

Section 7

International Load Centers

International Miniature Circuit Breakers	7-2
QO™ Plug-On and Bolt-On Circuit Breakers and Switches	7-2
Plug-On QOXD and Bolt-On QOBXD	7-3
Load Centers	7-4
IEC Certified QO™ Load Centers, Type 1 (Indoor)	7-4

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 _{cn}		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 _n)
Cat. No. Prefix		Number of Poles	Continuous Ampere Rating	IEC 947-2 Service Rating I _{cu} (I _{cs})		—
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.	
10 A	QOXD110	QOXD210	QOXD310	2.5–6 mm ²
16 A	QOXD116	QOXD216	QOXD316	2.5–6 mm ²
20 A	QOXD120	QOXD220	QOXD320	2.5–6 mm ²
25 A	QOXD125	QOXD225	QOXD325	2.5–6 mm ²
32 A	QOXD132	QOXD232	QOXD332	2.5–6 mm ²
40 A	QOXD140	QOXD240	QOXD340	10–25 mm ²
45 A	QOXD145	QOXD245	QOXD345	10–25 mm ²
50 A	QOXD150	QOXD250	QOXD350	10–25 mm ²
63 A	QOXD163	QOXD263	QOXD363	10–25 mm ²
80 A	N/A	QOXD280	QOXD380	25–50 mm ²
100 A	N/A	QOXD2100	QOXD3100	25–50 mm ²

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 ²
16 A	QOBXD116	QOBXD216	QOBXD316	2.5–6 mm ²
20 A	QOBXD120	QOBXD220	QOBXD320	2.5–6 mm ²
25 A	QOBXD125	QOBXD225	QOBXD325	2.5–6 mm ²
32 A	QOBXD132	QOBXD232	QOBXD332	2.5–6 mm ²
40 A	QOBXD140	QOBXD240	QOBXD340	10–25 mm ²
45 A	QOBXD145	QOBXD245	QOBXD345	1–25 mm ²
50 A	QOBXD150	QOBXD250	QOBXD350	10–25 mm ²
63 A	QOBXD163	QOBXD263	QOBXD363	10–25 mm ²
80 A	N/A	QOBXD280	QOBXD380	25–50 mm ²
100 A	N/A	QOBXD2100	QOBXD3100	25–50 mm ²

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]
Main Lugs 240/415 Vac 3Ø4W			
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
Main Circuit Breaker 240/415 Vac 3Ø4W			
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.