

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 _{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.