Table 8: Breakdown of Typical Catalog Number

FA	L	3	6	050	V	2100

Breaker Family

FY - 30 Ampere Frame
FA - 100 Ampere Frame
KA - 250 Ampere Frame
LA - 400 Ampere Frame
MA 1000 Ampere Frame
NA - 1200 Ampere Frame

NOTE:
"A" is replaced by letter "H" for High Interrupting
"A" is replaced by letter "C" for Extra High Interrupting
"A" is replaced by letter "I" for Current Limiting. (FA, KA. LA circuit breakers only)

Description

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 and Load connectors)

Poles

1 - 1-Pole
2 - 2-Pole
3 - 3-Pole

Voltage Rating

2 - 240 Vac
4 - 480 Vac
6 - 600 Vac

Ampere Rating

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

Suffix

The suffix indicates a special feature of the circuit breaker.
A, B, C - indicated I-Line Phase Connections
CV - Indicates Visi-Blade®
M - Indicates Automatic Molded Case Switch
XXM - Indicated Instantaneous Trip Only (Mag-Gard®) (i.e., 18M is 300-1100 ampere 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

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100 AMPERE FRAME

This section provides specific information on Square D® 100 ampere frame thermal-magnetic molded case circuit breakers. For more information, see the Introduction in this catalog.

Description

Table 13: Description of 100 Ampere Frame Circuit Breakers

Circuit Breaker	Description
HD, HG, HJ, HL	15–150 ampere, 600 Vac, 50/60 Hz 250 Vdc, 2-, 3-pole.
FA/FH	15-100 ampere, 600 Vac, 50/60 Hz, 250 Vdc, 1-, 2- and 3-pole.
FC	15-100 ampere, 480 Vac, 50/60 Hz, 2- and 3-pole
FI	20-100 ampere, 600 Vac 50/60 Hz, 2- and 3-pole
FY	15-30 ampere, 277 Vac, 50/60 Hz, 1-pole

Applications

- FI current limiting circuit breakers are used for electrical systems where high fault currents can occur.
- FA/FH, FC, and FI circuit breakers are used in industrial enclosures, panelboards, switchboards, busway plug-in units, combination starters, or motor control centers.
- FY thermal-magnetic circuit breakers are used in I-Line® panelboards and switchboards.

Table 14: 100 Ampere Frame Interrupting Ratings

Catalog Number Prefix		No. of Poles	Cont. Ampere Rating	UL Listed Interrupting Rating (kA)								Federal Specs. W-C-375B/GEN	IEC 60947-2 Icu/Ics (kA) AC Voltage
				AC Volts - RMS Symmetrical Amperes					DC Volts				
Unit Mount	I-Line			120	240	480Y/ 277	480	600	125	250	500		415/240
	FY	1	15–30	18	14	14	—	—	—	—	—	11a, 13b	10/2.5
FAL 240 Vac	FA 240 Vac	1	15–100	10	—	—	—	—	5	—	—	11a	10/2.5
		2	15–100	10	10	—	—	—	5	5	—	11b, 12b	
		3	15–100	10	10	—	—	—	5	5	—	11b, 12b	
FAL 480 Vac	FA 480 Vac	1	15–100	25	18	18	—	—	10	—	—	11a, 12a, 13a	10/2.5
		2	15–100	25	25	18	18	—	10	10	—	13b	
		3	15–100	25	25	18	18	—	10	10	—	13b	
FAL 600 Vac	FA 600 Vac	2	15–100	25	25	18	18	14	10	10	—	18a	10/2.5
		3	15–100	25	25	18	18	14	10	10	—	18a	
FHL★	FH★	1	15–30	65	65	65	—	—	10	—	—	13a	10/2.5
		1	35–100	65	25	25	—	—	10	10	—	13a	
		2, 3	15–100	65	65	25	25	18	50	50	—	22a	
FHL-DC▲	—	3	—	—	—	—	—	—	—	—	20K	—	—
FCL	FC	2, 3	20–100	100	100	65	65	—	—	—	—	22a	10/2.5
FIL	FI	2, 3	20–100	200	200	200	200	100	—	—	—	16a	6/1.5

★ Separate UL rating available for 240 Vac and 480 Vac grounded B single phase systems. Breakers must be ordered with 5861 suffix.

▲ UL Listed 500 Vdc rating for use on ungrounded systems. Must be connected 3 poles in series. Consult your local Square D sales office for additional information 1-888-Square D.

NOTE: For IEC 60947-2 rated S-line ratings, not UL listed, see Supplemental Digest.

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Table 16: 100 Ampere Frame Unit Mount Circuit Breakers *(continued)*

06013031

FAL/FHL/FCL Three-pole 15–100 Ampere

06013018

FIL Two- and Three-pole 20–100 Ampere

Ampere Rating	AC Magnetic Trip Settings Amperes		One Pole Catalog No.	Two Pole Catalog No.	Three Pole Catalog No.	Standard Lug Kit Wire Range
FAL Standard Interrupting						
	Hold	Trip		600 Vac/250 Vdc	600 Vac/250 Vdc	
15	275	600	—	FAL26015	FAL36015	AL50FA
20	275	600	—	FAL26020	FAL36020	#14-#4 Cu or
25	275	600	—	FAL26025	FAL36025	#12-#4 Al
30	275	600	—	FAL26030	FAL36030	
35	400	850	—	FAL26035	FAL36035	
40	400	850	—	FAL26040	FAL36040	
45	400	850	—	FAL26045	FAL36045	
50	400	850	—	FAL26050	FAL36050	AL100FA
60	800	1450	—	FAL26060	FAL36060	#14-#1/0 Cu or
70	800	1450	—	FAL26070	FAL36070	#12-#1/o Al
80	800	1450	—	FAL26080	FAL36080	
90	900	1700	—	FAL26090	FAL36090	
100	900	1700	—	FAL26100	FAL36100	
FHL High Interrupting						
	Hold	Trip	277 Vac/125 Vdc	600 Vac/250 Vdc	600 Vac/250 Vdc	
15	275	600	FHL16015	FHL26015	FHL36015	AL50FA
20	275	600	FHL16020	FHL26020	FHL36020	#14–#4 Cu or
25	275	600	FHL16025	FHL26025	FHL36025	#12–#4 Al
30	275	600	FHL16030	FHL26030	FHL36030	
35	400	850	FHL16035	FHL26035	FHL36035	
40	400	850	FHL16040	FHL26040	FHL36040	
45	400	850	FHL16045	FHL26045	FHL36045	
50	400	850	FHL16050	FHL26050	FHL36050	AL100FA
60	800	1450	FHL16060	FHL26060	FHL36060	#14–#1/0 Cu or
70	800	1450	FHL16070	FHL26070	FHL36070	#12–#1/0 Al
80	800	1450	FHL16080	FHL26080	FHL36080	
90	900	1700	FHL16090	FHL26090	FHL36090	
100	900	1700	FHL16100	FHL26100	FHL36100	
FCL Extra High Interrupting						
	Hold	Trip		480 Vac★	480 Vac	
15	275	600	—	FCL24015	FCL34015	
20	275	600	—	FCL24020	FCL34020	CU30FA
25	275	600	—	FCL24025	FCL34025	#14–#10 Cu
30	275	600	—	FCL24030	FCL34030	
35	400	850	—	FCL24035	FCL34035	
40	400	850	—	FCL24040	FCL34040	
45	400	850	—	FCL24045	FCL34045	
50	400	850	—	FCL24050	FCL34050	AL100FA4
60	800	1450	—	FCL24060	FCL34060	#14–#3 Cu or
70	800	1450	—	FCL24070	FCL34070	#12–#1 Al
80	800	1450	—	FCL24080	FCL34080	
90	900	1700	—	FCL24090	FCL34090	
100	900	1700	—	FCL24100	FCL34100	
FIL I-Limiter® Current Limiting						
	Hold	Trip		600 Vac	600 Vac	
20	275	600	—	FIL26020	FIL36020	AL50FA
30	275	600	—	FIL26030	FIL36030	1-#14–#4 Cu or
						1-#12–#4 Al

Continued on next page

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		100 A Frame						100 A F-Frame	
Circuit Breaker Type		FA (240 V)	FA		FH	FH■	FH	FI	FY
Number of Poles		1, 2, 3	1	2, 3	1	1	2, 3	2, 3	1
Current Range		15–100	15–100	15–100	15–30	35–100	15–100	20–100	15–30
Interrupting Ratings									
UL/CSA/NOM Rating (kA RMS) (50/60 Hz)	240 Vac	10◒	25◒	25	65	25	65	200	14
	480Y/277 Vac	—	18	18	65	25	25	200	14
	480 Vac	—	—	18	—	—	25	200	—
	600Y/347 Vac	—	—	14	—	—	18	100	—
	600 Vac	—	—	14	—	—	18	100	—
DC Ratings	250 Vdc✱	5♦	10♦	10	10♦	10♦	50	—	—
	500 Vdc▲✱	—	—	—	—	—	20	—	—
IEC Rating (kA RMS) Icu/Ics★	240 Vac	—	18/9	—	18/9	—	—	—	—
	415 Vac	10/2.5	10/2.5	10/2.5	10/2.5	10/2.5	10/2.5	6/1.5	—
Special Ratings									
CCC		—	—	—	—	—	—	—	—
Fed. Specs W-C-375B/GEN		X	X	X	X	X	X	X	—
HACR (2P, 3P)		X	—	X	—	—	—	—	—
Connections/Terminations									
Unit Mount		X	X	X	X	X	X	X	—
I-Line™		X	X	X	X	X	X	X	X
Rear Connection		X	X	X	—	—	—	—	—
Drawout		—	—	—	—	—	—	—	—
Optional Lugs		X	X	X	X	X	X	X	—
Accessories and Modifications									
Shunt Trip		X△▼	—	X△	—	—	X△	X△	—
Undervoltage Trip		X△▼	—	X△	—	—	X△	X△	—
Auxiliary Switches		X△▼	—	X△	—	—	X△	X△	—
Alarm Switch		X△▼	X △	X△	X△	X△	X△	X△	—
Motor Operator		—	—	X	—	—	X	X	—
Handle Operators		X	—	X	X	X	X	—	—
Mechanical Interlocks (3P)		—	—	X	—	—	X	—	—
Handle Padlock Attachment		X	X	X	X	X	X	X	X
Cylinder Lock (3P△)		—	—	X	—	—	X	—	—
Optional GF Protection□		—	—	X	—	—	X	X	—
Trip System Type									
Thermal-magnetic		X	X	X	X	X	X	X	X
Instantaneous-only (MCP)		—	—	X	—	—	X	—	—
Molded Case Switch (Automatic)		—	—	—	—	—	X	—	—
Electronic		—	—	—	—	—	—	—	—
Enclosures (Pages DE3-56–DE3-58)									
General Purpose (NEMA 1)		X	X	X	X	X	X	X	—
Raintight (NEMA 3R)		X	X	X	X	X	X	X	—
Dust-tight (NEMA 12)		X	X	X	X	X	X	X	—
Watertight (NEMA 4, 4X, 5)		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	6 (152)	6 (152)					8 (203)	
	Width	4.5 (114)	4.5 (114)					4.5 (114)	
	Depth	4.13 (105)	4.13 (105)					4.75 (121)	
Pages (Unit Mount)/(I-Line)		DE3-59 / Section DE5	DE3-59 / Section DE5					DE3-61/Section DE5	

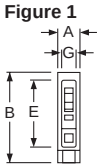
Note: All circuit breakers on this chart are UL Listed and CSA Certified unless otherwise noted.

- ▲ Ungrounded UPS systems only. See page DE3-35.
- ■ 65 kA @120 Vac
- ♦ 1Ø 125 Vdc rating only.
- ★ Dual CSA/UL and IEC ratings and CE markings on circuit breakers.
- ▼ 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.
- ✱ Not available with electronic trip units

Dimensions and Shipping Weights

Miniature and Molded Case Circuit Breakers

Figure 1



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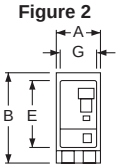

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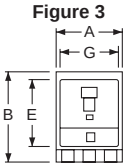
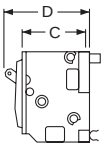


QO, QOB



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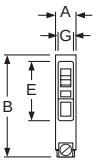

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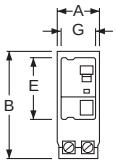
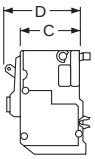


QO-GFI, QO-PL
QO-EPD



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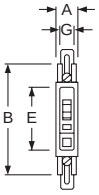

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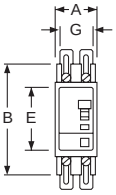

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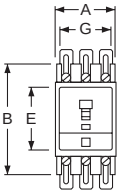
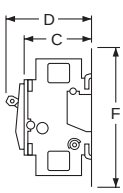


QOU
Low Ampere



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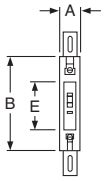

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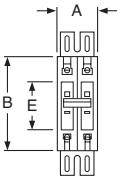

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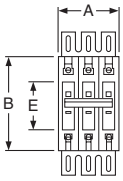


QOU
High Ampere

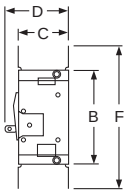
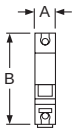


Figure 13



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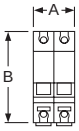

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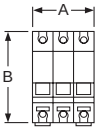

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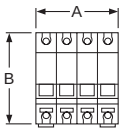

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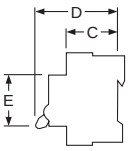

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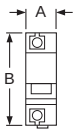

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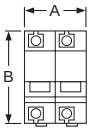

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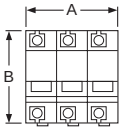

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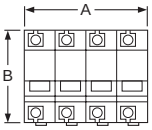

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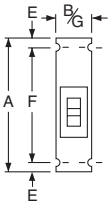

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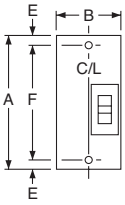


Figure 23

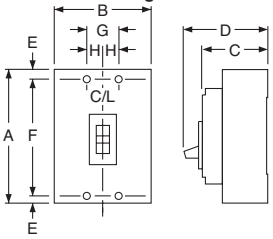
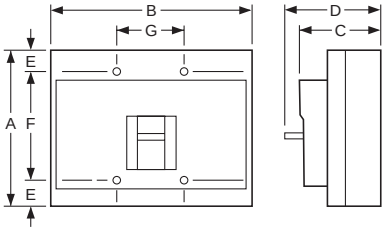


Figure 24



QO™, QOU, Multi 9™ Circuit Breakers

Circuit Breaker Catalogue No. Prefix	No. 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 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	9	0.75	4.45	2.37	2.96	2.25	6.78	. . .
	2	10	1.50	4.45	2.37	2.96	2.25	6.78	. . .
	3	11	2.25	4.45	2.37	2.96	2.25	6.78	. . .
Multi 9™ C60	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	—	—

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

QB, QD, QG, QJ, Q4, FA, FI, KI, LA, LH Circuit Breakers

Circuit Breaker Catalogue No. Prefix	No. 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, 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

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

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	LIL LXIL	25
FIL	8	Q4L	15
QB, QD, QG, QJ	4		

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