	Load Center	Load Center Cover	UL Listed Service	Max. UL Short		/ire Size /kcmil	Wire Bending Space	Box No.	Top or Bottom	UL Listed for Grounded "B"
in Amperes	Catalog Number	Catalog Number	Equipment	Circuit Rating	Al	Cu	Dimension (IN.)		Mains Position	Phase Systems
	Mains - Factory Insta Frame Size - Conver			mperage Mai	n Breaker- C	opper Bus		•		
100	QO112M100RB QO116M100RB QO120M100RB	INCLUDED INCLUDED INCLUDED	A,D A,D A	22,000■ 22,000■ 22,000■	#4	1-1 1-1 1-1	4.5 4.5 6.0	3R 4R 4R	TOP TOP TOP	NO
125	QO124M125RB	INCLUDED	А	22,000■	#4	-2/0	6.0	4R	TOP	NO
Convertible QOM2 Main	Mains - Factory Insta Frame Size - Conver	alled Main Circuit tible to Main Lug	Breaker s or Lower A	mperage Mai	n Breaker - C	Copper Bus			•	
150	QO120-30M150RB QO130M150RB	INCLUDED INCLUDED	A,D A,D	22,000 ■ 22,000 ■	#4-250 #4-250		8.6 8.6	5R 6R	TOP TOP	NO
200	QO120-40M200RB QO130M200RB QO140M200RB	INCLUDED INCLUDED INCLUDED	A,D A,D A,D	22,000■ 22,000■ 22,000■	#4-250 #4-250 #4-250		8.6 8.6 8.5	5R 6R 7R	TOP TOP TOP	NO
Main Breake	r with Feed Thru Lug	js								
125	QO16-12M125FTRB	INCLUDED	А	22,000■	#4	-2/0	6.0	3R	TOP	NO
150	QO18-16M150FTRB	INCLUDED	А	22,000■	#4	-4/0	8.5	6R	TOP	NO
200	QO18-16M200FTRB	INCLUDED	А	22,000■	#4	-4/0	8.5	6R	TOP	NO

Amperes maximum when main lug kits installed.

A UL Listed suitable for use as service equipment (neutral bonded at time of installation) with factory installed service disconnect.

B UL Listed suitable for use as service equipment (neutral bonded at the time of installation) with field installed service disconnect.

C UL Listed suitable for use as service equipment (neutral bonded at the time of installation) when not more than six service disconnecting means are provided and when not used as a lighting and appliance branch circuit panelboard. See NEC Sec. 384-14.

D UL Listed suitable for use as service equipment (neutral bonded at the time of installation) with field installed main lugs when not more than six service disconnecting means are provided and when not used as a lighting and appliance branch circuit panelboard. See NEC Sec. 384-14.



[◆] Short circuit current rating depends on lowest AIR rating of main or branch circuit breaker installed.

▲ 22,000 rms symmetrical Amperes maximum when supplied by integral Square D type QOMVH main breaker with 22,000 rms symmetrical Amperes minimum interrupting rating and when all QO installed branch circuit breakers have 10,000 rms symmetrical Amperes minimum interrupting rating.

□ UL Listed 5000 rms symmetrical Amps. short circuit current rating when used in 3Ø 240Vac grounded "B" phase systems when used as main lugs load center

anly. Use 240Vac circuit breakers only.
 22,000 rms symmetrical Amperes maximum when supplied by integral Square D type QOM-VH main breaker with 22,000 rms symmetrical Amperes minimum interrupting rating and when all QO installed branch circuit breakers have 10,000 rms symmetrical Amperes minimum interrupting rating and when main lug kits installed.

QO® Circuit Breaker Load Centers Three Phase Technical Information

3 Phase 4 Wire 208Y/120Vac, 3 Phase 4 Wire 240/120Vac Delta, 3 Phase 3 Wire 240Vac Delta Main Lugs, Main Breaker - Indoor

	<u> </u>									
Main Rating in Amperes	Load Center Catalog Number	Load Center Cover Catalog	UL Listed Service	Max. UL Short Circuit	S	Wire ize /kcmil	Wire Bending Space	Box No.	Top or Bottom Mains	UL Listed for Grounded "B"
		Number	Equipment	Rating ♦	Al	Cu	Dimension (IN.)		Position	Phase Systems
Fixed Mains	- Factory Installe	d Main Lugs								•
60	QO403L60NF/S	INCLUDED	В	22,000♦		#10-6	2.8	17	TOP	NO
125	QO312L125G QO320L125G QO324L125G	QOC16UF/S QOC24UF/S QOC24UF/S	B,C B,C B,C	65,000♦ 65,000♦ 65,000♦	#4-4/0 #4-4/0 #4-4/0	#4-2/0 #4-2/0 #4-2/0	6.0 6.0 6.0	5A 6 6	BOTH BOTH BOTH	NO
200	QO318L200G QO330L200G	QOC30UF/S QOC30UF/S	B,C B,C	65,000 ♦ 65,000 ♦	#4-250 #4-250	#4-250 #4-250	10.3 10.3	8 8	BOTH BOTH	NO
225	QO342L225G	QOC42UF/S	В	65,000♦	#4-300	#4-300	12.1	10	BOTH	NO
400	QON442LS400 MH53 (Box)	MHC53VF/S	NO	65,000♦		/0-750 0-300	14.4	21	вотн	NO
Convertible	Mains - Factory In	stalled Main Break	er		•				•	
100	QO327M100	QOC30UF/S	Α	22,000	#4-1/0	#4-1	10.3	8	вотн	NO
125	QO330M125	QOC342MF/S	А	65,000 † ▲	#4-250	#4-250	8.5	15	Х	NO
150	QO330M150 QO342M150	QOC342MF/S QOC342MF/S	A,D A	65,000 † ▲ 65,000 † ▲	#4-250 #4-250	#4-250 #4-250	8.5 8.5	15 15	X X	NO
200	QO330M200 QO342M200	QOC342MF/S QOC342MF/S	A,D A	65,000 † ▲ 65,000 † ▲	#4-250 #4-250	#4-250 #4-250	8.5 8.5	15 15	X	NO
225	QO342M225	QOC342MF/S	А	65,000 † ▲	#4-250	#4-250	8.5	15	Х	NO
Fixed Mains	- Factory Installe	d Main Circuit Brea	ker		•	•			•	
300	QON442MS300 MH68	MHC68VF/S	А	42,000♦		4-500 4-3/0	14.5	20	x	NO
400	QON442MS400 MH68	MHC68VF/S	А	42,000♦		(1)#4-600 (2)#4-250 14.5		20	x	NO
Main Lugs	s, Main Breake	r - Rainproof								
Main Rating	Load Center	Load Center Cover	UL Listed Service	Max. UL Short		/ire Size /kcmil	Wire Bending Space	Box	Top or Bottom	UL Listed for Grounded "B"
in Amperes	Catalog Number	Catalog Number	Equipment	Circuit Rating	Al	Cu	Dimension (IN.)	No.	Mains Position	Phase Systems
Fixed Mains	- Factory Installed	d Main Lugs	ļ.				-			1
60	QO403L60NRB	INCLUDED	В	22,000♦		#10-6	3.6	12R	TOP	NO
125	QO312L125GRB QO320L125GRB	INCLUDED INCLUDED	B,C B,C	65,000 ♦ 65,000 ♦	#4-4/0 #4-4/0	#4-2/0 #4-2/0	6.0 6.0	3R 4R	TOP TOP	NO
200	QO318L200GRB QO330L200GRB	INCLUDED INCLUDED	B,C B,C	65,000 ♦ 65,000 ♦	#4-250 #4-250	#4-250 #4-250	11.1 11.1	6R 6R	TOP TOP	NO
225	QO342L225GRB	INCLUDED	В	65,000♦	#4-300	#4-300	12.9	8R	TOP	NO
Convertible	Mains - Factory In	stalled Main Break	er			•			•	•
100	QO327M100RB	INCLUDED	Α	22,000	#4-1/0	#4-1	7.5	6R	TOP	NO
						#4.050	8.5	16R	TOP	NO
125	QO330M125RB	INCLUDED	Α	65,000 †▲	#4-250	#4-250	0.5	IOK	108	NO
125 150	QO330M125RB QO330M150RB	INCLUDED INCLUDED	A A,D	65,000 † ▲	#4-250 #4-250	#4-250 #4-250	8.5	16R	TOP	NO NO
				,						



[♦] Short circuit current rating depends on lowest AIR rating of branch circuit breaker installed.

A 22,000 rms symmetrical Amperes maximum when supplied by integral Square D type KDL main circuit breaker with 22,000 rms Amperes minimum interrupting rating and when all QO and Q1 installed branch circuit breakers have 10,000 rms symmetrical Amperes minimum interrupting rating.

† 65,000 rms symmetrical Amperes maximum when Square D type KGL main breaker with 65,000 rms Amperes minimum interrupting rating all QO and Q1 installed branch circuit breakers have 10,000 RMS symmetrical Amperes minimum interrupting rating.

A UL Listed suitable for use as service equipment (neutral bonded at the time of installation) with factory installed service disconnect.

B UL Listed suitable for use as service equipment (neutral bonded at the time of installation) with field installed service disconnect.

C UL Listed suitable for use as service equipment (neutral bonded at the time of installation) when not used as a lichting and appliance branch circuit panelboard. See NEC Section 384-14.

when not used as a lighting and appliance branch circuit panelboard. See NEC Section 384-14.

D UL Listed suitable for use as service equipment (neutral bonded at the time of installation) with field installed main lugs, when not more than six service disconnecting means are provided and when not used as a lighting and appliance branch circuit panelboard. See NEC Section 384-14.

X Mains positioning for top or bottom feed, first rotate main circuit breaker 180° then rotate complete load center 180°.

QO® Circuit Breaker Load Centers Technical Information

Modular Housing, Mobile Home and Trailer

Main Rating in Amperes	Load Center Catalog Number	Load Center Cover Catalog Number	UL Listed Short Service Equipment Circuit		Wire	ain Size /kcmil	Wire Bending Space Dimension	Box No.	Top or Bottom Mains	UL Listed for Grounded "B" Phase Systems
	-	Catalog Number	Equipment	Rating♦	Al	Cu	(IN.)		Position	Friase Systems
1 Phase 2 W	ire 120Vac - Main Lugs	Only								
30	QO2L30TTS ▼ ‡	INCLUDED	NO	10,000	#12-10	#14-10	1.5	1	TOP	NO
50	QO2-4L50TTS ▼II	INCLUDED	NO	10,000		#14-6	2.9	2	TOP	NO
1 Phase 2 W	ire 120Vac - Main Circu	it Breaker								
70	QO4-7FM70TTS★▼	INCLUDED	NO	10,000	See Bre	aker Info	4.5	16	TOP	NO
1 Phase 3 W	ire 120/240Vac - Main L	ugs Only							•	
70	QO2-4L70TS▼	INCLUDED	В	10,000	#12-3	#14-4	3.0	2	TOP	NO
100	QO6-12L100TF/S▼● QO6-12L100DTF/S▼●	INCLUDED INCLUDED	B,C B,C	10,000 10,000	#4-1 #4-1	#4-10 #4-1	4.5 4.5	3 3	TOP TOP	YES
100	QO8-16L100TF/S● QO8-16L100DTF/S●	INCLUDED INCLUDED	B,C B,C	10,000 10,000	#4-1 #4-1	#4-1 #4-1	4.5 4.5	3 3	TOP TOP	NO
1 Phase 3 W	ire 120/240Vac - Main C	ircuit Breaker								
200	QO120-40M200TC	INCLUDED	A,D	22,000▲	#4-	250	8.5	8	BOTH	NO
RISER										
Main Rating in Amperes	Load Center Catalog Number	Load Center Cover Catalog Number	UL Listed Service	Max. UL Short Circuit	Wire	ain Size /kcmil	Wire Bending Space Dimen-	Box No.	Top or Bottom Mains	UL Listed for Grounded "B"
•		Number	Equipment	Rating	Al	Cu	sion (IN.)		Position	Phase Systems
1 Phase 3 W QOM1 Main	ire 120/240Vac - Factor Frame Size - Convertib	y Installed Main le to Main Break	Lugs - Offset er - Copper E	Interior Wide Bus■	e Gutter					
125	QO112-24L125GWGC QO120-24L125GWGC	INCLUDED INCLUDED	B,C B	65,000▲ 65,000▲		·2/0 ·2/0	6.0 6.0	18 18	BOTH BOTH	YES
Generator	^r Panel									
Main Rating in Amperes	Load Center Catalog Number	Load Center Cover Catalog Number	UL Listed Service Equipment	Max. UL Short Circuit Rating	Wire	ain Size /kcmil Cu	Wire Bending Space Dimen- sion (IN.)	Box No.	Top or Bottom Mains Position	UL Listed for Grounded "B" Phase Systems
1 Phase 3 W	ire 120/240Vac - Factor	y Installed Main	Circuit Break	ers with Med	hanical Inte	rlock				
30	QO4-8M30DS-GP	INCLUDED	NO	10,000	#1	4-8	4.5	3	BOTTOM	NO
60	QO4-8M60DS-GP	INCLUDED	Α	10.000	#8-2		4.5	3	воттом	l NO

♦ Short circuit current rating depends on lowest AIR rating of main or branch circuit breaker installed.
 ♠ 22,000 rms symmetrical Amperes maximum when supplied by integral Square D type QOM-VH main breaker with 22,000 rms symmetrical Amperes minimum interrupting rating and when all QO installed branch circuit breakers have 10,000 rms symmetrical Amperes minimum interrupting rating.
 ★ Main circuit breaker is field installed – standard QO 1-pole circuit breaker.
 ★ Short gutter side limited to #3 AWG wire maximum.
 ★ CSA certified.
 ‡ Will not accept Quick Guard QO-GFI circuit breaker.
 † Use #10 AWG maximum size wire for QO-GFI circuit breaker.
 ♣ 70A maximim branch circuit breaker and 70A maximum back fed main circuit breaker.
 A UL Listed suitable for use as service equipment (neutral bonded at the time of installation) with factory installed service disconnect.
 B UL Listed suitable for use as service equipment (neutral bonded at the time of installation) when not more than six service disconnecting means are provided and when not used as a lighting and appliance branch circuit panelboard. See NEC Section 384-14.
 D UL Listed suitable for use as service equipment (neutral bonded at the time of installation) with field installed main lugs and not more than six service disconnecting means are provided and when not used as a lighting and appliance branch circuit panelboard. See NEC Section 384-14.

Grounding Bar Kits

All PK Equipment Grounding Kits are supplied with mounting screws, necessary installation instructions and an "Equipment Grounding Terminal" self-adhesive label.

Catalog Number	T-4-1	Terminals Quantity Each Size See Table "B" For Wire Range						A	Ç То Ç	Mounting	
	Total Quantity							Approximate Overall Length	Distance Between Mounting Holes		
		I	II	III	IV	V	VI		Wiodriting Floics		
PK0GTA-2	2						2	1.75"	One Hole	Тор	
PK0GTA-6	6					6		4.61"	1.69"	Тор	
PK3GTA-1	3	3						1.38"	One Hole	Тор	
PK4GTA	4	4						1.63"	One Hole	Тор	
PK5GTA	5	5						2.25"	1.25"	Тор	
PK7GTA	7	7						2.88"	1.25"	Top or Side	
PK9GTA-1	9	9						3.25"	One Hole	Тор	
PK9GTA	9	9						3.78"	3.13"	Тор	
PK12GTA	12	12						4.70"	3.13"	Тор	
PK15GTA	15	15						5.63"	3.13"	Тор	
PK15GTA-L	16	15	1					8.13"	3.13"	Тор	
PK15GTA-6	21	15			6			5.88"	A	Тор	
PK18GTA	18	18						6.56"	3.13"	Тор	
PK18GTA-L	19	18	1					8.81"	3.13"	Тор	
PK23GTA	23	23						8.11"	3.13"	Тор	
PK23GTA-L	24	23	1					9.44"	3.13"	Тор	
PK27GTA	27 or ● 26	27 26		1				9.36"	3.13"	Тор	

- ◆ PK27GTA includes one main grounding lug which mounts by utilizing two terminal screws, requires three terminals for mounting.
 ▲ 3.13" on small terminals; 5.25" on large terminals.

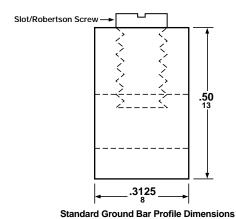


Table B

Size	Cu (Awg)	Al (Awg)
ı	(1) #14 to #4 or (2) #14 or #12	(1) #12 to #4 or (2) #12 or #10
II	(1) #1 to 4/0	(1) #1 to 4/0
III	(1) #6 to 2/0	(1) #6 to 2/0
IV	(1) #6 to 3/0	(1) #6 to 3/0
V	(1) #14 to 1/0	(1) #14 to 1/0
VI	(1) #10 to 2/0	(1) #6 to 2/0

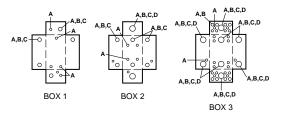
QO® Circuit Breaker Load Centers Knockouts, Dimensions

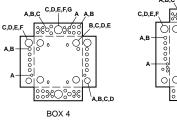
Knockout Information and Enclosure Dimensions Indoor

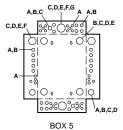
Dimensions									
Box No.	V	/	H	ł	D				
DOX NO.	IN	mm	IN	mm	IN	mm			
1	3.81	97	6.72	171	3.00	76			
2	4.81	122	9.30	236	3.19	81			
3	8.88	226	12.57	319	3.80	97			
4	14.25	362	14.92	379	3.75	95			
5, 5A	14.25	362	17.92	455	3.75	95			
6	14.25	362	20.92	531	3.75	95			
8	14.25	362	29.86	758	3.75	95			
9	14.25	362	33.78	858	3.75	95			
10	14.25	362	37.98	965	3.75	95			
15	14.25 362		39.50	1003	3.75	95			

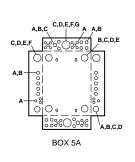
Dimensions								
Box	V	V	H	+	D			
No.	IN	mm	IN	mm	IN	mm		
16	7.38	187	9.89	251	3.30	84		
17	5.88	149	13.12	333	3.38	86		
18	14.25	362	20.92	531	3.75	95		
19	20.00	0.00 508		1270	5.75	146		
20	20.00	508	68.00	1727	5.75	146		
21	20.00	508	53.00	1346	5.75	146		
23	5.88	149	16.12	409	3.38	86		
24	7.56	192	23.12	587	4.25	108		
25	9.62	244	26.12	663	4.75	121		

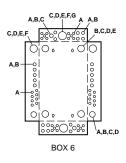
Knockouts									
Symbol	Α	В	С	D	Е	F	G	Н	I
Conduit Size	1/2	3/4	1	11/4	1½	2	2½	3	3½

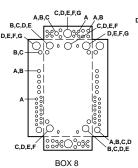


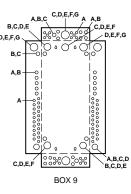


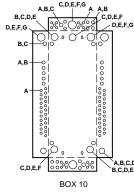


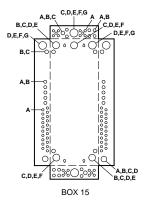


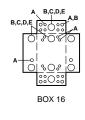


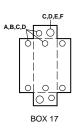


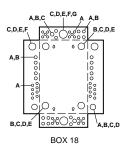


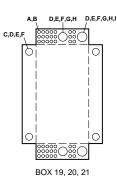


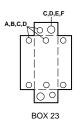


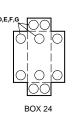


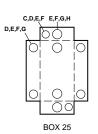






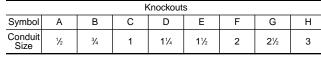




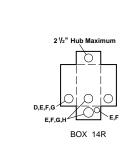


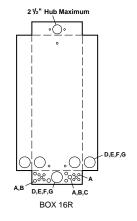
QO® Circuit Breaker Load Centers Knockouts, Dimensions, Bolt-On Hubs

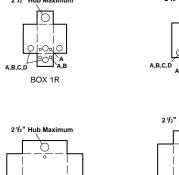
Knockout Information and Enclosure Dimensions Rainproof 21/2" Hub Maximum 21/2" Hub Maximum

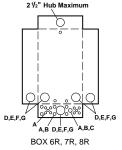


ΔR	Dimensions							
	Day Na	W		Н		D		
BOX ZIX	BOX NO.	IN	mm	IN	mm	IN	mm	
2½" Hub Maximum	1R	4.88	124	9.38	238	4.00	102	
	2R	8.88	226	12.65	321	4.27	108	
	3R	14.25	362	18.92	481	4.52	115	
	4R	14.25	362	22.06	560	4.52	115	
	5R	14.25	362	26.04	661	4.52	115	
	6R	14.25	362	29.86	758	4.52	115	
	7R	14.25	362	33.78	858	4.52	115	
	8R	14.25	362	37.98	965	4.52	115	
A,B D,E,F,G	11R	4.56	116	6.50	165	3.88	99	
	12R	6.92	176	13.18	335	4.12	105	
num	13R	7.56	192	23.24	590	4.75	121	
	14R	9.62	244	26.24	666	5.50	140	
	15R	6.92	176	16.18	411	4.12	105	
	16R	14.25	362	39.37	1000	4.52	115	
!								
	BOX 2R 2 1/2" Hub Maximum C,D,E,F	A,B,C,D A,B BOX 2R BOX No. 2 1/2" Hub Maximum 1R 2R 3R 4R 5R 6R 7R 6R 7R BOX 5R 11R BOX 5R 12R 13R 14R 15R	A,B,C,D A,B BOX 2R Box No. IN 2 1/2" Hub Maximum 1R 4.88 2R 8.88 3R 14.25 4R 14.25 5R 14.25 6R 14.25 7R 14.25 7R 14.25 BOX 5R 11R 4.56 BOX 5R 12R 6.92 13R 7.56 14R 9.62 15R 6.92	BOX 2R BOX No. No. W	BOX 2R BOX No. No.	BOX 2R BOX No. No.	BOX 2R Box No. No.	

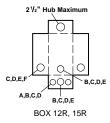


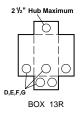








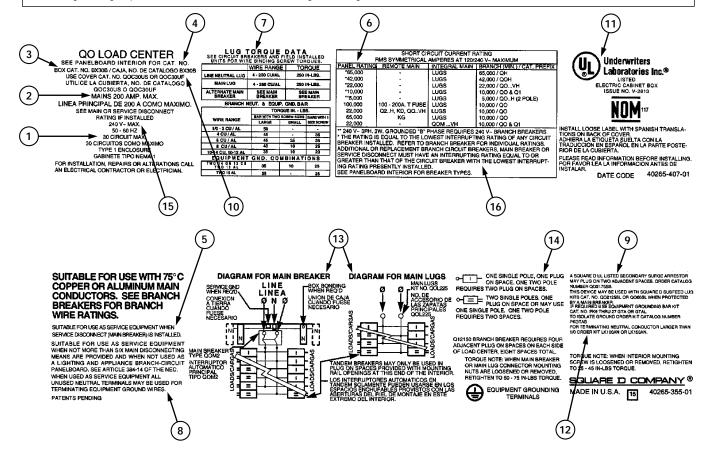




QO® Circuit Breaker Load Centers Wiring Diagram

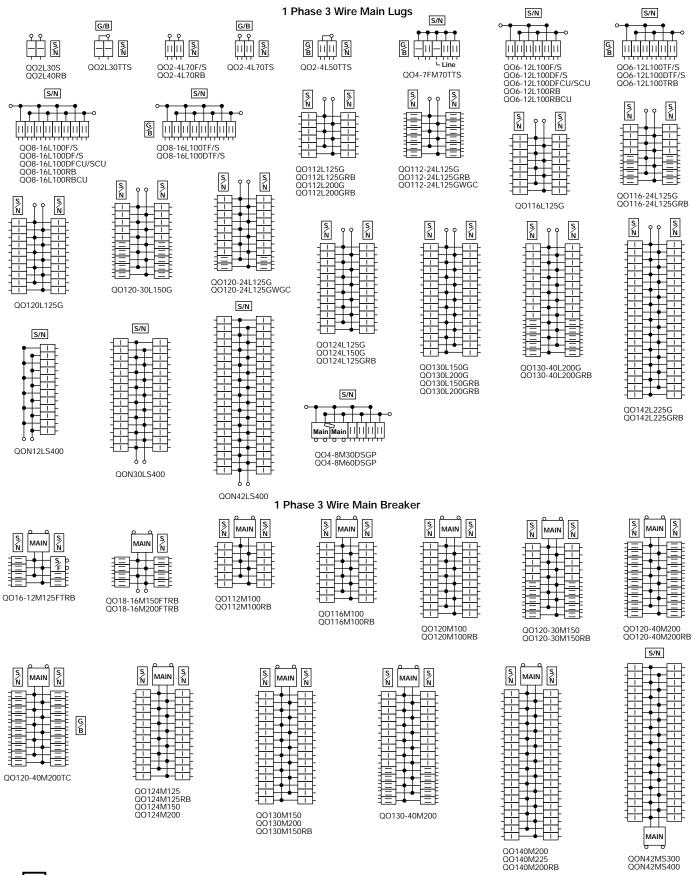
Represents a typical label. Information may not be applicable or may change without notice. See actual label in the load center for latest information.

- 1. Number of circuits maximum.
- Amperage rating.
- 3. Box catalog number.
- 4. See panelboard interior for catalog number.
- 5. Service equipment marking.
- 6. Short circuit ratings.
- 7. Wire range and lug torque data table.
- Use of unused neutral branch terminals for equipment grounding, service equipment application only.
- 9. Catalog number for secondary surge arrestor.
- 10. Catalog number of covers.
- 11. U.L. Listing.
- 12. Neutral lug for wire larger than 1/0.
- Alternate wiring diagram for main circuit breaker or main lug.
- Square D circuit breakers that may be used in this panelboard.
- 15. Voltage ratings.
- Short Circuit ratings and replacement or additional circuit breakers.





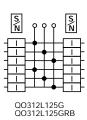
QO[®] Circuit Breaker Load Centers Wiring Diagrams

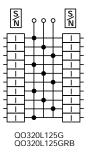


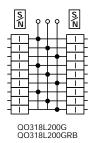
QO® Circuit Breaker Load Centers Wiring Diagrams

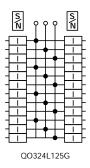
3 Phase 4 Wire Main Lugs

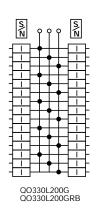


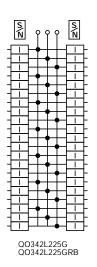


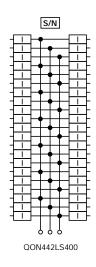




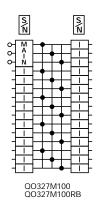


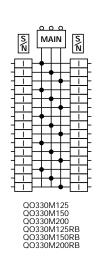


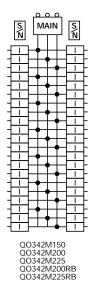


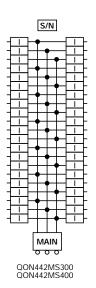


3 Phase 4 Wire Main Circuit Breaker









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