

# Section 7

## International Load Centers

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## QO™ Plug-On and Bolt-On Circuit Breakers and Switches

### General Description

In 1955 Square D Company introduced the QO™ Plug-on System and revolutionized the way electrical contractors install miniature circuit breakers in the United States. Today as part of Schneider Electric™ we offer the same Plug-on System technology around the world. IEC certified QO products are available for residential, commercial and industrial applications.

**Table 7.1: International Miniature Circuit Breaker Description**

Circuit Breaker	Description	1Ø Consumer Units	3Ø Distribution Boards
QOxD	Branch circuit breaker	X	X

### Characteristics

- Circuit breakers are rated 240 Vac single phase and 415 Vac three phase, 50/60 Hz.
- Circuit breakers are available in 1-, 2- or 3-pole construction.
- Thermal trip elements are factory calibrated to 40°C (IEC 947-2) and 30°C (IEC 898) ambient temperature.
- Trip-free handle ensures tripping even when the circuit breaker is held or locked in the ON position.
- Circuit breakers are in compliance with international standards set by the International Electrotechnical Commission (IEC).
- The CE marking is located on each circuit breaker in accordance with the low voltage directive of the European Union.
- The entire QO circuit breaker family provides the advantage of a plug-on connection. (Bolt-on connections also available)

### Accessories

**Table 7.2: Accessories**

Accessory	Description	Cat. No.	QOxD
Handle Tie	Ties two 1P circuit breakers together	QO1HT	X
Handle Lock-Off (Clamp)	Attaches to 1P circuit breaker handles	QO1LO	X
	Attaches to 1P, 2P, 3P circuit breaker handles	HLO1	X
Handle Padlock Attachment	Attaches to 1P, 2P, 3P circuit breaker handles	QOEPLA	—
	Attaches to 1P circuit breaker handles	QOE1PL	—
	Attaches to 1P circuit breaker escutcheon (fixed)	QO1PA	X
	Attaches to 1P circuit breaker handles (removable)	QOHPL	X
	Attaches to 2P, 3P circuit breaker handles (removable)	QO1HPL	X
	Attaches to 2P circuit breaker handles (removable)	GFI2PA	—

### Circuit Breaker Operating Characteristics

**Table 7.3: Branch Circuit Breakers**

Cat. No. Prefix		Number of Poles	Continuous Ampere Rating	IEC 898 Service Rating I <sub>cn</sub>		Tripping Characteristics
Plug-on	Bolt-on			240 V	415 V	
QOxD	QOBxD	1, 2, 3	10–32 A	3000	3000	Type D (10–20 I <sub>n</sub> )
Cat. No. Prefix		Number of Poles	Continuous Ampere Rating	IEC 947-2 Service Rating I <sub>cu</sub> (I <sub>cs</sub> )		—
Plug-on	Bolt-on			240 V	415 V	
QOxD	QOBxD	1, 2, 3	10–32 A	3000 (100%)	3000 (100%)	—
		1	40–63 A	3000 (50%)	—	—
		2, 3	40–100 A	—	3000 (50%)	—

### Main Switches

**Table 7.4: QO-M Plug-On Main Incomer Switch  
240 V Certified to IEC 947-3**

Ampere Rating	1P Cat. No.	2P Cat. No.	3P and 4P Cat. No.
100 A	N/A	N/A	N/A
125 A	N/A	N/A	QO3100M
125 A–4P	N/A	N/A	QO4100M

### Plug-On QOxD and Bolt-On QOBxD

**Table 7.5: QOxD Thermal-Magnetic, Plug-On Miniature Circuit Breakers  
240/415 V 10–32 A Certified to IEC 898 at 3 kA,  
40–100 A Certified to IEC 947-2 at 3 kA**

Ampere Rating	1P		2P		3P		Terminal Capacity Range
	Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.	
10 A	QOxD110	QOxD210	QOxD310	QOxD310	QOxD310	QOxD310	2.5–6 mm <sup>2</sup>
16 A	QOxD116	QOxD216	QOxD316	QOxD316	QOxD316	QOxD316	2.5–6 mm <sup>2</sup>
20 A	QOxD120	QOxD220	QOxD320	QOxD320	QOxD320	QOxD320	2.5–6 mm <sup>2</sup>
25 A	QOxD125	QOxD225	QOxD325	QOxD325	QOxD325	QOxD325	2.5–6 mm <sup>2</sup>
32 A	QOxD132	QOxD232	QOxD332	QOxD332	QOxD332	QOxD332	2.5–6 mm <sup>2</sup>
40 A	QOxD140	QOxD240	QOxD340	QOxD340	QOxD340	QOxD340	10–25 mm <sup>2</sup>
45 A	QOxD145	QOxD245	QOxD345	QOxD345	QOxD345	QOxD345	10–25 mm <sup>2</sup>
50 A	QOxD150	QOxD250	QOxD350	QOxD350	QOxD350	QOxD350	10–25 mm <sup>2</sup>
63 A	QOxD163	QOxD263	QOxD363	QOxD363	QOxD363	QOxD363	10–25 mm <sup>2</sup>
80 A	N/A	QOxD280	QOxD380	QOxD380	QOxD380	QOxD380	25–50 mm <sup>2</sup>
100 A	N/A	QOxD2100	QOxD3100	QOxD3100	QOxD3100	QOxD3100	25–50 mm <sup>2</sup>

**Table 7.6: QOBXD Thermal-Magnetic, Bolt-On Miniature Circuit Breakers  
240/415 V 10–32 A Certified to IEC 898 at 3 kA,  
40–100 A Certified to IEC 947-2 at 3 kA**

Ampere Rating	1P	2P	3P	Terminal Capacity Range
	Cat. No.	Cat. No.	Cat. No.	
10 A	QOBXD110	QOBXD210	QOBXD310	2.5–6 mm <sup>2</sup>
16 A	QOBXD116	QOBXD216	QOBXD316	2.5–6 mm <sup>2</sup>
20 A	QOBXD120	QOBXD220	QOBXD320	2.5–6 mm <sup>2</sup>
25 A	QOBXD125	QOBXD225	QOBXD325	2.5–6 mm <sup>2</sup>
32 A	QOBXD132	QOBXD232	QOBXD332	2.5–6 mm <sup>2</sup>
40 A	QOBXD140	QOBXD240	QOBXD340	10–25 mm <sup>2</sup>
45 A	QOBXD145	QOBXD245	QOBXD345	1–25 mm <sup>2</sup>
50 A	QOBXD150	QOBXD250	QOBXD350	10–25 mm <sup>2</sup>
63 A	QOBXD163	QOBXD263	QOBXD363	10–25 mm <sup>2</sup>
80 A	N/A	QOBXD280	QOBXD380	25–50 mm <sup>2</sup>
100 A	N/A	QOBXD2100	QOBXD3100	25–50 mm <sup>2</sup>

For Accessories, see Table 7.2 Accessories, page 7-2  
For short circuit ratings, see Table 7.3 Branch Circuit Breakers, page 7-2

## IEC Certified QO™ Load Centers, Type 1 (Indoor)

### Application Data

Square D™ QO™ Three-Phase Circuit Breaker Load Centers can be certified to IEC 60439-1 and 60439-3. Contact your local Field Sales office for more information. They are designed to meet residential, commercial, and industrial requirements to protect electrical systems and equipment.

### Features

- Three phase construction
- 125, 150, 200 and 225 A mains ratings with main lugs or main circuit breaker
- 12-42 circuit indoor version
- Flush or surface mounting
- Straight-in wiring to minimize service cable installation
- Top or bottom feed
- Automatic flush adjustment cover to speed installation
- Covers sold separately
- Products are stocked in USA
- Bus on 12-42 circuit load centers is one piece; bus on 12–42 circuit load centers is a one-piece copper bus.
- Order entry point is Lexington
- For more information, contact your local Field Sales office.

**Table 7.7: Load Centers**

Mains Rating Ampere	Spaces/ Max. Poles	Type 1	
		Box and Interior Cat. No.	Cover With Door Cat. No. [1]
<b>Main Lugs 240/415 Vac 3Ø4W</b>			
125 A	12	QO312L125G	QOC16UF/S
	20	QO320L125G	QOC24UF/S
	24	QO324L125G	QOC24UF/S
200	18	QO318L200G	QOC30UF/S
	30	QO330L200G	QOC30UF/S
225	42	QO342L225G	QOC42UF/S
<b>Main Circuit Breaker 240/415 Vac 3Ø4W</b>			
125	30	QO330MQ125	QOC342MQF/S
150	30	QO330MQ150	QOC342MQF/S
	42	QO342MQ150	QOC342MQF/S
200	30	QO330MQ200	QOC342MQF/S
	42	QO342MQ200	QOC342MQF/S
225	42	QO342MQ225	QOC342MQF/S

[1] F/S at end of catalog number indicates to order F for flush device or S for surface device.