

Thermal-magnetic Molded Case Circuit Breakers

250, 400 Ampere Frame
Class 655, 825, 660

SQUARE D
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For the most up-to-date information



KAL/KHL
2- and 3-pole
70–250 Amperes



KIL36250



Q4-L
2- and 3-pole
250–400 Amperes

K-frame—250 A, Thermal-magnetic (600 Vac)

Ampere Rating	AC Magnetic Trip Settings▲		Standard Interrupting		High Interrupting		Current Limiting		Terminal Wire Range
	Low	High	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price	
2-pole, 600 Vac, 250 Vdc									
70	350	700	KAL26070	\$1381.	KHL26070	\$3226.	AL250KA (1) #4 AWG–350 kcmil
80	400	800	KAL26080	1381.	KHL26080	3226.	...	...
90	450	900	KAL26090	1381.	KHL26090	3226.	...	...
100	500	1000	KAL26100	1381.	KHL26100	3226.	...	...
110	550	1100	KAL26110	1381.	KHL26110	3226.	KIL26110	\$4118.	
125	625	1250	KAL26125	1381.	KHL26125	3226.	KIL26125	4118.	
150	750	1500	KAL26150	1381.	KHL26150	3226.	KIL26150	4118.	
175	875	1750	KAL26175	1381.	KHL26175	3226.	KIL26175	4118.	
200	1000	2000	KAL26200	1381.	KHL26200	3226.	...	...
225	1125	2250	KAL26225	1381.	KHL26225	3226.	...	...
250	1250	2500	KAL26250	2400.	KHL26250	4241.	...	...
200	1000	2000	KIL26200	4118.	AL250KI (1) #1/0 AWG–350 kcmil
225	1125	2250	...	...	...	...	KIL26225	4118.
250	1250	2500	...	...	...	...	KIL26250	4815.
3-pole, 600 Vac, 250 Vdc									
70	350	700	KAL36070	\$1733.	KHL36070	\$3899.	AL250KA (1) #4 AWG–350 kcmil
80	400	800	KAL36080	1733.	KHL36080	3899.	...	...
90	450	900	KAL36090	1733.	KHL36090	3899.	...	...
100	500	1000	KAL36100	1733.	KHL36100	3899.	...	...
110	550	1100	KAL36110	1733.	KHL36110	3899.	KIL36110	\$5169.	
125	625	1250	KAL36125	1733.	KHL36125	3899.	KIL36125	5169.	
150	750	1500	KAL36150	1733.	KHL36150	3899.	KIL36150	5169.	
175	875	1750	KAL36175	1733.	KHL36175	3899.	KIL36175	5169.	
200	1000	2000	KAL36200	1733.	KHL36200	3899.	...	...
225	1125	2250	KAL36225	1733.	KHL36225	3899.	...	...
250	1250	2500	KAL36250	2889.	KHL36250	5065.	...	...
200	1000	2000	KIL36200	5169.	AL250KI (1) #1/0 AWG–350 kcmil
225	1125	2250	...	...	...	...	KIL36225	5169.
250	1250	2500	...	...	...	...	KIL36250	6054.

K-frame—250 A, Thermal-magnetic (480 Vac)

Ampere Rating	AC Magnetic Trip Settings▲		Extra High Interrupting		Terminal Wire Range
	Low	High	Catalog Number	Price	
2-pole, 480 Vac					
110	550	1100	KCL24110	\$3638.	AL250KA (1) #4 AWG–350 kcmil
125	625	1250	KCL24125	3638.	
150	750	1500	KCL24150	3638.	
175	875	1750	KCL24175	3638.	
200	1000	2000	KCL24200	3638.	AL250KI (1) #1/0 AWG–350 kcmil
225	1125	2250	KCL24225	3638.	
250	1250	2500	KCL24250	4460.	
3-pole, 480 Vac					
110	550	1100	KCL34110	4548.	AL250KA (1) #4 AWG–350 kcmil
125	625	1250	KCL34125	4548.	
150	750	1500	KCL34150	4548.	
175	875	1750	KCL34175	4548.	
200	1000	2000	KCL34200	4548.	AL250KI (1) #1/0 AWG–350 kcmil
225	1125	2250	KCL34225	4548.	
250	1250	2500	KCL34250	5580.	

Q4-frame—400 A, Thermal-magnetic (240 Vac)





Ampere Rating	AC Magnetic Trip Settings▲		Standard Interrupting		Terminal Wire Range
	Low	High	Catalog Number	Price	
2-pole, 240 Vac					
250	1250	2500	Q4L2250	\$2114.	AL400LA (1) #1 AWG–600 kcmil or (2) #1 AWG–250 kcmil
300	1500	3000	Q4L2300	2114.	
350	1750	3500	Q4L2350	2114.	
400	2000	4000	Q4L2400	2114.	
3-pole, 240 Vac					
250	1250	2500	Q4L3250	\$2554.	AL400LA (1) #1 AWG–600 kcmil or (2) #1 AWG–250 kcmil
300	1500	3000	Q4L3300	2554.	
350	1750	3500	Q4L3350	2554.	
400	2000	4000	Q4L3400	2554.	

Interrupting Ratings (kA)

	KAL	KHL	KCL	KIL	Q4
240 V	42	65	100	200	25
480 V	25	35	65	200	...
600 V	22	25	...	100	...

▲ UL magnetic trip setting tolerances are ±25% (low) and ±20% (high) from nominal values shown.

Accessories pages 6-36–6-38
Optional Lugs pages 6-43, 6-44
Dimensions pages 6-49, 6-50
Enclosures pages 6-51–6-54

	150 A Frame	250 A Frame		250 A Frame				250 A Frame				
												
Circuit Breaker Type	CJ	CG	CJ	QB	QD	QG	QJ	KA	KH	KC	KI	
Number of Poles	3, 4	3, 4	3, 4	2, 3	2, 3	2, 3	2, 3	2, 3	2, 3	2, 3	2, 3	2, 3
Current Range	15–150	175–250	175–250	70–250Δ	70–250Δ	70–250Δ	70–250Δ	70–250	70–250	110–250	110–250	

Interrupting Ratings

		100	65	100	10	25	65	100	42	65	100	200
UL/CSA/NOM Rating (kA RMS) (50/60 Hz AC)	240 Vac	100	65	100	10	25	65	100	42	65	100	200
	480Y/277 Vac	65	35	65	...	...	...	...	25	35	65	200
	480 Vac	65	35	65	...	...	...	...	25	35	65	200
	600Y/347 Vac	25	18	25	...	...	...	...	22	25	...	100
DC Ratings	600 Vac	...	...	...	...	...	...	...	22	25	...	100
	250 Vdc	...	...	...	...	...	...	...	10	50	...	...
	500 Vdc ■	...	...	...	...	...	...	...	...	20	...	...
IEC 415/240 Vac (Icu/Ics) ▼	70	36	70	10/5	10/5	10/5	10/5	10/2.5	10/2.5	65/65	130/65	
IEC 50/60 Hz	For additional IEC ratings, see Supplemental Digest.											

Special Ratings

Fed. Specs W-C-375B/GEN	...	...	...	✓	✓	✓	✓	✓	✓	✓	✓	✓
HACR (2, 3-pole)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	...

Connections/Terminations

Unit Mount	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
I-Line®	...	...	...	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rear Connection	✓	✓	✓	...	...	...	...	✓	✓	...	...	...
Drawout	✓	✓	✓	...	...	...	...	...	...	...	...	...
Optional Lugs	✓	✓	✓	...	...	...	...	✓	✓	✓	✓	✓

Accessories and Modifications

Shunt Trip	✓	✓	✓	...	...	...	...	✓▲	✓▲	✓▲	✓▲	✓▲
Undervoltage Trip	✓	✓	✓	...	...	...	...	✓▲	✓▲	✓▲	✓▲	✓▲
Auxiliary Switches	✓	✓	✓	...	...	...	...	✓▲	✓▲	✓▲	✓▲	✓▲
Alarm Switch	✓	✓	✓	...	...	...	...	✓▲	✓▲	✓▲	✓▲	✓▲
Motor Operator	✓	✓	✓	...	...	...	...	✓	✓	✓	✓	✓
Handle Operators	✓	✓	✓	...	...	...	...	✓	✓	✓	...	...
Mechanical Interlocks (3-pole)	✓	✓	✓	✓	✓	✓	✓	✓◆	✓◆	...	...	...
Handle Padlock Attachment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cylinder Lock (3-pole)	...	...	...	...	...	...	...	✓▲	✓▲	...	...	...
Optional GF Protection	...	...	...	...	...	...	...	✓★	✓★	✓★	✓★	✓★

Trip System Type

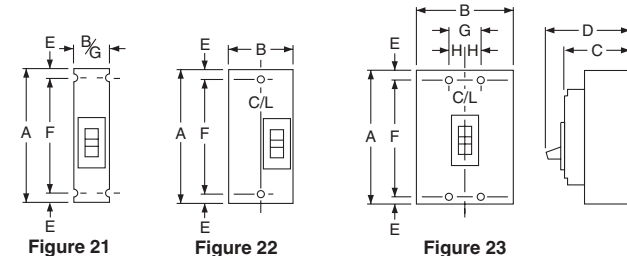
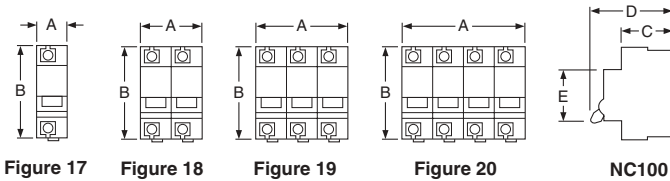
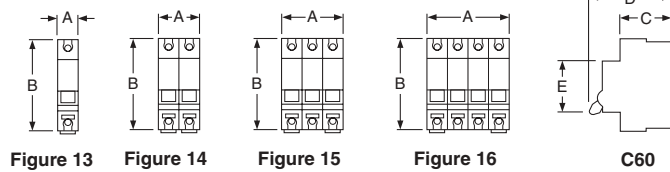
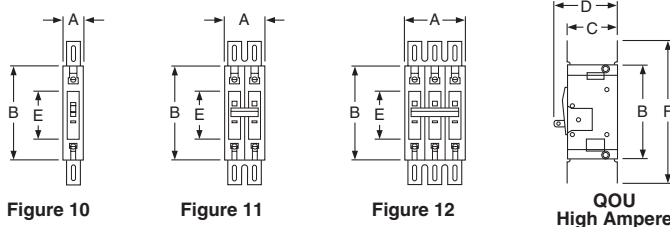
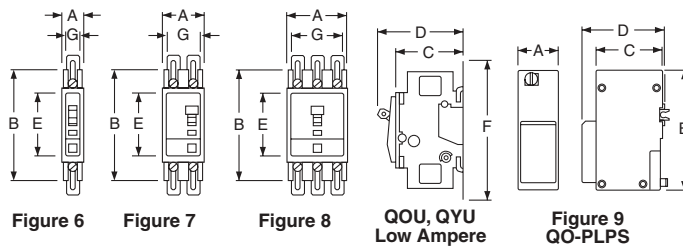
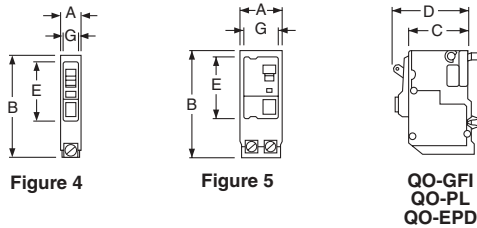
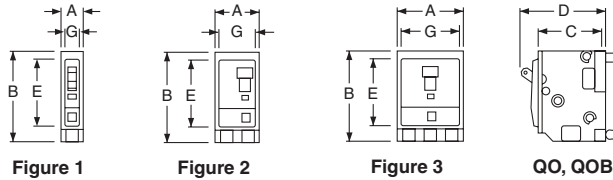
Thermal-magnetic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Instantaneous-only (MCP)	✓	✓	✓	...	...	...	...	✓	✓	...	...	...
Molded Case Switch (Automatic)	✓	✓	✓	✓	...	...	...	...	✓	...	...	...
Electronic	...	...	...	...	...	...	...	...	...	...	...	...

Enclosures (Pages 6-51–6-54)

General Purpose (NEMA 1)	...	...	...	✓	✓	✓	✓	✓	✓	...	...	...
Raintight (NEMA 3R)	...	...	...	✓	✓	✓	✓	✓	✓	✓	✓	✓
Dusttight (NEMA 12)	...	...	...	...	...	...	...	✓	✓	✓	✓	✓
Watertight (NEMA 4, 4X, 5)	...	...	...	...	...	...	...	✓	✓	✓	✓	✓
Explosion Proof (NEMA 7, 9)	...	...	...	...	...	...	...	✓	✓	...	...	...
Dimensions (3P Unit Mount)	Height IN (mm)	7.44 (189)	7.44 (189)	6.47 (164)				8 (203)				
	Width IN (mm)	4.13 (105)	4.13 (105)	4.5 (114)				4.5 (114)				
	Depth IN (mm)	3.38 (86)	3.38 (86)	3.93 (100)				4.75 (121)				
Pages (Unit Mount)/(I-Line)	□	□	Page 6-21/8-26				Page 6-22/8-27					

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

- ▲ Factory-installed option only
- Ungrounded UPS systems only. See Supplemental Digest.
- ◆ Requires breaker with WB suffix.
- ★ Requires factory-installed "G" Shunt trip and 3-pole module.
- ▼ Dual UL and IEC ratings and CE markings on circuit breakers. For additional IEC ratings, see Supplemental Digest.
- Δ I-Line Q-frame circuit breakers are available 70–225 A only, 250 A Q-frame unit-mount circuit breakers are limited to copper conductors only.
- See Supplemental Digest.



QO®, QOU, EH Circuit Breakers

Circuit Breaker Catalog 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 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	...	...
Multi 9 NC100	1	17	1.06	3.19	1.73	2.76	1.77	...	...
	2	18	2.13	3.19	1.73	2.76	1.77	...	...
	3	19	3.19	3.19	1.73	2.76	1.77	...	...
	4	20	4.25	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 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, KA, KI, LA, MA, ME and MX Circuit Breakers

Circuit Breaker Catalog 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, FCL♦	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, KHL, KCL, 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
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.
- ♦ FCL 2-pole circuit breaker dimension B is 4.50 as in Fig. 23.

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:

	FA	L	3	6	050	V	2100
BREAKER FAMILY							
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							
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 & Load Connectors)							
POLES							
1 - 1-Pole							
2 - 2-Pole							
3 - 3-Pole							
VOLTAGE RATING							
2 - 240Vac							
4 - 480Vac							
6 - 600Vac							
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 - 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

