

400 A L-Frame



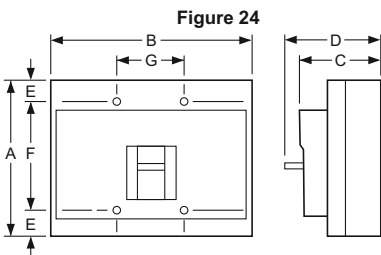
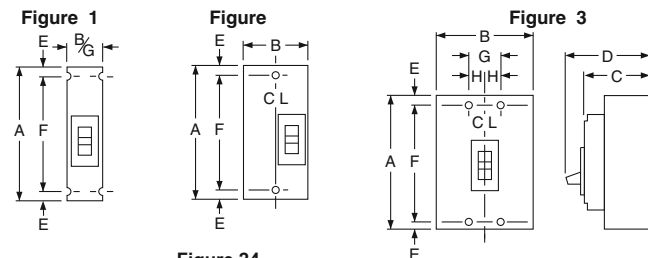
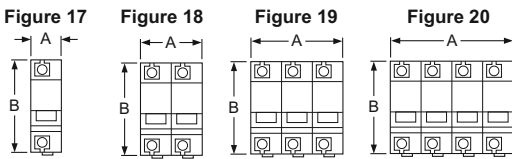
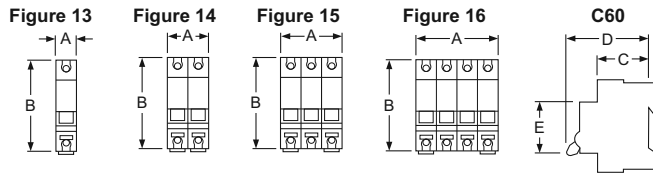
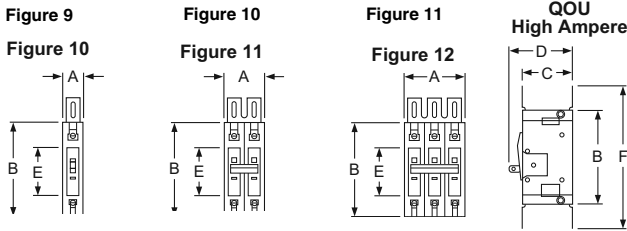
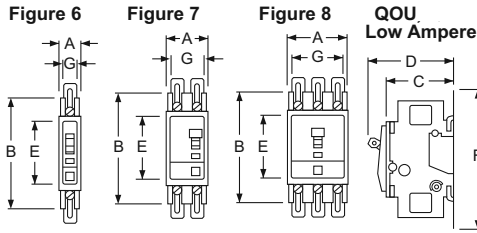
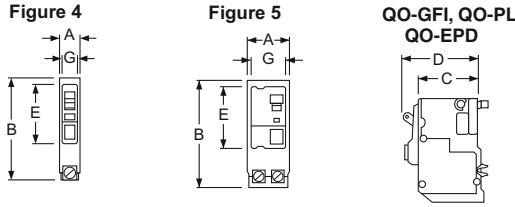
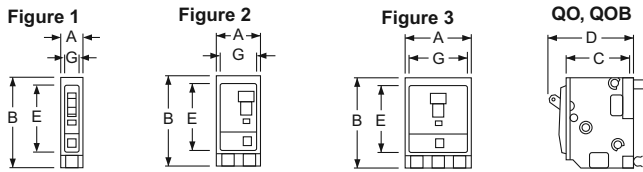
Circuit Breaker Type		Q4	LA	LH
Number of Poles		2, 3	2, 3	2, 3
Current Range		250–400	125–400	125–400
Interrupting Ratings				
UL/CSA/NOM Rating (kA RMS) (50/60 Hz)	240 Vac	25	42	65
	480Y/277 Vac	—	30	35
	480 Vac	—	30	35
	600Y/347 Vac	—	22	25
	600 Vac	—	22	25
DC Ratings	250 Vdc	—	10	50
	500 Vdc▲	—	—	20
IEC 60947-2 (kA RMS) Icu/Ics■	240 Vac	—	—	—
	415 Vac	—	20/5	20/5
Special Ratings				
CCC		—	—	—
Fed. Specs W-C-375B/GEN		X	X	X
HACR (2P, 3P)		—	X	X
Connections/Terminations				
Unit Mount		X	X	X
I-Line™		X	X	X
Rear Connection		X	X	X
Drawout		—	—	—
Optional Lugs		X	X	X
Accessories and Modifications				
Shunt Trip		X	X	X
Undervoltage Trip		X	X	X
Auxiliary Switches		X	X	X
Alarm Switch		X	X	X
Motor Operator		X	X	X
Handle Operators		X	X	X
Mechanical Interlocks (3P)		—	X♦	X♦
Handle Padlock Attachment		X	X	X
Cylinder Lock (3P)		X	X	X
Optional GF Protection		—	—	—
Trip System Type				
Thermal-magnetic		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
Raintight (NEMA 3R)		X	X	X
Dust-tight (NEMA 12)		X	X	X
Watertight (NEMA 4, 4X, 5)		X	X	X
Explosion Proof (NEMA 7, 9)		—	—	—
Dimensions (3P Unit Mount) in. (mm)	Height	11 (279)		
	Width	6 (152)		
	Depth	5.84 (148)		
Pages (Unit Mount)/(I-Line)		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.
- ♦ Requires circuit breaker with WB suffix .

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
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		
FAL, FHL 2P	3	LAL, LHL	15
FAL, FHL 3P	5		
		Q4L	15
QB, QD, QG, QJ	4		

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

Moulded Case Circuit Breakers

Q4L - LAL - LHL

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

LAL Standard Interrupting

	Low		High		600Vac, 250Vdc		600Vac, 250Vdc		AL400LA 1-#1-600 kcmil or 2-#1-250 kcmil
125	625	1250	LAL26125		LAL36125				
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		AL400LA 1-#1-600 kcmil or 2-#1-250 kcmil
125	625	1250	LHL26125		LHL36125				
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

Accessories:
Optional Mechanical Lug Kit for (1) 350-750 kcmil wire Cat. No. AL400LH7
Handle Padlock Attachment (locks ON or OFF) Cat. No. HPALM

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 - DE3-58
Dimensions - DE3-54

Thermal-Magnetic / Magnetic Only Molded Case Circuit Breakers

Introduction

Table 8: Breakdown of Typical Catalog Number

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

Special Magnetic or Thermal Calibration

(20% Price Adder)

Magnetic

The magnetic trip ranges for standard circuit breakers are listed in the Square D Digest. Requirements outside this range are best accommodated by selecting another standard circuit breaker. In some cases where this is not practical, a circuit breaker may be ordered with special magnetic calibration. Special magnetic calibration is not possible in all cases. Circuit breakers with special magnetic calibration and an **adjustable** magnetic trip range are **not** UL Listed; those with a **fixed** magnetic trip setting are UL Listed. Consult Square D/Schneider Electric local sales office for more information.

50 Degrees C

UL 489 Listed molded case circuit breakers are calibrated for 40 degree C ambient temperature. To meet requirements of higher ambient conditions, circuit breakers can be factory calibrated for a 50 degree C ambient temperature. Circuit breakers with special thermal calibration are not UL Listed. To order 50° calibration, add "35" suffix. Consult local sales office for more information.

Visi-Blade™ Circuit Breakers

(20% Price Adder)

Visi-blade construction is a modification to the cover of a thermal-magnetic circuit breaker, a molded case switch, or a Mag-Gard® circuit breaker which provides a "window" through which the position of the movable contacts can be verified. Luminescent paint is applied to the movable contact arms to clearly indicate their position. Gases produced during high level interruption may cause clouding of the Visi-blade window. Visi-Blade circuit breakers listed below are UL Listed except for FH circuit breakers. Visi-Blade construction is not available on circuit breakers not included in table below.



Visi-Blade Circuit Breaker

Add suffix letter "V" to the circuit breaker catalog number, i.e., FAL 36100V.

Table 3.36: Available Visi-Blade Circuit Breakers

Circuit Breaker Prefix	Amperes	\$ Price
FA, FH▲■	15–100 A	20% Price Adder
LA, LH	125–400 A	

- ▲ FH circuit breaker is not UL Listed.
- Not available on 1P FA/FH circuit breakers.

Moisture and Fungus Resistant Treatment for Circuit Breakers

(20% Price Adder)

This treatment covers the application of moisture and fungus resistant varnish to circuit breakers and molded case switches.

- The varnish meets Military Specification MIL-V-173C VARNISH, MOISTURE AND FUNGUS RESISTANT.
- The treatment meets military Specification MIL-T-152E TREATMENT, MOISTURE AND FUNGUS-RESISTANT, OF COMMUNICATIONS, ELECTRONIC, AND ASSOCIATED ELECTRICAL EQUIPMENT.

The treatment of circuit breakers in accordance with said specifications is intended to protect them against the moisture and fungus condition encountered in service by retarding the absorption of moisture and inhibiting the growth of fungi.

To order for F- and L-frame circuit breakers, place the suffix "FT" at the end of the circuit breaker catalog number, e.g., FAL36100 becomes FAL36100FT. To order for QB, QD, and QG circuit breakers, place the suffix "YF" at the end of the circuit breaker catalog number, e.g., QDL32150 becomes QDL32150YF. ED, EG, EF, GJL, PowerPact® D-, H-, J-, M-, P- and R-frame circuit breakers are inherently fungus resistant and need no further treatment.

Short Handle for LA/LH Circuit Breakers (No Additional Charge)

Certain applications of the LA/LH circuit breakers (as mains in particular panelboards) require the use of a slightly shorter operating handle. For ordering information refer to the chart below.

Table 3.37: Catalog Numbers for Short Handle LA/LH Circuit Breakers

Lug Configuration Desired		Catalog "Prefix Indication"	Catalog "Suffix Indication"	Circuit Breaker Cat. No.
ON End	OFF End			
Lugs	Lugs	"L"	"MB"	LAL36400MB
No Lugs	Lugs	"P"	"MB"	LAP36400MB
Lugs	No Lugs	"P"	"MT"	LAP36400MT
No Lugs	No Lugs	"F"	"MB"	LAF36400MB