

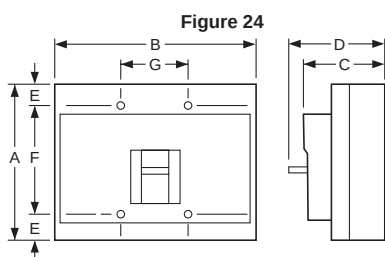
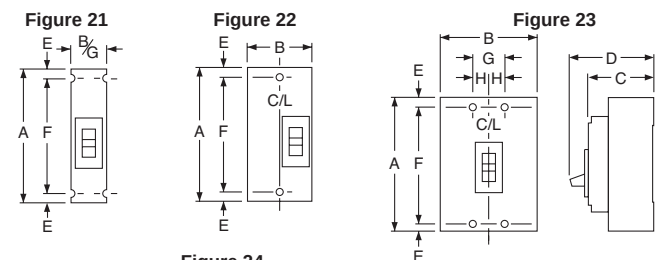
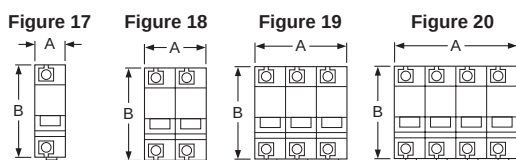
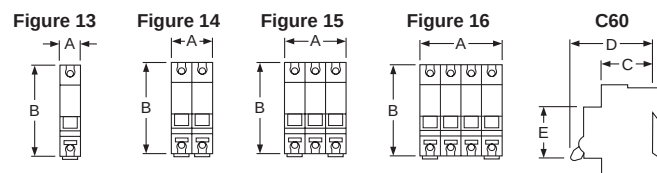
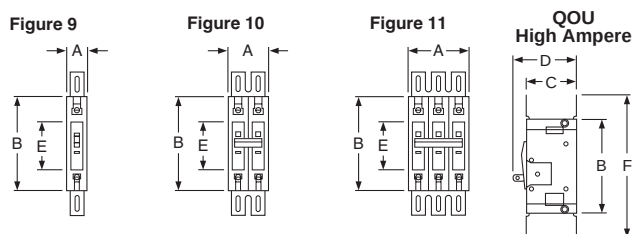
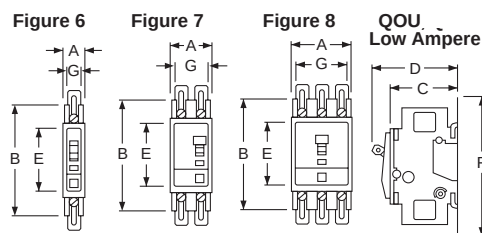
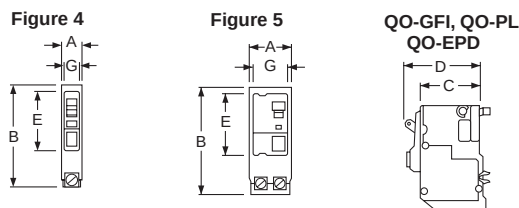
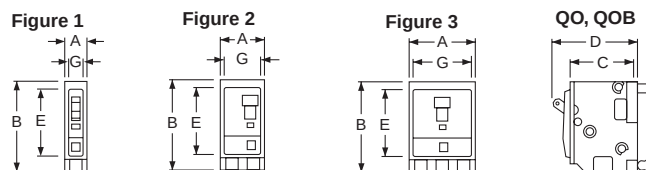
	250 A K-Frame	400 A L-Frame			600 A L-Frame	
						
Circuit Breaker Type	KI	Q4	LA	LH	LI	LXI
Number of Poles	2, 3	2, 3	2, 3	2, 3	2, 3	3
Current Range	110–250	250–400	125–400	125–400	300–600	100–600
Interrupting Ratings						
UL/CSA/NOM Rating (kA RMS) (50/60 Hz)	240 Vac	200	25	42	65	200
	480Y/277 Vac	200	—	30	35	200
	480 Vac	200	—	30	35	200
	600Y/347 Vac	100	—	22	25	100
DC Ratings	600 Vac	100	—	22	25	100
	250 Vdc	—	—	10	50	—
	500 Vdc▲	—	—	—	20	—
IEC 60947-2 (kA RMS) Icu/Ics■	240 Vac	—	—	—	—	—
	415 Vac	130/65	—	20/5	20/5	—
Special Ratings						
CCC	—	—	—	—	—	—
Fed. Specs W-C-375B/GEN	X	X	X	X	X	X
HACR (2P, 3P)	—	—	X	X	—	—
Connections/Terminations						
Unit Mount	X	X	X	X	X	X
I-Line™	X	X	X	X	X	X
Rear Connection	—	X	X	X	—	—
Drawout	—	—	—	—	—	—
Optional Lugs	X	X	X	X	X	X
Accessories and Modifications						
Shunt Trip	X♦	X	X	X	X	—
Undervoltage Trip	X♦	X	X	X	X	X
Auxiliary Switches	X♦	X	X	X	X	X
Alarm Switch	X♦	X	X	X	X	X
Motor Operator	X	X	X	X	—	—
Handle Operators	—	X	X	X	—	—
Mechanical Interlocks (3P)	—	—	X★	X★	—	—
Handle Padlock Attachment	X	X	X	X	X	X
Cylinder Lock (3P)	—	X	X	X	—	—
Optional GF Protection	X▼♦	—	—	—	—	X★
Trip System Type						
Thermal-magnetic	X	X	X	X	X	—
Instantaneous-only (MCP)	—	—	X	X	—	—
Molded Case Switch (Automatic)	—	—	—	X	—	—
Electronic	—	—	—	—	—	X
Enclosures (Pages DE3-56–DE3-58)						
General Purpose (NEMA 1)	—	X	X	X	—	—
Raintight (NEMA 3R)	X	X	X	X	—	—
Dust-tight (NEMA 12)	X	X	X	X	X	X
Watertight (NEMA 4, 4X, 5)	X	X	X	X	—	—
Explosion Proof (NEMA 7, 9)	—	—	—	—	—	—
Dimensions (3P Unit Mount) in. (mm)	Height	8 (203)	11 (279)		11.86 (301)	
	Width	4.5 (114)	6 (152)		7.5 (190)	
	Depth	4.75 (121)	5.84 (148)		6.74 (171)	
Pages (Unit Mount)/(I-Line)		DE3-61 / Section DE5		DE3-60 / 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.
- Dual CSA/UL and IEC ratings and CE markings on circuit breakers.
- ♦ Factory-installed option only.
- ★ Requires circuit breaker with WB suffix.
- ▼ Requires factory-installed "G" Shunt trip. Available only for 3P.
- △ 65/50 kA Icu/Ics for 450 A–600 A ratings

Dimensions and Shipping Weights

Miniature and Molded Case Circuit Breakers



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.

Moulded Case Circuit Breakers

Q4L - LAL - LHL



KAL/KHL
Two & Three Pole
70-250 Ampere

CSA Certified Interrupting Rating RMS Symmetrical Amperes

Breaker Cat. No. Prefix	System Voltage AC			DC	
	240	480	600	125	250
Q4L	25k				
LAL	42k	30k	22k	10k	10k
LHL	65k	35k	25k	50k	50k

Enclosures - DE3-56
Dimensions - DE3-54

Ampere Rating	AC Magnetic Trip Settings Amperes	Two Pole		Three Pole		Standard Lug Kit Wire Range
		Catalogue No.	Price	Catalogue No.	Price	

400 Ampere Frame Q4L Standard Interrupting

	Low	High	240Vac		240Vac		
250	1250	2500	Q4L2250		Q4L3250		AL400LA
300	1500	3000	Q4L2300		Q4L3300		1-#1-600 kcmil or
350	1750	3500	Q4L2350		Q4L3350		2-#1-250 kcmil
400	2000	4000	Q4L2400		Q4L3400		AL400LA

LAL Standard Interrupting

	Low	High	600Vac, 250Vdc		600Vac, 250Vdc		
125	625	1250	LAL26125		LAL36125		AL400LA 1-#1-600 kcmil or 2-#1-250 kcmil
150	750	1500	LAL26150		LAL36150		
175	875	1750	LAL26175		LAL36175		
200	1000	2000	LAL26200		LAL36200		
225	1125	2250	LAL26225		LAL36225		
250	1250	2500	LAL26250		LAL36250		
300	1500	3000	LAL26300		LAL36300		
350	1750	3500	LAL26350		LAL36350		
400	2000	4000	LAL26400		LAL36400		

LHL High Interrupting

	Low	High	600Vac, 250Vdc		600Vac, 250Vdc		
125	625	1250	LHL26125		LHL36125		AL400LA 1-#1-600 kcmil or 2-#1-250 kcmil
150	750	1500	LHL26150		LHL36150		
175	875	1750	LHL26175		LHL36175		
200	1000	2000	LHL26200		LHL36200		
225	1125	2250	LHL26225		LHL36225		
250	1250	2500	LHL26250		LHL36250		
300	1500	3000	LHL26300		LHL36300		
350	1750	3500	LHL26350		LHL36350		
400	2000	4000	LHL26400		LHL36400		



LAL/LHL
Two and Three Pole
125-400 Amperes

Thermal-Magnetic / Magnetic Only Molded Case Circuit Breakers

Introduction

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							

Thermal-Magnetic / Magnetic Only Molded Case Circuit Breakers Accessories

■ Field Installable Accessories

Field installable accessories can be installed, interchanged or replaced in the field without affecting the circuit breaker's UL listing or interrupting ratings. Field installable accessories cannot be used in a mounting location or a pole that has a factory installed only accessory. Field installable electrical accessories and circuit breakers are shipped separately. The following thermal-magnetic circuit breakers, magnetic only circuit breakers and molded case switches accept UL Listed, Square D® field installable accessories:

- Q4, LA, and LH Series 4 and higher
- LI and LC Series 1 and higher
- MA and MH Series 2 and higher
- PA, PH, and PC Series 4 and higher
- NA and NC Series 1 and higher

Shunt Trip

The shunt trip accessory is used to trip the circuit breaker from a remote location by using a trip coil energized from a separate circuit. When energized by a push button or other pilot device, the shunt trip causes the circuit breaker to trip. The trip coil has coil clearing contacts to break the coil circuit when the circuit breaker opens.

Shunt trips are available for 2- and 3-pole thermal-magnetic circuit breakers, magnetic only circuit breakers and molded case switches with standard control voltage ratings to 480 Vac or 24 Vdc. Additional ac control voltage ratings to 600 Vac are supplied with a 120 Vac rated coil and a control voltage transformer for user mounting. Control voltages above 480 Vac are not UL Listed. A 120 Vac shunt trip operates at 55% or more of rated voltage and all other shunt trips operate at 75% or more of rated voltage.

Ground Fault Shunt Trip

A ground fault shunt trip operates in the same manner as a standard shunt trip, except that since the trip coil is rated for continuous duty, no coil clearing contact is needed. This accessory was designed for use with the Micrologic® Ground Fault Module (GFM).

Table 54: Shunt Trip—Selection Data

	Control Voltage	Factory Installed Shunt Trip Suffix	Field Installable Shunt Trip Catalog Number★
Shunt Trip	24 Vac 50/60 Hz	1042	() 1042
	48 Vac 50/60 Hz	1048	() 1048
	120–240 Vac 50/60 Hz	1021	() 1021
	120–240 Vac 400 Hz	1046▲	() 1046▲
	208–480 Vac 50/60 Hz	—	() 1086■
	277–480 Vac 50/60 Hz	1037	() 1037★★
	600 Vac 50/60 Hz	1026▲	() 1026▲
	6 Vdc	1040	() 1040
	12 Vdc	1039	() 1039
	24 Vdc	1027	() 1027
	48 Vdc	1028	() 1028
	72 Vdc	1038	() 1038
	125 Vdc	1029	() 1029
	250 Vdc	1030	() 1030
Ground Fault Shunt Trip	24 Vac 50/60 Hz	G	() G★★

★ Complete accessory catalog number by adding appropriate circuit breaker prefix (LA1, MA1, NA1, or PA1).

▲ Not UL Listed

■ PA1 prefix only.

★★ Not available with PA1 prefix.