

<b>Circuit Breaker Type</b>	GJL	HD	HG	HJ	HL	FA (240 V)	FA	FH	FH■	FH	
<b>Number of Poles</b>	3	2,3	2,3	2,3★	2,3★	1, 2, 3	1	2, 3	1	1	2, 3
<b>Current Range</b>	15–100	15–150 A	15–150 A	15–150 A	15–150 A	15–100	15–100	15–100	15–30	35–100	15–100

Interrupting Ratings												
UL/CSA/NOM Rating (kA RMS) (50/60 Hz)	240 Vac	100	25	65	100	125	10☉	25☉	25	65	25	65
	480Y/277 Vac	65	18	35	65	100	—	18	18	65	25	25
	480 Vac	65	18	35	65	100	—	—	18	—	—	25
	600Y/347 Vac	18	14	18	25	50	—	—	14	—	—	18
	600 Vac	—	14	18	25	50	—	—	14	—	—	18
DC Ratings	250 Vdc	—	20	20	20	20	5♦	10♦	10	10♦	10♦	50
	500 Vdc▲	—	—	—	—	—	—	—	—	—	—	20
IEC Rating (kA RMS) Icu/Ics★	240 Vac	65/65	25/25	65/65	100/100	125/125	—	18/9	—	18/9	—	—
	415 Vac	65/65	18/18	35/35	65/65	100/100	10/2.5	10/2.5	10/2.5	10/2.5	10/2.5	10/2.5
IEC 50/60 Hz	For additional IEC ratings, see the Supplemental Digest.											

Special Ratings												
Fed. Specs W-C-375B/GEN	—	X	X	X	X	X	X	X	X	X	X	X
HACR (2P, 3P)	X	—	—	—	—	—	X	—	X	—	—	—

Connections/Terminations												
Unit Mount	X						X	X	X	X	X	—
I-Line®	—	X	X	X	X	X	X	X	X	X	X	—
Rear Connection	—	X◇	X◇	X	X	X	X	X	X	—	—	—
Drawout	—	X◇	X◇	X	X	X	—	—	—	—	—	—
Optional Lugs	—	X◇	X◇	X	X	X	X	X	X	X	X	—

Accessories and Modifications												
Shunt Trip	X	X	X	X	X	X	X△▼	—	X△	—	—	X△
Undervoltage Trip	X	X	X	X	X	X	X△▼	—	X△	—	—	X△
Auxiliary Switches	X	X	X	X	X	X	X△▼	—	X△	—	—	X△
Alarm Switch	X	X	X	X	X	X	X△▼	X△	X△	X△	X△	X△
Motor Operator	—	X◇	X◇	X	X	X	—	—	X	—	—	X
Handle Operators	X	X◇	X◇	X	X	X	X	—	X	X	X	X
Mechanical Interlocks (3P)	—	X	X	X	X	X	—	—	X	—	—	X
Handle Padlock Attachment	X	X◇	X◇	X	X	X	X	X	X	X	X	X
Cylinder Lock (3P△)	—	X◇	X◇	X	X	X	—	—	X	—	—	X
Handle Mechanical Interlocks	—	X◇	X◇	X	X	X	—	—	—	—	—	—
Optional GF Protection□	—	—	—	—	—	—	—	—	X	—	—	X

Trip System Type												
Thermal-magnetic	X	X	X	X	X	X	X	X	X	X	X	X
Instantaneous-only (MCP)	X	—	—	X▽	X▽	X	—	—	X	—	—	X
Molded Case Switch	—	X	X	X	X	X	—	—	—	—	—	X
Electronic	—	—	—	—	—	—	—	—	—	—	—	—

Enclosures (Pages 7-56–7-58)												
General Purpose (NEMA 1)	—	X	X	X	X	X	X	X	X	X	X	X
Raintight (NEMA 3R)	—	X	X	X	X	X	X	X	X	X	X	X
Dust-tight (NEMA 12)	—	X	X	X	X	X	X	X	X	X	X	X
Watertight (NEMA 4, 4X, 5)	—	X	X	X	X	X	X	X	X	X	X	X
Explosion Proof (NEMA 7, 9)	—	—	—	—	—	—	X	X	X	X	X	X
Dimensions (3P Unit Mount) in. (mm)	Height	4.72 (120)	6.4 (163)			6 (152)	6 (152)					
	Width	3.54 (90)	4.1 (104)			4.5 (114)	4.5 (114)					
	Depth	3.94 (100)	3.4 (86)			4.13 (105)	4.13 (105)					
Pages (Unit Mount)/(I-Line)	Page 7-24	Pages 7-22, 7-23, 7-28, 7-33/9-25				Pages 7-49, 9-23	Pages 7-49/9-24					

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

- ▲ Ungrounded UPS systems only. See page 7-34.
- 65 kA @ 120 Vac
- ♦ 1Ø 125 Vdc rating only.
- ★ Dual UL and IEC ratings and CE markings on circuit breakers. For additional IEC ratings, see the Supplemental Digest.
- ▼ Not available on 1P FA (240 V).
- △ Factory-installed option only.
- Requires factory-installed "G" Shunt trip and 3P module.
- ◇ Not available in HD and HG 2P rating (2P module).
- ☆ 2P in a 3P module.
- ▽ 3P only.
- ☉ 1P FA is 120 Vac.

7 MINIATURE AND MOLDED CASE CIRCUIT BREAKERS

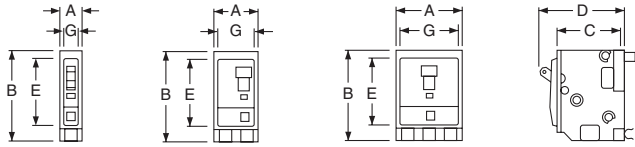


Figure 1 Figure 2 Figure 3 QO, QOB

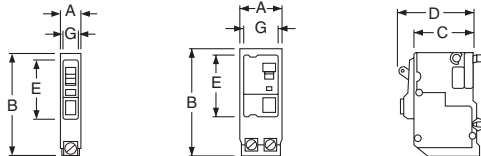


Figure 4 Figure 5 QO-GFI, QO-PL QO-EPD

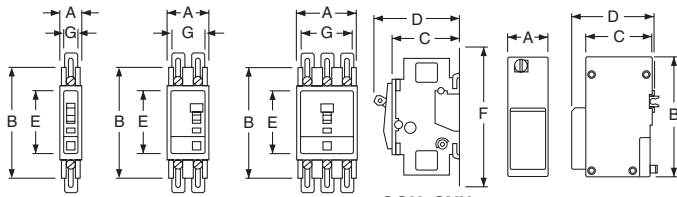


Figure 6 Figure 7 Figure 8 QOU, QYU Low Ampere Figure 9 QO-PLPS

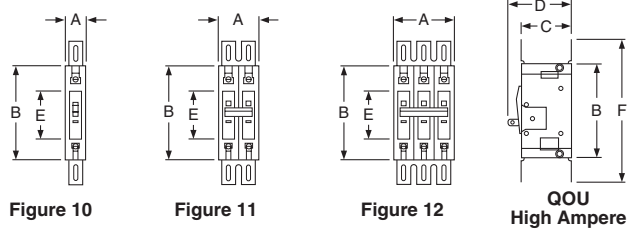


Figure 10 Figure 11 Figure 12 QOU High Ampere

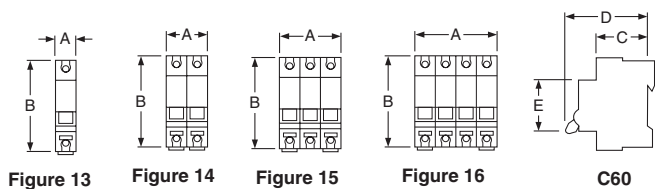


Figure 13 Figure 14 Figure 15 Figure 16 C60

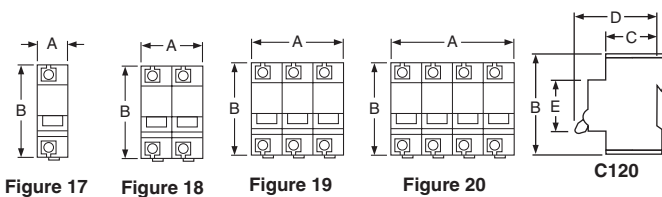


Figure 17 Figure 18 Figure 19 Figure 20 C120

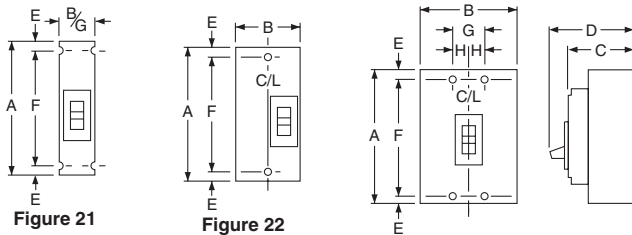


Figure 21 Figure 22 Figure 23

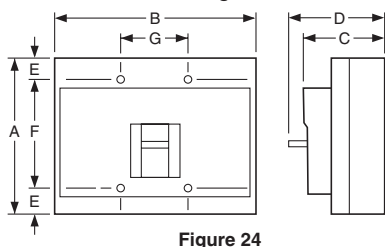


Figure 24

Table 7.140: QO®, QOU, Multi 9™ Circuit Breakers

Circuit Breaker Cat. No. Prefix	Poles	Fig. No.	Dimensions—Inches						
			A	B	C	D	E	F	G
QO, QOB	1	1	0.75	3.00▲	2.31	2.91	2.25	—	0.59
	2	2	1.50	3.00▲	2.31	2.91	2.25	—	1.34
	3	3	2.25	3.00▲	2.31	2.91	2.25	—	2.09
QOB-VH 150 A QOB-VH 110–150 A	2	2	3.0	5.72	2.53	4.90	3.78	—	2.85
	3	3	4.50	5.72	2.53	4.90	3.78	—	4.35
QO-PL QO-GFI QO-EPD	1	4	0.75	4.12■	2.31	2.91	2.25	—	0.59
	2	5	1.50	4.12■	2.31	2.91	2.25	—	1.34
	3	5	2.25	4.12■	2.31	2.91	2.25	—	2.09
QOU QYU Low Ampere	1	6	0.75	4.05♦	2.38	2.98	2.25	5.00★	0.62
	2	7	1.50	4.05♦	2.38	2.98	2.25	5.00★	1.37
	3	8	2.25	4.05★	2.38	2.98	2.25	5.00△	2.12
QOU High Ampere	1	10	0.75	4.45	2.37	2.96	2.25	6.78	—
	2	11	1.50	4.45	2.37	2.96	2.25	6.78	—
	3	12	2.25	4.45	2.37	2.96	2.25	6.78	—
Multi 9™ C60N	1	13	0.71	3.19	1.73	2.76	1.77	—	—
	2	14	1.42	3.19	1.73	2.76	1.77	—	—
	3	15	2.13	3.19	1.73	2.76	1.77	—	—
	4	16	2.84	3.19	1.73	2.76	1.77	—	—
QO-PLPS Power Supply	2	9	1.45	4.35	2.42	3.11	—	—	—

- ▲ 35–70 A is 3.12 in; 80–100 A 2P and 70–100 A 3P are 3.50 in.
- QO-PL is 4.55 in.
- ♦ 80–100 A 1P and 80–125 A 2P are 4.45 in
- ★ 80–100 A 1P and 80–125 A 2P are 6.78 in.
- ▼ 70–100 A 4.45 in.
- △ 70–100 A is 6.78 in.

Table 7.141: QB, QD, QG, QJ, Q4, FA, FI, KA, KC, KI, LA, LC, LI, LE, LX, LXI, MA Circuit Breakers

Circuit Breaker Cat. No. Prefix	Poles	Fig. No.	Dimensions—Inches							
			A	B	C	D	E	F	G	H
QB, QD, QG, QJ	2	22	6.47	3.00	3.02	3.93	□	4.25	—	—
	3	23	6.47	4.50	3.02	3.93	□	4.25	1.50	0.75
FAL, FHL	1	21	6.00	1.50	3.16	4.13	0.44	5.13	1.50	—
	2	22	6.00	3.00	3.16	4.13	0.44	5.13	—	—
	3	23	6.00	4.50	3.16	4.13	0.44	5.13	1.50	0.75
FIL, KAL, KCL, KHL, KIL	2 & 3	23	8.00	4.50	3.66	4.75	0.44	7.13	1.50	0.75
Q4L, LAL, LHL	2 & 3	23	11.00	6.00	4.06	5.84	0.88	9.25	2.00	1.00
LIL, LEL, LXL, LXIL, LCL	2 & 3	24	11.86	7.50	5.48	6.74	0.55	10.75	2.50	—
MAL, MHL	2 & 3	23	14.00	9.00	4.53	6.50	1.66	10.69	3.00	1.50

□ Dimensions E are 1.59 in at ON end and 0.63 in at OFF end.

Table 7.142: Shipping Weights◇

Frame Size	Approx. Shipping Weight (Lbs.)	Frame Size	Approx. Shipping Weight (Lbs.)
FAL, FHL 1P	2	KIL	9
FAL, FHL 2P	3	LAL, LHL	15
FAL, FHL 3P	5	LEL, LIL, LXL, LXIL, LCL	25
FIL	8	Q4L	15
QB, QD, QG, QJ	4	MAL, MHL	34
KAL, KHL	7		

◇ All weights are for 3P circuit breakers unless otherwise noted.

**INTRODUCTION**

**CLASS IV**

Exchange of permanent trip circuit breakers (KA, LA, MA or NA) furnished in lieu of circuit breakers specified with interchangeable trip. These circuit breakers can be identified by a label stating that they are subject to this exchange policy.

**Allowance**

A replacement circuit breaker within the same frame size, but of a different trip rating than that exchanged, is furnished at the lowest recognized competitive list price for a trip unit of the same frame size and trip rating minus the regular discount. This exchange arrangement requires that the replaced circuit breaker be returned to Square D.

**CATALOG NUMBERS**

Square D circuit breakers are ordered by a catalog number that includes the breaker family, description, poles, voltage rating, amperage rating and suffix.

Figure 5 shows a catalog number broken down by components. For example, FAL36050V2100, a typical catalog number, can be broken down as follows:

- FA 100A frame circuit breaker
- L Circuit breaker with lugs on both ends
- 3 Number of poles
- 6 Voltage rating
- 050 Continuous current amperage rating (handle rating)
- V and 2100 V indicates the Visi-Blade feature and the 2100 indicates a factory installed contact alarm. These two components are the suffix.

**TYPICAL CATALOG NUMBER:**

	<b>FA</b>	L	3	6	050	V	2100
<b>BREAKER FAMILY</b>							
FY - 30 Amp. Frame	NOTE: "A" is replaced by letter "H" for High Interrupting						
FA - 100 Amp. Frame	"A" is replaced by letter "C" for Extra High Interrupting						
KA - 250 Amp. Frame	"A" is replaced by letter "I" for Current Limiting. (FA, KA, LA circuit breakers only)						
LA - 400 Amp. Frame							
MA - 1000 Amp. Frame							
NA - 1200 Amp. Frame							
<b>DESCRIPTION</b>							
NO LETTER - (I-LINE®) Plug-On Breaker							
B - (I-LINE) Bolt-On Breaker (400 ampere frame maximum)							
F - Terminal Pads Only (No Lugs)							
L - Lugs on Both Ends (Merchandised — Universal Breaker)							
P - Lugs OFF End Only							
R - Plug-On Breaker (I-LINE Type DO with Plug-On Line & Load Connectors)							
<b>POLES</b>							
1 - 1-Pole							
2 - 2-Pole							
3 - 3-Pole							
<b>VOLTAGE RATING</b>							
2 - 240Vac							
4 - 480Vac							
6 - 600Vac							
<b>AMPERE RATING</b>							
015 - 090 - 15-90 Ampere Rating							
100 - 900 - 100-900 Ampere Rating							
1000 - 1200 - 1000-1200 Ampere Rating							
000 or 0000 - Molded Case Switch							
000X or 000XX - Molded Case Switch							
<b>SUFFIX</b>							
The suffix indicates a special feature of the circuit breaker.							
A, B, C - indicates I-LINE® Phase Connections							
V - indicates Visi-Blade							
M - indicates Automatic Molded Case Switch							
XXM - indicates Instantaneous Trip only (MAG-GARD®) (i.e., 18M is 300-1100A adjustable trip range)							
XXT - indicates adjustable magnetic trip with responsive thermal (mining breakers)							
G - indicates Ground Fault Shunt Trip accessory							
XXXX - i.e., 2100 indicates a factory installed accessory							

FIGURE 5  
CATALOG NUMBERING SYSTEM FOR THERMAL-MAGNETIC MOLDED CASE CIRCUIT BREAKERS

